

Adapting the technical management of coffee and honey bee productions to cope with market shocks in Guatemala

Benjamin Bathfield, Pierre Gasselin, Rémy Vandame, Santiago López-Ridaura, Luis García-Barrios

This paper presents the theoretical framework, methods and first results of a doctoral research project. This project focuses on the technical changes made in coffee and honey bee production to cope with markets shocks in the highlands of Guatemala.

In Jacaltenango and San Antonio Huista, two municipalities in Northwest of Guatemala, smallholders have had to deal with uncertainty. For over thirty years, coffee plantations have covered most of the highlands and remain the main source of employment and income in the study area. Since the termination of the International Coffee Agreement in 1989, smallholders have had to face market volatility while coffee production requires them to bet on the future. In the early 21st century the coffee market collapsed reaching the lowest real price since 1960. This crisis severely affected smallholders whose productivity slightly decreased (Eakin et al., 2005). With no grants from government nor private sources, social differentiation begun between producers. Few alternatives appear to them: diversification of production activities (honey bee, corn, livestock, small business); conversion to organic farming; migration; the strengthening of cooperatives activities. Such life experiences modulate the perceptions, decisions and practices of these families, i-e their position to cope with an uncertain context.

This study adopts an approach focused on technical practices changing within an uncertain context in order to develop the closest decisions' tools to producers strategies (Darnhofer et al., 2008; Dedieu and Ingrand, 2010). Thus we propose to understand how and why coffee and honey producers adapt their technical management to market shocks within an uncertain context. To answer, we make use of three central concepts: (1) action logics, defined as the sum of principles that lead the action for the long term (Dedieu, 2009); (2) flexibility mechanisms defined as operational and organizational changes that producers mobilize in response to a perturbation (De Leeuw and Volberda, 1996); (3) technical management understood as the whole of technical practices of a production process (Aubry, 2007). We formulate the hypothesis that, in response to market shocks, producers adapt their technical management using flexibility mechanisms and their action logics.

The sample corresponds to 48 coffee and honey bee producers that present similar agroecological and market conditions and who are member of the same cooperative. A four parts methodology is developed. The first part is explorative. It consists of comprehensive interviews in order to identify the main action logics, technical management and flexibility mechanisms in the study area. The second one extends interviews to the whole sample through semi-structured interviews. Then datas are treated with statistical tools in order to highlight correlations between the different concepts used. Finally these correlations are tested by another serie of semidirective interviews that lead to the construction of activities' systems monographies (Gasselin, 2009).

Half-way through this doctoral research, we have several intermediate products including statistical correlations that remain to be confirmed in the last phase of the methodology.