Sustainable agriculture: whole farm management – partnerships for resilient and profitable farming in Far North Queensland

Project summary

Proponent: Terrain Natural Resource Management Ltd

Value: $495,000

Project duration: 1 October 2013 – 30 June 2016

Project description

This project will build the capacity of landholders, extension staff, natural resource management bodies and other key influencers to understand opportunities for improving farming efficiencies. This will be achieved by improving whole farm planning and delivering triple bottom line outcomes that can be sustained over time. Building on past activities and adding value to future Reef Rescue investment, this project will build knowledge at two levels.

1. Region-wide information will be collected to assess:
   - current farming practice and the condition of agricultural land
   - adoption rates of best management practice (and barriers to adoption)
   - improvements in fertiliser and pesticide use efficiency for production and water quality outcomes
   - the level of understanding of the opportunities behind whole farm management.

   Information will be used to inform best practice frameworks as well as extension approaches and activities. There will be a focus on the cane industry due to its dominance in the region.

2. Targeted, intensive extension and support will be provided to 12-15 farmers across the region each year, spread across the full range of industries. Outcomes of previous investment (e.g. Reef Rescue) will be reviewed and current best management practice expanded into an integrated Whole Farm Planning approach. This approach will utilise best available technical expertise to enable in-depth enquiry and analysis around efficiency opportunities. The connection between whole of farm planning, best practice and farm productivity will be a key area of investigation, ensuring that outcomes for water quality are matched with economic outcomes for landholders.

Close connections with the Queensland Department of Agriculture and Fisheries Reef Plan Extension and Education Strategy will build on the existing partnership between the Department of Agriculture and Fisheries and Terrain Natural Resource Management in delivering the Reefocus...
Education pilot in the Herbert Catchment. The partnerships will ensure that this project complements and informs the Reef Plan Extension and Education Strategy as well as industry extension in general.

A key focus of this project will be to identify the opportunities and barriers for adoption of the wider range of best management practices at the farm scale. This information will be outlined in the context of a Whole Farm Planning framework. The region-wide and case study information will inform the refinement of regional best practice frameworks (i.e. ABCD), ensure effective targeting of broader extension activities, and maximise adoption outcomes.

The first year will target fewer landholders, focusing on constructing rich and comprehensive case studies, as well as maximising communication and extension opportunities such as field days and communication products. This level of analysis over a number of production seasons has not been undertaken to date. This will provide critical information about the broad range of outcomes from the adoption of best management practices.

The second and third years of this project will provide extensive support to landholders across the region around Whole Farm Planning and the adoption and integration of the wide range of best management practices.

This project will have a catalytic and lasting impact on the region and considerably raise the level of understanding amongst farmers and industry stakeholders on the best approaches to managing agricultural enterprises for multiple outcomes. Importantly, the significant knowledge of the farmers will ensure this project is realistic and beneficial to all parties. The project will establish a comprehensive and diverse collection of land managers across the Wet Tropics region. This group will continue to develop an extensive knowledge of farm planning, including gains in productive efficiency, and will act as champions for future extension.

**Project outcomes**

**Long-term outcomes (5-10 years)**
- Changed farm practices will result in an increase in soil health and the resilience of the natural resource base that underpins sustainable agriculture and biodiversity in the Wet Tropics.

**Intermediate outcomes (3-5 years)**
- Up to 45 farmers across the region are intensively engaged in implementing changed farm practices for the purposes of establishing Whole Farm Planning pilots and documenting up to 45 case studies.
- Contribution to the delivery of Reef Plan actions (seven and eight) through a coordinated, cross regional approach to promote and measure practice change and on-ground works that reduce the amount of sediment, nutrients and/or pesticides entering significant inland or coastal waterways.

**Further information**

For further information on the ‘Sustainable agriculture: whole farm management – partnerships for resilient and profitable farming in Far North Queensland’ project, please contact Terrain NRM Ltd.
Sustainable agriculture: whole farm management – partnerships for resilient and profitable farming in Far North Queensland

© State of Queensland, Department of Natural Resources and Mines, 2014.