

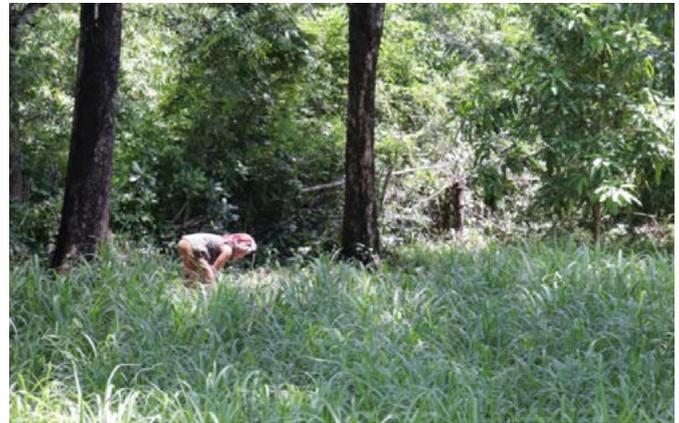


Australian Government

Australian Centre for  
International Agricultural Research

Crops

# Weed management techniques for mechanised and broadcast lowland crop production systems in Cambodia and Lao PDR



## Overview

In Cambodia and Laos, while rice crop intensification and yield improvements have ensured self-sufficiency, these improvements have dramatically reduced traditional rice planting methods. This has led to a rise in the direct-seeded rice (DSR) method.

Weeds are a significant constraint for DSR farmers. There are estimates of up to 46% reduction in yields due to weeds. Weeds also negatively impact the quality of the grain.

Better weed management not only increases yields but improves grain quality. This provides farmers with more opportunities and markets to increase their incomes.

The project aims to develop sound weed management methods for DSR under two lowland agroecosystems.

## KEY FACTS

**ACIAR Project No.** CROP-2019-145

**Duration:** January 2021 to December 2025 (5 years)

**Target areas:** Cambodia and Laos

**Budget:** A\$2,039,997

### Project Leader

Dr Jaquie Mitchell, University of Queensland

### Key partners

- National Agriculture and Forestry Research Institute, Lao PDR
- Cambodian Agricultural Research and Development Institute
- Royal University of Agriculture, Cambodia
- Department of Agriculture, Provinces of Savanakheth and Khammouan, Lao PDR

### ACIAR Research Program Manager

Dr Eric Huttner

## Objective

**The project objectives are to increase rice crop yields and improve grain quality for DSR by developing weed management methods under two lowland agroecosystems.**

## Expected scientific results

- Documenting the importance of the weed seedbank and the growing environments for weed pressure and control.
- Identifying and understanding the performance of the available mechanical weeding tools and the development of new mechanical tools.
- Identifying vigorous rice varieties and their performance for weed control.
- Identifying varieties that germinate under anaerobic conditions to improve weed control.
- Understanding the performance of drones for land mapping, weed identification and herbicide spraying.

## Expected impact/outcomes

- Develop diverse Integrated weed management (IWM) packages that are adapted to local conditions and are described and validated with farmers.
- Adopting suitable IWM packages to support the deployment of DSR and allow farmers to capture the benefits of DSR.
- Offer farmers options for weed control through new weed control service providers.

