

Socio-Economic Determinants, Opportunities and Constraints of Adoption of Technological Innovations of SFM in the Rural Commune of Klela (Sikasso) and Menguétan (Koulikoro) in Mali

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Abstract

In Mali climatic peioration, in the Sudanian and Sahelian zones, demographic growth, increases urbanization and opened access of markets, require sustainable increase of agricultural production to cover for food needs of the growing population densities. This increase of production can be obtained on poor lands through the introduction of improved technologies of production. In this context, many management technologies of soil fertility have been introduced at the level of farmer. Nowadays, these techniques are less or not adopted. In order to contribute to this situation, a study, objet of my Master works on «Socioeconomic factors for adoption of technological innovations of soil fertility in the Rural Communes of Méguétan (Cercle of Koulikoro) and Kléla (Cercle of Sikasso) in Mali. To achieve this goal, a survey has been conducted at three levels of scale (Commune, village and exploitation). The methodological approach used was based on participatory appraisal using a questionnaire which was administrated on a sample of 60 producers. Results revealed that the major constraints to adoption of soil fertility technology management identified in both Communes include problems related to land tenure according to 88,9% of the interviewed farmers, insufficiency of agricultural equipment (60 to 80%), high cost of inputs and difficult access to agricultural credit (40-44%), etc. The major ongoing technological innovations of soil fertility management in the study zones are organo-mineral fertilization techniques, (organic manure, compost, chemical fertilizers) and water and soil conservation techniques (stone lines, fallow, crop rotation, mixt cropping, and cover crop). The results of studies have shown that several individual sociological factors such as labor, revenues, education, etc., influence technology adoption. The regression analysis between adoption and individual determinants showed that none of the studied determinants are statistically significant in explaining the variable «Adoption». This situation can be explained by the reduced number of the sample size to 60 producers. However, the factors such as age, education, and being active member of an association tend to favor adoption of a technology of soil fertility management compared to the other factors studied.

Key words: Soil fertility, sociological factors, adoption, technological innovations, production