

Improve Jobs of Smallholder Women Farmers

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Jobs MDTF**Project Name:** Improve Jobs of Smallholder Women Farmers**Country:** Mozambique**TTL:** Joao Montalvao, Francisco Campos**Output:** Implementation Note**Date:** April 2018**Implementation Note****1. Overview**

This Grant partially financed the design and implementation of a new psychology-based agricultural extension **intervention** targeting women farmers in rural Mozambique. The innovative aspect of this intervention is its focus on non-cognitive entrepreneurial skills (“soft skills”) to help women stay motivated and overcome the psychological barriers associated with starting and running a (farm or non-farm) business, in addition to technical farming skills (“hard skills”) of a typical agricultural extension program (see Theory of Change in Figure A).

The intervention is being implemented by International Development Enterprises (iDE), an international NGO with presence in Mozambique and focused on promoting a business approach to increasing income and creating livelihood opportunities for poor rural households. iDE was procured through a competitively selected process. The soft-skills training modules were designed by a team of entrepreneurial psychologists from Leuphana University, and based on successful *personal initiative* training [Campos *et al.* 2017]. Personal initiative is defined by an entrepreneurial mindset that is self-starting, proactive, creative, perseverant, and future-oriented [Frese *et al.* 1996, Frese *et al.* 2001].

The intervention targets 1,500 women spread across 75 rural communities (20 women in each community) in the Tête province of Mozambique. The communities are equally distributed along three feeder roads (R603, R604, R605) in the district of Angonia, Macanga, and Tsangano. As part of an ongoing randomized control trial impact evaluation, the communities were randomly assigned to one of two treatment groups: 37 communities were offered the hard-skills training only, and 38 communities were offered the hard-skills training *and* the soft-skills training.

This note summarizes key aspects of the development and implementation of the intervention during the Grant period so far (July 2016 – January 2018). A major highlight is that **during the Grant period the**

intervention has provided training to a total of 1,429 women. The training is ongoing, with the last training session scheduled for June 2018.

2. Selection and Training of Trainers

The intervention uses a training-of-trainers (TOT) approach. Different trainers were selected for the soft-skills training and the hard-skills training to avoid contamination between the two types of training.

The TOT for the hard-skills training has five stages. **The first stage of the hard-skills took place in October 2017.** It consisted of a 3-day training focused on the first two modules of the hard-skills training curriculum. Twenty-five local women farmers were hired as trainers of the hard-skills training. The trainers were selected prior the first TOT based on their education level, leadership and teaching capacity, popularity status in the communities, and knowledge in agriculture. The remaining four stages of the TOT will take place in January, February, March, and May 2018 to prepare for the remaining five sessions of the hard-skills calendar (see timeline in Figure B). All trainers were equipped with bicycles and assigned to work with 2-5 communities each.

The TOT for the soft-skills training entails two stages. **The first stage took of the soft-skills TOT place in October 2017** to prepare for the first phase of the soft-skills training. It consisted of a 5-day training focused on the first four modules of the soft-skills training curriculum. Twelve graduate students from a local university with experience in agriculture and in rural development were invited to participate in the TOT. Based on their performance during the TOT, the best 8 participants were hired as trainers of the soft-skills training. The second stage of the TOT will take place in April 2018 to prepare for the second phase of the soft-skills training (see timeline in Figure B). All trainers are equipped with motorbikes and were assigned to work in 4-6 communities each.

3. Hard-Skills Training

The hard-skills training comprises seven 5-hour monthly group sessions. The curriculum was designed based on a preliminary value chain analysis and the lessons from the baseline survey conducted in April-June 2016. It focus on (i) locally relevant best farming practices related to land preparation, planting, growing, weeding, fertilizing, and harvesting; as well as (ii) basic business skills and commercial practices needed to manage farm production more effectively and for better returns. Table 1 lists the topics covered in each training session.

The first four hard-skills training sessions were delivered from November 2017 to March 2018. The participation rates continuously increased from 84.07% (1,261 women) in the first session to 86.93% (1,304 women) in the fourth session¹. The remaining 3 training sessions will take place between April 2018 and June 2018 (see timeline in Figure B).

