



Farmer Market Schools in Zimbabwe and Malawi

**Consolidation of knowledge based on four evaluations and quantitative
survey reports**

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ADRA

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Acronyms

ASC:	Action for Social Change
ADRA:	Adventist Development and Relief Agency
AEO:	Agricultural Extension Officer
D/PAEO:	District/Provincial Agricultural Extension Officer
DA:	District Administrator
DEGI:	Development Governance Institute
EU:	European Community
FAO:	Food and Agriculture Organization
FBS:	Farmer Business School
FFS:	Farmer Field School
FMS:	Farmer Market School
FTLRP	Fast Track Land Reform Program
GDP:	Gross Domestic Product
ICT:	Information-Communication Technology
JICA:	Japanese International Cooperation Agency
M&E	Monitoring and Evaluation
MAMID:	Ministry of Lands, Agriculture and Rural Resettlement
MFI:	Micro-Finance Institution
MOU:	Memorandum of Understanding
NGO:	Non-Governmental Organization
PVPU:	Per-Urban Vegetables Producers Union
CSDI:	Community Sustained Development Initiatives
USD:	United States Dollar
VIDCO:	Village Development Committee
VSLA:	Village Savings and Loans Association
WADCO:	Ward Development Committee
WFP:	World Food Program
ZAPF:	Zimbabwe Agricultural Policy Framework
ZEPARU:	Zimbabwe Economic Policy Analysis and Research Unit
ZESA:	Zimbabwe Electricity Supply Authority
ZFU:	Zimbabwe Farmers' Union
ZIMASSET:	Zimbabwe Agenda for Sustainable Social and Economic Transformation

Executive summary

The Farmer Marketing School (FMS) concept has been piloted by ADRA 2015-2018 in Malawi South (Machinga district), Central (Lilongwe district) and North (Mzuzu district)) and Zimbabwe (Mashonland North (Goromonzi and Domboshawa districts) and Matebeleland North (Redwood, Nyamandlovu, Bubi, Umguza and Mupane districts)). The FMS concept was conceptualized by ADRA staff and draws on experience from market linkage program implementing in Kenya and further elaborated in Malawi. The FMS approach build on to a tradition among practitioners who adhere to the slogan *“find the market first and then produce to satisfy market demand”*. In its approach to adult learning, the FMS is inspired by the original principles in Farmer Field Schools. Farmers learning about market dynamics and how to link to value chain actors is not done through conventional teaching, but by encouraging farmers to explore the market and its actors by themselves. This autonomous practical interaction with value chain actors is part of the learning process. Through experiential learning FMS farmers get a better understanding of how the market function and therefore become better at taking decisions about, which value chains to specialize in, how to interact with value chain actors and what is expected of them as producers.

The *“Farmer Market Schools in Zimbabwe and Malawi. Consolidation of knowledge based on four evaluations and quantitative survey”* report is expected to contribute to a global review undertaken by ADRA international Livelihood Learning Lab, with an aim to conceptualize a generic strategy that address the disconnect with profitable markets that characterize smallholder farmers worldwide and Africa in particular. The study consolidates information from the evaluation reports and two statistical reports based on quantitative end-line surveys from Zimbabwe and Malawi undertaken by independent consultants in collaboration with a team from ADRA (Zimbabwe, Africa and Denmark offices).

“Operational Manual, Farmer Market Schools - A facilitator’s guide” (ADRA 2017) is a comprehensive training manual that sets out the objectives of FMS, provides a detailed description of the content FMS facilitators are trained in, and an operationalized step-by-step practical guide for setting up a FMS. Facilitator training is comprised of four stages, preparatory activities, a module that provides a theoretical understanding of market value chains (covering six technical themes), a practical interactive module where participants, through discovery learning, learn about the market, and finally a M&E stage.

ADRA piloted the FMS as a two-stage facilitation approach. In the first stage, an experienced senior educator (from ADRA Denmark) facilitated key ADRA staff involved with piloting the FMS approach along with two AEO from each of the seven pilot sites. This group was educated as FMS facilitators following the four steps laid out in the FMS Manual. During the second stage AEO and ADRA staff co-facilitated FMS groups. All AEO and participating FMS members interviewed were very content with the quality of facilitation. The evaluations found the approach to be very effective in keeping a high quality of facilitation at both stages. The evaluations found that the FMS facilitation approach to learning has changed relationships between AEO and farmers in a positive way.

The implementation and performance of FMS differ between Malawi and Zimbabwe depending on socio-economic and political context. Overall FMS members in Zimbabwe have been successful in linking with profitable urban-based competitive markets, are dynamically developing their production and marketing patterns and scaling up the approach by starting new farmer facilitated FMS with strong endorsement of extension services. Only one out of six FMS in Malawi has had some measure of success in linking with profitable markets, while the other five FMS were unsuccessful in their attempts to use their enhanced market skills.

The implementation and performance of FMS differ between Malawi and Zimbabwe depending on socio-economic and political context. Overall FMS members in Zimbabwe have been successful in linking with profitable urban-based competitive markets, are dynamically developing their production and marketing patterns and scaling up the approach by starting new farmer facilitated FMS with strong endorsement of extension services. Only one out of six FMS in Malawi has had some measure of success in linking with profitable markets, while the other five FMS were unsuccessful in their attempts to use their enhanced market skills. This short study has not identified obvious reasons why FMS Malawi is relatively less successful in linking with competitive profitable markets than FMS Zimbabwe. Possible reasons, which would require additional studies to verify, for the difference in performance include the following. *On the supply side*, FMS members in Zimbabwe seems to have much more agency, their FMS groups are much more economically and socially dynamic. Possible reasons include, firstly a significant different in education level between FMS members in the two countries (ADRA Endline surveys, 2018), secondly a difference in quality of and access to agricultural and marketing extension service between the two countries and, thirdly a strong difference in what can be termed 'social dynamics. There is a sense of social entrepreneurship in rural Zimbabwe, among both FMS members, agricultural extension and ADRA staff, with a focus on moving forward after being held back and politically controlled during the Mugabwe era. The proliferation of farmer facilitated FMS groups in Zimbabwe is an outcome of this social dynamic. In rural Malawi social dynamics is slow, rule-bound and new activities seems to action to be shaped by path-dependency. When asked by the evaluation team, FMS members in Malawi showed interest in volunteering to facilitate new FMS and thereby passing on their knowledge to others in the community. Asked why it did not happen, they replied: "We have not been given authority by government to do so". *On the demand side*, the number of supermarkets and volume of demand for horticulture products is significant higher in Zimbabwe than in Malawi. In addition, the agricultural market infrastructure is considerably more elaborate in Zimbabwe.

FMS emphasizes the individual members capacity to analyze market opportunities and enhances individual agency to act on this analysis. The FMS concept does not (i) prescribe how farmers should organize collective marketing, (ii) facilitate farmers access to finance for investing in agricultural production, processing and marketing, aside from promoting VSLA as a model for internal saving or (iii) provide a strategy for scaling up. After completing FMS, the individual members' decides how to collaborate within the FMS group and disseminate their enhanced market knowledge within their parent organizations and the wider local community.

More than half FMS members in Zimbabwe bulk their harvest, share transport and market collectively (see Annex 4). However, only few are collaborating beyond the group level and members only few agree collectively on what and when to grow, monitor quality etc. In Malawi all six FMS groups have attempted to market collectively, but only one has been successful. Federating farmers into higher level organizations (beyond the group level) has historically been subject to state regulation in both Zimbabwe and Malawi, which is undermining legitimacy and trust of such organizations.

In both Malawi and Zimbabwe access to finance for investment and seasonal inputs for intensive horticulture production was mentioned as the key constraint by all FMS interviewed. Saving and credit from VSLA was highly useful for buying required inputs and transporting produce to the market, however, viewed as an insufficient source of finance for investments in production infrastructure such as irrigation.

Implementation of FMS was done very differently in Malawi and Zimbabwe, which has had clear consequences for scaling up and impact. In Malawi implementation was done as a blueprint project with little consideration for experimenting with new ways for overcoming challenges. Both Ministry, ADRA and

farmers themselves seemed path dependent and unwilling to divert from plans without permission. As a result, 6 FMS groups were implemented as planned. In Zimbabwe implementation was done with limited planning and budget and driven by ADRA staff that were passionate about the FMS concept after being introduced to it in Malawi. Implementation of FMS in Zimbabwe was highly participatory and focus on human resource capacity development through transforming AEO and farmers' perspectives of their ability to learn about the market and engage with value chain actors. As a result, all the FMS graduates returned to their parent groups and started farmer facilitated FMS on their own with encouragements, but limited technical support from ADRA facilitators and agricultural extension officers. This way the 7 NGO/extension facilitated FMS was scaled up to more than 20 farmer facilitated FMS.

Well being ranking (WBR) based on farmers perception of wellbeing within the community was carried out in all the five sites visited. The key informants used were respected persons with an in-depth knowledge of social relations within the community, such as traditional headmen, AEO, the political Councilor or other local leaders. This WBR found that the well off have adequate resources and a good starting point. These farmers have accumulated wealth over long periods and are resilient to change from weather or social conditions. Meanwhile they are not interested in the markets linkages or NGO programs such as the FMS supported by ADRA. This category are relatively few and make up some 20% of the total households. The middle-class is characterized as hard-working average farmers who are embracing modernization if given the chance and more than willing to work with AGRITEX. This category make up 30% of the total households. Some 90% of the farmers within FMS come from this category of farmers. The poor, make up half of the entire population. They are characterized by having few resources on land, they were born in poverty and most of them also die in poverty. Only around 10% of the FMS come from this group of farmers.

In both Malawi and Zimbabwe, mobilization for membership were done among farmers settled within irrigation schemes (in case of Zimbabwe, with the exception of Domboshawa where members were individually owned plots who had perennial water sources) and members of state sponsored farmer associations (in case of Malawi), which largely belong to the middle WBR category. Mobilization for FMS has only to a limited extent included the poorest WBR category or the well-off WBR category.

The evaluation identified four different indicators of perspective transformation among the AEO and FMS members: increased individual confidence and emancipation; changing household agency and gender relations; social relations within the FMS group; and visibility and status in community. There are both communalities and differences in the extent to which FMS has resulted in perspective transformation in Zimbabwe and Malawi. While all four aspects are strongly represented in Zimbabwe, the two last aspects are only weakly present in Malawi.

1. Introduction

1.1 ADRA support for FMS in Zimbabwe and Malawi

The Farmer Marketing School (FMS) concept was piloted 2015-2018 by ADRA in Malawi South (Machinga district), Central (Lilongwe district) and North (Mzuzu district)) and Zimbabwe (Mashonaland North (Goromonzi and Domboshawa districts) and Matebeleland North (Redwood, Nyamandlovu, Bubi, Umguza and Mupane districts)). The FMS concept was conceptualized by ADRA staff and draws on experience from a market linkage program implemented in Kenya and further elaborated in Malawi. The FMS approach builds onto a tradition among practitioners who adhere to the slogan *“find the market first and then produce to satisfy market demand”*. In its approach to adult learning, the FMS concept is inspired by Pablo Freire’s conscientization philosophy and Rober Chamber’s PRA and Farmer First notion. Farmers learning about market dynamics and how to link to value chain actors is not done through conventional teaching, but by encouraging farmers to explore the market and its actors by themselves. This autonomous practical interaction with value chain actors is part of the learning process. Through experiential learning, FMS farmers get a better understanding of how the market functions and therefore become better at taking decisions about which value chains to specialize in, how to interact with value chain actors and what is expected of them as producers.

The status of the four existing reports is as follows: the Final Zimbabwe Evaluation report was completed in April 2018, two draft reports on quantitative end-line surveys were available in June 2018, and a Malawi FMS Evaluation exists as an incomplete draft. A follow up visit to Malawi was undertaken by an independent consultant to cover issues missing in the incomplete draft Malawi FMS evaluation report.

This consolidated report on FMS Evaluation and survey reports for Zimbabwe and Malawi will draw on these existing reports and studies and is expected to contribute to a global review undertaken by ADRA international food security livelihood lab, with the aim of conceptualizing a generic strategy that addresses the disconnect between profitable markets and smallholder farmers worldwide and in Africa in particular.

1.2 Towards an understanding of theory of change of FMS

FMS is described in a concept note and in the FMS training manual. The following theory of change is extracted from these documents. The FMS approach perceives poverty as a mental state produced by an oppressive environment, which can be overcome by the strengthened self-confidence, cooperation and determination of the poor. The FMS concept was developed by ADRA Denmark with inspiration from publications and research by CIAT¹. ADRA Denmark will continue working with FMS by refining the generic manual developed based on the experiences thus far. See annex 3.

As a value chain approach, FMS is a unique way of strengthening farmers in their relation to the other actors in the agricultural value chain. The farmers enter the value chains after having examined prospects and opportunities in the market. The smallholder farmers are business partners who can negotiate and

¹ International Centre for Tropical Agriculture (CIAT), situated in Colombia, which has produced *A Market Facilitator’s Guide to Participatory Agro-enterprise Development*, CIAT, 2006. This guide is based on lessons learned from projects in Eastern and Southern Africa and makes the call: The first rule of marketing for small-scale farmers is to: Produce what you can sell, instead of trying to sell what you have produced. Link: <http://www.crs.org/sites/default/files/tools-research/market-facilitators-guide-to-participatory-agroenterprise-development.pdf>

take calculated risks. This is in contrast to the dominant *contract farming* approach, as FMS farmers will make their conditions clear rather than just accept the terms of the buyer. Farmer market schools empower participants by enhancing their market analytical skills and agency. While FMS aim at enhancing individual market capacity, there is the implicit hope that the participants in FMS will link with profitable markets in a collective manner by organizing in higher level farmer associations or cooperatives.

FMS emphasizes the *individual's* capacity to analyze market opportunities and enhances individual agency to act on this analysis. The FMS concept does not (i) prescribe how farmers should organize collective marketing, (ii) provide a solution for how farmers could access finance for investing in agricultural production, processing and marketing, or (iii) provide a strategy for scaling up. After completing FMS, the individual student decides how to collaborate within the FMS group and disseminate their enhanced market knowledge within their parent organizations and the wider local community.

This has resulted in a range of different practices within Zimbabwe and Malawi in terms of how marketing is organized, how investments are financed, and how the FMS approach is to be disseminated. FMS assumes that the appropriate actions to address these challenges are highly contextual and therefore allows decision making space for FMS graduates themselves to identify what is best for them.

1.3 Methodology

The result of the combined Malawi and Zimbabwe FMS evaluation is expected to contribute to a global review undertaken by ADRA international food security livelihood lab, with the aim of conceptualizing a generic strategy that addresses the disconnect between profitable markets and smallholder farmers worldwide and in Africa in particular. Fieldwork for the evaluation was undertaken in Malawi during two trips in 2017 and 2018 and in Zimbabwe during two trips in 2018 by independent consultants in collaboration with a team from ADRA (Malawi, Zimbabwe, Africa and Denmark offices).

In both countries the methodology included a review of project documents, discussions with the ministry of Agriculture, district extension services, field visits to a number of FMS, discussions with international aid agencies and interviews with horticulture value chain actors. In addition, more than 50 group and individual interviews were carried out during the evaluation, some of which were recorded, transcribed and analyzed using Nvivo software, see annex 1.

The joint evaluation report also draws from quantitative surveys based on a total of 195 members of FMS facilitated by ADRA and extension staff, 168 farmers belonging to the parent association from which FMS members were selected, and 230 farmers who were not supported by ADRA and who constituted a control group. Annexes 4 and 10 are based on these two surveys. For further elaboration of methodology see the FMS Zimbabwe evaluation report (ADRA, 2018).

1.4 Interpretation of TOR for consolidated FMS report

The TOR requests the consolidation of evaluation and survey reports for Zimbabwe and Malawi to take point of departure in the structure of the Zimbabwe FMS Evaluation report and to take information from this report on issues where information is inadequate in the incomplete draft Malawi FMS Evaluation report. There are

two important additions in the consolidated report, namely (i) a section on the importance of the different contexts in Malawi and Zimbabwe and (ii) further operationalization of recommendations.

