

Country Report: Lesotho

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LESOTHO is a small, landlocked country completely surrounded by South Africa and covering an area of 35 355 square kilometres. The whole country has an elevation of 1000 metres above sea level, thus making it the highest country in the world. It is divided into four geographic zones according to elevation. The lowland and foothill regions together contain 7 of the 10 district headquarters. Only 10% of the country is arable, two thirds of which is found in the lowland and foothill regions. Despite the fact that Lesotho's economy is based on agriculture, arable land continues to decline due to soil erosion and rapid encroachment of towns, villages and roads.

The population of Lesotho is growing at the rate of 2.6% per annum and the density per square kilometre has increased from 53 in 1986 to 64 in 1992, while human population density on arable land has increased from 478 in 1986 to 707 in 1992. Population increase has caused a shortage of land for cultivation, increasing the number of landless households. Eighty four per cent of the households are rural and almost all practice subsistence livestock farming. Because of the high number of men working in the mines in South Africa, there are many rural households that are headed by women.

Livestock is reared under extensive farming systems and there is communal grazing. Ownership of livestock is regarded as a source of wealth and livestock are used in traditional activities, such as the payment of lobolo (bride price). However, men rear all types of livestock with the exception of chickens, which traditionally are in the hands of women.

The Cultural Importance of Small-scale and Peri-urban Poultry

Lesotho is a third world country, where the standard of living is still very low. The Food and Agriculture Organisation of the United Nations classifies it as a

low-income food-deficit country. For every child to be able to perform normally each day, whether in class or outside school, a balanced diet is essential. In Lesotho, the majority of the population is poor and live in rural and peri-urban areas. It is worthy to note that chickens are a resource available even to the poorest families. Women have always kept chickens for various reasons, particularly as petty cash to cater for minor but essential household needs such as medical care, food, etc. Chickens are also used in several cultural rituals and traditional doctors use them for healing purposes. It is not uncommon to offer a chicken as a gift.

Among other African countries, Lesotho is rated as having a high literacy rate. Village chickens have played a significant part in the education of the rural people as live chickens and/or eggs are sold to raise money for school fees. They provide a cheap source of protein in comparison with mutton or beef, which are even less healthy in terms of having high levels of undesirable fat. As such, it is more common to find poultry meat in the diet of children and they always carry eggs to school as a snack. Thus, chickens play a significant role in Lesotho's rural economy and household food security.

Production Constraints

Although the importance of increased poultry production was understood decades ago, the Department of Livestock Services neglected to take an active role in promoting the development of the village poultry industry in the country. Priority was given to the more productive exotic breeds for commercial farming, and the Department lost sight of the reasons why the village poultry industry was introduced — to increase the protein content in the diets of rural children.

Therefore, in the goals and objectives for poultry development in Lesotho, there are no specific objectives and concrete activities for improving the production of the village chickens. There is no infrastructure such as cold storage facilities at Livestock

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Improvement Centres, which are centres placed strategically throughout the country to serve the farming community at village level. Consequently, storage of Newcastle disease (ND) vaccines to facilitate routine vaccination programs of village chickens is unavailable.

Extension services to people who keep village chickens are non-existent. It is for this reason that village chicken keepers lack information on various aspects of poultry production. For instance, they are not aware of how to control diseases such as ND despite the fact that they encounter many outbreaks that decimate their flocks. They also do not understand that chicken keeping, if managed well, could be an income generating-activity. No market research for the demand and sale of village chickens and eggs has been done and this factor limits increased production.

There are also no government policies regarding rural credit, which makes it difficult for rural poor people to access funding for expansion of their poultry units and the development of this sector. Lack of specific organisational objectives for rural poultry-raising has resulted in very little participation by the Animal Health Division and lack of information on important diseases besetting village chickens. However, there has recently been a change in government policy.

Methods of Controlling Poultry Diseases

Village chicken keepers believe in using an aloe preparation for the control of ND. Aloe is ground in water and given to sick birds to drink. Unfortunately, this treatment has not been verified scientifically. It is not an effective control measure because whenever the virus attacks, which is quite often, destruction of the whole village flock results. This is an indication that after outbreaks, carriers remain to infect new, susceptible birds.

Conventionally, ND is controlled through drinking water using La Sota vaccine. However, La Sota is not widely used because of a lack of knowledge on control of ND; the perception that the vaccine is expensive; the vaccine is not available at village level; lack of a cold chain at village level; and it is not affordable by the majority of rural people.

The Epidemiology of Newcastle Disease

Outbreaks of ND are experienced in the 10 districts of the country all year round with greater incidences in winter. Table 1 shows ND outbreaks in three districts. Although other districts have reported outbreaks, figures are not available. It is not clear whether the appearance of highly virulent strains is

cyclical but it has been observed that alarmingly high mortalities occur in certain years. The differences in the nature and course of the disease cannot be explained with certainty because factors that influence the disease, such as the environment, the virus strain, the natural and acquired differences in the host, as well as dosage, have not been studied.

Village chickens are usually left to roam in search of food. Therefore, transmission between flocks by direct contact between individual birds is significant. Contamination of the range by infected birds leads to infection of healthy birds. Aerosol transmission also plays a major role in ND virus transmission.

Table 1. Percentage mortality in Newcastle disease outbreaks in three districts.

District	Total population exposed	Total dead	% Mortality
Maseru	269	241	90
Quthing	63	49	77
Leربة	424	306	72.16

NB: The incidence rate could not be calculated because the population at risk was unknown.