The teaching method adopts a learning-by-doing approach made possible via demonstration plots of 1,000m² installed in each of the treatment communities. After 2-3 hours of theory in the classroom, the session continues with 2-3 hours of practice on the demonstration plot where the women are invited to repeat the techniques they have learnt. Thus, the various steps of the cultivation of the chosen cash crops (planting, growing, weeding, harvesting) are demonstrated. The plots are divided into six areas, to enable the visual comparison of different varieties of seeds and techniques and their respective productivity.

In addition to the group training sessions, the hard-skills training also includes four individual follow-up mentoring sessions. The goal of these visits at the women's own farms is to personalize advice adapted to each woman's production and to reinforce the content of theory and practice of the group sessions. The mentoring visits take place at strategic points in the agricultural season (see timeline in Figure B). The first mentoring visit took place in November 2017: **a total of 1,213 (out of 1,500) women from 74 (out of 75) treatment communities received the first individual visit, implying a take-up rate of 80.9%. The second individual visit took place in December 2017 and reached 1,370 women, implying a take-up rate of 91.3%.** The remaining two individual mentoring visits will take place in April and May 2018.

4. Soft-Skills Training

The soft-skills training entails a total of nine weekly 4-hour group sessions. The sessions are delivered in a group format through group discussions, activities, case studies, and shared experiences. The curriculum was developed by a team of entrepreneurial psychologists from Leuphana University, and based on successful *personal initiative* training for small-business owners in urban African contexts [Campos *et al.* 2017]. Personal initiative is defined by an entrepreneurial mindset that is self-starting, proactive, creative, perseverant, and future-oriented [Frese *et al.* 1996, Frese *et al.* 2001]. Table 2 provides an overview of the topics covered in the soft-skills training.

¹ The women who participated are from 74 of the 75 treatment communities. One community opted out of the program despite many attempts to convince them otherwise.

The training is divided in two phases. The first phase – comprising 4 training sessions – aims at fostering personal initiative to enhance the motivation to experiment and adopt best farming techniques and high-value cash crops. The second phase – comprising 5 training sessions - focus on experimenting with new (farm and non-farm) entrepreneurial activities: it invites women to try out small business activities, teach basic principles of marketing (product design and customer/competition analysis), and reinforce the personal initiative mindset covered during the first phase of the training.

The first four soft-skills training sessions were delivered in November 2017, at the beginning of the agricultural season: a total of 552-599 (out of 760) women from 34 (out of 35) communities participated in the first four sessions, implying take-up rates between 72-79%. Importantly, as seen in Table 3, the take-up rates (and therefore interest in the training) have not diminished over time across training sessions during the first phase of the training. The remaining five sessions will take place between April-June 2018, during the growing period when women have more free time outside their farms.

5. Pilot Trainings

All training modules are tested in a nearby pilot community prior to their scale-up. **The pilots for the first two modules of the hard-skills training were conducted in September 2017.** The feedback obtained from the trainees led to some readjustments in the training manual concerning the duration and difficulty of the topics: a greater emphasis was placed on the theory, investing more time on the most challenging topics (costs records, production plan and basic financial literacy). The remaining hard-skills training modules will be piloted throughout the implementation of the project (see timeline in Figure B), allowing for continuous improvement and adapted responses to the trainees' needs.

Given the novelty of the soft-skills training, a proof of concept mini-pilot took place in July 2017. This mini-pilot took place over five days in order to test a preliminary version of the training material. This exercise generated important feedback that was used to create the final training manual, as well as exercises and activities. The second phase the soft-skills training was piloted in March 2018 prior to the second TOT in April 2018 (see timeline in Figure B).

6. Complementary Activities: Inputs and Market Linkages

To further promote experimentation and adoption of cash crops discussed during the hard-skills training, **the intervention procures and distributes a limited amount of seeds for selected high market-value cash**

crops to all women participating in the training. Specifically, each woman received in November 2017 a start-up kit of 5-10kgs of seeds for the crops to be planted during the first season of the agricultural calendar (November-March), and received in April 2018 30gs of horticultural crops to be used during the second season (April-August). To promote the long-term sustainability of the intervention, the implementing partner is harnessing the necessary market linkages with input (seeds, fertilizer) suppliers and produce buyers (traders, processors, exporters) throughout the implementation period.

