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# Final report

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Last, but not least, we are grateful to the market vendors and key informants from the communities where we worked. It is our hope that this pilot project and the resultant work contributes to improved nutrition and food security in Busia County and neighbouring districts, and a greater appreciation for the local plant resources and traditional knowledge of the people of Kenya.

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## 2 Executive summary

The two-year pilot project, which started in 2015 in Busia County, Western Kenya, set out to test how schools and community health units can offer stable markets for smallholder farmers practicing sustainable agriculture and increase demand for local food biodiversity. If successful, the model would also produce benefits around biodiversity conservation, environmental sustainability and diverse diets in this part of Kenya where high levels of malnutrition and food insecurity persist despite the abundance of local nutritious biodiversity.

Two years down the line, the ACIAR project has successfully developed a holistic pilot to connect production and consumption of local edible biodiversity and established an enabling environment in the county for a workable food procurement model that puts local food diversity at its core and which can potentially be rolled out in other locations.

First steps included the development of an adapted Farmer Business School (FBS) model, which includes elements of group strengthening, local food production, nutrition education, business management and marketing. Secondly, training was provided to 547 men and women farmers from Busia's seven sub-counties who are now better equipped to penetrate local markets, apply and win tenders from public institutions and compete with other suppliers. All along, nutrition education and awareness activities were carried out to increase awareness and demand for local nutritious crops.

Since the pilot was launched in one school in mid-2016 catering for 410 students, the farm-to-school network is now providing healthy school meals to approximately 5,500 pupils. The linking of farmer groups to schools and health clinics has created employment opportunities for the farmers who now have a steady market for their produce while schools see the relationship of linking to local farmers as part of their social corporate responsibility and assured safe vegetable supply.

Achievements to date include:

- 25 farmer groups trained on processing, handling, marketing and financial business management using the adapted FBS model developed in 2016.
- Background information collected on the constraints to include nutrient-rich species into nutrition education activities in three schools and selected communities/households.
- Cooking demonstrations, trainings and nutrition education activities carried out in health centres, schools and in early childhood development centres on the use and preparation of local foods as part of a healthy and balanced diet. In June 2017, a field day was organised at the Agricultural Technical Centre in Busia targeting farmers and schools to raise awareness of local foods and their nutritional importance.
- Testimonials collected from the supply chain actors and highlighted in the BFN [website](#).
- Results from the project have formed the basis for a case study that was presented to the [Solutions Search](#) Competition, an innovative contest created to identify and showcase practical examples to address conservation and development challenges. The project was selected as one of the top 10 finalists in the worldwide contest and is included as a Solution in the new [Agriculture & Biodiversity Portal](#) being launched during the World Climate Conference on 16 November 2017 in Bonn, Germany.
- The pilot was also included as a case study in the recent Discussion Paper on [Schools as a System to Improve Nutrition](#) by the United Nations System Standing Committee on Nutrition (page 44).

Furthermore, the pilot study, along with the *Biodiversity for Food and Nutrition* (BFN) project, helped facilitate the development of the first biodiversity policy for Busia County

and for the rest of Kenya. The policy, still awaiting approval, provides a framework for the effective conservation and use of biodiversity and proposes that at least 30% of food procured by schools and hospitals must be locally-sourced and coming from family farmers. Project achievements are also feeding into the development of a County Nutrition Action Plan (CNAP) aimed at providing a framework for coordinated high impact nutrition interventions by county government and nutrition stakeholders. A draft is being developed and the final document is expected by the end of 2017. Thanks to the project, the recognition that African indigenous vegetables have unrealised potential for contributing to human welfare, particularly food security, nutrition and income-generation is slowly gaining ground in this part of Kenya.

### 3 Background

Despite the huge strides in addressing malnutrition in Kenya, food and nutrition insecurity persist in Busia County, located in Western Kenya (Figure 1). Rich in biological diversity, Busia County has sufficient rain and a variety of agro-ecological zones suitable for growing a diverse range of plants, yet is facing severe environmental challenges and is among the poorest and most food insecure counties in Kenya. Low productivity, limited access to technology, markets and credit all contribute to painting a grim picture with poverty indices in Busia County ranging from 63% to 74% and over two thirds of the population unable to meet its basic food minimum requirements. 26.6% children under the age of five are stunted, 11% are underweight and 4% are thin due to malnutrition (KDHS, 2014).

Aside from trade with neighbouring Uganda, agriculture in Busia County remains the largest source of employment and income, with most farmers practicing subsistence agriculture on a mixed crop-livestock production system. Large-scale farms have been divided into smaller portions, leaving most farmers trying to earn a living from less than 0.6 hectares of land. Increased pesticide use has been polluting water resources, while food production has been decreasing due to soil erosion. Changing land/resource use and management practices have heavily contributed to loss of biodiversity in the county, including the loss of nutritious genetic resources useful for agricultural productivity, sustainability and resilience to stresses. Other factors include climate change, over-exploitation, drought, floods and agricultural intensification.



**Figure 1.** Busia County (in red) sits on the Western side of Kenya bordering Uganda

Furthermore, changes in eating habits and preferences and a lack of access to quality seed, have left most Kenyans relying on a handful of food crops for their sustenance, such as maize and beans and to a lesser extent cassava, millet, sweet potatoes, cotton, groundnuts, sorghum, vegetables, fruits and sugar cane (Wasike *et al.*, 2014).

Agriculture offers a potential solution to solving malnutrition problems while addressing poverty reduction and enhancing livelihoods. Recent research in Kenya has shown that promoting the production of nutritious foods and linking households to markets has positive impacts on diets and on generating higher household incomes (Chege *et al.*,

2015). Extra profits also means that members are likely to buy more food, as ACIAR research in Timor-Leste shows that an extra dollar income from selling food crops translates to 87 cents more spent on food consumption (Bevitt, 2015). This implies, however, a shift from the production of larger quantities of a few energy-rich staple grains such as maize, wheat, and rice, to a more diversified production system; one that ensures availability and access to a variety of nutritious foods. At the same time, the shift from subsistence agriculture to commercial farming holds great promise for driving economic growth, creating job opportunities, improving livelihoods and improving the diets of Kenyan households.

Indigenous leafy vegetables represent an important component of Africa's agricultural past, yet they have gradually disappeared from people's diets and fallen into agricultural neglect, leading to huge losses in the diversity of foods available particularly in rural areas where dietary diversity tends to be low and people are more food insecure. A total of about 210 indigenous vegetable species have been recorded in Kenya but only a small proportion have been researched or exploited.

At the same time, indigenous leafy vegetables are becoming increasingly popular in urban areas, thanks to efforts by Bioversity International working with local partners in Kenya and in collaboration with Uchumi Supermarkets, to strengthen market linkages for communities and farmers (Gotor & Irungu, 2010). Many of these species fetch higher market prices than their exotic counterparts, providing a more equitable share of profits to smallholders. This can be an important incentive for farmers and communities to grow and conserve this diversity. Furthermore, African leafy vegetables (ALVs) are especially suitable for the resource-poor, who can integrate a selection of them into their farming system or agro-ecosystem, which are frequently complex, diverse and risk-prone. In a changing climate, local biodiversity will be much more resilient to drought and other stresses compared to exotic counterparts and may well provide valuable genetic traits in this regarding for the breeding of future climate-resilient crops (Stöber et al. 2016).

In Busia, pockets of virtuous farmers still grow some of these ALVs, mostly for home consumption. Among them are small-scale entrepreneurs (predominantly women and youth) from Busia County belonging to the umbrella community-based organisation (CBO) *Sustainable Income Generating Investment Group* (SINGI), who use sustainable crop production methods.

Market and value chain analysis carried out by BFN-KALRO in Busia County in 2013 identified a number of leafy vegetables such as spider plant (*Cleome gynandra*) with good market potential (Ndungu et al. 2013). The study also identified constraints linked to supply and demand and capacity building and training that needed to be addressed during value chain development. Major constraints include: limited range of improved varieties, lack of quality and limited quantity of seed, poor agronomic practices, poor market access, limited information on the nutritional value of foods and value addition as well as poor knowledge of post-harvest handling, food safety and hygiene practices.

This SRA explored issues linked to institutional market barriers and opportunities through consultations and workshops with the CBO SINGI to identify major strengths, constraints and opportunities in the production and supply of ALVs. A Farmer Business School (FBS) approach was adapted and used to support existing farm enterprises to include nutritious crops in their farming systems and training provided on best practices, improved processing, handling, marketing, financial and business management for these crops.

Based on the above, this SRA is in accord with the Government of Kenya's increased commitment to improving the health and welfare of its citizens. A number of national policy frameworks exist that support the SRA and that are conducive to more sustainable and nutritious agricultural systems as well as to market development for smallholder farmers.

These include:

- the draft *Emerging Crops Policy*

- the *Vision 2030* blueprint that recognises value addition of biodiversity as a means of increasing rural household incomes;
- the *National Nutrition Action Plan (2012-2017)* that promotes increased sustainable production of diversified, affordable food that helps meet nutritional requirements;
- and the *Agricultural Sector Development Strategy* that advocates the marketing of biodiversity to improve farmers' livelihoods.

Working with SINGI, small-scale entrepreneurs were able to combat the stigma attached to ALVs (food for the poor or the sick), promoting indigenous vegetable consumption, scaling-up production, and securing contracts for the sale of indigenous crops with neighbouring schools, health clinics and hotels.



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## 4 Objectives

The **objectives** of the project were:

- 1. To strengthen capacity and empower community-based organisations (CBOs) and self-help groups (SHGs), especially women by using an adapted Farmer Business School (FBS) approach to improve sustainable production using best practices, improved processing, handling and marketing and financial and business management.*
- 2. To develop a sustainable procurement model that better links rural entrepreneurs and producer groups to institutional markets (schools, clinics, etc.) and that improves dietary diversity by exploring opportunities and developing pilot supply chains that better link rural entrepreneurs and institutional markets to support the improvement of dietary diversity in schools, clinics etc.*
- 3. To carry out preliminary nutrition promotion and education around the importance of indigenous crops and fruits and other nutrition-rich food groups and to diversify diets that build on existing local knowledge, attitudes and practices, targeting especially women and young children and which can also increase demand for nutritious foods in the wider population.*

**Activities** included:

- Preliminary feasibility workshop conducted with local CBO SINGI and partners to explore major strengths, constraints and opportunities in production and supply of local nutritious crops
- Adapted Farmer business school model designed and implemented
- Training workshops for farmer groups on best practices, improved processing, handling and marketing and financial and business management undertaken
- Preliminary study undertaken to negotiate guaranteed price for producers in institutional markets
- Procurement model developed and tested
- Main constraints/opportunities to include nutrient-rich species into nutrition education activities assessed in three identified schools and selected communities/households
- Nutrition education and training materials and communications developed
- Nutrition promotion and education workshops, training and other events undertaken
- Testimonials of procurement chain actors collected and communicated

The main **Outputs** were:

**Output 1:** Training materials documented and adapted FBS framework established and tested

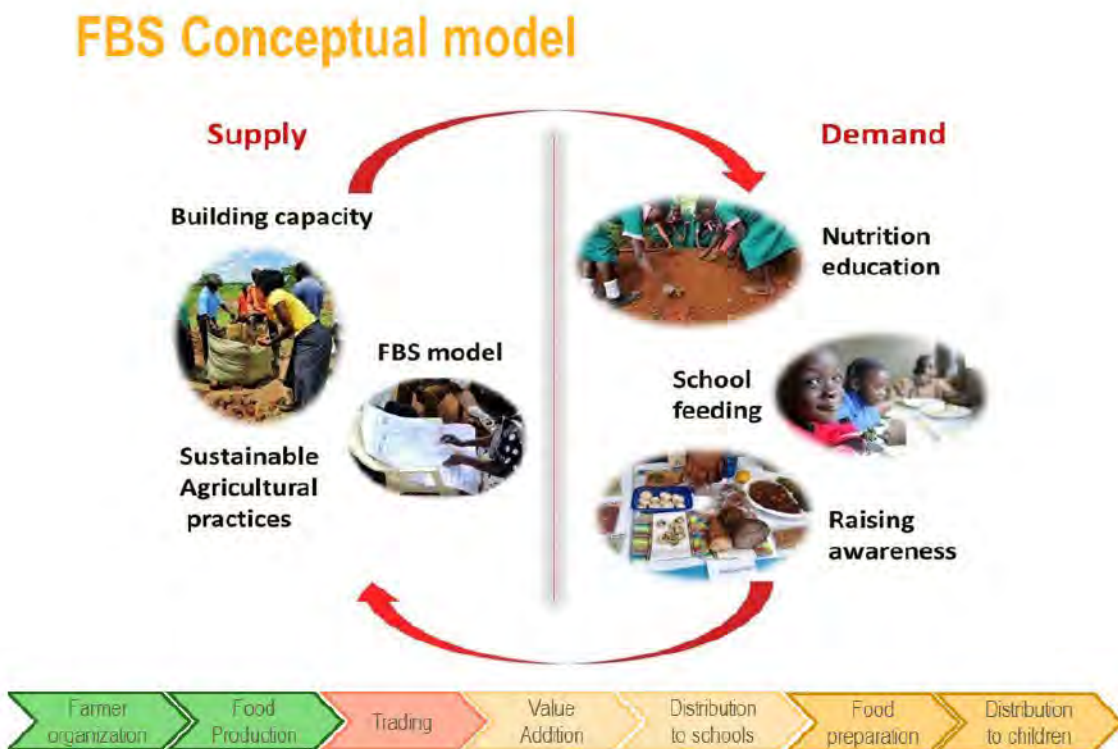
**Output 2:** Study report produced on the feasibility of negotiating a guaranteed price for producers in institutional markets and methods for developing a sustainable procurement model tested;

**Output 3:** Report on the effect of preliminary nutrition promotion and education under this proposal; Media reports and stories

## 5 Methodology

Conceptually, the project was designed following the “Home-grown School Feeding (HGSF) framework for analysis” developed by the Partnership for Child Development (Gelli *et al* 2010). In Kenya, a centralised school feeding model exists supported by the United Nations World Food Programme (WFP) implemented in remote, semi-arid areas that are severely food insecure as well as a decentralised “home-grown” model utilised by the *Njaa Marufuku Kenya* (NMK) programme and the *Home Grown School Meal Programme* (HGSMP) run by the Government of Kenya. Despite evidence of their impact, the two home-grown programmes failed to spur local production and marketing of local crops to sufficient levels and to effectively link smallholder farmers to school procurement so that markets could be sustained beyond program support (Drake *et al.* 2016).

In its quest to identify a more sustainable alternative to be adopted country-wide, the pilot project used the HGSF framework as a model and adopted a three-pillar framework for action (Figure 2) consisting of three intervention areas that were mutually reinforcing and which helped build a sustainable food value chain (SFVC) for indigenous vegetables. A SFVC is defined as “the full range of farms and firms and their successive coordinated value-adding activities that produce particular raw agricultural materials and transform them into particular food products that are sold to final consumers and disposed of after use, in a manner that is profitable throughout, has broad-based benefits for society, and does not permanently deplete natural resources” (FAO, 2014).



**Figure 2.** The Farmer Business School model value chain activities at supply and demand side

Existing information on the nutritional value of indigenous vegetables and original data generated by the *Biodiversity for Food and Nutrition* (BFN) project was used to raise awareness of the importance of incorporating these species within a varied and balanced diet both on the supply and the demand side of the value chain. On the supply-side of the food value chain, the model set out to build the capacity of smallholder farmers to respond to increasing market demand for nutritious crops by providing training on food production,

business management and value addition, while simultaneously building interest on the demand side by introducing these crops to a select number of schools in their school meals as well as clinics, early childhood development centres and private sector enterprises.

## 6 Achievements against activities and outputs/milestones

<i>Objective 1 - To empower community-based organisations (CBOs) and self-help groups (SHGs), especially women, to supply markets for nutrient-rich foods</i>				
No	Activity	Outputs/ milestones	Completion date	Comments
1.1	Preliminary feasibility workshop conducted with SINGI and partners to explore major strengths, constraints and opportunities in production and supply	Report on identified production and supply side constraints  Training materials documented	September 2015	<b>Completed.</b> A consultative workshop was held on 23-24 September 2015. This workshop helped to identify initial needs for the FBS Model (see activity 1.2), needs that were further explored during focus group discussions (FGDs) held with farmers and schools.  <b>Completed.</b> Training materials were documented and a report submitted to ACIAR in Dec 2015.
1.2	Adapted Farmer business school (FBS) model designed and implemented	Adapted FBS model developed  Adapted FBS model implemented	April 2016  Dec 2016	<b>Completed.</b> The adapted FBS model was developed.  <b>Completed:</b> Training was delivered to 25 farmer groups across seven sub-counties on value chain links from production to marketing.
<i>Objective 2: To develop institutional markets (schools, clinics, etc.) and supply chains for nutrient-rich foods</i>				
No	Activity	Outputs/ milestones	Completion date	Comments
2.1	Training workshops for farmer groups on best practices, improved processing, handling and marketing and financial and business management undertaken	Training workshops conducted	Dec 2016	<b>Completed:</b> Training on processing, handling, marketing and financial business management took place from August to December 2016 when the adapted FBS model was tested and validated. See activity 1.2.
2.2	Preliminary study undertaken to negotiate guaranteed price for producers in institutional markets	Study undertaken	Dec 2016	<b>Completed:</b> Gross margin analysis was carried out with the 25 farmer groups as part of their training to determine the most equitable price for ALV commercialisation prior to contacting institutional markets. The process was documented.
2.3	Institutional supply chain model developed and tested	Supply chain model developed	Dec 2016	<b>Completed:</b> The institutional supply chain model initially developed in Mundika high school was developed and tested in other farmer groups

<b>Objective 3: To raise awareness among target groups of the value of indigenous crops in improving diets</b>				
<b>No</b>	<b>Activity</b>	<b>Outputs/ milestones</b>	<b>Completion date</b>	<b>Comments</b>
3.1	Constraints to include nutrient-rich species into nutrition education activities assessed in three schools and selected communities/households	Report on the effect of nutrition promotion and education under this proposal	Dec 2016	<b>Completed:</b> Background information for this activity was collected by an MSc student from Gent University. Data has been analysed and methodology documented.
3.2	Develop nutrition education and training materials & communications	Five fact sheets on prioritised species developed	Dec 2016 – Sept 2017	<b>Completed:</b> Four recipe cards on prioritised ALV species containing nutrition information facts and data generated by the project were developed, printed and distributed, along with several posters for the project. These are available on the <a href="#">Kenya</a> country page on the BFN website. Furthermore, as part of the BFN work, a recipe book is being developed documenting the use, preparation and nutritional value of local food diversity for three communities in Western Kenya (Teso, Samia and Bakhayo). A Food composition table for Kenya has been digitised, updated, and a user database generated. The nutritional content of recipes containing mixed and single ingredients are currently being calculated. The revised Kenya food composition table is expected for early 2018.
3.3	Undertake nutrition promotion and education workshops, training & other events	Nutrition promotion and education workshops and training materials developed	June 2015- Sept 2017 (ongoing activity)	<b>Completed:</b> Cooking demonstrations, trainings and nutrition education activities were carried out in health centres, schools and in early childhood development centres on the use and preparation of local foods as part of a healthy and balanced diet. In June 2017, a field day was organised at the Agricultural Technical Centre in Busia targeting farmers and schools to raise awareness of local foods and their nutritional importance.
3.4	Testimonials of institutional supply chain actors collected and communicated	Testimonials collected and communicated	Ongoing	<b>Completed:</b> Testimonials continue to be collected from the supply chain actors and highlighted in the BFN <a href="#">website</a> (see activity 2.2) as well as inclusion of the Busia case study in a number of important global media (see section 8.1)

PC = partner country, A = Australia

## 7 Key results and discussion

*Objective 1 - To empower community-based organizations (CBOs) and self-help groups (SHGs), especially women, to supply markets for nutrient-rich foods.*

In September 2015, a consultative workshop was organised in Busia, Western Kenya to identify the major constraints faced by smallholders in the commercial marketing of African Leafy Vegetables (ALVs) and other nutritious crops. The participatory workshop brought together 43 men and women participants, including representatives of farmer associations, school managers, representatives from the County Ministries of Agriculture, Health, Education, local and international governmental organisation as well as the project's executing agencies. The meeting was immensely useful in bringing the supply (farmers) and demand (schools/community health centres) sides of the value chain to the same table to discuss how the possible future supply of ALVs to institutional markets might look like under the scoping study.

Building on feedback received from the participatory workshop, focus group discussions were held with the three farmer groups and schools identified for the scoping study to pinpoint specific challenges faced by both the supply/and demand side of the value chain. A survey was undertaken to assess sustainable production methods for indigenous crops and fruits in Busia County and how these might be improved by providing improved quality seeds and planting materials and incorporating organic and low-input agronomic practices.

An adapted Farmer Business School (FBS) model that took into consideration these challenges but advocated for greater attention to nutrition outcomes was developed in conjunction with the executing agency. Based on the model, training was provided to 25 farmer groups across Busia's seven sub-counties to respond to market demand for ALVs.

Prior to the rolling out of the FBS model, a capacity assessment was carried out for each group. Market surveys were conducted with farmer groups and public institutions interested in consuming ALVs were identified. To ensure county ownership, trainings were preceded by a roll-out workshop organised at the Agricultural Technical Centre in Busia bringing together the Centre for African Bio-Entrepreneurship (CABE), the Kenya Agricultural and Livestock Research Organisation (KALRO), Bioversity International, the Sustainable Income Generative Investment group (SINGI) and Government Ministries and stakeholders of the larger BFN project in Busia. Since the training, some farmers have organised themselves and formed a marketing platform as well as a savings and credit cooperative ([SACCO](#)). With access to credit, farmers are expected to become more powerful suppliers and be able to dictate supply and payment terms, including to bigger markets.

*Objective 2 - To develop institutional markets (schools, clinics, etc.) and supply chains for nutrient-rich foods*

Since the roll out of the FBS, six farmer groups have entered into contractual agreements with thirteen schools and one hospital for the provision of ALVs (Table 1). Quantities supplied vary between 10Kg per week to six times that amount while the agreed cost per kilogram varies between Kenyan Shillings KSh30 (AUS \$0.36) and KSh50 (AUS \$0.60) depending on the season. The farmer groups developed 23 business plans – now at different stages of implementation – through which they are empowered to plan their enterprises and keep track of supply and demand.

Group	Sub-County	Schools with which tenders were signed	Quantities supplied (Kg/week)	Unit cost (Ksh)
Katamakisi Kadumutu Self Help group (SHG)	Teso South	St. Jacob's Kaliwa Secondary school	60	30
Umoja SGH	Nambale	Esibembe Secondary school	45	45
Nasewa Mothers' Union	Matayos	Kisoko Girls High school	20	50
Konjera Farmers SHG	Butula	Tingolo Secondary school	12	50
		Esibina Secondary school	10	40
Muungano CBO (Otakhwenya W.G, Matunda SHG, Busijo table banking SHG)	Samia	Busijo Secondary school	20	40
		Namunyweda Secondary school		
		Nangina Girls Secondary school	16	35
		Nangina Hospital	20	35
		Bumbe Institute	14	35
		Bujung'a Secondary school	10	35
Agong'et New Generation Youth Group, Osia Jitahidi Youth Group and Hillstar Youth Group	Teso North	Kamuriai Secondary School	60	35
		Albert Ekirapa Secondary school	60	35
		St. Thomas Amagoro	60	35

**Table 1.** Farmer groups supplying indigenous vegetables on contract to various schools and hospitals in Busia County.

A total of 547 beneficiaries (151 male, 386 female) from the 25 farmer groups from Busia's seven sub-countries took part in the training. Youth representation was 22% (119 youth, both male and female). Thanks to the training, farmer groups are now better organised and able to penetrate into markets, apply and win competitive tenders from institutions and cope with competition from other suppliers. Farming ALVs as a business is slowly gaining ground in Busia County. Farmers are now willing to invest more resources in ALV production and marketing.

*Objective 3 - To raise awareness among target groups of the value of indigenous crops in improving diets*

A number of awareness raising events at the local and national level were organised during the project's lifetime. These include two Traditional Food and Seed Fairs held in 2015 and 2017 respectively. Both were held in Busia's Agricultural Technical Centre to raise awareness on local nutritious crops and the region's unique edible biodiversity. During the fair, which attracted schools and the wider public, seven farmer groups from the sub-counties competed for the widest display of indigenous foods and seeds.

Cooking demonstrations using ALVs were carried out in several schools and Early Childhood Development Centres (ECDs) to raise awareness of the importance of healthy and balanced diets. Farmer-to-farmer exchange visits were also supported with farmer groups from neighbouring Vihiga County visiting SINGI to learn how to form a community-based organisation and learn how to link to markets. Several school gardens have also been set up for ALV cultivation, including schools for children with special needs (School for the deaf).

At the national level, on 6 September 2016, within the framework of the 2016 African Green Revolution Forum (AGRF) held in Nairobi, BFN Kenya took part in the ACIAR Food Security Meeting for Africa “A Partners Forum”. A [poster](#) was presented on the approach being used in Western Kenya to link farmers to markets and to promote indigenous vegetable production and consumption.

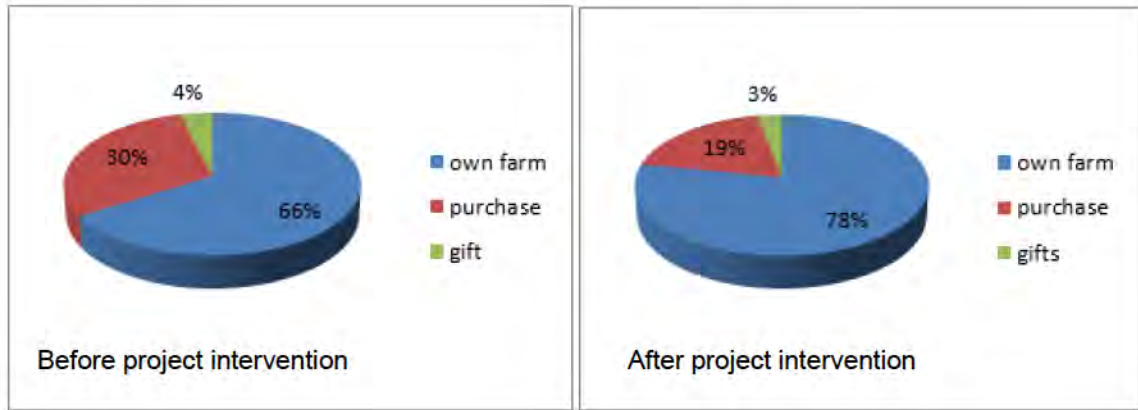
Kenya also took part in the [Democratizing Food Governance Conference](#) (14 October 2016) and on 19 October 2016 was a panellist in a side event during the 43<sup>rd</sup> meeting of the Committee on World Food Security (CFS43) (Rome, 17-21 October 2016). The side event, jointly organised by World Vision, FAO, Bioversity International, Scaling-Up Nutrition Movement and the Government of Canada focused on the multi-sectoral nature of scaling up production and utilisation of nutritious foods. Showcasing best practices identified for successful mainstreaming of BFN in Kenya, the National Project Coordinator, delivered a presentation on *Multisectoral approaches to achieving good nutrition in Kenya*, highlighting the Busia model.

On 21-22 November 2016 the project team took part in the inaugural [National Nutrition Symposium](#) of the Kenyan Academia and Research SUN Network in Nairobi. The symposium focused on innovative research and policy approaches to inform food, nutrition and public health policy and practice. During the forum, the NPC delivered a presentation on the use of indigenous biodiversity to improve nutrition and food security.

Recipes collected during a number of participatory workshops by the Kenya Agriculture and Livestock Research Organization (KALRO) in Alupe, Western Kenya, were used to develop four [recipe cards](#) for species that are listed among Kenya’s priority crops. The recipes, which were printed and distributed to stakeholders, were complemented by nutritional information, including data generated on [finger millet](#) and [bambara groundnut](#) by the *Biodiversity for Food and Nutrition* (BFN) Project in Kenya. Several stories have been published on the BFN website capturing the pilot project’s efforts in [linking farmers to institutional markets](#) and on exploring additional [private sector](#) opportunities for the marketing of ALVs.

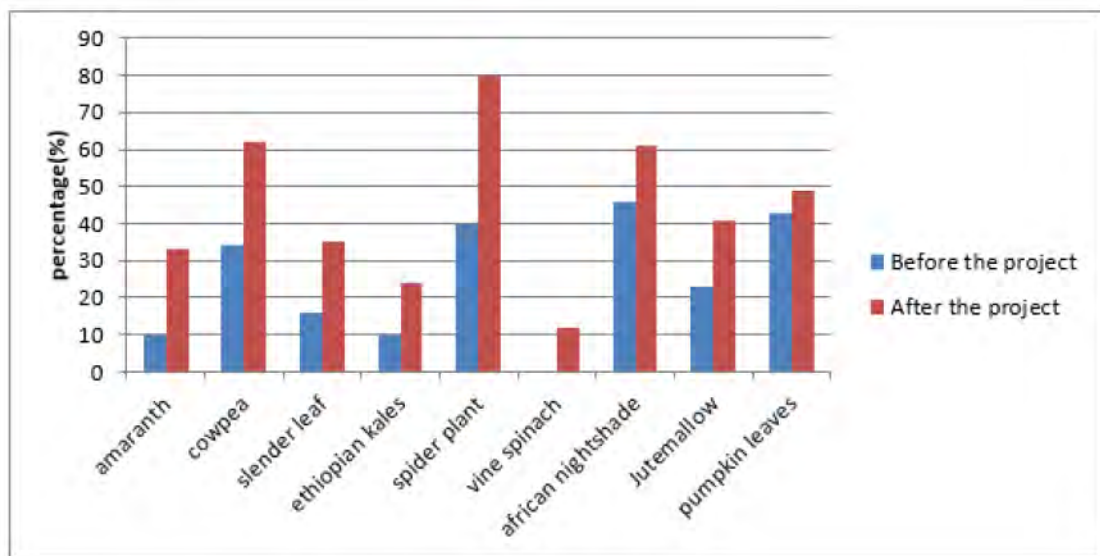
Following implementation of project activities a number of advances have been reported in the cultivation and use of ALVs in Busia. A small survey carried out among 20 households, 9 farmer groups and 5 schools highlighted positive trends in ALV cultivation and consumption. For example, a 12% increase was documented in the number of households cultivating ALVs for household consumption (Figure 3) along with an increase in the plot size devoted to ALV cultivation and while, prior to the project, amaranth was the most cultivated ALV, farmers have since started planting a greater variety of local vegetables and selling surplus for income (Figure 4).





**Figure 3.** Trends before and after project intervention on on-farm production and purchase of ALVs in farm households

Following the supply of certified seed, 12% of the farming households have started growing vine spinach, while the number of households producing spider plant has doubled from 40% to 80% since linking to institutional markets for the provision of indigenous crops. Spider plant (*Cleome gynandra*) is by far the vegetable of choice followed by Jute mallow (*Chorchorus olitorius*). The vegetables are often combined for cooking with ratios depending on community preference. Most farmers involved in the project are also aware of the nutritional value of the local vegetables and have included them in their diets.



**Figure 4.** Vegetables produced by the farmers before and after the project

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## 8 Impacts

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### 8.1 Scientific impacts – now and in 5 years

As mentioned in Section 5, the work carried out for this pilot complements existing work carried out by the *Biodiversity for Food and Nutrition* Project (BFN) in Busia County, as well as other work by Bioversity International that tackles issues directly related to the conservation, promotion and marketing of locally-important food species. This small pilot and BFN are producing positive feedback loops and widening scientific knowledge of the benefits of local biodiversity to tackle food and security issues at the local level.

BFN Kenya has now generated nutrition information on 18 target species including many of the ALVs being promoted in Busia County. As well as being used to update Kenya's existing Food Composition Table, data will be used to produce information and education material to further the scope of the ACIAR project, and to inform the Biodiversity Policy developed for Busia, which is currently awaiting endorsement by the County Government.

Preliminary data was collected at household level and within identified schools to assess current levels of biodiversity and ALV consumption. Although further research is needed to assess the long-term health impacts of increases in availability and consumption of local edible biodiversity as a result of project interventions, it is hoped that the initial evidence gathered on the feasibility of a long-term approach aimed at diversifying diets and food systems using nutrient-dense, traditional crops can stimulate further action to effectively mobilise and deliver biodiversity to address the significant deficits in micronutrients existing in Kenya.

The project's link with BFN and its international partners UN Environment, FAO and Bioversity International has presented numerous opportunities to share and exchange information and resources deriving from this pilot project. Results from the project have contributed to the tracking of relevant global indicators in the area of biodiversity, health, agriculture and food security.

As the global agencies responsible for implementation and execution, UN Environment, FAO and Bioversity are in fact adequately embedded in the relevant global processes and mechanisms to ensure that project results and outcomes feed into the achievement of the CBD Strategic Plan for Biodiversity 2011-2020 and monitoring of relevant global indicators, such as the new Aichi Biodiversity Targets, the Global Strategy for Plant Conservation (GSPC) indicators, the indicators on agricultural biodiversity embedded in the Global Plan of Action (GPA) of the ITPGRFA, as well as the relevant core indicators of the Sustainable Development Goals and the Committee on World Food Security, of which both Bioversity and FAO are members.

The Busia example has already been used to inform global forums that aim to mainstream biodiversity into sustainable food systems using public procurement and particularly schools as a platform for improving nutrition (Bioversity, 2017; UNSCN, 2017). The project was also included as a Solution in the new [Agriculture & Biodiversity Portal](#) being launched during the World Climate Conference on 16 November 2017 in Bonn, Germany.

It is hoped that the case study from Kenya used in these publications and media tools will raise interest in what other organisations are doing in relation to schools and documenting this, as well as developing new knowledge products on diversifying school meals and diversifying school food procurement. The project has already raised the interest of Kenya's World Food Programme (WFP) office, which recently visited the pilot site. In 2019, WFP will stop funding the national school feeding programme and is looking for sustainable alternatives while it hands activities over to the Government of Kenya.

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## 8.2 Capacity impacts – now and in five years

The main outcomes and impacts of the project are linked to empowering local communities and self-help groups to increase agricultural production of traditional food crops and be able to compete in supplying markets for nutrient-rich foods, in a context where local biodiversity is highly appreciated, particularly by older generations, but where market linkages are wanting and farmers have a hard time finding reliable and steady buyers for their crops. Ensuring that farmers are able to competitively supply food to any future home-grown school meals programme, or other institutional market, will be essential for improving livelihoods and generating broad-based health and economic growth. Currently, the guarantee of a steady supply of fresh vegetables remains a challenge and schools are accustomed to purchasing food from one or more larger traders following government guidelines for contracts and bidding processes.

Subsequent to the rolling out of the Farmer Business School (FBS) in 2016 and training imparted to 25 farmer groups across the seven sub-counties, farmers have started to invest more resources in the production and marketing of indigenous vegetables now that they have better knowledge, capacity and networks. Trainings provided on sustainable agricultural practices and the provision of certified seed from the Kenya Agricultural and Livestock Research Organization (KALRO) have helped farmers scale up their production levels for indigenous vegetables, while guidance on gross margin analysis has increased farmer skills in contract negotiation and in determining an equitable price for their produce.

Prior to the training, a limited number of group members (27%) had attended market and value addition trainings, expecting third parties to undertake market searches on their behalf. This is a historical issue in the region with most projects promising to provide markets, with little or no success. Following the training, group members were more confident about going out to seek their own markets, particularly after learning that institutional markets were open to purchasing ALVs for improved nutrition (during the market survey over 30 institutions expressed an interest in being supplied with ALVs).

With support from the Department of Home Economics of the Ministry of Agriculture nutritionists, training was provided to farmer groups and community members, particularly mothers, on nutrition education. Partners learnt about the many nutrition benefits of indigenous vegetables and through cooking demonstrations were made aware of the importance of a balanced diet, hygiene and appropriate preparation methods that enhance the nutrient content of food. Fruits were the most neglected component of the healthy plate and farmers learned how to best incorporate these in their diets. Turnout at these trainings was very high, indicating considerable interest in the subject, including from non-group members. Further training on value addition, as well as on drying and preservation methods will help farmers reduce post-harvest losses, and ensure year-round supply of traditional vegetables to schools and other buyers. The project has demonstrated that linking entrepreneurial farmers to institutional markets can provide a sustainable solution to address bottlenecks in the utilisation and conservation of local biodiversity while contributing to improved livelihoods. The private sector (hotels, restaurants and learning centres) have already expressed interest in being linked to producers for the supply of nutritious vegetables, and neighbouring counties are interested in replicating the model. This project, and lessons learned, will serve as a model for showcasing not only public-private partnerships but also out-scaling to other counties for improved diets and human well-being.

It is early to assess the downstream impact of these trainings, but it is hoped that it will encourage farmers to build sustainable out-grower schemes, diversify into new enterprises, reach more distant markets and inspire other farmers to learn new production methods and technical skills, improving productivity and profitability.

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## 8.3 Community impacts – now and in 5 years

The bottom-up research approach used in this SRA fits within the community biodiversity management (CBM) strategy of Bioversity International (Shrestha et al. 2013) to ensure:

1. healthy diets for sustainable food systems
2. productive and resilient farms, forests and landscapes
3. effective genetic resources conservation and use.

The approach enables women and men farmers in diversity hotspots to conserve, share and utilise native crop diversity for improved income, nutrition and resilience against economic and climate risks while facilitating gender responsive and social inclusive learning and decision-making processes within the communities. The three specific outcomes to achieve the overarching goal are:

1. community empowerment
2. livelihood development
3. biodiversity conservation.

The many awareness-raising events organised in Busia, particularly the two traditional food fairs prior and during this SRA (section 7, Objective 3), increased community participation in managing biodiversity by changing people's mind-sets and attitudes towards local foods. During the fairs farmers collected and competed for the most comprehensive display of plant parts, seeds, fruit samples and traditional food items. It was also an occasion for farmers to share biodiversity-related information and associated traditional knowledge as well as planting material and seeds, while it enabled the research team to locate new custodians of biodiversity. It is felt that the fairs have contributed in encouraging consumers, schools, youth, policy-makers and farming communities to make continued use of local crops and varieties, thereby contributing to their conservation.

It is hoped that conservation of this diversity will have several positive downstream impacts at the community level; some of these are highlighted below.

### 8.3.1 Economic impacts

Empowering smallholder farmers to meet the demand for traditional foods and providing them with business expertise is expected to increase their incomes by 20%. Their new found skills should enable farmers to:

1. organise themselves and have greater standing in negotiations with the private sector where they can come to the table as equal partners
2. access financial resources so they can take advantage of emerging opportunities, helping them to overcome poverty
3. access institutional and other markets
4. better negotiate farm-gate prices, form companies and own shares in processing centres.

Farmers are already reporting increases in household income although reports are currently only anecdotal. For example, Joyce Momanyi, a widow and housewife from Nang'eni belonging to SINGI reports using profits from the sale of ALV to purchase a digital TV and a solar power system for her home. Joyce is also using the money to pay for her children's school fees.

Economic impacts were measured for the farmer group providing ALVs to Mundika Secondary School. Projected average profits for the smallholder farmer group that supplies 91kg of ALVs to the school per week amount to \$0.15 per kg supplied. This translates into weekly profits of \$13 and yearly profits of roughly \$540. Farmers are also

encouraging neighbouring households to adopt sustainable agricultural practices while generating additional income. They prepare their own manure and sell it at \$10 per bag, and also help neighbours set up their own kitchen gardens at \$15 per household. The school, which is avoiding middle men and purchasing directly from family farms can save up to \$0.10 per kg of ALVs purchased. This sums up to weekly savings of approximately \$9 and yearly savings of \$360.

Further research is required to determine the long-term socio-economic impacts within producer households, but also, in relation to the home-grown school procurement model developed, the economic impact down the entire supply chain and the value transfer to families that are benefiting from the model (Fig. 5). Broad-based economic benefits have been reported and quantified for similar models leading to increased household investments in productive assets (Molinas and de la Mothe, 2010).

Input	Output	Impact	Value creation
US\$ invested in school feeding	No. of children receiving school feeding	1. $\Delta$ Household income	$\Delta$ HH income + Returns from resulting higher investments
		2. $\Delta$ Enrolment	$\Delta$ Productivity $\times$ $\Delta$ Productive life years $=$ $\Delta$ Lifetime earnings
		3. $\Delta$ Attendance	
		4. $\Delta$ Drop-out	
		5. $\Delta$ Cognition	
		6. $\Delta$ Intestinal parasites	
		7. $\Delta$ Micronutrient deficiency	
<b>Wider socio-economic benefits</b>			

**Figure 5.** Value creation and impact of home-grown school meal programs. Source: Molinas and de la Mothe, 2010.

### 8.3.2 Social impacts

Farmers have improved their standing within the community, as they are perceived as improving nutrition while promoting environmental sustainability. Plot establishment on school land and the use of plots as education tools have promoted renewed interest in sustainable agriculture as a profitable business venture, and awareness of environmental issues among younger generations. The linking of farmer groups to schools and health clinics has created employment opportunities for the farmers who now have a steady market for their produce while schools see the relationship of linking to local farmers as part of their social corporate responsibility.

Another important impact of this pilot study was the creation of an enabling environment for local administrators, who, prior to the project, had very little history of working together. The participatory workshop, and subsequent momentum created for the development of the Biodiversity Policy, has created a multi-stakeholder platform for biodiversity for food and nutrition in the County, that brings together the Agriculture, Education, Health and Environment sectors.

### 8.3.3 Environmental impacts

Although the pilot study is not directly monitoring the environmental impacts of the interventions, the African Leafy Vegetables being grown are mostly weedy, semi-cultivated species, that require very little management and inputs. They are well adapted

to growing in poor soils and are more resistant to pests and diseases, thus requiring no pesticide use. The sustainable agricultural practices being promoted – such as raised beds, mandala gardens etc. – are also environmentally-friendly and help prevent soil erosion and preserve soil moisture under drought conditions, thus putting less pressure on available water resources, one of the most limiting factors in scaling up the model. Composting, also being promoted as part of the trainings, helps improve soil quality and increase plant nutrient uptake in an area where soil fertility is steadily declining due to continuous planting (absence of crop rotation) on limited arable land. With the introduction of organic matter, soils are better equipped to retain moisture and resist compaction thus reducing erosion and run off.

Promoting this portfolio of biodiversity, including associated traditional knowledge has an important role in ensuring that agricultural landscapes are sustainable and provide options for future adaptation to a changing climate. Regarding the latter, this body of biodiversity has the potential to provide many of the genetic traits necessary for our future crops to adapt to changed environments, such as increased drought and salinity, or to resist the greater impacts of pests and diseases thereby reducing the need for applied pesticides (Stöber *et al.* 2016). Secondly, enhancing the diversification and resilience of agro-ecosystems improves their capacity to withstand the impacts of predicted climate change scenarios, such as extended periods of drought and increased frequency and intensity of extreme weather events.

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## 8.4 Communication and dissemination activities

Considerable efforts were made in engaging stakeholders both at the local and county level throughout the project. Some of the activities mentioned below are linked to the larger BFN project, but are mentioned because integral to the pilot and to the upscaling and outscaling of project activities. These can be summarised as:

### Strategic level stakeholder engagement

1. On 6 September 2016, within the framework of the 2016 African Green Revolution Forum (AGRF) held in Nairobi, BFN Kenya took part in the ACIAR Food Security Meeting for Africa “A Partners Forum”. A [poster](#) was presented on the approach being used in Western Kenya to link farmers to markets and to promote indigenous vegetable production and consumption.
2. Kenya also took part in the [Democratizing Food Governance Conference](#) (14 Oct 2016) and on 19 October 2016 was a panellist in a side event during the 43<sup>rd</sup> meeting of the Committee on World Food Security (CFS43) (Rome, 17-21 October 2016). The side event, jointly organised by World Vision, FAO, Bioversity International, Scaling-Up Nutrition Movement and the Government of Canada focused on the multi-sectoral nature of scaling up production and utilisation of nutritious foods. Showcasing best practices identified for successful mainstreaming of BFN in Kenya, the National Project Coordinator, delivered a presentation on [Multisectoral approaches to achieving good nutrition in Kenya](#).
3. On 21-22 November 2016 the project team took part in the inaugural [National Nutrition Symposium](#) of the Kenyan Academia and Research SUN Network in Nairobi. The symposium focused on innovative research and policy approaches to inform food, nutrition and public health policy and practice. During the forum, the NPC delivered a presentation on the use of indigenous biodiversity to improve nutrition and food security.
4. The innovative food procurement model developed in Busia was included as a Solution in the new [Agriculture & Biodiversity Portal](#) being launched during the

World Climate Conference on 16 November 2017 in Bonn, Germany. The model is also one of the 10 finalists in the [Farming for Biodiversity](#) competition.

#### Tactical/operation level engagement

Seven stakeholder meetings were held in Busia's seven sub-counties to sensitise stakeholders on the draft biodiversity policy. Stakeholders included women representatives, government officials, fisher folk, traditional healers and medicine men, youth groups, and community leaders. Views were gathered and incorporated in the draft policy, which is awaiting endorsement by the Busia County government. A meeting was also held with the county assembly committee on agriculture environment and land to incorporate their views and mobilise their support.

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## 9 Conclusions

The ACIAR-funded project *Linking Smallholders to Markets* has highlighted the school-to-school extension possibilities and the opportunity of linking to Kenya's Home-grown school feeding initiative to encourage the integration of underutilised, nutrient-dense food.

The project has had a major impact on how farmers perceive, grow and consume African Leafy Vegetables, which are now a source of not only income but are perceived to improve health. ALVs are no longer considered a woman's crop but also a source of livelihoods for the community. The pilot has also built the capacity of farmers to realise they can go out, look and find markets for their produce. They can also successfully develop business plans, plan their production and successfully compete and win tenders launched by government institutions.

Working closely with communities and local institutions for the implementation of activities has ensured groups take ownership and have capacity to run their enterprises vis-à-vis political instability and other economic and environmental vulnerability and shocks.

A further sustainability strategy built into the project is the empowerment, capacity building and sense of ownership the pilot has engendered at the community level. The community-based management approach promoted by the Project is building a strong element of self-reliance and the capacity to mobilise communities to generate their own funds to support activities after project completion. This is complemented by strengthening community linkages with government agencies, non-governmental agencies and private sectors and links to ongoing government and non-governmental activities that will ensure sustainability at the national level.

Wider national promotional, awareness and information-sharing activities campaigns would enhance the sustainability of the model by encouraging others to get involved on a wider scale.

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### 9.1 Recommendations

The pilot study provided preliminary practical experiences in defining and overcoming the barriers and constraints associated with a specific model, linking groups of producers of indigenous leafy vegetables and other underutilised, nutrient-dense foods, via short market chains and the development of entrepreneurial skills, to school feeding programs and procurement programs of other institutions that value good nutrition (e.g. hospitals). Recommendations include:

1. More in-depth studies on impact assessment, including partnership investment.
2. Building upon the existing work by reviewing the lessons learned from the pilot study, defining key knowledge gaps and the likely constraints and opportunities relating to extending this procurement model to diverse situations and geographical contexts.
3. Additional research into addressing many of the primary and secondary research questions that have arisen as a result of the pilot project.
4. Identify additional partnerships that can help roll out the pilot model to a larger number of locations.



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Wasike, V. and Manjella A

- [The perception of local foods in Busia County](#) (2017)
- [Traditional foods: the secret to long life](#) (2017)
- [Once were flowerbeds: home-grown school feeding and nutrition education enhances indigenous vegetable consumption in Busia schools](#) (2016)
- [African leafy vegetables in Mundika kill three birds with one stone](#) (2016)
- [Unity Hotel in Busia serves food for the healthy](#) (2016)

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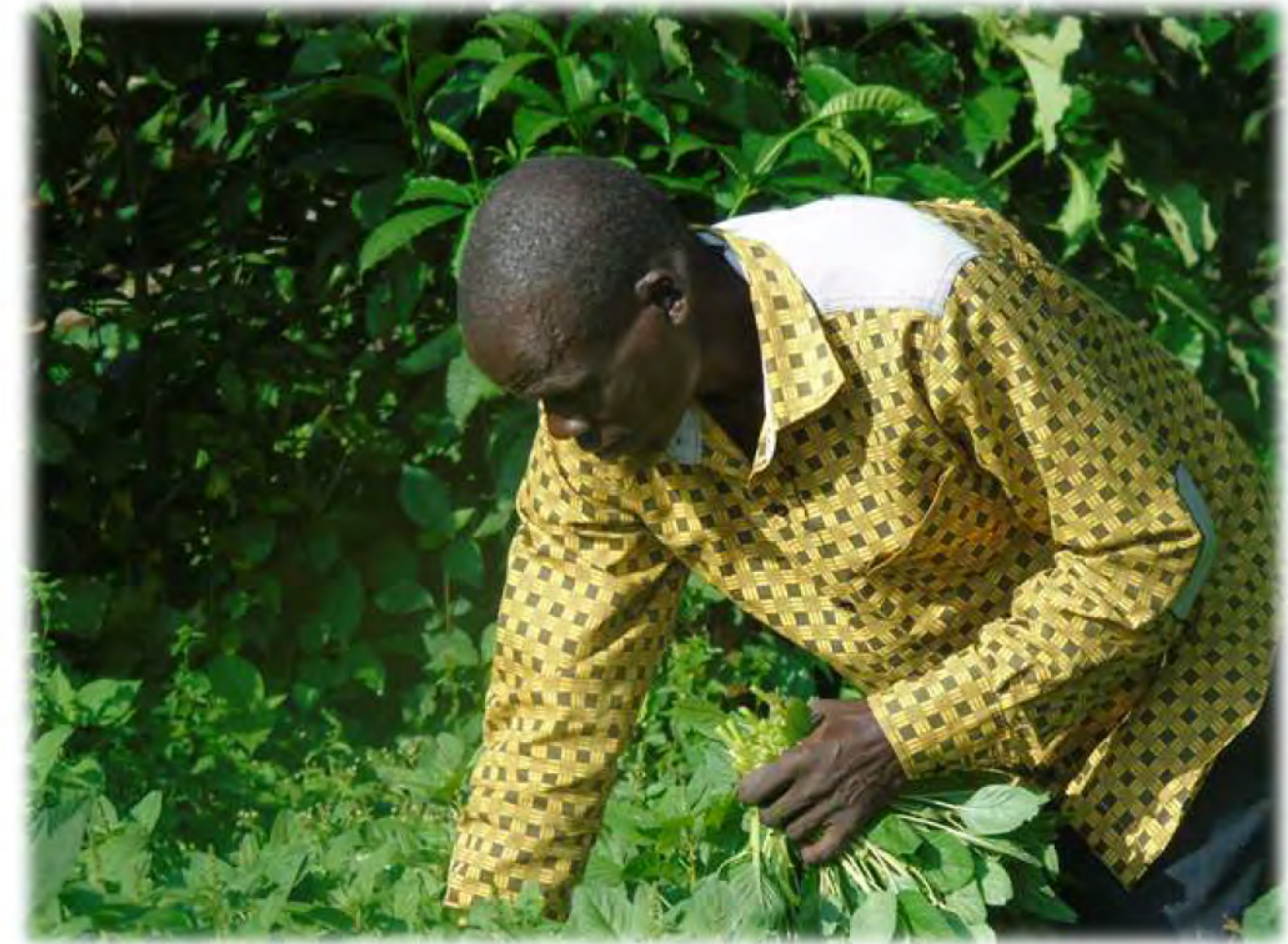
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## **Attachment 1. Linking smallholders to markets**

### **Pilot study on developing value chains for conserving local biodiversity and improving diets in Busia County, Kenya**



## Linking Smallholders to Markets:

Pilot study on developing value chains for conserving local biodiversity and improving diets in Busia County, Kenya

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## Setting the scene

### Busia County

Despite the huge strides in addressing malnutrition in Kenya, food and nutrition insecurity persist in Busia County, located in Western Kenya (Fig.1). Rich in biological diversity, Busia County has a variety of agro-ecological zones suitable for growing a diverse range of plants and sufficient rain, yet is facing severe environmental challenges and is among the poorest and most food insecure counties in Kenya. Large-scale farms have been divided into smaller portions, leaving most farmers trying to earn a living from less than 0.6 hectares of land. Increased pesticide use has been polluting water resources, while food production has been decreasing due to soil erosion. Changing land/resource use and management practices have heavily contributed to loss of biodiversity in Busia County, including the loss of nutritious genetic resources useful for agricultural productivity, sustainability, and resilience to stresses. Other factors include climate change, over-exploitation, drought, floods, and agricultural intensification. Furthermore, changes in eating habits and preferences, and a lack of access to quality seed, has left most Kenyans relying on a handful of food crops for their sustenance, such as maize and beans and to a lesser extent cassava, millet, sweet potatoes, cotton, groundnuts, sorghum, vegetables, fruits, and sugar cane.

**Fig.1** Busia County (in red) sits on the Western side of Kenya bordering Uganda



Aside from trade with neighbouring Uganda, agriculture in Busia remains the largest source of employment and income, with most farmers practicing subsistence agriculture on a mixed crop-livestock production system. Low productivity, limited access to technology, markets, and credit all contribute to painting a grim picture with poverty indices in Busia County ranging from 63% to 74% and over two thirds of the population unable to meet its basic food minimum requirements. Kenya's 2014 demographic and health survey reveals that poverty rates in Busia range from 63% to 74%. Two out of three citizens are unable to meet their basic food needs. 26.6% children under five are stunted, 11% are underweight and 4% are thin due to malnutrition.



## The Solution

Agriculture offers a potential solution to solving malnutrition problems while addressing poverty reduction and enhancing livelihoods. This implies, however, a shift from the production of larger quantities of a few energy-rich staple grains such as maize, wheat, and rice, to a more diversified production system; one that ensures availability and access to a variety of nutritious foods. At the same time, the shift from subsistence agriculture to commercial farming holds great promise for driving economic growth, creating job opportunities, improving livelihoods, and improving the diets of Kenyan households.

Indigenous leafy vegetables represent an important component of Africa's agricultural past, yet they have gradually disappeared from people's diets and fallen into agricultural neglect, leading to huge losses in the diversity of foods available. The limited consumption of fruits, vegetables, legumes, livestock, fish, and forestry products and the reduced ability of agricultural systems to produce nutritious foods has been a key driver of malnutrition worldwide. Only a few species have been fully domesticated. Most are semi-domesticated, and the majority are collected from the wild.

Currently, pockets of virtuous farmers still grow some of these African leafy vegetables (ALVs), mostly for home consumption. Among them are small-scale entrepreneurs (predominantly women and youth) from Busia County belonging to the umbrella CBO Sustainable Income Generating Investment Group (SINGI), who use sustainable crop production methods and have been involved in the ACIAR pilot project *Linking farmers to markets*.

These small-scale entrepreneurs were able to combat the stigma attached to ALVs (food for the poor or the sick), promoting indigenous vegetable consumption, scaling-up production, and securing contracts for the sale of indigenous crops with neighbouring schools, clinics and hotels.



## The Approach

A survey was carried out in October 2013 by the Kenya Agriculture and Livestock Research Organization (KALRO), which identified schools as potential market niches for the sale of these biodiverse commodities. The survey also highlighted the monotony of school meals, which consist mostly of maize and beans, complemented by kale or cabbage, depending on seasonality. Other foods, like spider plant, cowpea leaves, green grams, finger millet, fruits, sweet potato, cassava, boiled banana, chicken, eggs, and fish sometimes find their way into the school menu, but are normally provided to the school by parents as in kind payment for school fees.

In 2015, the ACIAR funded *Linking Smallholders to Markets* pilot study was launched aimed at improving the sustainable production and consumption of nutrient-rich indigenous crops as a means to diversify diets in Busia County, by linking rural entrepreneurs to institutional markets. The Objectives of the pilot study were:

1. To empower community-based organizations and self-help groups, especially made up of women, to supply markets for nutrient-rich foods by using an adapted Farmer Business School approach to improving sustainable production
2. To develop institutional markets (schools, clinics, etc.) and supply chains for nutrient-rich foods by exploring opportunities and developing pilot supply chains that better link rural entrepreneurs and institutional markets as a means to support the improvement of dietary diversity in schools, clinics etc.
3. To raise awareness among target groups of the value of indigenous crops in improving diets by carrying out preliminary nutrition promotion and education around the importance of indigenous crops and fruits and other nutrition-rich food groups in diversifying diets.

In September 2015, as part of the ACIAR *Linking Farmers to Markets* scoping study, a participatory workshop was carried out in Busia to identify the critical production and supply constraints involved in linking the SINGI smallholders to institutional markets, such as schools and clinics, specifically to:

- identify measures needed for strengthening farmer capacity to respond to increased market demand for nutrient-rich crops from institutional markets.
- test the opportunities and barriers for carrying out nutrition education interventions in targeted schools and communities in Busia County to increase the appreciation and use of local nutritious biodiversity to improve dietary diversity



“Let’s join forces in providing our kids with a healthy diet to reduce stunting, wasting and malnutrition in the County and save our local crops from extinction.” – Lorna, a BFN educator

## Successes to date

The key success factor in implementing the *Linking Farmers to Markets* scoping study has been establishing an enabling environment for the testing of a workable food procurement model.

One farmer group began by supplying indigenous vegetables to one school under a negotiated memorandum of understanding. To cut transport costs and avoid food losses, farmers have been growing the vegetables directly on school land. The school purchases the produce at an agreed market price. As a result, the school has a reliable and constant source of quality ALVs, and the farmers have lowered their transport costs and have a dependable buyer for their produce. Now 410 students are benefiting from more diversified meals. Since this initial success, training was provided to 25 farmer groups to build capacity in the sustainable production of ALVs, while nutrition education activities were carried out to improve the capacity of schools and clinics to benefit from ALV consumption. Eight farmer groups have now signed contracts with 13 schools and 1 hospital for the provision of ALVs to be included in their institutional meals. When established directly on school land, the plots double up as educational tools for students, who learn about sustainable agriculture and optimal nutrition, and get hands-on experience in growing and using local crops.