Diagnosis and Reporting of Newcastle Disease

Currently, full diagnosis of ND is based on clinical signs and post-mortem pathological findings, as laboratory facilities are inadequate. Upgrading of the laboratory to cater for diagnosis of viral diseases with an emphasis on ND is in the pipeline.

ND is classified as a notifiable disease. As such, the law requires that its occurrence be reported immediately by the fastest means to the nearest veterinary authority. Therefore, at village level a farmer reports to a Livestock Assistant or Livestock Attendant who in turn reports to the District Veterinary Officer (DVO). The latter then reports to the Chief Veterinary Officer (CVO). Normally, the DVO informs the CVO by phone and follows it with a written notification. Once the CVO receives a report on an outbreak, he reports back to the OIE and SADC Epidemiology Unit.

Role of Extension Services in Village Production

To support the existing poultry industry (improved layers and broiler breeds), there is a well-structured extension service. Farmers receive courses on health and production related issues. There is also a good back-up service from the Department to assist farmers to increase production. In its effort to

contribute to poverty alleviation and income generation through livestock production, the Department has embarked on public awareness campaigns where farmers are being told of the importance of village birds.

It is believed that the role of the extension services in village production is to equip village chicken keepers with knowledge on good management, which embraces the use of local and affordable feed and housing material as a means of cutting down on investment and operational costs. Farmers are given courses on recognition and prevention of important poultry diseases and are advised on the importance of importing desirable birds with proper health certificates in order to reduce the occurrence of epidemics. Extension services should also focus on marketing, teaching poultry keepers how to market their chickens and eggs. It is also important to provide the sector with a good back-up service on health and management-related issues.

Marketing Opportunities and Strategies

Accessibility by road to most rural areas is not easy in Lesotho because of its topography. Therefore, efficient supply of feed and veterinary drugs is a problem. Second, the prevailing poverty in rural areas makes it impossible for local people to rear exotic breeds of chickens, which are expensive to maintain. Even if they were to rear improved breeds, marketing of these chickens and eggs would require transport to urban areas where market places, such as supermarkets, are found.

Currently the production of village chickens is so small that it cannot even supply local markets. But with increased production, village chickens can serve markets further afield. Nowadays, people are conscious of what they eat and organically produced poultry and eggs fetch good prices. Also, if these products were produced locally, they would be less expensive than imported products. One other advantage that a non-intensive poultry production has is the cheap labour produced by the family unit. Therefore, low production costs mean the sector has a competitive advantage.

The Department is advocating the formation of Village Poultry Associations as a vehicle for village poultry development. This strategy will not only give members of the associations the financial muscle to purchase chickens, veterinary drugs and supplementary feed, but to market their produce as well.

Economic Potential of Village Poultry

Very low numbers of dual-purpose chickens are imported for distribution to the village community.

The purpose of introducing dual-purpose chickens is to improve the genetic pool of indigenous chickens. The prevailing production of village chickens is too low to satisfy any market demand. These chickens are mainly kept for home consumption. Considering the high amount of imported poultry meat, it is reasonable to conclude that if production of village poultry could be increased it would serve as an import substitute. With increased production, more jobs would be created and people would generate more income. The livelihood of the rural people would improve and fewer people would migrate to towns in search of jobs. Thus, there would be less pressure on the Government to create jobs and develop social infrastructure for the increasing urban population. The country would also benefit from the money circulating within the country instead of paying for imported goods.

Table 2. Poultry imports and exports over a three-month period.

Item	Imports	Exports
November 1999		
Eggs	19 098	0
Point of lay pullets	6 160	0
Dual purpose chickens	0	0
Day-old broilers	0	272 000
December 1999		
Eggs	22 281	0
Point of lay pullets	23 100	0
Dual purpose chickens	0	0
Day-old broilers	0	192 000
January 2000		
Eggs	25 464	0
Point of lay pullets	9 500	0
Dual purpose chickens	200	0
Day-old broilers	0	272 000

Marketing

The Government of Lesotho has created an effective marketing system for commercial egg producers. Marketing centres known as egg-circles were established in seven districts of the country. Each district egg-circle was mandated to accept and sell eggs produced in the district only. When a district experienced egg shortages, it was allowed to import eggs from either South Africa or other districts of Lesotho through a permit system, which was controlled by the Department of Livestock Services. Unfortunately, mismanagement has led to the collapse of these egg-circles. Recently poultry farmers were having a problem with dumping. Some business

people are buying low quality cheap eggs from South Africa, flooding the market and putting local producers out of the market. For village chickens, there has never been any organised marketing system.

Broiler producers have a problem of marketing their produce due to lack of slaughter facilities. Commercial places are only keen to buy meat that has undergone inspection. As such, farmers have to sell at farm gates or to individuals. This results in prolonged periods of depopulation and loss in profits. Since the majority of birds are sold live, producers cannot make use of their feathers, which reduces the income generating avenues.

Research and Development

Ten years ago, village chickens outnumbered the commercial chickens, but because of ND, they are now almost wiped out. In order to achieve their development goal, the Department of Livestock

Services has made project proposals aimed at assisting rural people to increase the production and productivity of their chickens. There is a need to establish an effective and efficient cold chain in the country to enable every farmer to have access to the ND vaccine. Since the conventional vaccine is too expensive for most poor farmers, research on proper handling of the heat-resistant V4 strain vaccine under local conditions and appropriate vaccine delivery to the chickens, is a priority.

Previous projects have unsuccessfully introduced dual-purpose birds. The Department is still encouraging farmers to keep this type because of its high resistance and performance under rural conditions compared to the improved breeds. Reasons for this observed failure are not known. Therefore, research will have to focus on appropriateness of production systems used by farmers and factors associated with poor production.