PROJECT BACKGROUND

The Uganda Community Connector (CC) Project is a community-based, USAID-funded, Feed the Future Initiative. CC is currently working with local governments in 15 districts, nine in the North (N) and six in the Southwest (SW) regions of the country to improve the nutritional status of women and children, and the livelihoods of vulnerable populations through sustainable, integrated nutrition and agriculture interventions at the community and household levels.

CC project staff worked closely with district and community leaders to define desired household interventions that would contribute to better nutrition, food security and improved financial security. These interventions are carried out through a variety of strategies, but the desired, measurable, household outputs have been defined as the CC See10 (Box 1). These 10 elements were selected based on existing evidence and in consultation with key stakeholders to reflect improved household nutrition and agricultural production, household livelihood activities, general hygiene and gender equitable practices. In other words, if these elements are observed to have been adopted within a household, then the project has evidence that its efforts to promote integrated livelihood and nutrition interventions has been successful. The elements are intentionally simple to permit CC beneficiary household members to understand whether or not each element has been achieved in their household. Careful monitoring of these elements permits the project to understand which intervention components are and are not working as intended.

Project monitoring data show the majority of CC beneficiary households have “adopted” many of these elements; however, few households have achieved all ten and some elements have low uptake. Anecdotal evidence from project staff and a technical review of the project suggests that, even where elements are present, households may not be using them optimally. Discussions among project staff and partners have also suggested that some of the elements may need refinement or improved measurement to adequately reflect the desired outcomes of improved nutrition, food security, health and financial stability.

BOX 1: SEE 10 IN A CC HOME

1. Women/family are saving (Saving with a Purpose).
2. Water, sanitation and hygiene (WASH) facilities (like a toilet, safe drinking water, utensil drying rack, hand washing facility with flowing water) exist.
3. Homestead compound is clean and neat.
4. Pumpkin and amaranth, or other traditional vegetables are planted near the homestead.
5. At least one pawpaw tree, an avocado tree or other fruit trees is seen near the homestead.
6. Family has chicken, and goats or apiary.
7. Family has an agricultural income generating activity.
8. Production assets (e.g. hoes, pangas, spray pumps, oxen/ox, ploughs, watering cans, wheelbarrows) have recently been acquired.
9. Signs of family having enough food stocks to last three months, e.g., in the garden or a store.
10. Signs that family members support each other in production and feeding decisions.
PURPOSE OF THE ACTIVITY

CC undertook a learning exercise in 2015 to better understand the uptake and consistency or sustainability in use of See10 elements among CC beneficiary households; to identify gaps in implementation that can be improved to enhance adoption of these simple, health and welfare-promoting interventions; and to understand strengths and limitations in the current measurement of these elements. Specifically, CC: 1) Examined the presence and use of each of the See10 elements to identify which pose the greatest challenge to households in terms of uptake and sustained use; 2) Explored barriers to adoption and consistent use; and 3) Identified strategies to strengthen project activities to improve both uptake and consistent use of the See10 elements.

METHODS

A cross-sectional, descriptive assessment was conducted to collect data from CC group members using structured questionnaires. Within both regions, a sample of sub-counties was selected, then a sample of CC groups within a sub-county, and finally 5 households per group were selected to participate. A subset of CC household members interviewed were selected to participate in semi-structured, in-depth interviews to explore barriers and facilitators to uptake in greater detail.

Quantitative data were analyzed in SAS 9.3 to generate descriptive statistics. Qualitative data from semi-structured interviews were imported into NVivo 10.0. Transcripts were coded using a thematic codebook, codes were subjectively grouped, coding frequencies were generated, and frequency tables were created based on region and participant gender.

RESULTS

A total of 901 structured interviews were conducted in the Southwest (n=448) and North (n=453) regions from April to June 2015 among CC household members. The majority of respondents were women; men made up approximately one-third of respondents in both regions. Eight semi-structured interviews were conducted.

