

Improved fallows implementation in southern Xayabury

Towards a better use of waste lands

Tran Quoc, H; Lienhard, P; Tivet, F;
 Sosomphou, T; Khamxaykhay, C;
 Chantharath, B; Panyasiri, K;
 Julien, P; Séguay, L



When a field is too infested by the so known Imperata grass (*Imperata cylindrica*), farmers have usually no other choice than let it return into fallow. Indeed, Imperata emergence and infestation is closely linked with soil fertility reduction. Moreover, labour required for weeding Imperata land is very high.

Furthermore, fallows infested by Imperata grass offer only few interests for animal husbandry since this weed is not appreciated by cattle.

Therefore, biological control of this vegetal pest which covers nowadays large areas in the South of Xayabury province is of main importance.

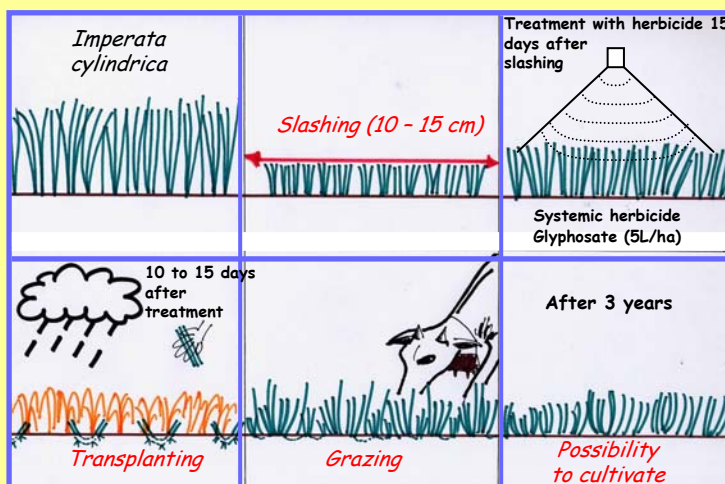
OBJECTIVES

- To develop technical alternatives based on biological control of Imperata grass (principle of competition between species) ;
- To improve fodder resources quality ;
- To test the possibility and the different ways to restart cropping activities after 3 years of improved fallow (restitution of fertility by recycling lixiviated minerals from deep soil layers).

MATERIALS et METHODS

- Trials are conducted in order to substitute *Imperata cylindrica* by fodder species.
- Demonstration plots are implemented in different ecological units .
- 6 species are tested : *B. ruziziensis*, *B. humidicola*, *B. decumbens*, *Panicum maximum*, *Andropogon gayanus*, *Stylosanthes guianensis* (using seeds or stem/root cutting according to species)

ANALYSIS OF SPECIES POTENTIALITIES



Succession cropping operations realized in the South of Xayabury province in order to substitute *Imperata cylindrica* by different fodder species



Species	<i>Imperata</i> control (after 1 year)	Recovery capacity	Adaptation to the environment	Implementation
<i>Brachiaria ruziziensis</i>	+++	+++	++	Transplanting or sowing
<i>Brachiaria decumbens</i>	+++	++	++	Transplanting
<i>Brachiaria humidicola</i>	++	++	+++	Transplanting
<i>Panicum maximum</i>	+++	+++	++	Transplanting or sowing
<i>Andropogon gayanus</i>	+	+	+	Transplanting
<i>Stylosanthes guianensis</i>	++	+	++	Transplanting or sowing

