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“Bridging the gap between increasing knowledge and decreasing resources”

Identification and Prioritisation of Farmer Innovations in Northern Ghana

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Abstract

Over the years, farmers have been recognised as innovators and experimenters and not just adopters of introduced technologies. The innovations developed by farmers (which are generally referred to as farmer innovations) could complement the highly promoted externally-driven technologies in addressing the numerous challenges facing agriculture. The aim of this paper is to identify outstanding innovations developed by smallholder farmers in northern Ghana, and prioritise the high potential ones for further scientific validation or dissemination. Using an innovation contest that rewards farmers' creativity, we identified 29 promising innovations. Additionally, 19 innovations were scouted through a household survey. The innovations are largely extensive modification of existing practices or combination of different known practices in unique ways to save costs or address crop and livestock production constraints. While some of the identified innovations can be recommended or disseminated to other farmers, most of them may require further validation or research. However, validating all of these innovations will be very expensive and time-consuming. We propose the multi-criteria decision making analysis based on expert judgement as a simple and useful method to prioritise the high-potential innovations. Using this method, we find that among the most promising innovations involve the control of weeds, pests and diseases using plant residues and extracts, and the treatment of livestock diseases using ethnoveterinary medicines. We briefly explain the six most highly ranked innovations. This case study from northern Ghana provides a further proof that smallholder farmers develop diverse and spectacular innovations to address the myriads of challenges they face, and these need to be recognised and promoted.

Keywords: Farmer innovation, innovation contest, innovation scouting, multi-criteria decision making, northern Ghana, validation