The consolidated report is organized in the following sections:

- Theory of change in FMS
- Experience from ADRA implementation of FMS in Malawi and Zimbabwe
- Government, private sector and donor perception of FMS
- Relevance and quality of training of FMS facilitators
- Interaction between (extension about) market and agronomy
- FMS members' capacity to analyze the horticulture value chain and link with market actors
- Change in FMS members' production and marketing patterns
- FMS members access to finance and financial services for investment in production and handling of payment conditions dictated by the market
- FMS influence on rural livelihood
- Perspective transformation of FMS members
- Recommendations for scaling up and operationalizing the FMS concept

2. Experience from ADRA implementation of FMS in Malawi and Zimbabwe

The FMS project in Malawi was chosen to receive support from funds collected in 'Danmarks indsamlingen'. In practice, piloting of FMS became a component in an on-going larger project titled 'Action for social change'. This was a good fit, as Action for Social Change has a participatory bottom up approach. As indicated in the timeline of FMS implementation in *annex 2*, FMS in Zimbabwe was financed by piggybacking first on the ADRA Denmark supported ASC project in 2016 and later in 2017 (after a 3 month period without funding) on the ADRA Australia supported 'Wealth in the Soil' (WITS) project. As the FMS pilot neither had project status nor an implementation budget within ADRA, its conditions for implementation were less than ideal. As an ADRA Zimbabwe staff put it: "We would have reached much further if we had had a dedicated budget".

ADRA offices in Malawi and Zimbabwe are project-financed and are as such neither used to, nor administratively equipped for, piloting a new concept such as FMS. A project implementation mode focusing on outcome was chosen, rather than an experimental mode focusing on learning in order to further develop the FMS concept. Internal participatory monitoring, institutional learning and mitigating action loops were largely absent during implementation of FMS, in particular in Malawi.

The Malawi ADRA staff had difficulties in understanding and integrating the facilitating pedagogical approach of FMS into the early implementation. Emphasis was on reaching the numbers trained rather than on the quality and participatory nature of the training. This reflects the fact that facilitating, rather than telling participants what to do, is a new approach for all actors involved, farmers, ADRA staff and government extension staff. Further, funding for the Malawi FMS was a result of the 'Danmarks indsamling' to which ADRA DK to a certain extent was accountable for the quantitative indicators. The funding modality was not intended for a pilot project.

The pilot testing of FMS in Zimbabwe has been a success *in spite* of shortcomings in administrative and financial support from ADRA Zimbabwe. Piloting FMS on a shoestring has been possible because FMS is

about human resource capacity development through transforming AEO and farmers' perspectives of their ability to learn about the market and engage with lower level value chain actors. If all actors are willing to engage in this transformative adult education with minimal external financial support, then implementation is possible with very limited financial resources. The fact that farmers have had to pay for their own bus fare and lunch when exploring the value chain has in fact enhanced their ownership of what they learned.

What has enabled ADRA to successfully pilot FMS in Zimbabwe is that some of its core staff became passionate about the FMS concept after being introduced to it in Malawi. Meanwhile, a new project funded by ADRA Australia was inspired by the initial results of FMS in Zimbabwe and was convinced to include FMS as a pilot component. Finally, ADRA management should be commended for allowing the required administrative flexibility and overcoming its initial skeptical perception of FMS. The inadequate budget for piloting FMS in Zimbabwe is, however, likely to have reduced the effective implementation of the FMS concept.

3. Government, private sector and donor perception of FMS

3.1 Public sector

There are major differences in how FMS is perceived in Zimbabwe and Malawi. FMS is receiving whole-hearted ownership and support from the Ministry of Agriculture and among agricultural extension staff in Zimbabwe, while more reserved endorsement was noted from agricultural extension services in Malawi. In Zimbabwe the Ministry of Agriculture's Extension Department has expressed its intention to adopt the FMS method and train extension staff countrywide to apply the method after a positive external assessment² and a joint trip to the project area. The evaluation confirmed support for FMS among Agritex staff at all four administrative levels, e.g. at MAMID in Harare, at the Provincial headquarters in Bulawayo, at District headquarters in Goromonzi and among Frontline AEO. In Malawi the Mzuzu District Agricultural Extension and Development Officer expressed satisfaction with the two FMS in the district, but at the same time she did not see a strong need for FMS, given the current FFS and FBS program supported by FAO (DIBcoop, 2018).

The evaluation team experienced enthusiastic support for FMS in Zimbabwe among frontline agricultural extension and development officers who have been trained by ADRA and gained experience as FMS facilitators. The district AEO for Goromonzi district in Zimbabwe told the evaluation: *"I have seen these four AEO change after being trained as FMS facilitators. They are now closer to the community. I would like all 70 AEO in my district to receive similar training"*.

² Kudzai Chatiza 2016. Smallholder Market Access and Horticultural Development Policy in a context of disrupted Value Chain Alliances: A Report developed for/and based on the experiences of ADRA Zimbabwe.

3.2 Privat sector

There are significant differences in the history, characteristics, and volume of private sector agricultural wholesalers and retailers in Malawi and Zimbabwe. In Zimbabwe the horticulture subsector has undergone major transformation since implementation of land reform in 2001 that saw most of the existing large scale upstream producers of horticultural crops disappear overnight. The horticulture subsector has been under restructuring ever since and is still volatile today. Over the past 3-5 years, there has been a growing recognition among downstream horticulture value chain actors, including wholesalers, supermarket retailers and suppliers of seeds and seasonal chemical inputs, that small scale farmers in Zimbabwe are key future business partners and reliance on large scale farmers alone as suppliers of horticulture products and buyers of inputs is no longer valid.

In Malawi, the private sector agricultural market infrastructure is much less developed. The parastatal market organization Agricultural Development and Marketing Corporation (ADMARC) has, since it was formed in 1971, been a major market player. After three rounds of World Bank sponsored liberalization reforms it has not been possible to create a comprehensive private-sector marketing system in Malawi. ADMARC therefore still exists in spite of strong criticism for being inefficient, wasteful and not sufficiently independent of government control. For the horticulture subsector, most trade is done in informal open markets, with supermarket retailers playing a small role, compared with Zimbabwe.

Interviews by the evaluation team of downstream private horticulture subsector value chain actors reveals a high demand for smallholder farmers' products. While this is much more the case in Zimbabwe than in Malawi, it is also the case in Malawi where staff from Shoprite supermarket in Mzuzu (Malawi) showed the evaluation team a list of fruits and vegetables (red onions, beetroot, pineapples, avocado, cucumbers and eggplants) that they were unable to buy locally and had to import from South Africa. Interviews and discussions with private sector stakeholders also made it clear that there are large variations in business models and downstream value chain buyers' attitudes towards small-scale farmers (in both countries).

3.3 Donor community

In both countries, FAO is seen as an important partner for the FMS program. FAO in Zimbabwe emphasized how FMS compliments FFS and suggested that further work should be done to understand how the two approaches can mutually support each other and/or be integrated. The acting FAO representative endorsed the idea suggested in the evaluation that a small group of individuals should be trained as National Master FMS Facilitators and further suggested that such training should be combined with, and coordinated by, the FAO Africa office in Nairobi which is currently planning to train National FFS Master Facilitators across Eastern and Southern Africa.

The FAO Malawi office acknowledged the potential synergy between FFS and FBS, which are currently implemented by FAO in Malawi, and FMS. However, they requested monitoring and evaluation reports on ADRA support for FMS in Malawi before closer collaboration could be established. ADRA Malawi held a FMS conference in 2016 with approximately 70 participants. This inspired ADRA Zimbabwe to implement FMS in Zimbabwe. ADRA Malawi attempted to use the momentum created by the conference to organize a broad stakeholder network based on a 'smallholder farmers' market access' theme. There was, however, not sufficient support for the idea and the network was closed within the year. In 2017, the EU was planning a new agricultural program and invited NGOs to participate. However, because of staff changes at ADRA Malawi, this opportunity was not pursued.

4. Relevance and quality of educating FMS facilitators

The unique feature that distinguishes FMS from most other approaches to linking small-scale farmers to competitive markets is the FMS focus on enhancing the individual farmer's capacity to analyze market opportunities and take production and marketing decisions based on such an analysis. While most approaches to linking farmers with the market draw on value chain theory (i.e. Global Value Chain Theory), the theoretical inspiration for the FMS approach is transformative adult learning. FMS can be viewed as a bottom up value chain approach.

The main differences between FMS and many other previous attempts to teach small scale farmers about market value chains, lies in how FMS facilitates farmers' learn. The quality and relevance of the facilitation approach is what separates success from failure. The FMS approach to facilitation draws on principles of adult and non-formal education (taking point of departure in farmers existing experience of the market and creating an inviting space that allows farmers to articulate their own experience-based knowledge). The FMS approach exposes farmers to the experiential learning cycle by guiding them to explore the value chains on their own. Through this actual practical interaction with lower value chain buyers farmers gain technical knowledge about how markets function. Meanwhile, by creating a safe learning space within the FMS where participants articulate and reflect on their experiential market learning cycles, a process of conscientization is encouraged. Finally, apart from technical learning, the FMS approach enables emancipatory learning, whereby the participants, through their engagement with markets are subjected to a series of 'wow' experiences (disorienting dilemmas) that disturb their preconceived ideas of the market place and ultimately may lead to perspective transformation (see section 9).

4.1 FMS operational manual

Operational Manual, Farmer Marketing Schools. A facilitator's guide (ADRA 2017) is a comprehensive training manual that sets out the FMS objectives, provides a detailed description of the content of FMS facilitators training, and an operationalized step-by-step practical guide for setting up FMS. Facilitator training comprises four stages: (i) preparatory activities; (ii) theoretical understanding of a market value chain (covering six technical themes); (iii) a practical interactive module where participants, through discovery learning, learn about the market; and (iv) monitoring learning loops.

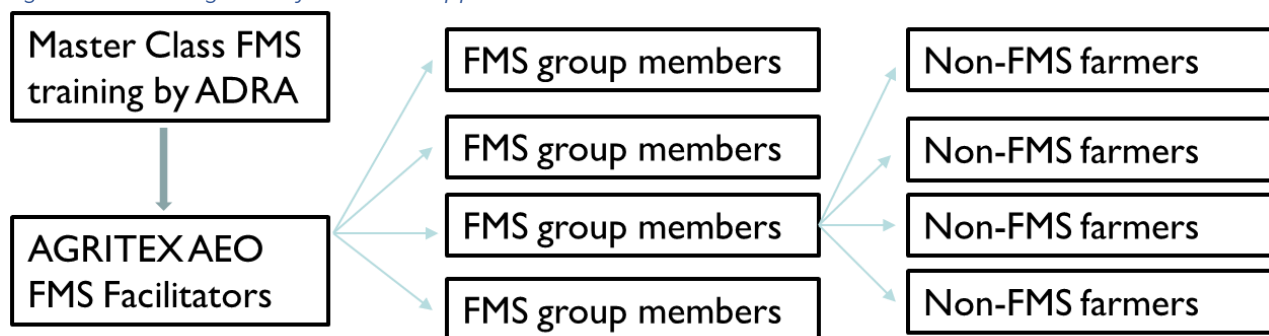
The current draft version has been revised, drawing on experience from educating the AEO as FMS Facilitators during the pilot phase in Malawi and Zimbabwe. Those who have used the manual in Zimbabwe and Malawi, including ADRA staff, agricultural extension officers and FMS participants all praised the quality of the manual. There is potential for improving three aspects of the FMS manual. Firstly, while *design of the experiential learning process* is good and allows for perspective transformative among participants (see section 9), this can be further refined as ADRA learns from implementation. Secondly, *teaching FMS participants to become FMS facilitators* themselves is absent from the manual. As discussed in section 4.4, such training may be highly useful for advancing farmer-facilitated FMS. Thirdly, experience from Zimbabwean FMS groups that are successful in linking to profitable competitive horticulture markets indicates a need for specialized technical training, such as *handling and packaging of perishable vegetables*.

4.2 Agricultural Extension Services and ADRA staff facilitated Farmer Market Schools

ADRA piloted implementation of FMS as a two-stage facilitation approach. At the first stage, an experienced senior educator (from ADRA Denmark) facilitated key ADRA staff in Malawi and Zimbabwe

involved with piloting the FMS approach along with two AEDO from each of the pilot sites. This group were educated as FMS facilitators following the steps laid out in the FMS Manual. At the second stage, pairs of extension staff and ADRA staff facilitate FMS groups. The flow of information from FMS group members to members of the community is not done as a facilitated process.

Figure 1. Two stage FMS facilitation approach



Source: ADRA 2018. Zimbabwe FMS Evaluation report.

The three AEDO and members from the two FMS interviewed in Malawi were all content with the quality of facilitation. This concurs with the analysis in the Zimbabwe FMS Evaluation report that finds the FMS facilitation approach to be very effective and of high quality at both stages of facilitation. In particular, the *facilitation approach to adult learning* was new and very different from what participants were used to. All found the discovery learning through interactive visits along the value chain to be challenging and the outcome in terms of what they learned from these visits to be useful.

There were, however, considerable difference between the two countries. The facilitation approach was welcomed by AEDO and accepted by DADO in Malawi, without having any lasting impact other than better relationships with the 6 FMS groups trained. In Zimbabwe the AEOs' expressed appreciation of the effectiveness of the facilitation approach in transforming and improving the learning environment and relationships between teacher/facilitator and participants. The DAEO of Goromonzi district in Zimbabwe, stated: *"I have noticed that the four AEO who were trained by the FMS program has changed in a good way. I would like similar change to happen for all 70 AEO in the district. That would be so nice." "These four AEO, now when they arrive in the community and farmers know that they have something important to share with them."*

The Zimbabwe FMS evaluation found that the FMS facilitation approach to learning changed the relationship between AEO and farmers in a positive way. This was confirmed during an interview with an AEDO during the Malawi visit, who stated that since FMS his relationship with farmers has changed dramatically and that he now discusses issues in a participatory manner during which solutions are co-produced. He further stated that a weight has been taken off his shoulders, as he no longer needs to pretend that he knows the answer to all the farmers' questions.

The AEDO facilitated FMS is illustrated in the box below.

Case study of AEDO facilitation of Choma FMS, Malawi

A participatory facilitation approach was followed. The ADRA Malawi facilitator told the evaluation team that *"they were allowed to talk their experience...about what they do and what they want to achieve"*. According to ADRA Malawi staff, the facilitating approach to teaching was not difficult, as

“farming is what they do every day and we also learn from them”.

FMS members first visit to their local weekly market was an eye-opener. In groups of four they interviewed all different types of traders, shops and hotels and realized that the markets were much more complex than they initially thought. Cassava was mentioned as an example. Cassava is sold raw; peeled; bundled and stored in a bucket of water; fried; or roasted. Some buyers were local end-users such as bars and restaurants, while others were wholesale buyers from as far as Southern Malawi. The second market travel was to Mzuzu town. Because of the cost, the number of members chosen to participate was limited to three. Cost was covered by all group members. This gave them a strong sense of ownership of the results of the market survey.

Farmers from Choma FMS confirmed that FMS has changed the way that they relate to the AEDO. During the group interview they expressed that they now *“feel free to express our needs”* and that the AEDO would respond.

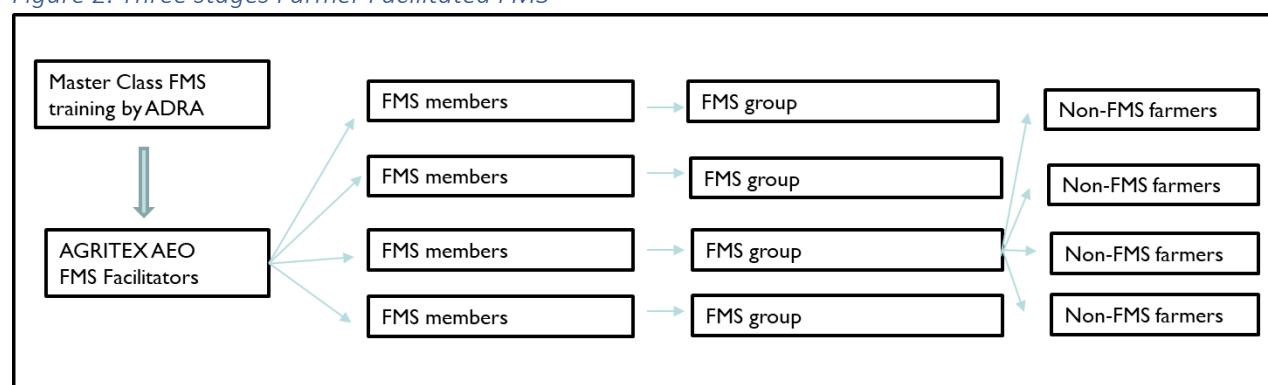
4.3 Dissemination of knowledge from FMS participants to the parent groups from which they were selected.

