

Soil-based challenges for cropping in Shan State (nutrient acquisition)



Key details

Location

Myanmar

Duration

Start May 2019

End Aug 2022

Budget

AUD 250,000

Commissioned organisation

Southern Cross University

Partners

Department of Agriculture Research, Myanmar;
Southern Cross University

Project Leader

Professor Terry Rose

ACIAR Research Program Manager

Dr James Quilty

Program

Soil and Land Management

Project code

SLAM/2018/190



Overview

This project aimed to understand key soil constraints in the Nyaung Shwe township area of the Shan State and implement on-farm research trials to address soil fertility decline and soil erosion impacting on the Inle Lake catchment

Agriculture in Shan State of Myanmar has enormous potential to help people out of poverty. However, agricultural productivity and efficiency are constrained by many factors, in particular, soil constraints such as poor nutrient acquisition by plants (due to high phosphorus fixation by soil, and low nitrogen fixation by plants) and infertile soil due to removal of nutrients in residues (especially relevant for potassium) and continual erosion of topsoil (loss of organic matter and nutrients).

Sufficient evidence suggests that hedgerow systems or cover cropping in maize crops could result in improved yield, reduced erosion and can benefit soil fertility.

Expected project outcomes

- Minimising erosion on sloping land using productive pastures and using hedgerows.
- Increasing productivity of upland rice through varietal and nutrition research.
- Understanding barriers to adoption of new rice varieties/livestock integration on farms.



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