Partners are also collecting nutrition information on ALVs as part of the larger, GEF-funded BFN project and widening scientific knowledge of the benefits of local biodiversity in order to tackle food security and environmental issues. Through implementation of the sustainable food procurement model, the project is also looking at how schools and clinics can offer stable markets and increase demand for local food biodiversity and by so doing, conserve it, in addition to producing benefits around diverse diets and environmental sustainability. As well as being friendlier to the environment, farms that include ALVs in their agricultural systems are more resilient to climate change and provide useful genetic material for breeding future climate-ready crops. Information and experience in implementing the sustainable food procurement model is being used to inform a Biodiversity Policy that is being developed for Busia that recognizes the importance of local biodiversity, including for improved livelihoods and for community health and nutrition.



## Resulting co-benefits

### Social/Community benefits

Farmers have improved their standing within the community, as they are perceived as improving nutrition while promoting environmental sustainability. Plot establishment on school land and the use of plots as education tools have promoted renewed interest in sustainable agriculture as a profitable business venture, and awareness of environmental issues among younger generations. The linking of farmer groups to schools and health clinics has created employment opportunities for the farmers who now have a steady market for their produce, and the schools see the relationship of linking to local farmers as part of their social corporate responsibility.

### Water

The sustainable agricultural practices promoted by SINGI, such as raised beds, keyhole gardens and mandala gardens, help prevent soil erosion and improve water conservation during the dry season. Composting helps to neutralize soil PH and improves the cation exchange capacity of soil, increasing its ability to withhold nutrients for plant use. The heavier soils are also better equipped to retain water and resist compaction, thus reducing erosion and run-off. As no chemicals and pesticides are used in the production of ALVs, water pollution is also significantly reduced.

### Food Security/Nutrition

The project plans to monitor the nutritional and food security impacts of introducing ALVs to school meals and promoting these crops in kitchen gardens. Initial reports from schools indicate that students with specific dietary needs and suffering from ulcers have reduced the demand for medication and are now able to enjoy more varied meals. School caterers have attended cooking demonstrations that help preserve the nutrient content of ALVs, and schools will provide data on reduced susceptibility to illness. Increased academic performance could also be used as an indirect measure of the positive effects of diversifying school diets.

### Economic benefits

Early projections for the dry season, when market prices for leafy greens are higher, show that schools can save up to US\$0.10 per Kg of ALVs purchased. This sums up to weekly savings of approximately US\$9 and yearly savings of US\$360. Projected average profits for one smallholder farmer group who supplies 91Kg of ALVs to the school per week amount to US\$0.15 per Kg supplied. This translates into weekly profits of US\$13 and yearly profits of roughly US\$540. Farmers are also encouraging neighbouring households to adopt sustainable agricultural practices while generating additional income. They prepare their own manure and sell it at US\$10 per bag and help neighbours set up their own kitchen gardens at US\$15 per household.

### Climate

African indigenous vegetables are hardier and more resilient to biotic and abiotic stresses than non-native crops. Most traditional varieties are drought tolerant and mature faster than exotic crops, representing an important food option if rains fail or become more erratic - one of the predicted outcomes of climate change. Most are also pest and disease resistant and are especially suitable for the resource-poor, who can integrate a selection of them into their farming system or agro-ecosystem, which are frequently complex, diverse, and risk-prone.



### Replication and Scale

Initially relying on grant funding, farming of ALVs as a profitable business is gaining ground in Busia County, and farmers are increasingly willing to invest more resources in ALV production and marketing. Working with farmer group and schools, a workable procurement model was tested and validated where farmer groups (production) have been linked to a market (schools) for the supply of ALVs at a predetermined negotiated price. By demonstrating durable demand at known and fair prices, ALVs are now increasingly appearing in markets and school meals and will likely lead to scaling up in more places over time. Increasing the farmers' business capacity has ensured that groups can now seek and participate in competitive procurement processes for the supply of ALVs, thereby ensuring sustainability. The farmers have even opened up their own commercial outlet along the Busia road.

### Return on investment (ROI)

In economic terms, the ROI for the pilot project is 39%. The budget amounted to US\$150,000 for 2 years, including extra support from the GEF-funded BFN project and the MacArthur Foundation. Returns from the sale of ALVs amount to US\$52,200 per season, for four planting seasons. The biggest return, however, is the farmers renewed sense of empowerment. "I never imagined I could go out and find my own market" said a lady farmer from Busia, as well as improved nutrition in schools and clinics. Funds supported a participatory feasibility workshop to explore strengths, constraints and opportunities of linking farmers to institutional markets, to develop a farmer business school model and its subsequent rolling out, to acquire and distribute quality seed to the farmers, and to carry out nutrition education activities in local schools and clinics. Additional funds would allow the scaling-up of this model.



"I am happy that my wife is still using our local foods and culture... that is the reason I am still alive, healthy and strong today." -96 year old Jacob Ochiel

## **Attachment 2. Activity progress report 2**

**Linking smallholders to markets pilot study on developing value chains for conserving local biodiversity and improving diets, November 2016**



## Progress report 2

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**[Linking smallholders to markets: pilot study on developing value chains for conserving local biodiversity and improving diets]**

**Elsie Kangai  
Program Manager, CABE**

**November 2016**

A project being implemented in collaboration with Kenya Agricultural & Livestock Research Organisation (KALRO), Bioversity International and Sustainable Income Generative Initiative (SINGI), with funding from Australian Centre for International Agricultural Research (ACIAR)



## INTRODUCTION

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CABE, with funding from Bioversity International is implementing and testing an adapted Farmer Business School (FBS) model and also facilitating development of a supply chain model for African Leafy Vegetables, as part of the joint ACIAR/MacArthur project “Linking smallholders to markets”. The overall aim of the pilot project is promoting local nutritious crops and linking farmers to markets by developing markets for identified nutrient rich indigenous species. The project is being piloted in Busia County, Kenya with 625 farmers in 24 farmer groups.

### **Objectives of the project**

1. To empower Community Based Organisations (CBOs) and Self Help Groups (SHGs), especially women, to supply markets for nutrient rich foods
2. To develop institutional markets and supply chains for nutrient-rich foods
3. To raise awareness among target groups of the value of indigenous crops in improving diets.

The main interventions of the project are:

- i. Building capacity in sustainable production of nutrient –rich crops.
- ii. Strengthening smallholder farmers’ capacity to respond to market demands for these crops.
- iii. Nutritional education in schools and communities to increase awareness and use of local nutritional biodiversity to improve dietary diversity.



This report highlights the activities which have been undertaken to meet the above objectives in the seven sub counties of Busia in the months of October and part of November 2016.

#### ACTIVITIES UNDERTAKEN DURING THE PERIOD

1. Conduct training sessions and demonstrations for ALVs farmer groups covering the FBS sessions 9-13
2. Build capacity of groups to understand marketing and markets.
3. Conduct a market survey and present major findings from the market surveys
4. Conduct business plan training workshop with selected farmer group representatives as a basis of business plan development at group level sessions 14- 23 and session 26
5. Facilitate development of group business plans for selected ALV enterprises

#### EXPECTED OUTPUTS

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1. 24 groups trained on nutrition education
  2. 24 demonstrations on a Healthy food plate held
  3. Market surveys conducted by group representatives for 24 groups
  4. 48 group representatives trained on business plan development
  5. 24 group business plans developed focusing on ALV enterprises.
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## ACHIEVEMENTS

Part 1: Diagnosis and planning	FBS Sessions/activity	Module/activity	Target (number/units)	Actual (number/units)	Percentage (%) attendance
9	Understanding Under-nutrition	Module 2	206	136	66.02
10	Food Groups and Nutrition	Module 2	193	129	66.84
11	Healthy Plate	Module 2	193	129	66.84
12	Understanding Marketing and Markets	Module 3	449	288	64.14
	Market survey		449	288	64.14
13	Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action	Module 3			
14	Developing a Vision and Goal for the Farm	Module 4	449	288	64.14
15	Understanding Enterprise Profitability	Module 4	449	288	64.14
16	Choosing an Enterprise	Module 5	447	241	53.91
17	Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan	Module 5	447	239	53.47
18	Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) Risks and Risk Management	Module 5	447	239	53.47
19	Preparing a Farm Business Plan and Action Plan	Module 5	206	136	66.02
20	Overview of Record Keeping	Module 6	193	129	66.84
21	Practice of Keeping Farm Business Records	Module 6	193	129	66.84
22	Savings and Mobilizing Finance	Module 7	138	60	43.48
23	Group Marketing and Buying	Module 7	72	38	52.78
	Group business plan development (Adoption)		24	On-going	

Part 2: Implementing					
26	Assessing and Managing Business Risks	Module 7	45	44	97.78
Part 4: Other activities					
	Cooking demonstrations conducted		45	44	97.78
	Nuclear farms established		45		

## **1. Conduct training sessions and demonstrations for ALVs farmer groups covering the FBS sessions 9-13**

### **1.1 Highlights of nutrition education training**

CABE facilitated trainings for 24 farmer groups on nutrition in the seven sub counties with the support from nutritionists from the Ministry of Agriculture, Home Economics Department. The nutritionists emphasized that under-nutrition had been overlooked and thus, had negatively affected the health of households. They stated that children were most vulnerable, going by the high number of malnourished children in the county.

The beneficiaries earlier before the training believed that eating beef/meat was a sign of good nutrition only to realize that indigenous vegetables had many nutritional benefits they needed to ensure good health.

The participants understood that some of the causes of malnutrition are inadequate nutritional information, limited size and access to farming land, lack of women empowerment and poor diets among others. Blame games between couples in affected families had led to diverse effects. Malnutrition has led to low-birth weight babies (high infancy deaths), slow mental and physical development thus affecting the body's ability to fight illnesses and infections, poor school academic performance and decreased productivity and incomes.

### **1.2 Highlights of cooking demonstration for 'A healthy plate'**

Through cooking demonstrations, the farmers realised that the common food crops locally produced and consumed are sufficient in providing balanced diets for feeding in households. The African leafy vegetables such as amaranth, spider herb, pumpkin leaves, black night shade and cowpeas are a major source of micronutrients which are important for health and vitamins which enhances immunity and prevent diseases and also rich in iron which helps in blood formation. They learnt that human body absorb the rich nutrients in ALVs when they are prepared to maintain the green colouring matter. Farmers also learned that fruits should be cut when ready for immediate consumption to avoid losing vitamins.



*Figure 1: demonstration of different meals to sum up as a healthy plate (left) while a farmer group is trained on nutrition in collaboration with HOMEc officer (right)*

The nutritionists/HOMEcOs practically demonstrated how the healthy plates are prepared and served. The farmers acknowledged that they over boil vegetables and in the process make them lose the vitamins. The group members acknowledged that the training was very important because some of them did not know the nutritious value of the vegetables. They also agreed that normally, they don't balance their plates at home. They promised to embrace the healthy plate always. Fruits were the most neglected component of the healthy plate. They were surprised to learn that fruits are only cut open when it's time to eat and that vitamins are lost if cut open earlier.

## **Observations**





1. Membership turnout was high indicating their interests in understanding the nutritional value of ALVs and how it impacts diets and health.
2. Majority members who are fish eaters understood how to integrate ALVs in diets and their importance to human bodies and health.
3. The experience was so exciting that even some community members enjoined to learn together with group members.
4. Many old women (over 65 years) who preferred overcooked ALVs realized that overcooking kills all the nutrients and renders the vegetable useless to our bodies.

## **2. Build capacity of groups to understand marketing and conduct a market survey.**

The trainings focused on key elements of marketing, its processes and how to gather information on markets as well as to exploit existing opportunities. With the assistance from the CABE Liaison officers, two members from each of the 24 farmer groups from 7 sub counties were dispatched with a simplified marketing tool to conduct a survey from various institutions, mainly schools and hospitals. The aim of conducting market surveys was to acquire background information on the feeding programs and potential demand and market requirements, as pertaining ALVs. The exercise also helped the farmers discover opportunities and gaps in the market for proactive market plan development. The institutions had diverse views on African leafy vegetables.

After the surveys, business pitching was done in some potential institutions, whereby ALV samples were presented by the marketing groups, accompanied by the CABE Agri-preneurship advisor and Project Coordinator in efforts to strike a deal with the institution (see figure 2A). The efforts yielded with several institutions requesting for supplies of vegetables, first to the staff and children with special diet and promised to upscale demand in January 2017. Other schools advised the farmer groups to present them with written document showing their interest to supply to the schools while they await announcement of tenders.



*Figure 2A marketing group from three farmers groups in Samia Sub County present their vegetable samples at Bunde institute during market linkage meeting*

Following the market survey and business pitching conducted by the selected marketing team from each farmer group, institutions with interest in consuming the ALVs were identified and presented in Annex 1. Some institutions requested the farmer groups to begin supplying them with vegetables for the staff, which was a positive sign that institutional market linkages were imminent. Since this period coincided with national exams and school closure, supply to students was not possible and hence no contracts were signed during the period.

### ***Observations***

1. After the market surveys, group members were more confident to seek more markets and were no longer sceptical especially after seeing that the institutional markets were very interested in the ALVs.
2. While some school representatives advised the groups to wait for the tendering process, others were expected to sign a contract in the beginning of the year after the schools re-opened.

**3. Conduct business plan training workshop with selected farmer group representatives as a basis of business plan development at group level sessions 14- 23 and session 26**

ALV beneficiaries needed to develop farm business plans to enable them record the most important decisions and actions affecting the operation of their farm business. The FBS model provided this opportunity to make sure that the targeted beneficiaries make plans and strive to adhere to it, in a way that makes their farms more profitable. Two representatives from each of the 24 groups participated in the three-day business plan training workshop held at the Busia ATC. The training was practical-based in that during the three days, the group representatives were developing their draft group business plans alongside the trainings (see figure 3). These are being refined and shared at the group level with the assistance of CABE Liaison Officers.



*Figure 3: A team of farmer group representatives at a workshop during business plan development training (left) while a group of farmers developing a sample business plan (right)*

## SUCCESS STORY 1

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### ALVS PROJECT'S BENEFICIARY FARMER CHOOSES VEGETABLES OVER MAIZE, A STAPLE IN BUSIA COUNTY

#### Story of Joyce Momanyi

Upon the sudden demise of her beloved husband in 2006, Joyce Momanyi, a housewife from Nang'eni (*a small village in Nambale Sub County, Busia County*) was sure that everything was crumbling. Convincing her otherwise was difficult because she depended on her husband on almost everything. In Nang'eni village, depending on husbands for economic provisions is a dogmatic orthodox among the villagers that most women don't think of being independent. Joyce, with two children, had a difficult time trying to establish how she will run the family and most importantly, how she will utilize the five acre piece of land her husband left behind.



Figure 4: Joyce Momanyi tending to her vegetable farm

She decided to use most of the land for maize production because everyone else in the village was producing maize. The maize did very well and after harvesting, she went to sell it in a nearby local market but unfortunately, she **did not make much profit** because the market price had been lowered extremely. This was because the whole village had produced maize in that season with most of them selling in the same market as Joyce. Joyce was not happy because she had spent a lot of resources and time on the production of maize. Resultantly, an idea came to her to try the production of African Leafy Vegetables, a decision she says has completely transformed her life to date.



Joyce decided to commit a quarter an acre of her land to ALV production to test the waters of the venture. She planted crotalaria, night shade and amaranth in the piece for a start. What compelled her was the fact that ALVs, as compared to maize, take a short period of time to get ready for the market. In just 3-4 weeks the vegetables were ready and to her surprise, buyers were already coming to ask for them from her home. Sometimes, she woke up in the morning to find her customers lined up waiting. Joyce says that she really felt encouraged with the kind of market demand she has seen in ALVs. *“My neighbours are still venturing into maize production because they do not know the advantages of ALV production. “ALVs take only 3 weeks to 1 month to get ready for the market while maize takes even 5 months to mature”.*

As a widow, **ALV production has changed Joyce’s life**. Through the sales of ALVs, Joyce has acquired a digital TV (worth Ksh36,000), a solar and a D-light from M-KOPA on hire purchase. “I paid Ksh100 daily for the TV, money that was easily available from my daily ALV sales”. Joyce has also managed to take her children to school; one in primary and the other in Secondary School. She says that she is sure that through ALV production, she has burgeoned the economy of her household and bets that the spirit of her husband must be proud of her.

She was very **motivated** and decided to **fully venture into ALV production**, expanding her farm by another quarter an acre. The more she expanded her ALV farm, the more her clients increased. Interestingly, Joyce asserts that the ALV project implemented by *CABE, Bioversity International* and *KALRO* came at the perfect time for her. She is overwhelmed by the timeliness of the project because she **needed to grow bigger as a farmer**. She was happy about the farmer business school trainings and most fundamentally the marketing bit as trained by a CABE liaison officer.

Joyce decided to form a group of young widows and elderly mothers to assist them in changing their lifestyles through ALV production and marketing. The group “Great Sisters Women Group” consists of 11 females and 3 males. It was then registered to benefit from the ALV project and trainings conducted by CABE.



Figure 2: Great sisters W.G during a nutritional training in collaboration with Ministry of Agriculture (HOMEC officer)

Together with the officers, the group **formed a marketing committee** and sourced for markets. She was among the marketing committee and was excited when one institution, **Esibembe secondary school agreed to be their market**. Joyce could not believe how much her markets were expanding. She decided to **expand the size of her production** land by another 1 acre, after seeing the demand of her market during a business plan training conducted to the group.

Joyce has also **decided to venture into seed production** to cut on the seed purchase costs as advised by CABE liaison officer. She says she **will sell extra seeds** to her group members. She thanks CABE for teaching her on the **new production technologies** which she promises **to embrace and produce in and out of season**. She also said, *“How could an ordinary farmer like me have known that it is possible to make a school your market? I am so grateful”*.



Figure 3; A piece of farm dedicated by Joyce for seed multiplication (left) while Joyce presents her business plan during a workshop held at Busia ATC(centre)Stella, a group member of Great Sisters produces ALVs in a piece of given to her by Joyce(right)



Joyce has **already started helping her group members** who are young widows and elderly mothers with land to produce ALVs. She **encourages and advices the group members** to remain motivated and expand their farms for production. The group members call her their mentor in ALV farming.

### **Reflections on the FBS Model**

The FBS approach is good since it has guided the project systematically towards ensuring that the capacity of farmer groups is strengthened to supply institutional markets and improve dietary diversification in households for enhanced nutrition security. However, model creates an ideal situation that may not be practical with the farmer groups in that the facilitator is supposed to divide the farmers/trainees into focused group discussions units yet the number of participants from each group sometimes is low thus only allowing one group discussion unit. The other engagement of the participants especially women have been constrained by time allocated for each session. Most of the group members are parents who expect the training to be brief (a maximum of 2 hours) because they have other responsibilities. Forming group discussions takes more time.

The second critical issue for reflection is that the FBS model is built around establishing market linkages for ALVs yet it has not factored in building capacity in production. Although CABE made some efforts to set up seven (7) nucleus farms, the majority of group members need sensitization on improved ALV production technologies and technological innovations which will equip them to have year-round supplies. As it is, with weak production skills and strategies, the farmers may not be in a position to sustain their already acquired market.

## ANNEXED ACHIEVEMENTS

### ANNEX 1: MARKET SURVEY SUMMARY

Group	Location	Activity	Remarks
<b>BUNYALA</b>			
Usawa IV Self Help Group	Bunyala West	Market survey	<ul style="list-style-type: none"> <li>• <b>John Osogo Sec. School</b> willing to introduce ALVs in the students feeding programme from January.</li> <li>• <b>St. Benedicts High School</b> willing to introduce ALVs to their students from January.</li> <li>• <b>St. Cecilia Namanya Girls Sec. School</b> willing to introduce ALVs to the teaching staff.</li> </ul>
Openji Youth Group	Bunyala North	Market survey	<ul style="list-style-type: none"> <li>• <b>Sisenye Sec. School</b> willing to introduce ALVs to their students from January.</li> <li>• <b>St. Trizer Mundere Girls Sec. School</b> needs to first consult with other stakeholders and give feedback later.</li> </ul>
<b>Matayos</b>			
Mabale Dynamic	Siteko (B)	Market survey	<ul style="list-style-type: none"> <li>• <b>Our Lady Girls Sec. School</b> willing to introduce ALVs to teaching staff.</li> <li>• <b>Burumba Sec. School</b> willing to introduce ALVs to teaching staff.</li> <li>• <b>Tanaka Nursing Home</b> ready to introduce ALVs to their feeding programme once assured of sustainable supply.</li> </ul>



Umoja Widows Women Group	Bwamani	Market survey	<ul style="list-style-type: none"> <li>• <b>Buyofu Sec. School</b> the principal promised to share with the school BOG and give a feedback before closure.</li> <li>• <b>Mayenje Sec. School</b> willing to introduce ALVs to students feeding programme from January.</li> </ul>
Nasewa Mothers Union	Nasewa	Market survey	<ul style="list-style-type: none"> <li>• <b>Nasewa Sec. School</b> willing to introduce ALVs to teaching staff.</li> <li>• <b>Lwanyia Girls Sec. School</b> willing to introduce ALVs to teaching staff.</li> <li>• <b>Mabunge Sec School</b> willing to introduce ALVs to staff and students with special diets e.g. alcers.</li> </ul>
Edama SHG	Nasira	Market survey	<ul style="list-style-type: none"> <li>• <b>St Augustine high School</b> in Nasira ready to introduce ALV in January</li> </ul>
NasiaKhukholere Alala SHG	Nasira	Market survey	<ul style="list-style-type: none"> <li>• <b>Nasira AC</b> ready to introduce ALV in January</li> </ul>
MusikomaUshirika Church	Musikoma		<ul style="list-style-type: none"> <li>• <b>Busibwabo Secondary</b> ready to introduce ALV in January</li> </ul>
Namalenga Water and Irrigation	Esikulu	Market survey	<ul style="list-style-type: none"> <li>• <b>Mulembe Hotel</b> discussion ongoing</li> </ul>
MuyafwaTuinuan e	Muyafwa	Market survey	<ul style="list-style-type: none"> <li>• <b>Muyafwa Secondary School</b> ready to introduce ALV in January</li> <li>• <b>St Jude Nangoma</b> ready to introduce ALV in January</li> </ul>
<ul style="list-style-type: none"> <li>• Teso south</li> </ul>			
Fanyakazi	Amaase	Market survey	<ul style="list-style-type: none"> <li>• <b>St. Teresa's girls Chakol</b> willing to introduce ALVs to staff</li> </ul>

			<p>and students with special diets e.g. alcers.</p> <ul style="list-style-type: none"> <li>• <b>St MonicaChakol Girls High School</b> and <b>St. Joseph's Secondary School</b> requested them to wait for next year when the tenders are announced for them to apply.</li> </ul>
Katamakisi	Okatekok	Market survey	<ul style="list-style-type: none"> <li>• <b>St. Jacobs Kaliwa;</b> Responded positively.Samples to be taken in January when the schools open. For a start, the group will supply 2kgs every day for two days in a week to the teachers and 30kgs for the students weekly totalling to 36kgs every week.</li> <li>• <b>St. Michael Apatit;</b> willing to introduce ALVs in their feeding program. Specifics to be finalised in January.</li> <li>• <b>St. Elizabeth Okatekok;</b> responded positively to the project.The group had a link to the school because one of the group members is the board chair of the school.</li> </ul>
Nambale			
Great Sisters &Tumaini	Nangeni	Market survey	<ul style="list-style-type: none"> <li>• Visited <b>Esibembe secondary</b> during their market survey and the school requested for supply right away.Begun supplying the school with 30kgs a week (on Wednesdays and Fridays- 15kgs each day).A tendering MOU will be signed in January 2017.</li> </ul>
Ayami	Ayami	Market survey	<ul style="list-style-type: none"> <li>• <b>Nambale High School;</b> Willing to introduce ALVs in their feeding program. Needed 200kgs a week starting next year.</li> <li>• <b>St. James Model Academy;</b> Willing to introduce ALVs in its feeding program.</li> <li>• <b>Nambale Primary School;</b> Willing to introduce ALVs in its feeding program</li> </ul>

Umoja	Sidende	Market survey	<ul style="list-style-type: none"> <li>Reached <b>Munami secondary school</b> which showed interest.</li> <li>The school needed vegetables worth ksh 300 weekly.</li> <li>There was no standard unit of measure yet because the farmers just measured the vegetables with their hands just as commonly done in the local markets.</li> </ul>
<b>TESO NORTH</b>			
Osia	Kamuriai	Market survey	<ul style="list-style-type: none"> <li>The marketing team visited <b>Kamuriai and Kekalet</b> secondary schools with samples of ALV vegetables, teachers were excited and equally surprised by the level of farmer innovation, supply to start in January</li> </ul>
Agong'et New Generation	Okuleu	Market survey	<ul style="list-style-type: none"> <li>The marketing team visited <b>St. Thomas Amagoro, St. Joseph Kocholia, Albert Ekirapa schools</b> and successfully discussed with school administrations and agreed to start supply January</li> </ul>
Hill star	Okuleu	Market survey	<ul style="list-style-type: none"> <li>The team visited <b>Kicholia hospital, Abolo school and moding schools</b>, the management for hospital accepted but wanted to verify the production sites for quality. The schools will engage in further discussion after schools open in January</li> </ul>
<b>BUTULA</b>			
Konjera	Mariachi north	Market survey	<ul style="list-style-type: none"> <li><b>Tingolo and Indangalasia secondary</b> schools have promised to consider taking ALV and try out to students in January</li> </ul>
Kilimosasa	Bujumba	Market survey	<ul style="list-style-type: none"> <li>Identified schools-Sirihaya, Buriya and Bujumba. Farmers advised to apply for tenders at the beginning of the year.</li> </ul>
<b>SAMIA</b>			

Otakwenya	Bwiri	Market survey	<ul style="list-style-type: none"> <li>Group members already selling ALVs to teachers at Bumbe technical institute.</li> </ul>
Busujo CABE table banking	Nanguba	Market survey	<ul style="list-style-type: none"> <li>Already selling ALVs to teachers from Bumbe technical institute and Busijo secondary school.</li> <li>Needs a follow up for Nangina Hospital</li> </ul>
Matunda farmers	Nanguba	Market survey	<ul style="list-style-type: none"> <li>Already marketing ALVs to teachers from Bumbe technical institute.</li> </ul>

**N/B**

*Samia groups have formed one marketing committee and representing three groups. These farmer groups (Otakwenya, Busijo CABE table banking and Matunda farmers) came together to strengthen their enterprises through collective marketing.*

#### ANNEX 2: MARKET LINKAGES ESTABLISHED SO FAR

<b>GROUP</b>	<b>LINKED MARKETS</b>	<b>VARIETIES SUPPLIED</b>	<b>TOTAL AMOUNT (Kshs)</b>	<b>REMARKS</b>
Konjerashg	Tingolo sec school	Cowpeas, black night shade and spider plant	550	11kgs sold for staff only as no official agreement.

Otahwenya, busijomu ungano table banking and matunda groups	Bumbe institute,	Slender leaf, cowpeas, black night shade, jute mallow, spider herb, pumpkin leaf	500	The supply is only for staff and nutrition class practical. The institution is streamlining their kitchen to incorporate the African leafy vegetables consumption
	Busijo secondary	Slender leaf, cowpeas, black night shade, jute mallow, spider herb, pumpkin leaf	1050	The supply is only for teachers but students to use at the beginning of the year.
Tumaini SHG & Great Sisters W.G	Esibembe Sec School.	Slender leaf, cowpeas, black night shade, spider herb	7200	Coming from same locality, the two groups merged to sale collectively. The school requested supply of 30kg of vegetables twice a week totaling to 240 kgs supplied in four weeks
Umoja SHG	Munami Sec School	Slender leaf, cowpeas, black night shade, spider herb	900	The school requested farmers to supply staff with vegetables worth 300 shillings per week

### ANNEX 3 PICTORIALS



*Figure 5 training session at katamakisi Kadumutu SHG showing the number of participants, a challenge during grouping them during trainings (left) while a crop affected by pests as a challenge faced by farmers during production, a topic not included in the model (centre and right)*

**ANNEX 4: BFN-MARKET LINKAGES LIFE OF PROJECT (LOP) AS AT 10<sup>TH</sup> NOVEMBER, 2016**

Part 1: Diagnosis and planning	FBS Sessions/activity	Module/activity	Target (number/units)	Actual (number/units)	Percentage (%) attendance
Planning phase	FBS Roll-out workshop	Participation in FBS Roll-out workshop	38	29	76.32
Planning phase	Group capacity assessment	Group profiling & capacity assessment	37	29	78.38
1	Rationale of a Farmer Business School and Developing Group Ownership	Module 1	449	288	64.14
2	Group Formation and Strengthening	Module 1	449	288	64.14
3	Individual and Group Capacity Assessment	Module 1	449	288	64.14
4	Learning and Working Together	Module 1	449	288	64.14
5	Leadership and Management	Module 1	449	288	64.14
6	Farming as a Business	Module 2	447	241	53.91
7	Gendered Value-Chain Analysis	Module 2	447	239	53.47
8	The Farmer as an Entrepreneur and Farm Business Profitability	Module 2	447	239	53.47
9	Understanding Under-nutrition	Module 2	206	136	66.02
10	Food Groups and Nutrition	Module 2	193	129	66.84
11	Healthy Plate	Module 2	193	129	66.84
12	Understanding Marketing and Markets	Module 3	138	60	43.48
	Market survey		72	38	52.78
13	Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action	Module 3			

14	Developing a Vision and Goal for the Farm	Module 4	45	44	97.78
15	Understanding Enterprise Profitability	Module 4	45	44	97.78
16	Choosing an Enterprise	Module 5	45	44	97.78
17	Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan	Module 5	45	44	97.78
18	Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) Risks and Risk Management	Module 5	45	44	97.78
19	Preparing a Farm Business Plan and Action Plan	Module 5	45	44	97.78
20	Overview of Record Keeping	Module 6	45	44	97.78
21	Practice of Keeping Farm Business Records	Module 6	45	44	97.78
22	Savings and Mobilizing Finance	Module 7	45	44	97.78
23	Group Marketing and Buying	Module 7	45	44	97.78
	Group business plan development (Adoption)				
<b>Part 2: Implementing</b>					
24	Understanding Contract Farming and Appraisal	Module 7			
25	Doing Business in Kenya and Understanding the Procurement System Process	Module 7			
26	Assessing and Managing Business Risks	Module 7	45	44	97.78
27	Benchmarking	Module 7			
28	Characteristics of a Successful Entrepreneur	Module 7	447	261	58.39
29	Value Addition	Module 7			
<b>Part 3: Evaluating and Re-planning</b>					
30	Introduction to End-of-Season Evaluations	Module 8			
	FBS reflections	Module 8			
<b>Part 4: Other activities</b>					



	Cooking demonstrations conducted		24	21	87.50
	Nuclear farms established		8		
	Anchor farmers identified		48	48	100.00
	Committees established		48	48	100.00



## **Attachment 3. FBS Reflections Workshop, March 2017**



# **FBS Reflections Workshop**

**Busia ATC**

**Thursday 24 March 2017**

# Outline of presentation

- Historical overview
- Board of Directors
- Staff
- Projects

# Historical overview

- CAFE was established as a knowledge sharing organization under the Non-Governmental Coordination Act of 1990 of Kenya.
- CAFE was founded in September 2003 in the Netherlands and one year later, it was formally registered in Kenya.
- CAFE works to enhance and improve the welfare of smallholder and youth entrepreneurs in Africa.
- Mobilising support, linking them to market and non-market agencies, protecting their rights and assisting them to improve their entrepreneurship

# CABE Founding Members (2004-2016)

Hannington Odame  
PhD Student  
ISS, the Hague,  
The Netherlands

Nicky Pouw  
PhD Student  
ISS, the Hague,  
The Netherlands

David Wafula  
MSc Student  
ISS, the Hague,  
The Netherlands



# Board of Directors (2016-2019)



Dr. Nicky Pouw



Mr. James Mhwika



Mr. David Wafula



Mr. Goudian Gwademba



Ms. Stella Kabuga



Ms. Regina Akumu

**EXECUTIVE DIRECTOR**



Dr. Hannington Odame

**PROGRAM MANAGER**



Ms. Elsie Kangai

**Policy & Programme**



Ms. Lucy Adoyo



Mr. David Kanda



Ms. Maureen Akwara

**Finance**



Mr. Dancun Akhobe

(Accountant)



Mr. Christopher Bwire

(Accounts Ass.)

**Administration**



Mr. Micky Abachi

(Admin Support)



Ms. Susan Mboonzi

(Admin Support)



Ms. Nereah Ouma

(Admin. Secretary)



Ms. Joyce Mbingo

(Project Coordinator)



Mr. Dancun Ombede

(Agribusiness Advisor)

Agro-Enterprise Advisor

(Livestock)



Catherine Mugabe (Liason Officer)



Didimus Odhiambo (Liason Officer)



Fredrick Owino (Liason Officer)



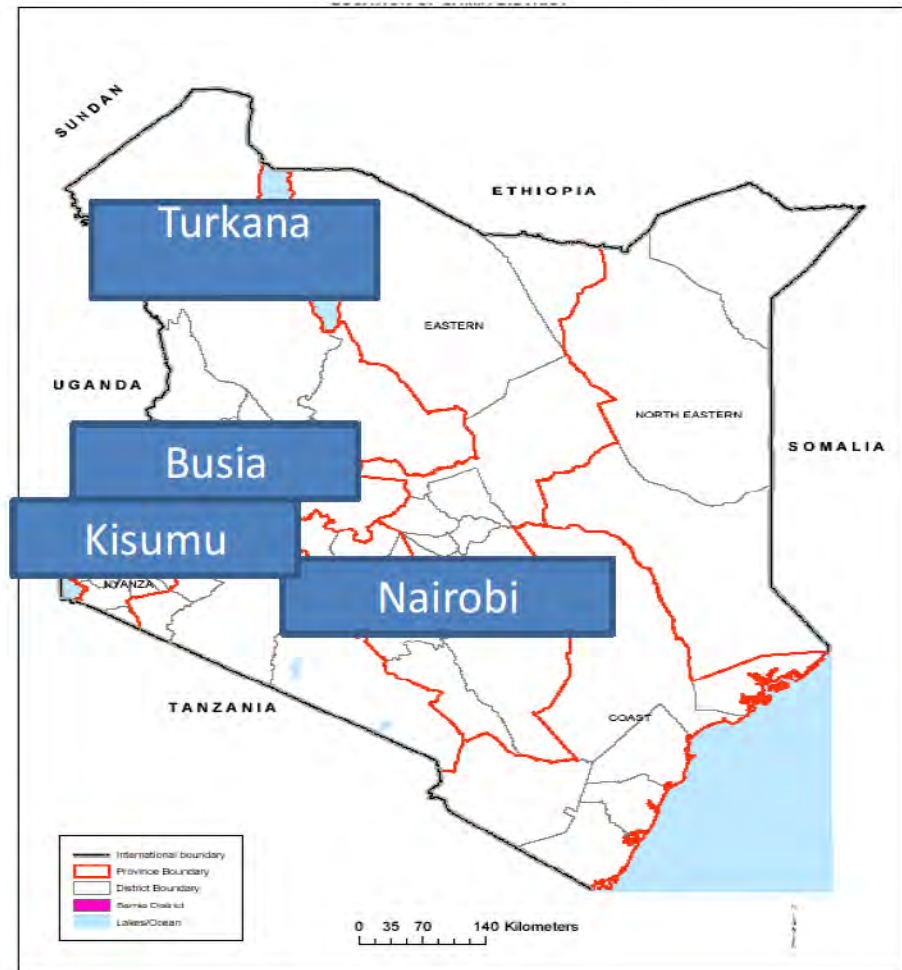
Fredrick Otieno (Liason Officer)

# Counties where CABE is working in Kenya

☐ CABE has offices in Nairobi, Busia and Turkana Counties and also in Kisumu

☐ CABE addresses the disconnect between small farmers/youth and policymakers through:

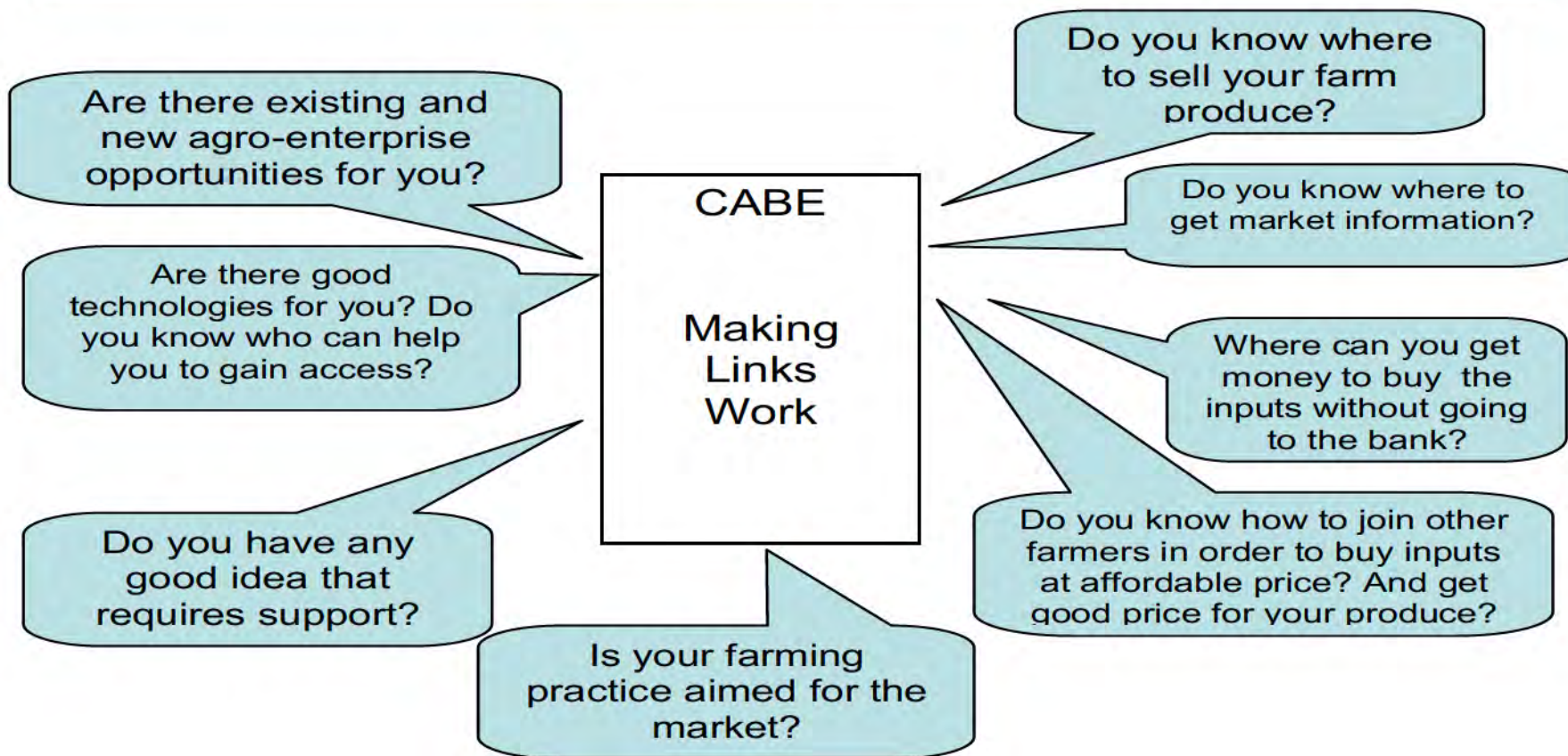
- Sustainable livelihoods
- Entrepreneurship
- Knowledge learning
- Innovation systems
- Policy process





# Making Links Work

## 'Bio'-entrepreneurship in Tree, Crop and Livestock Value Chains



# Programmes and Projects

Project Title	Goal/ Objective	Target	Duration	Partners	Main Achievements
Re-thinking Strategy on Animal Health, Markets and Policy (ReSAHMaP)	To enhance the capacity of pastoral communities to influence decision making with respect to climate change, animal health, livestock markets and policy for improved livelihoods and food security.	Nomadic and sedentary pastoralists in Turkana County	Nov 2015- Nov2016	OSIEA	<ul style="list-style-type: none"> <li>Engagement with key stakeholders on policy debates and dialogues</li> <li>Market Surveys</li> </ul>
Biodiversity for Food and Nutrition (BFN) Market Linkages Project	To improve the sustainable production and consumption of nutrient-rich indigenous crops to diversify diets, by linking rural entrepreneurs to institutional markets.	Entrepreneurial farmer groups targeting Institutional markets such as schools, clinics & hotels in Busia County.	Jul 2016- Dec 2016	Bioversity International , KALRO & SINGI	<ul style="list-style-type: none"> <li>Capacity assessment and group profiling</li> <li>Training on various modules</li> <li>Cooking demonstrations</li> <li>Nuclear farm demo plots</li> </ul>
Table Banking	To increase access to affordable financial services to rural people (women & youth) towards poverty eradication, increased incomes, employment creation and building of wealth.	Women and Youth entrepreneurs in Samia, Busia County.	3-year project (2013-2015)	CORDAID, Buren Churches- Netherlands	<ul style="list-style-type: none"> <li>Capacity building on governance, entrepreneurship, table banking and poultry keeping.</li> <li>Disbursed fund to groups.</li> <li>New loan products - Soko Loan and School Fee Loan.</li> </ul>



- Thank you

# AFRICAN LEAFY VEGETABLES PROJECT FOR BUSIA COUNTY



SUPPORTED BY



▣ PRESENTED BY DANIEL OMBEDE

# Constraints to be addressed

1. Limited range of improved varieties
2. Limited quality and quantity of seed
3. Poor agronomic practices
4. Restricted market access
5. Limited knowledge on nutritional value of foods and value addition
6. Limited knowledge on post harvest handling, food safety and hygiene practices
7. Varied gender based attitudes

# Overall ALV objectives

- ▣ Promoting local nutritious crops by working with entrepreneurial farmer groups to build capacity in sustainable production of nutrient rich crops
- ▣ Linking farmers to markets by building their capacity to respond to industrial market demands such as schools, clinics
- ▣ Promotion of increased utilization of ALV to improve dietary diversity ( value addition)

# WHY ALV project

- ❑ Farmers have been producing in large quantities low energy rich crops
- ❑ Need to shift from subsistence agriculture to commercial farming which will hence create jobs, improve livelihoods, and improve diets for target households
- ❑ Need to conserve the agricultural vegetable diversity which is under the threat of being lost from people's diets  
Bridge the gap of linking production (small holder farmers to market(institutions
- ❑ Capacity building of farmers to meet the increasing ALV demand

# Some Vegetable types prioritized

- ▣ Spider herb
- ▣ Black night shade
- ▣ Amaranth leafy and seed
- ▣ clotolaria (slender leaf)
- ▣ Ethiopian kale
- ▣ Jute mallow
- ▣ Cowpeas



# FBS APPROACHES

1. on production

▣ How do we ensure sustainable production of ALV to sustain the market

i. Market led production

ii. Segmented production to ensure sustainable supply to the market  
(what technologies will we use during dry season,

iii. Consider production of seed (seed producing groups) as well as  
vegetable for markets

iv. Change agents (ToTs)

2. on best practices doing gross margin analysis preparation of business plans  
value addition

3. Improve processes and marketing promoting contract farming (MoUs)  
commercial village approach

4. Financial and business management table banking and VSL  
training on procurement process

# Expected outcomes

- ▣ Identified farmer groups are better organized trained and empowered to respond to emerging markets
- ▣ market opportunities identified for absorption of ALVs
- ▣ Integrated consumption of ALVs to diets

# What are the general action points

- i. build the capacity of target groups on on production nutrient rich crops
- ii. Capacity build groups to respond to emerging markets
- iii. Nutritional education in schools and communities on ALV and on improved diets
- iv. Value addition training and actualization

# IMPLEMENTATION PLAN

- ▣ Identify anchor farmers in the Seven sub counties
- ▣ Establishment of nuclear demonstration sites
- ▣ Formation of production and marketing committees
- ▣ Listing of potential markets and seeking tenders across the county
- ▣ Demonstration on nutrition

Thank you

# **BFN PROJECT**

## **End of pilot project**

### **Achievements**

By  
Joyce Mbingo


# ACHIEVEMENTS

- Farmer groups are better organized and able to penetrate into markets; apply and win tenders from institutions and cope with the competition.
- ▶ 547 beneficiaries (151 male, 386 female) from the 25 farmer groups. (Youth reprn was at 22% (119 youth both gender)
  - ▶ five (5) farmer groups have managed to enter a contractual agreement with eleven (11) schools and one (1) hospital while two (2) have won tenders to supply to schools (2); bringing up to a total of 14 contracts and tenders secured.

Group	Sub county	schools that signed tenders	Quantities
Katamakisi Kadumutu SHG	Teso-South	St. Jacob's Kaliwa secondary school	30 kgs per week at Ksh 30
Umoja SGH	Nambale	Esibembe secondary school	45 kgs per week at Ksh 45
Nasewa mothers Union	Matayos	Kisoko Girls high school	20 kg per week at Ksh 50
Konjera farmers SHG	Butula	Tingolo secondary school	12 kg per week at Ksh 50
		Esibina secondary school	10 kg per week at Ksh 40
Muungano CBO (Otakhwenya W.G, Matunda SHG, Busijo table banking SHG)	Samia	Busijo secondary school	8 kg per week at Ksh 35
		Namunyweda secondary school	6 kg per week at Ksh 35
		Nangina girls secondary school	16 kg per week at Ksh 35
		Nangina hospital	20 kg per week at Ksh 35
		Bumbe institute	14 kg per week at Ksh 35
		Bujuang'a secondary school	10 kg per week at Ksh 35
Agong'et New Generation youth group, Osia Jitahidi youth group and Hillstar youth group	Teso north	Kamuriai Secondary school	60 kg per week at Ksh 35
		Albert Ekirapa secondary school	60 kg per week at Ksh 35
		St. Thomas Amagoro	60 kg per week at Ksh 35



# Achievements, cont..

- ▶ 23 business plans developed and currently being implemented at different stages.
  - ▶ Farming ALVs as a business is slowly gaining roots in Busia County.
  - ▶ Understanding and appreciation of the nutritional value of ALVs and the significance of a balanced diet.
- 

# Achievements, cont..

- ▶ untapped business ventures have been identified through market survey that was carried out by marketing committees (*CABE would play a facilitative role and backstopping where need arises*)
- ▶ Farmer groups set demonstration plots (nuclear farms) which were used as the start-up for the business and also seed multiplication sites

Group name	Sub county	Condition of the farm
Nasewa mothers union	Matayos	Group harvested twice and sold to the members Total harvested 90 kg at 35 shillings Seeds harvested;Amarath, spider plant (3,150/=)
Edama SHG	Matayos	Group harvested thrice and sold to the local market Total harvested 67 kg at 35 shillings Seeds harvested include amaranth and spider plant (2,345/=)
Usawa IV	Bunyala	The farm was partially destroyed by community cattle before germination and dry spell. Harvested 20kg and sold at 35 shillings. The rest was affected by drought and dried up (700/=)
Agonget generation	New Teso north	The group harvested one time for consumption at group level and left the rest for seed multiplication
Hillstar SHG	Teso north	The group harvested one time for consumption at group level and left the rest for seed multiplication

Group name	Sub county	Condition of the farm
Konjera farmers SHG	Butula	Group harvested and sold to group members and the surrounding schools at 40 shillings and 35 shillings farm gate(5,000/=)
Otakhwenya agoba ohubanja SHG	Samia	The site was affected by drought and saline after the rains commenced, but they group managed to harvest 187 kgs; Sold 73 kgs at 35 shillings Consumed 114 kgs (2,850/=)
Katamakisi Kadumutu	Teso South	The group harvested three times of total 60 kg and supplied to a school at 30 shillings (1800)
Great sisters W. G	Nambale	The group harvested and supplied to school 34 kg at 40 shillings and to the members 18kg at 35 shillings (1990/=)
Mabale Dynamic	Matayos	The group harvested 40kg and supplied to members at 40 shillings (1600/=)
Openji Youth group	Bunyala	The group harvested 30kg and supplied to members at 40 shillings (1200/=)

# Achievements, cont..

- ▶ The use of module tracker cards was appreciated as a unique opportunity for the groups to follow up on what was discussed and anticipate next activity.
- ▶ The varied approaches to learning (discussions, lecture, exercises, workshops, case studies, group/individual activities, benchmarking trip) embraced by the Farmer Business School model enhanced learning and gave room for tapping into existing knowledge and skills among farmers.
- ▶ FBS modules were initially grouped into three parts being:
  - 1. Diagnosis and Planning –covering module 1–6
  - 2. Implementing –covering Module 7
  - 3. Evaluating and Re–planning –covering module 8.
- ▶ we had to do a re–alignment for some sessions to fit in with the changes in the school calendar, with schools being the major target markets for ALVs and also to factor in the capacities (or gaps) which meant unique approaches to different groups.

<b>Part 1: Diagnosis and planning</b>	<b>FBS Sessions/activity</b>	<b>Module/acti vity</b>	<b>Target</b>	<b>Actual</b>	<b>(%) attend</b>
	FBS Roll-out workshop	Planning phase	588	362	61.56
	Group capacity assessment	Planning phase			
1	Rationale of a Farmer Business School and Developing Group Ownership	Module 1	469	318	67.80
2	Group Formation and Strengthening	Module 1	469	318	67.80
3	Individual and Group Capacity Assessment	Module 1	469	318	67.80
4	Learning and Working Together	Module 1	469	318	67.80
5	Leadership and Management	Module 1	469	317	67.59
6	Farming as a Business	Module 2	469	274	58.42
7	Gendered Value-Chain Analysis	Module 2	469	274	58.42
8	The Farmer as an Entrepreneur and Farm Business Profitability	Module 2	469	274	58.42
9	Understanding Under-nutrition	Module 2	469	342	72.92
10	Food Groups and Nutrition	Module 2	469	342	72.92
11	Healthy Plate	Module 2	469	342	72.92
12	Understanding Marketing and Markets	Module 3	469	279	59.49
	Market survey		469	279	59.49
13	Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action	Module 3	469	294	62.69

**Diagnosis and planning (continued...)**

14	Developing a Vision and Goal for the Farm	Module 4	469	269	57.36
15	Understanding Enterprise Profitability	Module 4	469	264	56.29
16	Choosing an Enterprise	Module 5	469	268	57.14
17	Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan	Module 5	469	275	58.64
18	Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) Risks and Risk Management	Module 5	469	279	59.49
19	Preparing a Farm Business Plan and Action Plan	Module 5	469	279	59.49
20	Overview of Record Keeping	Module 6	469	305	65.03
21	Practice of Keeping Farm Business Records	Module 6	469	314	66.95
22	Savings and Mobilizing Finance	Module 7	469	321	68.44
23	Group Marketing and Buying	Module 7	469	335	71.43
	Group business plan development (Adoption)		374	250	66.84

<b>Part 2: Implementing</b>					
24	Understanding Contract Farming and Appraisal	Module 7	469	332	70.79
25	Doing Business in Kenya and Understanding the Procurement System Process	Module 7	469	332	70.79
26	Assessing and Managing Business Risks	Module 7	469	253	53.94
27	Benchmarking	Module 7	63	54	85.71
28	Characteristics of a Successful Entrepreneur	Module 7	469	300	63.97
29	Value Addition	Module 7	63	54	85.71
<b>Part 3: Evaluating and Re-planning</b>					
30	Introduction to End-of-Season Evaluations	Module 8	469	316	67.38
	FBS reflections	Module 8	469	316	67.38
<b>part 4: other activities</b>					
	cooking demonstrations conducted		25	25	100.00
	nuclear farms established		13	13	100.00
	anchor farmers identified		50	48	96.00
	committees established		50	48	96.00
	business plan workshop		85	69	81.18
	procurement and contract farming workshop		50	43	86.00





Group members from Great Sisters and Tumaini actively preparing foodstuffs for HOMECEC cookery.(left) the different types of nutritious foods prepared by the group (right)



*Mr. Mapesa (Host farmer) demonstrating how to prepare organic manure (below) Mrs. Helen Osolo, showing copies of 6 tender documents for her three groups from Samia Sub-county (right)*





Market Survey and ALV sample presentation at Bumbwe Institute (left)



Katamakisi Kadumutu SHG having a FBS in their nuclear farm (left)



G7 committee member of the ALV Apex group formed during contract farming workshop (left)

Seed multiplication sites showcased by different groups (below)



*Thank you*

# Linking smallholder farmers to markets: A synthesis of ALV Groups' Business plans



Prepared by:  
**Ms. Elsie Kangai**  
Centre for African Bio-Entrepreneurship, CABE

# Outline

- Overview
- Summary of the business plans
- Challenges
- Way forward

# Overview

*If you don't know where you're going, any road will get you there. – [Lewis Carroll](#)*

- 87% of groups did not have business plans at the start of this project
- CABE built the capacity of farmer groups to conduct market surveys & use findings to prepare their own business plans
- By Feb' 2017, 76% of the 25 groups have business plans.