7. Monitoring

A complete **monitoring system** has been developed in order to (i) follow the daily activities in all treatment communities, (ii) intervene rapidly to correct for potential delays or issues and perform immediate readjustments, and (iii) assess the quality of the different activities of the project. This monitoring system is supported by six field agents and it comprises the three core components: (i) *trainers' feedback*: where after each training session all trainers fill in their corresponding attendance lists and write down their comments and recommendations for improvement; (ii) *trainees' feedback*: where after each training session a short questionnaire is administered to a random sample of 6% of the trainees to collect their feedback on the content of the training and on the quality of the trainer, as well as to test the knowledge that the trainees have acquired during the session; (iii) *senior staff's visits*: where senior staff of the project conduct regular and unannounced visits to the treatment communities before, during, and after the training sessions to monitor the quality of work of the trainers.

8. Impact Evaluation

A rigorous **randomized control trial** (RCT) approach is being used to measure the causal impacts of the agricultural extension intervention. The main source of data for the RCT are household and community level surveys (not financed by the Grant). The household level surveys collect information on (i) agricultural production and sales, crop choices, input usage, and farming practices; (ii) employment including off-farm; (iii) noncognitive skills; (iv) women empowerment and intra-household bargaining; (v) household and farm assets; (vi) feeder road usage and access to markets; (vii) household and farm assets; and (viii) consumption. The community level surveys focus on village-level crop prices and access to

markets. The baseline survey took place in April-June 2016. Two follow-up surveys are planned for September-October 2018 (midline) and September-October 2019 (endline).²

9. Project Team

The field staff is composed of one Project Manager, one Rural Development Consultant, one Agricultural Specialist, and one Monitoring and Administrative Assistant. Six Field Agents located across the project area provide full-time monitoring, logistical, and technical support in the 75 treatment communities. A total of 8 Trainers for the soft-skills training and 25 Trainers for the hard-skills training have been hired to deliver the sessions.

The research team is a multidisciplinary team that combines expertise in gender, agriculture and development economics, the psychology of entrepreneurship, and impact evaluation methods and practice. The team includes Joao Montalvao (TTL), Francisco Campos (co-TTL), Claire Boxho, and Markus Goldstein from the World Bank; Michael Frese, Michael Gielnik, and Benjamin Scharweit from Leuphana University; and Pedro Carneiro from the University College London.

² This RCT is built on an ongoing impact evaluation of a feeder roads rehabilitation program under an active World Bank project (IGPP - P127303). The roads rehabilitation evaluation combines aspects of the (non-random) placement of the feeder roads rehabilitation program with baseline and follow-up survey data – in a difference-in-differences framework – to measure the effectiveness of better road infrastructure aimed at improving the ability of farmers (both male and female) to sell their produce in the markets. We see this large-scale program as an ideal setting to test innovative market-oriented agricultural extension services targeted to women farmers – thus helping them take advantage of better road infrastructure connecting their communities with markets.

