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The Socio-Economic Impacts of Soil Quality Improvement by Adopting Soil Conservation Strategy among Small Scale Farmers in Uganda

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Abstract

In Uganda like in many other countries, land degradation is caused by both natural forces and human action but can only be remedied through proper human intervention. Soil and water conservation practices offer possibilities of reversing soil degradation. Successful conservation depends on understanding farmers' needs and perception of the problem. Most farmers require improved living standards and stable production. The objective of this article was to assess the long-term impacts of adopting soil conservation strategies on living standards of families in two zones in Uganda. This was achieved by modelling the empirical data from two study sites in Uganda experiencing degradation problems. The evaluation of questionnaires distributed to 100 families between April and August 2003 in a survey generated this data. Through mathematical programming techniques the family decision process under the changed scenarios due to conservation strategy implementation was evaluated. Results indicated that changing the land quality through earth bund construction had positive impacts on family economics. Family income in intensive zones will increase from 3,713,000 shs currently to 7,401,000 shs in ten years representing a 109% increment. In the low conservation zone the incomes would increase from 1,825,000 to 3,247,000 shs representing a 96 % increment, and leading to a higher living standard. If current soil degradation continues unabated, the income will decline with consequent deterioration of the family living standard. In intensive zones family income will decrease from 3,713,000 to 3,542,000 shs whereas in the low conservation zone the incomes would fall from 1,825,000 to 1,652,000 shs. Data of unused family labour show that a conservation strategy would reduce unused labour from 45% to 10% in the intensive zone and from 40% to 33% in the low conservation zone. In both zones an implementation of conservation strategies will reduce the amount of land allocated to crop enterprises by 10% but will not alter the number of cattle kept. If more land was freed for family use leading to a reduced need to open up new areas for farming activities thus reinforcing land resource use sustainability.

Keywords: socio-economic, soil conservation strategy and living standard, soil quality