Household income/livelihood intervention components appear to be the most readily adopted elements of the See10, with more than four out of five respondents indicating they are actively saving money and are engaging in agricultural income generating activities (Figure 1). Certain water, sanitation and hygiene intervention components also have widespread uptake and use, such as the use of drying racks for dishes (SW=87%, N=85%) and household access to a toilet (SW=98%, N=97). Making drinking water safe by boiling or treating the water is a common practice in the SW (79.5%); however, fewer than one-quarter of respondents (23.0%) use these measures in the North. Typically, washing hands with soap and water is practiced by a majority of respondents (SW=75%, N=71%), but regular availability of soap poses a problem for many. More than half of respondent households have adopted use of the CC-promoted tippy tap for handwashing (SW=58%, N=69%), but many respondents complained that having a tippy tap was difficult because children and free-running domestic animals keep destroying them, or the tippy taps are frequently stolen.

See10 elements that target improved nutrition seem to have successfully aided participants in diversifying their food resources, with more than 50% adoption of keeping livestock that can provide food sources (goats, chickens) and growing nutritious crops including fruits and vegetables promoted by CC. Food security, however, still remains a problem for some. One-quarter of respondents were not at all certain or only somewhat certain that they would have adequate food for their household in the next 3 months. Seasonal availability of food and limited ability to store foods pose significant challenges, particularly in the North where droughts have led to loss of crops. We also measured household hunger using a validated scale to understand recent food security in the household. Results revealed that substantial proportions of respondent households experienced moderate...
hunger (SW=24%, N=20%) or severe hunger (SW=36%, N=39%) at some point in the 30 days prior to the interview, which reflects considerable food insecurity.

Gender equity appears to remain an important challenge within many CC households. To explore gender equity, respondents were asked about responsibilities for important household decisions and for carrying out important household/farming work. Between 50% and 80% of married male and female respondents in both regions stated that responsibility for decisions around use of wages, health care and major household purchases was jointly shared between spouses. However, for the those households where such decisions were not made jointly, men retained decision making power over most decisions, particularly in the North where 20% to 30% of women reported their husbands made these decisions; only 5% to 9% women reported they made the decisions. Despite some equity in decision-making power within households, the distribution of work falls solidly on women. Between 63 and 90% of respondents in the SW and between 50 and 90% of respondents in the N stated that the woman was primarily responsible for: keeping the homestead clean; labor for production and gardening; preparing harvested food for sale; selling crops produced from the family garden and preparing food for children in the household. Only in the North did about half of respondents state that men are primarily responsible for labor for production and gardening.

The goal of the project is not to have households adopt any one of the See10 elements, but rather to adopt all ten because the combined effect of these various elements should lead to healthier, more economically stable homes. Because households differ on their abilities to adopt a given element, particularly between the households in the North and Southwest where conditions differ considerably, the project aims to have all household adopt at least seven of ten elements. Progress is being made with 55% of households in the Southwest and 40% in the North having achieved seven or more elements.

Results from in-depth interviews also indicate that some participants understand not only the importance of the different See10 elements to health, nutrition and livelihood, but how they are inter-connected with one another such that adoption of one element can lead directly to adoption/use of another (See figure 1). This was particularly evident in how food production (planting fruit trees and vegetable gardens) and raising oxen for plowing could lead to agricultural income and potential for savings. Participants described how raising animals has provided them with a source of income. Participants also described selling vegetables or fruit that they planted as a result of participating in the program. Participants occasionally described saving money they earned from selling these products and using it for specific purposes such as paying school fees or re-investing in their agricultural business.