The FMS manual and pilot project documents focus on the first stage (ADRA staff/AEDO facilitation of a group of farmers organized in FMS groups) and are vague and unclear with regards to how dissemination of knowledge is to be carried out between the trained FMS group graduates and their parent groups. This has allowed differences in implementation between the two countries. After interviewing ADRA Malawi staff and members of Choma and Kadawonda FMS, it is clear that Malawi and Zimbabwe represent two distinctly different approaches to transferring knowledge and skills from FMS participants to the members of the parent groups from which the FMS members were chosen.

In the Malawi implementation model, the FMS facilitation learning approach takes place within the first two stages only, while dissemination of knowledge between the FMS members and the parent groups is done through occasional short talks during group meetings using conventional one-way communication.

In Zimbabwe, the Evaluation report found that FMS graduates in all locations had, without any support from the ADRA and AEO teams, copied what they learned in FMS in the groups from which they were mobilized. The six technical modules of FMS were facilitated to the parent farmer groups by the FMS members. The Zimbabwe model is illustrated in figure 2.

Figure 2. Three stages Farmer Facilitated FMS



Source: ADRA 2018. Zimbabwe FMS evaluation Report

The difference between the two models has implications for scaling up. In Malawi the pilot project has remained with the 6 FMS facilitated by ADRA staff and AEDOs, while the 6 FMS groups facilitated by ADRA staff and AEOs in Zimbabwe have been scaled up with an additional 28 FMS graduate facilitated FMS groups (making it a 3 stage facilitated process). The Zimbabwe FMS evaluation indicates that the quality of FMS graduate facilitated FMS groups is not significantly different from the ADRA staff and AEO facilitated FMS.

The difference between the two models also has implications for how marketing is organized. In Malawi, the ADRA staff and AEO facilitated FMS group is the unit for collective marketing. These FMS groups may get additional supply of produce from individual members of the parent association/cooperative if needed. In Zimbabwe the ADRA staff and AEO facilitated FMS no longer exist as a group and FMS graduate facilitated FMS groups are the units of collective marketing.

4.4 Zimbabwe experience with Farmer facilitated FMS groups

The FMS members interviewed by the evaluation expressed that they viewed FMS as a continuous learning by doing process, where they discuss what they have learned within each of their groups, and then jointly decide how to follow up with action. Typically two to four FMS members belong to the same group, which they then jointly facilitate. Group interviews with these farmer-facilitated FMS groups revealed that the facilitation approach used by ADRA/AEO co-facilitated FMS was copied by the FMS members. This was challenging for them, as they had not received any training in how to facilitate, but simply repeated how they were taught. One FMS member joked *“All the farmers think that I have invented this new approach and I am becoming famous.”*

In the case of Domboshawa district, four FMS members have facilitated the transformation of their old VSLA group into a new farmer facilitated FMS group consisting of 26 women and 3 men. Farmer facilitation of the new FMS was carried out in connection with the weekly VSLA meetings, with a new topic every week. The farmer-facilitators spent some 30 minutes introducing the topic of the week. In this way the VSLA group has been transformed into a FMS group. The farmer facilitators took the group to their personal gardens and displayed how they were now growing in response to the market. Everyone was impressed and this has assisted getting all fully committed to grow for the market.

For now, the division of labor is that the FMS farmer-facilitators act as the link to the market buyers on behalf of their group. However, this may gradually change in the future, as farmer facilitated FMS group members become more active. As one member stated: *“The FMS members have done a very good job at linking us to market. No one else from the FMS group has yet tried to link to market, however, we plan to do this in the future.”*

4.5 Interaction between (extension about) market and agronomy

Whether to first learn about agronomy and then learn about the market, or the other way around, is a "chicken and egg" puzzle. There is clearly need for both. In both Malawi and Zimbabwe, focus has long been on agronomy and FMS has been welcomed as a response to a long-felt need. As one AEO in Zimbabwe puts it: *“The FMS has filled a gap that existed in our training of farmers. Agritex was focusing on agronomy only and FMS has complemented this approach and filled the marketing gap”* (AEO Ward 1). A similar opinion was expressed by Mzuzu DEADO in Malawi who stated: *“Our agricultural extension focus has been on production only, while another part of the ministry has supported establishment of producer*

associations. However, assisting farmers in understanding the market has been missing and our hope is that FMS can do this”.

The success of FMS in Zimbabwe in terms of engaging with competitive markets has led FMS members to intensify their cultivation, expanding the area cultivated and introducing new crops and varieties in response to information about market demand, which subsequently has created a need for more agronomy extension. Recognizing the need among farmers for receiving training in both agronomy and market access, AGRITEX and ADRA linked FMS members with *Lead Farmer* (a Zimbabwe extension approach). To match this term, FMS graduates are called *Lead Marketer*. However, because of the very different pedagogical approach to educating Lead Farmers and FMS (Lead Marketers), the evaluation questions the compatibility between the two educations. *Firstly*, The Lead Farmer education is not empowering and transformative. This could be observed in Domboshawa district, where the Lead Marketers were articulate and forthcoming, while the Lead Farmer kept quiet. *Secondly*, Lead Farmers education is highly biased towards high level use of improved seed, fertilizers, pesticides and herbicides. While this can be highly profitable for well-off farmers, it is not likely to be the most suitable strategy for many average farmers and certainly less relevant for poor farmers. The content of the education of Lead Farmers is therefore less relevant for poor farmers.

In Malawi, the FMS groups have not yet experienced the same level of success with market linkages and market driven changes in production patterns as in Zimbabwe. Agricultural extension services in Malawi are operating on minimum skeleton budgets and are largely dependent on external projects for their activities.

5. FMS experience with identifying and selling to profitable competitive markets

5.1 Overall success of FMS capacity to link with competitive markets

Three aspects are important for the assessment of the success of FMS in selling to profitable competitive markets. The first aspect is *FMS members capacity* for market analysis and ability to identify the value chains and market actors that are the best match for them, i.e. enterprises that are economically attractive, for which production is feasible and risk manageable. The second aspect relates to *FMS members individual and collective agency*, i.e. ability to act on their analysis of how market opportunities are best synchronized with their agricultural production. Access to profitable urban-based markets requires that farmers collaborate and market collectively to meet minimum requirements for consistency, quality and volume of marketed produce. The third aspect of success relates to the *character of market relations*. Some FMS bulk, transport and sell irrigated vegetables to urban-based supermarket retailers on a weekly basis. Other FMS bulk and market dryland grain to wholesalers once a year. In addition, the type of contracts between FMS and buyers varies depending on context and crop.

The evaluation did not find major differences between FMS in Zimbabwe and Malawi with regard to FMS members capacity for market analysis and the assessment of FMS individual and collective agency to act on the analysis also is more or less similar. There were, however, major differences between FMS in Zimbabwe and Malawi with regards to the character of market relations. Only one out of the 6 FMS in Malawi had a good market relationship with an urban-based competitive market actor, while all FMS visited in Zimbabwe had good and evolving market relationships.

5.2 FMS members capacity to identify and analyze market opportunities

In Both Malawi and Zimbabwe FMS participants explored value chains for selected crops together with ADRA and government agricultural extension staff. The two-stage market learning process was more or less the same in all FMS groups visited in both countries and largely followed the FMS Manual. The first stage is a facilitated visit by all FMS members to the local market hub, e.g. weekly local market or rural growth point (congregation of shops, bars and restaurants). In Choma FMS (Mzuzu district, Malawi) members visited the weekly local market where, in groups of four, they interviewed different types of traders. "It was an eye opener to realize how different trading conditions were between traders". They used the example of cassava also mentioned above, that they found was traded either raw and stored in a stack; peeled, bundled and stored in buckets of water; or roasted. They moreover discovered that some traders from the Southern part of Malawi bought raw cassava wholesale by the truckloads for other parts of the country, while other traders bought on behalf of local shops and restaurants.

During the second stage, a few selected FMS members visited urban-based more profitable competitive markets. In the case of Goromonzi FMS Ward 16 in Zimbabwe, the two AEO and one ADRA facilitators travelled together with a group FMS students to visit informal vegetable markets and formal wholesalers and retailers in Harare. The FMS participants set up the meetings and covered all their own travel expenses, including bus fare, food and accommodation during the value chain exploration travel. In practice, the farmer groups (e.g. irrigation groups and or VSLA groups) to which they belong and from where they were mobilized, contributed to cover these expenses. During their value chain exploration travel, the FMS students identified three different types of market outlets for fresh vegetables, namely (i) fresh produce retail stores (Food Lovers supermarket, Greendale), (ii) fresh produce retail and wholesale stores (Brands Fresh and Wills Grove) and (iii) informal fruit and vegetable market (Mbare informal market). The FMS members brought along samples of the vegetables available in their gardens (carrots, Swiss chard, spinach and lettuce). This enabled them to get into dialogue with potential buyers and learn about the conditions and requirements for each specific market. In the case of Kadawendo FMS (Mzuzu district, Malawi) two members took the bus to Msusu town, where they, together with ADRA staff and the Agricultural Extension Development Officer, visited a number of wholesale markets, including Export Trading Group (wholesale grain trader), PTC (whole sale vegetable trader), Mzuzu hotel (continuous purchase of vegetables and grain) and Shoprite (Up-scale supermarket). The FMS members made contact with vegetable and fruit buyers at Shoprite and were instructed how to harvest Mustard leafy vegetables early in the morning, pack them into bunches and deliver them fresh to the supermarket before noon.

After the second market visit, those who participated in the visit reported back to the FMS group, who discussed what they had learned about market opportunities and how their market analysis should change agricultural production patterns and marketing behavior. FMS groups have become exposed to more profitable markets and improved their capacity for market analysis. However, access to updated and accurate market intelligence (price information, quality requirements, volumes demanded and availability among growers) remains a major challenge for FMS members. In an attempt to keep updated on the market, FMS members contact the value chain actors with whom they established a rapport during their urban FMS markets visits by mobile phone.

Choma FMS provides an example where good market analysis and rational response to a market opportunity proved to be insufficient for success because of Malawi's volatile market context. Only a few members of Choma FMS have access to irrigation and like most other farmers, most depend on cultivating dryland crops during the rainy season. In 2016, soya bean had a market price of 200 Kwacha per (0.3 USD)

kg. Soya bean is an easy crop to cultivate and well suited for Msusu district. After the Choma FMS market visit to Msusu in which contact was made with Export Trading Group and based on their market analysis, Choma FMS agreed that all its members should cultivate Soya bean with the aim of bulking the 2017 harvest and selling it collectively. Export Trading Group agreed to buy the soya bean and provide transport, provided that Chome FMS cultivated sufficient volume to fill a truck. Members of Choma FMS all shifted their production pattern towards increasing the area used to cultivate soya beans and convinced many members from their parent farmer organization (Tiwere Soyabean association) to do the same.

However, by the time of the harvest in 2017, the market price of Soya bean had fallen to a third of the 2016 price level. Members of FMS and the association who had increased their area cultivated with soya beans were very dissatisfied and unwilling to sell their harvested crop at 0.1 USD/kg. Meanwhile, Export Trading Group with whom Chome FMS had agreed to organize at least one truck load of soya beans at market value were disappointed that the farmers were unwilling to abide by their oral agreement. In the end, some members from Choma FMS sold their produce to dairy farmers, while most stored their harvest for some months and eventually sold it to a donor supported Warehouse Receipt project. Apart from the farmers earning less than expected from their harvest, this experience negatively affected trust within the FMS and Tiwere Soyabean association and undermined their efforts for collective marketing. Fair or unfair, Choma FMS's first experience with linking to competitive markets was negative and the status and perception of FMS members in the community suffered.

5.3 Individual and collective marketing

A consistent statement from representatives from the supermarkets and wholesalers in Malawi and Zimbabwe that were interviewed during the FMS evaluation is that they do not want to deal with individual small-scale farmers but only with organized groups of farmers. Collective bulking of harvest and joint marketing is thus a requirement for accessing the most lucrative urban based competitive markets. Organizing in producer associations or cooperatives enables farmers to satisfy the three key requirements associated with more profitable competitive markets, namely (i) capacity to deliver adequate volume of agricultural produce; (ii) organization of production among members of farmer associations in a way that ensures consistency of delivery, i.e. staggered planting in the case of vegetables; and (iii) organization of internal quality control with the farmer association to ensure meeting of required quality standards.

The FMS who have been successful in establishing formal or informal contracts/agreements with profitable markets (i.e. most FMS in Zimbabwe and Kadawonda FMS in Malawi) are all reporting challenges with collective marketing. Collective marketing efforts within FMS groups are in an early stage and limited to bulking harvest of individual members, sharing costs of hiring a truck and allowing a FMS group representative to negotiate with wholesalers on behalf of the group. One challenge facing FMS in Bulawayo, Zimbabwe, is to distribute the income to each of the FMS members according to their production. The problem is not lack of trust, but very practical: no one has US dollars or even Zimbabwe Bond dollar notes and payment is done with 'plastic' (local debit card) and the transaction costs of transferring income to each FMS member is very high.

As indicated in Annex 4, a considerably higher proportion (significance key² test has not yet been made) of FMS farmers in Zimbabwe is involved with collective marketing, as compared with non-FMS farmers. The Endline survey's concept of collective marketing includes both sharing transport and selling each individual farmer's produce separately, as well as collective bulking, transport and marketing. The Endline survey also reveals that both FMS and control farmers mention 'having their own market' and 'delayed payment' as

important reasons for not engaging in collective marketing. In addition, the control group farmers mention 'have own transport' and 'lack of trust' as important reasons for not marketing collectively.

In the Malawi Endline survey an insufficient number of FMS members answered questions about collective marketing to generate statistics. Qualitative interviews indicate that the level of collective marketing is much less in Malawi than in Zimbabwe. Malawi FMS group members were selected from a state organized farmer association. The evaluation team cannot assess the legitimacy of the farmer associations from which the FMS members were selected. There is, however, no evidence that they are making any major difference for farmers access to markets. In fact, the approach of state initiated, and controlled producers associations has failed numerous times across the African continent (Friis-Hansen et al 2018).

The farmer marketschool concept does not prepare farmers for collective marketing or organizing in higher-level producer associations. Challenges with organizing farmers beyond the individual FMS group are structural and contextual. In the case of Zimbabwe, members of FMS are, with some exceptions, mobilized from producer organizations, such as irrigation associations under the land resettlement program. However, none of the FMS groups interviewed had any plans for marketing through these organizations which were not viewed as legitimate and trustworthy. Instead they were organizing collective marketing within their FMS group only. They were, however, all aware of the need to organize marketing at a higher level. At one location in Bulawayo farmers from three FMS groups had organized into a farmer Association. During a group interview they reflected over their progress: *"we want to be successful, but want to stay under the radar. If we are too successful they (the politicians) will send someone to control us."*

Aside from collective marketing, diversifying market relationships is another strategy widely used by FMS. Annex 5 shows that the number of market outlets that FMS members in Malawi link to has more than doubled over a three year period going from 16 to 38.

5.4 Market relationships

FMS members interviewed revealed that access to market was a major constraint for them before joining FMS. They had limited knowledge about: wholesale market prices for their produce; what crops and varieties were demanded by the market; who the value chain buyers were; and how they could be reached. Moreover they were not organized and each household searched for a market for their own produce within the community (to local hawkers/middlemen and/or to Village or Ward daily market) often in competition with each other.

