Tropentag, September 10-12, 2025, hybrid conference

"Reconcile land system changes
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Incentivising the adoption of integrated soil fertility management in smallholder farming communities in northern Ghana

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Abstract

Soil fertility is severely degraded in northern Ghana and continues to worsen due to unsustainable land use and management practices. Integrated soil fertility management (ISFM) is a promising way of combating the problem, but has not yet been adopted on a large scale. This study investigates the prevailing ISFM practices in northern Ghana and the incentive structures employed to promote their adoption. Building off this information, we compare the costs (including own labour time), yield, and revenue between current farm management practices and ISFM, to assess whether it is in the short-term narrow economic interests of the farmers to adopt ISFM. The long-term costs and benefits of ISFM, in comparison to current practices, are also evaluated to assess farmers' willingness to adopt longer-term time horizon ISFM practices. Critical factors here include farmers' time preferences and tenure security. The findings are used to design discrete choice experiments to assess the conditions under which farmers are likely to adopt ISFM. The choice sets include (a) financial incentives to increase the short-term profitability of ISFM, (b) factors that move farmers' time horizon, (c) information about the costs and benefits of ISFM as compared to current practice, and (d) ways in which to increase the salience of this information, e.g. through nudging. In addition to contributing to the limited literature on incentives for sustainable land management in the country, the study's findings offer critical insights for the design of future incentive programmes in complex and challenging environments.

Keywords: Cost-benefit analysis, discrete choice experiments, incentives, nudges, sustainable land management

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