



Living fences for improved livestock feed in Cambodian smallholder systems

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Objectives

- 1) Evaluate living fence species using an on-station livestock feeding trial.
- 2) Improve capacities of farmers to produce and manage living fences.
- 3) Evaluate constraints and impacts of using living fences on farms, through household surveys and focus groups.
- 4) Evaluate the potential to use living fences to protect food crop and fodder plots on-station.

Living fences - Cambodia

Tom Gill

Introduction

- Dry season feed gap exists, resulting from lack of options with adequate nutrients to supplement cattle diets beyond rice straw.
- Paddies are left fallow during the dry season for livestock grazing.
- Could fencing paddies with legume tree species improve animal nutrition AND provide extra land for secondary cropping?

Methods

Target population: smallholders with cattle in Battambang Province.

Mixed methods approach including:

1. Household surveys on a) attitudes and barriers to, and b) adoption of living fences.
2. 15-week cattle feeding trial.
3. Fodder production experiment with *Leucaena leucocephala*.

Results

- Living fences produced biomass for fodder supplementation through the dry season.
- Some “champion” farmers have established living fences around their rice paddies.

Recommendations

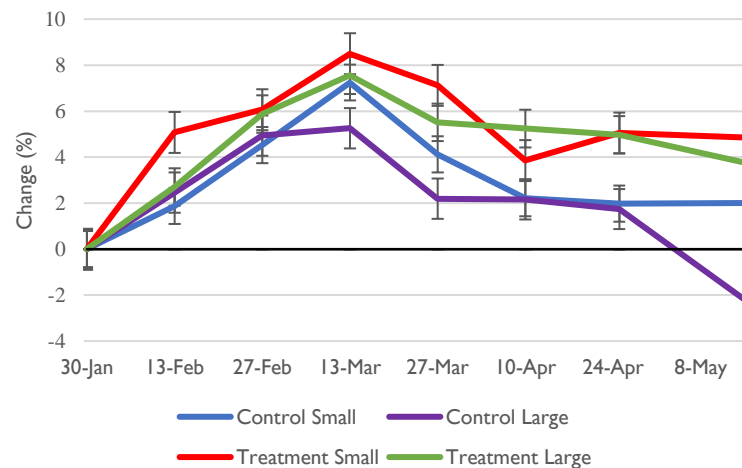
- Farmers should be encouraged to adopt species that produce biomass in the dry season to supplement cattle diets.
- Fencing paddies may only be appropriate for households with paddies near homesteads and available male labor.

Research gaps

- Questions remain about sustainable intensification of private paddies with public access during the dry season.
- Further research into gendered roles and responsibilities around cattle and fodder production is needed.

Cattle fed *Leucaena leucocephala* as part of their diet sustained weight gains through the dry season.

One hectare of paddy fenced with *Leucaena leucocephala* can produce sufficient biomass for a farmer in northwest Cambodia to supplement the diets and sustain weight gain of two cows through the dry season.



Mean percentage change (with standard error bars) in body weight during *Leucaena leucocephala* feeding trial with cattle (split into small and large starting weight categories), Battambang, Cambodia

Farmer views of living fences around paddies

(n=63; results expressed in %)

Farmers that have a living fence around the house	86 %
Reasons for having a fence	
Protection from cattle	76 %
Food and selling	49 %
Why don't people grow fences on paddy in the dry season? (top three reasons)	
Cattle	38 %
Time or labor	36 %
Water	15 %
View of living fencing around paddies	
Bad	22 %
Good	78 %
Top two problems with growing a living fence around paddy	
Shade that affects my neighbors' yield	60 %
Access to walkways for people and tractors	16 %