Improving bargaining position towards the middlemen or bypassing them altogether is a major outcome of FMS, although more so in Zimbabwe than in Malawi. *"FMS improves our farmers. They are now able to bypass middlemen and sell directly to retail buyers"* (Interview with Mrs. Mahaso, AEO, Ward 16 Goromonzi district). Two strategies are applied to bypass the middlemen. Firstly, shifting to production of vegetables and targeting urban-based supermarkets. Secondly, FMS members agree collectively to ignore, or in some cases to expel, local middlemen who do not pay the price demanded by FMS leaders.

The most common form of market relationship between FMS groups and high value market buyers is what is known locally as *open contracts*. Such an open contract is an oral mutual understanding and similar to the old-fashioned handshake where an on-going market relationship is based on trust and the price paid is the current market price. The purchase of vegetables from FMS by South African owned supermarket chains in both Zimbabwe and Malawi is done under such open contracts.

Access to updated and accurate market intelligence (price information, quality requirements, volumes demanded and availability among growers) is a major challenge for FMS members. FMS members contact the value chain actors to whom they established rapport during their FMS markets visits by mobile phone in an attempt to keep updated on the market. However, the informal market is volatile and non-transparent and accessing up to date accurate marketing data is very difficult.

Fixed contracts are used to a lesser extent in both Zimbabwe and Malawi. The experience from Zimbabwe is that when FMS enter into contracts that pay them a fixed price for the crop throughout the year, they end up receiving a lower income compared with an open contract where the price fluctuates according to supply and demand. In other words, the farmer pay for market security. It is therefore not necessarily negative, or a reflection of poor analytical market capacity on the part of FMS members that few of them have entered into contracts with fixed prices and fixed production volumes. In 2018, Kadawonda FMS (Malawi) replied to a tender notice in the newspaper for supplying vegetables to Msusu hotel for a one year period. During the evaluation visit, Kadawonda FMS were in the process of negotiating the terms and considered signing a fixed contract with Msusu hotel.

Market context is very important for success of FMS in linking to profitable competitive markers. In Zimbabwe, most FMS: (i) have access to irrigation that allows them to produce vegetables; (ii) have access to urban based retailers (South African owned supermarket chains) who supply middle class consumers with vegetables and pay premium prices; and (iii) have capacity to satisfy market requirements, including consistency of delivery, minimum volume and high quality standards.

In contrast, the five FMS that have been less successful in establishing and prospering from market links in Malawi, depend on grain crops for which (i) prices are low and regulated by government; (ii) local markets are dominated by non-transparent middlemen who are linked to urban based whole-sale companies and (iv) three out of the six FMS have no access to irrigation.

5.5 Change in business relationships between FMS and input suppliers

Enhanced market linkages have in 2017-2018 developed in Zimbabwe between FMS and input suppliers (who have obvious commercial reasons for nurturing such links with potential customers). Such institutionalized collaboration may be beneficial to FMS members as these seed and fertilizer companies may provide technical backstopping advice on vegetable production (via mobile phone) and are establishing demonstration plots at FMS gardens to display their products. One example is Prime Seed that is in the process of establishing a demonstration plot in Bulawayo in partnership with ADRA Zimbabwe at Woodville. Another example where collaboration with seed companies has improved access to extension was reported by the FMS in Ward 16, Goromonzi district: *"We can take a picture with a mobile phone and send it to the seed company and they will return and explain to us what pest it is and recommend what pesticide to use."*

An AEO explained to the evaluation team that FMS represents a shift away from a project driven approach to linking farmers to market to an approach where farmers build lasting business relationship with the market themselves. *"We used to have so many organizations coming to our community telling farmers what to grow. Farmers started engaging into those crops and by the time they mature, those organizations would have gone and there would be no market for the crops."* *"The FMS gives direct contact between farmers and buyers"* (Mr. Owen, AEO Ward 16, Domboshava, Goromomozi District Zimbabwe.)

The private agricultural input sector in Malawi is considerably less developed than in Zimbabwe. The draft Malawi evaluation report provides examples of improved links between FMS and input suppliers similar to those in Zimbabwe. Mwaiwatha FMS in Nanyumbu EPE has received improved groundnut seeds from ICRISAT on a loan basis with a view to reselling their harvest to ICRISAT (who are involved in bulking and distributing seed). Another example is Oga FMS which received improved sorghum seeds from Chibuku Breweries with a view to selling its harvest to Chibuku for opaque beer production.

5.6 Change in FMS members production and marketing patterns in response to enhanced market opportunities

Qualitative interviews indicate that FMS members in both Zimbabwe and Malawi have changed production patterns in response to a shift towards producing for market demand instead of simply producing and afterwards looking for a market.

In Zimbabwe, the shift in production pattern consisted of adding new crops through expanding the cultivated area rather than shifting cropping pattern. Such expansion of the cultivated area has been possible for FMS farmers as their farms, to begin with, all seem to have been underutilized. The opportunity of producing for profitable markets seems to be driving a process of using the available land resources more efficiently.

This change in cropping pattern is confirmed by the quantitative data of the Endline survey shown in annex 6. A change in cropping pattern is apparent. For one grain (sunflower), two root crops (sweet potatoes, Irish potatoes) and six horticulture crops (beetroot, lettuce, cauliflower, onion broccoli and spinach), the pattern is that more FMS group members grow the crop compared with the control group and more FMS graduates grow the crop than FMS group members. For two horticulture crops (pigeon peas and baby marrow) more FMS graduates grow the crop than the two other categories of farmers.

An example on the lower end of the market success scale is the Apostol Church FMS women group in Domboshava district, Zimbabwe. The evaluation team visited their one ha irrigated group plot that they had received on request from village authorities and where they cultivated Rape (Brassica napus). The 27 members of the group each cultivate two lines of Rape, which they harvest every two weeks and sell collectively on the local market. Their farmer facilitator approached Food Lovers in Harare, but she was unsuccessful in agreeing on an open contract and the supermarket did not return their calls. The group then decided that they should all visit Brand Fresh, the largest wholesaler in Harare. (This was confirmed during the evaluation's interview with the Brand Fresh Manager who recalled: *"Suddenly my office was full of women, who even sat on the floor"*). During the meeting, they agreed with Brand Fresh to supply Butternut and Baby Marrow. The group has now started saving to buy the inputs and is discussing collaboration with another group to ensure sufficient volume.

In Malawi, where land is scarcer, the shifts in cropping pattern for FMS members consist of changes in the relative importance of crops. Further the shift in cropping patterns was minor, reflecting the relative small increase in market involvement, compared with Zimbabwe. Annex 7 shows that in the 2015/2016 production season, the crops with significant difference in their land sizes across the three farmer groups were groundnuts, Irish potatoes and soybeans, and that FMS farmers cultivated significantly more acreages of soybean than the indirect FMS and control farmers. The FMS farmers also devoted a higher average of the same land size to soybeans in the 2016/2017 production season. For the 2017/2018 production season, there was no significant difference between the average land size devoted to each crop across the three

farmer groups, except for sweet potatoes, where the FMS farmers cultivated significantly higher mean acreages than the indirect FMS farmers. This relative increase of Soybean in 2015/16 and 2016/17 reflects that FMS farmers chose soybean as their main market crop those seasons, as discussed in section 4. The fall in the relative importance of soy bean during the 2017/18 season can be explained by the dramatic fall in market price of soya bean in 2017.

6. FMS members' access to finance and financial services for investment in production and handling of payment conditions dictated by the market

In both Malawi and Zimbabwe access to finance for investment and seasonal inputs for intensive horticulture production was mentioned as the key constraint by all FMS interviewed. In Zimbabwe, while helpful, VSLA was viewed as an insufficient source of finance, in particular for investments in production infrastructure such as irrigation. This is in contrast to Malawi, where farmers from Choma and Kadawondo FMS indicated that saving and credit from VSLA was highly useful for buying required inputs and transporting produce to the market. This reflects the lower level of volume of production, processing and marketing, as compared with Zimbabwe. The importance of interaction between VSLA and FMS needs to be further explored.

The analysis of finance focuses on Zimbabwe only, as the evaluation has insufficient information available about Malawi. In Zimbabwe, the Endline survey shows that less than half of the FMS farmers and less than 10% of the control group have access to financial services, see annex 8. Out of the farmers who accessed financial services, VSLA was the most important source for FMS members, followed by Micro Finance Institutions (MFI), see annex 9. Finally, annex 10 highlights the number and percentage of farmers who have taken loans for the 2017/2018 production season. The table shows that although still at a relatively low level (one fifth or less), the FMS members are accessing many more loans than the control group. The only source of financial services encountered by the evaluation team was VSLA, which seemed to play an important role for all the FMS groups visited. Either FMS members were also members of VSLA groups, or the VSLA groups themselves were turned into FMS groups.

FMS members have through collective marketing become capable of negotiating favorable payment conditions with higher level value chain buyers. One example Kadawonda FMS in Malawi that successfully negotiated bi-weekly cash payment with Shoprite in Msusu, after initially being demanded that the group extend one month credit to the supermarket. Similar examples of gradual improvement of the conditions of payment as a trust-based business relationship develop were found in Zimbabwe, i.e. Food Lovers in Bulawayo.

7. FMS influence on rural livelihood

7.1 Participatory Well Being Ranking of communities where FMS are piloted

The rationale for why the FMS evaluation decided to spend resources on carrying out Well Being Rankings (WBR) (five locations in Zimbabwe and one in Malawi) is that information and analysis of the socio-economic characteristics of the communities in which FMS is implemented is absent in the FMS pilot

documents. The ADRA FMS documents do not analyze the social differentiation within the community and do not identify which type of farmers are included in FMS.

The aim of the WBR is twofold. Firstly, to provide a deeper understanding of the socio-economic context in which the FMS intervention is operating (e.g. the FMS theory of change) and secondly, to identify from which WBR categories the FMS members are mobilized. A word of caution: given the very limited time available, the WBR methodology used during the evaluation is a very condensed and shortened version of the full WBR methodology and draws heavily on experiences with using this WBR methodology on Farmer Field Schools (FFS) in East Africa (Boesen et. al. 2001, Duveskog, Friis-Hansen and Taylor 2009). While associated with some uncertainty, the WBR criteria are trustworthy in the assessment of the evaluation team. This method for understanding social differentiation is based on *peoples' own perceptions* and different from the asset-based and consumption based methods and outcome may therefore vary from District Profiles.

WBR based on farmers perception of wellbeing within the community were carried out in all the five sites visited in Zimbabwe and in one site visited in Malawi. The key informants used were respected persons with an in-depth knowledge of social relations within the community, such as traditional headmen, AEO, the political Councilor or other local leaders.

The results from farmers perception of well-being give cause for great concern and indicate considerable rural poverty in Zimbabwe and Malawi. In Mashonaland the WBR showed that about 50% were poor, 30% belong to the middle WBR category, while 20% are perceived as well off. In Matebeleland North, the poverty is even more widespread with 80% poor, 15% middle and 5% well off. In Msusu District, Northern province of Malawi, the WBR showed that about 65% of the community belonged to the poor WBR category, 34% to the middle WBR category and only 1 % to the well off WBR category.

Most of the well-being ranking criteria that were articulated in Zimbabwe and Malawi are similar, including access to health, access to education, standard of dress, food security, housing standard, quality of food, and labor exchange (hire of casual labor, work as labor). Importance of access to land, livestock and ox-drawn implements as well-being ranking criteria differ reflecting the different climatic zones and socio-economic context: ownership of land is important in Mashonaland and Malawi North, while ownership of livestock and ox-drawn implements is important in Matebeleland. See examples of actual WBR from Zimbabwe and Malawi in annex 11-14.

In addition to these two overall differences, there are additional regional and local differences in the WBR criteria. For example in Goromonzi district Zimbabwe, the poor WBR category was subdivided into two equally sized sub-categories. The additional poor WBR sub-category in Goromonzi is comprised of people with low paying jobs in Harare, who have settled in Goromonzi rural area because they cannot afford to rent accommodation in the urban settlements. The bread winners of these households work in Harare, are not buyers of food, have no access to land and no interest in agriculture.

The overall characteristics of the three WBR categories are as follows:

The *well-off* have sufficient land and or livestock resources for agricultural production and sufficient land for irrigation. They live in a well sized house with burned bricks and asbestos or tile roof with additional huts in the homestead. Their household agricultural production system is based on hiring casual laborers to help out throughout the year and particularly during the peak seasons. The household is food secure and they eat meat three times a week. Some members have access to health facilities outside the community

when sick, most children finish secondary school and some can even access university and they are better dressed than averaged.

The *middle* WBR category has some land and or livestock and some, but not adequate, land under irrigation. They are hard-working and identify themselves as capable farmers. Living standards vary between areas. In Goromonzi district Zimbabwe, the middle WBR category live in two room houses made of burned bricks with corrugated iron roofs and have one thatched kitchen hut within the homestead. They may hire casual labor during good agricultural seasons and may work for others as casual labor if the rain and harvest fails. This category of farmers is food secure in good years and may eat twice a day and eat meat once a week. They can afford access to the local clinic and their children attend secondary school and some move on to university.

The *poor* WBR category has insufficient ownership of land and or livestock. They live in small one room thatched huts that serve as both kitchen, living room and bedroom. During peak season most are casual laborers, some work for others year round whenever possible. Some herd livestock for others. They are food insecure 3-6 months per year, eat once a day, and eat meat during festivities or when receiving visitors. They cannot afford the local clinic. Some use traditional healers. Some go to school up to form 4. The dropout rate for attending school is high. They only buy cheap clothes when their old ones are worn out and many have no shoes.

7.2 Social inclusiveness of FMS membership

Based on the FMS manual, discussion with AEO and ADRA staff and observations during the field visits in Malawi and Zimbabwe, it is the understanding of the evaluation that farmers were mobilized for FMS in an open, but at the same time highly selective, manner, on the one hand, joining FMS was based on volunteers from the groups while on the other hand, the result of the mobilization process was that those farmers who were most capable and could potentially benefit most were selected to join FMS.

In Bubi district (Zimbabwe), mobilization for FMS was done among the members of three irrigation groups that consist of 152 farmers divided into three groups of 111, 29, and 12 members. A total of 25 farmers were mobilized for FMS training. Fifteen of these were appointed by members of the three irrigation groups, five members were influential individuals, including the counsellor and her sister, and five were selected by local government leaders. During a Ward sensitization meeting, the content of FMS was explained to farmers, with the participation of local politicians (Ward chair-person and district counsellor). At the meeting, three gardens were selected to be part of FMS. The three existing groups in the irrigation gardens were asked to select members from within the groups to be trained.

In Msusu district (Malawi), mobilization for FMS was done among approximately 200 members of Tiwere Soyabean Association. The actual appointment of members for FMS was done by the Tiwere Soyabean Association management. The criteria set by ADRA were (i) they had to volunteer and (ii) they had to live within 5 km distance from the selected location. The evaluation team notes that the chairman and secretary of Tiwere Soyabean Association are members of FMS.

Mobilization for FMS was done among farmers who were already organized in government supported higher level organization, e.g. in Zimbabwe Farmer Association and as part of larger irrigation schemes in Zimbabwe, and in Farmer Associations in Malawi, who mostly belong to the middle and well-off WBR category. No deliberate attempt was done by ADRA to ensure that the mobilization for FMS was inclusive

of the poorest WBR category. The following is a qualitative attempt to locate FMS members the WBR categories discussed in the previous section..

The *well-off* have adequate resources and a good starting point. These farmers have accumulated wealth over long periods and are relatively resilient to change from weather or social conditions. Meanwhile they are not interested in the market linkages or NGO programs such as the FMS supported by ADRA. This category are relatively few making up between 1% - 20% of the total households.

The *middle-class* is characterized as hard-working average farmers who are embracing modernization if given the chance and more than willing to work with AGRITEX. This category makes up 15%- 30% of the total households. An estimated 90% of the farmers within FMS come from this category of farmers.

The *poor* make up 50%-80% of the community. They are characterized by having few resources on land, they were born in poverty and most of them also die in poverty. An estimated 10% of the FMS come from this group of farmers.

The implication of the above assessment is not that FMS does not suite the poorest farmers, but simply that the FMS approach was not tried with the poorest members of the community during the ADRA pilot phase.