Appendix

Figure A: Theory of Change

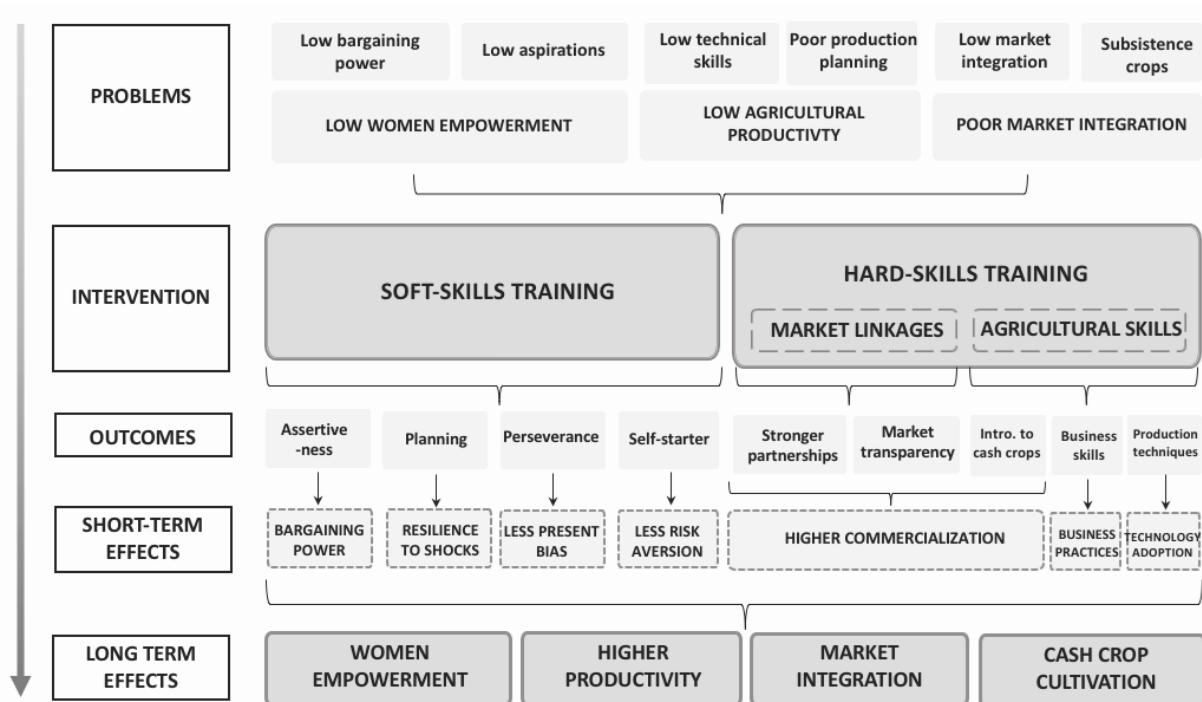


Figure B: Intervention Timeline

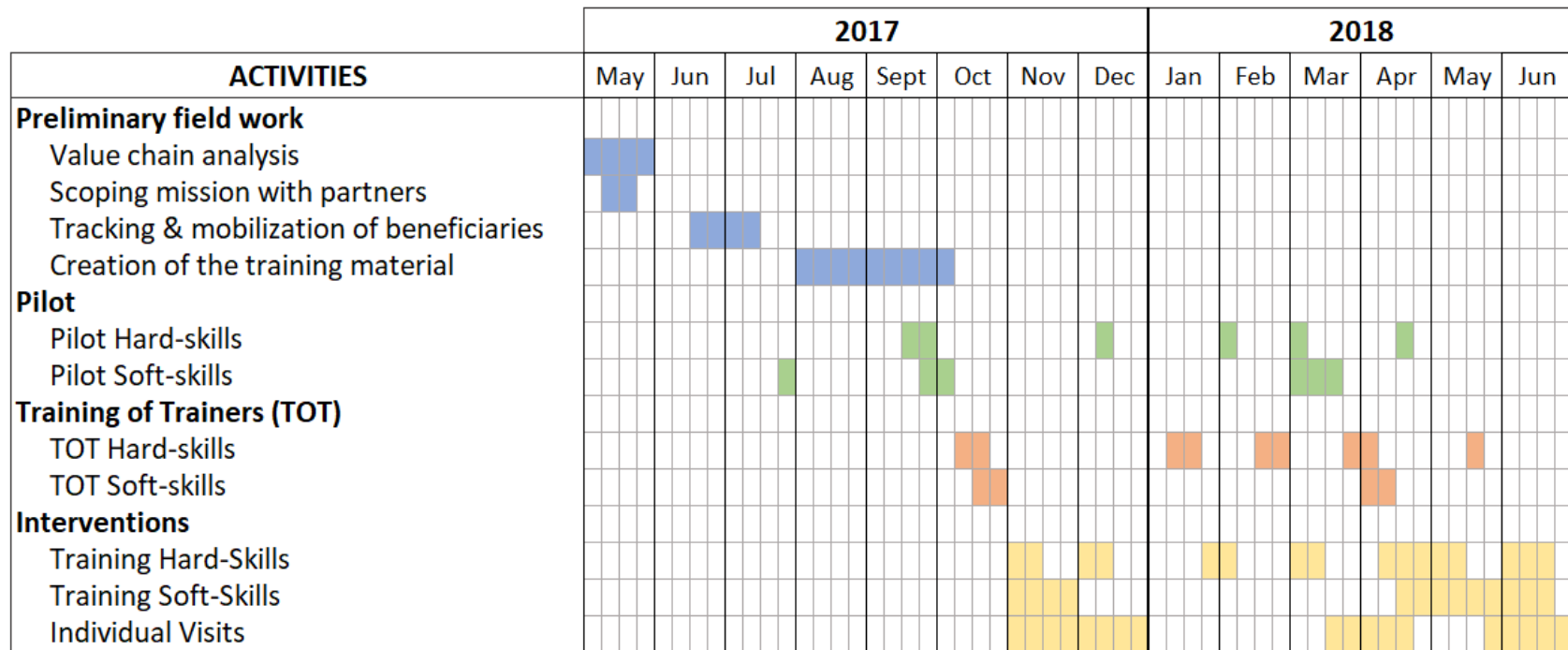


Table 1: Hard-Skills Training Modules

Module 1 (Nov 2017) <ul style="list-style-type: none"> ▪ Land preparation ▪ Introduction to cash crops ▪ Production plan ▪ Quality of seeds 	Module 5 (Apr 2018) <ul style="list-style-type: none"> ▪ Harvesting techniques ▪ Post-harvest treatments and conservation ▪ Market analysis and linkages ▪ Costs records and financial literacy
Module 2 (Dec 2017) <ul style="list-style-type: none"> ▪ Seeding and fertilizing ▪ Costs records and financial literacy ▪ Crop rotation ▪ Mulching 	Module 6 (May 2018) <ul style="list-style-type: none"> ▪ Irrigation systems ▪ Transplant of horticultural crops ▪ Revision of the topics of Modules 1-4 ▪ Cost and production records
Module 3 (Jan 2018) <ul style="list-style-type: none"> ▪ Weed control ▪ Pests and diseases ▪ Water management ▪ Principles of conservation agriculture ▪ Organic compost 	Module 7 (Jun 2018) <ul style="list-style-type: none"> ▪ Evaluation of the harvest of the production of the demonstration plot ▪ Market linkages and prices ▪ Basics of nutrition ▪ Production plan for the next agricultural season
Module 4 (Mar 2018) <ul style="list-style-type: none"> ▪ Introduction to horticultural production ▪ Preparation of horticultural nurseries ▪ Irrigation systems in nurseries ▪ Costs plans and financial literacy ▪ Organic pesticides 	

