QuIP
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CROPNUTS
grow more, with less

CASE STUDY:

Using QuIP to evaluate a smallholder value chain project in Kenya

- **COMMISSIONER:** Self Help Africa
- **COUNTRY OF STUDY:** Kenya
- **INDIVIDUAL INTERVIEWS:** 24 Interviews, 4 Focus Groups
- **YEAR OF STUDY:** 2022
- **PROJECT:** Cropnuts

ABOUT THE PROJECT

Self Help Africa (SHA) help to manage the AgriFI Kenya Challenge Fund, financed by the European Union and co -funded by SlovakAid, which supports agri-enterprises such as **Cropnuts**. Cropnuts works to support smallholder farmers in the pyrethrum value chain, a flower which can be crushed and used as an insecticide. Cropnuts, through their partner **Kentegra**, deliver training in good and climate smart agricultural practices for pyrethrum farming. They assist farmers with evidence-based and technology-supported farming advisory services with aim of securing a sustainable yield and income for smallholder farmers.

SHA commissioned a Qualitative Impact Protocol (QuIP) study to better understand what impact Cropnuts' work is having on farmers in the area and explore how other factors are affecting intended outcomes for farmers' lives and livelihoods. The study focused on Nakuru county where Cropnuts have a soil testing facility at an agri-clinic, although their services are available across East Africa.

WHY USE QuIP?

Cropnuts aims to encourage more farmers to start growing pyrethrum as a crop with good potential for income, then help them to increase the quality and quantity of crop. The intention is that farmers experience increases in:

- Income
- Food consumption and improved nutrition in the household
- Resilience to climate change
- Decision-making power of women
- Participation of youth in agriculture

SHA were interested in what changes farmers would report with little prompting about the interventions, and to better understand the reasons behind decisions farmers made. This is an example of a small n evaluation which, alongside monitoring data, can provide more information on causal mechanisms within a pre-identified group as a useful mid-term evaluation. There are myriad factors impacting agricultural decisions, practices and yields, Cropnuts' interventions will only be one part of that equation. This evaluation was designed to help establish what role Cropnuts played in the decisions that farmers made, alongside other factors.

APPROACH

A team of local researchers fluent in the local language conducted interviews with **24** farmers and facilitated **4** focus groups. Although the researchers were aware that pyrethrum was the crop of interest, neither the interviewers nor interviewees were aware of the hypotheses around specific interventions leading to the outcomes which were being tested in this study, and they worked completely independently of the Cropnuts team. This 'semi-blindfolded' approach was used to mitigate confirmation bias and ensure that respondents were not limited to discussion of only one intervention (i.e. Cropnuts) or project activity.

The interview was divided into the following relevant domains, based on the key outcomes from Bubayi and RVP's theory of change:

- **Agriculture**, including agricultural practices, inputs and yields
- **Income**, both from agriculture and other sources
- **Nutrition** including variety, quantity and quality of food consumption
- **Relationships**, both intra and inter-household
- Overall **wellbeing** and hope for the future

A final section asked respondents about community groups, programmes or organisations they engaged with; respondents were asked to detail their involvement with them and rank them in order of relative importance.
Unlike most QuIP studies, there was a supplementary *optional* final question that asked directly about changes in pyrethrum planting and practices. This was to increase the likelihood of capturing this information if the respondent had not mentioned pyrethrum throughout the interview. However since all but two respondents discussed pyrethrum unprompted earlier in the interview this question was rarely asked by the researchers.
QuIP uses purposive, stratified sampling – focusing on a small sub-sample of intended beneficiaries. Selection is based on known sample characteristics as well as available budget and logistical constraints. Since the approach does not require a counterfactual, a control group is rarely used. Interviews were conducted with farmers known to work with Cropnuts in two villages within Nakuru county; Turi, where the agri-clinic is based, and Nyota. The sample was split evenly between these areas, with **12** respondents in each.

