

Productivity and Efficiency Analysis of Smallholder Maize Producers in Southern Ethiopia

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ABSTRACT This study was undertaken in southern Ethiopia to assess productivity and technical efficiency of smallholder farmers and identify factors that determine productivity and technical efficiency. It was based on the data collected from 385 randomly selected farmers. A normalized translog production function was employed to assess maize productivity and factors conditioning productivity. In addition, data envelopment analysis was used to determine the levels of technical efficiency. Furthermore, a Tobit regression model was applied to identify factors influencing technical efficiency. The result depicted that productivity of maize was significantly influenced by the use of labor, fertilizer, and oxen power. The mean technical efficiency was found to be 40 percent indicating that there was substantial level of technical inefficiency of smallholder farmers in maize production. Important factors that significantly affected the technical efficiency were agro-ecology, oxen holding, farm size and use of high yielding maize varieties.