



Technical Brief

TRANSFORMATIVE LEARNING EXPERIENCE THROUGH FARMER FIELD SCHOOLS FOR BEAN FARMS IN ZAMBIA

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Introduction

The African population is projected to reach 1.5 billion people by 2030 (NEPAD, 2014). This presents a significant challenge in a continent faced with hampered agricultural growth, poverty, and food and nutrition insecurity. In Zambia, agriculture remains one of the key priority sectors in the growth and poverty reduction programme. The country is richly endowed with the necessary resources to stimulate and sustain agricultural and rural development. Zambia can produce various cereals, legumes, tuber crops, vegetables, and fruits due to its rich soils in arable land. However, despite being richly endowed with all the necessary resources, much of Zambia's agricultural potential is yet to be realized primarily due to poor agronomic practices and low adoption of approaches and technologies to increase household

productivity in Agriculture.

To address the challenges surrounding low productivity by most small-holder farmers, World Vision Zambia (WVZ) has spearheaded the running of Farmer Field Schools (FFS) across various value chains of focus, including bean value chain, to increase adoption of high agricultural productivity methodologies. The rationale for selecting dry beans (*Phaseolus vulgaris*) is that they have excellent nutritional properties and are the cheapest source of protein for many resource-poor households in Zambia (Faduagu et al., 2019). This technical brief gives insights into the outcomes of World Vision Zambia's interventions in Farmer Field Schools (FFS) for bean farmers in selected WV project areas. The brief ends with a call to action.

Technical Approaches

The World Vision FFS is a community low-cost participatory extension methodology and transformational model that tries to empower the most vulnerable and marginalized small-holder farmer and commercial producer groups (CPG) to increase the productivity of local small scale farmers. Therefore, FFS is essentially a "school without walls" composed of groups of farmers who meet regularly during the growing seasons to experiment with new production options. FFS aims to increase farmers' capacity to test new technologies in their own fields, assess results and their relevance to their particular circumstances through different groups such as CPG, FFS facilitators, lead farmers or agriculture entrepreneurs who are carefully selected based on their practical experience with the selected value chain. Furthermore, they interact on a demand-driven basis with researchers and extension workers, where they have an opportunity to seek assistance in areas where they are unable to solve a specific problem amongst themselves. Therefore, the FFS empowers farmers with the knowledge and skills to make them experts in their own fields; to sharpen the farmers' ability to make critical and informed decisions that render their farming profitable and sustainable; to sensitize farmers in new ways of thinking and problem solving and to help farmers learn how to organize themselves and their communities.

The program also has a business and input empowerment scheme. The concept of farming as a business is not popular among most small-holder farmers. As a result, they do not intentionally address production costs with a view to reducing them or indeed return on investment. In addition, farm inputs such as improved seeds, fertilizer and other entrepreneurial inputs are often unavailable. Therefore, the FFS also addresses farming as a business where issues of cost of production are

tackled to reduce cost and maximize return on investment. The program also promotes the uptake of improved production technology and training farmers on climate adaptation and enterprise risk management. Further, under the Empowered Biblical World View (EBWV)¹, farmers are empowered to enhance their perception and identity to break the cycles of dependency in the communities.

Outcome of the Interventions

Since its inception, WorldVision Zambia has empowered more women than men (59% to 41% respectively). As a result, the position of women in the targeted districts has improved owing to increased knowledge in farming techniques, consequently increasing yields and revenue from beans production.

Further, 70% of the farmers in the FFS program that successfully applied the farming techniques acquired under the programme, reported an increase in crop yields compared to the control plots, which had no empowerment. Furthermore, farmers reported increased profit from the sale of their beans. This helped improve their ability to meet the basic needs of their families. The case study below is an example of the positive outcomes of the FFS program.

Case Study: Reducing the cost of production and increasing profitability

One farmer from Njalamimba Zone in Mporokoso District by the name of Friday Kapambwe and a member of the beans Farmer Field School bought 110kg of bean seed that is 25kg Mbereshi and 85kg Lukupa, and planted on a 2ha piece of land. The total cost spent on inputs and labour was K2,884 (\$142.77). He managed to harvest and sell 24bags of bean seeds that weighed 1,411.7kgs and walked away with a K21, 175.5 (\$ 1,048.29). The money has helped transform his well-being and that of six family members, which was evidenced by enrolling 3 (1 nephew and 2 nieces) dependents in school and buying inputs for the next farming season in advance. He has also managed to finish building his grocery shop. Furthermore, he managed to roof his newly built house with iron sheets. This has brought joy to him, and his wife and they are planning to increase the area under cultivation in the next farming season.

Limitations and Challenges

While FFS have had a transformative effect on participating farmer groups, programme implementation has faced many challenges. There has been a challenge with having trained facilitators in all FFS groups. Each farmer field school needs a technically competent facilitator to lead and guide members through the hands-on exercises and support their learning processes. However, World Vision Zambia has not conducted formalized training for all the farmer field school facilitators in all active farmer field schools due to limited funding.

Further, FFS requires a structured form of leadership from the government through the Ministry of Agriculture and the cooperating partners. The Ministry of Agriculture is represented by Agricultural Extension Workers at field level.

However, due to limited human and financial resources, collaborative leadership has been a challenge to manage the farmer field schools.

Additionally, one of the critical factors to the success of a farmer field school is that there are no active lectures but solely runs its activities on experiential, participatory and hands-on work with the emphasis placed not only on the 'how but also on the why'. This, therefore, calls for the formulation of a standardized curriculum that is followed throughout the entire cycle of the crop. However, World Vision Zambia is still in the process of finalizing the production of a simple to use and picture rich curriculum. This presents a challenge to the uniformity of lessons being conducted at present.

¹Empowered World View is a faith-based enabling development approach for mobilizing and empowering individual and communities' potential to transform their mindset, beliefs, and behaviour which affirm their identity, dignity, and agency to participate effectively in sustainable transformative change. It is a foundational approach for engaging individuals and groups to address the root causes of many problems in communities and is used within every sector of development.



Opportunities

Working through farmer field and business schools present an excellent opportunity for farmers to interact and gain practical hands-on experience when government extension services are unavailable to meet daily technical requirements for the farmers.

Our Call to Action

The outcome of the programme intervention calls for strengthened partnership with different players to scale up the programme. Therefore, to continue reaping benefits that result from FFS and ensure continued transformative learning among vulnerable rural farmers, we call for the following measures to be taken:

Policy Makers

- To encourage bean farming, there is a need to establish sustainable cost-reflective markets for farmers and value chain hubs to increase uptake and sale of beans.
- Encourage the private sector, mainly seed and agro-marketing companies, to participate and support initiatives such as FFS that seek to improve farming practices.

Partners

- We call upon partners to build the capacity of farmers and demonstrate the importance of transformative learning experiences in increasing production.

- Local and traditional leaders can play a critical role in marketing the FFS program and enrolling more facilitators.
- Due to the increase in demand for plant catalysts, World Vision Zambia and its partners need to facilitate increased quantities to be distributed in the communities.

Programme Implementers

- We call upon program implementers to enhance consistent monitoring of the farmer field schools for effective rolling out of the concept, and adherence to technical agronomic requirements. Further, programme implementers should consistently support farmers during the production cycle to avoid distortion of critical lessons and technique aspects as intended in the curriculum.
- To enhance beans productivity, program implementers should continue offering farmers' capacity building programs in improved technologies through FFS to strengthen behavioural patterns in the farmers at each stage of production.

References and Resources

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