To improve understanding of the experiences of farmers of different genders and ages, the sample was also split between women, men, adult and youth (classed as below 35). However, since there were not enough young people available to interview this group is slightly smaller. The table below shows the breakdown of those interviewed.

TABLE 1: SAMPLE FOR INDIVIDUAL INTERVIEWS

		Women	Men	Totals
Nyota	Adult	3	3	12
	Youth	3	3	
Turi	Adult	4	5	12
	Youth	2	1	
		11	13	24

Additionally, **4** focus group discussions (FGDs) were conducted. FGDs are used to help triangulate and sometimes expand on the data collected in individual interviews - using pertinent group types. Two groups were facilitated in each district, split by gender, with **6** participants in each focus group. The intention was to split the groups evenly between the two age categories, however there were not enough farmers below age 35 available to interview so this was not possible. Instead, three mixed focus groups and one youth group were hosted.

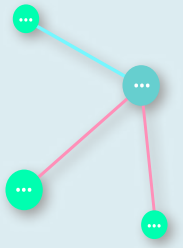
TABLE 2: SAMPLE FOR FOCUS GROUPS

		Women	Men	Totals
Nyota	Mix	1		
	Youth		1	2
Turi	Mix	1*	1	2
		2	2	4

*Primarily adult, one youth attended this focus group

FINDINGS

HOW TO READ CAUSAL MAPS

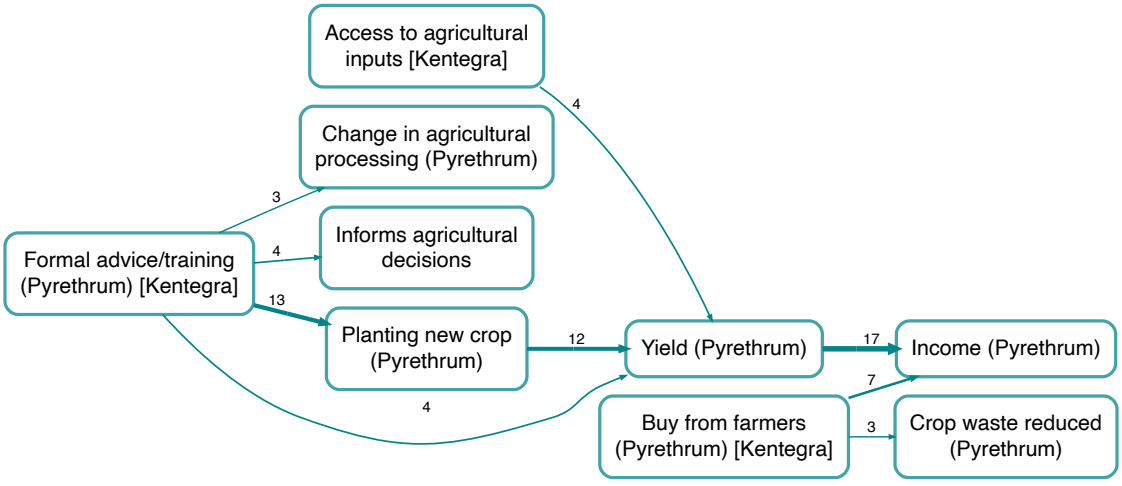


- Maps are designed to be read from left to right.
- The direction of the arrowhead on each link reflects the direction of causation or influence.
- Above each link there is a number which represents the number of participants who made that causal claim.
- Maps have been filtered and simplified to focus on the most frequent links in relation to a particular query.

IMPACT OF CROPNUTS

Formal advice/training from Kentegra was the most frequently cited influence factor leading to farmers **starting to plant pyrethrum**. Respondents mentioned the value of having Kentegra as a reliable buyer of their pyrethrum crop as it gave them a consistent source of income and meant that their crops did not go to waste. Good market conditions, aside from purchases made by Kentegra, and seeing the success of other farmers also promoted the crop.