# Summary of the business plans (48 weeks)

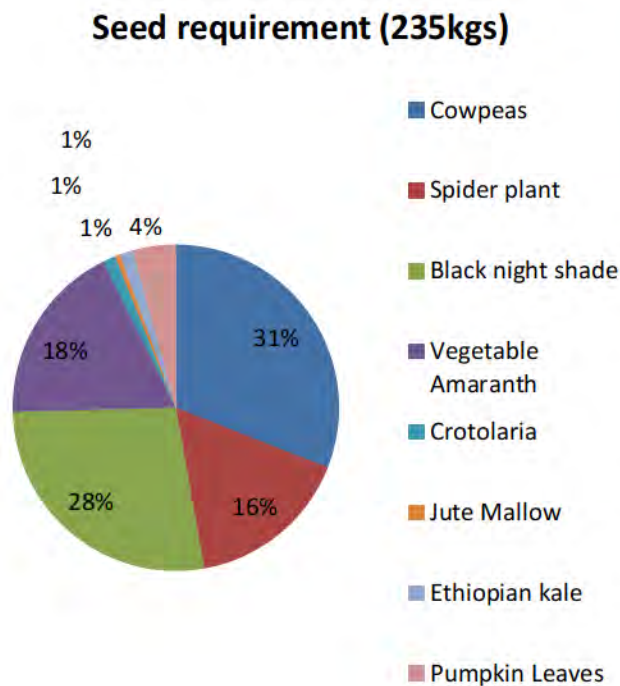
Description	Projected units	Remarks
No. of ALV groups	21	
Production area	38.8 Acres	Very small units each
Seed requirement	235.6 Kgs	Black night shade & cowpea most needed
Harvest	5.4 tons	Targeting to sell 300 kgs/week
No. of targeted institutional markets	38	14 contracts/tenders secured as at Jan 31 2017

# Summary of the business plans (48 weeks) cont'

Description	Projected units	Remarks
Financial requirements	Ksh1,378,340	Major cost items: Irrigation technologies & assoc' costs, seed & weighing scale
Income	Ksh8,394,600	Approximately Ksh141,000/week

# Summary of the business plans (48 weeks) cont'

## Seed requirement



## Seed Stock (Oct, 2016)

ALV type	Total seed stock (kgs)	No. of members stocking	Average seed stock (kgs)
Black nightshade	17.25	41	.86
Spiderplant	17.75	16	.77
Cowpeas leaves	17.00	41	.81
Clotolaria	3.56	16	.17
Pumpkin leaves	4.00	7	.18
Amaranth	2.50	18	.13

# Summary of the business plans (48 weeks) cont'

## Major cost items

Cost item	Estimated cost (Ksh)
Seed	85,025
Pumps	46,000
Watering cans	34,750
Irrigation & spraying labor cost	109,900
Weighing scale	126,500
<b>Sub-total</b>	<b>402,175</b>

# Summary of the business plans (48 weeks) cont'



- The planned financing strategies are:
  1. Table Banking which ranges between Ksh2,000-5,000 per month in most groups
  2. In-kind contribution –mainly land, manure and labour
  3. External financing

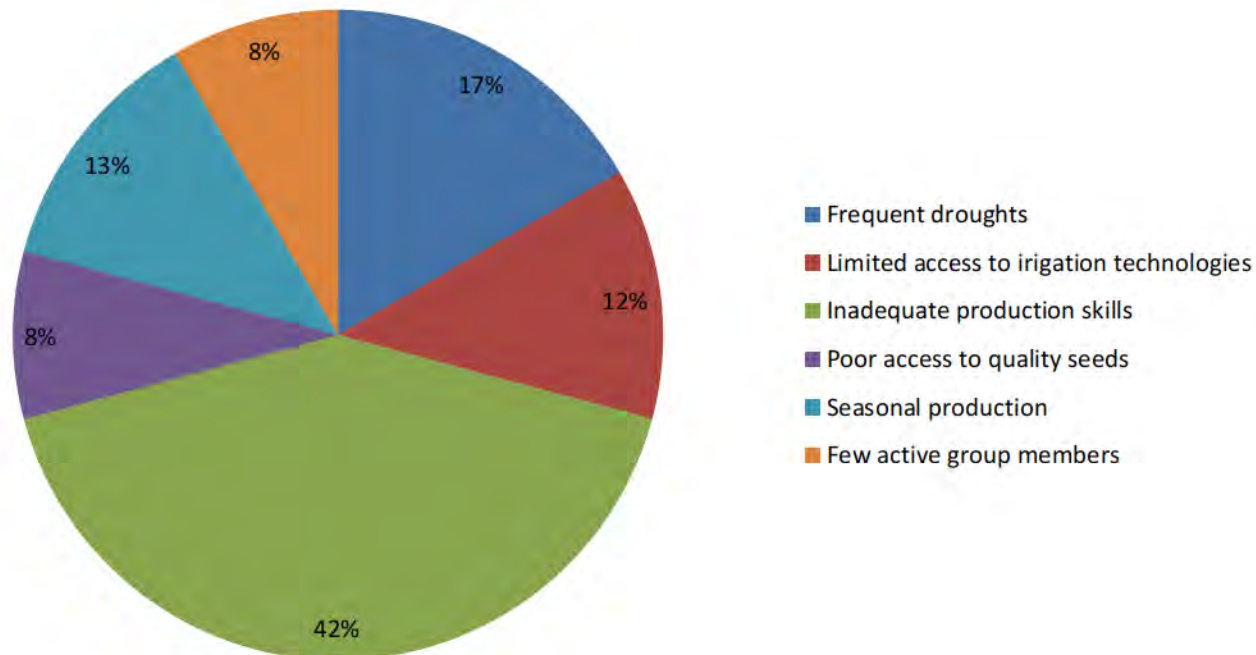


# Challenges

- Limited access to quality seed
- Inadequate access to irrigation technologies & innovations and technologies for value addition
- Low awareness of the nutritional value of ALVs
- Low investment in ALV value chain
- Limited market linkages
- Financing for labor costs
- Delayed servicing of contracts/tenders by public institutions

# Challenges cont'

- Major production constraints (CABE, 2016)



Challenges cont'

Limited access  
to irrigation  
technologies,  
tools and  
equipment

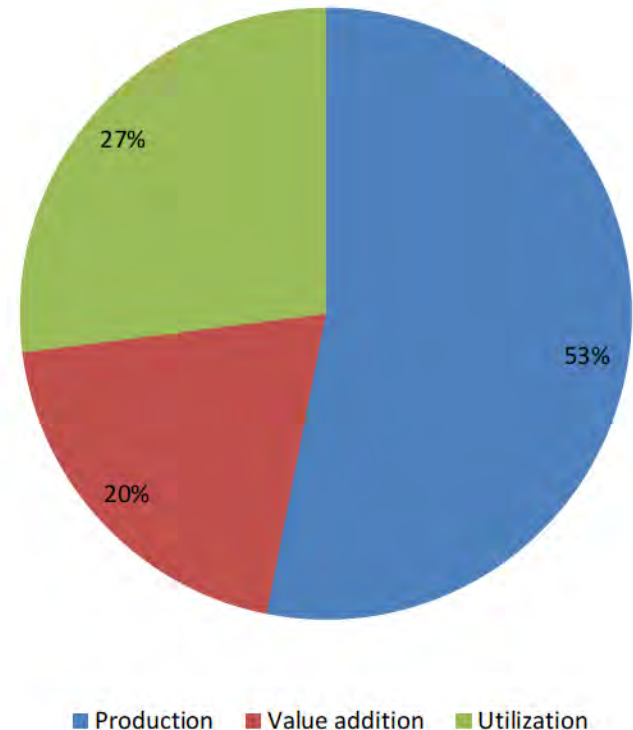




# Challenges cont'

- Low awareness of the nutritional value of ALVs
- Poor inter-generational knowledge transfer
- Affects utilization and value addition

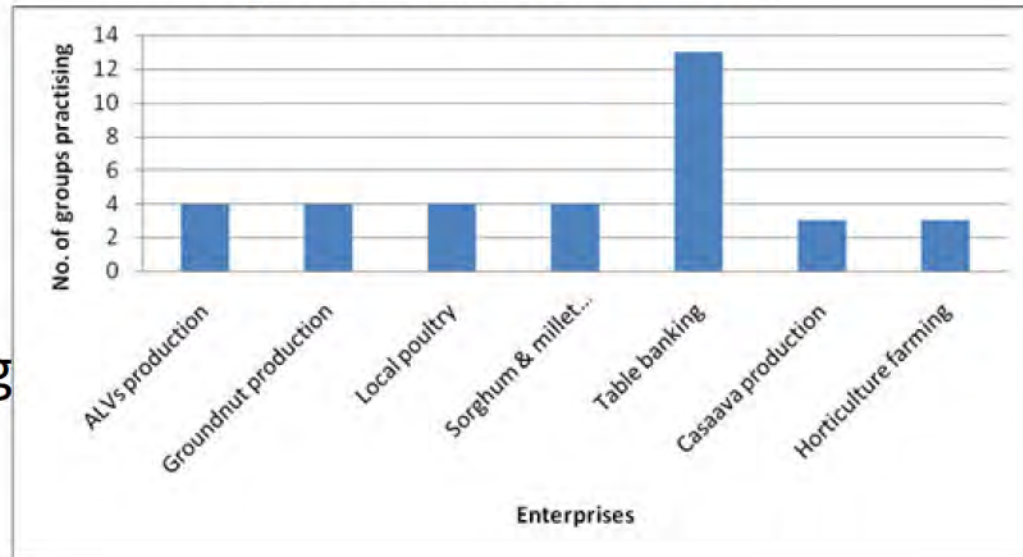
Level of participation in events promoting ALVs (Oct 2016)



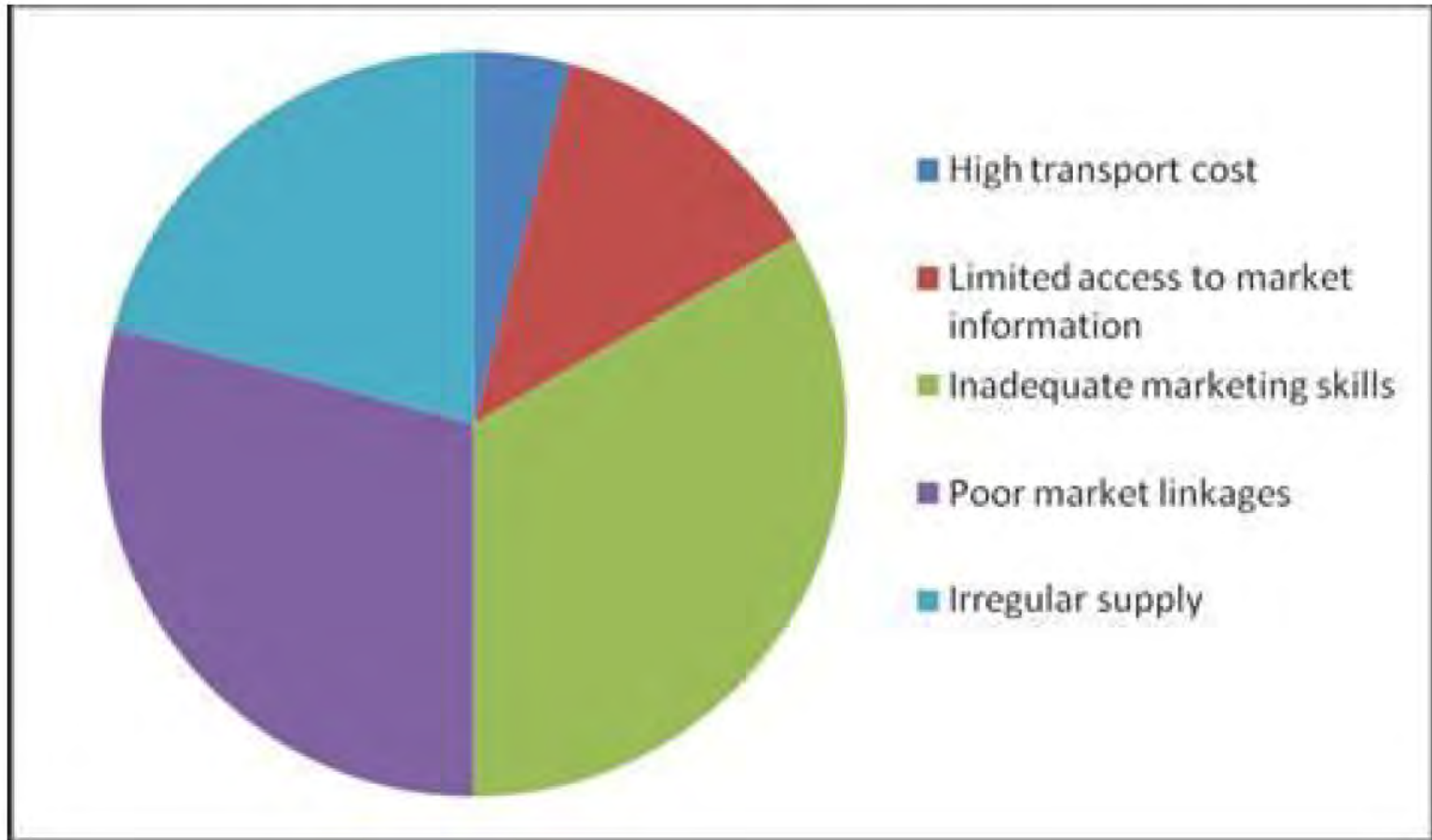
# Challenges cont'

- The level of investment in the ALV value chain is low and limited to individual investments –Need for a shift to C.A & peer-learning

Group common activities



# Major marketing constraints



# Way forward

*‘Even if the steps are small, you should strive to make progress, learn from the experience and revise your direction’*



# Way forward

- Facilitate the groups to **access finances** to support implementation of BPs
- Continuous **market research** to inform plans and seize emerging opportunities
- Strengthen **organisational innovations** such as the G7 and Muungano CBO to:
  - ✓ Sustain and scale up market linkages
  - ✓ Provide a learning platform for members
  - ✓ Build synergies in resource mobilization, production & marketing of ALVs

# Way forward cont'

- Enhance **business pitching** skills for farmer groups
- Provide **nutritional & economic facts** on ALVs in a simplified form.



# Way forward cont'

- Evaluation of implementation of business plans
- Provide opportunities for continuous learning and sharing to enhance penetration of technological innovations & strengthen entrepreneurship



## ALV entrepreneur's quote:


*"I have learnt a lot in ALV production. Since CAFE came on board with the project, I am committed to be an entrepreneur. After CAFE helped us to set up demo farms, our group embraced the kitchen garden technologies and we even organized for a merry –go-round system for setting up the technologies in individual member farms." Jeremiah Omurwoni, Tumaini SHG.*

# Thank you!!

For a happy & healthy life:



4. Eat more foods that  
grow on trees and  
plants, and eat less food  
that is manufactured  
in plants.

 /UsefulGen



For more information contact:

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Website: [www.cabe\\_africa.org](http://www.cabe_africa.org)

## **Attachment 4. Farmers Business School for trainers**

# Farmer Business School Guide: For Trainers

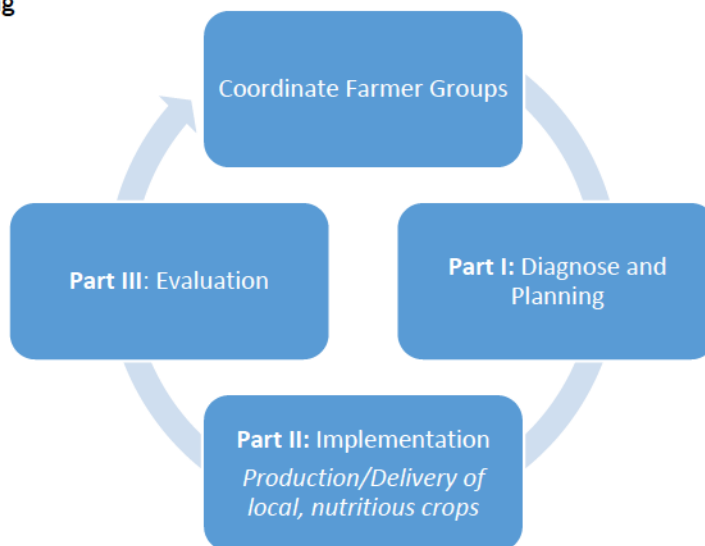
The manual is intended as a Facilitator's guide to aid in the delivery of the Farmer Business School (FBS). Many organizations have developed effective models for training farmers on business development activities. In many regions of the world, these efforts have proved to be successful, helping farmers to develop and expand their farming enterprises, and initiate value addition efforts.

This model was created in response to the specific needs of small scale agricultural entrepreneurs (mostly women and youth) living in Busia County, Western Kenya, who have expressed ambitions to grow their currently small enterprises by commercializing African Leafy Vegetables (ALVs) and other nutritious crops. The effort is part of the ACIAR-funded scoping study "Linking smallholders to markets: pilot study on developing value chains for conserving local biodiversity and improving diets" executed by the Kenya Agricultural and Livestock Research Organization in collaboration with the Biodiversity for Food and Nutrition Project (BFN) of Bioversity International. Specifically, the development of the FBS is linked to Objective 1 of the pilot study, i.e. *To empower community-based organizations (CBOs) and self-help groups (SHGs), especially women, to supply markets for nutrient-rich foods*. The FBS therefore focuses on developing **value chains for conserving local biodiversity and improving diets**. To help deliver the training to meet the farmers' needs, strong strategic partnerships were developed in Busia County and beyond between...?

In preparing this guide, a literature review was performed to determine the best FBS resources available to fit the needs of the Busia County farmers. Based on this review, the FAO's Farm Business School: For the Filipino Farmers (April 2015) was selected and adapted to fit the Busia context, incorporating other resources as appropriate.

These needs were realized through engagement with farmer groups in the area. BFN Kenya held a Consultative Workshop on 23-24 September 2015 that brought together farmer groups, schools and local administrators to discuss possibilities for developing institutional markets for local produce, while supporting the nutritional needs of the communities. This workshop helped to identify initial needs for the FBS Model. These needs were further explored during focus group sessions held with the farmers and the schools; see [Appendix B](#): Focus Group Templates for the focus group discussion template for the farmers and schools, respectively and [Appendix C](#): Focus Group Results for a summary of the focus group discussion results.

This training manual serves as a starting point for facilitators and farmer groups. Facilitators should familiarize themselves with the manual to help guide farmer groups on the most appropriate trainings from the manual. Based on the farmers' needs and experiences, the farmers should pick and choose from the sessions to determine what new skills and knowledge they may need, or where refreshers may be useful.



## Background

The purpose of the FBS is to work with farmers to help them build knowledge and skills to make their farming enterprises more profitable. Farmers will achieve this by learning about business in their local environment. The FBS program takes the school to the farmers. The training materials are designed around the concept of the farm business cycle, described in the diagram below.

<b><i>The FBS training program covers three main aspects of farm business management</i></b>	
<b>Part I – <i>Diagnose and Planning</i></b>	<ol style="list-style-type: none"> <li>1. Agree on what parts of the program to cover and when to hold meetings.</li> <li>2. Set goals for their farms and develop business plans to achieve those goals.</li> <li>3. Work through a set of exercises to learn how to examine their farms and to plan the (?) season.</li> <li>4. Develop an initial farm business plan to be implemented in the next season.</li> </ol>
<b>Part II – <i>Implementation</i></b>	Implement their farm business plans, based on the modules that best suit their needs. <i>Different modules may be more useful at different points in the year.</i>
<b>Part III - <i>Evaluation</i></b>	<p>Benefits and performance are assessed, an action plan is developed and participants prepare for the next season by:</p> <ol style="list-style-type: none"> <li>1. Reviewing their Farmer Business Plans and evaluate how well the plans worked.</li> <li>2. Re-assess their farm businesses and make a new Farmer Business Plan for the next season.</li> </ol> <p><i>Evaluation is an important part of the process to check to see if activities have been implemented according to plan and the objectives and goals have been met, as well as how processes can be improved on for the future.</i></p>

## Part I: Diagnosis and Planning

### Module 1: Starting the Farmer Business School (FBS)

#### Session 1: Rationale of a Farmer Business School and Developing Group Ownership

##### Objectives

By the end of this session, the participants shall have:

- Discussed the meaning and importance of the FBS;
- Described the benefits of FBS for participating group members; and
- Listed the meetings schedule, norms or ground rules for a more effective and sustainable implementation of the FBS.

Duration: **To be determined during dry-run**

##### Materials:

- Flipchart/s
- Markers or Pens

Handouts are available in Appendix A here: [Session 1: Rationale of a Farm Business School and Developing Group Ownership](#)

Session 1: Rationale of a Farmer Business School and Developing Group Ownership		
Lesson Steps		Resources
<b>1</b>	<p><b>Launching</b></p> <p>Since this will be the first formal meeting of the FBS, make it memorable. Invite key personalities to grace the occasion. You may want to arrange with the participants for each of them to bring some food or drink to share in order to celebrate the start of the school.</p> <p>A week or two before the FBS starts, make necessary arrangements for the launch. You should also visit each farmer who was invited to be part of the school to make sure that they remember when the school will start and where it will be held.</p> <p><i><b>Supplies:</b> Training materials to run the FBS, such as: paper, handouts, pens or pencils, flipcharts and markers, etc. This includes materials for the farmers.</i></p>	
<b>2</b>	<p>The <b>first session</b> is conducted after the launching activities. Usually this first session happens after lunch time. Confirm the attendance of all the participants to the first session of the FBS. Remind them that they were invited to participate in the FBS because they are interested in developing their farmer business skills so that they can improve the profitability of their farms.</p>	

Session 1: Rationale of a Farmer Business School and Developing Group Ownership		
Lesson Steps		Resources
3	Check if everyone knows everyone else. If not, ask participants to briefly introduce themselves. The first two meetings of the FBS will be about the purpose of the school and how the school will be run. After that, they will begin to learn about farming as a business.	Ice-breakers
4	Remind the participants of your earlier meetings with them, and inform them that in this first activity of the day you would like them to recap what they understand by FBS and what their learning expectations are. Organize the participants into discussion groups of three to five making sure that each group has at least one literate member. In their groups, ask participants to discuss the questions given in Exercise 1.	

## Exercise 1: Understanding the FBS Model

### Objective:

- To ensure farmers understand the framework of the FBS model.
- To learn from farmers their expectations of the FBS training, ensuring the effort meets their needs.

Duration: Placeholder

### Supplies:

- Flip chart and markers
- Pens and paper for groups to write notes on

### Preparations:

1. Decide on a way to form teams, this may be based on farmer groups
2. Prepare flip charts with the four questions, as space to write responses (*this may be a flip chart per question*)

### Exercise Steps:

- Ask the group to form teams.
- In teams, the groups will discuss the following questions. Explain the questions and ask if there are any questions on the exercise.

### Questions:

1. What do you understand by a 'Farmer Business School'?
2. What do you think is the purpose and advantage of a Farmer Business School?
3. What is different about a 'Farmer Business School' as compared to other training programs available for farmers?
4. What are your specific learning expectations from participating in this 'Farmer Business School'?

Session 1: Rationale of a Farmer Business School and Developing Group Ownership (Continued)		
	Lesson Steps	Resources
5	<p><b>When the groups have completed their discussions, question by question, facilitate a sharing in the plenary as follows:</b></p> <ol style="list-style-type: none"> <li>1. <b>What do participants understand by a 'Farmer Business School'?</b> After listening to each group's comments, explain that the FBS is a 'forum' or 'venue' that brings farmers together to carry out collective enquiry to address business and marketing problems and opportunities.</li> <li>2. <b>What do participants think is the purpose and advantage of a Farmer Business School?</b> Listen carefully to all the groups' responses, and reiterate that this platform would bring together a 'group of like-minded farmers' who wish to develop or strengthen their skills to produce more profitably for the market. As a 'program of learning', it can prove particularly beneficial for those smallholder farmers who are just getting involved in producing for the market and need help to do it more effectively.</li> <li>3. <b>What is different about a 'Farmer Business School' as compared to other training programs for farmers?</b> After obtaining comments from all the groups, refer participants to the handout on Overview of the Farmer Business School (FBS) and emphasize the special features of an FBS as follows: <ul style="list-style-type: none"> <li>● The focus of a FBS is on the content, and not the training facility;</li> <li>● The methodology is not lecture-based, but rather a 'Learning by doing';</li> <li>● This is a peer-based learning, where there is really no expert, and the farmers learn from each other, with the facilitator guiding the learning process;</li> </ul> <p>The learning is demand responsive and interactive, and is matched to the actual operations on their farms, i.e. pre-season, season and post-season.</p> </li> </ol>	
6	<p>Finally ask the groups to present their <b>expectations from participating in the FBS</b>. Note each group's expectations on the board or flip chart, and cluster common points so that these emerge as topics or Areas of Learning. Make sure that expectations are handled with care so that any unrealistic expectations (such as receipt of grants, or provision of transport and daily allowances, etc.) are managed at this point. Use the clustered learning expectations to transit to the next discussion point, i.e. what will be taught at the FBS.</p> <p><i>Supplies: Flip chart and marker</i></p>	
7	<p>Refer to the handout <b>Overview of the FBS Program</b> and explain how the FBS Program is designed to roll-out in three parts, i.e.:</p>	<p>See Appendix A for "Overview of</p>



Session 1: Rationale of a Farmer Business School and Developing Group Ownership (Continued)		
Lesson Steps		Resources
	<p><b>Part 1</b> - Diagnosis and Planning (pre-season),</p> <p><b>Part 2</b> - Implementing (during season), and</p> <p><b>Part 3</b> - Evaluating and Re-planning (post-season).</p> <p>The topics under each part are meant to prepare the farmer to perform the functions linked each part more effectively. Briefly explain the importance of some of the topics.</p> <p><i>Supplies: Handout "Overview of the FBS Program"</i></p>	<p><i>the FBS Program"</i></p>
8	<p>The entire FBS program has to be aligned to the pre-season, season and post-season of their chosen enterprise production cycle. Refer to the <b>FBS Seasonal Calendar</b> and explain how this would happen. All farmer diagnosis and planning meetings will have to be covered before the next planting season.</p> <p><i>Supplies: Handouts "Seasonal Calendar" and "Link of FBS Program to the Crops Season", flip chart and marker</i></p>	<p>See Appendix A for "Seasonal Calendar", which includes a list of traditional crops and "Link of FBS Program to the Crops Season"</p>
9	<p>For this next discussion, make sure that you have a calendar in the room, and have marked the various religious events and holidays on it. Explain to participants that the last important agenda of today's meeting is to plan the FBS meeting schedule. Inform the participants that there are four decisions that must be made:</p> <ul style="list-style-type: none"> <li>• How often should the group meet?</li> <li>• What days of the week?</li> <li>• What should be the start and end time?</li> <li>• What topics should be covered?</li> </ul> <p>Raise each of the above questions, and facilitate a discussion, ensuring that the group reaches a consensus. Finalize dates for a maximum of <b>20 meetings</b> required to complete Part 1: Diagnosis and planning. Tell the participants that the dates for Part 2 and Part 3 will be finalized after completion of Part 1.</p> <p>Finalize the meeting schedule on the board, and ask the participants to copy this information into the <b>Overview of the FBS Program</b> table, where the following should be noted:</p> <ul style="list-style-type: none"> <li>• Session number</li> <li>• Session topic</li> </ul>	<p>See Appendix A for "Overview of the FBS Program"</p>

Session 1: Rationale of a Farmer Business School and Developing Group Ownership (Continued)		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>• Date</li> <li>• Time</li> <li>• Venue</li> </ul> <p>If any changes are made to the schedule, it will be through mutual consensus.</p>	
10	<p>In the plenary, ask participants what, in their view, are the qualities of an effective group. Note participants' points on the board or flipchart. Now, based on these, establish the Ground Rules for the FBS, using the model in the Appendix as an example. Ensure that there is a common understanding of what each point means.</p> <p>For each point, obtain examples, e.g. self-discipline as individuals and responsibility to the group – what does that mean? Highlight that self-discipline can refer to punctuality, making sure that no meetings are missed, etc. Put up the pre-prepared flip chart on the wall, and ask all the participants to note their commitment on the posted paper.</p> <p><i>Example of Ground Rules for FBS</i></p> <ul style="list-style-type: none"> <li>• Share all costs of the FBS in a fair way.</li> <li>• Ensure that each member can participate and make decisions on an equal basis.</li> <li>• Ensure that decisions are made collectively in consultation with group members.</li> <li>• Treat one another with equality and respect at all times.</li> <li>• Practice self-discipline as individuals and be responsible to the group.</li> <li>• Be honest, dedicated and committed to group interests.</li> <li>• Agree to disagree and never get angry if any individual opinion is not accepted.</li> <li>• Accept the decisions of the majority, even if it is against any individual's view.</li> <li>• Ensure openness, accountability and transparency in dealings with group members.</li> </ul>	
11	<p>In the next meeting the participants will have an opportunity to finalize a meeting schedule for Part-1: Diagnosis and Planning meetings of their FBS Program, and finalize the following:</p> <ul style="list-style-type: none"> <li>• Schedule of meetings, i.e. frequency of meetings, day/s of the week, timing</li> <li>• Venue</li> <li>• Norms or ground rules</li> </ul>	

Session 1: Rationale of a Farmer Business School and Developing Group Ownership (Continued)	
<i>Lesson Steps</i>	<i>Resources</i>
Take a few minutes to review the key points covered in this session. Re-confirm date, time and venue for next meeting. Remind participants to bring their folders to the next, and all subsequent meetings. End the session on an energetic note and ensure that the group is energized and motivated to attend the next session.	

## Session 2: Group Formation and Strengthening

This section was developed based on the Farmer Business School: Facilitator’s Manual, developed by the Department of Agriculture, Second Cordillera Highland Agricultural Resource Management Project (DA-CHARMP2), International Fund for Agricultural Development (IFAD-Philippines) and International Potato Center, Food Security Through Asian Roots and Tubers Project (CIP-FoodSTART).

This session will provide the tools and the space for discussion regarding the formation of a farmers’ group. Note: The Busia County scoping study report noted, “there are few alliances among farmers and user groups...”

The session consists of three sessions:

1. Livelihood and business visioning
2. Individual and group capacity assessment; and
3. Learning and working together.

*Note: there are no handouts for this session.*

### Session 2A: Livelihood and Business Visioning

#### Objectives

This session will form and strengthen farmer groups for market-oriented learning and action. At the end of the session, the farmers will be able to:

- Discuss key livelihood and business concepts;
- Develop and share their livelihood and business visions; and
- Build consensus on priority commodities and market chains as tentative learning focus.

**Duration:** 2 hours

#### Materials:

- Flipchart
- Markers or Pens

Session 2A: Livelihood and Business Visioning		
Lesson Steps		Resources
<b>1</b>	<p><b>Presentation: livelihoods and the farm and agriculture-based business:</b></p> <p>The facilitator shall start the session with a lecture on the definition and key concepts of livelihood, business and enterprise. The presentation shall also discuss and touch on the livelihoods of rural people by citing practical examples.</p> <p><u>Key concepts to consider:</u></p> <ul style="list-style-type: none"> <li>• Livelihood and income generation</li> <li>• Business and enterprise</li> <li>• Farm business and agribusiness</li> <li>• Customer and consumer</li> </ul>	

Session 2A: Livelihood and Business Visioning		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>Household and family</li> <li>Livelihood strategies: on-farm, off-farm, non-farm</li> <li>Livelihood assets: human, social, financial, physical, natural</li> </ul> <p><i>Supplies: In making the presentation/lecture, the facilitator may use multi-media if there is electricity and a meeting hall available, or boards and markers. Take note that the lecture should also encourage open discussion and sharing of experiences among the participants.</i></p>	
2	<p><b>Small-group workshop on livelihood portfolio of the group or community and individual members</b></p> <p>The facilitator will group the participants into three (3) groups to discuss the current livelihood portfolio within individual households and in the community. Each small group should have a facilitator, documenter and reporter. A summary of the group discussion must be presented by the participant-reporter in plenary. The questions listed below may be used to guide the small-group discussion.</p> <p><u>Discussion Questions:</u></p> <ul style="list-style-type: none"> <li>What are the existing livelihoods of your farming households?</li> <li>Which of these livelihoods are business-oriented?</li> <li>In three (3) years, what changes in your livelihoods do you envision?</li> <li>What businesses do you aim to start/expand to support these livelihood changes?</li> <li>What future business interests do you share with other farming households?</li> </ul>	See exercise below.

### Exercise 2A: I Have a Dream

**Objective:** To illustrate/draw the vision of the participants about their business-oriented livelihood activities

**Duration:** 1 hour

**Supplies:**

- Paper

- Pens/markers

**Note to Facilitator:**

This exercise can also be used to do a business visioning of the group by drawing the before and after situations of the business identified by the group.

**Exercise Steps:**

1. Divide the group into 3 to 4 (depending on the number of the participants) with a documenter and a reporter assigned in each. Ask the group to form teams.
2. Instruct them to share among their group mates their own livelihood activities. Let the documenter list down the answers. From the list, ask them to identify the common livelihoods that surface. Further, ask them to specify their business-oriented livelihood/s.
3. Instruct them to illustrate on a piece of Manila paper the present situation of that business-oriented livelihood. They may use representations that define the situation.
4. Then let them draw/illustrate what they want for that business-oriented livelihood/s to look like in the future (i.e., next 3 or 5 years). Encourage them to expand their imagination.
5. Let each group present their output.
6. The presentations shall serve as basis for identifying the livelihood that the group may venture into.

See the sample result from Exercise 2A below, presented in the FBS Manual by DA-CHARMP2, IFAD-Philippines, and CIP-FoodSTART.

**Sample output of I HAVE A DREAM group exercise**

Current livelihoods	Livelihoods in Year 3
Daughter's remittance from Dubai	Husband as certified seed grower-trader*
Wife's informal lending business*	Wife as pig-raiser & meatshop operator*
Husband's service as church pastor	Husband produces-sells organic rice*
Husband as certified seed grower-trader*	Daughter's remittance from Dubai

**Session 2A: Livelihood and Business Visioning (Continued)**

Lesson Steps	Resources
<p><b>3 Formulating a Group and Individual Vision</b></p> <p>Oftentimes, mission and vision statements are posted in the organization's office, website or publications. It is expected even for an individual to have a vision of the future, a direction that he or she wants to follow, or simply, a goal to be achieved or a place where he or she wants to be in. When there is a vision, each activity initiated is aligned and contributory to achieve the individual or organizational goal. The facilitator will discuss the importance</p>	

Session 2A: Livelihood and Business Visioning (Continued)	
Lesson Steps	Resources
<p>of having a vision for oneself and for the organization. He or she will also recite several examples of the vision statement of different organizations.</p> <p>At the end of the lecture, a take home exercise on formulating individual vision will be assigned. In addition, the group shall also formulate how they envision their business in the future with the consideration of existing crops or commodities that the group members are growing. The answers to the assignment shall be recited at the start of the next FBS meeting.</p>	

## Session 2B: Individual and Group Capacity Assessment

### Objectives

At the end of the session, participants will be able to:

- Assess existing business capacities and resources for individuals and group; and
- Use assessment results to plan how the group could enhance capacities and resources to achieve its business vision.

**Duration:** 1 hours

Session 2B: Individual and Group Capacity Assessment	
Lesson Steps	Resources
<p><b>1</b> <b>Brainstorming session to assess and identify existing business capabilities and resources of the farmers:</b></p> <p>The big group shall be divided into three small working groups to facilitate productive sharing and discussions. Please be reminded that at the end of this activity, a list of available capabilities and resources must be shared with other groups.</p>	See exercise below.

### Exercise 2B.1: Capacity and Assets Inventory for Target Business

**Objective:** To make an inventory of the capacity and assets of the participants for the target business

**Duration:** 30 minutes

#### Supplies:

- Paper
- Pens/markers

#### Exercise Steps:

1. Divide the group into 3 to 4 (depending on the number of the participants). Let them assign among themselves a documenter and a reporter.



2. Instruct them to discuss the following questions:
  - 2a. What capacities and assets are required to pursue the business interests you share with others?
  - 2b. Which of these capacities and assets do you already have?
  - 2c. How do you plan to develop/acquire capacities and assets that you do not yet have?
3. After their discussion, let each group present their output (answers to the three questions).
4. Provide a synthesis of the presentations and encourage further discussions on similarities and differences of capacities and assets.

### **Exercise 2B.2: Individual Entrepreneurial Competency Assessment**

**Objective:** To enable the participants to list key competencies required for business success initiate a self-assessment process.

**Duration:** 30 minutes

**Supplies:**

- Paper
- Pens/markers

**Exercise Steps:**

1. Ask the participants to think of the most successful entrepreneur they know. After five minutes, ask them to share with others why they think a particular person is a successful entrepreneur. Note to ask them on the key abilities or competencies of the successful entrepreneur.
2. Note the participant's responses and write them on the Manila paper or whiteboard.
3. Ask the participants to individually assess their own competencies using the list identified. What are present? What competencies are strong? What do they want to improve?
4. Ask some 2-3 volunteers to share their answers.
5. In the plenary, ask the volunteers how they can improve these competencies.
6. Conclude this meeting by telling participants that they must actively engage themselves to developing their personal entrepreneurial competencies.

## **Session 2C: Learning and Working Together**

### **Objectives**

At the end of the session, participants will be able to:

- Determine the importance of farmer group-based learning and action in market chain development; and
- Analyze what makes a group successful and describe the key roles and contributions of each member.

Duration: 1 hour

Session 2C: Learning and Working Together		
Lesson Steps		Resources
<b>1</b>	<p><b>Group sharing on learning and working together as a group</b></p> <p>FBS participants should be divided into two smaller groups for better brainstorming.</p> <p>Each group should chose a reporter who will share a summary of the group discussions in a plenary session. The experiences of group members largely contribute to the discussion on the importance of group-based learning and the characteristics needed by the group in order to be successful. The FBS facilitator should complement the sharing with a discussion on the stages in group development and the advantages of a collaborative learning environment.</p>	<p>See exercise below.</p>

### Exercise 2C.1: I Have a Dream

**Objective:** To state behaviours or attitudes which contribute to and which hinder team building.

**Duration:** 30 minutes

**Supplies:**

- Old newspapers
- Scrap paper
- Masking tape
- Scissors

**Exercise Steps:**

1. Ask participants to group themselves into 3-4 groups or more depending on the number of participants. A group must have at least 5 members.
2. Distribute the materials to each group.
3. Instruct them to build their own tower with the use of the materials in 20 minutes. Do not give any description about the tower. Encourage the participants to think and to be creative in making their tower. The use of materials aside from what were provided is allowed.
4. Observe and note how the discussion is going on in the groups. You may raise your observations during the discussion.
5. After 20 minutes, announce that the time is up.

6. Ask all the groups to put their towers at the center of the room so that everyone gets a good view of them.

7. Process the activity. Parallel the towers to teams or groups. Sample questions: *You may direct some of the questions to each group:*

- What can you say about the tower of Group 1, Group 2, Group 3, Group 4 (appearance, etc.)?
- What factors contributed so that you were able to build your towers?
- What behaviors or characteristics among your group members hindered the completion of the tower?
- Were there any disagreements? How did you solve them?

8. Raise also your observations during the construction of the towers.

9. Relate the game to real life group team working.

## Session 3: Leadership and Management

The Busia County scoping study report noted need for leadership skills.

The following Session was developed based on the Catholic Relief Services' Organizing and Managing Farmers' Groups: A SMART Skills Manual, available at: [http://www.crs.org/sites/default/files/tools-research/organizing-and-managing-farmers-groups\\_0.pdf](http://www.crs.org/sites/default/files/tools-research/organizing-and-managing-farmers-groups_0.pdf)

This section serves as a brief introduction of leadership skills required for the farmers group.

### Objectives:

After this session you will be able to:

- Describe the desirable characteristics and skills of a group leader
- List the types of leaders and officers a group should have, and the functions of each
- Describe how leaders should be chosen, and how long their terms of office should be
- Elect leaders and choose people to fill management positions
- Describe how to hold leaders and members accountable for their actions.

**Duration:** To be determined during dry-run

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 3: Leadership and Management](#)

Session 3: Leadership and Management		
	Lesson Steps	Resources
1	<p><b>Presentation: Leadership and Management Skills and Characteristics</b></p> <p>The facilitator shall start the session with a short introduction of key leadership and management skills and characteristics.</p> <p>To work well, a group needs a management committee made up of a chairperson, secretary and treasurer, and perhaps other officers. In many groups the most open or outgoing members are chosen as chairperson and secretary. However, other members may also have hidden but valuable skills. All the skills and abilities of the individual members should be used as far as possible. A group can exploit these abilities by rotating the leadership positions among the members.</p>	<p>After the short introduction, lead Exercise 3A below, "Leadership Styles and Qualities". See Appendix A for the "Leadership Styles" handout.</p>

### Exercise 3A: Leadership Styles and Qualities

#### Objective:

-To explain why leadership is important by using farmers' own experience of observing and interacting with leaders in their everyday life.

**Duration:** 40 minutes

**Supplies:**

- Large sheets of paper
- Marker pens

**Exercise Steps:**

1. Ask the participants to think of a leader they admire who is not a member of the group. This could be a national, regional or local leader. They should not give the leader's name.
2. Ask them about the qualities that make this leader effective, or the reasons they admire this person. Summarize the responses on a large sheet of paper. Ask what happens if these "good" qualities are absent in a group of people. *Note the responses on the paper.*
3. Ask which is more usual: one person who has all the necessary qualities, or two or three people who each have some of the qualities and who lead together. Discuss the advantages and disadvantages of such an arrangement.
4. Introduce the three different styles of leadership: commanding, consulting, and enabling. Invite individual participants to role play each style. Emphasize that there is no best style: each style might be appropriate for a particular situation. Leaders may switch between styles depending on the needs. See Appendix A for images of leadership styles.
5. Ask the group to name the advantages and disadvantages of each style. Note the responses on the paper. Which style would work best for them?

**Session 3: Leadership and Management (Continued)**

<i>Lesson Steps</i>		<i>Resources</i>
<b>2</b>	<p><b>Presentation: Leadership Positions</b></p> <p>After a discussion of leadership characteristics, the group should consider what leadership positions their group will need. The facilitator may choose to introduce the leadership positions, facilitated by the pictures (see Appendix A) or instead may jump into the activity to open up the group's needs to discussion.</p>	<p>After the short introduction, lead Exercise 3B below, "Leaders' Tasks". See for the "Possible Leadership Positions" handout</p>

**Exercise 3B: Leaders' Tasks**

**Objective:**

-To help the members decide what types of leaders the group will need, and to decide on their tasks.

**Duration:** 2 Hours

**Supplies:**

- Large sheets of paper

- Marker pens

**Exercise Steps:**

1. Ask the participants to think of the leadership positions the group will need. List their ideas on a large sheet of paper.
2. Facilitate a discussion of the positions. Consolidate, eliminate or add to the list as needed.
3. For each position, ask the group to describe what that person's tasks or responsibilities should be. List these on the paper.
4. Compare the responsibilities of the various positions and discuss any overlaps or gaps.
5. Now ask the group to list the skills and characteristics that each person should have (for example, the secretary and treasurer have to be able to read and write). Should the positions be open to both men and women?
6. Help the group agree on a final list of positions and responsibilities.

**Possible Positions:**

Depending on the group, you may need to adjust the list of leaders below. For example, a marketing group will need a marketing manager; a production group will need a production coordinator; a savings and internal lending community will need a money counter and key holders.

- *In all group:* chairperson, secretary, treasurer

- *Additional positions* (depending on the group): vice-chair, production coordinator, marketing coordinator, auditor, money counter, key holders.

## Module 2: Understanding Basic Concepts

### Session 4: Farming as a Business

#### Objectives

By the end of this session, the participants shall have:

- Described how farm commercialization is taking place; and
- Identified the components of a farm or business.

Duration: To be determined during dry-run

#### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 4: Farming as a Business](#)

Session 4: Farming as a Business		
	Lesson Steps	Resources
1	Welcome the participants, and share with them the objectives of the meeting.	
2	Ask the participants to pair up, and discuss the following:  Why are you a farmer? Is it to produce food for yourself and your family? Is it to generate cash? Or is it for both food production and for cash?	
3	While the participants are discussing the questions above, draw on the board two equal circles, one next to the other. In the circle on the left, draw sweet potatoes, while in the circle on the right, draw some bank notes or coins. Now ask the participants to finish their discussion, and answer the question asked. The likelihood is that you will receive many different responses, i.e. some farmers may be producing equally for food and cash, while others may be producing more for cash, and yet others may be producing more for food and less for cash.  <i>Supplies: flip chart, markers</i>	
4	Show the participants <b>The Commercial Farming Environment</b> where changes in the importance of farming for food and farming for cash are depicted over a 10-year period. Ask them to think, and write if possible, what the visual means.	See Appendix A for “The Commercial Farming Environment”, handout.
5	Once everyone has had the chance to review the visual, ask for comments. Consolidate the discussion to emphasize that farming practices have changed over the years. There was a time 10 years ago when the majority	

Session 4: Farming as a Business		
Lesson Steps		Resources
	<p>of farmers produced equally for both food and cash. But today farming is more specialized, where farmers produce for the market. Explain that just as demands in life have changed over the years, so have farming practices. Life requires more cash today than in the past. Therefore, instead of using farms for growing food to consume at home, there is more and more pressure to use the farms to generate the required cash. It is therefore important to begin to look at the farm more as a business than solely as a source of food.</p>	
6	<p>Ask the participants to think of the similarity between a farm and a business. Brainstorm ideas, and write participants' comments on the flip chart or whiteboard, clustering or grouping ideas where possible. To conclude the discussion, ask participants to fill up <b>Components of a Farm or Business</b>.</p> <p>Explain that a farm is similar to a production unit, where something is made, grown or manufactured. Ask participants to think of examples of things which are grown or manufactured on a farm, and write these in the centre column under production unit or farm. Ask participants to share some examples, e.g. rice, corn, potatoes, milk, eggs, etc.</p> <p><i>Supplies: Handout "The Components of a Farm or Business", flip chart, markers</i></p>	<p>See Appendix A for "The Components of a Farm or Business/The Farm Business Cycle", handout.</p>
7	<p>Write on the board 'production unit or farm', and ask participants what would be needed to produce anything on either. The answer is inputs. On the left of production unit or farm, ask participants to write the word 'inputs' and draw a line from inputs to production unit or farm, highlighting that this represents the physical flow on the farm. Ask participants to note on the handout some examples of inputs, e.g. seeds, water, fertilizer, etc.</p>	<p>Same handout as above.</p>
8	<p>Now ask participants what happens to the products made in the production unit or farm. Elicit the answer that these are sent and sold in the market. On the right hand side of the production unit or farm, write market, and draw a line from farm to market. Ask participants to think of some examples at this stage of the farm business, and write the same on the handout. Share in the plenary some examples, such as packing, transport, selling prices, labelling, etc.</p>	<p>Same handout as above.</p>
9	<p>Prior to this meeting, draw the <b>Farm Business Cycle</b> (see handout for the cycle) on a flip chart or board. Begin this part of the discussion by explaining to the participants that like any other business, a farmer needs to understand what is happening within the farm, and what internal and external elements that affect farm profitability are.</p>	<p>Same handout as above.</p>



Session 4: Farming as a Business		
	Lesson Steps	Resources
	<p><b>Supplies:</b> Pre-draw Farm Business Cycle diagram. See the handout “The Components of a Farm or Business/The Farm Business Cycle”.</p>	
10	<p>Inform the participants that a farm business cycle is a useful way to develop a business orientation or thinking. Refer participants to the diagram of the farm business cycle and explain each component of the farm business cycle as follows:</p> <p><i>Step 1: Diagnosis and finding opportunities</i></p> <p>A study of the business that identifies problems that are limiting the farm’s performance (finding out what is wrong), and opportunities that can improve performance (finding out what more can be done).</p> <p><i>Step 2: Planning</i></p> <p>Exploring options and making decisions about the steps to follow to achieve an objective or goal. It is about looking into the future.</p> <p><i>Step 3: Implementing</i></p> <p>Ensuring that the plan can be realized. This involves organizing, producing, monitoring and marketing. Organizing involves arranging the resources and people needed to carry out the plan. Monitoring involves keeping track of progress being made on tasks and activities of the plan, and checking to see if things are going as planned.</p> <p><i>Step 4: Evaluating</i></p> <p>Deciding whether or not the plan worked and whether or not the goals were achieved. It involves taking a longer look at what you have done and measuring it against your expectations.</p> <p><b>Note to Facilitator:</b> Jump to Session 24 for more information on value addition.</p>	
11	<p>The last activity of this meeting is to better understand each step of the farm business cycle. Divide the participants into four groups, and tell them that they will have the opportunity to study Wafula’s journey through the farm business cycle. This will however be done through a case study in five parts, where after each part the groups will discuss certain given questions.</p>	

Session 4: Farming as a Business		
	Lesson Steps	Resources
12	<p>Read out loud, in a dramatic and funny way <b>Part 1: Diagnosis/Finding Opportunities of Wafula’s Story</b>.</p> <p>Then ask the participants to discuss for 10 minutes, in their groups, the following questions:</p> <ol style="list-style-type: none"> <li>1. What did Wafula realize about the farmers in his village?</li> <li>2. What did Wafula decide to do? How did he do it? Why is this important?</li> <li>3. What did Wafula learn from his visit to the market (retailers and traders)?</li> <li>4. What did Wafula decide to do? Why could he be confident about this?</li> </ol> <p>After 10 minutes, raise each question in the plenary and generate a quick discussion to ensure that participants understand what it means to critically diagnose or examine the situation of the business. Summarize as follows:</p> <p><i>In this case study, Wafula identified a problem. He realized that everyone was growing the same crops and not actively looking for markets. He also realized that the existing practice was to sell to the first buyer that came to their farms. Realizing that he should grow something different, Wafula undertook research and identified a more profitable opportunity for himself i.e. growing and selling bambara nuts. In order to make a final decision, Wafula found out the costs and the technical inputs needed for a successful business.</i></p>	<p>See Appendix A for <b>Part 1</b> of the story.</p>
13	<p>After that session, read out next, in a dramatic and funny way, <b>Part 2: Planning of Wafula’s Story</b>. Then ask the participants to discuss for 5 minutes, in their groups, what in their view were some key steps in Wafula’s plan.</p> <p>After 5 minutes, generate a discussion in the plenary, highlighting that Wafula carefully identified what inputs he would need for his business, what he would produce, how he would sell the bambara nuts, and the profit he could expect. These are some important steps towards assessing business feasibility.</p>	<p>See Appendix A for <b>Part 2</b> of the story.</p>

Session 4: Farming as a Business		
	Lesson Steps	Resources
14	<p>Similarly, read out to the participants <b>Part 3: Implementing: Organizing, producing and monitoring of Wafula story.</b></p> <p>Then ask the participants to discuss for 10 minutes, in their groups, the following questions:</p> <p>What happened after Wafula planted his bambara nuts? What did he do about it? Why? When it got close to harvesting time, what did Wafula do?</p> <p>After 10 minutes, generate a discussion in the plenary. Explain to the participants that the whole purpose of making a plan is to implement it, which involves three key activities, i.e.:</p> <p><b>Organizing</b>, i.e. to get in order everything you need for producing. In a farm business, it mostly refers to buying inputs, organizing and draft power.</p> <p><b>Producing</b>, i.e. growing the crop or raising the animals. It includes all the things a farmer does to produce his crop or product such as ploughing, planting, harvesting, feeding and watering animals.</p> <p><b>Monitoring</b>, i.e. checking that everything is going according to plan. It also means making small changes to the plan. In Wafula's story, he had to replant because he did not have the right seed.</p>	See Appendix A for Part 3 of the story.
15	<p>Then after that session, read out next <b>Part 4: Implementing: Marketing of Wafula's Story.</b> Then lead a discussion, in the plenary, around the following questions:</p> <p>The harvesting and packaging went well, what happened When Wafula took the bambara nuts to the three retailers? What did he do about it and why?</p> <p>Explain how it is that marketing is a very important part of the farm business. It includes preparing, packaging, transporting, and selling the product.</p>	See Appendix A for Part 4 of the story.
16	<p>Now read out, dramatically, <b>Part 5: Evaluating of Wafula story.</b></p> <p>Then again, lead in the plenary, a discussion around the following questions:</p> <ol style="list-style-type: none"> <li>1. After Wafula sold all his bambara nut and went home, what did he do? Why?</li> <li>2. Did Wafula make a profit? How did he know?</li> <li>3. What are some of the things Wafula learned from his evaluation? What does he plan to do about it?</li> </ol> <p>Conclude the discussion by highlighting how important it is to evaluate one's performance. It helps the farmer know what went well and what</p>	See Appendix A for Part 5 of the story.

Session 4: Farming as a Business		
	Lesson Steps	Resources
	went wrong. It enables the farmer to know how to improve his farming business to make it more profitable.	
17	Conclude the session by reminding participants of the key concepts covered in this meeting, i.e. how changes in farming practices have led to a more commercial farming environment; how similar are the components of a farm or business i.e. input supply, production/farm and market; and the logical sequence of business planning through the farm business cycle, i.e. diagnosis and finding opportunities, planning, implementing and evaluating.	

## Session 5: Gendered Value-Chain Analysis

This Session was adopted from the Marketing Tools within the Farmer’s Field and Business School Toolkit developed by Cooperative for Assistance and Relief Everywhere, Inc. (CARE), available at: <http://www.care.org/work/world-hunger/farmers-field-and-business-school-toolkit>.

### Objectives

To map where women are present in the key value chains that the project is working on and whether they are present as participants (processors, value adders) or as controllers (sellers, managers)

**Duration:** 1 hour

### Materials:

- Flip chart
- Markers of a number of colors

### Facilitator’s Note:

This exercise is ideally completed through a focus group discussion with women who are all part of the same value chain, but it can also be done with a group of women involved in different value chains, provided that there are two or three women involved in one chain so that they can work on the assignment together. The facilitator should meet with the same focus group one year later to hold another discussion; consent should be obtained for follow-up when selecting the group for the first gendered value chain analysis.

Handouts are available in Appendix A here: [Session 5: Gendered Value-Chain Analysis](#)

Session 5: Gendered Value-Chain Analysis	
Lesson Steps	Resources
1	<p><b>Introduction and participant information:</b> Explain that we are going to spend some time to understand the enterprises that women are involved in and where they are placed in the production and marketing processes. Tell the group that the exercise will help us to identify relationships between players in the value chain, and where are the opportunities to boost women’s position and income-earning opportunities.</p>
2	<p><b>Drawing the value chain:</b> Ask the group to draw a diagram of their value chain, using paper and markers or materials collected from around the village. Encourage the use of pictures.</p> <p><b>Note:</b> Make sure the diagram includes the entire value chain and not just the processing or production stages. Participants may need to take their best guess about the downstream stages (such as international exports). The diagram needs to include all key steps, stages or processes, but does not have to be overly detailed.</p>

Session 5: Gendered Value-Chain Analysis		
Lesson Steps		Resources
	<p><b>Facilitator's Note:</b> Based on timing, you could develop the value chain on a flip chart as a group. Use pictures to demonstrate the value chain wherever possible, limiting the use of text.</p> <p>See Appendix A for an example of the value chain from the CARE guide. This diagram should serve as a <b>guide</b> but should be revised based on the farmer's specific value chain and include images and limited words where possible.</p>	
3	<b>Most profitable stages:</b> Ask the group to mark the processes or stages in the value chain that are most valuable or that make the most profit, using a separate color or symbol.	See Appendix A, Value Chain Diagram 2
4	<b>Women's participation and control:</b> Ask the group to mark the processes in the value chain where they participate, using a separate color or symbol.	See Appendix A, Value Chain Diagram 3
5	Ask the group to mark processes that they control with another color.	See Appendix A, Value Chain Diagram 3
6	<b>Men's involvement and control:</b> Ask the group to mark the processes in which men are involved, using a separate color or symbol. See diagram 4.	See Appendix A, Value Chain Diagram 4
7	Ask the group to mark processes that men control with another color.	See Appendix A, Value Chain Diagram 4
8	<p><b>Analyzing the value chain:</b> Analyze the chart with beneficiaries to identify gender inequalities in control and access in the value chain. Ask the following questions:</p> <ul style="list-style-type: none"> <li>• What are the stages along the value chain where there is greater value?</li> <li>• Who are key actors in the processes that are the most valuable, women or men? Why do you think that is?</li> <li>• Are women primarily concentrated in one or two processes in the value chain? Are these the most valued processes? The most skilled? The best remunerated?</li> <li>• What skills, equipment, capital, information is required to enter the higher-valued stages?</li> <li>• What are the main barriers for women to participate in these stages?</li> <li>• What can women do to get into processes that are more valuable or that have more value add and control?</li> <li>• What types of businesses are women more likely to be involved in, in this community? And men? Why is that?</li> </ul>	

Session 5: Gendered Value-Chain Analysis	
Lesson Steps	Resources
	<ul style="list-style-type: none"> <li>• Within a household, who in the household typically makes the sale from this crop? Who makes the sale of the processed products? Can either partner make the sale, at any given time?</li> <li>• What are the advantages or disadvantages that men and women have in finding markets and negotiating sales for their products? Why do you think that is?</li> <li>• What happens at the household level, when earnings from the crop or processed products come into the household? How is the money from the crop or processed product distributed between spouses/and with other family members?</li> </ul>
9	<p><b>Identifying opportunities, constraints, goals:</b> Identify the goals for the season and the project period by asking the following questions:</p> <ul style="list-style-type: none"> <li>• What changes do you hope to see along this value-chain (including at the household level)? Why?</li> <li>• What skills, support, information is required to realize these changes?</li> <li>• What information, understanding do men need to have to help realize these changes? How can they be brought on board?</li> <li>• What rules need to change to help realize these changes?</li> </ul>
10	<p>Summarize the key points of the discussion, and point out where the Pathways program will support some of the goals they have identified. Use the discussion to identify the specific power issues or gendered constraints that the project can help address, or the additional resources and connections that may be needed.</p> <p><b>Example summary of the sample diagrams charts and discussion:</b></p> <p><i>Respondents noted that women have some role in growing peanuts, but the bulk of peanuts need to be bought, and this is men's job. Women are primarily responsible for making and bottling peanut butter. Women and men equally sell peanut butter in local markets and their control over the profits from this venture is about equal. It is primarily men who sell outside the village. There is a little more money to be made here, and men tend to hold this as part of household profits. Men are also primarily involved in and control interactions related to trading. This is where the most money is to be made. There are some women involved in retail sales and, if they own their own shops, they will control the profits, but mostly it is men who run these shops or own them and they control related profits.</i></p> <p><b>Facilitator's Note:</b> Make sure to store or photograph the diagrams so that they can be revisited in the next years of the project, to see if there have been changes.</p>

## Session 6: The Farmer as an Entrepreneur and Farm Business Profitability

### Objectives

By the end of this session, the participants shall have:

- Explained the required competencies for business success;
- Accomplished the self-assessment process;
- Discussed the concept of costs and profit as it relates to a farm business;
- Differentiate between farm business and farm enterprise; and
- Identified factors that can affect farm business profitability.

Duration: **To be determined during dry-run**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 6: The Farmer as an Entrepreneur and Farm Business Profitability](#)

Session 6: The Farmer as an Entrepreneur and Farm Business Profitability		
Lesson Steps		Resources
1	Welcome the participants, and share with them the objectives of the meeting.	
2	<p>In the plenary, ask the participants to close their eyes, and think of the most successful entrepreneur or business person they know.</p> <p>After 3-4 minutes, ask everyone to open their eyes, and share with others why they think a particular person is a successful entrepreneur, i.e. what in their views are the key abilities or competencies that make the person a successful business person.</p> <p>Note the participants' responses on the board. Cluster these responses into three sections, where possible: achievement, planning and power. Refer the participants to the handout <b>Competencies for Business Success</b>. Connect the participants' responses to the 13 competencies.</p> <p><i>Supplies: Flip chart, markers</i></p>	See Appendix A for the "Competencies for Business Success" handout
3	<p>Lead the participants through Exercise 5: <b>Competencies for Business Success</b>.</p> <p><i>Supplies: See Exercise 5 below.</i></p>	Same handout as above.



## Exercise 6: Competencies for Business Success

### Objective:

By the end of the exercise, the participants shall be able to explain the required competencies for business success.

