

The intensity of soil conservation practices implemented by farm households in Tigray region of northern Ethiopia

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Abstract

Soil erosion and the consequent reduction in crop productivity pose a critical challenge to enhance well-being and ensure food security of rural people. As such, soil conservation practices have a paramount importance to address crop productivity problems and restore the degraded lands. This study explores the factors that affect farm households' decisions to the intensity of adoption of soil conservation structures based on cross sectional data collected from 840 randomly selected farm households in the Tigray region of Ethiopia. The study finds that households with larger asset holdings tend to intensify the use of soil conservation structures. Likewise, croplands that are operated by households who participated in labor sharing and training activities are treated with significantly denser conservation structures. Moreover, farmers who have feeling of long-term tenure security are more likely to invest in costly and durable conservation structure such as stone bund. It further affirms that farmers are more likely to intensify soil conservation structures if their holdings are located at relatively steeper slope, are relatively more fertile, and are closer to their residence. The results underscore the need for a policy aimed at enhancing the capacity of farmers in terms of material wealth and knowledge to enable them allocate significant portion of their labor force for soil conservation on croplands.

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