FIGURE 1: IMPACT OF KENTEGRA



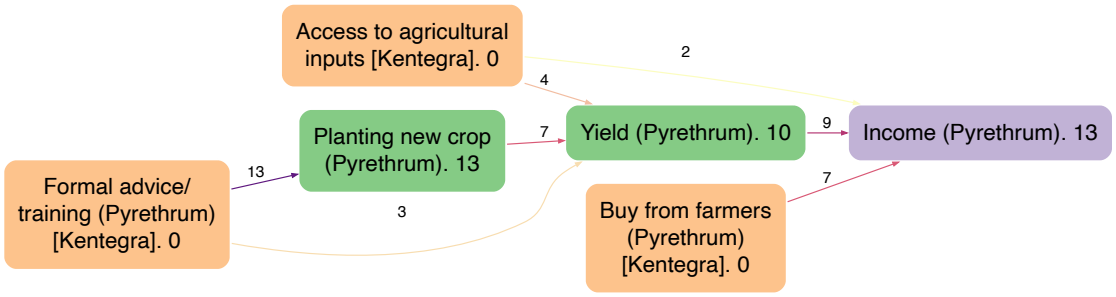
Showing links with 3 or more source mentions, one up and three links down from factor labels containing 'Kentegra'.

Kentegra were scored as the **highest-ranking organisation** in the ranking exercise. They were not the only organisation in the area supporting pyrethrum but were scored above other organisations like the Pyrethrum Board of Kenya and other government bodies.

PYRETHRUM YIELD

Many farmers (**19/24**) reported increased pyrethrum yields, however, for many this was due to the fact it was a new crop. Pyrethrum sales were reported to lead to **increased income** for **17/24** of the respondents.
10 farmers linked increased pyrethrum yield to Kentegra's activities, as the map below shows, through improved access to **agricultural inputs** and **training**. **13** farmers connected increased income from pyrethrum to Kentegra, in part due to Kentegra's provision of stable income as a reliable purchaser.

FIGURE 2: PATH TRACED FROM KENTEGRA TO INCREASED PYRETHRUM INCOME

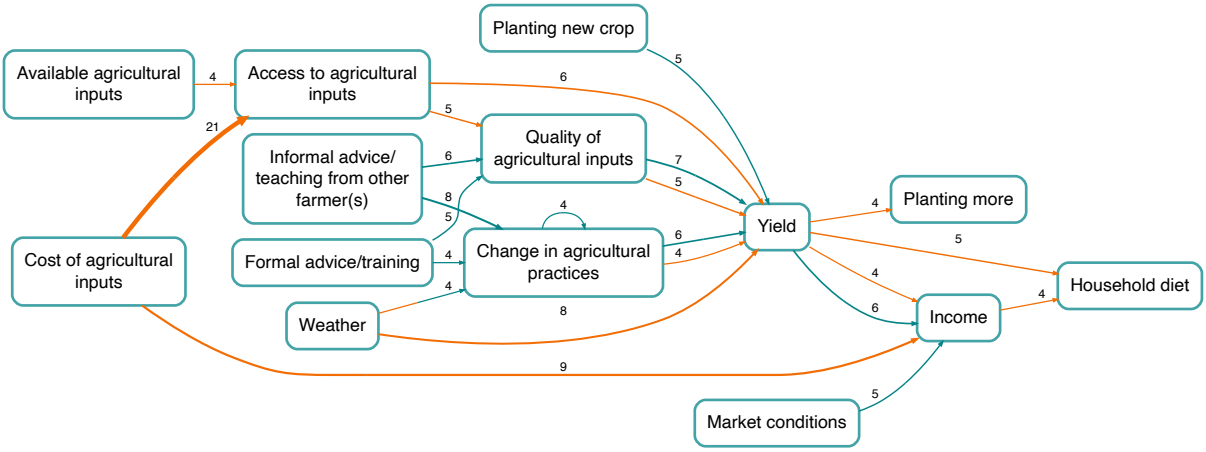


Path traced from labels including 'Kentegra' to 'Income (Pyrethrum) '. Showing links with 1 or more source mentions. Factors and links labelled with number of sources that mentions the upstream thread.

