



## Objective

**The project aims to increase the profitability and sustainability of intensive and emerging cropping systems in Bangladesh through improved nutrient management. A small, complementary activity aims to improve profitability of nutrient management in grain cropping in south-west Australia.**

The objectives are to:

- Identify differences between current and recommended fertiliser use on farms, gather evidence of nutrient imbalances and identify barriers to adoption of more profitable and sustainable nutrient management practices.
- Develop and test tools for sustainable nutrient management of intensively cropped areas of north-west Bangladesh, emerging conservation agriculture cropping systems, and for coastal zone soils of southern Bangladesh.
- Engage with women and men in farmers' groups, extension officers and the private sector to out-scale the use of tools and inform the development of fertiliser policies to achieve more efficient fertiliser use.
- Increase the knowledge of soil resources and their capability for nutrient management among women and men farmers, research partners and key stakeholders.

## Expected scientific results

- Increase common use of nutrient budgets and nutrient balance for management of crop nutrition in intensive cropping patterns.
- Transition from present single-crop approach to cropping pattern nutrient management.
- Increase scientists understanding of loss pathways that need to be taken into account when recommending fertiliser.
- Identify major loss pathways to inform additional research to increase nutrient use efficiency.
- Validate data on fertiliser requirements and rice crop responses.
- Quantify potential for re-use of farm and rural bio-waste as a nutrient input for cropping.

## Expected impact/outcomes

- Improve nutrient management and benefits from increased profitability for participating farmers.
- Ensure farmers receive current, best-practice advice on fertiliser use to optimise nutrient management and efficiency and profitability of cropping intensification.
- Implement utilisation of fertiliser recommendations throughout Bangladesh resulting in changed fertiliser application practices, which will improve profitability and livelihoods.
- Increase understanding of biophysical, socio-economic (including gender) and technical constraints to changing nutrient management practices and strategies to overcome constraints.
- More responsive policy formulation that better supports sustainable nutrient management.