7.3 Changes in FMS members livelihood

Qualitative interviews with FMS members in Malawi and Zimbabwe unanimously indicate that FMS has improved their livelihood in a broad sense. However, when asked if FMS has led members to shift to a higher WBR category the answers have been negative. The sentiment among FMS members is that while their livelihood has been improved, they have only moved higher within the middle WBR category and only very few have become well-off. Becoming well-off is, however, clearly the aim of many FMS members and they felt confident that they with more time would shift WBR category.

The ADRA Zimbabwe 3rd year monitoring reports³ contain a long list of qualitative statements about how FMS graduates and FMS group members, already after one-two seasons, are experiencing improvements in their livelihood. Field visits by the evaluation confirmed these statements and collected additional qualitative statements from FMS members on their perceptions of improvement of their livelihood. The statements may be grouped into four categories: improved food security and diet, payment of school fees, increased household utilities and investment in agricultural production. In Malawi, qualitative interviews indicate that social change has happened within the first two of these categories, while only few have accumulated income to invest in household or agricultural production.

The most common statement on improved livelihood articulated by FMS graduates and FMS group members was that: *“our children are now able to attend school”*. While ensuring that their children attend primary and secondary school is high on the agenda of farmers in Zimbabwe, poverty and poor harvest cause farmers to fail to pay school fees and/or to take their children out of school to work on their farm or for other farmers, herd livestock or even work as casual laborers. Paying for school fees is on the top of the agenda when FMS start earning an income from sale of vegetables. This trend is also found in Malawi,

³ ADRA Zimbabwe 2017. REPORT ON THE FARMER MARKET SCHOOL APPROACH MATABELELAND NORTH PROVINCE (BUBI, UMGUZA, AND LUPANE DISTRICTS) AND MASHONALAND EAST PROVINCE (GOROMONZI).

where a female member of Kadawongo FMS stated: *I used to be a very poor person, now I can care for my family, pay school fees and my daughter is the first in our family to attend secondary school (form two).*

During a group interview with FMS group members in Domboshava, one women told the evaluation team: *“I no longer have to ask my husband about money for petty items for the household, I can pay myself from the money I get from sale of vegetables. I have become independent”*. However, FMS group members have also started buying larger household utilities. One woman from Nyamandlovu stated that *“I have bought a very big solar system that can even run a fridge. However the fridge is not yet bought. The next thing I will do is replace my old furniture in the house”*. Another woman from the same group added *“I have bought a three-plate gas cooker and a 5 kg gas tank. I have also bought a small solar for light and to charge my mobile phone”*.

Finally there are examples of farmers using the income from marketing through the FMS group to buy improved seasonal inputs or invest in agriculture. One woman had joined forces with her husband and with their shared income they hired labor to dig an 11 m deep well and buy a diesel pump for irrigation for a homestead garden. Another woman stated that she saved all the income earned through collective marketing of vegetables through her FMS group and combined this savings with the end of year payment of surplus from her VSLA group and used it to buy seasonal inputs to cultivate 1.5 acre of irrigated vegetables, 19 indigenous chicken, 15 improved day-old chicks and one goat. In addition she managed to repay all her loans.

7.4 Perspective transformation of FMS members

ADRA annual report for the ASC project⁴ states that: FMS members have *“high morale and state of happiness has been improved. Garden members are always jovial and encouraging each other, which has been a change for most of the garden members”*. The report further states that the *“garden is like a newly formed family unit for the garden members as the friendship and associations grow; new found business relationships are mushrooming”*. In an attempt to understand the extent of social changes and how they are attributed to FMS, the evaluation decided to investigate the background for these and similar statements among FMS group members, and further explore the extent to which the FMS are transforming the perspectives of their members similar to what has been documented in Kenya (Duveskog, Friis-Hansen and Taylor 2009, Friis-Hansen, Duveskog and Taylor 2010). This was done through nine in-depth hour-long one-to-one personal interviews with FMS graduates and FMS group members in Zimbabwe and four in-depth interviews in Malawi.

Based on an analysis of these interviews, four indicators of perspective transformation among FMS members were identified, namely: (i) *Increased individual confidence and emancipation*; (ii) *Increased household agency and change in gender relations*; (iii) *Social relations within the FMS group*; and (iv) *Visibility and status in community*. There are both communalities and differences in the extent to which FMS has resulted in perspective transformation in Zimbabwe and Malawi. While all four aspects are strongly represented in Zimbabwe, the two last aspects are only weakly present in Malawi.

The first aspect is increased individual confidence and emancipation. During the personal interview with Colota (Zimbabwe), she stated *“Because of the way they could facilitate, it inspired me to do things by*

⁴ ADRA Zimbabwe 2016. ASC annual report.

myself, discover new things on my own. I'm now more confident in doing things and determined to do them". Later in the interview she elaborated how she related this change to FMS: *"the way I learn in FMS has created motivation for me to do things by myself. I want to continue."* In her personal interview, Alise referred to her own confidence and emancipation: *"I have increased confidence in myself and I'm no longer afraid to stand up.* This increase in confidence has led to enhanced individual agency, as expressed by a FMS member in Domboshava (Zimbabwe): *"what has made me happy is that you don't have to sit back anymore, there are things you can do".* Mr Amon, chairman of Kadawondo FMS (Malawi) expressed that he had been *"humbled"* by FMS. *"FMS has helped me as a leader. Before I was judgmental and quick to dismiss people I disagreed with. Now I try to understand how they feel and I have become good at mitigating personal conflicts"*.

One aspect of perspective transformation that came out very clearly from the personal interviews was changing household agency and gender relations. During a group interview with the Tariro FMS group, a woman proudly stated in front of her peers: *"I do no longer depend on my husband to pay school fees for my children. We are now both breadwinners."*....She went on to explain: *"having your own income changes the division of labor in the household. The disputes with my husband is less now, as I do not have to ask for trivial small money all the time. We are now jointly making decisions. My husband has come to appreciate that I joined FMS."* The personal interview with John revealed that changes in household gender relations are not only about emancipation, but to a large extent about men changing their view of women: *"I share my new ideas with my family and have invited them to come to my garden".... "We are together as a family"*. John realized that he could not fulfil his plans of producing for the market and that he needed his family to make joint plans (household agency). He expressed: *"Now whatever we do, we do it together"...."We are now better in terms of cash"*. Realizing that his wife was a very good resource manager has made him change the division of labor at home: *"When my wife is busy I can also do cooking and fetching of firewood"*. Similar to the women in the Tariro group, John expressed that the outcome of this change has been that: *"we are together as a family now and have less noise"*.

A similar change was found in Malawi where Amon from Kadawondo FMS states *"I have become a gender respecter"...." I now involve my wife in the household decisions and even tell her where the money is hidden in case of an emergency" ...There is now peace in the household and we are both free"*.

The third aspect of perspective transformation among the FMS members relates to social relations within the FMS group. One of the FMS farmer-facilitators for the Nyamandlovu FMS (Zimbabwe) told the evaluation how being a facilitator had changed her relations with her group: *"I facilitate the farmer market school. They hear me now, they listen to me, they give me so much. We even talk about our life in general and personal issues."* During the personal interview with Colota, she explained how FMS has brought the group members closer to each other: *"We have become united in the FMS group and relate better to each other."* Later in the interview she went on to talk about how FMS has built trust: *"we trust each other in the FMS group and can even allow others to handle money from sale of crops for each."*

The facilitation process, in which emphasis of the facilitator is on asking questions, including everyone in the discussion and being a good listener, seems to have had a profound impact on the farmer-facilitators, as expressed by John: *"being trained and working as a facilitator has been amazing" ... "I have changed, now I communicate and have become a humble man"*. The facilitator experience has furthermore enhanced

his empathy: *"I am now even able to take criticism and become more receptive for other opinions, as I am more confident with myself"*.

The fourth aspect of perspective transformation is how the FMS members have increased their visibility and status in community. Several of the FMS members emphasized how the community's perception of them as a group has changed. As one FMS member put it: *"you don't even have to do anything, they will give you a platform to speak at public meetings"*. Colletta reflected *"My role in the community has changed. I am now viewed by many as an expert. Several people come and ask me for advice and I am assuming a role as their mentor. Our FMS group has been asked by the village leaders to have a mentoring role for other groups."* Colota went on to say that she had been given a special position at community meetings. *"Other people respect me now and listen to what I have to say."* Alice expressed how her experience with attending community meetings has changed: *"I can now participate in community meetings and speak out."* Alice further reflected over how she had become known to be a good listener and how this has attracted people living in the neighborhood to visit her: *"Our neighbors approach us and we see it as our responsibility to respond to them.".... "I am now advising others as a mentor, all want to be like us."* While still at an early stage, the evaluation observed a tendency for the FMS members to become leaders in the wider community. After being asked, Alice has agreed *"to become a counselor for a HIV/AIDS organization (Mavembo Trust)."*

The Church is an important part of the wider community. Several of the FMS members interviewed referred to how FMS had changed their relationship to the church, in part because they now have an income and are able to contribute economically to the church congregation. Alice stated: *"I have become closer to my church. I have always been a member of the church but I felt inferior in the community as I was poor. Worship in the church is now more free. We are no longer a burden for the church. I have prayed to God that it should become better and now my prayers have been heard. I feel closer to God."*

7.5 Attributing perspective transformation to FMS

Explaining how the adult learning processes associated with FMS can cause perspective transformation among its participating farmers is very complicated and beyond the scope of this evaluation. It may, however be useful to speculate what may be the elements in that learning process that led to change in the participants' frame of reference.

We understand from adult education theory, and in particular Transformative Learning theory, that to be transformative, learning has to take place within a safe place where feelings can be articulated and reflection take place. Put in a simplified way (without giving full credit to Transformative Learning theory) perspective transformation may be stimulated when the personal frame of reference in an adult person is repeatedly challenged through a series of disorienting dilemmas. A recent journal article⁵ associates disorienting dilemmas among farmer field school participants in Kenya with the Swahili word '*kumbe*' (that can be translated to WOW in English). The study argues that FFS members experience a disorienting dilemma (and say out loud: *kumbe*) when carrying out Agro Ecosystem Analysis (AESA) with integrated pest management (IPM) and discover that the insects in their fields can play a role of both host and predator. This discovery challenges both their traditional knowledge about pests (that encourages agro-bio diversity

⁵ Duveskog, Friis-Hansen and Taylor 2011. Farmer Field Schools in Rural Kenya: A Transformative Learning Experience. *Journal of Development Studies*. Volume 47:10.

and crop rotation) as well as the agricultural modernization message (that recommends spraying pesticides).

Through discussions with FMS members and ADRA staff, the evaluation explored if FMS students experienced similar disorienting dilemmas and where in the learning processes they take place. A total of five possible disorienting dilemmas were identified. The *First* occurs when FMS members, during the facilitation process, first realize that the solution to overcoming the market access challenge requires that they become active themselves in searching for markets and speak out in the form of the AEO. This marks a major shift in how farmers relate to AEO (authorities) and was referred to by all FMS members interviewed. *Second*, possible disorienting dilemmas occur during the FMS student's first visit to the local growth-point. At this location (that comprises an open informal market, shops, restaurants of various kinds, bars and guest houses), which they have visited many times before, they are taken by surprise when, through systematic interviews, they realize how different the potential buyers are from each other and how they each represent different market opportunities. Some require quality, while others want the cheapest product; some pay cash, while others need credit; some want to build a long term business relationship, while others want to cheat you. *Third*, possible disorienting dilemmas occur when FMS members visit down-stream value chain actors and are invited into their offices, offered tea and are treated with respect. This is when FMS students realize that they are important as producers and that the value chain actors need them as much as they need the buyers. The *fourth* potential disorienting dilemma occurs when FMS members engage in facilitating their own FMS by copying how they were facilitated by ADRA staff and AEO. Here, their ego and self-confidence get challenged. One FMS farmer-facilitator expressed this experience as *"being humbled"*. Finally, the *fifth* potential disorienting dilemma occurs when the FMS members receive their first payment after selling horticulture crops produced in response to the requirement of a specific value chain buyer. This has led FMS members to critically reflect over their past behavior. For example John (Zimbabwe) stated: *"I now complain over how I used to do things" "I lost a lot of crops because of ignorance"*.

8. Recommendations

FMS is an innovative new attempt of market linkage intervention. This report brings together lessons learned from piloting FMS in two country, drawing on two country evaluation studies and two quantitative surveys. This report aims to examine initial results from 3 years FMS pilot implementation in terms of changing small-scale farmers perspective about themselves as farmers and about the market. Pilot implementation of FMS in Malawi and Zimbabwe has provided an empirical basis that allows the FMS evaluation to explore the experiences and analyze how best to consolidate and further strengthen the FMS into a generic approach. The following section will: (i) reflect on how FMS can be consolidated and further developed as a concept; (ii) discuss perspectives for implementing FMS for rain fed agriculture; (iii) discuss how to scale up FMS in a cost effective and institutionally sustainable way; (iv) how to institutionalize implementation of FMS in East and Southern Africa.

8.1 Consolidating and further developing the FMS concept

Continuous improvement of the FMS training manual

The training approach to FMS is well described in *ADRA 2017. The Farmer Market Schools. A facilitator's guide. Final Draft Operational Manual*. The quality of this FMS Manual is very good. The manual should, however, be viewed as a living document that for the time being is under regular adjustment and improvements pending learning cycles such as the present FMS evaluation. The Manual should be expanded to include experience other countries as the FMS approach is spreading.

It should be emphasized that the current (hard core) approach to facilitation should *stay as it is* and guarded against being watered-down during any future scaling up of the FMS approach. The FMS piloting was true to the principles of facilitating and not teaching, which was highly appreciated by both FMS graduates and the AEO facilitators and closely linked to ownership of FMS and its outcomes.

New modules can be added to the current 6 technical modules. Such extra modules should not necessarily be taught during the first FMS training period but could be added during a later follow-up/refresher FMS training period. Three additional FMS training modules were suggested and discussed during the evaluation and could be amended in future versions of the FMS training manual.

- (i) A FMS farmer-facilitation and mentoring module. All FMS graduates in Zimbabwe have since engaged in facilitating FMS groups in the own right as well as acting as mentors for farmers who have no relation to FMS. However, they are undertaking these activities purely based on copying what they experienced them self when being taught. A systematic training in facilitation and mentoring skills could assist them perform better.
- (ii) Principles of collective farmer organization and marketing. Experience from FMS in Zimbabwe and Malawi show that accessing more profitable urban-based competitive markets require that small scale farmers organize at the higher level than the group. Successful federation of farmer groups to higher level producer associations that are downwards accountable is challenging. It would be useful to add a module with basic principles and thresholds for farmer institutional development (see Friis-Hansen et. al. 2018). Handling of perishable horticulture products. During the evaluation the team realized the importance of how horticultural productions are handled for the quality and therefore price of the produce. This aspect is currently not included in the Manual and poorly understood by both farmers and AEO.

Integrating FMS into the FFS family of approaches

The evaluation of FMS in Malawi and Zimbabwe has shown that small scale farmers need complementary knowledge for production, business and market. The FMS is closely related to the better know FFS and FBS approaches and the three approach a complementary rather than competing or overlapping in scope See annex 3 and annex 12). It is, however, worth noting that FBS differs from both FFS and FMS in its pedagogic approach, e.i. FBS is a theoretical and individual approach to farming as a business that place less emphasis on practical and collective experiences (DIBcoop, 2018).

A compelling reason for combining FFS with FMS is the strong need to support the process of establishing FMS networks that can unleash the next level of marketing potential in the form of aggregated input and output marketing. This argument would support the development of a special FFS curriculum that not only focus on agronomy, but also on the process of federating FMS into sub-district or district based marketing networks. For a discussion of thresholds for successful support for federation of democratic rural organizations, such as FMS groups, see (<https://www.routledge.com/Democratic-Rural-Organizations-Thresholds-for-Evolution-in-Africa-and/Friis-Hansen-Andharia-Godfrey/p/book/9781138202559>).

Addressing Farmer Institutional Development associated with FMS

Small-scale producers can only access and benefit from sale to down-stream value chain buyers that require high volume, high quality and regular supply, if they organize in groups and or higher level organization for collective action. Provisions should be made to stimulate all FMS groups within a given area to federate into higher level organisation (network, association, cooperative or company Limited) for the purpose of collective action (input supply, processing and marketing).