CROP YIELD

Overall income and yields from crops (other than pyrethrum) had decreased, primarily due to the **cost of agricultural inputs** and poor **weather conditions**. The majority of farmers reported that the crops grown for **household consumption** had reduced, and 17/24 farmers mentioned a decrease in yield for at least one crop. A few farmers specifically mentioned challenges with their potato crop which they stopped planting as a result. Increased cost of agricultural inputs had led to reduced **quality** of inputs. Many farmers were reducing the amount of fertiliser they applied, using uncertified products or an alternative such as organic manure, which they linked to reducing overall crop yields. Most farmers we spoke to were solely reliant on farming, so fluctuating yields had significant impacts on their households.

FIGURE 3: FACTORS INFLUENCING YIELD



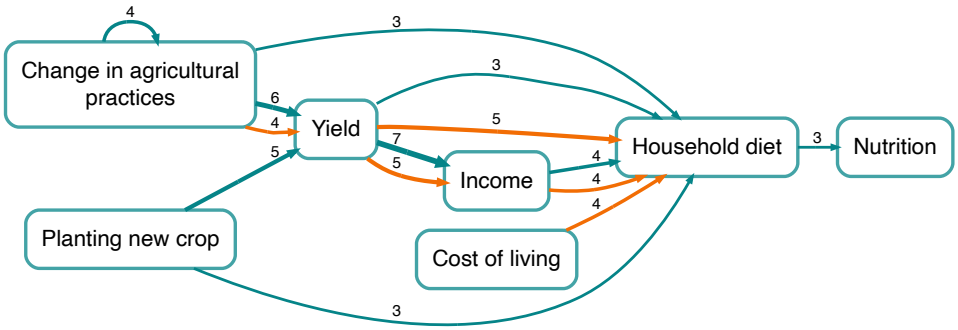
Showing links with 2 or more source mentions. Orange links denote a negative connection, e.g. higher cost of inputs led to reduced income.

The main positive factors influencing pyrethrum and food crop yields overall were informal and formal advice/training which led to better **quality agricultural inputs** and **improved agricultural practices**. Quality agricultural products were classed as products appropriately matched to the crop/soil, often informed by advice or testing.

NUTRITION

Reduced purchasing power due to the rise in **cost-of-living** and decrease in **income** made it harder for some households (**8/24**) to have a good and varied diet. This was particularly highlighted in the focus group discussions. However, planting new crops, such as leafy greens, improvement in agricultural practices and increasing yields directly contributed to improving household diets for **7/24** farmers.

FIGURE 4: HOUSEHOLD DIET



Showing links with 2 or more source mentions. Showing links 1 up/down from 'household diet'. Orange links denote a negative connection, e.g. less yield leads to poorer diet.

OVERALL

There is evidence that farmers are being encouraged to start planting pyrethrum through **training and advice** delivered by Cropnuts' partner Kentegra, and by being a **reliable buyer** of the crop. Pyrethrum **yields** were positively impacted by quality agricultural inputs recommended by Kentegra, as well as other organisations, government bodies and farmers.

Food crops were negatively affected by **bad weather**, and **poor access to agricultural inputs** caused by the cost-of-living crisis. The cost of food and lower yields from food crops has negatively impacted **households' diets**. Some farmers, however, reported that increased income from farming meant that they were able to improve their diet and nutrition.

There was no significant change reported regarding decision-making power of women or participation of youth in agriculture. Neither was there explicit mention of increased climate resilience, although pyrethrum was seen as a good choice of crop since yields were increasing compared to other crops, despite poor weather conditions.

Overall, increased farming income, including money from the pyrethrum crop, gave households more money, but the rise in cost of food and inputs meant that overall farmers felt that their financial situation was getting worse.

Bath Social & Development Research, curators of the QuIP, conducted this study.
For more information please see www.bathsdr.org

Bath SDR