Duration: Placeholder

### Supplies:

- Handout "Competencies for Business Success" (See Appendix A)
- Pens/pencil

### Exercise Steps:

1. Ask the participants to form pairs.
2. Ask the participants to recall Wafula's story from the previous meeting. The participants should revisit Wafula's story (all five parts) and mark on handout which of the 13 competencies they think Wafula has. Inform the participants that they must justify their marking with an example.
3. After 15 minutes, lead a quick plenary discussion, by calling out a competency, asking if Wafula had that competency, and if yes, requesting an example.
4. Once the participants understand individual competencies, ask them to mark, on the same exercise sheet, those competencies that they think they are strong in.
5. Facilitate a quick discussion to identify which of the competencies participants would like to improve. Ask participants how a person can improve his/her competencies? Some ideas are as follows:
  - Meet successful business persons – observe them, talk to them, and learn from them
  - Identify the cluster that you need to improve, and seek training for the same
  - Take deliberate steps during the various parts of this training to overcome identified limitations
  - Discuss with the facilitator how to overcome specific limitations and inhibitions

## Session 6: The Farmer as an Entrepreneur and Farm Business Profitability (Continued)

<i>Lesson Steps</i>		<i>Resources</i>
<b>4</b>	Recall with the participants that in the previous discussions, they have had the opportunity to look at the farm as a business. The viability of any business is linked to inputs, production, markets and the general commercial environment. Ask the participants to brainstorm the most important things they believe they need to know, and be able to do, to make their farm businesses a success. Write their ideas on the board.	
	<b>Supplies:</b> Flip chart, marker	

Session 6: The Farmer as an Entrepreneur and Farm Business Profitability (Continued)					
Lesson Steps		Resources			
5	<p>When all the ideas have been listed, ask the participants to refer to the handout <b>Important Aspects of a Farm Business</b>. Explain each concept and tell the participants that these are some of the most important aspects of a farm business. These simple questions also constitute a business plan, which is a tool that allows the systematic assessment of all those factors that can positively or negatively affect business performance.</p> <p><i>Facilitator/Preparation Note: The concepts in the handout were covered during the farmer focus group discussions, conducted in Busia County in March 2016. The facilitator should fill out this handout Important Aspects of a Farm Business for each farmer group participating in the FBS training, where possible, and relate their specific situations back to the concept of a business plan.</i></p>	See Appendix A for the “Important Aspects of a Farm Business” handout			
6	<p>Introduce them to the principles of Good Agricultural Practices, or GAP, as the direction to follow to add more value to their products. Use the handout Good Agricultural Practices as the facilitator’s resource. (Participants do not need individual copies of this handout, but would benefit instead from a brief presentation on the topic.)</p>	Good Agricultural Practices: Facilitator’s Resource			
7	<p>Write the word ‘Profit’ on the board, and inform the participants that the next discussion is about profit. Remind the participants of an earlier exercise where it was discussed that farming has changed over the last decade. As farmers aim to develop their farms into profitable businesses that generate more cash, they should take into consideration profitable nutrition-sensitive agricultural practices (Session 7A through 7C will provide an overview of important nutritional information relevant to designing and implementing these practices). Ask the participants to brainstorm the following questions:</p> <ol style="list-style-type: none"> <li>1. What is profit?</li> <li>2. Why is profit important?</li> <li>3. How can profit be used?</li> </ol> <p>Write participant’s comments on the board, and lead the discussion to the idea that profit is the money left over from income after all costs have been deducted.</p> <p><i>Supplies: Flip chart, markers</i></p>				
8	<p>Create three columns on the board, and on the column at the right write the word ‘Profit’, as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 30%; text-align: center;"><b>PROFIT</b></td> </tr> </table>			<b>PROFIT</b>	See Appendix A for the “Farm Business Profitability/ Understanding the Difference
		<b>PROFIT</b>			

Session 6: The Farmer as an Entrepreneur and Farm Business Profitability (Continued)					
Lesson Steps		Resources			
	<p>Ask the participants to brainstorm the following questions:</p> <ul style="list-style-type: none"> <li>• Where does profit come from?</li> <li>• How do you know that you have made a profit?</li> </ul> <p>Write participants' ideas on the board under 'Profit'. Lead the discussion to the idea that profit comes from income and costs. When the income is greater than the costs, there is profit. When the brainstorming is done, write the words 'Farm income' and 'Farm costs' in the first and second columns on the board as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">FARM INCOME</td> <td style="text-align: center;">FARM COSTS</td> <td style="text-align: center;">PROFIT</td> </tr> </table> <p>Encourage the participants to discuss among themselves and brainstorm what each of these words mean. Start with income, and then discuss farm costs, and write their answers on the board. Refer them to <b>Farm Business Profitability</b> chart, and explain that the reason to discuss farm income and farm costs is to establish the idea that the farm business is separate from the household. While the household relies on the income from the farm and other sources, the profitability of the farm is based on the income and costs related to the farm only, and not the household.</p>	FARM INCOME	FARM COSTS	PROFIT	<p>between Farm Business and Farm Enterprise" handout</p>
FARM INCOME	FARM COSTS	PROFIT			
10	<p>The next discussion is to understand the difference between a farm business and a farm enterprise. Lead the discussion to the idea that a farm business is made up of different enterprises. Each crop or kind of livestock produced is an enterprise. A farmer may produce rice, corn and eggs. Each of these products is an enterprise. Rice is an enterprise; corn is an enterprise; eggs is an enterprise. Together they make up the farm business as a whole. Explain that sometimes farmers make decisions about the whole farm business and other times they make decisions about a specific enterprise, so it is important to understand the difference. Tell the participants that this distinction is important to understand in order to calculate costs and profit. For further details refer to <b>Understanding the difference between Farm business and Farm enterprise</b>.</p>	<p>See Appendix A for the "Farm Business Profitability/ Understanding the Difference between Farm Business and Farm Enterprise" handout</p>			
11	<p>On the board write the words 'Variable costs' and 'Fixed Costs'. Ask the participants what they understand by these terms. Note participants' comments under each term, and constantly ask for examples of fixed and variable costs. Make sure that many of the points on the handout <b>Understanding Costs</b> have been covered, before referring participants to that handout and emphasizing once again the link of variable costs to individual enterprises, and fixed costs to the overall farm business.</p>	<p>See Appendix for the "Understanding Costs" handout</p>			

Session 6: The Farmer as an Entrepreneur and Farm Business Profitability (Continued)		
	Lesson Steps	Resources
12	<p>In order to help participants think clearly about all the various factors that can affect farm profits, make a small circle on the board and write the word 'farm profit'. Ask the participants: What in their view can affect the profitability of any farm business?' Write participants' contributions on the board, ensuring that the following ideas have been covered:</p> <ol style="list-style-type: none"> <li>1. Cost of inputs</li> <li>2. Home consumption</li> <li>3. Market demand</li> <li>4. Market prices</li> <li>5. Competitors</li> <li>6. Technology</li> <li>7. Credit</li> <li>8. Input suppliers</li> <li>9. Others, such as GAP certification, etc.</li> </ol> <p>For each of the above ideas, keep probing for how these factors can affect farm profits, e.g. if more competitors enter the market, the prices can go down, or if a new technology is introduced that can produce in less time, with less costs and efforts, then profits can go up, etc. If additional points have come up, ask participants to add these to the figure on <b>What can affect farm business profit?</b></p>	<p>See Appendix A for the "What Can Affect Farm Business Profit?" handout</p>
13	<p>Ask the participants if they have any questions or comments about the meeting. Encourage participants to talk about the concepts discussed in the meetings with other people in their family and neighborhood. Take a few minutes to review the key points covered in this meeting, i.e. the concept of a farm business plan, farm business profitability, difference between a farm business and farm enterprise, the difference between fixed costs and variable costs, and factors that affect farm business profit. Ask the participants to review, before the next meeting, the handouts given.</p>	

## Session 7A: Understanding Undernutrition

This Session was primarily adopted from the Nutrition Toolkit within the Farmer’s Field and Business School Toolkit developed by Cooperative for Assistance and Relief Everywhere, Inc. (CARE), available at: <http://www.care.org/work/world-hunger/farmers-field-and-business-school-toolkit>. Other resources are noted within the text.

### Objectives

- To identify immediate, underlying and root causes of undernutrition.
- To develop an understanding about nutrition in relation to other everyday practices and decisions.

**Duration:** To be determined

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 7: Introduction to Food and Nutrition Issues and Solutions](#)

Session 7A: Understanding Undernutrition		
	Lesson Steps	Resources
1	<p>Welcome the participants, and share with them the objectives of the meeting.</p> <p>Undernutrition is a multifaceted condition, with a variety of factors that surround agriculture, women’s empowerment, and access to food. Understanding the underlying causes of undernutrition will help individuals address the presence of undernutrition. This tool can be adapted for any specific problem that arises from undernutrition as well (see examples below).</p>	
2	<p><b>Presentation<sup>1</sup>:</b></p> <p>Maize production has increased significantly over the years to the point where it dominates agriculture and diets. Unfortunately, production of other foods such as legumes, nuts, fats, oilseeds, fruits, vegetables, and animals has received less attention.</p> <p>These foods are often not available or accessible year round in the quantities needed by the body. Even in areas where these foods are available and accessible, people lack knowledge on the importance of including them in their diets.</p>	<p>See Appendix A for the “Unbalanced Meal/Balanced Meal” handout.</p>

<sup>1</sup> This section was adapted from the 2015 Nutrition Handbook for Farmer Field Schools developed by the Ministry of Agriculture, Irrigation and Water Development, Department of Agricultural Extensions Services (DAES), Malawi, with support from FAO and Flanders State of the Art.

Session 7A: Understanding Undernutrition		
Lesson Steps		Resources
	<p>The result is that meals are dominated by maize (mahindi). [<i>Demonstrate this concept to the group by showing them the <b>Unbalanced Meal</b> on the handout.</i>]</p> <p>The current meal does not provide the variety of nutrients that the body needs. This can cause different forms of malnutrition such as: underweight; overweight/obesity; too short for age/stunting; slow to develop; or a variety of micronutrient deficiencies that affect sight, blood formation, energy, bone development, disease prevention, or healing.</p> <p>This diet encourages monoculture and food insecurity in case of adverse conditions in addition to being detrimental on the environment, which then needs high external input to be productive. On-farm diversity also acts as safety net in case of adverse weather conditions. Some crops (especially local crops) are often more resilient than exotic crops, and can be more resistant to pests and diseases. The more crops on farm, the lower the likelihood of crop failure.</p>	
3	<p>The better meal is diverse. The foods change from meal to meal because of diversified production.</p> <p>This meal shows that there are many foods to choose from for a more diverse diet in terms of both staple and other food groups. [<i>Demonstrate this concept to the group by showing them the <b>Balanced Meal</b> on the handout.</i>]</p> <p>A diverse diet is better for the environment as it reduces the risk of crop failure and increases resilience, thereby ensuring food security. A healthy environment uses fewer inputs hence the need to care for and manage the natural resource base.</p> <p><i>Facilitator's Note: The facilitator may decide to skip Step 2 and 3, due to timing or other reasons, and jump right into Step 4 with interactive exercises.</i></p> <p><i>Supplies: In making the presentation/lecture, the facilitator may use multi-media if there is electricity and a meeting hall available, or manual methods through the use of meta cards, boards and markers. Take note that the lecture should also encourage open discussion and sharing of experiences among the participants.</i></p>	Same handout as above.
4	<p>Explain to the group that we will start with an exercise to practice determining the root causes of a problem. Divide the group into sub-groups of three or four people. (Go to Exercise 6A.1)</p>	See Exercise 6A.1.
5	<p>Use the same technique as Exercise 6A.1 to determine the underlying causes of nutrition problems they experience in the participant's</p>	See Exercise 6A.2.

Session 7A: Understanding Undernutrition											
Lesson Steps	Resources										
	communities, we will create a Problem Tree, which is a concept based on the structure of a tree. (Go to Exercise 6A.2)										
6	<p>To further build on the previous exercise, the participants shall review the problem tree developed in Exercise 6A.2, and ask “but why” to identify the underlying and root causes for undernutrition.</p> <p>Show participants the last session. Remind them of the signs and causes of undernutrition (or whatever nutrition issue they chose to address) and ask them if they have any additional signs or causes to add to the tree.</p>										
7	<p><b>Discussion:</b></p> <p>Working with the drawings from Part I, look at each cause and ask, “But why” to help participants identify the underlying and root causes. For example:</p> <p><i>A child is terribly thin, her bones stick out, and she looks like an old woman. Her hair is thin, her stomach sticks out, and she is sick most of the time. Point to the drawings and indicate how the trees have sub-roots and deepest roots. Ask participants to label these levels.</i></p> <table border="1"> <tbody> <tr> <td>Why is she undernourished?</td> <td>She does not eat enough</td> <td>Poor diet = Immediate cause</td> </tr> <tr> <td>But why does she not eat enough?</td> <td>There is not enough food in the home</td> <td>Food shortage = Underlying cause</td> </tr> <tr> <td>But why is there a shortage of food?</td> <td>The family has not enough land</td> <td>Insufficient land = root cause</td> </tr> </tbody> </table> <p>Rearrange the root labels, so that the root causes are the lowest on the drawing.</p> <p>For example:</p> <p>Cause: Nanjala is undernourished because she does not eat a balanced diet.</p> <ul style="list-style-type: none"> <li>• <i>Why does she eat poorly?</i> Because of limited crop diversity.</li> <li>• <i>Why is there limited variety of crops?</i> Because there are no seeds available.</li> <li>• <i>Why are there no seeds for other crops?</i> Because there is no seed supplier.</li> <li>• <i>Why is there no seed supplier?</i> Because the costs are too high.</li> </ul>		Why is she undernourished?	She does not eat enough	Poor diet = Immediate cause	But why does she not eat enough?	There is not enough food in the home	Food shortage = Underlying cause	But why is there a shortage of food?	The family has not enough land	Insufficient land = root cause
Why is she undernourished?	She does not eat enough	Poor diet = Immediate cause									
But why does she not eat enough?	There is not enough food in the home	Food shortage = Underlying cause									
But why is there a shortage of food?	The family has not enough land	Insufficient land = root cause									

Session 7A: Understanding Undernutrition	
Lesson Steps	Resources
<p><b>8 Nutrition inputs.</b> Using the diagrams below, talk through the following key points.</p> <p><b>1. Good nutrition</b></p> <p>Good nutrition means eating the right quantity, quality and diversity of foods and getting the care we need to keep our bodies strong and healthy and prevent us from getting sick. When a person is undernourished, there are usually numerous reasons. Often, these reasons are connected. If a child is malnourished, the father may blame the mother for not feeding the child enough. Yet the father may not be giving the mother the right variety of foods to cook. Maybe he cannot afford it, or he does not have enough land.</p> <p>It is important to do a proper analysis and not blame one person. In many cases, the solution to one person’s malnutrition will involve the whole community.</p> <p><b>2. Impact of malnutrition:</b></p> <p>Malnourished children have slow mental and physical development that affects their thinking and their physical growth. Malnutrition also weakens the body’s ability to fight illness and infection. When malnourished adults are sick, they can’t perform their daily work, which decreases their productivity and incomes, which can lead to less ability to buy or grow healthy foods.</p> <p><b>3. Undernutritionundernutrition cycle:</b></p> <p>Malnutrition is a vicious cycle. Young girls who are poorly nourished are more likely to give birth to low-birth weight babies, who are also more likely to be undernourished, stunted, or to die in infancy. Girls who are married at a young age are also more likely to have low-birth weight babies. Good nutrition—especially for girls and women--needs support in all stages of the lifecycle.</p> <p><b>4. Agriculture and nutrition:</b></p> <p>Agriculture and nutrition are very closely interrelated. Well-nourished farmers are able to be more productive. Intercropping nutrient-rich vegetables or rearing small animals can improve the variety and quality of foods that are produced and eaten at the household level, saving incomes. Using good agriculture and market practices also increases yields, which gives more income to invest in quality food.</p>	<p>See Appendix A for the “Impact of Malnutrition” and “Undernutrition Cycle” diagrams.</p>



Session 7A: Understanding Undernutrition	
Lesson Steps	Resources
	<p>Good agricultural production alone doesn't lead to good nutrition. Both parents need information on good nutrition to discuss the importance of investing in good food and care to nourish productive and healthy families.</p>
9	<p><b>Reflection.</b> Summarize the key points while asking participants to reflect on the session:</p> <ul style="list-style-type: none"> <li>• Undernutrition is complex. There are basic or root causes that we often don't see.               <ul style="list-style-type: none"> <li>– Were there any root causes the group identified that are not seen every day?</li> </ul> </li> <li>• Undernutrition is dangerous, because a weak body cannot easily fight infections and can fall sick more easily. Once a person gets sick, she or he may become even more malnourished.</li> <li>• To address undernutrition, we need to look at household level, community level, and even beyond.               <ul style="list-style-type: none"> <li>– What are some reasons that addressing these root causes is difficult?</li> </ul> </li> </ul> <p>Looking at the problem trees, ask the participants:</p> <ul style="list-style-type: none"> <li>• How can we address some of the underlying causes of malnutrition?</li> <li>• Where on the problem tree can we, as farmers, intervene?</li> <li>• What resources do we have to address some of the problems?</li> </ul>

### Exercise 7A.1: But Why?

**Objectives:**

(Same as Session 6.A)

- To identify immediate, underlying and root causes of undernutrition.
- To develop an understanding about nutrition in relation to other everyday practices and decisions.

**Duration:** 1 hour

**Supplies:**

- Flipchart
- Markers

**Exercise Steps:**

1. Explain to the group that we will start with an exercise to practice determining the root causes of a problem. Divide the group into sub-groups of three or four people.

2. Give each group a simple nutrition question, such as:

- Why do women think they do not have enough breast milk to feed their babies?

- Why do women feel they do not have enough time to breastfeed their baby as much as is suggested by health workers (10 times per day)?
- Why are mothers responsible for the health of their children?
- Why do fathers make the decisions about what the family eats?
- Why do some women have “low blood?”
- Why do some babies get sick easily?
- Why are their “lean” months each year?

Make sure that the same statement is given to at least two groups, and that the groups that have the same question cannot hear each other.

Tell the groups that they must determine the real cause of the observation by continuing to ask “But why?” until a satisfactory answer is found. It may be useful to do one example as a group before dividing into sub-groups.

3. Bring the participants back to plenary and ask them to discuss their experience. Were they surprised by their findings? Did groups with the same question have similar explanations?

Explain to participants that we will now use this technique to determine the underlying causes of nutrition problems they experience in their communities.

## Exercise 7A.2: Creating a Problem Tree

### Objectives:

(Same as Session 6.A)

- To identify immediate, underlying and root causes of undernutrition.
- To develop an understanding about nutrition in relation to other everyday practices and decisions.

**Duration:** 1 hour

### Supplies:

- Flipchart
- Markers

### Exercise Steps:

1. Have participants look around or think about a tree. Then, ask them the following questions:

- What makes trees strong?
- How do they become strong?
- Which parts of the tree do we see?
- Which are invisible?
- Why are the roots of the tree important?

Point out that the roots of the tree give it strength & nutrients, and help it grow. But if the tree has weak roots, the tree may not grow well. Explain that *this session will be about identifying and explaining the root causes of malnutrition. We will create a tree to find out the roots of undernutrition, or a more specific, contextually relevant nutrition problem, which could include anemia, low birth weight, or vitamin deficiency.*

2. **Drawing the trees.** Divide the participants into groups of 4-5 participants and give each a piece of paper and markers. Ask the participants to complete the following tasks, allotting them a total of 20 minutes and guiding them with sub-questions:

A. Draw a tree and label the trunk of the tree “undernutrition” (or a more specific, contextually appropriate nutrition issue such as those listed above in Step 1)

B. Draw the branches and leaves (the parts we can see). Label the branches with the signs of undernutrition.

- What are the signs that a child or adult is undernourished?
- What are the results of such undernourishment?

C. Draw in the roots of the tree: Label the roots with the “Causes” of undernutrition.

- What are the causes of undernutrition? Causes answer the question why does it happen?

D. Bring the groups together and review:

- What are the signs and signals of malnutrition that are common to all the drawings?

- What are the causes of malnutrition? (Add any details that might be missing.)

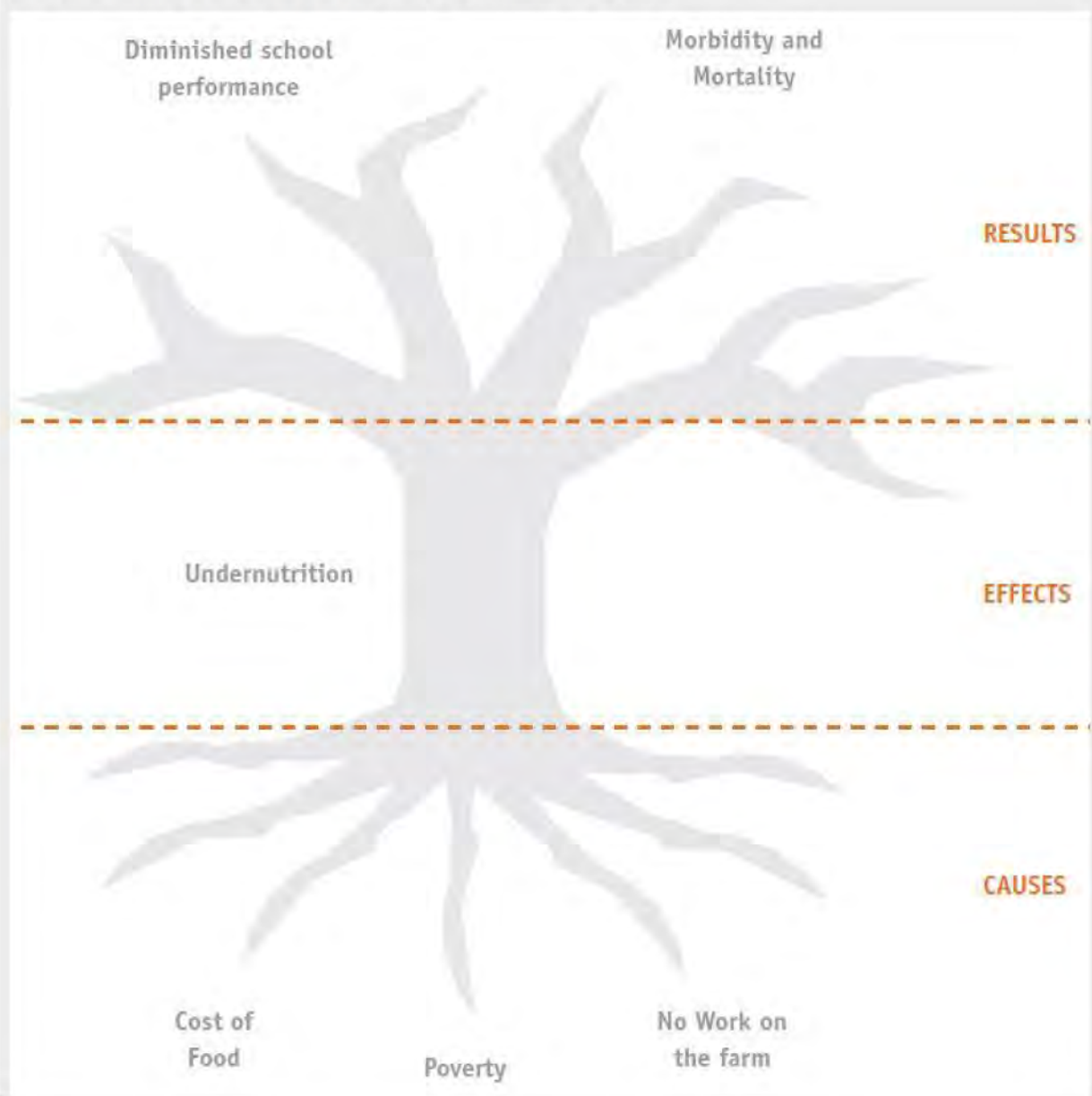
3. Reflection. Summarize the key points:

- Undernutrition is complex. There are basic and root causes that we often don't see. We can use the "But why?" technique to determine these basic and root causes.

- Undernutrition is dangerous, because a weak body cannot easily fight infections and can fall sick more easily. Once a person gets sick, she or he may become even more malnourished.

- To address undernutrition, we need to look at household level, community level, and even beyond.

- Ask participants to see if they can pick the root causes that are present at the different levels. Which ones can they address? Which can be addressed through households? Which roots are tied to the community or could be helped through communal action?



## Session 7B: Food Groups and Nutrition

This Session was primarily adopted from the Nutrition Toolkit within the Farmer’s Field and Business School Toolkit developed by Cooperative for Assistance and Relief Everywhere, Inc. (CARE), available at: <http://www.care.org/work/world-hunger/farmers-field-and-business-school-toolkit>. Other resources are noted within the text.

### Objectives

- To understand the different food groups and the importance of having a diverse diet.
- To understand how to put together a balanced meal

**Duration:** 1 hour (can also be divided into two 30-minute sessions)

### Materials:

- Food cards (cards or pieces of paper with names or pictures of local foods) or poster with pictures of local foods
- Small pieces of paper, with the names of diverse foods written on them (one for every participant)
- A list of the foods that grow in the area and their nutrient content
- Flip-chart and markers
- A picture of a local fire or cook stove
- Computer and projector to show video (if possible). If not, you may need to skip Step 9.
- Markers or Pens

Handouts are available in Appendix A here: [Session 7: Introduction to Food and Nutrition Issues and Solutions](#)

Session 7B: Food Groups and Nutrition	
Lesson Steps	Resources
<p><b>1</b> Welcome the participants, and share with them the objectives of the meeting.</p> <p>A nutritious diet is made up of foods from each of the different food groups: carbohydrates, fats, proteins, and vitamins and minerals. In order have healthy bodies, a family needs to have an understanding of what each of these food groups is so that they can do their best to eat appropriate amounts of each group. Each group plays a very important role in how our bodies work, so eating nutritious meals is key to improving overall health.</p>	
<p><b>2</b> <b>Introduction:</b> Ask the group:</p> <ul style="list-style-type: none"> <li>• What do you like to eat best in different seasons?</li> </ul> <p>Take a few examples, until people are excited about food and eating. Taste is important to enjoy what we eat, but to be healthy we also have to eat food that gives our bodies the nutrients to keep going.</p> <ul style="list-style-type: none"> <li>• Ask: What do you need to make a fire for cooking lunch?</li> </ul>	<p>Picture of Kenyan stove</p>

Session 7B: Food Groups and Nutrition		
Lesson Steps		Resources
	<p>Take a few responses and point out that for the stove, you need kindling, a match, fuel, and air. When the fire has lots of dry wood and air, it burns well and makes coal. When it runs out of fuel, or has poor-quality fuel it burns down. Our bodies are the same: They need fuel to keep going, and if the food we eat is not enough or not right for us, we get tired and weak. The fuel for people is in the nutrients in the different foods we eat.</p> <p><i>Supplies: Flipchart/ markers, picture of stove to facilitate discussion.</i></p>	
8	<p><b>Input on nutrients:</b> Remind the group that:</p> <ul style="list-style-type: none"> <li>• Our bodies require a variety of nutrients to stay healthy, grow, and fight off sickness.</li> <li>• All foods contain a mixture of nutrients. Each food has a different amount of each nutrient. To stay healthy, people must eat a variety of different foods every day so that they get some of each nutrient.</li> <li>• Each type of nutrient has a different function for the body: For example, carbohydrates and fats give us energy; proteins help us build muscles, skin, blood, and bones; and vitamins protect us from infection and sickness. Show the group the drawing <b>Diagram of Food Benefits on Body</b>.</li> </ul>	<p>See Appendix A for the image entitled "Diagram of Food Benefits on Body".</p>
9	<p><b>Video Clips:</b> Show the group the following video. Explain that this video was designed to teach parents what they need to feed their children from the age of six to 24 months to help them grow to be healthy or strong. However, these food groups described in this video clip are ones we all need to be health.</p> <p>Show participants the following video:  <a href="http://www.medicalaidfilms.org/film/understanding-what-your-child-should-eat/">http://www.medicalaidfilms.org/film/understanding-what-your-child-should-eat/</a>. You will not be showing the group the whole film, but instead two clips. (<i>Note: the clip is available in English and Swahili</i>)</p> <p>First, show the participants the clip from 3:30 to 6:00:</p> <p>Also, remind participants that in addition to producing eating the right foods, everyone needs to take food safety steps to ensure they prevent illness among themselves, their children, and their communities.</p> <p>Now show participants the clip from 11:10 to 12:15.</p>	

Session 7B: Food Groups and Nutrition		
Lesson Steps		Resources
	<p>Participants should keep these food safety procedures in mind during production, including post-production/processing activities.</p> <p><i>Facilitator's Note: If a computer/projector are not available, move on to Step 10.</i></p>	
10	<p><b>Input on food groups:</b> Using food cards (names or pictures of local foods on cards or pieces of paper) or a food poster created for the local context, introduce the different food groups. Illustrate your talk by holding up/pointing out pictures and asking participants to name other examples of food belonging to that group.</p> <ul style="list-style-type: none"> <li>• <b>Carbohydrates:</b> These are sometimes called “Go” foods. These foods give our body energy to move, work and think. We get most of our carbohydrates from grain crops such as rice, wheat, maize, millet, cassava, potatoes and sweet potatoes. We get the greatest portion of our daily meals from carbohydrates. <ul style="list-style-type: none"> <li>– <b>Ask:</b> What are some of the foods you eat every day to give us energy?</li> </ul> </li> <li>• <b>Proteins:</b> Proteins can be called, “Grow foods,” or body-building foods, because they help our bodies grow, build muscle, &amp; repair themselves. They are found in animal foods (meat, eggs, milk, fish) but they also are found in vegetables like beans, lentils, &amp; peas. <ul style="list-style-type: none"> <li>– <b>Ask:</b> What are some of the foods you eat every day to help us grow and build your bodies?</li> </ul> </li> <li>• <b>Vitamins and minerals:</b> Vitamins and minerals are also called micronutrients. They are protective foods that help our bodies “glow.” Our bodies need small amounts of these to help our bodies work properly. These fight infections and protect our skin &amp; eyesight. We become sick if we do not get enough vitamins and minerals. Vitamins and minerals are concentrated in deep-colored vegetables and fruits (dark-green leafy vegetables, orange carrots or sweet potatoes and pumpkin), and also in egg yolks and liver. We need to eat as many diverse protective foods as we can. <ul style="list-style-type: none"> <li>– <b>Ask:</b> What are all the different types of protective foods you eat every day?</li> </ul> </li> <li>• <b>Fats:</b> Fats and oils provide a lot of concentrated energy that we can store. Fats are also very important because they help the body store some of some vitamins and minerals you eat. Fats are important for the development of young children. <ul style="list-style-type: none"> <li>– <b>Ask:</b> What are the foods you eat that contain fats?</li> </ul> </li> </ul>	See Appendix A for the table “Seven Food Groups and their Importance for Nutrition with Examples from Western Kenya” which can serve as a reference to facilitators.

Session 7B: Food Groups and Nutrition		
Lesson Steps		Resources
	<p><b>Supplies:</b> Food cards (names or pictures of local foods on cards or pieces of paper) or a food poster created for the local context; list of foods and their associated nutrient content. See Appendix A for <b>Seven Food Groups and their Importance for Nutrition with Examples from Western Kenya</b> to assist the facilitator in guiding the discussion.</p>	
11	<p>See <b>Exercise 6.B Energizer Game – Food Stew</b> to help participants practice identifying which food groups certain items belong to, and creating a healthy meal using foods from each food group.</p>	<p>See Exercise 6.B below.</p>
12	<p><b>Discuss</b></p> <ul style="list-style-type: none"> <li>• What have you learned today?</li> <li>• What foods do you eat that are most nutritious?</li> <li>• What changes might you make to your diet to ensure you eat enough nutritious foods?</li> </ul>	

### Exercise 7B: Energizer Game – Food Stew

**Objectives:**

- To help participants practice identifying which food groups certain items belong to, and creating a healthy meal using foods from each food group.

**Duration:** To be determined

**Supplies:**

- Small pieces of paper, with the names of diverse foods written on them (one for every participant)

**Exercise Steps:**

1. Invite participants to stand in a circle, then distribute the food cards so that each participant has one. Tell them that they should not show anybody else their card.
2. Walk around the circle and call out different food group names.
3. All participants holding a card belonging to that food group should stand together inside of the circle.
4. Repeat with other food groups until all categories have been called.
5. When you call out “nutritious meal,” ask participants to form groups in which all of the food cards are represented. Ask one participant to explain how their group makes up a “nutritious meal.”



## Session 7C: Healthy Plate

This Session was primarily adopted from the Nutrition Toolkit within the Farmer’s Field and Business School Toolkit developed by Cooperative for Assistance and Relief Everywhere, Inc. (CARE), available at: <http://www.care.org/work/world-hunger/farmers-field-and-business-school-toolkit>. Other resources are noted within the text.

### Objectives

- To understand the different food groups and the importance of having a diverse diet.
- To understand how to put together a balanced meal

**Duration:** 1 hour (can also be divided into two 30-minute sessions)

### Materials:

- Food cards (cards or pieces of paper with names or pictures of local foods) or poster with pictures of local foods
- Small pieces of paper, with the names of diverse foods written on them (one for every participant)
- A list of the foods that grow in the area and their nutrient content
- Flip-chart and markers
- Markers or Pens

Handouts are available in Appendix A here: [Session 7: Introduction to Food and Nutrition Issues and Solutions](#)

Session 7C: Healthy Plate		
	Lesson Steps	Resources
1	<p><b>Introduction:</b> Review key messages from the previous session. Tell participants that our bodies and families need many different types of nutrients, which are found in different quantities in the foods we grow and cook with. The way we group, harvest, and prepare foods also affects the amount of nutrients we get from the foods we eat.</p>	
2	<p><b>Applied Nutrition<sup>2</sup>:</b> Ask participants, “What do you think is applied nutrition?” It is what you ‘select’ to eat, how you ‘prepare’ the food, and how you ‘cook’ the food. Show the participants the <b>What is Applied Nutrition</b> graphic to aid the discussion.</p> <p>Start a discussion with participants about how they select, prepare and cook their food to ensure the health of their families? Incorporate the information from the <b>What is Applied Nutrition?: Facilitator’s Guide</b> into the into the discussion.</p>	See Appendix A for the “What is Applied Nutrition” graphic and facilitator’s guide
3	<p><b>Making a balanced meal:</b> Explain that the amount we need to eat depends on our age and time of life. In general, a healthy meal should be about half “go foods” (carbohydrates), about 15% protein, a little fat, and all the rest</p>	

<sup>2</sup> Adapted from the Applied Basic Agri-Nutrition Toolkit for Trainers, Prepared by USAID and the Republic of Kenya Ministry of Agriculture and the Ministry of Health and Sanitation. Available at: [http://growkenya.org/docs/Applied\\_Nutrition\\_Toolkit\\_V2.pdf](http://growkenya.org/docs/Applied_Nutrition_Toolkit_V2.pdf)

Session 7C: Healthy Plate		
Lesson Steps		Resources
	<p>of the plate should be different vitamins and fruits. (Draw a circle like the one below to illustrate the proportions.)</p> <p><i>Supplies: Flip chart and markers</i></p>	
3	<p>Divide the participants into smaller groups of 4-5 participants. Using the food-cards or pieces of paper from the previous exercises, have the participants draw the plate illustrated below on a flip-chart. In groups, have them sort the cards they are holding into the appropriate segments on the plate, until they have created a balanced meal. If they do not have enough cards, they can create their own cards or swap with other groups.</p> <p>Bring the groups together to discuss:</p> <ul style="list-style-type: none"> <li>• Was everyone able to create a balanced, tasty meal?</li> <li>• How many meals did we create?</li> <li>• Were they meals that you would like to eat?</li> <li>• Were they meals that you eat every day?</li> </ul> <p>Explain that it is not necessary to eat all nutrients in one meal, but if we eat a variety of foods in on day, we can get the nutrients that the body needs.</p> <p><i>Facilitator's Note: See Appendix A for a food circle with six main food groups as used in nutrition training in Western Kenya. Adapted from FAO's Promoting Improved Infant and Young Child Feeding: Key Messages Book.</i></p> <p><i>Supplies: Flip chart and markers (make sure you have enough pieces of paper for all of the groups)</i></p>	<p>See Appendix A for an example of the food chart titled "Western Kenya Example of Food Circle with Six Main Food Groups"</p>
4	<p><b>Discuss the local availability of foods.</b></p> <ul style="list-style-type: none"> <li>• Why do some families eat the same type of food every day?</li> <li>• Which of these foods (in our balanced plates) do you grow? In which season?</li> <li>• Which of these foods do you eat, but not cultivate?</li> <li>• What problems arise if we do not have different types of ingredients in our meals?</li> <li>• How can we encourage families to get a more varied diet to get more of these nutrients?</li> <li>• What can we grow to be able to prepare a more diverse diet?</li> <li>• What food habit can we change to get a more nutritious meal?</li> </ul> <p>Repeat the key points:</p> <ul style="list-style-type: none"> <li>• Good health starts with eating properly, which means getting enough of the right kinds of foods. What we eat and drink every day makes up our food habits. We learn most of our habits from our families.</li> </ul>	

Session 7C: Healthy Plate	
Lesson Steps	Resources
<ul style="list-style-type: none"> <li>• Different foods contain different nutrients that our bodies need to stay healthy.</li> <li>• Nutritious foods in a healthy diet are important because                             <ul style="list-style-type: none"> <li>– They protect against diseases</li> <li>– They keep us full</li> <li>– They help us grow well</li> <li>– They give us energy and thinking power</li> </ul> </li> </ul>	

## Module 3: Where We Are Now

### Session 8: Understanding Marketing and Markets

#### Objectives

By the end of this session, the participants shall have:

- Discussed the key elements of marketing and its process; and
- Discussed the needed information to be gathered from different market opportunities.

Duration: **To be determined**

#### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 8: Understanding Marketing and Markets](#)

Session 8: Understanding Marketing and Markets		
	Lesson Steps	Resources
1	Welcome the participants, and share with them the objectives of the meeting. Emphasize here the importance of knowing the demands of the market first to ensure the profitability of the farm business.	
2	Write the word 'Marketing' on the left side of the board and ask participants what they understand by this term. Note key words from their responses under the word 'Marketing'. Then write 'Market' on the right side of the board. Again ask participants what they understand by this term, and note their responses below the word 'Market'. Conclude this discussion by referring the participants to the handout <b>Defining marketing and markets</b> , and explaining the definitions as follows: <ul style="list-style-type: none"> <li>• <b>Marketing</b> is the process of exchange between the producer (farmer) who sells, and the consumer who buys.</li> <li>• <b>Market</b> is the place where the exchange of goods and services takes place. It is made up of sellers, buyers, products and prices.</li> </ul>	See Appendix A for the "Defining Marketing and Markets" handout.
3	Ask the participants that you would like them to spend some time discussing their experiences in marketing. Use the following questions to guide the discussion and make sure that some key marketing concepts and terminologies are introduced: <ul style="list-style-type: none"> <li>• Who has sold products at the market?</li> <li>• What products did they sell?</li> <li>• What quantity did they sell?</li> <li>• How did they take the product to the market?</li> <li>• How well did this work?</li> <li>• What was the market like?</li> </ul>	

Session 8: Understanding Marketing and Markets		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>What difficulties did you have? What would you do differently?</li> </ul>	
4	<p>In order to deepen participants' understanding of marketing and to anchor the learning to their own farms, organize the participants into groups of three to five. Ask each group to select a product that they are familiar with and ask them to answer the following questions (write these on the board) with regard to the chosen product:</p> <ol style="list-style-type: none"> <li>Who is the final consumer?</li> <li>What are the different ways to market this product?</li> <li>What are some of the constraints or problems you might experience when selling the product?</li> </ol>	
5	<p>After 20 minutes, facilitate a discussion to ensure that the following concepts are clear:</p> <ul style="list-style-type: none"> <li>A product may pass through a number of hands to get from the farmer to the final consumer or user. All the stages together from farmer to the final consumer are called the marketing channel.</li> <li>At each stage value is added to the product. And at each stage a cost is also added to the product. The costs include things like transport, storage, packaging, and handling fees.</li> <li>Explain that if farmers sell in the local market their profit margin might be high, but they can only sell small amounts. If the product reaches the city market or the international market, then the farmers can sell larger amounts. But such sales would need the support of traders and others along the way. Each of them would add value and cost to the product. Because the costs are higher, the profit margin will be lower.</li> </ul> <p>Conclude this discussion by referring the participants back to the handout on <b>Defining marketing and markets</b>, and reiterating the following:</p> <ul style="list-style-type: none"> <li>A product exists only if someone is willing to pay for it (someone who buys it)</li> <li>A product can be sold only if it has a customer</li> </ul>	<p>See Appendix A for the "Defining Marketing and Markets" handout. (Same handout as above)</p>

Session 8: Understanding Marketing and Markets		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>Marketing and the market are therefore critical to the success of the farm business</li> </ul>	
6	<p>As a last exercise for the day, ask participants to identify a commodity that is commonly produced among them. Ask them to write the name of the commodity in the handout <b>Where can We Market</b>. The participants should be divided into four groups, where each group should discuss their selected commodities and the questions from the handout:</p> <ol style="list-style-type: none"> <li>1. What are the different market outlets available for the product?</li> <li>2. What quantities do they want?</li> <li>3. When is the best time to use these markets?</li> <li>4. What else do they know about these markets?</li> <li>5. What else do they think they need to learn about these markets?</li> </ol> <p><i>Facilitator's Note:</i> Based on the literacy abilities of the group, you may want to walk the group step-by-step through the worksheet OR perform the exercise as a group.</p>	
7	<p>When the groups have finished their discussions, facilitate a question-by-question discussion in the plenary. Emphasize that it is important to know what market outlets are available for your products. It is also important to know about these markets, with regard to time, access, terms and conditions and other facilities. In this way they will be able to make informed decisions about which market to use.</p>	
8	<p>Inform the participants that they are going for a field trip – a trip to a nearby market to conduct a market survey. Organize them to form their market visit groups and explain to them how to use the <b>Market Survey Questionnaire</b>. Suggest a market that they can visit and agree a schedule when to conduct the survey.</p>	
9	<p>Conclude the meeting by telling participants that in the next meeting they will report on the results of their market surveys which will lead them to know more about markets and marketing.</p>	

## Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action

### Objectives

By the end of this session, the participants shall have:

- Presented the major findings from the market survey visit;
- Enumerated the specific strengths and limitations of their enterprises;
- Identified the most important strengths and weaknesses affecting their farms; and
- Formulated actions to take to benefit from the strengths and overcome the weakness.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 9: Presenting](#) the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action

Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action		
Lesson Steps		Resources
1	Welcome the participants, and share with them the objectives of the meeting.	
2	Ask the participants to get into their market visit groups. Ask them to spend a little time working on the information they gathered, so as to make sure that it is as complete as possible. Ask them to organize the information using the headings of the market survey questionnaire. In the interest of time, each group presents first their information on one product. The presentation on the other product can be made if time permits.	
3	After the presentations have been made, facilitate a discussion as follows: <ul style="list-style-type: none"> <li>• Was this market survey visit a useful activity? If yes, why? How was it different from their previous market visits?</li> <li>• What strategies did the group use to obtain information? Did the group members face particular resistance? If yes, how did they handle this issue?</li> <li>• Were they able to practice some of the competencies discussed in an earlier meeting? Ask for specific examples, and emphasize the importance of using these competencies on an on-going basis.</li> </ul>	
4	Ask participants if they were able to establish useful contacts. Get some information on the kinds of contacts made, and how these can help the FBS and its members. If farmers have incomplete information, then highlight the same, and ask the group members to get more information.	See Appendix A (from Section 7) for the

Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action		
Lesson Steps		Resources
	<p>Emphasize that contacts and connections are essential for commencement and promotion of every business, for example with tractor owner before sowing, with fertilizer and seed dealer, with financial institutions and banks (if capital is required), and with agricultural institutions for the latest technique and technology. The market survey can be very helpful in promoting their business contacts, and this process should be on-going. Farmers should adopt this as a habit to contact market and other institutions for useful purposes. Encourage discussion and draw in those who did not study the product to ask questions and to share ideas.</p>	<p>“Market Survey Questionnaire”.</p>
5	<p>The group members should note those areas where they need more information, e.g. sources of loans and credit, the location of input dealers, the assistance they can receive from the various agencies of the Department of Agriculture as well as the Department of Agrarian Reform.</p>	
6	<p>This meeting on the market survey will contribute to the next session, i.e. to establish a vision and goal for their business. Therefore if they have any unanswered questions regarding their business, they should pay another visit to the market before the next scheduled meeting.</p>	
7	<p>Here is another exercise for the day. Organize the participants into teams of 2 or 3 for the task. While they are doing this, they should not worry about accuracy or drawing to scale. They should draw their farm on the provided sheet. Simple pencil drawings will be sufficient. As they draw their maps, they should share ideas and ask questions about the others’.</p> <p>Once the maps are done, ask the participants to compare farms. How are they similar? How are they different? Why? Look for common points. This may be the first time the participants have ever drawn a map or a map of their farms. It can be a very rewarding experience.</p> <p><b>Facilitator’s Note:</b> Facilitators may want to draw an example of a map on the board.</p> <p><b>Supplies:</b> Flip chart and markers (for each team).</p>	
8	<p>The next task is to understand farm enterprises. Ask the participants to think about what they produce on their farms and what they do with their produce. Some specific questions are:</p> <ul style="list-style-type: none"> <li>• How much do you produce?</li> <li>• How much do you consume at home or share with others?</li> <li>• How much do you sell?</li> </ul>	



Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action								
Lesson Steps	Resources							
	<p>Ask the participants if they can recognize the differences in their various farm enterprises. Remind them once again that a farm enterprise can mean one single crop or product, because a farm may have more than one enterprise.</p> <p><i>Facilitator's Note: More real-life examples will help here.</i></p>							
9	<p>Now that the participants know about the importance of the demands of the market, remind them that it is really important to understand their various enterprises, and determine if these are competitive, supplementary or complementary to each other. Write the three terms, i.e. competitive, supplementary or complementary on the board, and ask participants what they think these terms mean.</p> <p>Under each term, note participants responses, and then refer them to the handout on <b>Understanding Farm Enterprises</b> to explain as follows:</p> <ul style="list-style-type: none"> <li>• Competitive enterprises compete with each other for the same resources.</li> <li>• Supplementary enterprises do not adversely affect each other.</li> <li>• Complementary enterprises are those that contribute to the production of another enterprise.</li> </ul>	See Appendix A for the "Understanding Farm Enterprises" handout.						
10	<p>This next exercise will allow the participants to look at the strengths and weaknesses of their own farm. Ask the participants that if they were asked to evaluate the strengths and weaknesses of a farm (any farm), what factors or business aspects would they look at? Generate a discussion in the plenary, and note participants' responses on the board. Make sure that the factors listed on the <b>Farm Assessment Audit Checklist</b> have been adequately covered in the discussion.</p>	See Appendix A for the "Farm Assessment Audit Checklist" handout.						
11	<p>Explain the given smileys, and ask participants to undertake a self-assessment to rate how strong (or weak) they are vis-à-vis their enterprises on each of the given factors. If participants can write, ask them to note the reason for their rating. This exercise may take nearly 30 minutes to complete. Once participants have completed their self-assessment, ask them to form groups of 2 or 3 members (preferably those with similar enterprises). Ask the groups to assess the performance of his or her farm and enterprises for the first business aspect, i.e. use of farmland. This discussion may take about 20 minutes. Once the groups are ready, facilitate a plenary discussion so that you are sure everyone is on track.</p>	See the handout above.						
12	<p>On the board, create a matrix as follows:</p> <table border="1"> <thead> <tr> <th>Business Aspect</th> <th>Strength</th> <th>Weaknesses</th> </tr> </thead> <tbody> <tr> <td>Use of farm land</td> <td></td> <td></td> </tr> </tbody> </table>	Business Aspect	Strength	Weaknesses	Use of farm land			
Business Aspect	Strength	Weaknesses						
Use of farm land								

Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action								
Lesson Steps	Resources							
	<p>Ask the groups if any of them have examples of how 'use of farm land' is strength for them. Note examples for strengths and weaknesses under the respective columns. Some examples can be as follows:</p> <table border="1"> <thead> <tr> <th>Business Aspect</th> <th>Strength</th> <th>Weaknesses</th> </tr> </thead> <tbody> <tr> <td>Use of farm land</td> <td> <p>My farm produces enough food for my family with some surplus to sell.</p> <p>My farm is good for many crops.</p> </td> <td> <p>I don't actually know which of my crops is most profitable.</p> <p>My cattle do not get good prices at the market because they are too thin.</p> </td> </tr> </tbody> </table> <p><i>Supplies: Flip chart and markers</i></p>		Business Aspect	Strength	Weaknesses	Use of farm land	<p>My farm produces enough food for my family with some surplus to sell.</p> <p>My farm is good for many crops.</p>	<p>I don't actually know which of my crops is most profitable.</p> <p>My cattle do not get good prices at the market because they are too thin.</p>
Business Aspect	Strength	Weaknesses						
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13	<p>Once you have completed the discussion about the first business aspect, allow the groups to discuss the remaining business aspects, and inform them that they will have an opportunity to discuss these in detail in the next meeting.</p>							
14	<p>Ask the participants if everyone had the chance to revisit the exercise on strengths and weaknesses. Praise those who put in extra effort, and seek some comments on the experience of sharing and discussing this important exercise with those at home.</p>							
15	<p>Inform the participants that you would now like to take the discussion forward, and show them how to use the strengths and weaknesses information for defining concrete action. Ask participants to refer to the handout <i>From Analysis to Action</i> and see the example given there. Explain this example on the board, so that the participants understand how to translate from analysis to action.</p>							
16	<p>Organize the participants into the same teams they had for the strengths and weaknesses exercise, and ask the groups to undertake two tasks as follows:</p> <ol style="list-style-type: none"> <li>1. Identify for each member of the group one strength and one weakness (from any of the business aspects covered) that they feel makes the biggest impact on the profitability of their farm. These should be written down, under the correct heading, on the handout.</li> <li>2. For each strength and weakness, the group would facilitate its members to come up with actions that will directly improve farm profitability.</li> </ol>							

Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action		
<i>Lesson Steps</i>		<i>Resources</i>
<b>17</b>	Once most of the groups have completed the task, facilitate a sharing in the plenary by requesting each group to give an example of strength and action and a weakness and action. Continue the discussions till you are satisfied that all the participants understand the concept of how to translate analysis into action. Make sure that diverse examples emerge, and almost all the business aspects are covered.	
<b>18</b>	Conclude this session by telling participants that the remaining Part-1 meetings are geared towards many of the actions that they have listed. Tell them that you look forward to seeing them in the next session.	

## Module 4: Where We Want to Go

### Session 10: Developing a Vision and Goal for the Farm

#### Objectives

By the end of this session, the participants shall have discussed how to formulate the vision and goals of their farm business.

Duration: To be determined

#### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 10: Developing a Vision and Goal for the Farm](#)

Session 10: Developing a Vision and Goal for the Farm		
Lesson Steps	Resources	
1	<p>Welcome the participants, and share with them the objectives of the meeting. After they have assessed their farms and determined what courses of action to take, they are now ready to see how their farm business will look in the future.</p>	
2	<p>Ask the participants what they understand by a vision. Mention that a vision is a statement about what the future will look like. Ask participants if any of them have a vision for their farm. Ask those who do to share with others. By the end of this meeting, each of the participants should have thought of what their farm will look like '5 years from now'.</p>	
3	<p>Explain to the participants that in order to 'see' the future, you have to 'challenge' the present. To work on their farm vision, you would like them to work in small groups where each member will ask:</p> <ol style="list-style-type: none"> <li>1. How can I improve my farm business?</li> <li>2. What is my vision for a better farm?</li> <li>3. What will my farm be like in five years' time?</li> </ol> <p>Organize the participants into teams of three to five. Ask each team to brainstorm on what could be their personal or individual vision and to help each other with their respective vision statements. To help the participants along, ask them to refer to an example of a vision for an individual farm from the handout <b>An Example of Farm Vision, Goals and Strategies</b>. A vision is like a face – no two persons can have the same face. Similarly, each person should have his or her very own vision.</p>	See Appendix A for the "An Example of Farm Vision, Goals and Strategies" handout.
4	<p>The participants should develop and write down their farm vision on the material <i>My Farm Vision, Goals and Strategies</i>. Once complete, ask those who are willing to share to present their visions to others in the plenary. Explain that visions are meant to be real, and are not just a learning exercise for the FBS. They are like a magnet or a beacon of light. They guide you and</p>	See Appendix A for the "My Farm Vision, Goals and

Session10: Developing a Vision and Goal for the Farm		
	Lesson Steps	Resources
	<p>motivate you to stretch beyond your existing capacity. Those people who have no vision generally remain at the same level all their life.</p>	Strategies” handout.
5	<p>Inform the participants that another important and associated concept is that of a goal. Goals are the ladder towards achieving your vision.</p>	
6	<p>Ask participants to brainstorm, in the plenary, the kinds of goals that farmers may have for themselves. Write the answers on the board. Responses could include:</p> <ol style="list-style-type: none"> <li>1. Making money to achieve a certain standard of living</li> <li>2. Producing enough food from the farm to feed the family; often an extended family</li> <li>3. Producing products that will enable the family to stay healthy</li> <li>4. Ensuring that family members have enough leisure time</li> <li>5. Fulfilling social obligations and helping the extended family</li> <li>6. Ensuring the financial and physical security of family members</li> <li>7. Improving skills and capacity for better opportunities</li> </ol> <p><i>Supplies: white board and marker</i></p>	
7	<p>Discuss with the participants that they now have an opportunity to set some goals for themselves. For this they will work in pairs, where one team member will ask the other the following questions: What do you hope to achieve for your farm? And by when?</p> <p>The person answering the question should write his or her responses on <b>My Farm Vision, Goals and Strategies</b> page. The pair would then trade roles, and the one who answered the questions first now asks the other participant the same question. When they have all finished, ask the participants to share what they have written. There should be only limited discussion at this point. Check that they understand the exercise. Give guidance as needed.</p>	See Appendix A for the “An Example of Farm Vision, Goals and Strategies” handout.
8	<p>Conclude the discussion by highlighting that there may be a need to often consciously balance the family goals with the business goals.</p> <p>Examples of family goals:</p> <ul style="list-style-type: none"> <li>• To be self-sufficient in food</li> <li>• To ensure that everyone in the family is healthy</li> <li>• To ensure that everyone in the family receives education</li> </ul> <p>Examples of business goals:</p> <ul style="list-style-type: none"> <li>• Increase profit by 30%</li> <li>• Increase net income by 30%</li> </ul>	

Session10: Developing a Vision and Goal for the Farm	
Lesson Steps	Resources
	<ul style="list-style-type: none"> <li>• Increase yield by 50%</li> </ul>
9	<p>Inform the participants that the next scheduled meeting would be an important one, where they will begin the process for developing their business plans by understanding the profitability of the different enterprises in their farm.</p>

## Session 11: Understanding Enterprise Profitability

### Objectives

By the end of this session, the participants shall have:

- Explained the concepts of enterprise profitability;
- Described how to develop a budget for a farm enterprise; and
- Discussed fixed costs and depreciation.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 11: Understanding Enterprise Profitability](#)

Session 11: Understanding Enterprise Profitability		
	Lesson Steps	Resources
1	Welcome the participants, and share with them the objectives of the meeting. Remind them that in the previous meetings they began to look at the issue of farm performance rated through a set of indicators and strengths and weaknesses. In this meeting they will look at another way to measure farm performance, i.e. “profitability”.	
2	Ask the participants what they understand by a budget? Note comments and conclude that a budget for an enterprise is a list of income earned and costs incurred in producing a product. It is a tool that can be used to calculate expected profit from an enterprise on a per unit basis, such as a hectare of land or head of livestock, for one year or one production period.	
3	<p>Draw a farm budget template on the board. Refer participants to the <b>Budget Template</b> and explain that the key elements of any budget are income, costs, and profit. This is a generic budget template that they can use to estimate the income, cost and profit of any of their enterprises. The focus of this exercise will be on “enterprise profit”, which is essentially the enterprise’s contribution to the whole farm profit. Before moving forward, remind the participants that it is important to understand the key elements of a budget.</p> <p><i>Facilitator’s Note: Pre-prepare the budget template on a flip chart to save time.</i></p> <p><i>Supplies: Flip chart, markers</i></p>	See Appendix A for the “Budget Template”.
4	Ask participants to define “income”. Explain that income is the value of your production. It is made up of the money you receive when you sell products. It also includes the value of the produce you eat, use or give away. With examples, explain the following:	

Session 11: Understanding Enterprise Profitability		
Lesson Steps		Resources
	<p>Income is calculated by multiplying the quantity of the product sold, eaten, used or given away times the price of the produce on the market.</p> <p>Quantity is specified in terms of the unit of measure, which can be kg, bags, tons, bottles, etc.</p> <p>Price is specified in terms of a unit of measure, i.e. KSh/kg, or KSh/bottle, etc. Hence it is referred to as the unit price.</p>	
5	<p>Remind participants when in a previous meeting they discussed variable costs. Ask them what they remember. Explain that variable costs are made up of the money you spend on all the inputs and activities needed to grow a particular category of crop or animal raised.</p> <ul style="list-style-type: none"> <li>• Explain that each individual category of variable cost is calculated by multiplying the quantity of the input used with the unit price for that item.</li> <li>• Quantities and costs are specified in term of the unit of measure which can be kg, bags, tons, bottles, etc.</li> </ul> <p>Use examples to walk through the 'variable cost' section of the budget. It may aid the participants' understanding to break up the variable costs by activities/stages: pre-production (e.g., rent land, buy tools), production (open up land, weeding stages, seed), post-harvest (transporting product, processing technologies/materials), marketing (hiring vehicle, communication expenses, market fees). Take input from the group to develop a list of potential costs, and work through some examples (writing everything on the board).</p>	See Appendix A (Session 5) for the "Understanding Costs" handout.
6	<p>Divide participants into similar enterprise groups and tell them that they will have an opportunity to fill out a budget template for their chosen enterprise. Provide participants the Budget Template to use to complete their budget. And give them the step-by-step instructions for the task.</p>	See Appendix A for the "Budget Template".
7	<p>Explain that this is a simple and basic way to determine the profitability of an enterprise. If the total income minus the total variable costs gives a negative number (that is, it is less than zero), then the enterprise is making a loss. This means that the costs are greater than the income or the income is less than the costs. Highlight that if the total income is greater than total variable costs the calculation gives a positive number (that is greater than zero), and the enterprise is making a profit. The larger the resulting total, the greater the profit. Farmers will have to decide for themselves if the amount of profit is enough or not.</p>	
8	<p>Spend the next 30 minutes getting farmers to prepare a budget for a farm enterprise. During the exercise, walk around to ensure the groups understand the process. Once the task is complete, ask the groups if any</p>	



Session 11: Understanding Enterprise Profitability		
Lesson Steps		Resources
	member faced a problem in developing the budget. If so, respond accordingly.	
9	<p>Ask participants if they can think of how to increase the profit during the budget preparation exercise. Note the responses and conclude that profits can increase through the following:</p> <ul style="list-style-type: none"> <li>• Asking a higher price for the commodity</li> <li>• Increasing the yield</li> <li>• Reducing variable costs through alternative inputs, cheaper technologies, or saving mechanisms</li> </ul>	
10	<p>In their enterprise groups, ask farmers to discuss the type of small changes they could introduce in their respective enterprises to make them more profitable. Some examples can include using compost or farmyard manure as an alternative to chemical fertilizer for crops, or growing cattle feed as an alternative to buying concentrates. Ask each group to state their changes and note their suggestions on the board.</p> <p>Refer to the list of changes compiled on the board and pick an example for illustration. Ask the participants:</p> <ul style="list-style-type: none"> <li>• Is this change likely to bring in more money to the enterprise?</li> <li>• If it brings in more money, what are the reasons?</li> <li>• What is likely to change? Will it result in an increase in yield?</li> <li>• Will it lead to more income? Or will the change reduce the amount of labour used?</li> <li>• Will this result in lower costs?</li> <li>• Will this change ultimately produce benefits and more income?</li> </ul> <p>Ask participants to consider the effect of small changes on the profitability of their group enterprise. Ask them to revisit the changes they have proposed and see if they are likely to do better in terms of yield or income or by using fewer inputs.</p>	
	<p><b>Facilitator's Note:</b> Write the proposed changes on the board.</p> <p><b>Supplies:</b> White board, markers.</p>	
11	<p>Refer participants to the previous exercise on budgeting and ask them to calculate the minimum price that could be charged for produce sold without making a loss. Explain that this information will assist them in pricing the produce to be sold and negotiating effectively with buyers.</p> <p>Get farmers to return to their enterprise groups and ask them to review the budget they had earlier developed. Now write the following on the board:</p>	See Appendix A for the "Determining the Minimum Price and Yield for the

Session 11: Understanding Enterprise Profitability	
Lesson Steps	Resources
<p style="text-align: center;"><b>Break-even price = total variable cost per ha ÷ yield per ha</b></p> <hr/> <p>Refer participants to the handout <b>Determining the Minimum Price and Yield for the Enterprise</b> and explain the concept of break-even price. Using the information given in the previous budget exercise, calculate the breakeven price as follows:</p> <hr/> <p style="text-align: center;"><b>Break-even price = KSh 15,900 per ha ÷ 1,600 kg per ha</b></p> <hr/> <p>In this example, the variable costs equal KSh 15,900 per hectare. The yield per hectare is 1600 kg. Therefore the break-even price is KSh 9.93 per kg. If the farmer sells his produce for less than KSh 9.93 per kg, he will make a loss. If s/he sells for more than KSh 9.93 per kg, he will make a profit. Since the farmer is selling his/her produce at 23 per kg, he is making a profit of KSh 13.07/kg.</p> <p>Conclude that the break-even price allows a farmer to establish the minimum price that can be charged for the produce. If the produce is sold below the break-even price it will result in a loss.</p>	Enterprise" handout
<p><b>12</b> Inform the participants that the next concept to be learnt is the break-even yield. This is the minimum level of production that you can produce to cover the costs of production. It is calculated by dividing the total variable costs per hectare by the per unit price of the produce.</p> <p>Write break-even yield formula on the board:</p> <hr/> <p style="text-align: center;"><b>Break-even yield = total variable cost per unit ÷ expected price per unit</b></p> <hr/> <p>Using the information from the example we have used, calculate the following on the board:</p> <hr/> <p style="text-align: center;"><b>Break-even yield = KSh 15,900 per ha ÷ KSh 23 per kg</b></p> <hr/> <p>The break-even yield is 691 kg/ha. In this example the farmer is producing well above the breakeven yield, i.e. at 1,600 kg/ha. If the farmer can further improve production efficiency, s/he can make a bigger profit.</p>	
<p><b>13</b> Remind participants that in previous sessions we discussed the concept of fixed costs. We mentioned that in contrast to variable costs, fixed costs apply to the farm as a whole. Fixed costs are costs that do not vary with changes in production output of a specific product. Fixed costs remain the same regardless of the output.</p>	
<p><b>14</b> Ask participants to list examples of fixed costs and write them on the board. Lead the discussion to include at least the following fixed costs:</p> <ul style="list-style-type: none"> <li>• The cost of renting a tractor or buying a piece of equipment which is used on the whole farm,</li> <li>• The cost of a head of livestock for draft power</li> </ul>	

Session 11: Understanding Enterprise Profitability	
Lesson Steps	Resources
	<ul style="list-style-type: none"> <li>• The cost of a packing shed</li> <li>• The cost of farm infrastructure (e.g. fencing)</li> <li>• The cost of permanent labour and management</li> <li>• Depreciation</li> </ul>
15	<p>Ask the participants if any of them owns a tractor or a plow or some other implement. Ask whoever answers if that piece of equipment will last forever. Does it ever wear out? [The response should be that it does not last forever and eventually wears out.]</p> <p>How long have you used it? How often do you replace it?</p>
16	<p>Explain that every piece of equipment has a monetary value. Its highest value is usually when it is new. Its lowest value is when it is old. And it has no value when it no longer works or does its job.</p> <p>Depreciation is the word used to describe the reducing value of an asset like a tractor or implement. Each year the value of piece of equipment is less. Although it does not cost you cash, each year a little bit of the value of the equipment is used up. And that used up value is a cost to the farm. It is usually a fixed cost because the equipment is used on more than one enterprise.</p> <p>Point out that calculating depreciation allows one to measure the yearly cost of the equipment.</p>

Session 11: Understanding Enterprise Profitability		Resources
Lesson Steps		
17	<p>Two things need to be known to calculate depreciation. First, you need to know the price of the equipment when you first bought it. Second, you need to know how long the equipment will last.</p> <p>Draw the following diagram on the board:</p> <div style="text-align: center;"> <p>The diagram is a circle divided into 10 equal slices by lines radiating from the center to the circumference. The slices are labeled as follows: Year 1 (top right), Year 2 (right), Year 3 (bottom right), Year 4 (bottom), Year 5 (bottom left), Year 6 (left), Year 7 (top left), Year 8 (top), Year 9 (top left), and Year 10 (top).</p> </div> <p>Explain the following with the help of the board. Let us say that we have a new plow. The price when it was new was KSh 10,000. We know the plow will last 10 years. In the diagram we see 10 slices in the pie. Each slice represents one year of life of the plow. Depreciation says that each year the value of the plow reduces by 10% of the original value. In this case it is KSh 1000 per year. In this way, KSh 1000 is subtracted from the value of the plow each year for 10 years. At the end of the 10<sup>th</sup> year, the plow has fully depreciated. Its value is now zero (0). Explain that depreciation is the annual cost or value of a fixed asset that will be used in calculation of the farm profit.</p> <p><i>Facilitator's Note: Prepare the diagram before the session.</i></p> <p><i>Supplies: Flip chart, markers.</i></p>	
19	<p>As you are explaining this, write next to each year in the diagram. Explain that in year 2 the depreciation would be:</p> <p>- KSh 1,000 + - KSh 1,000 = - KSh 2,000.</p>	

Session 11: Understanding Enterprise Profitability	
Lesson Steps	Resources
<p>The value of the plough after two years would be:</p> <p>KSh 10,000 – KSh 2,000 = KSh 8,000.</p> <p>Revise the diagram on the board to add “-KSh 1000” next to each year around the circle.</p> <p><i>Facilitator’s Note: To save time, you may consider preparing two diagrams in advance one as shown above in Step 18 and another that contains “-KSh 1000” next to each year.</i></p>	
20	<p>Conclude this session by summarizing key points for discussion and reminding farmers that they need to undertake a profitability assessment of their own farm enterprise as a home task.</p>

## Module 5: Developing a Business Plan

### Session 12: Choosing an Enterprise

#### Objectives

By the end of this session, the participants shall have:

- Identified a viable farm enterprise; and
- Assessed the technical feasibility and availability of other resources required.