Communities often have resourceful individuals, such as retired civil servants, who if given the opportunity would be willing to serve the community as Community Based Facilitators (CBF) or Village Agents (VA). CBF or VA can play an essential role in this organizational federation process.

In Nyamadlovu the evaluation team interviewed the leaders and members of *“Hope Farmer Market School Business Development Association”*. This association was made up of members from two FMS groups who shared an ambition of being first movers and strive for economic development. The association has made a constitution and elected leaders. The chairman stated: *“We were previously organized in a state supported collective, which we have abandoned, and we have now organized into our own association. We want to move far with business. However, we do not want to be too visible, as we fear that government may then send someone to manage us”*.

One FMS member made a request to the evaluation team: *“We need a broader forum than the group where we can discuss and exchange ideas about marketing. ADRA should help mobilize us to the next stage. We don’t need money to build new storage we can use existing buildings.”* Private agricultural market brokers who collect and analyse real time market information, such as the e-Mkambo social media platform and call service, could be contracted and linked to FMS groups and future higher level organizations. In addition, farmers WhatsApp marketing fora, which are already used by some FMS members could be supported.

Addressing the financial challenges amplified by FMS

The newly gained knowledge about the market and first experiences with sales to buyers in the lower end of the value chain has greatly inspired FMS members to progress. These enhanced aspirations have dramatically increased their financial needs. FMS groups identify a number of financial needs. *Firstly*, infrastructure investments in boreholes and infield irrigation equipment, *secondly*, seasonal chemical inputs for hybrid vegetable seed, fertilizer and pesticides, *thirdly*, investments in marketing infrastructure such as facilities for bulking, sorting and packing, and *fourthly*, finance for satisfying household income requirements during the time-gap between selling the crop and receiving payment from value chain buyer.

Establishing internal loan and savings groups such as VSLA in Zimbabwe is a strategy for accumulating savings in a way that creates ownership. However, as the rural people who are saving are poor, the pace of change that can be accomplished using this strategy is likely to be slow. There are two sustainable (but slow) roads that lead to VSLA / FMS groups involved with horticulture production and marketing becoming ‘bankable’ in the eyes of MFI. The *first road* is to use joint savings as a platform for bankability. VSLA credit management experience can be used as an entry point and training tool. Capacities can be built among VSLA /FMS members to manage their own savings, thus giving them confidence that they can achieve their objectives provided that they are willing to observe certain rules and create a culture that motivates

members to support each other. The *second road* uses a joint marketing track record to determine bankability. After some years of collective marketing and slowly becoming able to meet the quantities and quality standards required by down-stream value chain actors, this track record can be translated into a credit facility to acquire their own irrigation, packing and processing infrastructure. However, A more thorough study that give thought and practical insight into the issue of smallholder farmers' 'bankability' is needed to make solid recommendations for how FMS can best meet their financial needs.

Addressing social inclusion of FMS

A lesson learned from the FMS evaluation is that the current FMS members are mobilized among the middle wellbeing ranking category that is characterized as hard-working average farmers who are embracing modernization if given the chance and willing to work with extension services. This category make up 15%- 30% of the total households. Some 90% of FMS are estimated to come from this category of farmers. The *poor* make up 50%-80% of the entire rural population. They are characterized by having few productive resources and dependent on working as casual labor for the well-off farmers. Only around 10% of the FMS are estimated to come from this group of farmers.

As part of scaling up FMS, serious thought has to be given to how FMS can be more socially inclusive. This starts with the implementing organization *taking an interest in understanding the socio-economic characteristics of the community* in which the FMS intervention takes place. Secondly, *specific measures have to be in place to include the poor* during mobilization for FMS. Thirdly, special measures may have to be taken to ensure that the poor who participate have access to *sufficient productive resources to produce for the market*. An example of how support for FMS can be socially inclusive is to start with a low threshold enterprise, such as sugar beans, that is well suited as a first collective market crop for FMS groups with resource poor members. The Zimbabwe FMS evaluation write “*The advantage of this enterprise is that it has a secure market, low input requirements (seeds can be recycled and need for basal fertilizer) with minimal or no topdressing only) and wholesalers such as JASBRO in Bulawayo pay (through bank transfer) at delivery (no credit gap). Some FMS groups, such as Nyama ndhlovu in Matebeleland North, told the evaluation that their strategy was to start with production of sugar beans for sale in open contract with JASBRO and then move on to more profitable vegetables when they have sufficient savings to invest in a borehole and infield irrigation infrastructure*”. (ADRA, 2018:32)

Recognizing and encouraging transformative learning aspects of FMS

The current study is scraping the surface in understanding the processing through which FMS is fostering perspective transformation among its participants and among its external facilitators. There is also need for better understanding of how members perspectives are transformed because of their participation in FMS. Such a study focus should be integrated into the future review and monitoring protocols of FMS. Learning loops should be establish that allows continuous finetuning of the FMS concept.

8.2 Implementing FMS for rain fed agriculture

While FMS in Zimbabwe is piloted among farmers with access to irrigation and thereby able to respond quickly to market demand from the horticulture value chain, half of the FMS in Malawi are implemented where members depend on rainfed agriculture for there livelihood. Non of these rainfed FMS experience

the same success as FMS where members had access to irrigation. The rainfed FMS experience a range of challenges, including: (i) less profitable enterprises than vegetables; (ii) less market transparency and more challenging to identify wholesaler who are not interlinked with middlemen; (iii) less flexibility to shift between crops; (iv) more competition from other farmers; (v) large intra and inter seasonal fluctuations in prices. Serious considerations which additional actions are needed to assist dryland FMS overcome these and other constraints.

The evaluation team discussed the idea of FMS for livestock keeping with FMS members in Nyamandlovu. They told us that sedentary livestock keepers were often selling to middlemen who paid as low as 250 USD for a cow, as they had no alternative market. The evaluation was told that prices for a cow could be four times higher in Bulawayo. This price difference indicates that FMS may have a role to play among pastoralists.

8.3 Scaling up FMS

Farmer Facilitated FMS

Farmer-facilitated FMS groups have been organized in Zimbabwe on farmers own initiative. The Evaluation recommend that any new project support for scaling up FMS should support farmer-facilitated FMS groups as an integrated part of the project.

The evaluation recommends that the current two-stage facilitation process (outlined in the FMS operational manual) is extended to a three-stage facilitation process, as innovated by FMS members during the piloting in Zimbabwe. Adding a third farmer-facilitated stage will greatly enhance the capacity of the FMS model to scale up, while reducing the cost of training. A farmer-facilitated approach to scaling up FMS will require FMS program support in terms of a training of trainers course that educated the FMS graduates to become facilitators. Such a shift will moreover require changes in roles and responsibilities among actors. The role of AEO will shift from primarily being FMS facilitators, to also providing technical back up and quality insurance to the FMS farmer facilitators.

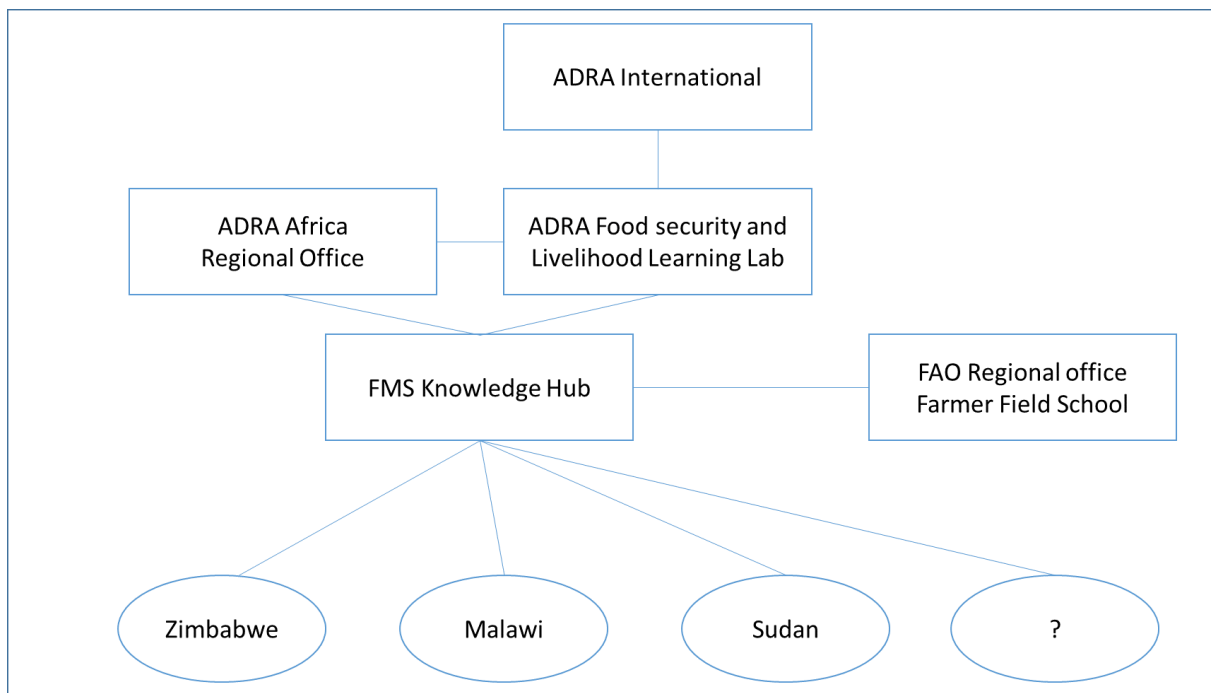
Implementing FMS as component or add-on to agricultural interventions

The evaluation hopes that the information about FMS in this report can be useful and inspire the integration of FMS type of training in their existing or planned development interventions, e.g. FAO and other ADRA agricultural projects with market components.

8.4 Institutionalizing implementation of FMS in East and Southern Africa

It is the intention that the experiences from implementing FMS in Malawi and Zimbabwe are used by the ADRA International Food Security and Livelihood Learning Lab, situated in Nairobi, to consolidate and further develop FMS as a generic concept. The evaluation recommends the following structure for this work.

Figure. Illustration of possible situation of FMS Knowledge Hub



The role of an Africa FMS Knowledge Hub would include education of National FMS Master Trainers, Integrating FMS concept with FFS, technical backstopping and coordination of new initiatives.

Annex 1. people met during FMS evaluation

NAME	DESIGNATION	ORGANISATION	SECTOR
Zimbabwe			
Mr. A. Mudhefi Mr. Chawonwa Mrs Chirima	Depty Director Agritex Agribusiness Agribusiness	Ministry of Agriculture Lands and Rural Resettlement – Head-office	Government
Mr B. Guti Mrs S. Mujati Ms T. Mahaso Ms C. Matipano Mr. O. Marenga	District Agriculture Extension Officer Agriculture Extension Officer Supervisor Agriculture Extension Officer Agriculture Extension Officer Agriculture Extension Officer	Ministry of Agriculture Lands and Rural Resettlement – Goromonzi District	Government
Dr. J. Mitti Mr. K Kwazira	Sub regional Director Crops Crops Officer	Food and Agriculture Organisation	United Nations
-Ward 16 Chinyika FMS class -FMS Farmer group – Gutsa -Control Group farmers – Takadii individual plot owners - Field Visit, Chinyika Irrigation	Smallholder Farmers	Farmer Groups – Takadii, Gutsa, Ngazimbi and Chinyika Irrigation	Farming – Irrigation, community garden and individual plot owners
-Ward 1 Munyawiri FMS class - Ward 1 Community Leaders Well being Ranking - Control Group farmers – Munyawiri individual plot owners -FMS Farmer group – Kachuta	Smallholder Farmers	Farmer Groups – Kachuta, Govere, Matabvu, Cheza,	Farming – Individual plot owners and community garden

- Field Visit Kachuta			
Mr. D. Nyoni	Provincial Agriculture Extension Officer	Ministry of Agriculture Lands and Rural Resettlement – Matabeleland North and Bulawayo Metropolitan Provinces	Government
Mr. T. Ndlovu Mrs Ndebele Mr. M. Sibanda Ms A.Ncube Mr. S. Gaviro	District Agriculture Extension Officer Agriculture Extension Officer Supervisor Agriculture Extension Officer Agriculture Extension Officer Agriculture Extension Officer	Ministry of Agriculture Lands and Rural Resettlement – Umguza District	Government
Mr.J.Kujinga Ms S. Mhlanga Mr. H. Kubvoruno Mr. B Ncube Ms Z. Dube Mr P. Ndlovu Mr. B. Thembanani Ms C. Nkomo	District Agriculture Extension Officer Agriculture Extension Officer Agriculture Extension Officer Livestock Officer Crops Officer Agriculture Extension Officer Supervisor DA's Office Agriculture Extension Officer	Ministry of Agriculture Lands and Rural Resettlement – Bubi District	Government
-Thembanani/Vhusanani/ Redwood FMS Group -Control Group – Edwaleni --FMS Farmer group – Redwood -Ward 9 Community Leaders – Well being Ranking	Smallholder Farmers	Farmer Groups – Redwood, Thembanani and Vhusanani	Farming – Irrigation Scheme
-Nyamandlovu FMS Group -Field Visits – Ward 19 Individual Plots -Nyamandlovu Community leaders –Wellbeing Ranking -Control Group	Smallholder Farmers	Farmer Groups – Alicedale, Bambanani, Hilltop, Mimosa, Papamani, Nyahafas, Masiyaphmabili,	Farming - Irrigation Schemes , dry land, community garden, individual plot

-FMS Farmer group - Bambanani			
-Bubi FMS class -Bubi Community leaders – Wellbeing Ranking -Control Group -Bubi FMS Farmer group - Pollards Irrigation -Filed Visit Pollards Irrigation	Smallholder Farmers	Farmer Groups – Pollards Irrigation Scheme, Canopus, Mpumelelo gardens	Farming - Irrigation Schemes , community garden,
Mr. Tshuma	Buyer	Food Lovers	Private Sector – Vegetable Retailer
Mr. Jasset	Managing Director	Jasbro	Private Sector – Wholesaler Dried Sugar beans, etc
Mrs M. Van der Werff	Managing Director	Avanos Seed Company	Private Sector - Vegetable Seed Company
Mr. T. Dikariis Mr I. Chimanya	Sales and Marketing Manager Buyer	Brands Fresh	Private Sector – Vegetable wholesaler
Mr. G. Campbell Mr. D. Phiri	Managing Director Agronomist	Charter Seeds Company	Private Sector – Vegetable Seed Company
Mr. S. Kashiara Mrs F. Musuka	Project Formulation Advisor Project Officer	JICA	NGO
Malawi			
Mathews Lwanja Evans Chavula Martha Chimaliro	Smallholder Farmers	Choma FMS members	Farming

Yollam Chavula Sankani Chimaliro Nefasi Nkhonjera Safali Gama Sydney Kamanga Elizerbeth Siwande Beauty Phiri Jane Hawile			
Betrice Mbakaya Mirriam Nkhoma Emma Jakobo Oscar Mkamdawire Susan Chitaya Hetherwick Manda Janet Chalemba Edina Chirwa Pilirani Kawonga	District Agriculture and Development Officer Agricultural Extension and Development Officers ADRA staff	Ministry of Agriculture	Government
Jestina Nkosi Chancy Phiri Simon Moyo Mc Donald Chilambo	Smallholder Farmers	Farmer Market School Soyabean Association	Farming

Boyce Shaba Florence Phiri Elifa Mwaungulu Lisco Kumwenda Amon Kumwenda Monica Nungu Ellen Mbewe Letus Nyasulu Brian Moyo Doris Gondwe Joyce Mghogho Jokes Zgambo Kestina Kanyasko Deliwe Moyo			
Patson Shumba Peter Mtonga Dick Mhone Susan Chitaya Hetherwick Manda Pilirani Kawonga	FRUITS AND VEG Controller Fresh Food Manager Fresh Food Supervisor M and E Officer District Manager Field Officer	Shoprite Supermarket	Private sector Retailer

