

## Appendix G: Summary from the qualitative report

The research project was complemented by a set of focus groups discussions led by Dr. Salome Wawire. The groups were conducted during the Long Rain season of 2015 (after the FFDs and before the e-extension service started). These discussions helped understand farmers' informational needs, current information sources and their perceptions about the usefulness of different delivery methods. For completeness, we present a summary of the main findings by theme.

**Method and sampling:** Sampling for the focus group discussions was purposive, whereby participants were selected based on their area of residence, gender, participation in either of the program activities, non-participation in any of program activities and belonging in the social network of participants of program activities.

The 10 focus group discussions were distributed as follows:

	<b>Participant Description</b>	<b>Location/ Area</b>	<b>Num. people</b>	<b>Women/ Men</b>
1	Farmers	Kotur	11	5/6
2	Farmers (women only)	Simba Chai	9	9/0
3	Farmers who had received soil test in past	Lugulu	7	3/4
4	Farmers who had received soil test in past (women)	Sikura	10	10/0
5	Neighbors of those who received soil tests	Lukolis	9	6/3
6	Neighbors of those who received soil tests (women)	Lupida	8	8/0
7	FFD attendees	Anyiko	10	5/5
8	Farmers	Gotnanga	11	10/1
9	FFD attendees (women)	Eluche	9	9/0
10	Farmers	Buhuru	10	5/5

There were 7 to 12 participants in each focus group discussion, purposely selected to fit the requirement for each group. The focus group discussions took an average of 1 hour and 45 minutes and were facilitated by a moderator, a note-taker and a translator, whenever the need arose. The discussions were held in the preferred language of the participants, including Kiswahili, Luhya, Luo and Teso. The discussions were recorded and later transcribed and translated to English. The transcripts were cleaned for flow, consistency and clarity of the discussions.

**Analysis:** The main technique for analyzing the data collected through the focus group discussions is thematic analysis. The final transcripts were thematically coded and analyzed according to the objectives of the study. A preliminary scan through the transcripts revealed emerging themes, which were coded accordingly. A deeper-dive analysis of the themes was done to obtain greater knowledge for each theme, in line with the objectives. The analysis followed the specific questions under each evaluation

criterion to gain a deeper and more nuanced understanding of community members' perceptions of their farming information needs, existing farming information channels, the possibility of mobile phone as a channel to disseminate farming information, farmers' experiences with extension workers and agricultural supply dealers, and experiences with field plots and soil tests, as well as attendance at FFDs.

## **Results:**

**Perceptions about general farming needs:** Some farmers reported that yields had significantly increased in the last 10 years because of practicing modern farming methods, which empowered them to use farm inputs such as manure, fertilizer and seeds. Other farmers reported reduced yields in the last 10 years and attributed the reduction to reduced farm sizes and not using modern farming methods and inputs. Most discussants said that they did not use as many farm inputs as they would have liked, due to lack of financial resources. The farmers' limited ability to understand instructions and advice on modern farming methods from experts was also mentioned as another cause leading to decrease in yields. One of the main concerns experienced by farmers, while farming their principal crops, included a notable increase in weeds. Adverse weather changes that affect agricultural activities was another concern raised by farmers. These include heavy rains, strong winds, hailstorms, flooding and inadequate rain leading to drought. Some farmers indicated that the presence of counterfeit seeds and a lack of finances to farm at the right time delayed farming processes, affecting yields and profitability.

**Informational needs:** Farmers reported having several agricultural questions they wished they had answers for. These included questions about different types of seed varieties available in the market and when planting of crops should be done. Others wanted to know why they harvested lower yields than their expectations at the time of planting. Other farmers wanted to know the appropriate type of fertilizer to use (DAP, CAN or NPK) and others were interested in knowing the soil types on their farms and how to get rid of the striga weed, which has been a problem for many farmers in the area.

**Agricultural information they have received and sources:** Some farmers indicated receiving information on new seed varieties, new crops, prices, the importance of testing the soil, soil pH, the type of fertilizer to use, crop rotation, spacing, farm preparation and storage of crops after harvest. The information was received from a variety of sources, including agricultural extension officers, fellow farmers, group meetings, chiefs, assistant chiefs and organizations (e.g. Innovations for Poverty Action, One Acre Farm, KALRO and the National Agriculture and Livestock Extension Programme), radio, phones and the internet. Most farmers indicated that the agricultural information they received, especially on improved/modern farming techniques and practices, was useful to them and had led to increased yields for those who practiced it. Farmers indicated that the agricultural information that would be most useful to them is on land preparation, seed, and planting, use of fertilizers, crop storage and pesticides. Farmers gave varied information on when, during the farming cycle, they found information most useful. Some indicated that information received before planting was useful, while others indicated that the information was most useful during the harvest.

