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Factors Influencing Implementation of Buffer Strips by Smallholder Farmers in Teso, Rural Kenya

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Abstract

Buffer strips are an agro-ecological practice that has potential to simultaneously tackle the problems of decreased soil fertility and to improve food security and dietary diversity. Nevertheless smallholder farmers are often reluctant to adopt this technique. The factors influencing implementation of buffer strips by the farmers in Teso, rural Kenya, were assessed by using a sequential-exploratory study design.

Focus group discussions (FGDs) with 30 farmers were used to gain knowledge on farmers' knowledge, attitude, practices and perceptions on buffer strips. The results were used to develop a household survey which was carried out among 257 farmers who had a kitchen garden. The aim was to capture the farmer profile, details about kitchen gardening practices and the extent and manner of buffer strip implementation.

Only 55 % of the farmers in Teso had heard about buffer strips prior to the survey. These farmers (n=142) were able to define the main drivers of and barriers to the adoption of this practice. Protection from animals (86 %), food production (18 %) and improved soil fertility (15 %) were named among the most important drivers which also gained respectful rankings within FGDs. Similar factors were identified as barriers: providing shade, attraction to animals and reduced soil fertility for the main crop – ranked 1–3. These findings indicate that the farmers were especially focused on the direct, visible and short-term benefits.

Generally missing know-how was mentioned as a limiting factor by the survey participants. Other hindering factors were availability of arable land, land tenure, cost of seeds and labour constraints.

Most of the farmers had started implementing the buffer strips only shortly before the survey. Thus, they had not been able to observe the long-term effects like improved soil fertility yet. However, 'information brokers' might have put the emphasis on short-termed objectives and biased the farmers, accordingly. The development of an information system for farmers which would support the adoption of valuable practices such as buffer strips is needed. Communication skills are required on how to motivate farmers to also consider long term effects of their farm activities.

Keywords: Buffer strip adoption, dietary diversity, information transfer, soil fertility

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