



# Investigating and developing interventions to mitigate foodborne parasitic disease in production animals in Lao PDR



## Overview

Foodborne parasitic diseases such as *Taenia solium*, commonly known as pork tapeworm, are of significant concern given their «dual burden» on humans and animals. Infected people suffer significant health problems, with reductions in productivity and value of their animals.

Transmission of food borne parasitic diseases continues in areas where human sanitation is poor, free-ranging livestock systems are employed and ingesting raw/undercooked animal-sourced food is common.

Pork tapeworm is of significant concern in endemic countries including Laos. The Lao Government has prioritised mitigating the risk of transmission while improving livestock trade and market access.

To effectively control the transmission of pork tapeworm, the World Health Organization promotes a One Health approach that acknowledges the linkages between human, animal and environmental health.

The project aims to implement and evaluate joint human-animal intervention strategies that provide best practice to mitigate food borne parasitic disease transmission. This will lead to reduced parasitic disease in people and their livestock and increase production of animal-related income.

## KEY FACTS

**ACIAR Project No.** LS/2014/055

**Duration:** November 2020 to December 2023  
(3 years and 2 months)

**Target areas:** Laos PDR

**Budget:** A\$1,600,000

### Project Leader

Dr Amanda Ash, Murdoch University

### Key partners

- National University of Laos
- Ministry of Health Laos

### ACIAR Research Program Manager

Dr Anna Okello

## Objective

**The project aims to simultaneously improve human health and livestock productivity through the reduced transmission of pork tapeworm between livestock and smallholder farmers.**

The objectives are to:

- Develop criteria for identifying high-risk villages for food borne parasitic disease involving production animals in northern Laos.
- Implement and evaluate appropriate joint human and animal interventions to reduce disease transmission between livestock and smallholder farmer communities.
- Assess the cost-effectiveness of a joint human-animal approach to the control of food borne parasitic disease.
- Validate current diagnostic techniques for targeting food borne parasitic disease in low-and middle-income countries.

## Expected scientific results

- Develop proven methods to identify high-risk hotspots of food borne parasitic diseases.
- Demonstrate the benefits of a One Health approach, including feasibility, health benefits and economic viability.
- Develop diagnostic techniques to detect animal zoonoses and foodborne parasites that are affordable, accessible and accurate in low-and middle-income country settings.

## Expected impact/outcomes

- Decrease prevalence of foodborne parasitic disease and soil transmitted helminths in communities involved in the study.
- Increase livestock productivity in project communities due to improved animal health.
- Increase household income in project communities due to improved livestock production.
- Improve knowledge and practices relating to foodborne parasitic disease transmission in project communities, mitigating future transmission.
- Expand the database to enable evidence-based government policy updates relating to neglected tropical diseases, biosecurity and disease surveillance.
- Improve partnerships and communication with key stakeholders.

