CocoaSoils

Exploring the potential of ISFM for yield improvement and nutrient recycling in cocoa

Deo-Gratias Hougni

Wageningen University & Research

Objectives

General objective: To explore the potential of ISFM in cocoa through a better understanding of the role of farm organic resources in nutrient cycling.

Specific objectives:

1.To characterize nutrient resource allocation in cocoa farms.

2.To analyse the effects of confounding factors (soil characteristics and overall management) on cocoa yield response to fertilizers.

3.To evaluate the effects of the current cocoa husk management practices on nutrient release and the survival of black pod disease.

4.To assess the effects of residue management options on nutrient recycling in cocoa farm.

Research Questions

1.What nutrient resources are used by whom?

2.To what extent can yield be increased by fertilizer application under farmer conditions?

3.How do residual nutrient contents and black pod disease inoculum change in a decaying mass of cocoa husks over time?

4.What can be done to get most of nutrients from the cocoa husks and the applied fertilizers?

Methods

Research area: Nigeria

- Surveys and questionnaires
- 30 on-farm fertiliser-management-environment interaction trials (S1 trials; Fig. 1; Fig.2)
- Trials with additional treatments with pod husks and leaf litter (S2 trials)
- Lab and field experiments on nutrient leaching from husks

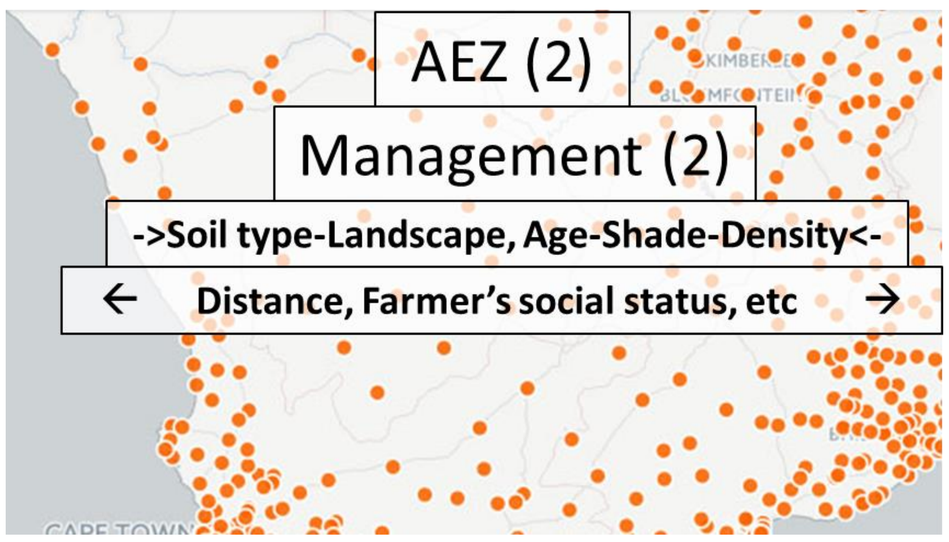

Fig. 1: Sampling strategy for trials

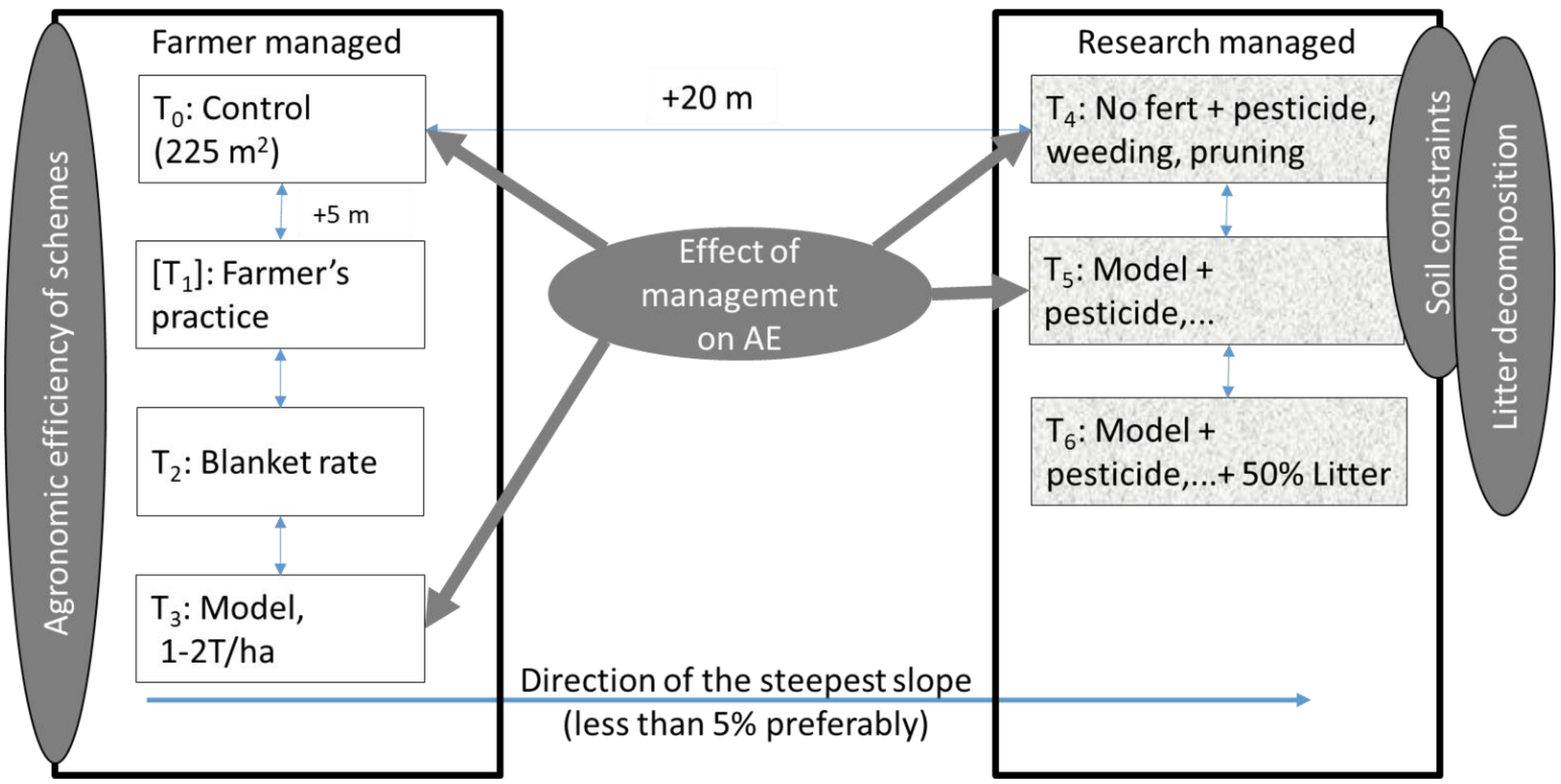

Fig. 2: Treatments in S1 trials

More information

Deo-Gratias Hougni

E-mail: deo-gratias.hougni@wur.nl