The majority of farmers interviewed indicated that agricultural information reached them through the following channels: radio, phones, chiefs' *barazas*, group meetings,

agricultural supply dealers, fellow farmers, agricultural extension workers, field days, friends or word of mouth. Group meetings, radios, chief's *barazas* and extension officers were listed as the most used and reliable channels for disseminating agricultural information. The least used channels of communicating agricultural information were mentioned as TV and newspapers, because majority did not have access to them.

The interviews indicated that different groups received information through different channels; for instance, whereas youth mostly received information from seminars, women mostly received from groups in which they participate. These channels were said to be effective. Participants reported that the communication channels could be improved by increasing the frequency of meetings and that this should involve farmers, extension workers and agricultural organizations. The people who disseminate agricultural information in these forums also need to receive more training. The most preferred communication channel was group meetings and chief *barazas*.

**Reliability of information:** Some farmers indicated that they received advice and recommendations on agriculture from extension workers. The frequency of interaction with extension workers varied. Some farmers met with extension officers only once a year, during the agricultural shows or open field days; others visited their offices with some regularity. A minority received home visits from extension officers. Most farmers appreciated the assistance they received from extension workers and indicated that they trusted the information they received from them. Several farmers indicated that they received agricultural advice and recommendations from agricultural supply dealers. Most farmers indicated that they asked dealers for advice on what inputs to buy, although some farmers claimed that some agricultural supply dealers sell bad inputs. A number of farmers said they did not trust recommendations from the dealers because they see their interest as selling their stock.

**Farming information on mobile phones:** A majority of the farmers indicated that they keep their phones in their pockets or hang them around their necks. A few said they kept their phones in the house. Phone usage varied from once a day to an average of 20 times a day, based on the amount of airtime people had or the motive for calling. This was the case for SMS and M-PESA use. Only two participants indicated that they used the internet regularly. Farmers indicated that they received messages on their phones about sports, weather, news and health. Very few respondents indicated that they received farming information on their phones. The majority said they received notifications about agricultural meetings or events, but not specific information on farming. Although the majority did not receive information on agriculture, they agreed that the phone was an effective channel for communicating agricultural information, because it is reliable and it would reach many people in a short time.

**Diffusion of farming information:** A majority of farmers indicated that they did not generally share a lot of information on farming practices with their neighbors. They also indicated that this lack of information sharing was due to a lack of trust and jealousy among themselves, which means that few neighbors would share information on seeds that would boost yields. Most respondents indicated that some neighbors would not disclose the inputs they have used on their farms and their last seasons' harvest. They therefore reported not trusting information from their neighbors because it was likely to be inaccurate.

**Women's participation in farming:** A majority of female respondents indicate that they were in charge of agricultural activities in their household and that the husbands played a supplementary role. Most indicated that they performed the day-to-day running of the farm, with their husband providing only advice, labor, inputs or financial support. A majority of women said they were more knowledgeable on farming practices than their husbands. A majority of women owned phones; just a few shared phones with their husbands. Most women carried their phones all the time and had access to the phone throughout the day.

**Farmer field days:** Two of the 10 focus group discussions were with participants who had attended open field day activities (but were not part of the quantitative study sample). These participants were asked to share their experiences attending field days and to indicate what they had learned from their experiences. The participants indicated that they were invited to the field days through various channels, including the chief's *baraza* and invitations from a KALRO field officer and the owners of the demonstration plots, as the quotes below show:

It was advertised ... I was invited by agricultural officers ... I was called by the owner of the shamba where the demonstration plot was set ... Through posters ... Chief Barazas told us. — FFD focus group discussion participants, Anyiko

Participants expressed that they were impressed with what they saw at the demonstration plots and were encouraged to adopt the same practices on their own farms. The crops on the demonstration plots were visibly healthier than those on neighboring farms, and this made participants curious to learn about the practices the plot owners had employed.

All the lessons from the field days were useful to the participants, but some issues were seen to be most useful – farming techniques, seed types, fertilizer selection and application, post-harvest storage and market solutions for the harvest.