Duration: **To be determined**

#### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 12: Choosing an Enterprise](#)

Session 12: Choosing an Enterprise		
	Lesson Steps	Resources
1	Share the meeting objectives with the participants and explain that this session will help them develop a farm business plan. Over the next three meetings participants will explore different parts of the business plan and will also learn how to complete the business plan format.	
2	The first four exercises involve technical agricultural work. You may want to ask the relevant extension workers to help with these exercises. They could provide information and advice about the technical feasibility, resource needs and requirements to develop the chosen enterprise.	
3	<p>Explain that in the last sessions they determined goals and set visions for their farm businesses. As they now know what they want to achieve, they will need to decide the best way to do so and thereby realize their goals.</p> <p>Explain that the first step is to identify and choose an enterprise to work on. Guide them in this process. They may want to introduce a new enterprise to take advantage of a market opportunity. Or they may want to change the way they produce a current enterprise to make it more profitable. It is important to remember that whatever enterprise they choose, they must know that there is a market for it. In this regard the following four steps are essential to:</p> <ol style="list-style-type: none"> <li>1. Form an enterprise group</li> <li>2. Undertake technical feasibility</li> <li>3. Assess physical resources and input availability</li> <li>4. Assess requirements and availability</li> </ol>	

Session 12: Choosing an Enterprise		
	Lesson Steps	Resources
4	<p>Start a discussion on potential enterprises. Lead the discussion so that groups of three to five participants can be formed around a single enterprise. There should be at least one group for each of those selected. Refer participants to the material on <i>Choosing an Enterprise</i> and explain what is written under “Step 1 - Form an Enterprise Group”. Ask participants to list different goals that farmers could set for themselves. Write the answers down on the board.</p> <p><i>Supplies: Flip chart and markers.</i></p>	See Appendix A for the “Choosing an enterprise” handout
5	<p>Explain that before developing a farm business plan for the example enterprise, farmers must first see if the enterprise is technically feasible. This first step includes checking whether the soil, climate, topography, water conditions of the land is suitable for growing a specific crop. Refer participants to “Step 2 -Undertake technical feasibility” of <b>Choosing an Enterprise</b> and explain the example given.</p> <p>Explain that they are now going to check if it is possible to produce the enterprise. Farmers need to make sure that the land, soil, climate, rainfall, and temperature are suitable.</p> <p>If this is not so, then farmers shouldn’t try to produce the crop. For example, cashews need a long dry period to flower and set the fruit. If your area does not have a long dry period, then it is not technically possible to grow cashews. Make sure you have discussed for both crop and livestock enterprise.</p>	See Appendix A for the “Choosing an enterprise” handout
6	<p>Ask the groups to help each other think about what their enterprise needs and to decide if their farm is suitable for the enterprise. Next to each indicator, they should write down whether their farm is okay or not. They should also give an overall assessment of all factors. In this case all the factors should be “Okay”. While the groups are working on this, move from group to group to help out. When the groups have finished their work, ask each group to share the results of their discussions. If any enterprise group finds that their chosen enterprise is not technically feasible, then they will have to choose another enterprise and repeat this exercise.</p>	
7	<p>When the technical feasibility exercise has been completed, farmers should check the availability of physical resources and inputs needed for the enterprise. If all the resources needed to grow the crop are available, then the enterprise can be chosen. If not, farmers should select a different enterprise. Refer participants to “Step 3 - Physical resources and inputs availability” of <b>Choosing and Enterprise</b> for more details.</p> <p>Explain that for this exercise they need to answer the following questions:</p> <ol style="list-style-type: none"> <li>1. What physical resources will I need? (such as capital, inputs, materials)?</li> <li>2. How much of each will I need?</li> </ol>	See Appendix A for the “Choosing an enterprise” handout

Session 12: Choosing an Enterprise		
Lesson Steps		Resources
	<p>3. How much of each is available at the farm and how much must I buy?</p> <p>4. What are my sources of supply?</p>	
8	<p>Ask the groups to think about what physical resources their enterprises will need. For crops, these should include inputs like seed, fertilizer and pesticides. These should also include equipment, implements and tools, storage structures and animal draft. For livestock they should include things like feed, medicines, tools and small equipment. These resources should include those available at the farm and those they must buy. They should list these under the first heading.</p> <p>When they have finished their list of resources, ask each group to share their lists with detail of quantity and source of supply. <u>Encourage discussion</u>. Have they covered everything? Is anything left out?</p> <p>If any enterprise group finds that they will not be able to get the necessary physical resources, they will have to choose another enterprise and start the process over.</p>	
9	<p>Explain that now everyone knows that their enterprise is technically feasible and they can get all the physical resources, so now they must check the labour requirements and availability. If farmers are able to access all the labour they need, they can go ahead with the enterprise. If not, they should choose another enterprise. Ask participants about the labour needs on their farms. Use the following questions as a guide to the discussion:</p> <ul style="list-style-type: none"> <li>• Do any of them use only family labour?</li> <li>• Do any of them hire external labour?</li> <li>• How do they decide whether or not to hire external labour?</li> <li>• How do they decide when they need external labour?</li> <li>• Where do they get hired external labour?</li> </ul> <p>When the discussion is done refer participants to “Step 4 – Labour Requirement and availability” of <b>Choosing an Enterprise</b>. Explain that now they need to look at the key questions given on the page. For crop enterprises they should think about all the different activities like land preparation, planting, weeding, pest control and harvesting. For livestock enterprises they should think about production activities such as feeding, watering, cleaning and handling.</p> <p>They should then estimate how much labour is needed? How many workers will be required? For how many days? Write this down in the first line in the labour plan. When the discussion is over, ask each group to discuss the need for hired labour on their enterprise. Provide 10 minutes for this and ask farmers to make their labour plans as explained in the handout.</p>	See Appendix A for the “Choosing an enterprise” handout



Session 12: Choosing an Enterprise	
Lesson Steps	Resources
<p><b>10</b> When the groups have finished, ask one participant from each group to share his labour plan. <i>Encourage discussion</i>. Does the plan make sense? Is it missing anything?</p> <p>When this discussion is over, ask each group to share what was discussed. Did any group think they would need to hire external labour? What did they decide to do? How did they decide to do it? If any enterprise group finds that it will not be able to get the labour needed, then they will have to choose another enterprise and repeat the exercise.</p>	
<p><b>11</b> Explain that these decisions will be helpful to finally prepare a farm business plan for the selected enterprise. Tell farmers that the next two meetings will be helpful to understand and develop the farm business plan.</p>	

## Session 13: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan

### Objectives

By the end of this session, the participants shall have:

- Identified the components of a farm business plan, and
- Formulated the individual farm business plan highlighting the production plan and marketing plan.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 13 and 14: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan](#)

Session 13: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan		
Lesson Steps		Resources
1	Participants should remain in their enterprise groups. For this meeting each group will be given writing paper and pens to prepare a Farm Business Plan for their common group enterprise.	
2	Remind participants that previously they assessed the technical feasibility of their enterprise. They then identified the physical resources needed and checked that they were available. Finally they determined the need for labour and its availability. If these preliminary checks were positive, they can go ahead and prepare a farm business plan for the selected enterprise.	
3	Before preparation, farmers should understand the concept of a business plan. Start by asking participants what they understand by a business plan. Link their responses with the business plan concept from the handout <b>Components of Farm Business Plan</b> , and explain its key components.	See Appendix A for the "Components of Farm Business Plan" handout
4	Explain that initially they will work on a simple plan for a single enterprise. At the end of the next season, a second, more complex farm business plan will be prepared, covering all of the farm enterprises. In this session we will go through the farm business plan one part at a time. Eventually, participants will develop a farm business plan for their own farm. Now start explaining one by one all the components of a business plan.	
5	Explain that the first component of a farm business plan is the "Background". This should provide key information on the enterprise i.e. the objective, vision, mission and goal. It also provides a rationale for selecting such an enterprise. It helps farmers stay focused on what he or she wants to achieve.	

Session 13: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan		
	Lesson Steps	Resources
6	<p>Now introduce the next component, the “Farm business plan” (see the <b>Components of a Farm Business Plan</b>). <i>Explain: you are now going to work on a farm production plan and this part should be based on your goal.</i></p> <p>If you have chosen a crop, then the farm production plan states what crop you will grow and the number of hectares you will plant. Use the example on the handout as a guide. Give the participants 5-10 minutes to work on this. While the groups are working, move from group to group to assist if necessary. When the time is up, ask each group to share their production plans. <u>Encourage discussion</u>. If there is more than one group with the same enterprise, compare production plans. Are they the same? If not, why not?</p>	See Appendix A for the “Components of Farm Business Plan” handout
7	<p>Introduce Component 3, the “Market Plan” of the <b>Components of Farm Business Plan</b>. Ask participants to notice the different elements that need to be included in a market plan. Remind them that:</p> <ul style="list-style-type: none"> <li>• A product exists only if someone is willing to pay for it (buys it)</li> <li>• A product can be sold only if it has a buyer</li> <li>• Therefore, marketing is critical to the success of the farm business.</li> </ul>	See Appendix A for the “Components Of Farm Business Plan” handout
8	<p>Refer to the handout and discuss the example of the “Market Plan”. Explain that the market plan should show how products will be marketed. The plan should include the target market, the buyer, the quantity farmers expect to sell, the expected market price, an estimate of the marketing costs and the farm gate value.</p>	See Appendix A for the “Components Of Farm Business Plan” handout
9	<p>Explain the following:</p> <ul style="list-style-type: none"> <li>• The price you get for a product is influenced by many things. One of those things is where you sell it. You could sell your product to a buyer who comes to your farm gate. You could sell it at the market closest to you. Or you could sell it at some other market. Each market will pay a different price for your product.</li> <li>• The price you get when you sell your product from the farm is called the farm gate price. It is usually the lowest price you will get for your product. But selling at your farm gate does not involve transport costs. So while the price is lower, your costs are lower too.</li> <li>• The market price is the price you would get selling your product to a market away from your farm. To sell on this market will cost you something extra at least for transport and packaging.</li> <li>• The extra money you must pay to prepare your product and transport it to the market is called the marketing cost. When you add this cost to the farm gate price, you get the lowest price you can accept in the market.</li> </ul>	
10	<p>Help participants to determine the price. Write the following example on the board: Product: Tomatoes</p>	

Session 13: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan	
Lesson Steps	Resources
<p>Farm gate price = KSh 90/kg Marketing costs = KSh 10/kg Lowest price you can accept = KSh 100/kg</p> <p>Explain that in this example, if the price you can get for your tomatoes at the market is KSh 100 or more, then using that market is good. But if the price you get for your tomatoes at the market is less than KSh 100, then it is better to sell at your farm gate. So it is important for you to know three things:</p> <ul style="list-style-type: none"> <li>• What price will you get for your product if you sold it at farm gate?</li> <li>• What price will you get for your product if you sold it at the market?</li> <li>• How much cost will you incur if you have to take your product to the market?</li> </ul> <p>When you know these three things, you can decide where to sell your products.</p>	
<p><b>11</b> Ask the participants in each group to help one another to think about their marketing plans. They should discuss the following questions:</p> <ol style="list-style-type: none"> <li>1. What market should I use?</li> <li>2. How much can I sell in each market?</li> <li>3. What price would I get if I sold my product at the farm gate?</li> <li>4. What price can I expect from each market?</li> <li>5. What costs can I expect to incur in each market?</li> <li>6. What other important points should I think about?</li> </ol> <p>While the groups are working, move from group to group to listen and help. When they have finished their discussions, each participant should record the information on the handout. When the groups have finished, ask each group to share their market plan.</p> <p><u>Encourage discussion.</u> Does the market plan sound reasonable?</p> <p>Does anyone have any suggestions?</p> <p>We will continue working on the farm business plan in the next session.</p>	

## Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) Risks and Risk Management

### Objectives

By the end of this session, participants shall have prepared theirthe individual farm business plan highlighting:

- Profitability
- Cash flow and availability; and
- Risk management

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 13 and 14: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan](#)

Session14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management		
<i>Lesson Steps</i>		<i>Resources</i>
1	Now move to next part “Financial Plan” of the <b>Components of Farm Business Plan</b> . Refer participants to that part of the handout and review the concepts of profitability and how it is calculated. Profit is the amount remaining when costs are deducted from income.	See Appendix A for the “Components of Farm Business Plan” handout
2	<p>Explain that they will now be discussing the profitability of their chosen enterprises. They will start with income. They need to answer three questions:</p> <ol style="list-style-type: none"> <li>1. What products will they sell?</li> <li>2. What quantity of each product will they sell?</li> <li>3. What price per unit do they expect to get for their products?</li> </ol> <p>They can get this information from the market plan they prepared earlier. To work out the total value of the products they sell, they must multiply the quantity to be sold by the price per unit. Use the example in the handout.</p>	
3	<p>Ask each group to work on the income expected from their enterprise. As they are working on this, move from group to group and assist them if necessary. When everyone is finished ask each group to share their income calculations. <i>Encourage discussion.</i></p> <p>Does this make sense? Notice if anyone is having trouble with the exercise.</p>	

Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management	
Lesson Steps	Resources
4	
5	
6	See Appendix A for the "Components of Farm

Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management		
	Lesson Steps	Resources
	<p>carry out your farming activities during the season. If you do not have enough cash, you will need to decide what to do. Ask the groups to discuss the following question:</p> <p>Do I have adequate cash available to implement my farm enterprise?</p>	Business Plan" handout
7	<p>Explain that the "example of cash flow" on the <b>Components of Farm Business Plan</b> will be used to discuss the cash flow concept. Note that the season for this farmer starts in September to August of the following year. Explain that a cash flow shows the farmer how much cash flows into the farm business over a certain period of time and how much flows out of the farm business. If in any month the cash flow out is more than the cash flow in, then the farmer knows he has to find extra cash for that month. The "Net cash flow" is the difference between the cash inflow and cash outflow.</p> <p>Ask participants to identify the time when they think the farmer needs cash. Point out that cash is required in <b>October, November, December, January, and May for the enterprise</b>. Proceed to explain the importance of the cumulative "net cash flow" to assess the overall financial requirements.</p>	See Appendix A for the "Components of Farm Business Plan" handout
8	<p>Explain that using the cash flow format, the participants should be able to indicate the amount of cash available and required. The Format is given in the example. The participants should write this amount under the "Cash availability" section of their farm business plan filling out points (a) to (e).</p>	
9	<p>Explain that if the amount in (a) is more than the amount in (b), there is enough cash to finance the enterprise. If the amount in (b) is less than the amount in (a), then they do not have enough cash for their enterprise. If they have enough cash, they do not have to make any further decisions about financing. If they do not have enough cash, they will need to make a plan to get the money they need during the season. The total amount required should be written in section (c) of the cash availability format of their farm business plan. Next ask the groups to discuss in which months they need extra cash. They should write down the months in (d).</p>	
10	<p>Then ask the groups to discuss where the farmers can get the extra money from. Make two columns on the board for "Source" and "Amount".</p> <p>Brainstorm with the participants regarding possible sources of financing and the amounts required. Ask each person in the groups to prepare a cash availability plan for their enterprise. Next to each source they should put an amount. When all the participants have finished, ask one participant from each group who needs extra cash to share with the class his cash availability plan.</p> <p><u>Encourage discussion.</u></p>	

Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management		
	Lesson Steps	Resources
	Ask if the plan makes sense, whether it will work and if they have covered everything.	
11	<p>Now move to the last section, “Risks in farming” on the <b>Components of Farm Business Plan</b>. Ask the participants what they think the risks are in farming. <i>Encourage discussion</i>. Discuss their understanding of risk. Ask the participants what some of the things are that can happen and that can harm their enterprise, e.g.:</p> <ul style="list-style-type: none"> <li>• What can happen to the production part of the business?</li> <li>• You know that your enterprise is technically feasible but what could go wrong with production?</li> <li>• What actions do you need to put in place?</li> <li>• What can happen to your marketing plan?</li> <li>• What can happen to the financial part of the business?</li> <li>• What can happen to the human part of the business?</li> </ul> <p>Follow up the ideas with additional questions about how a particular risk can harm the farm business:</p> <ul style="list-style-type: none"> <li>• What would be the effect of a drop in the market price of a product?</li> <li>• What would be the effect of a pest infestation?</li> <li>• What would be the effect of a delay in the delivery of fertilizer from your supplier?</li> </ul>	See Appendix A for the “Components of Farm Business Plan” handout
12	Explain that now the participants should think about the enterprise they are working on. Ask the groups to discuss the specific risks that they might face with these enterprises. They should think about changes in market prices, the possibility of low yields, increases in the costs of production and other types of risks. For each risk they should also think about the possible harm it can do.	
13	<p>Ask each group to discuss if there is anything else they think should be included in the farm business plan. When each group has finished, ask each group to share what they have written. <i>Encourage discussion</i>. What do the other enterprise groups think? Are these notes useful to other groups?</p> <p>When the discussion is finished, ask the groups to look back over the farm business plan. Have a brief discussion again on each part. They should check the information and make changes where they think changes are needed. When this is done, explain to the participants that they have just finished their first farm business plan. It is very important to step toward making their farms better managed and more profitable. Encourage them to take their plans to their families and to discuss them. They may need to make changes.</p>	



Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management

Session 14: Components of a Farm Business Plan, Part 2: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management		
<i>Lesson Steps</i>		<i>Resources</i>
14	Tell participants that in the next meeting they will start preparing their individual business plans for the selected enterprises.	

## Session 15: Preparing a Farm Business Plan and Action Plan

### Objectives

By the end of this session, the participants shall have:

- Identified the key steps and resources required to implement their business plans to make progress towards fulfilling their visions; and
- Prepared their own action plan.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 15: Preparing a Farm Business Plan](#)

Session 15: Preparing a Farm Business Plan and Action Plan	
Lesson Steps	Resources
<p><b>1</b> Do a quick review of the different components of the farm business plan. The participants should refer to the format in the handout <b>My Farm Business Plan</b>. Ask them to go through all of the parts systematically. Inform them:</p> <ul style="list-style-type: none"> <li>• Initially, they should assess their selected enterprise for technical feasibility; the availability of physical resources and inputs and requirements.</li> <li>• If technically viable, they should proceed to complete the handout <b>My Farm Business Plan</b>. They should describe their enterprise and the date of preparation of the plan.</li> <li>• They should then provide background information: the name of the farmer, the village/district and the time-frame of the plan.</li> <li>• Each participant should describe the vision and goals that they set for themselves.</li> <li>• Each participant should then proceed to complete the Business Plan format covering the following components: <ul style="list-style-type: none"> <li>– Farm Vision, Goals and Strategies</li> <li>– Farm production plan</li> <li>– Market plan</li> <li>– Profitability</li> <li>– Cash flow and availability</li> <li>– Risks and risk management</li> </ul> </li> </ul>	<p>See Appendix A for the “My Farm Business Plan” handout</p>
<p><b>2</b> Organize the participants into groups with the same individual enterprises, three to five people per group. Set a clear time limit – one or two hours. Encourage them to work together. Check with each group how far they got with the business plan for their individual enterprises.</p>	
<p><b>3</b> Ask each group to consult and select one business plan from the group to present to the rest of the participants. Ask the first group to present a</p>	

Session 15: Preparing a Farm Business Plan and Action Plan		
	Lesson Steps	Resources
	completed business plan. Encourage the participants to ask questions. Help with suggestions for improving the business plan. Ask the group to explain how the business plan contributes to fulfilling the farm business vision.	
4	Repeat the process with one group at a time until all the enterprise groups have had a chance to present their selected business plans. When the last plan has been presented, consolidate the work. Make sure each person understands how to prepare the plan and has a complete set of materials for his or her chosen enterprise. Ask if there are any more questions or issues to be discussed. Review the meeting and remind the participants of the next meeting.	
5	Now that the business plan has been prepared, there will be many actions that farmers will need to undertake with regard to physical resources and inputs, markets, managing resources and risks, etc. Refer them to the format for <b>Preparing an Action Plan</b> and explain that the form will allow them to list a set of actions, its duration, start date and responsibility. Emphasize that the action plan can be divided into sub-sections, for example physical resources and inputs, market, managing risks, etc.	See Appendix A for the "Preparing an Action Plan" handout
6	<p>Ask participants to brainstorm some actions under the various sub-sections, and note comments on the board. If required, add the following:</p> <p><b>For physical resources and inputs</b></p> <ul style="list-style-type: none"> <li>• Arrange financing for buying inputs</li> <li>• Confirm suppliers and the costs of each input item</li> <li>• Place orders/collect inputs from suppliers</li> <li>• Arrange transport to collect/deliver inputs</li> </ul> <p><b>For labour</b></p> <ul style="list-style-type: none"> <li>• Identify skilled labour from neighbouring areas</li> <li>• Check other's farmers source of labour</li> <li>• Identify technologies that could bring down the cost of labour</li> <li>• Train workers so that they can work more efficiently</li> </ul> <p><b>For market plan</b></p> <ul style="list-style-type: none"> <li>• Visit a potential market</li> <li>• Find out about different forms of transport</li> <li>• Look at different forms of packaging</li> <li>• Link up with specific buyers</li> </ul> <p><b>For risks</b></p> <ul style="list-style-type: none"> <li>• Find out about ways to reduce market risks</li> <li>• Find ways of addressing production risks</li> </ul>	

Session 15: Preparing a Farm Business Plan and Action Plan	
Lesson Steps	Resources
7	Instruct the participants to go back to their enterprise groups, and develop an action plan for their chosen enterprise. When each group has finished, ask them to share their list of actions. Write these on the board. <u>Encourage discussion</u> . Are the lists similar? If they differ, why? Have any actions been overlooked?
8	Conclude the meeting by highlighting that they now have many 'things to do'. Remind them to meet with their families to discuss their action plans and to make changes as needed. Remind them that they must use the action plan as a central tool for business plan implementation. Whenever they feel the need to consult, they should contact their enterprise group members, the other farmers, or the facilitator.

## Module 6: Keeping Records

### Session 16: Overview of Record Keeping

#### Objectives

By the end of this session, the participants shall have:

- Discussed the importance of keeping farm records, and
- Enumerated the different types of records needed.

Duration: **To be determined**

#### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 16: Overview of Record Keeping](#)

Session 16: Overview of Record Keeping		
Lesson Steps		Resources
1	Share the session objectives. Ask the participants the following question. If you meet a vegetable farmer who says that he or she has had a good harvest last season, what information are you most likely to want? Give each person time to think about the question and write down the answers on board. Proceed to ask each person individually what his or her key questions are. Name the participant with the closest right questions. Explain that there are a lot of things to be asked but the answers depend on the farmer keeping records. Records are important to analyse the performance of the farm business.	
2	<p>Ask for two volunteers to perform in a skit (if appropriate, offer that volunteers will want to be comfortable reading simple sentences in English). The skit is a role play given in <i>Role Play about Record Keeping</i>. Give the volunteers time to review the skit. Then let them act out the skit in front of the other participants. After the performance, ask the following:</p> <ul style="list-style-type: none"> <li>• What happened in the role play?</li> <li>• Why did the wife not believe that her husband used all the money properly?</li> <li>• What could have been done to avoid the confusion on how the money was spent?</li> </ul> <p>Link the answers to the need to keep proper records.</p> <p><i>Supplies: Facilitators will want to print three copies of the role play, one for the facilitator and one each for the volunteers.</i></p>	See Appendix A for the “Role Play about Record Keeping”
3	<p>Discuss with the participants why it is important to keep records.</p> <ul style="list-style-type: none"> <li>• What is the purpose of records? How can records help farmers?</li> </ul>	Use the Overview of

Session 16: Overview of Record Keeping	
Lesson Steps	Resources
<ul style="list-style-type: none"> <li>• What can happen if records are not kept?</li> </ul> <p>Start a discussion on their experience in using records. Brainstorm on why some businesses or farms do not keep records. The following explanations may be given:</p> <ul style="list-style-type: none"> <li>• Some farmers do not give importance to records.</li> <li>• Some don't know how to prepare them.</li> <li>• Some find it complex.</li> <li>• Some don't have enough time available.</li> </ul> <p><i>Write the explanations on the board.</i></p> <p><b>Supplies:</b> Flip board, markers</p>	<p><b>Record Keeping: Facilitator's Guide</b> to help guide the discussion</p>
<p>4 Divide the participants into four groups and ask them to list the types of records they are familiar with. What types of records do you think are needed? Write these on the board. On the basis of these findings identify the most important farm records. Refer to the list on the <b>Overview of Record Keeping: A Facilitator's Guide</b>.</p> <p>Describe the 9 examples of farm records and initiate a discussion.</p> <p>Tell the participants that we will now look at these records. Together they will help you make a profit and loss statement for your farm and individual enterprises.</p>	<p>Use the <b>Overview of Record Keeping: A Facilitator's Guide</b> to help guide the discussion</p>

## Session 17: Practice of Keeping Farm Business Records

### Objectives

By the end of this session, the participants shall have:

- Enumerated the kinds of records needed;
- Described how to maintain them on a regular basis;
- Identified the kind of records needed; and
- Discussed the ways to maintain them on a regular basis.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens
- Calculator or phone with calculator

Handouts are available in Appendix A here: [Session 17: Practice of Keeping Farm Business Records](#)

Session 17: Practice of Keeping Farm Business Records												
Lesson Steps				Resources								
1	<p>Start working through the records discussed in the last meeting.</p> <p>Essentially this Session reinforces the need for record keeping by putting together in one place your previous computations regarding your farm business.</p>											
2	<p><b>Production Record</b></p> <p>Organize the participants into groups of three to five. Group them around common enterprises. Ask the participants to view the <i>Production Record</i> handout.</p> <p>Explain that the entries here provide information on production output. This record helps the farmer to understand how well his production program is performing. It can be used to compare the performance of one farm with another. A production record is necessary for assessing the farm business plans previously prepared.</p> <p>Ask the participants to discuss the production records and start filling in the table, for example</p> <table border="1"> <thead> <tr> <th>Enterprise</th> <th>Land Size</th> <th>Expected Yield kg/Hectare</th> <th>Total Yield (tons/kgs/bags)</th> </tr> </thead> <tbody> <tr> <td>Ethiopian kale</td> <td>1 ha</td> <td>2800 kg/ha</td> <td>2800 kg</td> </tr> </tbody> </table>			Enterprise	Land Size	Expected Yield kg/Hectare	Total Yield (tons/kgs/bags)	Ethiopian kale	1 ha	2800 kg/ha	2800 kg	<p>See Appendix A for the <b>Production Record</b> handout</p>
Enterprise	Land Size	Expected Yield kg/Hectare	Total Yield (tons/kgs/bags)									
Ethiopian kale	1 ha	2800 kg/ha	2800 kg									
3	<p><b>Record</b></p> <p>Ask the participants to refer to the format on the <b>Record</b> worksheet. Explain the following while pointing out the different headings in the record:</p> <ol style="list-style-type: none"> <li>1. Entries under these headings provide information on the number of people required for each activity and the number of hours they will take</li> </ol>			<p>See Appendix A for the <b>Record</b> handout</p>								

Session 17: Practice of Keeping Farm Business Records																										
Lesson Steps	Resources																									
	<p>each day. Such information will assist the farmer in understanding the requirements for each activity.</p> <ol style="list-style-type: none"> <li>Under the heading “Number of people working”, record the actual number of people who worked on that particular activity for a particular day.</li> <li>Under the next heading “Number of hours taken”, record the actual hours spent doing the particular activity. The total number of hours is calculated by multiplying the number of people and the number of hours spent on each activity.</li> </ol> <p>Explain that it is <u>important to record the information as soon as the activity is done</u>. The information should be recorded each day that the activity takes place. If not, it will be difficult to remember the number of hours taken to complete the activity.</p>																									
4	<p>Refer and explain how in the following example, the farmer is able to know exactly how many workers are required to carry out a task, and to know how much time it will take. Let the participants know that it is important to keep records.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Activity</th> <th>Number of People Working</th> <th>Number of Day Taken</th> <th>Total Man Days</th> </tr> </thead> <tbody> <tr> <td>20/2/16</td> <td>Land preparation</td> <td>2</td> <td>2</td> <td>4</td> </tr> <tr> <td>20/3/16</td> <td>Planting</td> <td>2</td> <td>6</td> <td>12</td> </tr> <tr> <td>6/10/16</td> <td>Harvesting</td> <td>1</td> <td>8</td> <td>8</td> </tr> </tbody> </table>	Date	Activity	Number of People Working	Number of Day Taken	Total Man Days	20/2/16	Land preparation	2	2	4	20/3/16	Planting	2	6	12	6/10/16	Harvesting	1	8	8					
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5	<p><b>Inputs &amp; Materials Records</b></p> <p>Explain to the participants that agricultural production inputs and materials vary widely because of the different productions systems. They can be categorized as seed inputs, fertilizer or plant nutrient materials, plant protection materials.</p> <p>Refer and explain how in the following example, the farmer is able to know exactly how much inputs and materials have already been purchased and used. Emphasize the importance and practicality of these records.</p> <table border="1"> <thead> <tr> <th>Inputs/Materials</th> <th>Date Purchased</th> <th>Quantity of Inputs/Materials</th> <th>Unit</th> <th>Unit Price (KSh/kg)</th> <th>Total Amount (KSh)</th> </tr> </thead> <tbody> <tr> <td>1. seeds</td> <td>15/3/16</td> <td>3</td> <td>kg</td> <td>200</td> <td>600</td> </tr> <tr> <td>2. fertilizer</td> <td>16/3/16</td> <td>4</td> <td>kg</td> <td>150</td> <td>450</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Ask the participants to use the <b>Inputs and Materials Record</b> worksheet for these data.</p>	Inputs/Materials	Date Purchased	Quantity of Inputs/Materials	Unit	Unit Price (KSh/kg)	Total Amount (KSh)	1. seeds	15/3/16	3	kg	200	600	2. fertilizer	16/3/16	4	kg	150	450							See Appendix A for the Inputs and Materials handout
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Lesson Steps					Resources		
<b>6</b>	<p>Start a discussion about the use of cash inflow records. Ask them if they understand the value of the record? Mention that farmers should keep cash inflow records for each of their farm enterprises. This will help farmers to prepare enterprise budgets for the next round of planning. The record also helps farmers to construct cash flows for the farm.</p> <p>Ask the participants to go over the <b>Cash Inflow Record</b> worksheet. Explain the following while pointing out the different headings in the cash inflow record:</p> <ol style="list-style-type: none"> <li>1. Entries here provide information on the activities that require the farmer to receive money particularly from the sales of the products of the enterprise. The first heading, "Date", gives the date of the product sold.</li> <li>2. The type of product is given under the second heading "Produce sold".</li> <li>3. Under "Quantity" enter the amount of produce sold. Remember to include the unit for example: number, kg, liters, bag, etc.</li> <li>4. The unit price (the price the buyer paid for one unit of produce) is recorded in the fourth heading "Unit price".</li> <li>5. The fifth heading is for "Total income". We learned in earlier sessions that the "Total income" is calculated by multiplying the market price by the quantity sold. Because money from sales is coming into the farm business, it is called "cash inflow". The amount of money coming in will depend on the level of productivity, the amount sold in the market and the market prices.</li> <li>6. The last heading is given to enter "Comments" about things you observed when marketing the produce that could affect the performance of the enterprise. For example, it could include a note that prices were better in the morning than in the afternoon. It could be a note that the bigger buyers were at the market very early.</li> </ol> <p>Explain that the cash inflow record should be updated regularly. It is a good idea to record the information at the end of every day after returning from the market. At the end of the production cycle the farmer should total all the cash inflows.</p> <p>Make sure the participants understand the nature of the record (refer to the example below). Let the participants know that it is important to give details of the sales/outputs.</p>					<p>See Appendix A for the <b>Cash Inflow Record</b> handout</p>	
	Date	Sales/Outputs	Quantity (kg)	Unit Price (KSh/kg)	Total Income (KSh)		Comments
	12/04/16	Sold Cowpeas	700	35	24,500		Sold at farm gate
	15/04/16	Sold Cowpeas	600	38	22,800		Sold at town market
20/04/16	Sold Cowpeas	400	36	14,400	Sold to local restaurant		

Session 17: Practice of Keeping Farm Business Records						
Lesson Steps						Resources
	25/04/16	Sold Cowpeas	900	35	31500	Sold to school
	<b>Total</b>		<b>2600</b>		<b>93,200</b>	
<b>7</b>	<p><b>Cash Outflow Record</b></p> <p>Start a discussion about the usefulness of the cash outflow record. Ask if the participants understand the value of the record? Explain that farmers should keep cash outflow records for all their enterprises. This will help farmers when they need to set up enterprise budgets for the next round of planning. This record will also help the farmer when he needs to calculate the cash flow for the whole farm.</p> <p>Ask the participants to go over the <b>Cash Outflow Record</b> then explain it in detail. Notify farmers that it provides information of all the activities that require them to spend money either to buy inputs or pay for services and operations.</p> <p>Explain the format as follows:</p> <ul style="list-style-type: none"> <li>• The date the activity is carried out or the inputs are purchased are recorded under the first heading, "Date".</li> <li>• The operation, activity or input used is recorded under the second heading.</li> <li>• Under the "Quantity" heading the amount of work conducted (operation) or the amount of input purchased is recorded. Again you will need to include the unit of measurement such as kg, number, ha, litre, bag, etc.</li> <li>• The cost of the unit of input, or services or operation is recorded under the fourth heading "Unit cost".</li> <li>• The "Total cost" for the activity or input is recorded under the fifth heading. In an earlier session we learned that the total cost is calculated by multiplying the quantity used by the unit price. Because money is always going out or being spent it is regarded as a cash outflow.</li> <li>• The last column is provided for any comments or observations the farmer has that may affect the performance of the enterprise.</li> </ul> <p>Explain that all of the columns need to be completed every time an activity is carried out. At the end of the production cycle, the farmer should aggregate all the money spent and seen as cash outflows.</p>					See Appendix A for the <b>Cash Outflow Record</b> handout
<b>8</b>	Referring to the example below, explain that this captures the cash paid out to buy inputs and materials needed to grow maize. Each time money is used to make a purchase it should be recorded in this format. Like with the cash inflow					

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<p>record, at the end of the season, the cash outflow record will make it easy to know exactly how much cash was spent to produce and market maize.</p> <p>The record also enables the farmers to see when and where they spent their money. This will help them when planning their production and marketing strategy for the enterprise.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Particulars</th> <th>Quantity</th> <th>Unit</th> <th>Unit Price (in KSh)</th> <th>Total Expenses (KSh)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>25/01/16</td> <td>Purchased Seed</td> <td>50</td> <td>kg</td> <td>50</td> <td>2500</td> <td>Bought from local market</td> </tr> <tr> <td>01/02/16</td> <td>Purchased Fertilizer/ Manure</td> <td>1</td> <td>tonne</td> <td>700</td> <td>700</td> <td>own</td> </tr> <tr> <td>18/02/16</td> <td>Purchased Fertilizer/ Manure</td> <td>1</td> <td>tonne</td> <td>3500</td> <td>3500</td> <td>Bought from other farmer</td> </tr> <tr> <td>25/02/16</td> <td>Bush clearing</td> <td>4</td> <td>Man days</td> <td>200</td> <td>800</td> <td>Did some work myself</td> </tr> <tr> <td>25/02/16</td> <td>Ploughing</td> <td>5</td> <td>Man days</td> <td>500</td> <td>2500</td> <td>Hired labour</td> </tr> <tr> <td>05/03/16</td> <td>Planting</td> <td>12</td> <td>Man days</td> <td>300</td> <td>3600</td> <td>Local/hired labour</td> </tr> <tr> <td>05/03/16</td> <td>Pesticides</td> <td>1</td> <td>liters</td> <td>1000</td> <td>1000</td> <td>Bought from agrovet</td> </tr> <tr> <td>25/03/16</td> <td>Weeding</td> <td>4</td> <td>Man days</td> <td>300</td> <td>1200</td> <td>Hired labour</td> </tr> <tr> <td>05/10/16</td> <td>Transportation</td> <td>1</td> <td>pickup</td> <td>1000</td> <td>1000</td> <td>Hired "Go Trucking"</td> </tr> <tr> <td>05/10/16</td> <td>Packaging material (Bags)</td> <td>40</td> <td>bags</td> <td>50</td> <td>2000</td> <td>Bought from local market</td> </tr> <tr> <td>06/10/16</td> <td>Harvesting</td> <td>8</td> <td>Man days</td> <td>250</td> <td>2000</td> <td></td> </tr> <tr> <td><b>Total</b></td> <td></td> <td></td> <td></td> <td><b>7,850</b></td> <td><b>20,800</b></td> <td></td> </tr> </tbody> </table>						Date	Particulars	Quantity	Unit	Unit Price (in KSh)	Total Expenses (KSh)	Comments	25/01/16	Purchased Seed	50	kg	50	2500	Bought from local market	01/02/16	Purchased Fertilizer/ Manure	1	tonne	700	700	own	18/02/16	Purchased Fertilizer/ Manure	1	tonne	3500	3500	Bought from other farmer	25/02/16	Bush clearing	4	Man days	200	800	Did some work myself	25/02/16	Ploughing	5	Man days	500	2500	Hired labour	05/03/16	Planting	12	Man days	300	3600	Local/hired labour	05/03/16	Pesticides	1	liters	1000	1000	Bought from agrovet	25/03/16	Weeding	4	Man days	300	1200	Hired labour	05/10/16	Transportation	1	pickup	1000	1000	Hired "Go Trucking"	05/10/16	Packaging material (Bags)	40	bags	50	2000	Bought from local market	06/10/16	Harvesting	8	Man days	250	2000		<b>Total</b>				<b>7,850</b>	<b>20,800</b>		
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<b>9</b>	<p><b>Home Consumption Record</b></p> <p>Start a discussion about the importance of the home consumption record. Lead the discussion to an understanding that the home consumption record assists farmers in knowing where some of the income from the farm enterprises is going.</p> <p>It helps farmers make a business decision whether to sell all of their food crops to generate cash or to preserve a portion for household consumption. When a farmer knows the value of the produce that is consumed by the family he/she will recognize the impact on the profitability of the enterprise. He/she can then decide whether or not to continue this way.</p> <p>Advise the participants that once the season begins they should start using the consumption record.</p> <p>Ask the participants to turn to the <b>Home Consumption Record</b> worksheet. Explain the following while pointing out the different headings in the table:</p>					<p>See Appendix A for the <b>Home Consumption Record</b> handout</p>																																																																																											

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Lesson Steps	Resources																								
	<p>The entries in the home consumption record logs produce that has been stored, consumed, or given as gifts to relatives, friends and family members. It can also log produce that is lost or spoiled after harvest. The main purpose of the record is to provide information on the amount and the value of what the family has consumed from the farm or has given away.</p> <p>The first heading includes the date that produce is consumed or stored for consuming later. Remember, if produce is not sold it does not attract income, but unsold products still cost money to produce.</p> <ul style="list-style-type: none"> <li>• The second heading shows the “consumed items”.</li> <li>• Under the third heading you record the “Amount consumed”, given away or stored for consuming later. Remember to include the unit of measurement such as number or kg.</li> <li>• Under the “Unit price” heading you record the price of the produce you would have received if you had sold it in the market.</li> <li>• The next heading is “Total value”. We learnt in a previous session that the “Total value” is calculated by multiplying the unit price times the amount recorded under “Quantity consumed”.</li> <li>• The last heading is provided for “comments” on the amount of produce consumed or given as gifts. For example one may record that produce was used at a wedding or given to a neighbour who needed help.</li> </ul> <p>Explain that this record should be updated regularly. It is best to record on the day that the produce is stored, consumed, given away or lost. At the end of the production cycle, a farmer should calculate the total value of this produce as part of the income from the enterprise. A member of the farm household should be encouraged to keep these records. Get feedback and make sure the participants understand the nature of the consumption record.</p>																								
10	<p>Referring to the example table below, explain that the farmer has recorded the number of kilograms of sweet potato consumed by the family or given away. The total value of the production consumed instead of sold is KSh 5000. The amount is part of the enterprises profitability. But it is not part of the enterprise cash inflow.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Consumed Items</th> <th>Quantity</th> <th>Unit Price (KSh/kg)</th> <th>Total Value (KSh)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>05/03/16</td> <td>Sweet Potato</td> <td>50kg</td> <td>50</td> <td>2500</td> <td>Family</td> </tr> <tr> <td>05/03/16</td> <td>Sweet Potato</td> <td>50kg</td> <td>50</td> <td>2500</td> <td>Family</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>100</b></td> <td></td> <td><b>5000</b></td> <td></td> </tr> </tbody> </table>	Date	Consumed Items	Quantity	Unit Price (KSh/kg)	Total Value (KSh)	Comments	05/03/16	Sweet Potato	50kg	50	2500	Family	05/03/16	Sweet Potato	50kg	50	2500	Family	<b>Total</b>		<b>100</b>		<b>5000</b>	
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11	Profit and Loss Record																								

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Lesson Steps		Resources
	<p>Explain that the cash inflow record and the cash outflow record (and the home consumption record if you used it), which we have just looked at, can be used to make a profit and loss statement for each enterprise.</p>	
12	<p>Ask the participants to refer to the <b>Profit and Loss Record</b> worksheet and explain that the record should help keep track of profits and losses. At the top of the record farmers should enter the type of enterprise being measured. If it is sweet potato, it becomes: "Measuring my sweet potato enterprise".</p> <p>Each profit and loss record covers a specific period of time. For crops, it is usually a cropping season. For vegetables the period may be a few months. For grain crops the period may be a year. For tree crops this could be many years. For livestock the period will be from the point of purchase to the point of sale.</p> <p>When we calculated enterprise budgets, we used as an example 1 ha land.</p> <p>Each farmer will have a unique size of land or a unique number of livestock. In order to calculate profitability of the actual farm, he/she will need to use the actual size of the enterprise.</p> <p>So you need to write down the area (hectares) or size (number of livestock) of the enterprise and use this number when doing your calculations.</p>	<p>See Appendix A for the <b>Profit and Loss Record</b> and <b>Sample Profit and Loss Record</b> handouts</p>
13	<p>Ask the participants to write the appropriate information in their records. Next, ask each group to go through the cash inflow, cash outflow (and consumption records) for their enterprise and calculate the profit (or loss). They should write this down in their worksheets using an enterprise budget format.</p> <p>Refer to the part with the headings. Explain the following:</p> <ul style="list-style-type: none"> <li>• This sheet is used to arrange the records provided by the farmer into different categories: field operations, inputs and materials, post production and value of sales. The items included in the cash outflow and cash inflow formats are entered under "Inputs/Operations" (second heading) and placed under the appropriate heading.</li> <li>• The unit of measurement and the quantity used are provided under the second heading.</li> <li>• Practice keeping farm business records</li> <li>• The unit cost or price is given for each item and recorded under the heading "Unit price or cost". It is considered a cost if it appears in the cash outflow record and it is included in the price if it comes from the cash inflow record or home consumption record.</li> <li>• To calculate the total income you multiply the quantity of the produce sold times the unit price. The amount is recorded under "Total income".</li> <li>• To calculate the total cost you multiply the quantity of inputs or operation by the unit cost. The amount is recorded under "Total cost".</li> </ul>	<p>See Appendix A for the <b>Profit and Loss Record</b> and <b>Sample Profit and Loss Record</b> handouts</p>

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Lesson Steps		Resources																								
	<p>This record sheet can be difficult to do. So you may want to ask for help from an extension worker or other farmers. Or you might be able to help other farmers.</p> <p>Use the <b>Sample Profit and loss statement</b> as guide to complete a profit and loss record with the help of other records. Ask each group to maintain and share their results. Deal with one enterprise at a time. Did each group reach the same answer? If not, why? Which enterprises are profitable? Which enterprises are not profitable? Why? Ask if there are any questions about this.</p> <p><u>Encourage discussion.</u></p>																									
14	<p><b>Fixed Asset Record</b></p> <p>Start a discussion about why it is important to have a fixed asset record. Lead the discussion to create an understanding of the following about the fixed asset record:</p> <ul style="list-style-type: none"> <li>• The fixed asset record helps farmers remember when and for what price they bought the equipment</li> <li>• It helps them remember when to repair or replace an item</li> <li>• It helps them calculate the fixed costs for their farms when calculating the profit for the whole farm</li> </ul> <p>Ask the participants to refer to the <i>Fixed Asset Record</i> worksheet and explain that this provides information on the important items of fixed costs related to the enterprises on the farm. Each item includes the date of purchase, the purchase price (cost) and the life of the item. The life of the item varies. The life of housing and buildings can be taken as forty years; the life of a tractor and other machinery is five years; the life of tools is ten years.</p> <p>Referring to the example below, explain that there are three items included into the fixed asset record: hand tools, a sprayer, and some irrigation pipes. This farmer does not have a tractor. If he did, he would list it in this record.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Items</th> <th>Purchase Price (Ksh)</th> <th>Quantity</th> <th>Life (years)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>01/02/16</td> <td>Jembe</td> <td>400</td> <td>2</td> <td>2-3</td> <td>Replace in 2019</td> </tr> <tr> <td>02/03/2016</td> <td>Watering cans</td> <td>200</td> <td>3</td> <td>2-4</td> <td>Bought from the market</td> </tr> <tr> <td>03/04/16</td> <td>Irrigation pipes</td> <td>2000</td> <td></td> <td>10</td> <td>Bought from a hardware</td> </tr> </tbody> </table> <p><u>Get feedback to make sure the participants understand the record.</u></p>	Date	Items	Purchase Price (Ksh)	Quantity	Life (years)	Comments	01/02/16	Jembe	400	2	2-3	Replace in 2019	02/03/2016	Watering cans	200	3	2-4	Bought from the market	03/04/16	Irrigation pipes	2000		10	Bought from a hardware	See Appendix A for the <b>Fixed Asset Record</b> handout
Date	Items	Purchase Price (Ksh)	Quantity	Life (years)	Comments																					
01/02/16	Jembe	400	2	2-3	Replace in 2019																					
02/03/2016	Watering cans	200	3	2-4	Bought from the market																					
03/04/16	Irrigation pipes	2000		10	Bought from a hardware																					
15	<p>Explain to the participants that in order to review progress they will need to keep their records up to date. Organize the participants into enterprise teams of 2-3. Ask each team to discuss the records they will keep during the implementation of their business plans. They should also agree who will be</p>																									

Session 17: Practice of Keeping Farm Business Records		
<i>Lesson Steps</i>		<i>Resources</i>
	responsible for keeping the records. Separate records should be kept for each farm and farmer.	
<b>16</b>	<p>Ask each team to keep records for the selected enterprise on a regular basis. They should be encouraged to meet with one another regularly to discuss the entries that they are making and any noticeable differences. Participants should get together to help each other with the record keeping, if need be.</p> <p>This system of working together provides checks and balances on the data recorded and the 'peer review' is an integral part of the FBS learning process.</p>	
<b>17</b>	Adequate time will need to be made available for the group to discuss the records or any problems the teams might have.	
<b>18</b>	At the end of meeting review all the records discussed. Explain to the participants that during the season they should maintain these records. In the next meeting the schedule for the implementation phase will be prepared.	

## Module 7: FBS Meetings During Production Season

### Session 18: Savings and Mobilizing Finance

#### Objectives

By the end of this session, the participants shall have:

- Discussed the concept and principles of group savings; and
- Identified sources of information on sources of credits and capital.

