





Operational Research on Integrating Nutrition in Farmer Field Schools (FFS)

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ABSTRACT

Self Help Africa (SHA) Malawi is implementing the 'Better Extension Training Transforming Economic Returns (BET-TER) program which is part of the KULIMA (Kutukula Ulimi Malawi) program, financed by the European Union. The BETTER project is a five-year (2018-2022) project being implemented in ten (10) districts of Malawi (Chitipa, Karonga, Mzimba, Nkhatabay, Nkhotakota, Salima, Kasungu, Thyolo and Mulanje) by a consortium of four partner organizations namely Self-Help Africa (Lead Agency), Plan International Malawi, Action Aid Malawi, and Evangelical Association of Malawi. The overall objective of the project is to increase resilience, food, nutrition, and income security of 402,000 smallholder farmers through 13, 400 Farmer Field Schools (FFS). The program uses Farmer Field School (FFS) approach and is currently in its fourth year of implementation.

The KULIMA –BETTER program promotes nutrition-sensitive agriculture, to ensure that the project yields maximum benefits on nutrition outcomes. This is done by integrating nutrition education in all the value chain activities in the farmer field schools to ensure that FFS participants receive adequate knowledge to link their food production with improved nutrition practices, while also promoting their ability to consume a diversified diet.

This operational research comprehensively reviewed the various elements of nutrition component(s) embedded within the KULIMA BETTER Farmer Field Schools. It has captured and documented the effectiveness of the approach and propositions to improve the integration.

Methodology and Context: The team used mixed and cross-sectional approaches to collect qualitative and quantitative data for the operational research. Participatory research approaches were used to gauge and explain (as well as make recommendations) on the overall functionality, effectiveness, efficacy, short and long- term nutritional benefits of the FFS. Data was collected through household surveys, key informant interviews, and gender -disaggregated Focus Group Discussions (FGDs). The sample size for the research were 225 FFS participants and 76 non-FFS participants. This operational research was done in a regional represented sample of three out of the ten BETTER programme districts; Karonga, Thyolo and Salima districts (with FGDs involving FFS participants only in Kasungu and Mzimba South). **Matched Case Control** was used, whereby data was collected, analyzed, and interpreted for those in the FFS (case) and then compared to those not participating in the FFS (control).

Findings

Table below provides an outline of key findings for the operational research

Farmer Field Schools and Nutrition Integration

- Overall, the most discussed topics during FFS sessions across the study districts included: cropping systems (72.8 %), six food groups (59.6 %), irrigation systems (51.8 %), and conservation agriculture (40.4%).
- Results from interviews with the FFS participants (N=225), indicated 88.9 % (n=200) reported learning nutrition topics in their FFS and 11.1 % (n=25) reported not to have learned any nutrition topic(s) in their FFS. Most (91.4 %) of those that have not yet received training/capacity building on nutrition topics in their FFS are in cohort 3 (recently joined FFS in the 2020/21 growing season).
- The most common nutrition topics covered in FFS include information on the following: the six food groups (89.3 %), water, hygiene and sanitation (39.3 %), integrated homestead farming (28.4 %), and food processing (24.9 %).
- Across the three districts, all nutrition topics are facilitated by Master Trainers (MTs), and Community Based Facilitators (CBFs) who are normally more knowledgeable and versed in agricultural topics as compared to nutrition content.
- There was limited involvement of other key nutrition stakeholders such as health workers, cluster leaders etc in facilitating training on nutrition topics.
- There was limited integration of value addition activities to reduce food loss and strengthen farmers marketing and income, and ultimately food and nutrition security. Some FFS groups (mostly in Salima) have embarked on juice making from locally available fruits such as baobab which was a positive outcome.
- There is variation in frequency and timing of training on nutrition topics/sessions within FFS. This is largely a result of different competing interests and expertise of CBFs/MTs as well as there not being a uniform FFS curriculum.
- Socialization process and engrained divide (irrespective of district) between women and men has made most
 males in rural areas not be oriented/interested in aspects such as food preparation and this delineates their
 interest in this aspect at FFS level as well. In turn, their interest has delved and vested more into ventures
 such as juice making etc for its economic benefits.

Impact of FFS on nutrition

- Participation in FFS is associated with a threefold increase in receiving skills on nutrition related topics such as formulating a meal plan, knowing a seasonal food availability calendar etc.
- Participation in FFS was associated with high adoption of nutritional and WASH practices at household levels
 as compared to non-FFS participants. FFS participants were more likely than non-FFS participants to have a
 backyard garden, to own livestock and to have fruit trees around their homes.
- There is no statistical difference in knowledge of causes and effects of malnutrition between FFS and non-FFS participants (X2= 0.138, p=0.48).
- FFS participants were 3 times more likely to meet their minimum dietary diversity requirement than non-FFS participants (OR =3.592, p<0.001).
- For women of reproductive age, Karonga has the highest dietary score of 6.57 (with 3-11 food groups), Salima has a score of 6.30 (with 3-11 food groups) and Thyolo has the lowest at 5.79 (with 2-9 food groups.

