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## The Importance of Informal Seed Systems for Food and Nutrition Security in Kenya and Uganda

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### Abstract

Smallholders are vital for food and nutrition security in East Africa. Seeds, particularly uncertified seeds, accessible via informal seed systems (ISS), traditional social networks and family relations, are important for local food production. ISS in particular, are robust, and can supply seeds even during crisis periods, in contrast to formal seed systems with certified seeds. Due to a severe drought in 2016, agricultural production was heavily stressed in Teso (Kenya) and Kapchorwa (Uganda), study sites of the HealthyLAND project (HLP). Both areas differ in topography (Kapchorwa being on Mt. Elgon, whereas Teso is relatively flat), affecting farmers' access to seeds. Therefore, Kapchorwan villages appear to have a higher remoteness than those in Teso. This study aims to compare the importance of ISS for smallholders' crop production and food security, under varying degrees of remoteness.

Four HLP villages in each study site were randomly selected. A second random sampling within the selected villages was conducted to identify focus group discussion (FGD) participants from HLP households. Two gender-separated FGDs were conducted per village. Participants of FGDs were asked for their seed sources and recipient. Additionally, guided interviews on seed sources and recipients were conducted with persons named during the FGDs (41 women; 16 men). Data was analysed using the nutritional sciences concept 'dietary diversity', by classifying seed into food groups (FGs). The number of crops per FG and the number of FGs a person had accessed seeds for was evaluated.

In both regions, the bulk of seeds came from ISS. Gender showed no effect on the number of species per FG, being generally small ( $n=1-2$ ). Kapchorwan Interviewees had seeds for  $n=3-5$  FGs and FGD- participants for  $n=2-5$  FGs. In Teso, interviewees and FGD-participants had seed for an equal number of FGs ( $n=3-4$ ). Proximity and access to trading centres had an influence on the accessibility of seed in both countries. In remote villages, either less seed was transferred or more actors were involved in equal numbers of seed transactions. Following drought, ISS were essential for seed provision. These can be fostered by establishing communal seed banks to secure smallholders' food and nutrition security.

**Keywords:** Access to seeds, dietary diversification, East Africa, food groups, seed systems