Duration: **To be determined**

#### Materials:

- Flipchart
- Markers or Pens
- Blank Cards (about 20, the size of business cards)
- Calculator with basic arithmetic functions
- Basket/Box (to shake up and distribute the blank cards)

Handouts are available in Appendix A here: [Session 18: Savings and Mobilizing Finance](#)

Session 18: Savings and Mobilizing Finance		
Lesson Steps		Resources
<b>1</b>	<p>Discuss that farm capital can come from various sources. One of these is savings. Introduce the concept of savings. Ask the participants where the money for savings can come from. Use the following parts to guide the discussion:</p> <ul style="list-style-type: none"> <li>• Ask the participants to discuss why people don't save.</li> <li>• Ask the participants to mention types of savings.</li> </ul> <p>Explain that saving money is normally difficult for smallholder farmers. However, if funds are mobilized as a group it should be easier. Ask participants to discuss the advantages and disadvantages of group savings for input buying.</p>	
<b>2</b>	<p>Have the blank cards and calculator available. Ask ten participants to come forward and let each of them pick two cards. Ask them to write their estimated saving from last year on each card (in this way the two cards will have the same amount). Now ask another participant to come forward and take one card from each of the ten participants with cards and add the total value of all the cards collected. Ask the participants to put their second cards in a basket/box. Shake them up. Ask each participant who had a card to pick one card from the basket/box and read aloud the amount written on his/her card. Ask the participant with all the cards to tell the total value of all the cards collected from the others. (Provide a calculator to assist this calculation.) Instruct the 10 participants to compare the amount of money on each of their individual cards to the total value of all the cards.</p>	
	<i>Supplies: Blank cards, calculator, basket/box.</i>	



Session 18: Savings and Mobilizing Finance		
Lesson Steps		Resources
3	<p>Explain to the participants that this exercise shows that a group of farmers saves more money than any one single farmer. Ask them how the additional money could be used?</p> <p><u>Start a discussion.</u> Suggest that the additional money could be used to lend money to group members at different times of the year. This can be especially helpful when a farmer needs to buy inputs but is short of cash. Explain that in order to do so, the group would have to set up a system to manage the money. They would have to take turns borrowing the money. The group would also have to make sure that loans are given out fairly frequently and repaid on time. Ask if they would be interested in setting up a group for this purpose.</p>	
4	<p>Present/write on the board the savings equation to reiterate the concept of savings.</p> $\text{Income} - \text{Expense} = \text{Savings}$ <p style="text-align: center;">or</p> $\text{Income} - \text{Savings} = \text{Expense}$ <p>Savings are resources that one decides to set aside for investment purposes and not for luxury. Use the handout <b>Concept and Principles of Savings: For Facilitator's</b> to assist the facilitation of the discussion.</p> <p><i>(As the hand out is text heavy, it is likely not suitable to serve as a handout to participants.)</i></p> <p><i>Supplies: Flip chart and markers.</i></p>	See Appendix A for <b>Concept and Principles of Savings: For Facilitator's</b>
5	<p>Discuss that another source of capital is credit or loans.</p> <p>Refer the participants to the handout on <b>Mobilizing Finance</b> and talk through the example given. Everlyne has to cover the costs of producing cowpea i.e., buying seed at KSh 500 in March – ploughing at KSh 3500 in June and labour at KSh 250 in May and June, respectively. The farmer has KSh 500 cash available in March, KSh 250 in May and KSh 500 in June.</p> <p>Explain that the amount of extra cash that the farmer will need to finance the enterprise will be determined by the shortfalls in the cash flow for the enterprise.</p> <p>Ask the participants how much extra cash this enterprise will require. Take them through the cash flow calculation in the handout. Explain that the enterprise will require an additional KSh 450 in June. The total cash needed will be the cumulative sum of all the monthly cash short falls.</p>	See Appendix A for the <b>Mobilizing Finance</b> handout
6	<p>Explain that in this case the farmer may need to borrow money from other sources. These could be family, friends, micro-financing institutions and banks. Farmers should know that the credit or loans have to be repaid over</p>	See Appendix A for the <b>Mobilizing</b>

Session 18: Savings and Mobilizing Finance		
Lesson Steps		Resources
	<p>a pre-defined period, with interest. Explain that the person or institution lending the money sets the conditions for repayment. The section “What is credit and what are loans?” in the handout explains more fully the terms and conditions of loans. Explain also that repayment of credit needs to be included as a cost to the business and the farmer should borrow when the cash flow shows that there will be enough cash generated by the enterprise to repay the loan.</p>	Finance handout
7	<p>Ask the participants to indicate when it is appropriate for a farmer to access credit for his/her farm enterprise. Discuss some of the benefits and risks of taking loans and getting credit. Some of the benefits might be:</p> <ul style="list-style-type: none"> <li>• Providing finance to start-up a new enterprise with good market potential</li> <li>• Providing finance to expand an on-going enterprise</li> </ul> <p>Some of the risks might be:</p> <ul style="list-style-type: none"> <li>• If credit is not well utilized it could result in debt and hardship</li> <li>• A farmer’s reputation may be at stake for failure to pay back</li> <li>• Interest rates may be too high and could offset any positive gains for the farmer</li> </ul> <p>Ask the participants to suggest when it is not advisable for a farmer to use credit. Explain that it is inappropriate for a farmer to use credit when:</p> <ul style="list-style-type: none"> <li>• The farmer foresees the possibility of not being able to pay back the loan</li> <li>• If the terms and conditions are not favourable</li> <li>• When there is no plan to use the credit</li> <li>• When borrowing to pay for another loan – never repay a loan with another loan</li> </ul>	
8	<p>Referring back to the handout, remind the participants that farmers borrowing money need to know the conditions or terms before they can decide whether or not to take the loan.</p> <p>Ask the participants to state what they consider to be the most important terms they need to find out from a micro-finance institution, a bank or individuals loaning money. Write the responses on the board.</p>	See Appendix A for the “Mobilizing Finance” handout
9	<p>Explain all these terms using the definitions in the handout, under “Conditions or terms to be considered”. Guidance is given below.</p> <p><b>Interest rates:</b> Interest is the cost of borrowing money. It is usually given as a percentage. Interest rates may vary depending on where you get your loan. There are usually government laws that limit the interest rate to protect you from dishonest lenders.</p>	See Appendix A for the “Mobilizing Finance” handout

Session 18: Savings and Mobilizing Finance		
Lesson Steps		Resources
	<p><b>Bank charges:</b> In addition to interest rates, some lenders may also charge a certain fixed amount for processing the loan. This may be charged separately or it may be made part of the interest rate.</p> <p><b>Loan repayment period:</b> This is the time over which you have to repay the loan. The period may also vary depending on where you get your loan. You should choose a repayment period that is most appropriate for your enterprise.</p> <p><b>Grace period:</b> This refers to the period of time between getting the loan and when you have to start repaying it. Lenders usually understand that some enterprises may need a longer period of investment before realizing profits. You should choose a grace period that is most appropriate for your enterprise.</p>	
10	<p><b>Visiting a Lender</b></p> <p>Arrange for the members of the FBS to visit a financial lending institution or person in the area to discuss the terms and conditions under which credit is given.</p> <p>Before doing the exercise, participants will need to identify lending institutions or individuals in the area. These may be banks, micro-finance institutions or moneylenders. Find out a little about each one. If they have any printed information about getting loans from them, you should try to get hold of it. Choose at least one of each kind of source so that the participants are exposed to each of the different kinds of credit sources available. In this exercise you will organize teams to visit these persons or organizations. Therefore choose enough so each team can visit at least one lender.</p>	
11	<p>Organize the participants into teams of three to five depending on the number of lenders you have chosen. Refer participants to the <b>Directory of Credit Providers</b> and explain that you have chosen some lenders that they are going to visit. Assign at least one lender per team from your list. Ask them to visit their assigned lender and find out about the four conditions of a loan – the interest rate, loan repayment period, and grace period and bank charges. Encourage them to ask additional questions and to collect any printed information available. Advise the group to be specific in getting the information, noting if the loan is seasonal, short term, long term and for what type of enterprises. Agree on a time to return to the FBS. Send the teams into the field.</p>	See Appendix A for the <b>Directory of Credit Providers</b> handout
12	<p><b>Reporting on the visit to individual lenders or lending institutions</b></p> <p>When the teams return, ask each group to present its findings to the rest of the participants. As each team reports back write the information on the board.</p>	

Session 18: Savings and Mobilizing Finance	
Lesson Steps	Resources
	<p>After all the teams have reported, encourage the participants to compare the information. Which lender has the lowest interest rate? Which lender has the highest interest rate? Do all the lenders have a grace period? How do the repayment periods compare?</p> <p>After the details of the four conditions have been discussed and compared, ask the participants to rank the different financial sources. <u>Encourage discussion.</u></p> <p>Were all the lenders ranked the same? If yes, why? If not, why not?</p>
13	<p>Summarize the discussions by stating again that when farmers need to borrow money, they should investigate the best option. They need to be sure to find out about the terms and conditions from each lender that they are considering.</p>
14	<p>End the session by discussing that the next five sessions may be scheduled at the time the participants are less busy with the actual farm tasks since this is in the implementation phase of the farm business plan.</p>

## Session 19: Group Marketing and Buying

### Objectives

By the end of this session, the participants shall have:

- Discussed the concept of group marketing and its advantages and challenges to members;
- Identified the different marketing channels and buyers and the cost of selling produce to these markets;
- Discussed the importance and advantages of group buying of inputs; and
- Explained the concept of group buying and its advantages and disadvantages.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 19: Group Marketing and Buying](#)

Session 19: Group Marketing and Buying		
	Lesson Steps	Resources
1	<p>Start the session by asking the participants to recall their experiences during the market survey. Write these on the board. Once a list has been compiled organize the participants into teams of 2-3. Ask them to discuss how they chose the marketing outlet they used. On what did they base their decisions? When the teams have finished, ask them to share their responses. <i>Encourage discussion.</i></p> <p>Are the reasons they chose certain marketing outlets the same? Are they different? Why? Are there any new marketing outlets that they are thinking of selling to?</p> <p>Explain to the participants after the discussion that there are many different types of markets or marketing outlets. Some are close to the farmer; others far away. At some markets, the farmer can sell the products with very little packaging, handling and transporting. Other markets may require more packaging, handling and transporting. Each type of market requires different information, different skills, and different decisions. Farmers must carefully consider these requirements when choosing a market outlet. Most smallholder farmers sell their products at the farm or local markets because it is easiest and simplest.</p>	
2	<p>Explain that when marketing produce, it is also important to understand marketing costs. Understanding these costs will assist farmers to select marketing outlets that generate better returns for them. After this brief introduction, write the term "Marketing costs" on the board. Ask participants if they have ever taken produce to the market. Ask them to describe what they did and saw. The following questions can be used to guide discussion:</p>	

Session 19: Group Marketing and Buying		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>• What kind of produce did they sell?</li> <li>• How did they get the produce there?</li> <li>• Did they have to prepare their produce in any special way?</li> <li>• Did they use packaging?</li> <li>• How the selling was organized at the market?</li> </ul> <p>Write the answers on the board. The purpose of this discussion is to get the participants to think about the different parts of the marketing chain and the costs involved.</p> <p>When the participants have given all their ideas, check to see if there are any important things missing. Explain that marketing involves much more than just taking produce to market and selling it. Some products need to be cleaned before they can be taken to the market. Some products need to be packaged. All products have to be transported. At the market place farmers may need to hire a stall or pay a membership fee. Each of these marketing activities cost money.</p> <p><i>Supplies: White board and markers</i></p>	
3	<p>Organize the participants into teams of three to five. Assign each group a different enterprise or product. Ask each team to discuss the stages in marketing produce. When the teams have finished, ask each team to share the stages they identified. Write the responses on the board. <u>Encourage discussion.</u></p> <p>After the discussion, use the <b>Different Stages in Marketing Produce: Facilitator’s Guide</b> to summarize the points.</p>	See Appendix A for the <b>Different Stages in Marketing Produce: Facilitator’s Guide</b> handout
4	<p>Ask the participants if they have been a part of a group marketing scheme or if they know of one. What was the experience? What were the benefits? What were the pitfalls?</p> <p>Ask the teams to brainstorm the advantages and disadvantages of group marketing. When the teams are done, ask each team in turn to present the first advantage and disadvantage. Write them on the board under the correct heading, heading “advantages” and “disadvantages”. <u>Encourage discussion.</u></p> <p>One disadvantage is that once the contract is signed, the price is fixed. If they found a better price later, they would not be able to take it.</p> <p>Is this really an advantage? Is this really a disadvantage? Ask participants if they would like to initiate a group marketing scheme. Encourage them to discuss ideas to start this process.</p> <p><i>Supplies: Flip chart and markers</i></p>	

Session 19: Group Marketing and Buying		
Lesson Steps		Resources
5	<p><b>Marketing our Produce</b></p> <p>Explain the following: We have been studying and implementing our farm business plan. Now we have come towards the end of the season and our produce has to be marketed. We are all now going to be marketing our produce, document the whole process and share it with others. Ask the participants if which marketing outlets and buyers they plan to sell will send their produce and why. Write the responses on the board. Discuss some of the marketing outlets listed.</p> <p>Brainstorm on what they will do when they arrive at the market.</p>	
6	<p>Organize the participants into their enterprise groups. Ask each team to make a plan for marketing at least part of their product. They need to look at their marketing plans in their farm business plans and should answer the questions listed on the handout. When the teams have finished, ask each team to share their marketing plans. Have they covered all the important parts? Is anything left out? Will the plan work? If not, why?</p> <p>Ask them to consider also the following questions:</p> <ul style="list-style-type: none"> <li>• What product are they marketing?</li> <li>• Which market outlet will they use?</li> <li>• When will they go to the market? What day? What time?</li> <li>• What do they need to do to prepare their product for the market?</li> <li>• How will they get their produce to the market?</li> <li>• What arrangements do they need to make at the market before they can take their products there to sell?</li> <li>• How will they record the sales, the income and other information?</li> <li>• How will they share the transport and marketing costs?</li> <li>• How will they divide the income among the members of the team?</li> </ul>	
7	<p>Remind each of the teams to record the process of taking produce to the market. This should be done even if the produce is sold on the farm. Clarify that not all of the teams will market their products at the same time. So the report back session will be held only after at least one team has done their marketing. The exercise will be repeated for each team that completes the marketing of their produce. When you learn that a team has marketed its produce you should agree on a time to report back to the class. You should help them prepare by going over their records and making sure that all is in order.</p>	
8	<p>Ask each team that has marketed its produce to report about their experience. They should use the notes they took to record the marketing process. After presentation of the marketing process, ask the participants how the process was done. Some of the questions to ask include:</p> <ul style="list-style-type: none"> <li>• Was the price fair? Was it favourable to you?</li> <li>• What was the basis for deciding the price?</li> </ul>	<p>See Appendix A for the <b>Assessing Group Marketing: Facilitator's</b></p>

Session 19: Group Marketing and Buying		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>• Who conducted the marketing?</li> <li>• How long did it take to market the produce?</li> <li>• How was the product packaged?</li> <li>• What challenges did they face?</li> <li>• What will they do differently next time?</li> </ul> <p>Repeat this process of reporting until all the teams who have completed their marketing have shared their stories. Use the handout on <b>Assessing Group Marketing: Facilitator’s Guide</b> to summarize the discussion.</p>	<b>Guide</b> <b>handout</b>
9	<p><b>Group Buying</b></p> <p>Ask participants to describe their experiences in buying inputs and equipment from other farmers, dealers, suppliers, retailers and manufacturers. Once all participants have shared their experience, ask participants to discuss the conditions of purchase.</p>	
10	<p>Explain to the participants that if they buy inputs as a group from dealers or suppliers there are good chances to get discounts as the purchase could be made in bulk. They could also make savings on transport. But first it will be necessary to be organized and take advantage of these opportunities. When organized as a group, money could be saved and the funds utilized to purchase additional inputs.</p> <p>Ask the participants if they have had experience in buying inputs as a group. What were the advantages and disadvantages? List some advantages and disadvantages of group buying.</p> <p><i>Supplies: Flip chart and markers</i></p>	



## Session 20: Understanding Contract Farming and Appraisal

### Objectives

By the end of this session, the participants shall have:

- Discussed contract farming and contracts;
- Examined a contract carefully; and
- Demonstrated skills in negotiating contracts.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 20: Understanding Contract Farming](#)

Session 20: Understanding Contract Farming and Appraisal		
Lesson Steps		Resources
1	<p>Ask participants what they understand by contract farming. Inquire if anyone has ever been involved in contract farming and what has been his/her experience? What type of product was sold under contract? What were the benefits? What difficulties did they face?</p> <p>Reviewing the handout <b>Understanding Contract Farming: Facilitator's Guide</b>, explain the concept of contract farming. Mention that it involves individuals or groups of farmers entering into formal (written) or informal (verbal) arrangements for marketing their products.</p> <p><i>Facilitator's Note: You may consider discussing difficulties of forming relationships between farmers and institutions, drawing upon the farmers' previous experiences. Based on this discussion, examine how the farmers might facilitate these relationships through formal and informal arrangements. For example, the arrangements may begin as informal or less formal as both parties "test the waters" and then become more formal as time goes on.</i></p>	See Appendix A for the <b>Understanding Contract Farming: Facilitator's Guide</b> handout
2	Ask participants to identify the advantages and disadvantages of contract farming. List them on the board. Discuss each one in detail.	
3	<p>Ask the participants what they can do to overcome the challenges faced in contract farming?</p> <p>Using the handout <b>Understanding Contract Farming: Facilitator's Guide</b>, discuss some of the strategies to overcome the challenges. Emphasize the importance of group marketing as a key to negotiating a contract.</p>	See Appendix A for the <b>Understanding Contract Farming: Facilitator's Guide</b> handout
4	Ask participants to brainstorm on what they consider important components of a contract, sometimes called a memorandum of	

Session 20: Understanding Contract Farming and Appraisal	
Lesson Steps	Resources
<p>understanding. <u>Encourage discussion</u>. Write down the possibilities on the board.</p> <p>Lead the discussion to include at least the following points.</p> <p><b>Contract duration:</b> How long the contract will last. It is usually from the date of signing the contract to date of delivery of the products and payment.</p> <p><b>Quality standards:</b> What are the quality requirements; for example size, colour, moisture content and grade.</p> <p><b>Production limits:</b> How much must be produced and delivered by the farmer to the buyer; for example 5 ha (or hectare) per farmer or 5 tons per farmer. <i>Include language that considers what will be done with surplus produce, if applicable to the situation. In that instance, the farmers may want to consider connecting with other eligible buyers prior to planting season.</i></p> <p><b>Cultivation practices:</b> How the product will be produced, for example use of manure only, organic farming, not using certain pesticides, hand harvested.</p> <p><b>Product delivery arrangements:</b> Where, when and how the product should be delivered; for example specific locations, time, mode of transport, packaging, and storage requirements (particularly pertinent for fresh produce)</p> <p><b>Pricing arrangements:</b> What price will be paid and under what conditions; for example price based on quality and price based on quantity.</p> <p><b>Payment procedures:</b> How and when the farmer will be paid by the buyer; for example cash on delivery, payment after some days or months, paid by check.</p> <p><b>Insurance arrangements:</b> How the product is insured against things like fire, hailstorms, damage in transport.</p> <p><b>Arbitration terms:</b> Rules for settling disagreements between farmers and buyers. This usually include information on where to report conflicts.</p> <p><i>Facilitator's Note: You may consider using the market survey (see Section 8) to anticipate your institution's needs and prepare for discussion with their representative. Consider using the final MoU developed by St. Mary's School and the Namalenga farmer group as an example.</i></p>	
5	<p>Organize the participants into teams of 2-3. Refer participants to the <b>Sample Contract</b>. Ask the teams to read and study it and then identify its strengths and weaknesses for both parties: the seller and buyer. When the teams have finished, ask each team in turn to identify one strength and one weakness from the example contract. Write their answers on the</p>

Session 20: Understanding Contract Farming and Appraisal	
Lesson Steps	Resources
<p>board under the correct heading. Continue in this way until all the strengths and weakness are listed.</p> <p><b>Highlight some of the strengths:</b></p> <ul style="list-style-type: none"> <li>• The farmer and the buyer both know how much land will be planted with corn</li> <li>• Price is clear</li> <li>• The farmers will be given production advice</li> <li>• The supply of inputs is clear</li> <li>• There is finance for the supply of inputs and other activities</li> <li>• Product quality is clear</li> </ul> <p><b>Highlight the weaknesses:</b></p> <ul style="list-style-type: none"> <li>• The contract does not say what will happen if there is hail, drought, flooding or other 'Acts of God' that reduce yield or quality</li> <li>• The contract does not say what will happen if the buyer or farmer does not meet part of the contract</li> <li>• The contract does not say what the terms of payment are. Is it cash on delivery? Is it payment after some days or months?</li> <li>• The contract is not clear about its duration.</li> <li>• The price of inputs is not clear.</li> <li>• The contract is not clear about who is responsible for transporting maize to the designated locations</li> </ul>	
<p><b>6</b> Divide the participants into three groups and ask them develop a simple contract using the headings discussed under Part 3 above and strengths and weaknesses of the sample contract. Point out that it is very important to include all necessary contract components when preparing the contract.</p> <p>Communicate to participants that signing a contract for fresh produce is different than signing one for dry produce.</p> <p><i>Dry produce can be stored and transported easily. It is not easily damaged. Rice, for example, is easy to handle and package. Fresh produce can be easily damaged or spoiled due to rotting. Thus fresh produce needs special packaging and handling. A contract for fresh produce would include:</i></p> <ul style="list-style-type: none"> <li>• <i>Packaging requirements</i></li> <li>• <i>Quality requirements</i></li> <li>• <i>Transport requirements</i></li> <li>• <i>Storage requirements</i></li> </ul>	
<p><b>Facilitator's Note:</b> Ask the farmers to complete their simple contracts on flip chart paper. Once they are finished, post the charts in the front of the room, asking a group representative to summarize their contract. Discuss strengths and weaknesses of the contracts.</p>	

Session 20: Understanding Contract Farming and Appraisal	
Lesson Steps	Resources
7	<p>Ask the participants if they feel that this is a good contract for the farmers or not. If they were organized in a farmer group, would they be pleased to sign this contract? If yes, why? If not, how would they improve it for the farmers? Lead the discussion to the point that the participants understand that the farmers do not have enough protection under this contract. The weaknesses show all the areas that need to be changed to protect the farmers.</p> <p>Ask the participants how a contract for fresh produce like African leafy vegetables (ALVs) would be different from the example contract for rice. What will be the main differences?</p>
8	<p><b>Negotiation Skills</b></p> <p>This exercise will start with a role play. You will need to ask 5 of the participants to act the part of buyers and sellers. The 5 participants should be selected before the meeting and their roles explained to them. They should have had time to rehearse the role play. The details are set out below.</p> <p>Actors: 3 farmers; 2 traders</p> <p><b>Setting:</b> The farmers have just finished harvesting. There is a lot of produce in the village. There are many traders coming to the village market offering various prices and terms.</p> <p><b>Issue:</b> The three farmers are working together trying to get a better price for their produce. The two buyers are working together trying to get the produce at the lowest possible price.</p> <p><b>Action:</b> The players discuss until they settle on an acceptable price and agree to the terms and conditions.</p>
9	<p>Explain the purpose of the session to the participants. The participants should watch carefully as they carry out the role play, as they will have to discuss it afterwards. Ask the five participants to start.</p> <p>When the role play is completed, thank the actors. Start a discussion and ask the participants the following questions:</p> <ul style="list-style-type: none"> <li>• What was the role play about?</li> <li>• How did both parties reach the agreement?</li> <li>• What did the farmers give up to reach an agreement?</li> <li>• What did the buyers give up to reach an agreement?</li> <li>• What did both parties hold on to reach an agreement?</li> </ul> <p>After the discussion, using the handout <b>Negotiating Contracts: Facilitator's Guide</b>, explain the concept of negotiation. Ask the participants to brainstorm on what negotiation means. Have they had any experience negotiating anything? What about negotiating at a shop? Have they ever</p>

Session 20: Understanding Contract Farming and Appraisal		
	Lesson Steps	Resources
	had to negotiate a price for clothes? What about negotiating for marriage? How did the negotiations work? What was involved?	
10	Lead the discussion towards the need for knowledge and skills in order to successfully negotiate. Write the following words on the board “Things I need to know about negotiation.” Ask the participants what is needed to improve their position in a negotiation. <i>Encourage discussion</i> . Write their answers on the board. Using the “Tips For Successful Negotiation” on the handout <b>Negotiating Contracts: Facilitator’s Guide</b> , make up a comprehensive list.	See Appendix A for the <b>Negotiating Contracts: Facilitator’s Guide</b> handout
11	Write on the board ‘Skills I need for effective negotiation’. Ask the participants to identify the skills and abilities needed to be successful in a negotiation. <i>Encourage discussion</i> . Write their answers on the board. Using the “Tips For Successful Negotiation” on the handout <b>Negotiating Contracts: Facilitator’s Guide</b> , make up a comprehensive list.	See Appendix A for the <b>Negotiating Contracts: Facilitator’s Guide</b> handout
12	<p>Inform participants they now have two lists. One list is the things they need to know to strengthen their position in a negotiation. The other list is the skills needed to be successful in a negotiation.</p> <p>In this part of the exercise participants will assess whether they have the necessary information listed and the skills to negotiate effectively. They should also assess whether they are strong or weak in both aspects. Organize the participants into teams of two. Explain the details of the <b>Farm Assessment Audit Checklist</b>.</p> <p>Ask the participants to mark in their handout whether they are strong or weak in a particular area. <i>Encourage discussion</i> within the teams for an honest assessment. Ask groups to work on all knowledge and skills areas listed.</p>	See Appendix A for the <b>Farm Assessment Audit Checklist</b> handout
13	When the participants have finished assessing their knowledge and skills, ask each team to share first the strongest and then the weakest skills.	
14	Ask each participant to identify their weakest skill and knowledge gap. Explain that these could be improved by training and understanding the relevant information. Encourage the participants to make arrangements to get help in addressing these weaknesses.	

## Session 20A: Doing Business in Kenya and Understanding the Procurement System Process

### Objectives

By the end of this session, the participants shall have developed an understanding of the requirements they must meet and develop an action plan to help meet them.

Duration: To be determined

### Materials:

- Flipchart
- Markers or Pens

Session 20A: Doing Business in Kenya and Understanding the Procurement System Process		
<i>Lesson Steps</i>		<i>Resources</i>
1	Welcome the participants, and share with them the objectives of the meeting.	
2	<a href="http://www.industrialization.go.ke/images/downloads/Doing-Business-In-Kenya-Local-Investors-Handbook.pdf">http://www.industrialization.go.ke/images/downloads/Doing-Business-In-Kenya-Local-Investors-Handbook.pdf</a>	
3	Aurillia to develop a training component about the local procurement system, if appropriate (if it is not appropriate, revise the heading here and wherever else it is mentioned in the document).	

## Session 21: Assessing and Managing Business Risks

### Objectives

By the end of this session, the participants shall have:

- Identified the various types of risks farmers face when planning more commercial operations; and
- Described strategies to manage risks.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 21: Assessing and Managing Business Risks](#)

Session 21: Assessing and Managing Business Risks		
Lesson Steps	Resources	
1	<p>Explain that this session will reinforce the discussions on risks explored during the formulation of the farm business plan. By way of review, brainstorm again on what the term “risk” means. Explain that risk is defined as any factor that may cause losses to the farm business. Farmers may have little control over such risks. Some risks are external such as changes in market prices, low rainfall, etc. Some risks are internal, relating to the business. Farmers can control internal risks. Most important to understand is that risk management is not a guarantee for increased income. But farmers should be able to manage risk so that it has minimum negative effects on their business. In a full group session, ask the participants to identify the major risks they face with their enterprises. Write their answers on the board under the appropriate heading. Refer them to the handout <b>Assessing and Managing Business Risks: Facilitator’s Guide</b> and discuss in detail the five major risk categories associated with farming as a business i.e. production, marketing, finance, institutional and human.</p>	<p>See Appendix A for the <b>Assessing and Managing Business Risks: Facilitator’s Guide</b> handout</p>
2	<p>Work through the list of risks on the board. Ask the participants how they deal with these kinds of risks. Why do they use that particular strategy? How effective is it? Would they use the same strategy again? Why? Why not? <i>Encourage discussion.</i> For a list of risks and risk management strategies see the farmers’ <b>Farm Business Plan and Action Plan</b> developed in Session 15.</p>	<p>See Appendix A (Session 15) for the <b>Farm Business Plan and Action Plan</b> template</p>
3	<p>Organize the farmers into teams of three to five. Explain that they are going to carry out an exercise about production risk. It will give them an idea of how to assess the chances of obtaining a particular yield for a commercial crop in the coming year. Give each team 10 to 20 counters and a large sheet of paper. (This can also be done on the ground). Ask each team to choose a different crop that they know about. Ask each team to</p>	

Session 21: Assessing and Managing Business Risks		
Lesson Steps		Resources
	<p>agree on the minimum, average and maximum expected yields for their enterprise. Ask each team to do the following:</p> <ul style="list-style-type: none"> <li>• Draw a line across the paper.</li> <li>• At the left end of the line write down the lowest yield expected.</li> <li>• At the right end of the line write down the highest yield expected. In the middle write down the average yield expected.</li> </ul>	
4	Allocate the counters to these intervals based on how likely they think the yield will be in this range. The yield they think they are most likely to get should get the most counters. The yield they think they are least likely to get, is given the least counters.	
5	Add up the counters in each interval and divide each number by the total number of counters used.	
6	<p>While the teams are doing their work, write the following risks on the board:</p> <ul style="list-style-type: none"> <li>• Uncertain and variable market prices</li> <li>• Greater chance of pests and diseases damaging a crop from more intensive agricultural production</li> <li>• Changes in climatic conditions</li> <li>• Failure in the production of a new commercial crop or livestock activity</li> <li>• Failure in the adoption of a new technique of production aimed at increasing yields in a commercial activity</li> <li>• Institutional risk as farmers rely more heavily on the support and regulation of organizations outside the village</li> <li>• Human or personal risk, such as injury to or the death of the family head or the main worker in the farm family</li> <li>• Borrowing risk that increases as farmers commercialize and borrow money to finance their new commercial operations.</li> </ul>	
7	When each team has completed the exercise, ask them to share their results with the rest of the participants. Explain that the percentages they calculated are the chances of these events occurring. That is, the percentages are the likelihood that the uncertain yield will fall in this range in the coming production season. <i>Encourage discussion.</i> Ask, do teams with the same crops have the same expectations of yields and chances? Why? Why not? What factors did the teams take into account when deciding on the high and low yields? What factors did they take into account when deciding how many counters to put on each range?	
8	Explain that now that they have calculated the likelihood that they will get a particular yield, the next thing to do is to think about what might affect yield. Ask each team to identify the factors that might affect yield.	



Session 21: Assessing and Managing Business Risks		
Lesson Steps		Resources
	<p>Ask each team to share one of the factors they identified. Write these on the board. Continue until all the possible factors have been identified and written down.</p> <p>Ask the participants to agree on the most serious risk in the list. Ask each team to develop strategies to manage the chosen risks. When the teams have finished, ask each team to share the results of their discussions. How do the risks and strategies compare between the teams? Will the identified strategies work? Are they feasible? Are there any other ideas?</p> <p><u>Encourage discussion.</u></p>	
9	<p>Get the farmers to look at the risks on the board. Ask each team to choose a risk from the list. Ask them to write this risk in the handout. Ask each team to consult and agree on the following four things:</p> <ul style="list-style-type: none"> <li>• The impact of the risk if it occurs</li> <li>• The financial consequences if it occurs</li> <li>• The likelihood it will occur</li> <li>• The risk management strategy they should use</li> </ul> <p>As they agree on their answers, they should write these down on the large sheet of paper provided. When each team has completed the task, ask them to share their work with the rest of the participants. <u>Encourage discussion.</u> Do they all agree on the likelihood and consequences of the risk? Why? Why not? Will the identified strategies work? Are they feasible? Are there any other ideas?</p>	
10	<p>By way of postscript to this session on risks, bring up to the group the fact that agriculture is still one of the most vulnerable sectors to climate change. Explain that crop growth can be easily affected by changing climate. Calamities do not only affect crops and livestock directly but also infrastructure facilities. Extreme climate variability makes businesses which are agro-dependent unpredictable and unreliable. This is a big challenge since market contracts need to be met as agreed regardless of the climatic condition surrounding the business.</p> <p>Remind farmers that the impacts of extreme weather changes include the following:</p> <ul style="list-style-type: none"> <li>• Reduced fish catch</li> <li>• Prevalence of pests and diseases</li> <li>• Low production and income</li> <li>• Disruption in cropping system</li> <li>• Natural ecosystems change</li> <li>• Water shortage</li> <li>• Drying of wetlands/dams resulting to reduction in irrigated area</li> </ul>	

Session 21: Assessing and Managing Business Risks	
<i>Lesson Steps</i>	<i>Resources</i>
<p>Inform farmers that it is also good to attend any training on climate smart agriculture provided by government or private agencies. Reading more on the topic would help too.</p>	

## Session 22: Benchmarking

### Objectives

By the end of this session, the participants shall have compared the performance of farms with a view to finding ways to improve farming operations.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 22: Benchmarking](#)

Session 22: Benchmarking		
	Lesson Steps	Resources
1	In order to do the benchmarking exercises, you will need to visit some farmers in the area that are performing above average. The farmers who are performing well can be used as a performance benchmark. Before running this session you will need to identify which farmers to visit and inform them in time to prepare for a visit by the FBS participants.	
2	Ask the participants if they have heard of the concept of benchmarking. They should be encouraged to share this knowledge with the group. <u>Encourage discussion.</u> After the discussion, explain the following using the handout on <b>Benchmarking: Facilitator's Guide</b> . Benchmarking is a continuous process of comparing the performance of one farm against another that is recognized as performing well. It involves gathering information from farmers and comparing it with information from the more successful farmers in the area.	See Appendix A <b>Benchmarking: Facilitator's Guide</b> handout
3	Organize the farmers into their enterprise groups. Each group should consist of three to five participants. Explain to them that they are market-oriented farmers and will really benefit from benchmarking. To carry out a benchmarking exercise they will need to collect information from both farms to allow a comparison to be made in performance.  Ask the participants to brainstorm some of the things that they would like to compare with other farms. What aspects of their farms should be compared? Start with a crop enterprise that is common to all of the participants. Write their ideas on the board. Lead the discussion to the following aspects of the farm business: <ul style="list-style-type: none"> <li>• Land</li> <li>• Labour</li> <li>• Capital</li> <li>• Input supply</li> <li>• Water</li> <li>• Production</li> <li>• Post-harvest marketing</li> </ul>	

Session 22: Benchmarking		
Lesson Steps		Resources
	<ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• Management</li> </ul>	
4	<p>Start a discussion about the kinds of questions they should ask, referring to the different parts of their farm business. This could start with Land. What information do they need to know about the land they use on their farm?</p> <ul style="list-style-type: none"> <li>• What is the total farm area?</li> <li>• What are the individual plot sizes?</li> <li>• How far are the plots from home?</li> <li>• Who owns the land?</li> <li>• How much land is planted to the different enterprises?</li> <li>• Is there any intercropping? How much?</li> <li>• What is the condition of the land? Fertility? Erosion?</li> </ul>	
5	<p>Explain that the next exercise requires that the participants have information on hand about their farms. They will need information to answer the questions they have just developed. Some of the information is technical and requires numbers. Other information is more general. They will need to collect this information before conducting the benchmarking exercise. A list of some of the indicators of performance is listed in the <b>Benchmarking: Facilitator's Guide</b> handout. These are presented in the form of a checklist of questions to be used during the exercise. The participants will be expected to prepare a similar checklist for the field work.</p> <p>Ask the participants when they are likely to be ready with the information. How long will it take them to gather it? Agree on a date and time for the next session. Suggest that they call on the extension worker to help them gather the information needed.</p>	See Appendix A <b>Benchmarking: Facilitator's Guide</b> handout
6	<p>Explain that the data that they collect will be compared with similar data on the selected benchmark farms. To facilitate this process each of the enterprise groups should decide on single enterprise for performance comparison. The groups should spend the necessary time collecting data. Some of the information could come out of the records kept. Some consensus should be reached within the groups on the indicators chosen. This will require group meetings, discussion and debate.</p>	
7	<p>When the data has been collected, explain the following: Now that you have done this work, you have enough information to compare your farms with a benchmark farm. In the next session, farmers will visit the benchmark farms to compare performance. The purpose of the visit is to gather information from the benchmark farmers. Farmers will use the same information checklist of collected for selecting the enterprise in the previous session.</p>	

Session 22: Benchmarking		
	Lesson Steps	Resources
	Remind the participant groups to bring writing materials – exercise book, pen, pencil etc. during the benchmarking visit to record the information that will be collected.	
8	Organize the farmers into their enterprise groups. Then visit the identified farmers and discuss the benchmark questions. The groups should be mindful to identify areas where their farms are performing weakly and well compared to the benchmark farm. It is the weak areas, however, that will require attention. Farmers should try to identify the cause and effects of the difference in performance. When all the information has been collected return to the FBS.	
9	<p>On return to the FBS each group should analyse the information collected and summarize the comparison. After each team has completed this task they should present a brief summary of what they learned. Ask farmers also to share one or two of the most important things they need to improve to increase their performance. <i>Encourage discussion.</i></p> <p>After each team has presented, ask farmers to think about what actions they will take to improve their performance. They should propose actions for implementation for each of the areas where they need to improve. Ask the groups to think about the following questions:</p> <ul style="list-style-type: none"> <li>• If you are weak in a specific area, where can you get help from?</li> <li>• Why do you think that this source can be of assistance to you?</li> <li>• How can it help you to improve?</li> </ul>	
10	After the teams have made a plan for one or two of the actions they need to take, ask them to share these with the rest of the participants. <i>Encourage discussion.</i> Will the action they propose work? Is there another action they should consider?	
11	Inform the participants that they are going for another field trip – a trip to a model farm to observe the features of a successful farm business. Form farm visit groups and encourage them to share their observations during the next session.	

## Session 23: Characteristics of a Successful Entrepreneur

### Objectives

By the end of this session, the participants shall have:

- Discussed real cases and experiences with a successful entrepreneur;
- Identified the characteristics of an entrepreneur; and
- Evaluated self-entrepreneurship skills.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 23: Characteristics](#) of a Successful Entrepreneur

Session 23: Characteristics of a Successful Entrepreneur		
Lesson Steps		Resources
1	Ask the participants to get into their farm visit groups. Ask them to spend some time working on the information they gathered. Ask them to share and present what they observed and learned during the farm visit.	
2	<p>The next activity during this session is a panel discussion with local entrepreneurs. Several days before the activity, <u>you will need to arrange a meeting with 2-3 well-spoken and successful farm businessmen/businesswomen</u>. Preferably, they should be people with whom the participants can identify. They should be working in something related to agriculture such as processing, marketing, etc. Each panel member will need to be briefed as to the purpose of the panel discussion. They should each be asked to present a 5-10 minutes story about themselves and the business they are managing, after which they should be prepared to answer questions.</p> <p>You may want to organize refreshments to be served after the panel interviews are done. Also, the follow up session for this meeting is a visit to local entrepreneurs. You will need to confirm with the FBS participants if they want to do this. If so, you will need to make the arrangements.</p>	
3	<p><b>Panel Discussion with Local Entrepreneurs</b></p> <p>The session should start about one hour before the panel members arrive. This will give the participants time to brainstorm the questions they want to ask the panel members. Before the panel members arrive, explain that in this meeting that they will be learning about entrepreneurship. We will try to understand what an entrepreneur is and what qualities an entrepreneur has. This will be done in two ways. First there will be a panel-discussion that will involve two or three local entrepreneurs. This will help participants identify the characteristics of entrepreneurship. The second will be an exercise to identify which of these characteristics the</p>	

Session 23: Characteristics of a Successful Entrepreneur		
Lesson Steps		Resources
	<p>participants have. Explain that some local entrepreneurs will be telling their stories. The groups' job during this time is to write down on available paper the characteristics or qualities of an entrepreneur that the panel members demonstrate. Brainstorm the kinds of questions the participants can ask the panel. Some possible questions to ask the panel are:</p> <ul style="list-style-type: none"> <li>• Why did they start the business?</li> <li>• How long have they been in their business?</li> <li>• How long did it take to start making profits?</li> <li>• How did they know they could make a profit?</li> <li>• What is the most important thing to do as an entrepreneur?</li> <li>• What do you need to be careful about as an entrepreneur?</li> <li>• What are the most important characteristics of an entrepreneur?</li> <li>• What about risk? Are they risk takers?</li> </ul>	
4	<p>Introduce the panel members. Ask them to tell their stories. Encourage the participants to ask questions. After this, thank the panel members. Invite them to stay for refreshments. Invite them to stay for the next session, if they wish to.</p>	
5	<p>Explain that now that groups have heard from a few entrepreneurs, they will consolidate their learning. While listening to the guests' stories, the participants made notes on the characteristics an entrepreneur should have. Organize the participants into teams of three to five. Ask each team to share their findings with each other. They should work together to agree on five key characteristics of an entrepreneur.</p>	
6	<p>When all the teams are done, ask someone from each group to write their five key characteristics on the flipchart. Members from each team should take it in turn to give a brief explanation of each of the characteristics they agreed on. As the characteristics go up on the flipchart, watch for repetitions; group similar characteristics together.</p> <p>When all the teams have put up their characteristics, start a discussion about which of these are the most important. Facilitate the discussion until groups have agreed on the top 5 to 10 most important characteristics of an entrepreneur.</p>	
7	<p>Explain that after developing the checklist, they can assess themselves as entrepreneurs. This will be done through interviews with each other. Walk through the <b>Characteristics of a Successful Entrepreneur</b> worksheet.</p> <p>Organize the participants into teams of two. Explain that in this exercise, their job is to interview one other to help assess to what degree each possesses the right characteristics for an entrepreneur.</p> <p>Start with the first characteristic. Participants should interview one another. Does the interviewee possess this characteristic? Are they strong in this characteristic? If yes, tick the "Strong" column. If not, then tick the</p>	<p>See Appendix A for the <b>Characteristics of a Successful Entrepreneur</b> handout</p>

Session 23: Characteristics of a Successful Entrepreneur		
Lesson Steps		Resources
	<p>“Weak” column. Participants should do this for each of the characteristics in the list. They may or may not have the same ratings. This is unimportant. What is important is that farmers make a truthful assessment of their qualities. When the teams have finished, ask participants to share their assessments with others. <u>Encourage discussion.</u></p>	
8	<p>Explain that this exercise should have helped farmers to identify their strengths and weaknesses as entrepreneurs. The idea is to now help one another to build on strengths and to strengthen weaknesses.</p> <p>Participants who are ‘strongest’ in a given characteristic should help the ‘weakest’ participants for the same characteristic. The two should meet to discuss the characteristic and how it can be strengthened. At future meetings, progress can be shared.</p>	



## Session 24: Value Addition

### Objectives

By the end of this session, the participants shall have:

- Discussed value addition as a concept; and
- Identified new ideas about value addition that they can pursue individually and through group activities.

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Handouts are available in Appendix A here: [Session 26: Understanding](#) How to Assess the Performance of a Farm Business Plan

Session 24: Value Addition		
Lesson Steps		Resources
1	Before starting with this section, the participants must obtain information on the price of 1kg of a fresh, local produce and 1kg of its processed counterpart.	
2	<p>Show two sweet potatoes (or another easily accessible, local produce) - one clean, the other dirty. Ask the participants which one of the two they would prefer buying? (Most may say the clean one). Ask them: if a sack of clean potatoes and a sack of dirty potatoes were kept in a shop, which would be likely to fetch a higher price? Why?</p> <p>Now show participants the three packets of vegetables (or other suitable commodity). Ask them which one do they think would fetch the best price if taken to the market? Why? Hold up the nicely packaged one and ask how many think it will fetch the highest price? Why? Which packet of vegetables is likely to receive the lowest price? Why? Guide the discussion towards the fact that price was enhanced due to the following:</p> <ul style="list-style-type: none"> <li>• Cleaning of vegetables</li> <li>• Grading of vegetables</li> <li>• Packing and packaging of vegetables</li> </ul> <p>Discuss the concept of value addition.</p> <p>Value adding means: to work on the raw product to improve its overall value, and therefore marketability. This can include adding value through post-harvest handling or adding value through processing.</p>	
3	Explain to the participants that this discussion is about “Value addition through postharvest handling”. Now show participants the groundnuts and the peanut butter. Explain that the main input for peanut butter is	

Session 24: Value Addition		
Lesson Steps		Resources
	<p>groundnuts. The price of 1 kg of groundnut is KSh 150, but the price of 1 kg of peanut butter is KSh 500.</p> <p>Determine prices as per local scenario. Ask why the peanut butter is more expensive than the groundnuts? Lead the discussion to the understanding that the peanut butter is more expensive because value has been added to the groundnuts through processing. It is important to also consider the cost of processing the groundnuts to peanut butter.</p> <p>Explain that in this meeting we will look at “adding value” to farm production through both post-harvest handling and processing. First we will start with post-harvest handling.</p>	
4	<p>Ask the participants to think of the different things that are done to a product after harvesting. Write the answers on the board and discuss different examples of value addition through post-harvest handling.</p> <p>Cover the following ways to add value through post-harvest handling :</p> <ul style="list-style-type: none"> <li>• Cleaning</li> <li>• Drying</li> <li>• Threshing</li> <li>• Packaging/packing</li> <li>• Transport to storage</li> <li>• Cooling/boiling</li> <li>• Grading/sorting</li> <li>• Transport</li> </ul> <p>Explain that this list will not apply to all products. The next step will be to look at the post-harvest handling for the group products and organize the participants into group products.</p> <p>Develop a post-harvest handling chain for the group product. They may refer to the list on the board. To do this they should agree on all the things that are done to the product after harvesting. They should write them down on available paper. They should number them according to the order in which they would happen. For each thing they have written down, they should discuss how it adds value to the product.</p> <p>As the groups are working on their lists, check on their progress and offer help. You want to make sure the lists are complete and that the activities are in the correct order. The process shows the chain of the product as it gains value at each stage.</p>	
5	<p>When these tasks are done ask each team in turn to come to the front and act out or demonstrate the things that happen to their product after harvesting. The first person in the team should start by holding up the picture of their product and introducing the product. He should then hand the picture to the next person who explains the first thing that is done to</p>	

Session 24: Value Addition		
Lesson Steps		Resources
	<p>their product after harvesting and how it adds value. He then hands the picture to the third person who explains the next thing that is done and how it adds value. This process should continue until the entire list of post-harvest activities is completed.</p> <p>As each team presents, ask questions and encourage discussion. Do the rest of the participants agree with what the team is presenting? Have they left anything out? Have they put something that does not actually happen?</p> <p>The process shows the chain of the product as it gains value at each step.</p>	
6	<p>When all the teams have presented, start a discussion about the farmers' role in post-harvest handling. Who could or should perform each step? Do all farmers do it? Why? Why not? Some possible answers are given below:</p> <ul style="list-style-type: none"> <li>• They do not know how</li> <li>• They consider it expensive</li> <li>• They do not perceive the value or importance</li> <li>• They have immediate need for cash and therefore sell off their produce</li> <li>• They do not have additional time or other resources (e.g. tools, machinery) for undertaking some processes</li> </ul> <p><i>Facilitator's Note: It may be useful to discuss the time and resources needed to conduct the various post-harvest activities.</i></p>	
7	<p>Organize the participants into teams of three to five based on enterprises they are currently managing. Ask each team to think about the post-harvest handling of their product. How could or should the product be handled after harvesting? Are they doing this? If not, why not? Who is doing it? How do you think this affects the prices they are getting at the market? Can they make a plan to help one another to do this work? When the teams have finished their discussions, ask each team to report back to the FBS.</p> <p><i>Facilitator's Note: Encourage discussion and take note of responses.</i></p>	
8	<p>Explain to the participants that in this exercise they will look at how to add value to a product through processing. Ask the participants if they can think of any examples of products that are processed into a new product before they are sold.</p> <p>For example 1kg of finger millet is KSh 50 but we can process the finger millet to get flour that can be used to make porridge, <i>ugali</i> and even snacks. We can sell 1kg of finger millet for Ksh 200.</p> <p><i>Try to bring along samples of each product being shown as example. Ask participants why farmers do not add value through processing their products. Again responses may be as above.</i></p>	

Session 24: Value Addition		
Lesson Steps		Resources
9	<p><b>Basic Hygiene Guidelines<sup>3</sup></b></p> <p>Discuss that during the entire production system, it is important to following basic hygiene rules. Brainstorm with the group about what these guidelines might be. Use the <b>Basic Hygiene Guidelines: Facilitator's Guide</b> to aid the discussion. During the discussion about hand washing, walk the participants through the <b>Basic Hygiene Guidelines</b> graphic.</p>	See Appendix A for the <b>Basic Hygiene Guidelines: Facilitator's Guide</b> and the <b>Basic Hygiene Guidelines</b> graphic.
10	<p>Organize the participants into teams of three to five based on common enterprises they are currently managing and ask each team to brainstorm about how their product could be processed to add value. They should identify what can be done, such as how groundnuts can be made into peanut butter. They should also identify who would actually do the processing. Can they do it themselves? Does it have to be done by someone else? Would they like to process their product in this way? Who would do it?</p> <p>When the teams have finished this work, ask each team to share their work with the rest. <i>Encourage discussion</i>. Do the others agree with their ideas? Do they want to form teams to work on putting these ideas into action? Encourage groups to work together on this. They will need to investigate the possibilities and find out what is required. Ideally you want to encourage the participants to form teams that can work together in taking their ideas further. Encourage them to investigate more and to report back at another meeting.</p>	
10	<p>Organize the participants into teams of three to five. Explain that they will be visiting someone who is a value-adding entrepreneur (<u>if possible, schedule a visit to the Wamama Pamoja group</u>). Outline the program for the visit. Inform the groups on the name of the entrepreneur/s and their business. Discuss with them also about the products they process and what the business does with the product (e.g. it processes groundnuts and simsim seeds into peanut butter). Explain that the purpose of the visit is to learn about possibilities for adding value to one of the products the farmers are currently producing. Before going to the business, they need to brainstorm the questions they will ask</p> <p>Ask each team to think of 2-3 questions on each of the following themes: Production, Marketing and Organization. When the teams have completed their work, ask each team to share the questions they have come up with. Ask each team to share one question, and then ask another team to share</p>	

<sup>3</sup> Adapted from the Applied Basic Agri-Nutrition Toolkit for Trainers, Prepared by USAID and the Republic of Kenya Ministry of Agriculture and the Ministry of Health and Sanitation. Available at: [http://growkenya.org/docs/Applied\\_Nutrition\\_Toolkit\\_V2.pdf](http://growkenya.org/docs/Applied_Nutrition_Toolkit_V2.pdf)

Session 24: Value Addition	
Lesson Steps	Resources
	<p>one question. Write the questions under the appropriate headings. Continue this process until the teams have shared all their questions.</p> <p>When all of the teams have reported, encourage discussion. Use the questions suggested above as a guide during the discussion. Guide the discussion to agreeing on the questions they will ask during the visit.</p> <p>Next, agree on who will ask which questions during the visit. Try to make sure that each participant asks at least one question. Also agree on how the answers will be recorded. Should one person take notes for everyone? Should everyone take their own notes? Should the person asking the question also write down the answer? When all the questions have been assigned, go to the business and carry out the investigation.</p>
11	<p>When the visit to the entrepreneur is over, return to the FBS and organize the participants into the same teams that worked together on the questions. Ask each team to go over the questions and answers they have recorded. Remind participants about the three aspects of the questionnaire used for the survey i.e. production, marketing and organization.</p> <p>Starting with production, ask each team to share what they have learned. Write their answers under the appropriate headings. <i>Encourage discussion</i>. Does the value-adding business seem to make money? Does it seem easy or difficult to do? Are there many risks? When the discussion is done, ask the participants if they want to look into being in this or another value-adding business or starting such a business of their own.</p> <p>If the participants seriously want to consider this further, then they should form a small task team to study this more. Suggest that they contact the local extension officer or agri-business co-operator for more help with this.</p>
	<p>Pending additional information about post-harvest information from Rhoda or Janet Amimo, previously of WFP. Additional information could be added about the specifics of post-harvest processes that are nutrition-sensitive.</p>

## Module 8: Introduction to End-of-Season Evaluations

### Session 25: FBS Reflection

#### Objectives

To identify the different challenges and achievements that group members feel they have experienced during the season.

**Duration:** 1 hours and 30 minutes

#### Materials:

- Flipchart
- Markers or Pens
- Coloured paper
- String and available materials

#### Background:

The lifeline is a participatory tool that allows individuals or groups to reflect over a given period on the achievements and challenges faced. This is an open-ended exploration that helps bring out unanticipated changes and challenges that may not otherwise come up in monitoring or discussions. It allows you to explore how participants are using (new) resources to cope with challenges, and to identify areas where the project could address some of them.

Session 25: FBS Reflection		
Lesson Steps		Resources
1	<p><b>Preparation:</b> Choose a timeline period for this activity (one year, or the past crop season). You will be asking the participants to draw a timeline of his/her/their life over the timeline period (i.e. 12 months or crop season), marking on it the highlights and the low points of their involvement with the FBS, work in agriculture, work in the house, and the relationship with their spouse (if applicable). Have some open-ended questions ready to probe around the lifeline period. For challenges, ask about resources or skills that enabled (or would enable) the participant to cope with the issue. For successes, ask about what brought them about and how it has changed their life.</p> <p>After the participants draw their timeline, you will initiate a discussion around what they have illustrated.</p>	
2	<p><b>Introduction to participants:</b></p> <ul style="list-style-type: none"> <li>• Ask participants to close their eyes for a minute, and think back on some of the big changes (ups and downs) of the [time] since they've been part of the program.</li> <li>• Ask participants to open their eyes. Tell them that what you'd like to do now is go over the history of this last year, and record those high</li> </ul>	

Session 25: FBS Reflection		
Lesson Steps		Resources
	points and low points. Tell them that you will all draw symbols of these events on a timeline.	
3	<b>Draw the Lifeline:</b> Ask the participants to draw a line representing the duration of the project's last year on an individual piece of paper, or if you choose to draw one timeline for the whole group, on one sheet of paper. They should mark the start of the project/season/year at one end of the chart, and the finish at the other.	
4	<b>Brainstorm Events:</b> To help participants, you may want to first brainstorm the highlights and challenges before you plot them on the timeline. If you are creating one timeline for the whole group, discuss each issue to come to agreement on when they happened and which are the most important to plot on the timeline.	
5	<b>Plot Events:</b> The participants should then mark down the occurrence of the high points and low points on their timeline. In order to best facilitate the interpretation of the timelines, choose one symbol to mark the highlights and achievements, and a different symbol to mark the difficult points or challenges.  Start with the most exciting/important moments and the most challenging/difficult moments, and plot those on the timeline first. Fill in the other points in order of significance.  As they plot each point on the timeline, discuss the questions below.	
6	<b>Probe the Lifeline sample questions:</b>  1. To start with, tell me about some of the happiest and proudest moments of this year/season since you've been part of the program.  <ul style="list-style-type: none"> <li>• Why were they important? Who did you share those moments with?</li> <li>• How did you feel in these moments? Did you have any other feelings (besides happiness) at the same time? Why?</li> <li>• How did other people look at you or think about you in those times?</li> <li>• What led up to this moment?</li> <li>• Did your life change in any way after this moment?</li> </ul> 2. Tell me about some of the most difficult times/challenges in the past year since you've been part of the program.  <ul style="list-style-type: none"> <li>• What were some of the biggest challenges you have faced in this past year, since you've been part of the program? Why caused these challenges? What put you in that difficult position?</li> <li>• How did you cope with difficulties? Who helped you through those times? How?</li> <li>• Did any FBS program activities or partners help you cope?</li> <li>• What would have made it easier to cope during these times?</li> </ul>	

Session 25: FBS Reflection	
Lesson Steps	Resources
	<ul style="list-style-type: none"> <li>• How did your life change because of these difficult moments?</li> </ul>
<p><b>7</b></p>	<p><b>Summary and Reflection:</b> After plotting the events, help the participants to look back at the overall timeline, and follow up with some broad reflection questions.</p> <p>1. Summary:</p> <ul style="list-style-type: none"> <li>• Looking back on the past year, what are your thoughts about this timeline?</li> <li>• How would you characterize the biggest changes you experienced while you were part of this program?</li> </ul> <p>Probe around:</p> <ul style="list-style-type: none"> <li>• Skills, capacity, confidence • Family and household relationships • Group relationships</li> <li>• Mobility, community participation • Economic changes and improvements</li> <li>• Negative changes</li> </ul> <p>2. Concerns:</p> <ul style="list-style-type: none"> <li>• Looking forward in the next year, what are you most concerned or worried about, regarding your involvement in this project and your crops?</li> <li>• Why is this a concern? What is your plan to address this issue? How can the group, family, spouse, program, and community support?</li> </ul> <p>3. Hopes:</p> <ul style="list-style-type: none"> <li>• Looking forward to the next year, what is one change that you would like to see for yourself, your group, your family in the next year? Why is this important to you?</li> <li>• How do you think you can make this change happen? How can the group, program, spouse, community help?</li> </ul> <p><b>Close:</b> Thank participants and close. If possible, photograph, label, and document the lifeline, but leave the original with the participant(s). Record to return to the following year.</p>



## Session 26: Understanding How to Assess the Performance of a Farm Business Plan

### Objectives

By the end of this session, the participants shall have:

- Understood how to evaluate their farm business plan at the end of the production year using the records and existing benchmarks

Duration: **To be determined**

### Materials:

- Flipchart
- Markers or Pens

Session 25: Understanding how to Assess the Performance of a Farm Business Plan		
Lesson Steps		Resources
1	The participants should have brought with them the farm business plans for this session.	
2	<p>Organize the farmers into groups of three to five based on a common enterprise. Walk the students through the checklist on <b>Assessing The Performance Of The Farm Business Plan</b>. Recognize that many of the farmers are still in the process of developing their businesses, but ask them to perform this activity as a check-in to see how the process is going. Explain that this activity will be useful for the groups to complete at the end of the first season.</p> <p>Using the assessment handout, ask the groups whether they think each item is something that they should do again, and whether they should do it differently. This will require them to review past targets, e.g. farm goal, production plan, labour plan, market plan, etc. and assess how well they performed vis-à-vis targets.</p> <p>For those who achieved their goals, encourage them to discuss the key things that contributed to their success. For those who did not achieve their goals, ask them to identify the things that prevented them from achieving them. They should make notes on the checklist page.</p>	See Appendix A for the <b>Assessing The Performance Of The Farm Business Plan</b> handout
3	<p>When they have finished, ask each group to present what they have discussed. Encourage discussion and try to identify key elements that contributed to achieving or not achieving results. During the discussion keep writing the key elements on the board under the appropriate heading.</p> <p>There are likely to be many factors that contributed to achieving or not achieving their goals. There may be a tendency for the participants to blame factors beyond their control for any deviation from the plan. You as</p>	

Session 25: Understanding how to Assess the Performance of a Farm Business Plan	
<i>Lesson Steps</i>	<i>Resources</i>
<p>a facilitator will have to make them realize that they should take responsibility for their actions.</p> <p>You will need to probe their answers and guide their thought process in order to accomplish this task. The following questions should be asked:</p> <ul style="list-style-type: none"> <li>• Did they follow (strictly) their plans?</li> <li>• If the plan did not work, what were the weak elements?</li> <li>• Why were they weak?</li> <li>• What should they have done differently?</li> <li>• What parts of the plans went well?</li> <li>• Can they be repeated?</li> </ul> <p>Explain to the participants that they should remember these key points, as these will be important when they revise their Farm Business Plan.</p>	
<p><b>4</b></p> <p>Lead the discussion to the idea that a farm business plan needs to be clear and then it needs to be implemented. Plans, however, are not fixed. They have to be adjusted as they are implemented. Things change and new things develop. So farmers have to adapt their plans. But, they should stick to the overall goal. Next ask the participants to share their thoughts on the role of records in evaluating their farm business plans and their enterprises.</p> <p>In addition, discuss the importance of records. They provide most of the information needed to do the evaluation. If good records are kept, then a farmer does not have to rely so much on his memory. His evaluation will be more accurate which means his next farm business plan will be better.</p>	
<p><b>5</b></p> <p>Introduce the concept of re-evaluating farm enterprises for the next season. When determining the enterprises they want to include, the farmers will want to ask themselves the following questions:</p> <ul style="list-style-type: none"> <li>• Which enterprises were the most profitable last season?</li> <li>• What new market opportunities did they learn about last season?</li> <li>• What enterprises are technically feasible for their farms?</li> </ul> <p>Walk them through the steps they would take to choose the farm enterprises using the handout <b>Choosing Farm enterprises for the Next Season</b> handout. Highlight that the selection of enterprises should be a logical, systematic process. Farmers must make informed choices and each farmer must choose enterprises based on his/her own situation. No two farms are likely to be exactly the same.</p> <p>Explain that the farmers should include all of their enterprises in their business plans.</p>	<p>See Appendix A for the <b>Choosing Farm Enterprises for the Next Season</b> handout</p>

Session 25: Understanding how to Assess the Performance of a Farm Business Plan		
	Lesson Steps	Resources
6	<p>Remind the participants of the structure of the farm business plan. Write the following headings on the board:</p> <ul style="list-style-type: none"> <li>• My farm business plan</li> <li>• Background</li> <li>• Farm production plan</li> <li>• Market plan</li> <li>• Profitability</li> <li>• Cash flow and cash availability</li> <li>• Risks and risk management</li> </ul>	
7	<p>Ask them if the process has been useful for them, and if so how? Write their answers on the flipchart. Lead the discussion to cover the following points:</p> <ul style="list-style-type: none"> <li>• Every farm should have a written business plan. A farm business plan records all the important decisions about the farm.</li> <li>• Writing a farm business plan will improve thinking, decisions, communication and memory.</li> <li>• A farm business plan helps evaluate the success of the farm at the end of the season. (If the actual results do not occur as planned, the written record should help the farmer to evaluate what went wrong, whether better decisions could have been made. Without a written record, incorrect memories may cause incorrect changes.)</li> <li>• A farm business plan is very important for the creation or expansion of a business that processes products. Many new business ventures fail because they do not focus their efforts on properly implementing the plan.</li> <li>• The business plan is not something you complete and then forget about. It is a living document that will undergo change as you move through the business development and implementation process.</li> </ul> <p>Focus on the quality of your business plan, not its length. A simple, clear plan is best.</p>	
8	<p>Remind participants about the first section, i.e. background information. Ask the groups then to discuss the vision and goals they have for their farm businesses (Session 10).</p> <p>Now they should think again about goals. Do they want to keep the same vision and goals as last season? Do they want to change their goals and vision? After discussions, each participant should have an individual set of own goals and vision. When the groups have finished setting goals, you should ask at least one person from each group to share his goals. Encourage discussion. Does the goal sound achievable? Does it stretch the</p>	

Session 25: Understanding how to Assess the Performance of a Farm Business Plan	
Lesson Steps	Resources
	farmer? Is it too easy to reach? Ask the participants to put the visions and goals onto the <i>My Farm Business Plan</i> worksheet.
9	<p>As the final exercise, discuss with the participants final questions about transferring and applying what they have learned during the FBS training.</p> <p>As a large group, or in small groups, discuss the questions below.</p> <ul style="list-style-type: none"> <li>• What can you do to continue learning about farm business management after graduating from the FBS program?</li> <li>• How can you transfer the learning to other farmers in your area?</li> <li>• Can you apply what you have learned to other enterprises? How?</li> <li>• Are there other programs or opportunities that you can avail to take forward the FBS learning?</li> </ul>

## Appendix A: Handouts

This appendix contains handouts referred to in the training sections above.