Table 2: Overview of the Soft-skills Training Content

Personal Initiative <ul style="list-style-type: none"> ▪ Pro-activeness and creativity ▪ Resources and opportunity identification ▪ Future orientation and anticipating problems ▪ Perseverance and overcoming barriers 	Problem solving techniques <ul style="list-style-type: none"> ▪ Defining problematic situations ▪ Using different sources of information ▪ Goal setting, planning and monitoring ▪ Reward after achievement ▪ Getting and evaluating feedback from different sources 	Entrepreneurship in practice <ul style="list-style-type: none"> ▪ Adoption of cash crops as a form of experimenting ▪ Starting a small business activity (farm or off-farm) ▪ Developing an action plan and using problem solving techniques ▪ Basic principles of marketing ▪ Making errors and learning from them
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Table 3: Take-up rates as for April 2018

Soft-skills (760 eligible women)	Module 1	552	72.63%
	Module 2	585	76.97%
	Module 3	599	78.82%
	Module 4	599	78.82%
Hard-skills (1,500 eligible women)	Module 1	1,261	84.07%
	Module 2	1,270	84.67%
	Module 3	1,291	86.07%
	Module 4	1,304	86.93%
	Individual Visit 1	1,213	80.87%
	Individual Visit 2	1,370	91.33%

Photos



Photo 1: Registration day



Photo 2: Piloting soft-skills training



Photo 3: Soft skills training session in action



Photo 4: Training of Trainers session



Photo 5: Learning and practicing mulching