### TABLE 1: HOUSEHOLD ADOPTION OF CC SEE10 ELEMENTS

<table>
<thead>
<tr>
<th>Element</th>
<th>Southwest</th>
<th>North</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SWAP</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>2. WASH</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>3. Clean compound</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>4. Garden vegetables</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>5. Fruit Trees</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>6. Livestock</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>7. IGA</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>8. Food security</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>9. Production assets</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>10. Joint decision-making</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>At least 7 elements</td>
<td>80</td>
<td>60</td>
</tr>
</tbody>
</table>

### FIGURE 1. HOW CC INTERVENTION COMPONENTS FEED INTO EACH OTHER.

- **SWAP:** Money can be invested in buying more animals
- **IGA:** Source of agricultural income
- **IGA/Food security:** Plows fields for food production
- **Productive assets:** Raising production animals (e.g., oxen)

### BARRIERS TO UPTAKE AND USE

Eight people participated in in-depth interviews, all of whom discussed barriers to either adoption or use of specific See10 elements. Barriers to adoption were primarily related to personal issues (e.g., lack of knowledge or ill health), domestic issues (conflicting priorities or disagreements with a partner), poverty, issues directly related to the See10 element (e.g., difficult or time consuming to construct, lack of available inputs or markets for sale), and promotional barriers (e.g., conflicting messages from other agricultural programs, or history of exploitation from outsiders).
In terms of barriers to use, lack of rain contributed to the inability (or difficulty) to grow fruit trees and vegetable gardens. Roaming livestock cause destruction of planted fruit trees and WASH products (like tippy taps and drying racks), and make it difficult to keep the household compound clean. Theft caused loss of livestock and WASH products (i.e., tippy tap), and among those who participated in VSLA, corruption or theft of money was also noted as a problem by some. Conflicting domestic priorities, a partner’s alcohol use, and behavioral inconsistencies (e.g., saving money) were also mentioned as barriers to consistent use of See10 elements.

**FACILITATORS TO ADOPTION AND USE**

Main facilitators for adopting many of the elements included the ease of constructing the element either because the participant was already familiar with the practice or construction could be done by his/herself or at a convenient time. Sense of the importance of either the products or the benefits of adoptions are also motivators for adopting the element. When the elements offered some sort of health benefits (e.g., preventing disease or providing food) they were perceived to be particularly important. Quality of CC project teaching was also noted as a facilitator for adoption.

Tangible benefits from adopting See10 elements, such as being able to pay school fees, preventing disease, and making work easier serve as motivators for continued use. It was suggested that access to initial income, continued support from knowledgeable leaders, and greater focus on promoting products with viable markets would facilitate greater adoption.

**SUGGESTIONS TO IMPROVE USE OR UPTAKE**

Participants suggested See10 adopters should be used to promote greater adoption to others in their community. More direct interactions between CC project staff and community members was suggested as a way to facilitate greater trust in the project, which could increase acceptance and adoption of the project elements.

**DISCUSSION**

Integrated nutrition and agriculture projects such as USAID’s Community Connector project are designed to lead to improvements in nutrition, health and livelihoods among vulnerable population. However, changes in these outcomes take time and may be hard to measure in the brief period of a 3 or 5 year project. For this reason, it is critical for projects to identify relevant, proximal or intermediary outcomes that have been suggested or, better yet, demonstrated to be lead to these larger impacts. By measuring and monitoring these intermediary outcomes, projects can have a better understanding of the short-term achievements and gaps in programming in order to adapt, revise or change course if needed, to continue toward achieving greater impact.

Routine assessment and period household surveys permits CC to gather the information necessary to understand which components of are more successful leading to household change and which require to be adjusted or changed to improve effectiveness. In this cross-sectional assessment, barriers to uptake and ongoing use of See10 elements fell into six categories: individual, interpersonal/household, product-related, promotional/knowledge-related, social and environmental. By examining challenges and barriers at each of these levels, CC can identify strategies to address behavioral, contextual and structural factors that impede successful integration of agricultural and nutrition interventions within the household, such as working with farmers to identify alternative watering strategies in cases of drought, or learning that different projects are conveying conflicting messages so that those messages can be harmonized across projects. Monitoring and measuring these elements permits participants to understand the changes they need to make and permits the project to measure and monitor these changes so that the likelihood broader impact on the desired outcomes of improved nutrition, livelihoods, and ultimately health and well-being can be achieved over the course of the project.