Some handouts are designed as facilitator's guides, and are denoted with a star at the top, left-hand corner of the page. All other handouts (with no star) are designed to be used by participants as well.

Navigate to the applicable session to find your desired handout. *Not all sessions have handouts.*

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## Module 1: Starting the Farm Business School

### Session 1: Rationale of a Farm Business School and Developing Group Ownership

#### Overview of the FBS Program

FBS Topic		Date, Time & Venue (If Needed)
Part 1: Diagnosis and Planning	<b>MODULE 1 – Starting the Farm Business School</b>	
	<i>Session 1</i> Rationale of Farm Business School and Developing Group Ownership	
	<i>Session 2</i> Group Formation and Strengthening	
	<i>Session 3</i> Leadership and Management	
	<b>MODULE 2 – Understanding Basic Concepts</b>	
	<i>Session 4</i> Farming as a Business	
	<i>Session 5</i> Gendered Value-Chain Analysis	
	<i>Session 6</i> The farmer as an Entrepreneur and Farm Business Profitability	
	<i>Session 7A</i> Understanding Undernutrition	
	<i>Session 7B</i> Food Groups and Nutrition	
	<i>Session 7C</i> Healthy Plate	
	<b>MODULE 3 – Where We Are Now</b>	
	<i>Session 8</i> Understanding Marketing and Markets	
	<i>Session 9</i> Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action	
	<b>MODULE 4 – Where We Want to Go</b>	
	<i>Session 10</i> Developing a Vision and Goal for the Farm	
	<i>Session 11</i> Understanding Enterprise Profitability	
	<b>MODULE 5 – Developing a Business Plan</b>	
	<i>Session 12</i> Choosing an Enterprise	
	<i>Session 13</i> Components of a Farm Business Plan: Farm Production and Marketing Plan	
	<i>Session 14</i> Components of a Farm Business Plan: Financial Plan (Profitability and Cash Flow & Availability) and Risks & Risk Management	
	<i>Session 15</i> Preparing a Farm Business Plan and Action Plan	
	<b>MODULE 6 – Keeping Records</b>	
<i>Session 16</i> Overview of Record Keeping		
<i>Session 17</i> Practice of Keeping Farm Business Records		
Part 2: Implementing	<b>MODULE 7 – FBS Meetings During Production Season</b>	
	<i>Session 18</i> Savings and Mobilizing Finance	
	<i>Session 19</i> Group Marketing and Buying	
	<i>Session 20</i> Understanding Contract Farming and Appraisal	
	<i>Session 20A</i> Doing Business in Kenya and Understanding the Procurement System Profile	
	<i>Session 21</i> Assessing and Managing Business Risks	
<i>Session 22</i> Benchmarking		

FBS Topic		Date, Time & Venue (If Needed)
	<b>Session 23</b> Characteristics of a Successful Entrepreneur	
	<b>Session 24</b> Value Addition	
<b>Part 3: Evaluating and Re- planning</b>	<b>MODULE 8 – Introduction to End-of-Season Evaluations</b>	
	<b>Session 25</b> FBS Reflection	
	<b>Session 26</b> Understanding How to Assess the Performance of a Farm Business Plan	



## Seasonal Calendar for Local Crops

Seasonal Calendar																
Nutritional Information	Food group and item	Latin name	Local Name	January	February	March	April	May	June	July	August	September	October	November	December	
Energy	Arrowroot	<i>Maranta arundinacea</i>														
	Cassava, tuber	<i>Manihot esculenta</i>														
	Finger Millet	<i>Eleusine coracana</i>														
	Green Bananas	<i>Musa spp.</i>														
	Irish potato	<i>Solanum tuberosum</i>														
	Maize	<i>Zea mays</i>														
	Plantain	<i>Musa paradisaica</i>														
	Sorghum	<i>Sorghum bicolor</i>														
	Yam	<i>Dioscorea bulbifera</i>														
Protective	Vitamin-A Rich Food (Prevents Diseases and Enhances Vision)	Sweet potato (white and orange variety)	<i>Ipomoea batatas</i>													
		Carrot	<i>Daucus carota</i>													
		Pumpkin, fruit	<i>Cucurbita spp.</i>													
		Mango	<i>Mangifera indica</i>													
		Papaya	<i>Carica papaya</i>													
	Dark Leafy Greens		African nightshade, leaf	<i>Solanum spp</i>												
			Amaranth, leaf	<i>Amaranthus spp.</i>												
			Cassava, leaf	<i>Manihot esculenta</i>												
			Cowpea, leaf	<i>Vigna unguiculata</i>												
			Creeping Foxglove	<i>Asystasia gangetica</i>												
			Jute mallow, leaf	<i>Corchorus olitorious</i>												
			Kale	<i>Brassica carinata</i>												
			Pumpkin, leaf	<i>Cucurbita spp.</i>												
		Spiderplant	<i>Cleome gynandra</i>													

Seasonal Calendar															
Nutritional Information	Food group and item	Latin name	Local Name	January	February	March	April	May	June	July	August	September	October	November	December
Other Fruits and Vegetables	Malabar spinach	<i>Basella alba</i>													
	Swiss chard	<i>Beta vulgaris var. cicla</i>													
	Iceberg lettuce	<i>Launea cornuta</i>													
	Onions	<i>Allium fistulosum</i>													
	Rattle pot /Slenderleaf	<i>Crotalaria brevidens</i>													
	White cabbage	<i>Brassica oleracea</i>													
	Tomato	<i>Solanum lycopersicum</i>													
	Avocado	<i>Persea americana</i>													
	Banana	<i>Musa acuminata</i>													
	Cashew	<i>Anacardium occidentale</i>													
	Custard apple	<i>Annona reticulata</i>													
	Dessert date, dried	<i>Balanties aegyptiaca</i>													
	Gooseberry	<i>Physalis peruviana</i>													
	Grapes	<i>Syzygium cordatum</i>													
	Guava	<i>Psidium guajava</i>													
	Jackfruit	<i>Artocarpus heterophyllus</i>													
	Lemon	<i>Citrus limon</i>													
	Loquat	<i>Eriobotrya japonica</i>													
	Mulberry	<i>Morus nigra</i>													
	Orange	<i>Citrus sinensis</i>													
	Passion fruit	<i>Passiflora spp.</i>													
	Pineapple	<i>Ananas comosus</i>													
	Strawberry	<i>Fragaria spp.</i>													
Tamarind	<i>Tamarundus indica L.</i>														
Tangerine	<i>Citrus tangerina</i>														

Seasonal Calendar															
Nutritional Information	Food group and item	Latin name	Local Name	January	February	March	April	May	June	July	August	September	October	November	December
	Watermelon	<i>Citrullus lanatus</i>													
	Yellow plum	<i>Ximenia americana</i> L													
Body Building	Legumes & Pulses	Cowpea	<i>Vigna unguiculata</i>												
		French bean	<i>Phaseolus vulgaris</i>												
		Groundnut	<i>Arachis hypogaea</i>												
		Bambara Groundnut	<i>Voandzeia subterranea</i> L. or <i>Vigna subterranea</i>												
		Lablab, pods	<i>Lablab purpureus</i>												
		Lablab, seeds	<i>Lablab purpureus</i>												
		Mung bean	<i>Vigna radiata</i>												
		Sesame, seeds	<i>Sesamum indicum</i>												
	Soya bean	<i>Glycine max</i>													

### Link of FBS Program to the Crops Season

Based on the Seasonal Calendar for Local Crops table, develop the FBS program timeline in the table below

Stage	Weeks	January	February	March	April	May	June	July	August	September	October	November	December
<i>Pre-Season:</i> Diagnoses and Planning													
<i>During Season:</i> Implementing													
<i>Post-Season:</i> Evaluation and Re-Planning													

## Session 3: Leadership and Management

The following handouts are adopted from the Catholic Relief Services' Organizing and Managing Farmers' Groups: A SMART Skills Manual, available at: [http://www.crs.org/sites/default/files/tools-research/organizing-and-managing-farmers-groups\\_0.pdf](http://www.crs.org/sites/default/files/tools-research/organizing-and-managing-farmers-groups_0.pdf)

### Leadership Styles



## Possible Leadership Positions

**Chairperson**



**Vice-chair**



**Treasurer**



**Secretary**



**Production coordinator**

(in production group)



**Marketing coordinator**

(in marketing group)



**Auditor**







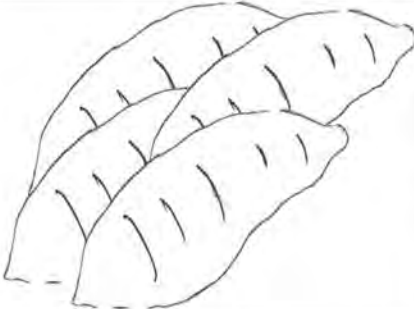

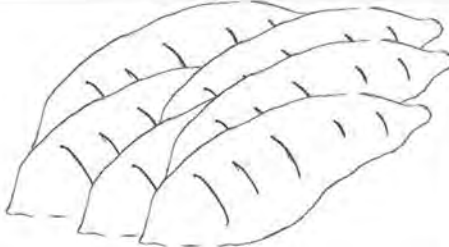

## Module 2: Understanding Basic Concepts

### Session 4: Farming as a Business

The following handout was adopted from FAO's Farm Business School for the Filipino Farmer.

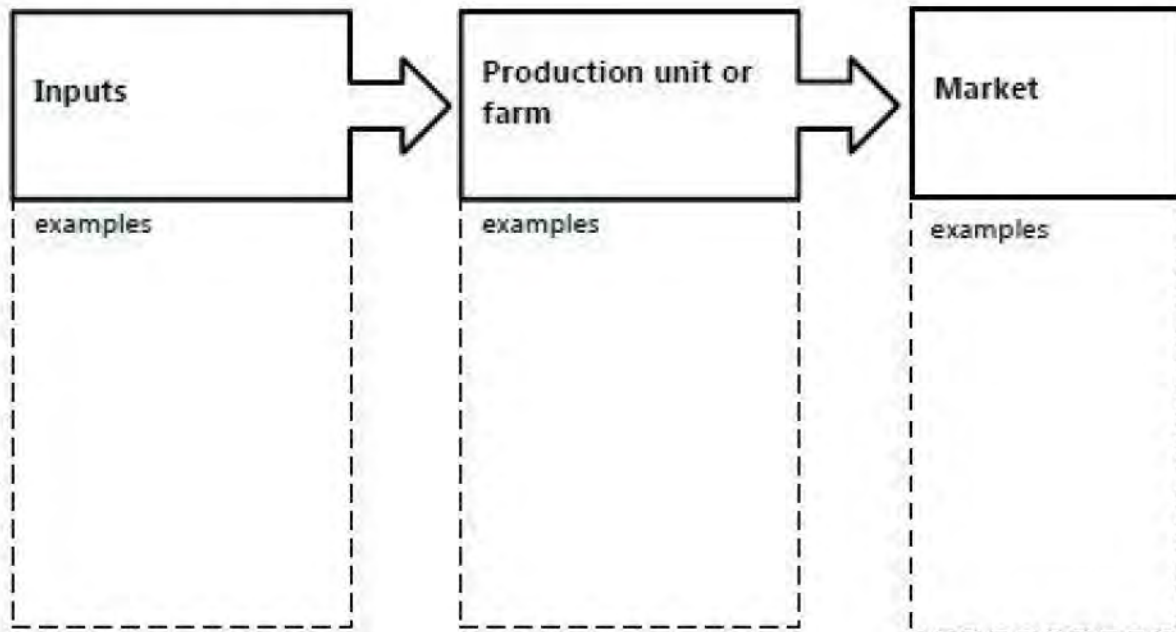
#### The Commercial Farming Environment

How do you explain the following changes in farming practices?

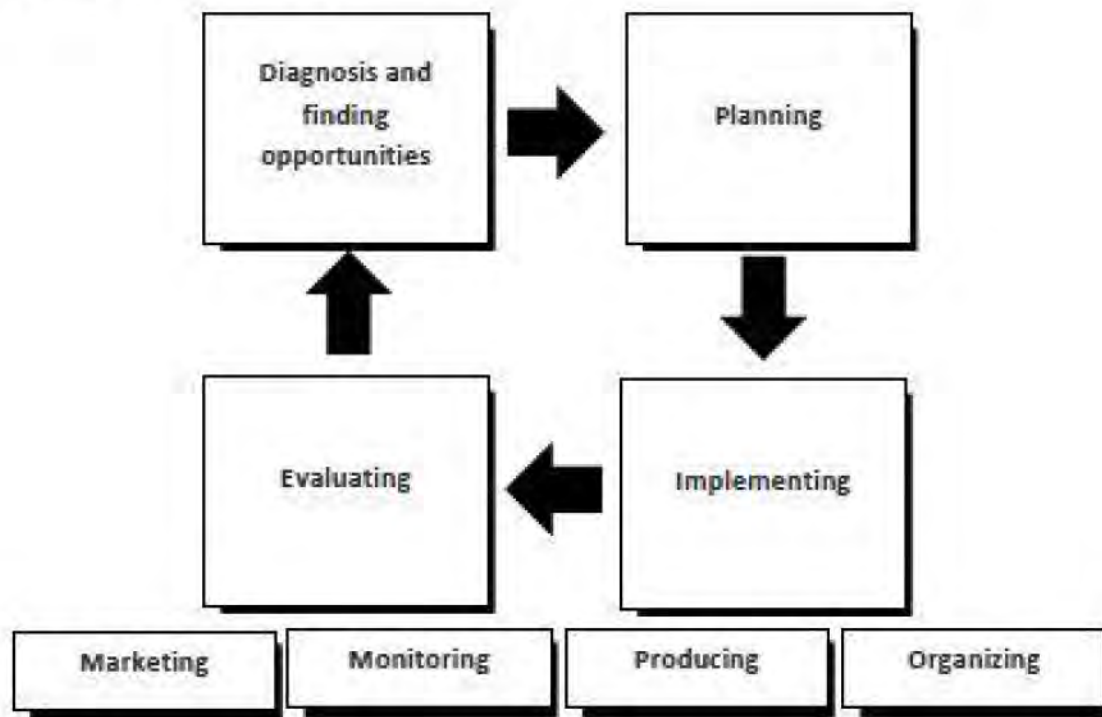
	Farming for Food (Sweet Potato Example)	Farming for Cash	Why this Changes? List down your answers
10 Years Ago			
5 Years Ago			
Today			



## Components of a Farm or Business



## The Farm Business Cycle



## A Vignette of a Kenya Farmer

### Wafula's Story

#### *Part 1: Diagnosis/Finding Opportunities*

After completing his primary education, Wafula had left his village to seek a job in the city. While the city life had been exciting, and he had found several work opportunities, it had also been a hard living. Wafula's father was now too old to be managing the 1 hectare family farm land by himself, and Wafula now had no choice but to return home. However, he wanted to make sure that he would be earning enough to support his family on a long term basis. For this, he needed to know the current farming practices and see what could be done to raise the income generated by the land.

Upon return, Wafula started talking to the farmers in his own village, so that he could find out what crops were being grown in the area. Based on his interview he found that most farmers grow the same crops: beans, onions and maize. When asked why, they said because everyone else did; it was what they had always grown. He also learnt that these farmers were selling their produce to the first buyer who came to the farm.

As a next step, Wafula decided to find out if other products could be produced in the area. He went to the nearest town where he talked to buyers, and found out that there was a high demand for bambara nuts. Wafula knew that growing bambara nuts was like growing groundnuts, so it would not be difficult to produce. He also found three buyers who said that they would buy bambara nuts from him, provided it was of good quality. They said they normally paid KSh 250 per kg.

Before investing in bambara nuts production, Wafula realized that he needed to know that he could make a profit by growing and selling bambara nuts at the market rate. He visited a neighbouring village, where farmers helped him calculate how profitable garlic was.

As a final step, Wafula approached an extension worker from the local community organization who advised him to start bambara nuts production by planting  $\frac{1}{4}$  a hectare with the new crop. The extension worker told him he should be able to harvest about 1000 kg per hectare, so on  $\frac{1}{4}$  hectare, he should be able to produce 250kg of bambara nuts.

After completing his investigations, Wafula decided to grow bambara nuts on  $\frac{1}{4}$  hectare of his land and plant local vegetables, finger millet and maize on the rest of the land.

#### *Part 2: Planning*

Based on what he had learned from the market, the other farmers and from the extension worker, Wafula set himself a goal of growing  $\frac{1}{4}$  hectare of bambara nuts and marketing it to the three nearby buyers. He figured out that if he sold 250kg of bambara nuts, he would obtain a total sales income of KSh 62,500. But in order to calculate the profit he could make, he first needed to know the cost of the inputs that would be used to grow and sell the crop.

#### Guide Questions

What did Wafula realize about the farmers in his village?

What did he decide to do? How did he do it? Why is this important?

What did he learn from his visit to the market?

What did Wafula decide to do? Why could he be confident about this?

Wafula listed the primary inputs he would need to grow the bambara nuts, i.e. seed and manure, among others. As the bambara nuts was sold at the farm gate there were no transport costs. He calculated that expenses incurred amounted to KSh 21,000 meaning that he could expect a total profit of KSh 41,500 from bambara nuts production.

Of course, Wafula now needed to implement his plan, i.e. buy the immediate inputs, organize, prepare his land and plant the crop.

#### Guide Questions

What was Wafula's plan?

Describe it.

### *Part 3: Implementing, Organizing, Producing and Monitoring*

When Wafula had organized all the inputs, he prepared his land and planted the bambara nuts seeds. Within a month, however, Wafula realized that the germination was poor and the growth of the bambara nuts was not as expected. He went to the extension worker for advice, who told him to replant using a different variety of seed. Even though this was an extra cost for Wafula, he obtained new seeds for planting, knowing that he made a promise to several buyers in the market to supply good quality bambara nuts. He did quick calculations and knew that he would still make a profit.

Knowing that the crop would now be delayed by at least a month, he made new arrangements for transport. This did not cost him anything extra. The second time, the germination was much better. A few weeks later, Wafula bambara nuts was almost ready and it was looking good.

Close to harvest time, Wafula purchased the packaging he needed to market his bambara nuts to the three shops. Very shortly thereafter, Wafula harvested his bambara nuts. He was a month later than expected, but it was worth it.

#### Guide Questions

What happened after Wafula planted his bambara nuts?

What did he do about it?

Why?

When it got close to harvesting time, what did he do?

### *Part 4: Implementing: Marketing*

As the bambara nuts was harvested from the field, it was checked and cleaned. The bad nuts were thrown away, while the rest was packed into the net bags and put into boxes. When everything was weighed, Wafula discovered that he had 225 kgs.

It was a little less than expected, but based on his calculation, Wafula knew that he would still make a profit.

The transport arrived as planned. The bags were loaded onto the mkokoteni (cart) and Wafula took his bambara nuts to the three retailers. Initially, the first shop refused to take his bambara nuts since Wafula was one month late. However, Wafula showed the storekeeper the quality of his produce and convinced him to buy it.

The second buyer agreed to take the product, but wanted to pay Wafula after sixty days. Wafula explained that this was his first crop and he wanted to keep selling to this buyer, but couldn't if they could not make a better deal on payment. In this way, Wafula persuaded the storekeeper to pay 50 percent immediately and 50 percent after sixty days.

The third buyer refused to pay the agreed price. He said that he was able to get cheaper bambara nuts from another farmer. Again, Wafula showed the storekeeper the quality of the product. He also told

#### Guide Questions

The harvesting and packaging went well.

What happened Wafula took the bambara nuts to the three buyers?

And what did he do about it?  
Why?

him that his competitors had bought the bambara nuts at the agreed price. In this way, Wafula convinced the storekeeper to pay the agreed price in cash.

### *Part 5: Evaluating*

Wafula came back home a very happy man! However, he realized that his task was not complete. He still had to evaluate his bambara nuts business, by comparing what he planned with what actually happened. He also needed to calculate how much profit he had made.

He noted that he had to replant the bambara nuts because he had used the wrong seed. He decided that next time, he would check with the extension worker before buying inputs.

Also, he did not expect the buyers to present problems. The first vendor had been concerned about the delay in delivery. Next time, he would be sure to keep his buyers informed. He also did not expect to be asked to be paid in 60 days. Next time he would confirm the deal beforehand.

Did he make profit? Wafula knew that the income from sales is not equal to profit. He sold all 225kg of bambara nuts, KSh 250 per kg. Thus his total income was KSh 56,250. His costs were KSh 22,000 including the KSh 1,000 for the additional seeds. So, his profit was KSh 34,250.

This was the first time Wafula had been responsible for the family farm, and it had more money than last year. His parents were very proud of him and asked what he was going to do with the farm next year. He said he would investigate more opportunities. He would again research the market; speak to the extension worker and other farmers. When he had enough information, he would decide what to do.

For the day, Wafula wanted to celebrate! He invited his family and friends to party. All of them wanted to know how Wafula had made so much money from his farm. He shared the whole story with them, so they could also learn from his experience.

#### **Guide Questions**

After Wafula sold all his bambara nuts and went home, what did he do? Why?

Did Wafula make a profit?  
How did he know?

What are some of the things he learned from his evaluation? What did he do about it?

## Session 5: Gendered Value-Chain Analysis

Diagram 1

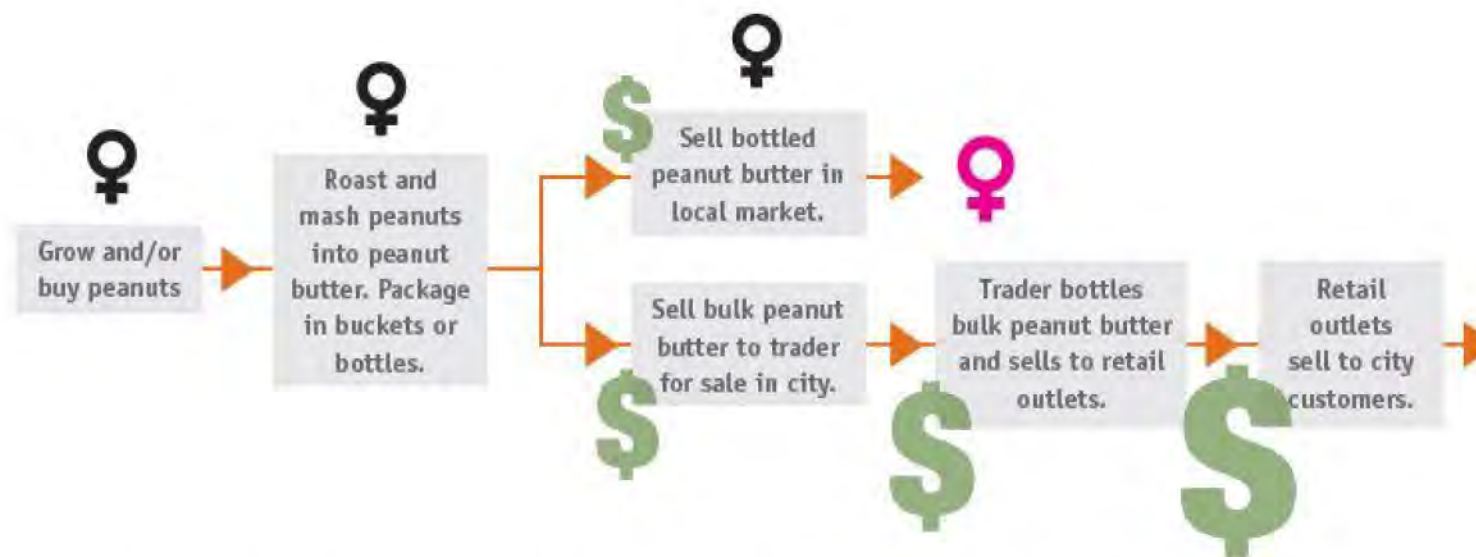


Diagram 2



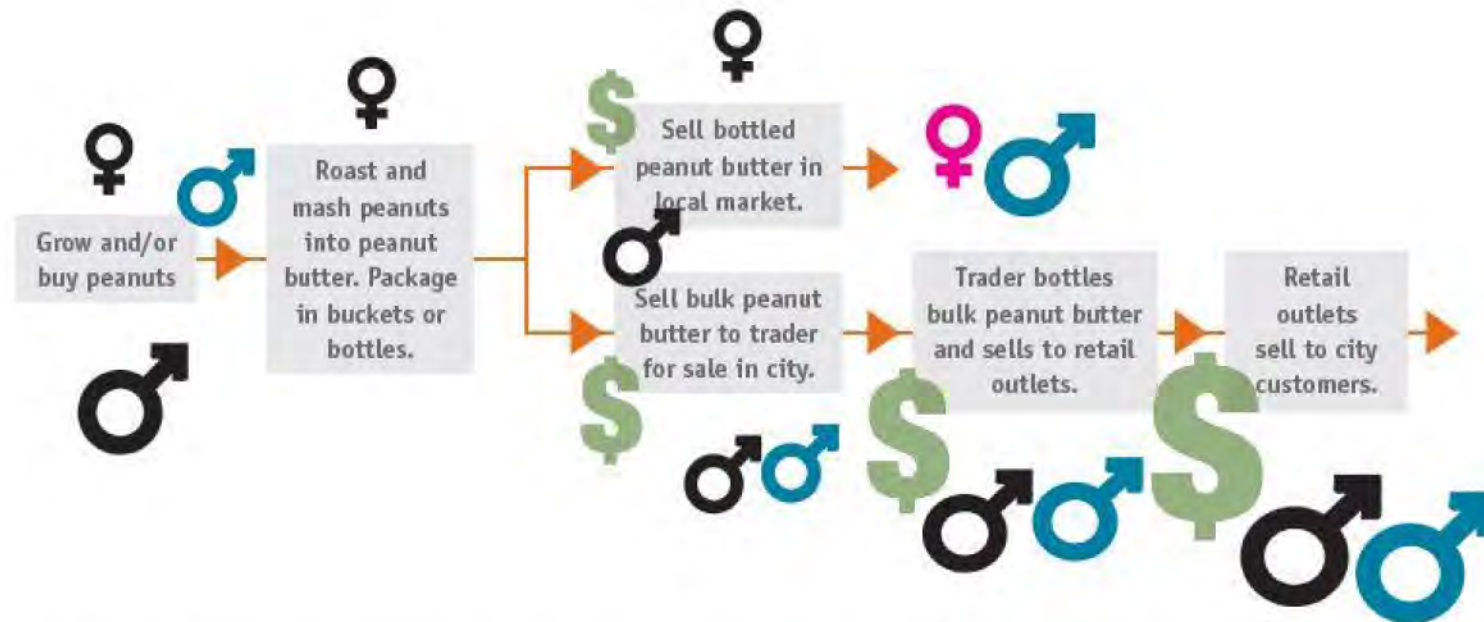
**Note:** In this diagram, the larger the dollar sign, the greater the profit.

Diagram 3.



**NOTE:** In the sample above, “participation” is marked by the black sign for woman and “control” is marked by the pink sign for woman. The larger the symbol, the more participation or control the woman has. When completing this exercise use different coloured marker pens to make the distinction between participation and control.

Diagram 4.



**NOTE:** In the sample above, the black symbols for man represent participation and the blue symbols represent control. Note again that the larger the symbol, the greater control or participation. When completing this exercise use different coloured marker pens to make the distinction between participation and control.


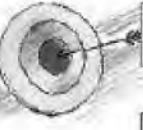











## Session 6: The Farmer as an Entrepreneur and Farm Business Profitability

The following handout was adopted from FAO's FBS: Training of Farmers Programme, South Asia.

### Competencies for Business Success

Mark in the given space which of the competencies Wafula (as in handout) has, and you have

Achievement Cluster		Planning Cluster		Power Cluster							
1	 Initiative	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	6	 Goal Setting	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	12	 Commitment to the Work Contract	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>
2	 Opportunity Seeking	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	8	 Systematic Planning	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	13	 Persuasion & Networking	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>
3	 Information Seeking	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	9	 Problem Solving	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>				
4	 Demand for Quality	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	10	 Persistence	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>				
5	 Demand for Efficiency	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>	11	 Independence & Self Confidence	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>				
7	 Risk Taking	Ahmad has <input type="checkbox"/>	You have <input type="checkbox"/>								



## Important Aspects of a Farm Business

If a previous focus group was conducted that covered these questions, facilitators should provide participants with both a blank and completed handout.

1. What to produce?		
2. How to produce it?		
3. Is it possible to produce it on your land?	Check Y/N in Box Below	
	Yes	
	No	
	Notes:	
4. What resources and inputs are needed and where to get them?		
5. What do you need?		
6. What is the best market for the product?		
7. What price can the product get in the market?		
8. Is it profitable?	Check Y/N in Box Below	
	Yes	
	No	
9. Do you have enough cash?	Check Y/N in Box Below	
	Yes	
	No	
10. What are the risks and what to do about them?		



## Good Agricultural Practices: Facilitator's Guide

### WHAT IS GAP?

The food industry is aware that food safety involves every link in the food chain from production to consumption, from farm-to-fork. Food can be contaminated at any point in the food chain and such contamination can compromise the safety of the consumer. As such there is an imperative need to apply a whole chain approach, achieving uniform food safety requirements in the food industry.

There is a clear emergence in the market of a preference for horticultural products that are "clean", principally freedom from chemicals -- i.e. pesticides. Exporters must be prepared to service the distant markets that they deliver to. Supermarket chains are rapidly becoming the dominant force and will significantly influence the range of products that are marketed.

The concept of Good Agricultural Practices (GAP) has evolved in recent years in the context of a rapidly changing and globalizing food economy and as a result of the concerns and commitments of a wide range of stakeholders about food production and security, food safety and quality and the environmental sustainability of agriculture.

GAP are a collection of principles to apply for on-farm-production processes resulting in safe and healthy food and non-food agricultural products while taking into account economic, social and environmental sustainability.

It requires gaining and maintaining an understanding of production techniques and systems for each of the major agro-ecological area (eco-region).

Application of GAP includes various areas, such as:

- Food safety
- Environmental safety (addressing soil, water, air, native vegetation and animal safety)
- Sustainability of the operations
- Workers' health and safety

### Kenya-GAP

The Good Agricultural Practice of Kenya (or KenyaGAP) is a standard owned by the Fresh Produce Exporters Association of Kenya (FPEAK), which targets horticulture farmers in Kenya. KenyaGAP takes into consideration internationally accepted practices in growing fresh produce that will result in food that is safe to eat for the consumer, while ensuring conservation of the environment as well as the health and safety of those doing the production.

### KenyaGap Certificates:

KenyaGAP Certificates can be sought for groups of farmers or individual farmers. This can be achieved by:

- Filling in and submitting an application form giving details of name and location, and crops grown.
- Undertaking the baseline audit by a KenyaGAP Internal Auditor. *The Auditor will give a report advising on what you will need to do on the farm to fully comply, including time frame and budget.*
- Undergoing a training on GAP at FPEAK.
- Undertaking an internal audit by FPEAK Farm Auditor, or by own auditors if trained.
- Undergoing final certification audit from an approved certification body (for International Scope)


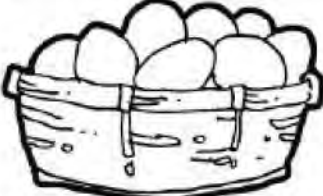
More information, including information on benefits and costs, is available at:

<http://fpeak.org/index.php/kenya-gap-2/>










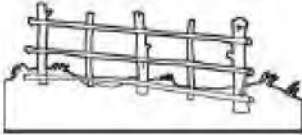
### Farm Business as Profitability

Farm Income	Farm Costs	Profit
Money received from selling products and the value of produce consumed. (Note that farm income comes from the value of all the products produced on the farm.)	Money spent to produce and market products; the value of all the things used to produce products on the farm.	Money left over from income after the costs are deducted.

### Understanding the Difference between Farm Business and Farm Enterprise

Farm Business	Farm Enterprise
Farm business refers to the whole farm as a business. Together all enterprises make up the farm business as a whole.	Farm enterprises refer to the individual enterprises of the farm. Each crop or kind of livestock produced is an enterprise. A farmer may produce maize, beans and eggs. Each of these products is an enterprise – maize enterprise, bean enterprise, egg enterprise
	

## Understanding Costs

<p><b>Variable costs</b> "The costs of actual production. They apply to specific enterprises on the farm. These costs vary as output changes. These costs occur only if something is produced. They do not occur if nothing is produced. Variable costs can be allocated to specific enterprises."</p>		
<p>Seeds</p> 	<p>Fertilizers</p> 	<p>Fuel</p> 
<p>Hired labor</p> 	<p>Livestock feed</p> 	<p>Veterinary</p> 
<p><b>Fixed costs</b> "The fixed costs apply to the farm as a whole. Fixed costs are costs that do not vary with changes in production output of a specific product. Fixed costs remain the same regardless of the output. Even if there is no output, there will still be fixed costs."</p>		
<p>Farm equipment (e.g. tractor)</p> 	<p>Implements and tools</p> 	
<p>Packing shed</p> 	<p>Farm infrastructure (e.g. fencing)</p> 	

## What Can Affect Farm Business Profit?



## Session 7: Introduction to Food and Nutrition Issues and Solutions

### What Is Applied Nutrition?



**SELECT**



**PREPARE**



**COOK**



**HEALTH**





## What Is Applied Nutrition? Facilitator's Guide

*Trainers note: Ask the participants, "What do you think is applied nutrition?" It is what you 'select' to eat, how you 'prepare' the food, and how you 'cook' the food.*

### SELECT:

*Select a variety of foods from each of the following groups: starches (carbohydrates), fruits and vegetables, proteins, fats and oils, salt and sugar, and water.*

- **Starches (Carbohydrates):** Select a variety of carbohydrates throughout the day including roots, tubers, grains, legumes, and pulses. Make starchy foods the basis of most meals.
- **Fruits and Vegetables:** Select a variety of fruit and vegetables. Include at least five different colours. You will be eating necessary vitamins and minerals to maintain a healthy body.
- **Proteins:** Select a variety of protein from both animal and plant sources. Each week select proteins from sources such as beans, lentils, fish, chicken, beef, goat, rabbit, and eggs.
- **Fats and Oils:** These are necessary for the body to function, but should be used in small quantities.
- **Salt and Sugar:** Reduce your intake of salt and sugar.
- **Water:** Consume at least eight glasses of water daily.

### PREPARE:

- Wash your hands. Attend to personal hygiene before preparing food.
- Use only well washed utensils and cooking vessels.
- Wash fruit and vegetables in clean, safe water very well to remove all dirt that may cause diarrhoea or gastric upset (vomiting).
- Only remove skin off fruit and vegetables if necessary or inedible.
- Wash and chop leafy greens just before cooking, as this will retain the most nutrients.
- If you need to chop leafy green vegetables, make sure you do not chop the vegetables too finely, as this will also reduce the nutrient retention when cooking.
- Pre-soak legumes and pulses to release nutrients and save on fuel since soaked legumes and pulses take a shorter time to cook.

**COOK:**

- Ensure animal products are well-cooked to avoid food-borne infections (i.e. diarrhoea).
- Avoid over-cooking vegetables, as this will increase the nutrient loss.
- Only cook vegetables just before meal times to retain as many nutrients as possible. The longer cooked vegetables sit in water, the more nutrients are lost.
- Use alternative food cooking methods to make meals interesting and ensure diets contains sufficient nutrients. Cover food that requires long periods of cooking to retain nutrients and save energy.

This handout was adopted from the 2015 Nutrition Handbook for Farmer Field Schools developed by the Ministry of Agriculture, Irrigation and Water Development, Department of Agricultural Extensions Services (DAES), Malawi, with support from FAO and Flanders State of the Art.

## Unbalanced Meal

### Unbalanced meal

One example. Similar problems worldwide.

- ❑ Few nutrients
- ❑ High risk of crop failure
- ❑ Environmental degradation



- ❑ Mono-culture
- ❑ High risk of food insecurity
- ❑ High input

## Balanced Meal

### Balanced meal

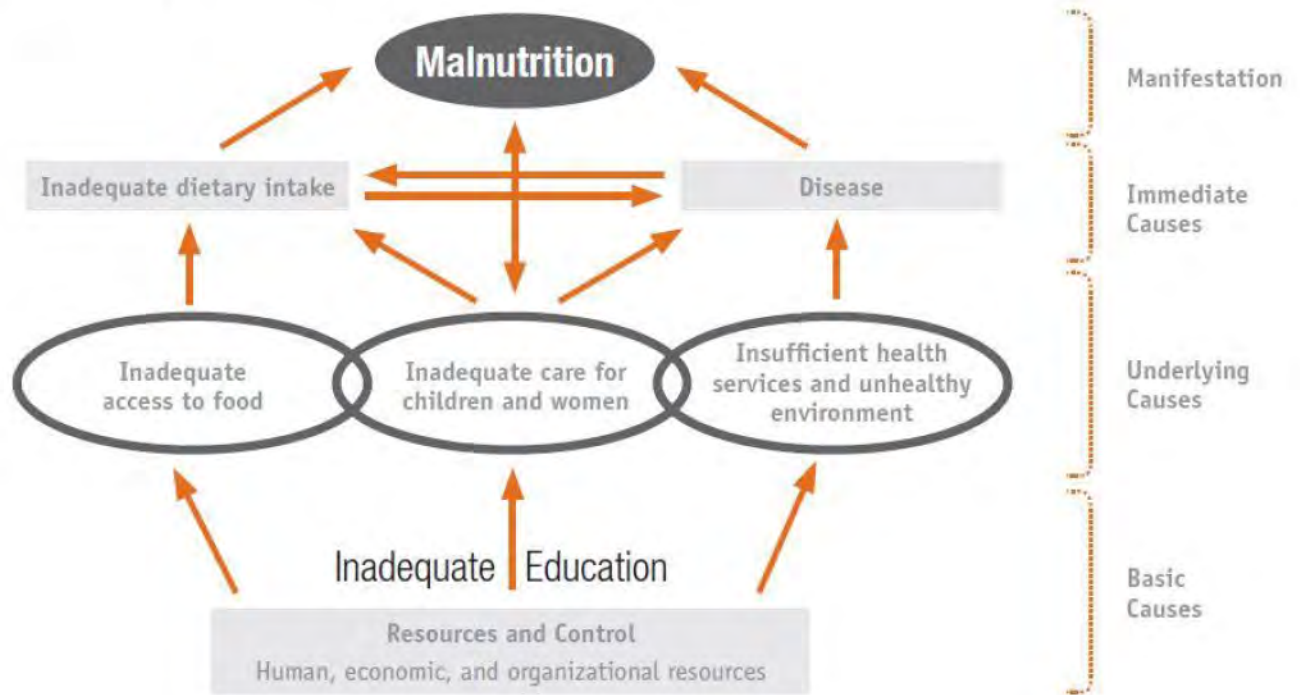
One example. Similar solutions worldwide.

- ❑ Many nutrients
- ❑ Better chance of harvest
- ❑ Healthy environment

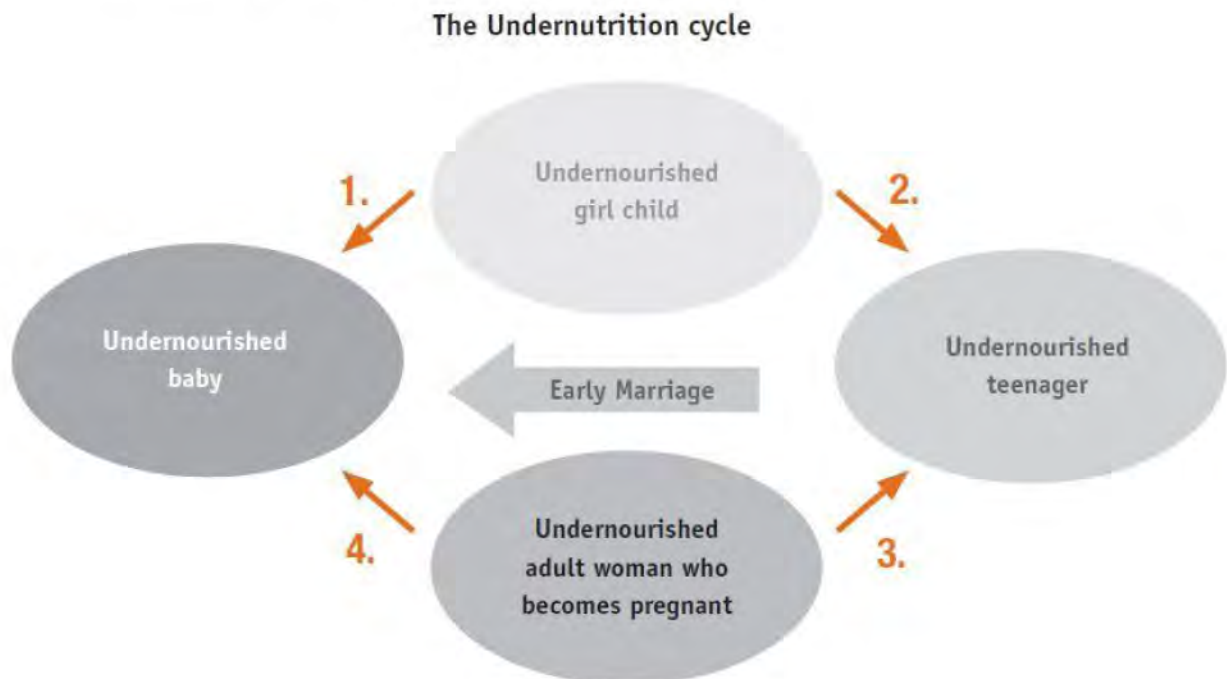


- ❑ Diverse agriculture
- ❑ Increased food security
- ❑ Fewer inputs

## Impact of Malnutrition



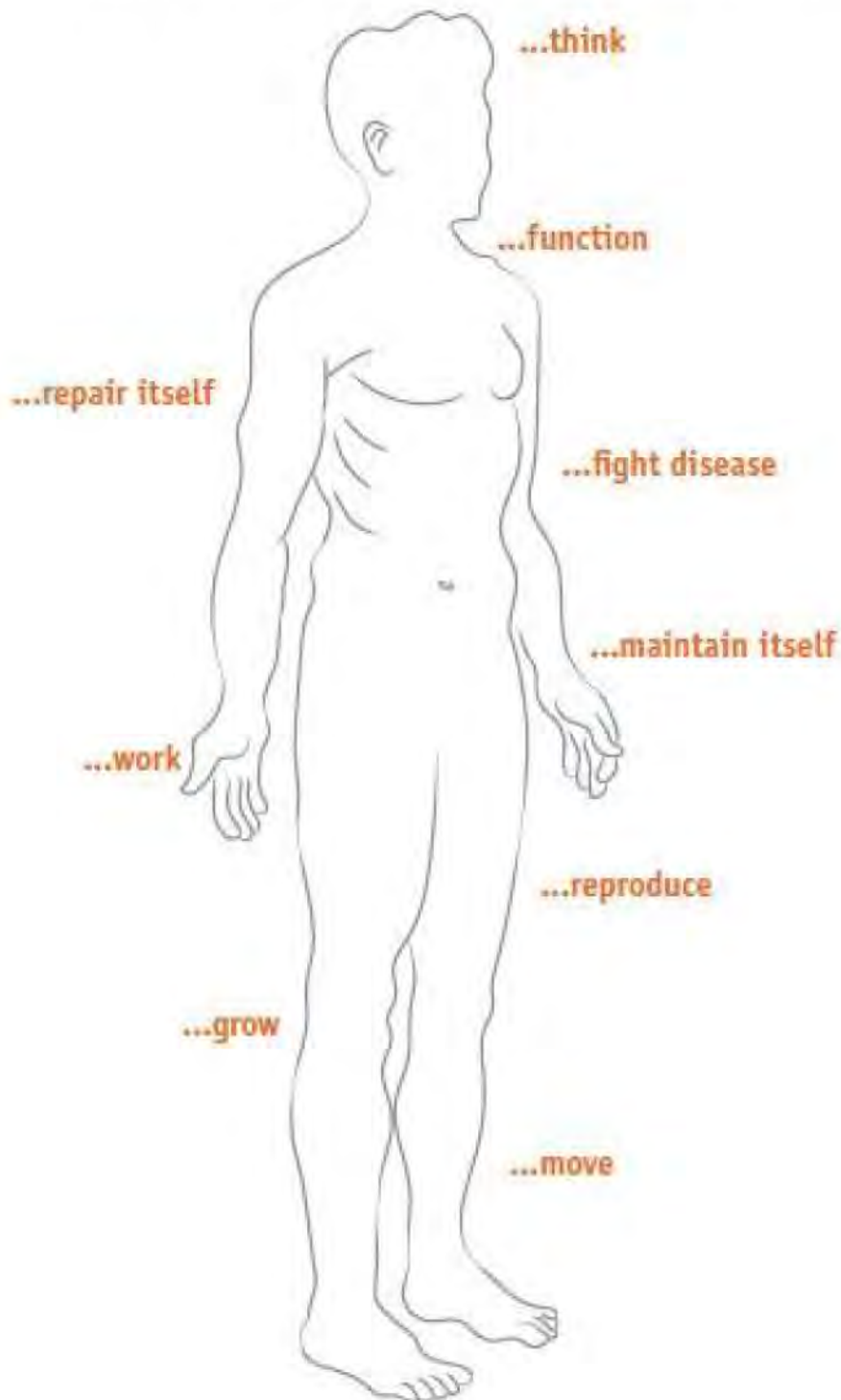
## Undernutrition Cycle



## Diagram of Nutritional Benefits on Body

Adopted from the Nutrition Toolkit within the Farmer's Field and Business School Toolkit developed by Cooperative for Assistance and Relief Everywhere, Inc. (CARE), available at: <http://www.care.org/work/world-hunger/farmers-field-and-business-school-toolkit>.

**Nutritious food gives our body the energy and substances to...**



## Seven Food Groups and their Importance for Nutrition with Examples from Western Kenya<sup>4</sup>

*It is important to note that the amount of nutrients given are average values that can vary between different agro-ecological zones and can depend on farming practices, harvesting time, storage among others.*

Food group	Importance	Examples of foods
Staple foods	<ul style="list-style-type: none"> <li>• They provide mostly starch for energy</li> <li>• Orange fleshed sweet potatoes in addition are rich in pro-vitamin A that prevents diseases and enhances vision</li> </ul>	<ul style="list-style-type: none"> <li>• Cereals such as maize, rice, millet, sorghum;</li> <li>• Roots and tubers such as cassava, English potatoes, sweet potatoes, arrow roots and yams;</li> <li>• Starchy fruits such as green bananas.</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• They are rich in micronutrients which are important for health</li> <li>• The more orange-looking vegetables are the richer in pro-vitamin A, which prevents diseases and enhances vision</li> <li>• Some vegetables are also rich in vitamin C and other vitamins that are important to enhance immunity and prevent diseases</li> <li>• Dark green leafy vegetables are rich in iron which helps in blood formation, is important for strength and the prevention of tiredness</li> </ul>	<ul style="list-style-type: none"> <li>• Orange coloured vegetables such as carrot and pumpkin</li> <li>• Other vegetables such as African eggplant, cabbage, tomato, onion, green pepper, mushrooms</li> <li>• Dark green leafy vegetables such as amaranth, pumpkin leaves, spider plant, kales, cowpea leaves and many other traditional leafy vegetables</li> <li>•</li> </ul>
Fruits	<ul style="list-style-type: none"> <li>• Orange fruits are rich in pro-vitamin A that prevents infections and enhances vision</li> <li>• Most other fresh fruits provide vitamins such as vitamin C that helps to enhance immunity and prevent diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Orange fruits such as ripe mango and papaya</li> <li>• Oranges, guava, pineapple, avocado, watermelon, sweet banana, passion fruit, loquat, mulberry, cape gooseberry, soursop or jackfruit</li> </ul>
Legumes, nuts and oily seeds	<ul style="list-style-type: none"> <li>• They are good sources of proteins</li> <li>• They contain iron which helps in blood formation, is important for the strength and prevention of tiredness</li> <li>• Oil seeds and some legumes are rich in fat and are therefore high in energy</li> </ul>	<ul style="list-style-type: none"> <li>• Low fat legumes: cowpea, pigeon pea, kidney bean, lentil, chickpea</li> <li>• High fat legumes and oilseeds: groundnut, soybean, pumpkin seeds, sesame (simsim), sunflower seeds, melon seeds</li> </ul>
Animal source foods	<ul style="list-style-type: none"> <li>• They contain proteins</li> <li>• They contain iron which helps in blood formation, is important for strength and the prevention of tiredness</li> </ul>	<ul style="list-style-type: none"> <li>• Milk and milk products</li> <li>• Eggs from different birds</li> <li>• Beef, chicken, pork, liver, kidney, intestines</li> <li>• Fish from the lake or sea</li> </ul>

<sup>4</sup> Adopted from a Draft Manual: *Diversifying agricultural production for balanced diets in Western Kenya*

Food group	Importance	Examples of foods
		<ul style="list-style-type: none"> <li>• Small animals such as rabbits, guinea pigs</li> <li>• Insects such as termites</li> </ul>
Fats and oils	<ul style="list-style-type: none"> <li>• They give extra energy</li> <li>• Enhances food flavour</li> <li>• Makes vitamin A available – always add to vitamin A rich food</li> <li>• Small children need more fat an oil than adults in order to grow well</li> </ul>	<ul style="list-style-type: none"> <li>• From plant sources: avocado, coconut, margarine, vegetable oils and fats</li> <li>• From animal sources: ghee, butter, animal oils and fats</li> </ul>
Sugar	<ul style="list-style-type: none"> <li>• It gives only energy and no other nutrients.</li> <li>• Useful for making foods taste nice and for improving appetite.</li> <li>• However, eating sugar too often and too much is harmful to health, e.g. bad for the teeth.</li> <li>• Eating too much food with sugar often means eating less of other more nutrient-rich foods.</li> </ul>	<ul style="list-style-type: none"> <li>• Sugarcane</li> <li>• Sugar in tea</li> <li>• Soft drinks</li> <li>• Sweets/candy</li> <li>• Sweet biscuits and cake</li> </ul>

## Nutrition Needs of Plants & People

### Nutrition needs of plants & people

Different species. Similar needs.

#### Plants

Plants each have their own nutrient needs. Each needs a variety of nutrients.

##### **Macronutrients:**

- ❑ N = Nitrogen – similar to the human need for ‘protein’

##### **Micronutrients:**

Minerals:

- ❑ P = Phosphorus
- ❑ K = Potassium
- ❑ Other key minerals are: Zinc, Manganese, Selenium and Iodine

**Water**

#### People

Humans need almost 50 nutrients to be healthy and productive.

##### **Macronutrients:**

- ❑ Proteins (people’s nitrogen source)
- ❑ Fats
- ❑ Carbohydrates

##### **Micronutrients:**

Minerals:

- ❑ Phosphorous
- ❑ Potassium
- ❑ Other key minerals: Zinc, Iron, Manganese, Selenium and Iodine

Vitamins:

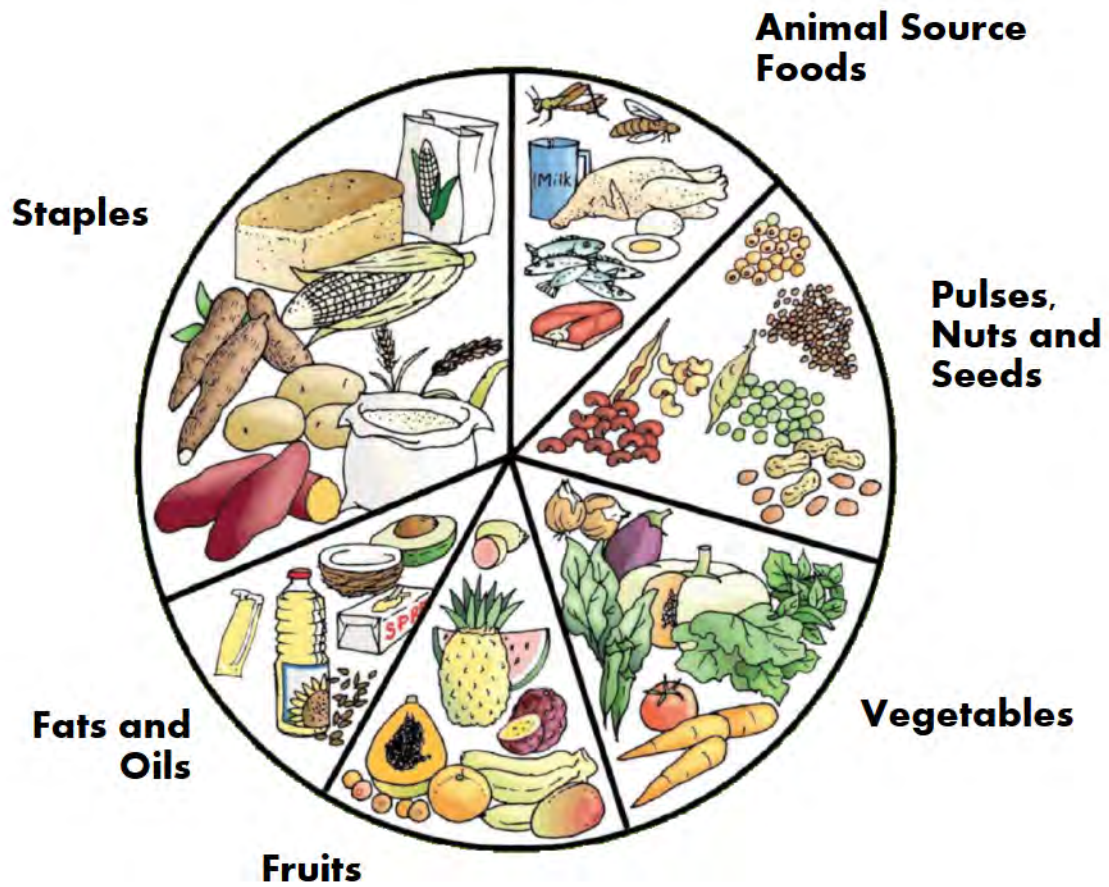
- ❑ Vitamins A, B, C, D, E, K

**Water**



## Western Kenya Example of Food Circle with Six Main Food Groups

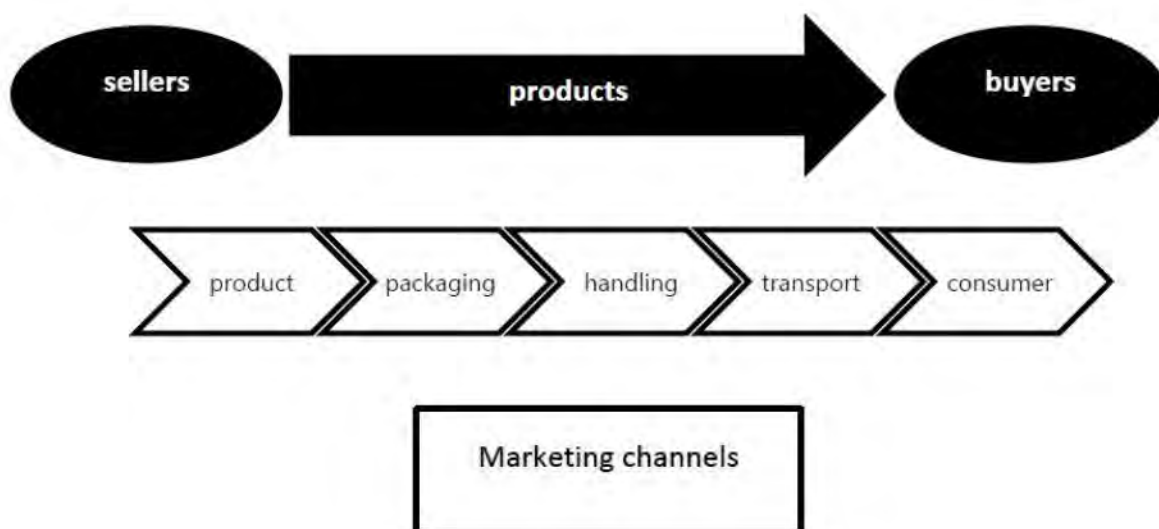
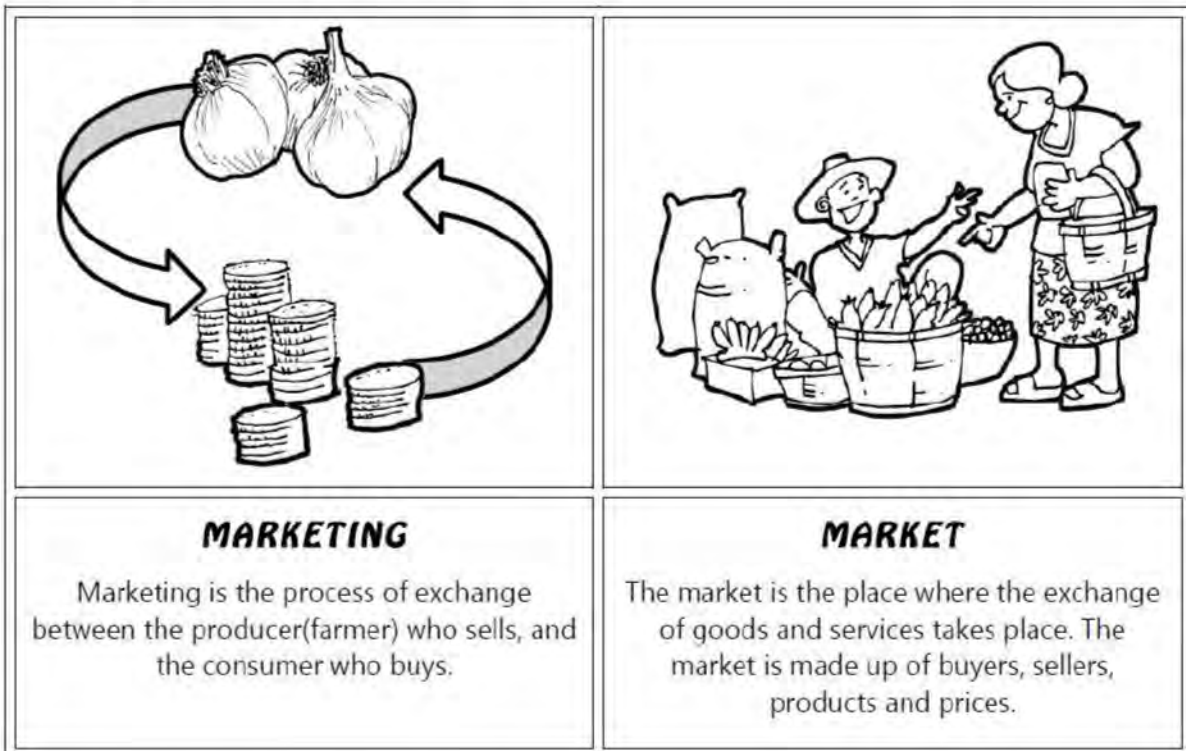
Adopted from a Draft Manual: Diversifying agricultural production for balanced diets in Western Kenya



## Module 3: Where are We Now

### Session 8: Understanding Marketing and Markets

#### Defining Marketing and Markets



## Where Can We market...

Product: \_\_\_\_\_

<p><i>1. What are the different market outlets where the product can be sold?</i></p>	<p><i>2. What quantities do these outlets want?</i></p>
<p><i>5. What else must one learn about these markets?</i></p>	
<p><i>3. What are some special features of each market?</i></p>	<p><i>4. Is there a best time to use each of these markets?</i></p>

## Marketing Survey Questionnaire

<b>Customer/End Market</b>	
What vegetables do you often buy (weekly)? Specify. At what price. What is the mode of payment? (specify unit)	
Why do you buy these vegetables?	
Who are your suppliers for these vegetables?	
In what quantities per week do you buy these vegetables?	
How often are these vegetables available in the market? (daily or seasonal)	
How often do you go to the market to buy these vegetables in a week?	
What time of the year (month/s) are prices for these vegetables at their highest?	
What can you say about the quality of the vegetables you often buy? Please describe.	
What are the problems you have encountered with these vegetables you buy the most?	
<b>Agent/Wholesaler/Retailer</b>	
What vegetables do you often buy (weekly)? Specify. At what price. What is the mode of payment? (specify unit)	
Why do you buy these vegetables?	
Who are your suppliers (individual farmer, coop, farmers' group, agent/assembler, wholesaler)?	