Annex 2 Timeline for conceptualization of FMS and its implementation in Zimbabwe

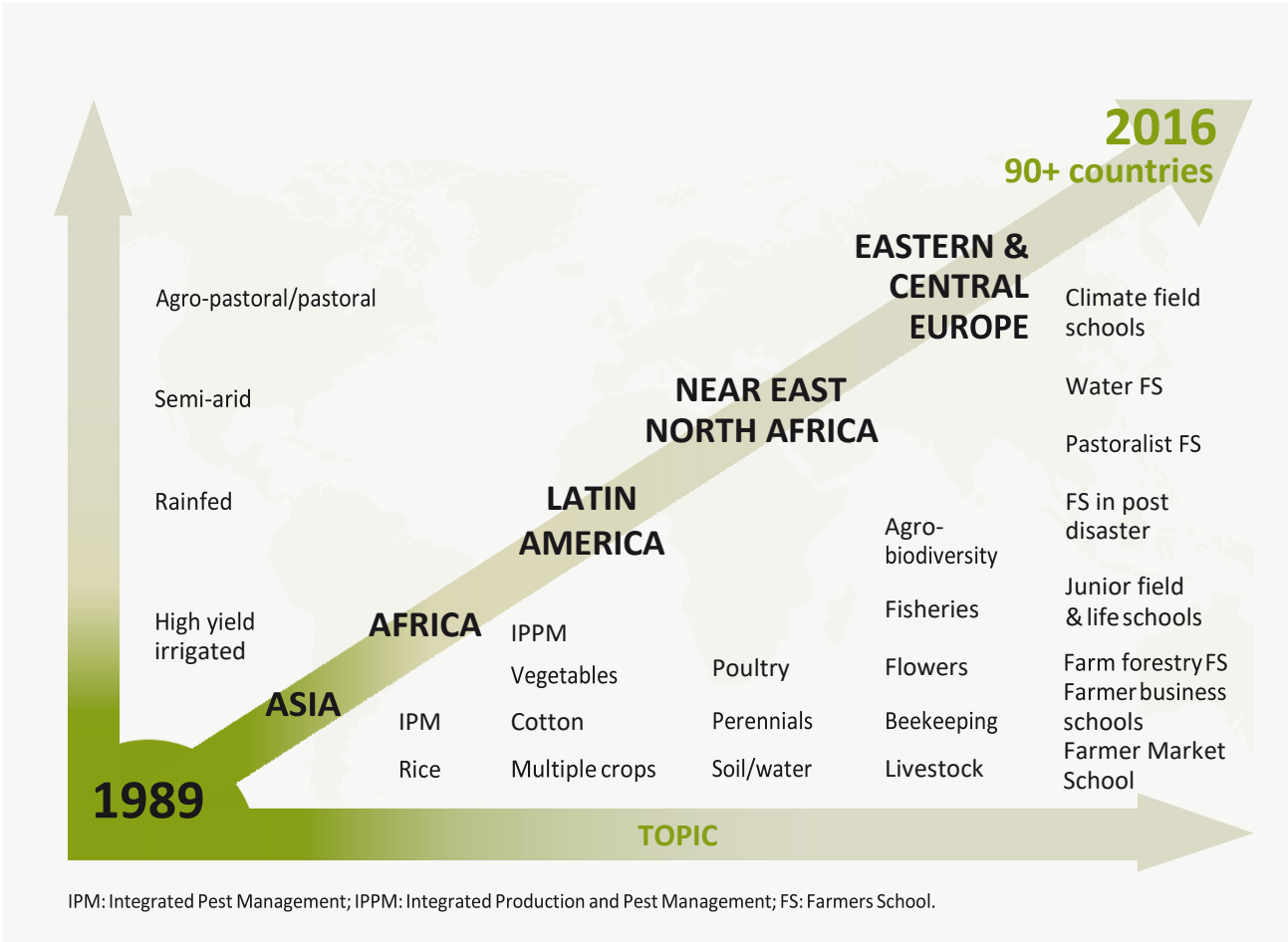
The following summary of the timeline for how FMS was conceptualized and implemented in Zimbabwe was written by ADRA Denmark staff who participated as resource persons in the FMS evaluation.

Year	Activity
2015	<p>As part of the Action for Social Change program in Malawi a small test was organized together with two groups of 'farmer researchers' in Mulanje and Machinga Districts. The two groups were encouraged to do market research for their preferred crops. They were given very basic training in relevant market issues by ADRA before they went to visit markets and research how their value chains functioned. The trips to market centres were paid and undertaken by themselves without project support.</p> <p>At a stakeholder meeting in Blantyre in November 2015 the research farmers presented their findings. It was obvious that they had undergone a process from being almost totally market illiterate to be much better informed about how the markets for their crops functioned. The amount of data they had collected was impressive.</p> <p>During this meeting ADRA Denmark and ADRA Zimbabwe were present, and it was decided to take an additional step in developing this approach further under the name Farmer Market School, which was chosen with intended reference to the methodology behind the Farmer Field School approach, which FMS partly built on.</p> <p>This would be piloted in Malawi as cooperation between ADRA Malawi and ADRA Denmark and with funding from 'Danmarksindsamlingen' and as an independent two-year project running parallel with the ASC program.</p> <p>The staff from the ASC program in Zimbabwe present at the November meeting in Blantyre insisted that the approach also should be piloted in Zimbabwe. And this would be as a special component of the ASC program, which was, however, being phased out in 2016. The Zimbabwe pilot project would thus only be for one year.</p>
2016	<p>The pilot project in Malawi got established with two new FMS groups in Machinga and two in Mzuzu. A training was undertaken by ADRA Denmark of facilitators for these FMS groups. The facilitators were ADRA staff and Ministry of Agriculture extension staff. An FMS operational manual had been written for this purpose.</p> <p>A similar training took place in Harare for ADRA Zimbabwe staff (ASC and WITS staff) and AGRITEX district staff plus other interested organisations. Initially 7 FMS groups were established in Matabeleland North and Mashonaland East– all with bulk of the members on irrigation schemes and the rest on community gardens or individual plots.</p> <p>A stakeholder meeting was held in Lilongwe with ADRA Malawi as one of the key organisers. The subject was 'smallholder farmers and the market', and the ADRA Malawi FMS pilot project was presented.</p> <p>ADRA Denmark made a presentation of the FMS approach at the 12th BDS conference in Kenya.</p> <p>In Zimbabwe graduation ceremonies were held for all the FMS groups – now including two new ones established in Mashonaland East. A stakeholder meeting was also held in Harare where the approach was presented. A short video on the FMS experience in Zimbabwe was produced afterwards.</p>

	<p>An exchange visit was organized where the Project Manager of the FMS pilot project in Malawi visited Zimbabwe. Together with the Deputy Director from AGRITEX FMS groups were visited by a small delegation of representatives from ADRA Zimbabwe, Denmark and Malawi. An agreement was made with ADRA Australia to continue supporting the FMS groups in the Matabeleland North and Mashonaland East in its 'Wealth in the Soil' (WITS)-project after the phase out of ASC program.</p> <p>A refresher training of FMS facilitators was undertaken in Malawi, and a joint updated Malawi and Zimbabwe FMS manual produced.</p>
2017	<p>During ADRA International's Second Annual Summit in Portugal, FMS was presented in the ADRA International Technical Learning Lab for Food Security/Livelihood. The FMS video was shown to the members of the TLL and for leading ADRA International officers as an example of innovation. The TLL decided to apply for ADRA International funding under a pilot project facility to evaluate FMS and other market focused approaches in various ADRA programs. An evaluation of the FMS in Malawi and Zimbabwe were part of the proposed activities.</p> <p>The funds were granted and it was decided that the TLL Food Security/Livelihood coordinator based in the ADRA AFRO-office in Nairobi would be responsible for implementation, and that ADRA Denmark would be the operational project holder.</p> <p>The Malawi evaluation took place in November 2016 and included visits to all – now 6 – FMS in Malawi. Meetings were also held with FAO and GiZ in Malawi, but unfortunately the Ministry of Agriculture at national level could not be met due to logistical problems.</p> <p>Through FAO useful links with FAO at regional levels in Southern and Eastern Africa were established. ADRA Denmark's FMS resource person visited Zimbabwe for a planning the FMS evaluation, which was planned for March 2018. Here the key person responsible for Farmer Field Schools at the FAO regional office for Southern Africa was approached and invited to meet with one of the FMS-groups in Mashonaland East</p> <p>The TLL Food Security/Livelihood coordinator based in Nairobi together with the ADRA Denmark FMS resource person also had a fruitful meeting with the FAO FFS team at the Eastern Africa regional office. Here closer collaboration was agreed between ADRA and FAO, and ADRA was invited to present the FMS approach in an FFW workshop for FAO representatives from 13 Eastern African countries to be held in Rwanda.</p> <p>An FMS resource person from ADRA Zimbabwe was tasked to make this presentation on behalf of the ADRA TLL for Food Security/Livelihoods.</p> <p>During 2017 the ADRA Denmark FMS resource person made four presentations of the FMS approach in Sudan – one at national level and three of state level in Blue Nile, West Darfur and White Nile respectively – for stakeholders as an introduction of the idea to also pilot the FMS approach in Sudan as well. This would be in 2018.</p> <p>A request from ADRA Burundi was made to ADRA Zimbabwe to send some key FMS staff to Burundi to present the FMS approach to stakeholders and train ADRA staff. This was however postponed to 2018.</p> <p>In October 2017 ADRA Denmark made a presentation of the FMS approach to an audience of members of 'Danish Forum for Microfinance' in Copenhagen.</p> <p>In December a group of 30 persons were trained as FMS facilitators in Sudan – mostly MoA and ADRA staff. An updated operational manual was produced specific for Sudan in English and Arabic versions.</p>

2018	<p>In connection with the consultant's evaluation of the FMS experiences in Malawi and Zimbabwe it was decided to make quantitative surveys in both countries, which would also relate to baselines established before starting the FMS groups as end-lines.</p> <p>The Malawi survey was undertaken in December 2017, while data processing and preliminary reporting was done in early 2018. In Zimbabwe the similar process was undertaken in January-February. In both countries these surveys were undertaken by relevant ADRA staff and MOA-field staff used as enumerators.</p> <p>ADRA Malawi is a partner in consortium of a major Farmer Field School and Value Chain project ('Kilimo' funded by EU) in Malawi. FAO will be technically responsible for training and support on the FFS part while GiZ will be technically responsible the value chain part. Both FAO in Malawi visited by the evaluation team and the Danish consultant for GiZ (who took part in the FMS presentation in Copenhagen October 2017) have expressed interest of including FMS as a complementary approach in the program and in collaboration with ADRA Malawi.</p> <p>In Sudan the FMS pilot project is started with two FMS groups in each of the states Blue Nile, West Darfur and White Nile. At the same time FFS master trainers have been approached to come to Sudan to train FFS facilitators in White Nile (MoA staff) and West Darfur (Farmer-facilitators). And a model for implementing the FMS pilot projects side by side with FFS has been developed and will be tested.</p> <p>The FMS Evaluation in Zimbabwe started Mashonaland East during late February 2018, and in Matabeleland North in first half of March 2018. ADRA Australia has willing agreed to pay for the local costs in Zimbabwe – transport etc. – for the evaluation through its WITS-project.</p> <p>The FMS Evaluation in Malawi started in 2017 and was completed August 2018.</p>
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Annex 3. Farmer Market School, the latest evolution of the Farmer Field School family



Annex 4. Number and percentage of farmers engaged in collective marketing in Zimbabwe

	FMS graduates (N=117)	FMS Group members (N=101)	Control farmers (N=202)
Yes	68 (58%)	43 (43%)	71 (35%)
No	49 (42%)	58 (57%)	131 (65 %)

Source: ADRA Endline survey 2018. Total number of participants (N) = 420.

Annex 5. Increased diversity of market ventors 2015/2016 – 2016/2017 – 2017/2018 in Malawi

market ventors 2015/2016

Type of Market	FMS (N=78)	FMS Group (N = 67)	Control (N = 28)
Vendor	29	46	14
Home	2		
Auction	1	3	
Community	3	7	1
Exagris Africa	2	1	
Local market	6	2	1
Mbanila	3	2	
Mzuzu ADD	1		
Nayuchi	1		
AHL		5	
Admarc	2	2	2
NGO		1	
ETG	1		
Shoprite	2		
NASFAM		1	
Cooperatives		1	
Total number of farmers	39	52	15

Market ventors 2016/2017

Type of Market	FMS (N=78)	FMS Group (N = 67)	Control (N =28)
Vendor	35	50	22
Home	1		
Auction	3	3	
Community	6	12	1
Exagris Africa	1		
Local market	6	2	

Mbanila	1	2	
Mzuzu ADD			1
Nayuchi			
AHL		4	
ADMARC	5	4	1
NGO	1	1	
ETG		1	
Shoprite	18	1	
NASFAM		1	
Cooperatives		1	
ICRISAT	3		
Supermarkets	1		
Transglobe	1		
Rab processors	1		
Strawberry company	1		
Total number of farmers	56	57	22

Market ventors 2017/2018

Type of Market	FMS (N=78)	FMS Group (N =67)	Control (N =28)
Vendor	17	19	16
Home			
Auction	2	1	
Community/ consumers	1	8	
Exagris Africa			
Local market	3	4	1
Mbanila		1	
Mzuzu ADD		1	1
Nayuchi			
AHL		1	
ADMARC	1	4	2
NGO			
ETG	6	11	
Shoprite	13	12	
NASFAM			

Cooperatives	1	5	
ICRISAT	2	1	
Supermarkets	2		
Transglobe	1		
Rab processors			
Strawberry company			
AGORA	9	4	
Rai-Rai	2		
Big companies	10	10	
Blantyre companies	1		
Chibuku products LTD	1	1	
Hotel	4		
Kulima	4	2	
Patison	1		
Schools	1		
Demeter	5	2	
FADAMZ	1		
Health insitutions	1		
Institutions	1		
Liwonde	1		
Lodge	1		
Secondary school	1		
Rab processing	2	3	
Peoples supermarket	3	2	
Total number of people	38	42	17

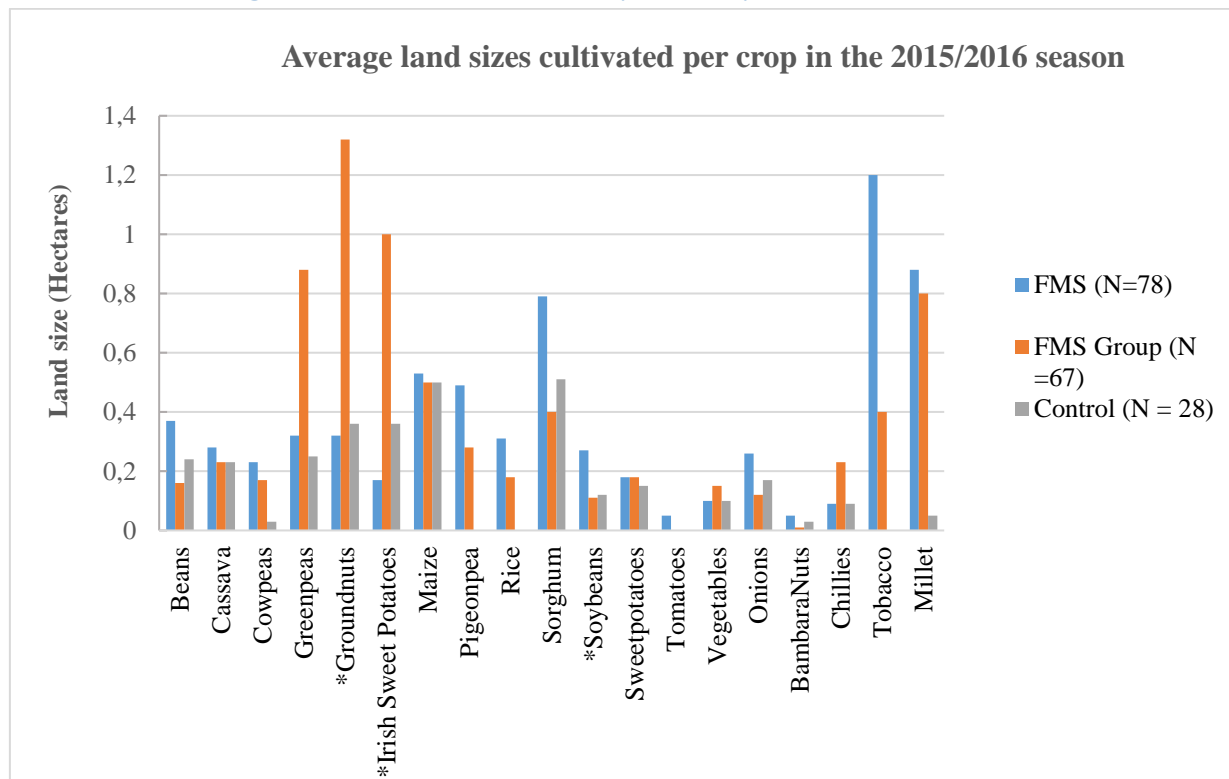
Annex 6. Frequency of crops grown by Zimbabwe FMS graduates, FMS group members and control farmers

