Essential factors to adoption land-uses in Central America rural contexts

Victor Meza*1

1Universidad Nacional de Costa Rica – Costa Rica

Abstract

In the context of the adoption of land-uses, an innovation is understood as a new way of solving problems at the farm level. An innovation could be the use of a new technology or a production system designed to improve the costs-benefits relation from use of the land. Therefore, each option will be evaluated in the context of its relevance to the land operators’ situation. Although a high diversity of factors affecting the adoption are observed in rural contexts. Through the analysis of households, we examined the effect of critical influencing factors on the spontaneous and planned adoption of the production system in specific local contexts of the border region between Honduras and Guatemala. We applied two methodological tools: (1) the farm’s plan, and (2) the survey, to 218 farmers, which were divided in two ethnic groups, natives (n = 175) and locals (n = 43). The area currently used by a given productive system was the criteria to consider the adoption rate of such systems. We found four predominant land uses, where basic grains is the system more adopted by natives, who employ 68% of their land in this production, while locals use 80% of their lands for livestock production. Hence, the perception about some importance from basic grains in the households surveyed, resulted in 95% of the natives identifying this production system as very important. But only 7% of locals’ respondents identified this as important and very important source of income. There are several dimensions to the importance of income-generating activities. In the coffee case, it is very important and important, for 47% and 46% of the natives and locals, respectively. However, in the forest production case, it was very important for 5% of the natives and the locals did not assign any value of importance to this activity. In other words, forest production, is not performing or is unimportant, for 95% of the natives and for 100% of the locals. We developed propositions to predict the effect of the most important factors on the transaction costs for each condition. We propose that when a farming system is perceived in a positive manner by the potential adopter, it is spontaneously adopted, as a result of a conscious and rational process of confronting the costs and benefits of a given option. The relevance of a particular factor in different situations is often changing rapidly; therefore every factor plays a specific functional role. These roles are according to the purpose of the crops: for example, if it was established for meeting subsistence, cash or other needs, or even as a response of changing availability on the critical factors. In consequence, the migration towards other production systems is only possible if the farmer had changed his perception about a problem on security livelihood and on the relevance of the innovation for the solution of this problem.

Keywords: food security, decision, making, innovation, agriculture, strategies, Central America

*Speaker