How often are these vegetables available in the market? (frequency during its season)	
How is the demand for these vegetables? (surplus or deficit)	
What time of the year (month/s) are prices for these vegetables at their highest?	
What can you say about the quality of the vegetables you often buy? Please describe.	
Where do you sell the vegetables that you are buying? Name of buyer and classification of your buyer (wholesale buyer, retailer, end-user, others).	
Do you still have market demand for other vegetables? If yes, what are the other vegetables that have market demand?	
<b>Farmer (Individual or in Groups)/Competitor</b>	
What vegetables do you usually produce?	
Why do you usually produce these vegetables?	
How much volume do you usually produce of these vegetables?	
Where do you sell? (Specify your buyer)	
How much is the price per kilo of each kind of vegetable for each type of buyer (e.g., school, hotel, etc.)?	
What is the method of selling? (Picked-up or delivered)	
If picked-up, price per unit (i.e. per kilo, per bag, etc.)	
If delivered, how much is the price?	

How much is the transport cost?	
Is transport available on time?	
Who pays for the transport costs?	
What type of transport is usually used?	
What are the problems you encountered as a producer?	
<b>Transport Service Provider</b>	
What means of transport are most commonly used by farmers for their produce?	
As transport service provider, what are the different vegetables that you usually transport?	
When is the busiest period (month, duration) that you are "ferrying" vegetables?	
From where are you getting the vegetables?	
How much is the cost of transport per kilo/per bag or of what unit of measure used?	
Does the cost of transport include transportation service? (Yes or No)	
If no, who shoulders the hauling costs?	
Is your transport service busy for the whole year transporting vegetables? (Yes or No)	
If no, what other commodities are you hauling?	
What problems have you encountered in your transport business?	

## Session 9: Presenting the Market Survey Report, Assessing Current Farm Situation and Translating Analysis into Action

### Understanding Farm Enterprises

<b>Competitive Enterprises</b>	<b>Supplementary Enterprises</b>	<b>Complementary Enterprises</b>
Enterprises “compete” when they use the same resources	Enterprises “supplement” one another when they use resources that might otherwise not be used	Enterprises “complement” one another when they interact in a supportive, two-way process
If a farmer does not have enough to harvest two different crops at the same time, one crop can only be increased if the other is reduced.	A farmer has fish and duck enterprises. The duck droppings are utilized by the fish in the fishpond which could otherwise have been thrown away, wasted. In such a case, the two enterprises are supplementary: the ducks supplement the feed for the fish.	Poultry produces manure. The manure can be applied as fertilizer to crop enterprises. The maize grain can be fed to the poultry. This relationship between the livestock and crop enterprises shows that the two are complementary.

## Module 4: Where We Want to Go

### Session 10: Developing a Vision and Goal for the Farm

#### An Example of Farm Vision, Goals and Strategies

**Vision:** By the end of 3 years, my farm will be a profitable business, with at least 5 enterprises that supplement and complement each other to make my farming more cost effective and economically viable

Examples of:

<b>Family Goals</b> <ul style="list-style-type: none"> <li>• To be self-sufficient in food</li> <li>• Everyone in the family is healthy</li> <li>• Everyone in the family gets an education</li> </ul>	<b>Business goals</b> <ul style="list-style-type: none"> <li>• Increase profit by 100%</li> <li>• Increase yield by 50%</li> </ul>
--	--

In the next three years, I will invest in the following strategies to achieve the vision and goals:

<b>Production:</b> <ol style="list-style-type: none"> <li>1. Will make detailed farm production plans to take advantage of the market demands.</li> <li>2. Will use farm resources optimally, i.e. without any waste, in the production, harvesting, and post-harvesting processes.</li> <li>3. Will choose a range of enterprises that will complement and supplement each other, so that the produce of one enterprise can become the input of the other.</li> </ol>	<b>Marketing products:</b> <ol style="list-style-type: none"> <li>1. Will systematically gather market information and identify appropriate and cost effective inputs, and better market opportunities and outlets for farm products.</li> <li>2. Will improve skills to harvest and engage in post-harvest activities such as grading, storing to minimize losses and improve quality.</li> <li>3. Will invest in better and more convenient packing and packaging, and timely delivery of the products.</li> </ol>
<b>Profits:</b> <ol style="list-style-type: none"> <li>1. Will control both fixed and variable costs, so as to enhance profit margins.</li> <li>2. Will put aside at least 10% from the annual income as contingency insurance fund</li> </ol>	<b>Managing my farm as a business:</b> <ol style="list-style-type: none"> <li>1. Will maintain a careful record of all farm operations, inputs and production outputs.</li> <li>2. Will monitor and record regularly all costs incurred.</li> </ol>



## My Farm Vision, Goals and Strategies

**VISION**

--

**GOALS**

**Family goals**

**Business goals**

--




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<b><i>Production:</i></b>	<b><i>Marketing products:</i></b>
<b><i>Profits:</i></b>	<b><i>Managing my farm as a business:</i></b>

## From Analysis to Action

<b>Strengths</b>	<b>Possible Actions</b>
<p><i>Example: My farm is good for many crops.</i></p>	<p><i>Example: I will undertake a market survey to find out what else I can grow</i></p>
<b>Weaknesses</b>	<b>Possible Actions</b>
<p><i>Example: I don't know what/which of my crops is most profitable.</i></p>	<p><i>Example: I will learn how to assess enterprise profitability.</i></p>

## Farm Assessment Audit Checklist

Business Aspects	Ratings			Comments
				
Use of farm land				
Choice of crops, livestock and poultry				
Farming technology and input use				
Supply and use				
Harvesting, post-harvest, storage and packaging				
Marketing, transport and delivery arrangements				
Savings, capital formation and use				
Records and record-keeping				
Linkage to input suppliers				
Linkage to markets				
Linkage to financial institutions				

## Session 11: Understanding Enterprise Profitability

### Budget Template

Budget Components				Instructions
Step 1: Enterprise				Put the name of the enterprise (e.g., groundnut) in the space provided on the top of the template.
Step 2: Budget Period		_____ to _____ [month/year] [month/year]		Agree on a duration for this enterprise, e.g. for the period November 2015 to June 2016
Step 3: Area under cultivation (ha)				Estimate the area of the crop under cultivation (in ha).
Step 4: Income				Calculate the income by listing the various ways in which the groundnuts have been disposed, including seller at farm gate, or a neighbouring market, or to an exporter, or kept for home consumption, or given away. The quantities and prices for each form of disposal may be different. If the produce has been retained for home consumption, or given away, make sure that the unit price reflects a market value.
Item	Quantity	Unit Price (KSh)	Value (KSh)	
Step 5: Total Income				Once all the values have been added, it will reflect the total income from that particular enterprise.

Step 6: Variable Costs			
Item	Quantity	Unit Price (KSh)	Value (KSh)
Step 7: Total Variable Costs			
Step 8: Enterprise Profit (Income – Variable Costs)			

Calculate all costs directly related to the production of groundnuts. Under the column items, list all the production costs associated with this enterprise. For each item, trace the specific quantity and the unit price to reach the value (in KSh) for each item. To ensure all costs are included, it may be helpful to divide costs by the following activities/stages: pre-production (e.g. rent land, buy tools), production (open up land, weeding stages, seeding), post-harvest (transporting product, processing technologies/materials), marketing (hiring vehicle, communication expenses, market fees).

Add up the value or cost for all the items to calculate the “Total Variable Costs”.

To calculate the “Enterprise Profit”, subtract from the total income the total variable costs.

## Determining the Minimum Price and Yield for the Enterprise

### Calculating the Break-even Price

A break-even price is the minimum acceptable price that will, if nothing else, cover the cost of production. At this price the income received will be equal to the cost of production, and the profits will be zero. The break-even price can be calculated from the information in the enterprise budget, using the following formula:

$$\text{Break-even Price} = \text{Total Variable Costs per ha/yield per ha}$$

### Calculating the Break-even Yield

The break-even yield is the minimum level of production that you can produce to cover the costs of production. It is calculated by dividing the Total Variable Costs/ha with the per unit price of the produce. The break-even yield can be calculated from the information in the enterprise budget, using the following formula:

$$\text{Break-even Yield} = \text{Total variable costs per ha/unit price of produce}$$

## Module 5: Developing a Business Plan

### Session 12: Choosing an Enterprise

#### Choosing an Enterprise

For this part of the FBS program, you are going to develop a farm business plan for one enterprise. The enterprise you choose should be a cash crop or a higher-value crop that you know can be sold at the market.

#### Step-1: Form an enterprise group

Choose an enterprise to work on. Then join up with a few other participants who want to work on a similar enterprise. Together you will form an enterprise group and will work on developing a business plan for that enterprise. For your chosen enterprise, your enterprise group will eventually decide the following:

- What to produce
- How much to produce
- How to produce it
- What price to charge
- How to market it

#### Step-2: Undertake technical feasibility

You need to make sure that your land and soil is suitable for the chosen enterprise, and that the climate, rainfall and temperature will make production possible. If not, you should not choose the enterprise. For example, cashews need a long dry period to flower and set the fruit. If your area does not have a long dry period, then it is not technically possible to grow cashews.

An example of rating for a technical feasibility is as follows:

Technical Production Factors	
For Crops	OK/Not OK
Soil	
Climate (Rainfall, Temperature)	
Water Availability	
Topography	
For Livestock	
Climate	
Grazing/Vegetation	
Water Availability	
Overall Suitability	

### Step-3: Assess physical resources and inputs availability

The next step is to check the physical resources and inputs needed by your enterprise, and whether or not you can get them. If you are able to get all the resources you need, in the quantity you need, then you can choose the enterprise. If you are not able to get all the resources you need, then you will have to choose another enterprise. A rating for assessing physical resources and inputs can be carried out as follows:

Discuss the physical resources required for your enterprise. For crops, these should include inputs like seed, fertilizer and pesticides. These should also include equipment, implement and tools, storage structures and animal draft/labour. For livestock, these may include things like feed, medicines, tools and small equipment. These resources should include both those you can get on the farm and those you must buy. The list of resources/inputs needed should be put under the first column, i.e. resources/inputs.

Decide on the quantity needed for each resource, and write this in the second column, i.e. Quantity.

Decide where you will get each resource, and write this in the third column, i.e. Source of Supply.

#### Physical resources and inputs availability

Resources	Quantity	Source of supply
Seed		
Fertilizer		
Pesticide		
Equipment		
Implements and tools		
Storage structures		
Animal draft/Labour		
Water		

If your enterprise group cannot obtain the necessary resources or inputs for an enterprise, they you must choose another enterprise and start over again.

### Step-4: Assess Labour Requirements and Availability

The next challenge is to check what labour is needed and whether or not you have enough. If you can get all the labour you need, then you can go ahead with the enterprise. If not, then you will have to choose another enterprise. The first estimation is to look at your enterprise and decide:

- How much labour you need
- How much family labour you have
- How much labour you must hire
- When you need it
- Where you will get it



For crop enterprises you should think about all the different activities like land preparation, planting, weeding, pest control and harvesting. For livestock enterprises you should think about production activities such as feeding, watering, cleaning and handling.

#### Example Labour Plan

I need _____ workers for a total of _____ days.			
I have _____ workers from my family.			
I need to hire _____ workers according to the following plan.			
Activity	Month	Amount of labour to hire	Number of days needed
land preparation			
planting			
weeding			
harvesting			
<b>Total</b>			

If your enterprise group finds that it will not be able to get the labour needed, then you will have to choose another enterprise and start over again.

## Session 13 and 14: Components of a Farm Business Plan, Part 1: Farm Production and Marketing Plan

### Components of a Farm Business Plan

A farm business plan is a document that records the most important decisions and actions affecting the operation of the farm business. It is a way to make sure that all the things that need to be done are done, and in a way that makes the farm more profitable.

Its components are:

1. Background
2. Farm production plan
3. Market plan
4. Profitability
5. Cash availability
6. Risk management
7. Notes

#### 1. Background

*Description of the farm business, including its vision, goal and objectives. It helps the farmer stay focused on what he or she wants to achieve.*

#### 2. Farm Production Plan

<i>States what crop you will grow and the number of ha you will plant Example 1</i>			
Enterprise	Land size	Expected yield/ha	Total yield (tons/kg/bags)
1. Tomatoes			
2. Sweet potatoes			
3. Slender leaf			
4. Cowpea			
5. Finger millet			

#### 3. Market Plan

It specifies the enterprise, the target market and the buyer in addition to:

- What price would you get for your product if you sold it at your farm gate?
- What price would you get for your product if you sold it at the market?
- What costs will you have to take your product to the market?

<b>Example 2</b>						
Enterprise	Target market	Buyer	Expected quantity to sell (kg)	Market price (KSh/kg)	Marketing cost/kg (KSh)	Farm gate price (KSh/kg)
Slender leaf	Schools	Mundika Secondary School	2000	55	10	30
cowpeas	Health unit	Tanaka Health Unit	2500 kg	40	5	30

#### 4. Financial Plan

A financial plan details the profit contribution from each enterprise, and deducts fixed costs to calculate the whole farm profit.

##### Example

Item	Quantity	Unit	Price/kg in KSh	Total income
Cowpeas	1500	kg	40	60,000
			<b>Total</b>	

##### Variable Costs

Item	unit	Quantity	Unit Cost (KSh)	Amount (KSh)
Land preparation	Man days	10	432	4,320
Seed	kg	1	1000	1,000
Planting	Man days	8	432	3,456
Fertilizer	Kg	25	100	2,500
Fertilizer – 2	Kg	35	100	3,500
Irrigation Charges	Man days	4	432	1,728
Weeding	Man days	6	432	2,592
Harvesting	Man days	3	432	1,296
<b>Total Variable Costs</b>				20,392
<b>Enterprise Profit</b>				39,608

#### 5. Cash Flow

The following form details the cash flow (in/out) for each enterprise, each month to ensure that enough cash is available to the business.

##### Example

Activity	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
<b>Cash Inflow</b>													
Crop Sales	0	0	0	0	0	0	0	0	0	5900	0	0	5900
Cash Available										5900			
<b>Cash Outflow</b>													
Buy Seed			500										500
Buy Fertilizer			500										500
Buy Pesticide				200									200
Hired		900	900		540				900				3240

Activity	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Cash Needed		900	1900	200	540				900				4440
Net Cash Flow		-900	-2800	-3000	-3540				-4440	1460			1460

## 6. Risk in Farming

Risk refers to things that could happen that can harm the farm business. Farmers need to anticipate these risks ahead of time, and be prepared with mitigation strategies. The following example shows how:

### Example

Risk	How to Handle Risk
Produce can be damaged on the way to the market resulting in a lower market price	Ensure proper packaging for the produce.
Market price can drop, resulting in lower profits.	Remain alert for changes in the market; decide when to sell and how much to sell at a time.

## Session 15: Preparing a Farm Business Plan

### My Farm Business Plan

Enterprise: Date:

1. Background					
2. Farm Production Plan					
Crops/Horticultural Production					
Crop Type	Area (ha)	Output (kg/ha)	Total Output (kg)		
1					
2					
3					
Livestock Production					
Type of Animals	Number of Animals	Yield per Animal	Total Yield		
1					
2					
3					
3. Market Plan					
Enterprise	Target Market	Buyer	Expected Quantity to Sell (Units)	Market Price KSh/unit	Marketing Cost/Unit
1					
2					
3					
4. Profitability					
Expected Enterprise Profit (A)			Amount (KSh)		
1					
2					
3					
Total Enterprise Profit					
Fixed Costs, Annual Depreciation (B)					

<b>Total Annual Fixed Costs</b>													
<b>Whole Farm Profit (A-B)</b>													
<b>5. Cash Flow and Cash Availability</b>													
Activity	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
<b>Cash Inflow</b>													
Enterprise 1													
Enterprise 2													
Enterprise 3													
<b>Total</b>													
<b>Cash Outflow</b>													
Enterprise 1													
Enterprise 2													
Enterprise 3													
<b>Total</b>													
<i>Cash needed</i>													
<b>Net Cash Flow (Shortfall)</b>													
<b>Cumulative Cash Flow</b>													
<b>Cash Availability</b>													
Do I have enough cash available to implement the farm enterprise?													
a. I have the following cash available to use for my enterprise:													
b. I need the following amount of cash for my enterprise:													
<input type="checkbox"/> Yes, I have enough cash <input type="checkbox"/> No, I do not have enough cash													
c. The amount of extra cash I need is:													
d. I need the extra cash in the following months:													
e. I can get the money from the following sources:													
source:													
amount:													
<b>6. Risk</b>													
<b>Risks</b>											<b>Risk Management Strategy (How to Handle Risk)</b>		

## Preparing an Action Plan

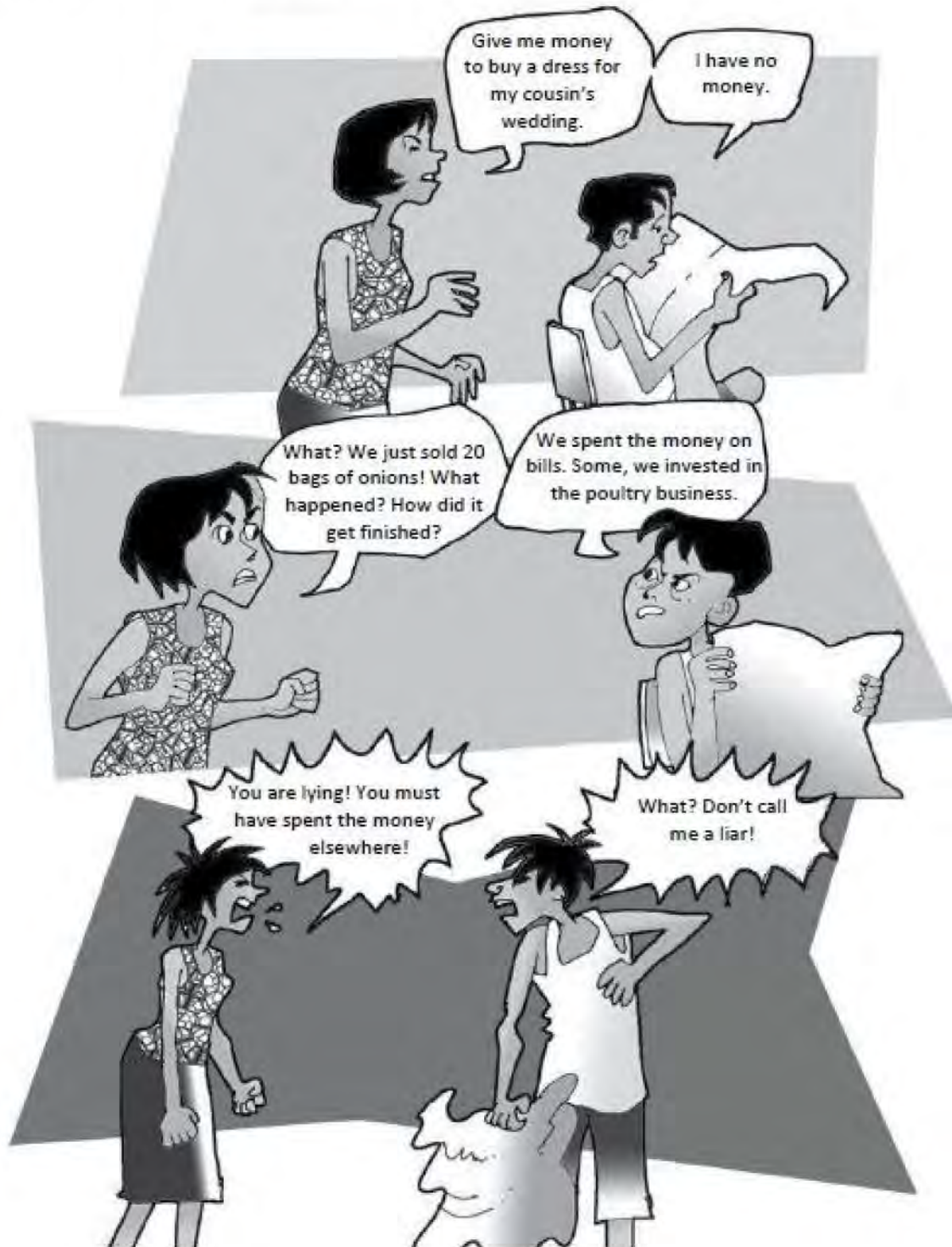
Action	Duration	Start Date	Responsibility
<b>Physical Resources and Inputs</b>			
<b>Market</b>			
<b>Risks</b>			

## Module 6: Keeping Records

### Session 16: Overview of Record Keeping

#### Role Play about Record Keeping

##### Argument between Spouses







## Overview of Record Keeping: A Facilitator's Guide

<b>What is a record?</b>	<p>A record is written proof of what happened, what is happening, or what is anticipated to happen. A record can also be a written proof of what was said, and who said it.</p> <p>Some examples are: minutes of a meeting, a report on the number of group members who worked in the group project, a record of the names of members who have brought in their membership contribution.</p>
<b>Why we keep record?</b>	<p>Many people do not write down how much money comes in and how much money goes out of their business. Some farmers do not know how to do it, or some do not know how it can help their business. Therefore people do not really know how much money they are earning.</p> <p>Record keeping means that you write down all the money that comes into your business, and all the money that goes out of your business, including the production activities. Record keeping is important because you cannot keep everything in your head. People are forgetful by nature.</p>
<b>Advantages of record keeping</b>	<p>You will know how much money you have received, how much money you have spent and how you have spent it.</p> <ul style="list-style-type: none"><li>• You will know the amount of inputs and materials used to grow the enterprise.</li><li>• You will know the price of produce sold and cost of inputs.</li><li>• You can calculate whether you are making a profit or a loss.</li><li>• You will be able to make better decisions on what to buy and sell.</li><li>• You can keep records of buying and selling on credit, so that people cannot cheat you.</li><li>• You will know how much volume you produce.</li></ul>
<b>Types of Farm Business Records</b>	<ol style="list-style-type: none"><li>1. Production Records</li><li>2. Records</li><li>3. Inputs &amp; materials records</li><li>4. Cash Inflow Records</li><li>5. Cash Outflow Records</li><li>6. Home Consumption Records</li><li>7. Profit and Loss Records</li><li>8. Fixed Asset Records</li><li>9. Sales Records</li></ol>













## Profit and Loss Record

Measuring my [include name of enterprise] profit for the period:

Area/size of the enterprise:

	Quantity	Unit price/cost (KSh/unit)	Total value (KSh)
<b>Income</b>			
Sales			
Home consumption			
Other			
<b>Total income (a)</b>			
<b>Expenses</b>			
<i>Inputs and materials:</i>			
• Seed			
• Fertilizer			
• Pesticides			
<i>Field operations:</i>			
• Land preparation			
• Ploughing			
• Planting			
• Weeding			
• Harvesting			
• Storage fee			
<b>Total costs (b)</b>			
<b>Profit (a-b)</b>			



## Sample Profit and Loss Record

Measuring my Groundnut profit for the period: Nov. 2012 – Jan 2013

Area/size of the enterprise: 1 ha

	Quantity	Unit price/cost (KSh/unit)	Total value (KSh)
<b>Income</b>			
Sales	1500 kg	22.20	33300
Home consumption	100 kg	20	2000
Other		0	0
<b>Total income (a)</b>			<b>35,300</b>
<b>Expenses</b>			
<i>Inputs and materials:</i>			
• Seed	50 kg	50	2500
• Fertilizer	2 bags	70 + 3500	4200
• Pesticide	1 litre	1000	1000
<i>Field operations:</i>			
• Land preparation	4	200	800
• Ploughing	5	500	2500
• Planting	12	300	3600
• Weeding	0	0	0
• Harvesting	8	250	2000
• Storage fee			3000
<b>Total costs (b)</b>			<b>19,600</b>
<b>Profit (a-b)</b>			<b>15,700</b>





## Module 7: FBS Meetings During the Production Season

### Session 18: Savings and Mobilizing Finance

#### Concept and Principles of Savings: Facilitator's Guide

Modified from FAO's *FBS for the Filipino Farmer* which was adapted from "Trainer's Manual on Auto-savings Promotion and Development," by Agabin and Quinones.

##### Saving and borrowing

Two basic ways by which people normally cope with their day-to-day financial requirements.

##### Savings

Any amount that is not spent, regardless of whether it is going to be spent next year or tomorrow, or whether it is deposited in a bank or merely kept in home or in your wallets.

##### People are natural savers, but they are not natural borrowers

Because income is received only at certain points in time (e.g. every harvest season, every 15<sup>th</sup> day of the month, or every week) while expenses are incurred daily, people are forced to save in order to stretch their income so that enough of it remains until the next harvest or pay day.

##### Borrowing

People borrow only when their savings are not enough. For example, most people tend to borrow during lean months, especially when both education and household expenses need to be addressed at the same time (e.g. expenses for children's education and land preparation or planting in the months of May and June)

##### Ideal Situation

The situation is ideal if the person has more income and savings than expenses. The ideal situation for farmers is to have huge incomes and savings earned from production that can be utilized for the next season or for other investments.

##### Principles of Savings

- 1) Groups are organized as economic/savings units for a specific purpose
- 2) Self-help through group action
- 3) Voluntary membership
- 4) Members participate in making decisions
- 5) Groups exercise freedom in making decisions
- 6) Regular savings deposits to establish:
  - Habit of economizing
  - Members discipline
  - Good track record
- 7) Regular group meetings are held to:
  - Make group more cohesive
  - Make it easy to gather savings, give loans, collect repayments, undertake decisions
- 8) "Small is beautiful" – start small, but grow.

## Mobilizing Finance

### Need and Importance of Finances:

A farmer has to cover the cost of many activities in the various months as follows:

- **March:** purchase of seeds for KSh 500
- **June:** ploughing for KSh 700
- **May-June:** labour for KSh 250

The Farmer's cash availability is as follows:

- **In March** – KSh 500
- **In May** – KSh 250
- **In June** – KSh 500

How well do you think the farmer will be able to manage his/her farm cash flow? Will the farmer need any extra cash to finance the enterprise? How will the farmer calculate any shortfalls in the cash flow for the enterprise?

### Cash Flow Chart

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Buying Seed			500									
Organize Ploughing					700							
Labour				250	250							
<b>Total Cash Needed</b>			500		250	950						
<b>Total Cash Available</b>			500		250	500						
<b>Shortfall</b>					0	450						

**Note:** The enterprise will require an additional cash amount of KSh 450 in the month in June. However, the total cash needed will be a sum of all the cash shortfalls as shown in the cash flow chart. So the farmer may need to borrow money from other sources.

### What is credit and what are loans?

Credit and loans are money borrowed from various sources such as banks, money lenders, family and friends. This money must be generally repaid over a certain pre-defined time period, most often with interest or sharing of profit.

### When does the farmer need to access credit from the enterprise?

1. There is a farm business opportunity or potential, but the farmer lacks funds to invest.
2. There is a cash flow problem for a certain period of time, but funds are guaranteed to be generated.

**Assessing the Costs of Borrowing (Conditions or Terms to be considered)**

<b>Interest Rates</b>	Interest is the cost of borrowing money. It is usually calculated as a percentage of the amount borrowed. Interest rates may vary depending on where you get your loan. There are usually government laws that limit the interest rate so as to protect you from dishonest lenders.
<b>Bank Charges</b>	Some lenders may also charge a certain fixed amount for processing the loan. This may be charged separately or it may be made a part of the interest rate.
<b>Loan Repayment Period</b>	This is the time over which you have to repay the loan. The period may vary depending on where you get your loan. You should choose a repayment period that is most appropriate for your enterprise.
<b>Grace Period</b>	This refers to the period of time between getting the loan and when you have to start repaying it. Lenders usually understand that some enterprises may need a longer period of investment before realizing profits. You should choose a grace period that is most appropriate for your enterprise.

**Sources of finance:** family, friends, microfinance institutions, banks

**List of Credit Providers**

**Note:** Many financial institution in Busia County have stopped giving loans to farmer groups due to defaults on their payments.

No.	Name of Lender	Interest Rate Charge	Loan Repayment Period	Grace Period	Ranking
1	Equity bank	16%-20%	1 - 3 years	1 month	





## Session 19: Group Marketing and Buying

### Assessing Group Marketing: Facilitator's Guide

Advantages	Disadvantages
Increases bargaining power	Possibility of over-centralization
Improves economies of scale	Loss of individual flexibility
Lowers transaction costs	Levies and fees for the group
Better prices	Exploitation of weaker members
Combined small surplus can access transport to the market	Forced to accept prices of the group
The smallest producer can sell at the same price as international marketing networks	
Sharing risk	
Encourages innovation	



## Session 20: Understanding Contract Farming

### Understanding Contract Farming: Facilitator's Guide

Contract farming happens when individuals or a group of farmers enter into formal (written) or informal (verbal) arrangements with buyers for the marketing their products. The different ways or approaches through which farmers can market their produce are through **contract farming**, **group marketing**, and **individual marketing**.

Advantages of contract farming	Challenges of contract farming
<ul style="list-style-type: none"> <li>• Encourages small-scale producers to diversify into new enterprises.</li> <li>• Can lead to improved supply of production inputs provided by the contractors.</li> <li>• May help the farmer get credit.</li> <li>• Potential buyers can provide extension.</li> <li>• Offers opportunities to reach markets that are very far away, including export markets.</li> <li>• Can help farmers learn new production methods and technical skills, improving productivity and profitability.</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in the weather, pests and diseases might make it difficult for farmers to supply the amount and quality of output agreed in the contract.</li> <li>• If the contract requires more capital-intensive production, the farmer may be required to borrow money to buy equipment and implements.</li> <li>• An individual farmer may find it difficult to supply the quantity required by the buyers on his own, and other farmers may not want to join him.</li> <li>• Producing under a contract means that the farmer is not free to run his farm as he wants. He must farm according to the terms of the contract. He loses some control over what he does on his farm.</li> <li>• The farmers might not be able to sell all their produce if it does not meet the quality standards set in the contract.</li> <li>• Farmers might find it difficult to bargain for a reasonable price.</li> </ul>

#### Tips to overcome the challenges of contract farming

- Small-scale farmers can work together in order to increase their power to negotiate the terms of the contract.
- Farmers can work together to supply larger quantities of produce. This is likely to attract the interest of the buyer.
- Groups are likely to find it easier to share the machinery for production, hence reducing the need to borrow.
- Farmer groups are more likely to get grants and loans than individual farmers.
- Farmer groups can help other farmers in the group if they are struggling to keep up with the terms of the contract. They can also put pressure on others in the group.



## Sample Contract

Carefully review the contract below, and identify the strengths and weaknesses for both parties:

Company A offers to buy maize from farmer group (FG). The conditions under which the crop will be grown and sold are outlined below.

1. Farmer Group (FG) will plant no more than a total of 100 hectares of maize.
2. All crop production activities must be followed in accordance with Company recommendations and instructions.
3. Company A guarantees to buy all grain maize produced from the allocated limit.
4. Buying will be at designated locations and buying slips will be issued immediately after purchase.
5. All maize fields must be effectively fenced against animals.
6. All necessary seed, chemicals and fertilizer will be supplied and charged to the farmers. Payment for pre-sowing cultivation charges may be advanced.
7. The pricing formula for grain purchase at 14.5 percent moisture level will be as follows:
  - a. Production up to 3 500 kg/hectare = 20 ₱ /kg
  - b. Production from 3 501 to 4 000 kg/hectare = 21 ₱ /kg
  - c. Production from 4 001 kg/hectare and over = 22 ₱ /kg
8. Farmers are not allowed to sell maize covered under this agreement, to any other buyer without the written consent of Company A. Any breach of this agreement will result in farmers giving up their contracts.
9. Bags will be supplied by Company A, which retains ownership thereof. Any loss of bags will be debited to the farmer's account.
10. Farmers will be paid when their crops have been harvested and sold to Company A and all outstanding crop advances have been deducted.

If you wish to grow maize on the above terms and conditions, please complete this form and return it to Company A's office before \_\_\_\_\_ so that we may reserve your quota of \_\_\_\_\_ hectares.

Signed on \_\_\_\_\_

\_\_\_\_\_  
Company Manager Representative

\_\_\_\_\_  
Farmer (Farm No \_\_\_\_\_ )

[Placeholder for MOU between the Namalenga farmers group and Mundika School]

## Negotiating Contracts

Negotiation is a process whereby two parties discuss an issue and reach an agreement. Negotiation usually requires both parties to compromise, where each will give up something and hold on to something in order to come to an agreement.

### Tips for Successful Negotiation




#### 1. Things you need to know




- Range of buyers available
- Demand and supply of crops
- Market prices and conditions
- Break-even and cost of production
- Marketing costs
- Lowest price for product

#### 2. Skills and abilities you need to have

- Ability to say “No”.
- Listening skills
- Focus on the end goal
- Self-control

### Farm Assessment Audit Checklist

Knowledge Areas	Rating			Areas of improvement
				
Range of buyers available				
Demand and supply of crops				
Market prices and conditions				
Break-even and cost of production				
Marketing costs				
Lowest price for product				

Knowledge Areas	Rating			Areas of improvement
				
Ability to say "No"				
Listening skills				
Focus on the end goal				
Self-control				



## Session 21: Assessing and Managing Business Risks

### Assessing and Managing Business Risks: Facilitator's Guide

Risk is defined as any factor that may cause losses to the farm business. Farmers may have little control over such risks. Some risks are external, such as changes in market prices, low rainfall, etc. Some risks are internal, such as decisions about what to produce, the type of inputs to purchase and use, etc. While farmers can control the internal risks more easily, there are ways to also manage external risks, provided these are recognized and addressed in time. However, risk management is not a guarantee for success, and often allows the farmer to effectively minimize the negative effects to his/her business.

#### Some risks associated with farm business

- Production and technical risk
- Marketing and price risk
- Financial risk
- Institutional risk
- Human and personal risk
- Natural disasters and adverse weather pattern

#### Risk management strategies

- Risk-reducing inputs
- Risk-reducing technologies
- Selecting low risk activities
- System flexibility
- Production diversification
- Reserves of inputs and produce
- Spreading sales
- Market price information
- Contract farming
- Crop insurance
- Selling assets

**Things to be considered to assess and manage the risk**

*The impact of the risk if it occurs*

*The financial consequences if it occurs*

*The likelihood that it will occur*

*The risk management strategy*



## Session 22: Benchmarking

### Benchmarking: Facilitator's Guide

Benchmarking is a continuous process of comparing the performance of one farm with another one that is performing really well. It involves gathering information from farmers who have used good practices on their farms.

What aspects of the farm should be compared?




<b>Land</b>	<ul style="list-style-type: none"> <li>• What is your farming system?</li> <li>• What is the total farm area?</li> <li>• What are the individual plot sizes?</li> <li>• How far are the plots from home?</li> <li>• Who owns the land?</li> <li>• How much land is allocated to the different enterprises?</li> <li>• Is there any intercropping? How much?</li> <li>• What is the condition of the land? Fertility? Erosion?</li> </ul>
<b>Labour</b>	<ul style="list-style-type: none"> <li>• How many family members can work on the farm?</li> <li>• What is the total hours needed per enterprise?</li> <li>• How much labour is hired? From where? How are they paid?</li> </ul>
<b>Capital</b>	<ul style="list-style-type: none"> <li>• What stocks and reserves of food, cash, etc. are available?</li> <li>• How much livestock is available?</li> <li>• What machinery, tools and equipment are available? What condition is it in?</li> </ul>
<b>Input Supply</b>	<ul style="list-style-type: none"> <li>• What purchased inputs are used? From what suppliers? Are the inputs of good quality, reliable supply, etc? What prices are being paid?</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>• What sources of irrigation water are available?</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>• What is your level of production?</li> <li>• Are there any enterprises that are performing outstandingly?</li> <li>• What is produced? What yields are achieved? What is the quality?</li> <li>• What inputs are used? How much inputs are applied? When are they applied?</li> <li>• How much of the crop is consumed by the household? How much is sold at market?</li> </ul>
<b>Post-harvest Marketing</b>	<ul style="list-style-type: none"> <li>• Where is the produce marketed?</li> <li>• How is it marketed?</li> <li>• How attractive is the market? What is the demand for the product?</li> <li>• What are your marketing costs per item?</li> <li>• What prices are achieved? Are these the best prices?</li> <li>• Are there ways that marketing can be improved?</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>• What buildings/structures are on the farm?</li> <li>• How are the roads to the markets?</li> <li>• How are the farm roads?</li> <li>• What is the source of energy for the farm (e.g. electricity, biogas)?</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Which enterprises are the most profitable?</li> </ul>

- How is the farm managed?
- Does the farmer keep records?
- What are the unit costs of inputs and materials?
- What is your overall level of profit?
- Does the farmer plan for the future?
- What lessons can you share?

## Session 23: Characteristics of a Successful Entrepreneur

### Characteristics of a Successful Entrepreneur

Rate yourself on the following entrepreneurial skills

Entrepreneurial Characteristic	Rating		
			
Likes being your own boss			
Has self-confidence			
Has sense of urgency			
Has high energy			
Is willing to risk money and security			
Can inspire and energize others			
Strong willed			
Has ability to learn from failures			
May devote a disproportionate time to the business			
Very competitive			
May lack some business skills			
Has a “never, never, never quit” attitude			
Honest and trustworthy			



## Basic Hygiene Guidelines

Hand washing technique with soap and water, adopted from the Adapted from the Applied Basic Agri-Nutrition Toolkit for Trainers, Prepared by USAID and the Republic of Kenya Ministry of Agriculture and the Ministry of Health and Sanitation. Available at:[http://growkenya.org/docs/Applied\\_Nutrition\\_Toolkit\\_V2.pdf](http://growkenya.org/docs/Applied_Nutrition_Toolkit_V2.pdf). The Agri-Nutrition Toolkit adapted this graphic from the *World Health Organization Guidelines on Hand Hygiene in Health Care*



**SELECT**



**PREPARE**



**COOK**



**HEALTH**



## Basic Hygiene Guidelines: Facilitator's Guide

- Wash hands after visiting the toilet, blowing your nose, brushing hair, or touching your body.
- Wash hands between food preparation tasks.
- Wash hands when coming from the farm.
- Wash hands after handling animals.
- Wash raw foods thoroughly. Fruits and vegetables contain harmful dirt, fertilizers, and pesticides.
- Avoid unnecessary human contact and over-handling of food. Use spoons or other utensils.
- Prepare raw and cooked food separately; use separate chopping boards and utensils where possible. This prevents cross contamination, or transferring microorganisms from contaminated food to uncontaminated food (by hands, utensils, or storage).
- Wash cooking equipment with soap and clean water before and after use and when preparing different foods using the same equipment.
- Never eat while preparing food.
- Minimize time food is at unsafe temperatures during preparation.





## Session 26: Understanding How to Assess the Performance of a Farm Business Plan

### Assessing the Performance of the Farm Business Plan

	Things I should do again	Things I should do differently
1. My farm goal		
2. My production plan		
3. Physical resources and inputs		
4. Planning		
5. Marketing		
6. Profitability		
7. Cash availability		
8. Risks		
9. Record Keeping		

## Choosing Farm Enterprises for the Next Season

Systematically choose your enterprise for the next season:

	<p>Think of all the different enterprises that it might be possible to have</p>
	<p>Make a budget for each enterprise and consider that which can bring the most profit</p>
	<p>Review the materials, resources and inputs that would be required. Are they easily available? Are the sources reliable?</p>
	<p>Assess what labour is needed. Is enough labour already available or will additional farm hands need to be hired?</p>

**Remember:** No two farms are exactly the same. The following factors should always be assessed (for each farm and farmer)

- Market Demand
- Experience from the previous season
- Profitability
- Technical feasibility
- Physical resource requirements
- Labour requirements

## Appendix B: Focus Group Templates

**FOCUS GROUP DISCUSSION TOOL (FARMER GROUPS)**

<b>Name of the Group:</b>	
<b>Farm Size:</b>	
<b>Number of Group Members:</b>	

1. What local, nutritious crops do you want to grow

Local name	English name

2. What is the best market for the product?  
 3. How do you plan to produce the new produce?  
 4. Is it possible to produce it on your land?  
 4.1 How close is your land to a market?  
 4.2 Is there sufficient space?  
 4.3 Is the soil quality adequate for the crop you want to grow?  
 5. What resources and inputs are needed and where do you get them?

Resource	Need (Y/N)	Quantity	Quality (Poor, Neutral, Good)	Source of Supply
Seed				
Fertilizer				
Pesticide				
Equipment				
Implements and Tools				
Storage Structures				
Animal Draft				
Water				
<b>Notes:</b>				

6. How easy is it to get planting materials when you need it?  
 7. How satisfied are you with the seed /planting material for the vegetables?

**8. What labour do you need?**

Activity	Month		Amount (estimate in KSh)	Number of Days/Weeks (specify which; estimate)
	1 <sup>st</sup> season	2 <sup>nd</sup> season		
Land Preparation				
Planting				
Weeding				
Harvesting				
Total				

**9. Do you have any savings or linkages with financial institutions?****10. What are the risks involved and what do you do about them?****11. What are the technologies used in production?****11.1** Are there any accessible technologies that will make production more efficient?**12. Vegetable grown on-farm:**

Species	Quantity produced	Quantity consumed	Quantity sold
Cowpeas			
Spider plant			
African nightshade			
Pumpkin leaves			
Notes			

**13. Do you have a separate household garden for personal consumption? 13.1** If not, will it be difficult to expand production and maintain sufficient food for consumption?**14. Market information:**

Where do you sell your produce?	
How does the product get to the market?	
How many products does the market handle?	
When does the market have the highest demand for produce? All year round? Only in certain seasons?	
Who buys the product?	
How are products paid for?	
What happens to produce that are not sold?	
Do you conduct any post-harvest activities (cleaning, drying, sorting, boiling, etc.)?	
What kind of packaging is used, if any?	
Do you have an alternative market?	

15. Have you ever attended any training on capacity building activities? Who organized it and what was taught?

Organizers of training	Topics covered

16. What are your training needs?

*The farmer group is shown a draft outline of the FBS training, and asked what topics may be useful for the group.*

17. Challenges

*This space is reserved for overall challenges expressed by the farmer group.*

## Appendix C: Focus Group Results

### Overall Results Summary from Farmer Focus Groups by Farmer Group and Topic Area

[Placeholder for short narrative summarizing table and major needs overall]

Group	Topic	Challenges
<i>INUA BULAKO FARMERS</i>	Financial	Account needs to be active
<i>INUA BULAKO FARMERS</i>	Financial	Delay in payment when supplying vegetables to institutions
<i>Esikoma Ushirika SHG</i>	Financial	High Charges
<i>INUA BULAKO FARMERS</i>	Financial	High Charges
<i>Esikoma Ushirika SHG</i>	Financial	High Collateral required to access loans
<i>INUA BULAKO FARMERS</i>	Financial	High Collateral required to access loans
<i>Esikoma Ushirika SHG</i>	Financial	High interest rates
<i>Esikoma Ushirika SHG</i>	Financial	Lack of capital and financing (it is expensive to hire tractors)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Financial	High Charges
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Financial	High Collateral required to access loans
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Financial	Lack of capital to cultivate the land (It is expensive to hire a tractor)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Infrastructure	Security (the farm is not fenced thus the locals steal the produce)
<i>Esikoma Ushirika SHG</i>	Market	Lack of market for the produce
<i>INUA BULAKO FARMERS</i>	Market	Lack of reliable market for the produce
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Market	Lack of sustainable market for the produce
<i>Esikoma Ushirika SHG</i>	Market	Low prices during rainy seasons due to overproduction of leafy vegetables
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Market	Low prices for the produce
<i>INUA BULAKO FARMERS</i>	Market	Markets handle very little produce(less than 50% of the produce)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Market	Markets handle very little produce(less than 50% of the produce)
<i>Esikoma Ushirika SHG</i>	Market	No alternative markets



<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Market	poor local market
<i>Esikoma Ushirika SHG</i>	Market	Village market (from the farm) handles few produce, mainly African nightshade and spider plant
<i>Esikoma Ushirika SHG</i>	Post-Harvest	Little use thus far (cleaning)
<i>INUA BULAKO FARMERS</i>	Post-Harvest	Little use thus far (cleaning)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Post-Harvest	Little use thus far (sorting)
<i>INUA BULAKO FARMERS</i>	Production	Crops are damaged by wild animals
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Production	Floods especially during rainy season
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Production	Pests and diseases
<i>INUA BULAKO FARMERS</i>	Production	Pests and diseases (African nightshade, cowpeas, spider plant and African kales)
<i>Esikoma Ushirika SHG</i>	Resources	Depend on rain water
<i>INUA BULAKO FARMERS</i>	Resources	Depend on rain water
<i>Esikoma Ushirika SHG</i>	Resources	Dissatisfied with the seeds (not viable)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Resources	Dissatisfied with the seeds (not viable)
<i>Esikoma Ushirika SHG</i>	Resources	Drought (Depend on rain-fed agriculture)
<i>INUA BULAKO FARMERS</i>	Resources	Drought (It is expensive to buy water pump and pipes for irrigation as the farm is far from the water source)
<i>Esikoma Ushirika SHG</i>	Resources	Hard to get planting materials
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Resources	Hard to get planting materials
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Resources	Lack of certified seeds
<i>INUA BULAKO FARMERS</i>	Resources	Lack of certified seeds (African nightshade and spider plant)
<i>Esikoma Ushirika SHG</i>	Resources	Lack of certified seeds (African nightshades & spider plant)
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Resources	Lack of inputs (organic fertilizer)
<i>INUA BULAKO FARMERS</i>	Resources	Soil is acidic
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Resources	Soil is acidic
<i>INUA BULAKO FARMERS</i>	Resources	soil quality is not adequate - too acidic
<i>Esikoma Ushirika SHG</i>	Tech. Needed	Irrigation

<i>INUA BULAKO FARMERS</i>	Tech. Needed	Irrigation technology
<i>INUA BULAKO FARMERS</i>	Tech. Needed	Pest and diseases control techniques (making plant liquid manure)
<i>Esikoma Ushirika SHG</i>	Tech. Needed	Post-harvesting
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Tech. Needed	Post-harvesting techniques
<i>INUA BULAKO FARMERS</i>	Tech. Needed	Post-harvesting technologies
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Tech. Needed	Preparation of organic manure
<i>NAMALENGA WATER IRRIGATION PROJECT</i>	Tech. Needed	Production technologies e.g. Mandala garden, Keyhole, Hanging garden etc.
<i>INUA BULAKO FARMERS</i>	Tech. Needed	Production technology e.g.- mandala garden, keyhole, hanging garden, double digging beds
<i>Esikoma Ushirika SHG</i>	Tech. Needed	Water Harvesting
<i>INUA BULAKO FARMERS</i>	Tech. Needed	Water harvesting technology

**Attachment 5. Factsheet African leafy vegetables go back to school in Kenya**



Photo: Cowpea leaves ready for harvest at St Mary's Mundika secondary school. Credit: BFN Kenya/A. Manjella

# African leafy vegetables go back to school in Kenya



## Biodiversity for nutrition and health in Busia County, Kenya

Nutritious and resilient African Leafy Vegetables are making a comeback in Busia County, Kenya, thanks to a pilot procurement scheme that is sending local, nutritious diverse crops back to school.

This initiative is developing markets and value chains for traditional crops by using them in school-feeding programmes. This win-win-win approach is increasing crop diversity in both diets and production systems, resulting in healthier people, healthier food systems and improved livelihoods.

## Locally available nutritious diverse crops as a solution

Busia County, Kenya, is rich in biological diversity. It has a variety of agro-ecological zones suitable for growing a diverse range of plants and crops with the potential to meet nutrition needs and sustainably support agricultural productivity.

Yet people living in Busia County are among the poorest and most food insecure people in Kenya with poverty rates around 70% and two thirds unable to meet their basic food needs. 26% of children under 5 are stunted and 11% are underweight. At the same time obesity is on the rise, along with an increase in diabetes and high blood pressure.

Several challenges are affecting food production, including climate change, severe weather, changing land use, water pollution and soil erosion. Shifts in eating habits and preferences, and a lack of access to quality seeds, have left most communities relying on just a handful of food crops for their sustenance.

This has come with a decline in the production and consumption of traditional crops, including African Leafy Vegetables (ALVs), nutritious, weedy, semi-cultivated species adapted to local growing environments and more resistant to pests and diseases, requiring little management, pesticides and fertilizers.



Photo: Picking African Leafy Vegetables Credit: BFN Kenya/A. Manjella

## Utilizing school-feeding programmes to address several challenges

A food procurement model approach between local producers and schools, carried out by Bioversity International with partners, is simultaneously addressing consumer demand and supply constraints linked to marketing traditional crops.

One farmer group began by supplying ALVs directly to St. Mary's School, Mundika, under a negotiated memorandum of understanding. The farmers grow the vegetables directly on school land reducing transport costs and food losses.

The agreement means that the school has a reliable and constant supply of quality African Leafy Vegetables while the farmers have a dependable buyer for their produce. The 400 students benefit by consuming a more diversified and nutrient-rich diet

through their school meal.

*"There is nothing more important than seeing my pupils fed on a nutritious and balanced diet. This will improve their health and increase their academic performance and reduce absenteeism due to sickness and diet-related diseases."* comments Mr Obonyo, School Principle, St Mary's School.

Additional benefits of having the vegetable plots on the school premises are the educational opportunities. Students are getting hands-on experience in growing and using local crops in food dishes, and learning about sustainable agricultural practices.

*"Other schools in the area have shown interest in adopting this approach as they see that providing healthy balanced diets need not be expensive and can that barriers can be overcome. This reflects what we*

*have found in other project sites where we have carried out similar procurement schemes, such as in Brazil."* explains Danny Hunter, Global Project Coordinator, Biodiversity for Food and Nutrition.

Since this initial success, training was provided to 25 farmer groups to build capacity to sustainably produce ALVs, while nutrition education activities were carried out to improve the capacity of schools and clinics to benefit from ALV consumption. Eight farmer groups have now signed contracts with 13 schools and 1 hospital for the provision of ALVs to be included in their institutional meals.

*"Looking ahead, we are currently planning a workshop with stakeholders to roll out and test the procurement model in more locations in Kenya and to look at including additional countries, such as Tanzania and Ethiopia."* concludes Hunter.



Photo: Cook serving cowpea leaves to the students  
Credit: BFN Kenya/A. Manjella

## Partners

The GEF 'Mainstreaming Biodiversity for Nutrition and Health' initiative is led by Brazil, Kenya, Sri Lanka and Turkey and coordinated by Bioversity International, with implementation support from the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations (FAO).

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## **Attachment 6. Introducing nutritious vegetables and fruits in primary school feeding programs in Busia County, Kenya**

## Introducing nutritious vegetables and fruits in primary school feeding programs in Busia County, Kenya

*June 2015 to May 2016*

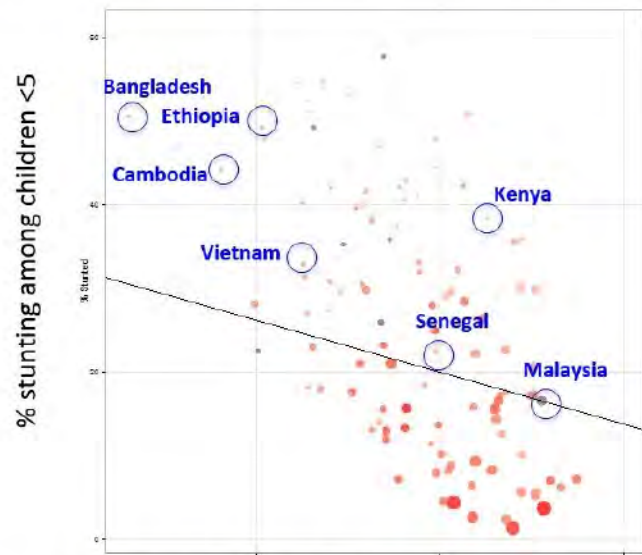
In Kenya, high levels of under-nutrition and overweight and obesity coexist. The Government of Kenya has placed a high priority on changing the quality and quantity of food available to its citizens, and particularly its children. The government has made considerable headway in achieving a number of child-specific targets including exclusive breastfeeding, reduction of child obesity and stunting.

Considerable buy-in and political support from relevant government ministries and departments for this initiative is clearly visible and provides a good platform for its expansion. The County Ministries of Agriculture, Health and Education are currently supporting the project with capacity building activities in sustainable agriculture production, nutrition and health education as well as training in business skills and group dynamics. Furthermore, the Ministries have been involved in the drafting of a biodiversity policy document that recognizes the importance of local edible biodiversity as a pathway towards food and nutrition security. Local foods have the potential to reduce both childhood obesity and stunting by providing affordable micronutrients for healthy and balanced diets.

Preliminary data from the project shows that local landraces of finger millet are higher in calcium and magnesium, and contain on average 6 times more iron and twice as much fibre in comparison to commonly consumed maize varieties. Local landraces of Bambara nut were found to be lower in fat and sodium and higher in fibre than commonly consumed groundnut varieties, with almost double the potassium content. Food composition data of African Leafy Vegetables is currently being collected as part of the wider Biodiversity for Food and Nutrition Project of which this scoping study is a part.

Unreliable supplies, lack of year-round availability, longer preparation and higher market prices have meant that schools are often unable to incorporate local foods into their school feeding programs, leaving them to provide meals that are repetitive and nutrient-poor.

This pilot project has demonstrated that it is possible to diversify school meals and raise demand for local foods by linking entrepreneurial farmers to a nearby secondary school. One farmer group has been successfully linked and is supplying six indigenous vegetables to one school under a



Credit: Remans et al. GFS 2014; also adapted by SUN 2014

negotiated memorandum of understanding. To cut transport costs and avoid food losses farmers grow the vegetables directly on school land. The school purchases the produce at an agreed market price. As a result, the school has a reliable and constant source of quality African Leafy Green Vegetables and the farmers have lowered their transport costs and a dependable buyer for their produce.

In addition, the plots are providing a useful educational tool for students who are learning about sustainable agricultural practices and are getting hands-on experience in growing and using local crops.

The success of this approach is raising the interest of neighbouring schools proving that healthy and balanced diets need not be expensive and that they can be easily introduced in school feeding programmes at little or no additional cost. This is also attracting the attention of local administrations.



There is nothing more important than seeing my boys fed on a nutritious and balanced diet. This will not only improve their health but also increase their academic performance and reduce absenteeism due to sickness and diet-related diseases". Mr. Obonyo

Principle – St Mary's Secondary School, Mundika, Kenya.

Early projections for the dry season, when market prices for leafy greens are higher, the school can save up to 10 Ksh (\$0.10) per Kg of leafy greens supplied. That sums up to a weekly savings of approximately \$9 per week and yearly savings of \$360 a year.

Projected average profits for the smallholder farmer group, on the other hand, supply 91Kg of African Leafy Vegetables to the school per

week, with a profit of 15Ksh (\$0.15) per Kg of leafy greens supplied. This translates into a weekly profit of 1,365Ksh (\$13) per week and yearly profits of roughly \$540 a year.

The project will continue track and monitor the economic benefits over time to the school and to the farmers. In a second phase, the project could also begin to monitor the nutrition outcomes of improved and diversified diets.

This project is helping to revive interest in African Leafy Vegetables by addressing demand and supply-side constraints facing these local crops. The project is building the capacity of entrepreneurial farmer groups to sustainably produce and respond to market demands for African Leafy Vegetables from institutional markets (such as local schools, clinics etc.). At the same time, schools and communities are undertaking nutrition education interventions in Busia County to increase the appreciation and use of local nutritious biodiversity to improve dietary diversity.