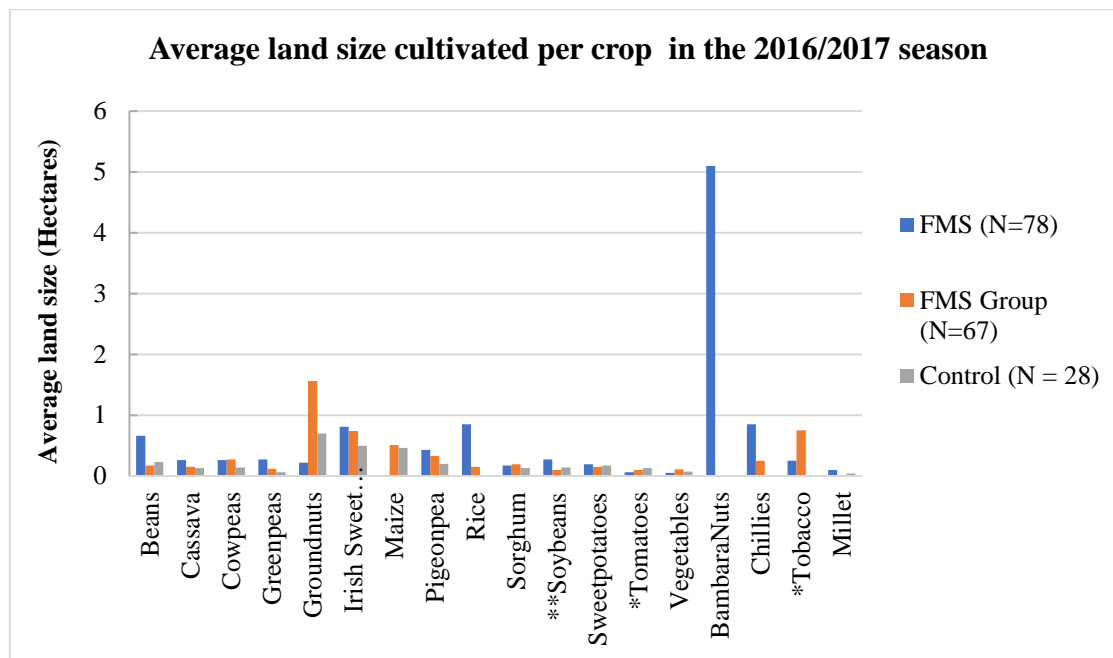
Crop	FMS graduates (N=116)	FMS group members (N=101)	Control (n=202)
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Maize	112 (96.55%)	100 (99.01%)	199 (98.51%)
Groundnuts	78 (67.24%)	65 (64.36%)	142 (70.30%)
Beans	79 (67.52%)	61 (60.40%)	112 (55.45%)
Soybeans	14 (11.97%)	10 (9.90%)	17 (8.42%)
Pigeon peas	3 (2.59%)	1 (0.99%)	2 (0.99%)
Sunflower	29 (24.79%)	15 (14.85%)	22 (10.89%)
Sweet potato	72 (62.07%)	66 (65.35%)	78 (38.61%)
Irish Potato	23 (19.83%)	17 (16.83%)	10 (4.95%)
Beetroot	40 (34.48%)	22 (21.78%)	13 (6.44%)
Lettuce	27 (23.28%)	15 (14.85%)	11 (5.45%)
Baby Marrow	13 (11.21%)	4 (3.96%)	6 (2.97%)
Cauliflower	14 (12.07%)	8 (7.92%)	7 (3.47%)
Onion	91 (78.45%)	69 (68.32%)	114 (56.44%)
Tomatoes	87 (75.00%)	78 (77.23%)	125 (61.88%)
Cowpeas	76 (65.52%)	57 (56.44%)	111 (54.95%)
Broccoli	13 (11.21%)	5 (4.95%)	4 (1.98%)
Kale	48 (41.38%)	41 (40.59%)	83 (41.09%)
Spinach	51 (43.97%)	35 (34.65%)	32 (15.84%)
Millet	17 (14.66%)	13 (12.87%)	30 (14.85%)
Roundnuts	68 (58.62%)	56 (55.45%)	102 (50.50%)
Sorghum	46 (39.66%)	29 (28.71%)	76 (37.62%)

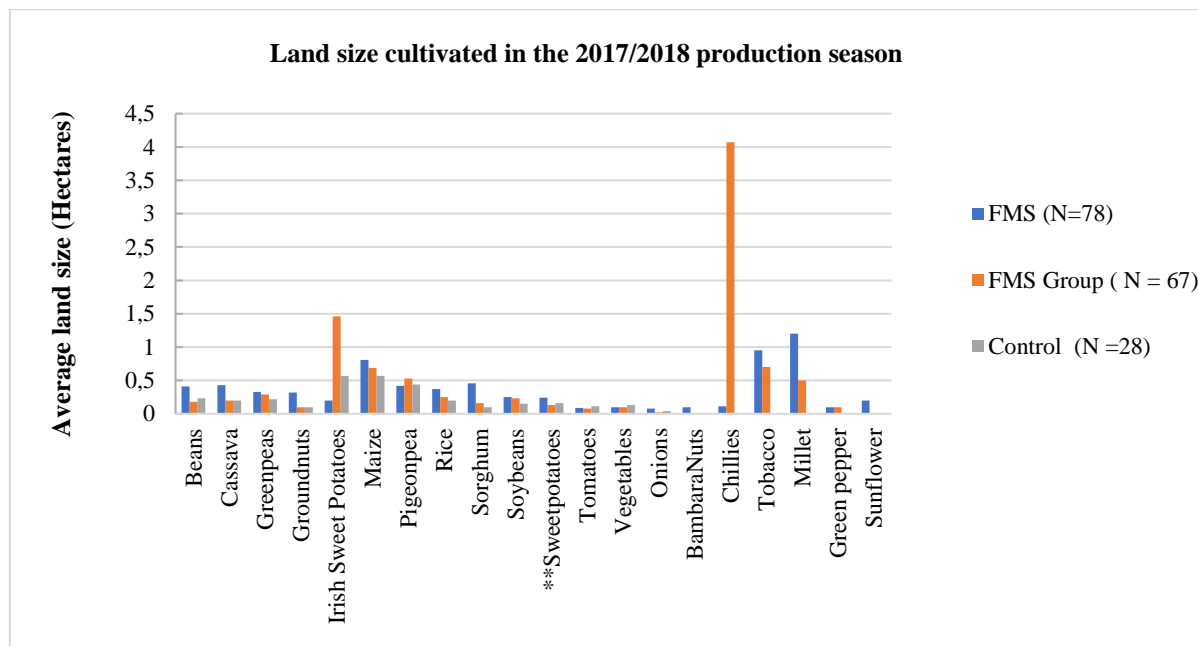
Source: ADRA Endline survey 2018. Total size of survey (N) = 319 respondents. Values in parenthesis are percentages

Annex 7 Changes in area cultivated per crop 2015/2016 - 2016/2017 - 2017/2018 Malawi





Annex 7 Changes in area cultivated per crop 2015/2016 - 2016/2017 - 2017/2018 Malawi (continued)



Annex 8. Access to financial services for FMS graduates, FMS group members and Control farmers

Access to financial service	FMS	FMS Group	Control
Yes	50 (43%)	42 (42%)	19 (9%)
No	67 (57%)	59 (58%)	183 (91%)

Source: ADRA 2018. Endline survey. Total sample size (N)= 420.

Annex 9. Sources of agricultural loans for FMS graduates, FMS group members and Control farmers

	FMS graduates	FMS Group members	Control farmers (N=202)	Total
Banks	12 (13%)	9 (12%)	4 (17%)	25
Individuals	3 (3%)	3 (4%)	0 (0%)	6
MFI	32 (34%)	29 (38%)	9 (39%)	70
VSLA	43 (46%)	30 (39%)	8 (35%)	81
Value chain financiers	3 (3%)	6 (8%)	2 (7%)	11
Total	93 (100%)	77 (100%)	23 (100%)	193

Source: ADRA 2018. Endline survey. Total sample size (N) = 193

Annex 10. Loans taken during 2017-2018 agricultural production season

Taken loan	FMS (N=117)	FMS Group (N=101)	Control (N=202)
Yes	22 (19%)	13 (13%)	6 (3%)
No	95 (81%)	88 (87%)	196 (97%)

Source: ADRA 2018. Endline survey. Total sample size (N) = 320.

Annex 11. Wellbeing ranking in Zimbabwe and Malawi

Wellbeing ranking of Ward 16 in Goromonzi district, Mashonaland, Zimbabwe

Wellbeing category	Hard working farmers (50%)	Poor (25%)	Poor not interested in agriculture (25%)
Land	More than 2 acres	0. 5 acre	Only homestead
Livestock	Cows for ploughing	Goats and poultry only	Poultry only
Work as labour	No	Work as casual labor whenever work is available	Too weak to work as casual labor
Hire labour	Yes	No	No
Food security	Food secure when season is not abnormal	Food insecure 3-6 months per year. Receive food aid. 400 kg maize own production. Conservation agriculture	Food secure, net buyers of food
education	Send children to secondary school. Access to advice. Members of ZFU.	Difficult in paying for school fees for primary school. No access to Agritex. Do not attend Farmer field day.	Used to urban life. Work as factory / unskilled workers in Harare.
Focus	Most focus on maize and livestock, while horticulture is new	Insufficient food, have to work for others for survival	Work in Harare and settled here because of low housing rent

Source: AEO in Ward 16.

Wellbeing ranking of farmers in Domboshava district, Zimbabwe

	Well off	Middle class	Poor
Land	6 acres. Sufficient land for gardening.	2 acres. Not sufficient land for gardening.	0.5 acres for subsistence maize production.
House	One room round kitchen house, thatched. 4-5 room house, asbestos or tail roof.	One room round kitchen house, thatched 2 room house, asbestos or iron roof.	One room round house, thatched. Serve as kitchen, living room and bed room.
Work as casual labour	Never work as casual labors.	Only work as casual labors during years with crops failure.	During peak season most are casual labors, some work for others year round whenever possible. Some heard livestock for others.
Hire casual labour	Hire casual labor for all agricultural tasks year round.	May hire casual labor during peak agricultural season.	Never hire casual labor. May engage in reciprocal labor arrangements with neighbors
Food security	Food secure, eat 3 times a day and meat 3 times per week.	Food secure in good seasons, eat twice a day and meat once a week.	Food insecure 3-6 months per year, eat twice a day, meat during festivity or receiving visitors.
Access to health services	Access to urban hospitals.	Access to local clinic.	Cannot afford local clinic. Use traditional healers.
Access to education	Most children go to university or other higher education.	Some children go to university or other higher education.	Some go to school up to form 4. Dropout rate for attending school is 30%.
Dress	Buy cloth when even they want. Conscious of fashion.	Dress up with cheap 2 nd hand cloth.	Only by cheap cloth when worn out. Many have no shoes.

Source: group interview with four traditional leaders (headmen) from Domboshava.

Well-being ranking in Bubi district, Matebeleland North, Zimbabwe

WBR category	Poor (80%)	Middleclass (15%)	Well off (5%)
Arable land	Less than 2 ha	2-3 ha	3-4 ha
Assets	Non	1 plough, 1 scotch card	2 ploughs, 1 scotch card
Hire casual labour	Never hire casual labour	Occasionally hire 1-2 casual labour	4-5 casual labour during peak seasons
Work as casual labour	Work as casual labour during peak season, or whenever in need for money.	Occasional work as casual labour if the cropping season fail.	Never work as casual labour.
Quality of house	Round thatched hut made of sticks plastered with clay.	Thatched round hut made of burned bricks.	Large square house made of burned bricks and plastered with cement. Asbestos or iron roof.
Education of children	Never more than primary school. Some drop out because of not paying school fees.	Many complete secondary school. Few attend university.	Most complete secondary school and many attend university.
Access to health services	Sometimes cannot even afford transport and medicine for local health centre.	Access local health centre.	Access local health centre or transfer to Bulawayo hospital.
Food security	Food insecurity October-February. Often go 2 days without food.	Food secure year round.	Food secure year round.
Quality of food	Only eat meat at special occasions.	Eat meat 1 time a week.	Eat meat 3-4 times a week.
Livestock	0-2 cows.	15 cows.	More than 25 cows.

Source: two headmen, the councillor and two Agritex Agricultural Extension Officers

Well being ranking in Msusu district, Malawi

	Poor	Middle	Well off
land	1 ha	5-10	>15 ha
house	Wood plastered with mud, thatched roof, sleeping on sacks, one room	Burned bricks, some iron roof, on glass windows, not plastered, 2 rooms	Plastered burned bricks, iron roof, windows with glass, solar, several rooms
Food security	One meal a day, food deficit December-April	Two meals a day, food secure year round, sometimes only one meal a day December -April	Three meals a day, frequently meat and varied diet.
Work as casual labour	Daily basis through out the year. Affect labour for own fields.	Occasionally December-April if things get hard	Never
Hire casual labour	Never	Occasionally for weeding and harvest	Hire for all functions year round
Cloth	Cloth is sloppy and never washed with soap. Only buy new when worn out. No new Sunday cloth for church.	3-4 good cloth. Buy new periodically. Set of new Sunday cloth for church.	Regularly buy both 2 nd hand and Chinese cloth. Buy fashion cloth.
Access to education	Children attend public primary only. Few sponsored by NGO or Government for public secondary	Most attend both primary and secondary public school. Few enter university	Private primary and secondary school. Attend university if sufficient grades.
Access to health services	Use local medicine as first option. Use local public clinic and district hospital if referred.	Use both local public and private clinic and district hospital if referred	Use local private clinic or directly to district hospital, private payment section.
Livestock	Chicken only	<10 goats <5 cattle 1 dairy cow	+ 20 goats + 20 cattle

Source: group interview with farmer leaders, Msusu district

Annex 12. Farmer Field School best practice principles

- Farmers' needs define and drive FFS and FFS programmes.
- Farmers' local knowledge co-produces and co-creates new knowledge, science and public services [i.e. extension] alongside science-based knowledge.
- The learning process and knowledge generation are central to FFS and FFS programmes:
 - a. FFS are based on fields (or animals) through which to learn and experiment;
 - b. structured hands-on, experiential learning is primarily used;
 - c. adult learning cycles emphasize observation, critical analysis, sharing and debate, conclusion/decision and implementation to enhance knowledge and decision-making skills that combine local and science-based knowledge;
 - d. learning is a continuous process – regular meetings are held at critical crop/enterprise development stages to correspond with the decision-making of farmers/pastoralists;
 - e. the practical and critical development of skills and competences is the main focus;
 - f. diversity in age, gender and experience enriches FFS when all are involved in production.
- Building trust and strengthening groups in order to develop:
 - a. critical analysis skills;
 - b. feedback and evaluation skills;
 - c. planning skills;
 - d. basics of group work and collaboration (group dynamics exercises).
- Facilitation of the learning process: competent master trainers and facilitators (technical, methodological and organizational skills).
- Situation/location-specific activities, i.e. locally appropriate learning curriculum.

Source: FAO 2016. Farmer Field School Guidance Document. Planning for Quality Programmes. Page 24.