SMALLHOLDINGS

Yields inversely proportional to acreage

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African agriculture has been subject to farm consolidation as a function of both national and international policies as well as economic forces. However, recent research from Asia suggested that farm consolidation may in fact depress yields and productivity, with smallholders able to take advantage of additional and cheaper labour.

Mark Paul, at Duke University, and Mwangi wa Githinji, at the University of Massachusetts Amherst, examined data on Ethiopian smallholdings to determine the effect of farm size and fragmentation on crop yields in an African context. They found that while most households had less land than can meet subsistence needs, doubling the average size of a farm would only increase total farm output by 172%, effectively reducing

outputs from consolidation. Controlling for characteristics like literacy, age and experience maintained this association. Fragmentation of plots (along with increased distance between them) also has a positive effect on yields, suggesting that diversity of plots and crops is more beneficial than sheer size.

Confirmation of the ‘inverse relationship’, as it is known in development circles, suggests that more should be done to support smallholders to improve food security and sustainability rather than impose consolidation of farms and plots.

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