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## Crop-Livestock Interactions in Smallholders’ Market Participation in Ethiopia

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### Abstract

Most studies on household level market participation decisions are analysing either crop or livestock market participation separately. However, in mixed crop-livestock farming systems, smallholders’ participation decisions in crop and livestock markets may not be separate as a household’s position in one market is influenced by its position in the other. Where there is limited income from off-farm and/or non-farm activities, household cash requirements in crop production or consumption are usually met by selling livestock. Similarly, livestock purchase is usually financed by income from crop sale. But to what extent the position in one market affects the other is still not well explored in the literature. The aim of this paper is to examine determinants of household market participation positions both in crop and livestock markets jointly. Household level data collected in 2009 from 1190 sample households in ten districts of the four major regions of Ethiopia is used for the analyses. Descriptive statistics show that there is no autarkic household in crop markets. Thus, our sample households are classified in six categories, combinations of net buyer and net seller positions in crop market, and the three possible positions (net seller, autarkic, and net buyer) in livestock market. Using simultaneous equation models, we have tested whether the position to be a net seller in crop market is affected by the position to be a net buyer in the livestock market, and vice versa. Results show that the decision to be a net buyer in crop market affects the decision to be a net seller in livestock market. Similarly, the decision to be a net buyer in livestock market is affected by the decision to be a net seller in crop market, but not the other way round in both cases. Results imply that crop purchase is financed by livestock sale and excess income from crop sale is saved in a form of livestock asset. Thus, policies/strategies enhancing smallholders’ participation in crop and livestock markets particularly in mixed crop-livestock system should pay attention to the production and marketing of both commodities simultaneously.

**Keywords:** Crop-livestock system, Ethiopia, market participation, market position, smallholder