- Across the districts, the most frequently consumed food groups are grains, tubers and cereals, dark green leafy vegetables, vitamin A rich fruits and other vegetables, whilst the least consumed food groups are dairy, other fruits, eggs and local meat.
- Increased availability of homestead gardens and improved post-harvest management practices (such as use of PICS bags) learned via FSS have scaled-up access to food amongst FFS participants compared with non-FFS participants.
- Participation in FFS did not have a significant effect on food availability at household level rather yields volume, household incomes (to enable purchase) and family size were.
- Utilization of food varied between FFS participants and non-participants. FFS participants were able to preserve some food items such as vegetables and fruits as compared to non- FFS participants.
- There is significant increase in joint decision making (by females and males) on access and control of backyard gardens, consumption (what to be eaten) and use of proceeds from sale of crops/livestock among FFS participants (63.1 %) than non-FFS participants (36.9 %).
- FFS participants cite improved varieties (54.2%), post -harvest handling (32.2 %), and improved management of pests and diseases (18.7 %) that they have acquired via FFS as key practices to improve nutritional outcomes.

Recommendations

Based on findings and results of this operational research, the following recommendations are made:

Improve the training and capacity of MTs and CBFs to integrate nutrition in FFS

- Develop a uniform nutrition curriculum that specifies the timing, frequency and flow of nutrition topics in farmer field schools (FFS's). This curriculum will ensure that facilitators know which nutrition topics should start first in the FFs calendar/work plan, such as the nutrition problem tree analysis and seasonal food availability calendar. These topics help understand the nutrition problems within a community and the factors that may impact on this. Following this each FFS should formulate a nutrition plan which will inform the type of nutrition activities for the FFSs moving forward. The aim of this participatory approach is to assist communities to become more self-reliant, with the capacity to analyze their own food and nutrition situation, identify their needs, plan activities to address these needs, secure funding/resources, and technical expertise, and implement and manage the activities.
- Integration of nutrition within the FFSs should not be taken as a once off activity rather as a process, and thus in addition to teaching nutrition concepts separately, facilitators should Integrate some nutrition topics with other topics, for example, if discussing about livestock production include nutritional benefits of livestock etc.
- There is need to develop farmer user friendly IEC materials (i.e., graphic and in local language) that can be used for training on nutrition topics in FFs.
- Limited positive impact without good human resources Facilitators are key to effective nutrition integration in FFSs (vis a-vis their technical and communication skills, personal characteristics, and sensitivity). Special training (e.g. special focused training, long-term support/coaching, or part of a regular/refresher training) for community-based facilitators and extension staff is crucial to helping them develop their nutrition related capacities.

Scale nutritional benefits derived from FFS

- Strengthen the integration of value addition in farmer field schools through promotion of low-cost food processing and/or preservation methods especially for perishable nutritious foods such as fruits and vegetables as an income generating initiative which is an important measure to reduce food loss, boost incomes and strengthen food security and nutrition. Strengthening income generating activities can attract more men to join in nutrition activities as it was found that men were more inclined to be more interested in interventions that generated income. The training could also help FFS groups to establish new, small-scale food processing businesses, which would also ensure sustainability of groups beyond project lifespan.
- More involvement by men and community leaders will be key for effectiveness and sustainability of FFS nutrition interventions and its success. To address the social and cultural barriers limiting optimal nutrition outcomes such as dietary diversity, the project should engage men and community leaders in nutrition education, to ensure that their respective roles and responsibilities in household/community nutrition are recognized and harnessed.

Improved design, implementation and M&E for integration of nutrition in FFS

- For future programmes on integration of nutrition into FFS, collaborate with Area Nutrition Coordination Committees (ANCC) and Health Facilities as key stakeholders in the design, planning and implementation of FFS to leverage and optimize on skills on nutrition sensitive agriculture.
- For future programmes on integration of nutrition into FFS, to ensure optimal adoption of nutrition practices at household level, the Farmer field school approach should be complemented with a ''family approach" whereby facilitators conducts sessions on gender and nutrition with FFs members together with their spouses.
- Strengthen collaboration and linkages between the FFS groups to other existing groups at community level such as care groups to leverage technical support and resources, where joint planning of activities could link to joint implementation of activities, e.g., cooking demonstrations targeting both FFs members and care groups.
- Future FFs programs should articulate a clear theory of change to define envisioned success of nutrition integration in FFS, as well as have project nutrition indicators that are reflective of project context. For instance, use of indicators such as the Minimum Dietary Diversity for Women (MDD-W) provide much insight into the more vulnerable members of a household than food consumption score.



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