Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

Co-Design of Future Farming Systems in Guadeloupe: Techno-Economic Referencing of Agroecological Practices in Crop-Livestock Systems

Antonia Herm-Stapelberg[1,3], Gaël de Certaines[2,3], Audrey Fanchone[3]

[1] *Montpellier SupAgro, Tropical and Subtropical Agriculture, France*
[2] *Ecole Supérieure d'Agro-Développement International, France*
[3] *Institut National de la Recherche Agronomique (INRA), French West Indies and Guiana, France*

Abstract

This poster presents ongoing research towards the agroecological transition in Guadeloupe, island of the French Antilles, and is part of the AgroEcoDiv project involving INRA, CIRAD and the University of the Antilles. The current agriculture, heavily export-focused, producing sugar cane and banana often in monoculture, is facing increasing problems and instability due to phytosanitary problems, input dependence and instable market conditions. Sustainable solutions are sought to improve especially the situation of smallholders and improve food security. A possible solution are agroecological practices like improved crop-livestock integration, vermi-compost, pasturing on crop residues, and biological pest control. Agroecology suffers however from a negative reputation of uncertainty, impreciseness and being practice of the elder and it thus lies in the responsibility of universities and research institutions to improve this perception. Within the AgroEcoDiv project, a participative approach with a farmer nucleus of 5 community leaders was applied for the innovative co-conception of the ideal future farming system, starting-off on the current one. During this co-design process, a farming system oriented towards high self-sufficiency, performance, efficiency and resilience achieving improved results thanks to the stepwise introduction of agroecological practices was commonly developed. Within this study, the goal is to establish reference values on self-sufficiency, performance, efficiency and resilience of the current and future system to provide a discussion base, which will be crucial for the communication between researchers and farmers during the further co-design and dissemination process. The research shows in how far the new system unites low dependence on external inputs, agrobiodiversity, soil improvement, plant protection and acceptable workload while assuring a monthly income of 2220€;, thus proves the agroecological transition for Guadeloupean farmers realistic and gives researchers a useful tool for the dissemination of the step-wise transition amongst small mixed crop-livestock farms in Guadeloupe.

Keywords: Agroecology, Carribean, mixed crop-livestock system, participatory, system co-design

Contact Address: Antonia Herm-Stapelberg, Montpellier SupAgro, Tropical and Subtropical Agriculture, Montpellier, France, e-mail: antonias.post@gmail.com