



HOW-TO GUIDES

IN AGRICULTURAL MARKET SYSTEM DEVELOPMENT

Lead Farmer Business Incubator Approach

Practical guidance on lead farmer
selection, training and business start-up





HOW-TO GUIDES

IN AGRICULTURAL MARKET
SYSTEM DEVELOPMENT

SNV



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CHAIN

How-to Guides in Agricultural Market Systems Development

Lead Farmer Business Incubator Approach

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Foreword

Cambodia's agricultural sector shows continued growth both in production and export, despite the COVID 19 pandemic. Nevertheless, poverty remains largely a rural phenomenon, as about 80% of the 2.5 million poor people live in rural areas. Cambodian smallholder farmers' low productivity is the result of limited access to quality agricultural inputs, technical knowhow and innovation, as well as limited marketing opportunities and market information. Pressure on water resources and the effects of climate change are additional challenges. Limited involvement of the private sector in agricultural extension services and weak cooperation with public sector actors restrain the development of prosperous smallholders. Cambodia is not self-sufficient in vegetables and fast economic growth has resulted in a higher demand for safe and quality local fruits and vegetables. This provides a huge opportunity for smallholder farmers and processors, particularly women, to increase income and food security. Moreover, improved rural infrastructure has increased the mobility of rural poor people, providing them access to diversified markets and job opportunities.

Responding to these challenges and opportunities, the Swiss Agency for Development and Cooperation (SDC) has developed the Cambodian Horticulture Advancing Income and Nutrition (CHAIN) 2014-2022 programme in close cooperation with the Ministry of Agriculture, Forestry and Fisheries through the General Department of Agriculture (GDA) and the provincial departments of Agriculture, Forestry and Fisheries (PDAFF). CHAIN has used a market development approach aimed at strengthening the inclusion of poor people (with a strong focus on women) in the market to secure better access to agricultural goods and services and to gain higher incomes. The key element of this approach is a facilitation process for involving private and public partners as well as civil society organisations in the delivery of goods and services on the input and output side of the horticulture value chains (e.g. extension, inputs, marketing and market information) that appropriately meet the needs of poor farmers and processors. Over the past eight years, we were able to achieve impressive results. Cambodia vegetable production has increased remarkably over the last 3 years and is now covering 68% of domestic market demand (700,000 Mt in 2020) compared to 422,000 Mt in 2013. Great achievement!

This How-to Guides in Agriculture Market System Development Book is a collection of tools, principles, practices and approaches developed during CHAIN implementation. It shall provide a reference for all stakeholders in agricultural value chains from public and private sector as well as the civil society. It is also a guide book for sustainability that is at the core of chain as it aims at strengthening horticulture market systems and the capacity of the sector actors to provide services to the targeted farmers. The established networks, policies and market systems will continue to function, as sector actors and farmers will have reached a critical mass large enough to become a profitable and self-sustaining market.

I would like to thank MAFF, GDA, Provincial Authorities, PDAFFs, and SNV and all involved people for an excellent collaboration and for actively contributing to the implementation of the CHAIN Project.



Markus Buerli
Director of Cooperation

Other guides in this series

- Introduction to Market Systems Development
 - Facilitating Agribusiness Cluster Development
 - Facilitating Business to Business (B2B) Relationships
 - Developing Crop Budgets
 - Rural Business Accelerator
 - Smart Water and Climate-Smart Solutions for Horticulture
 - Farmer Videos for Digital Extension
-

Table of Contents

1.	Introduction	1
2.	Methodology Overview	2
3.	Lead Farmer Business Incubator Steps	3
4.	Step-by-Step Guidance	6
4.1	Identification of potential lead farmers	7
4.2	Recruitment of lead farmers	9
4.3	Incubator training program and coaching	11
4.4	Learning assessment and developing a business plan	13
4.5	Business matching and start-up support (coaching and seed capital)	17
5.	Conclusion	26
	Annexes	27

1. Introduction

The Cambodia Horticulture Advancing Income and Nutrition (CHAIN) project has produced a series of How-to Guides (HTGs) that are meant to be practical, informative instruction manuals for those who would like to replicate and improve the successful approaches used during the three phases of CHAIN. Each HTG provides an overview of the methodology, step-by-step guidance, tips and recommendations, and illustrative success stories.

We hope that these HTGs will be useful for many organizations globally – in the public and private sectors, and in civil society – especially those involved in agricultural development projects applying a market systems development approach (see Box 1). However, we have written these HTGs with Cambodian stakeholders in mind, mainly the Ministry of Agriculture, Forestry and Fisheries (MAFF), the General Directorate of Agriculture (GDA), the Provincial Departments of Agriculture, Forestry and Fisheries (PDAFFs), other provincial government departments and local NGOs.

Box 1

Market Systems Development (MSD)

The MSD approach covers the entire system that surrounds a market. In the case of horticulture, this holistic view of the market includes all the relevant participants ('actors' or 'players'): the farmer who grows the crops, the retailer who sells seeds and other inputs to the farmer, the trader who buys the crops once harvested, and the wet market sellers who sell the vegetables to consumers. It may also encompass services that support the core market, such as government extension agents who provide advice to farmers and local market organisations that make physical space available for buyers and sellers to meet.

MSD aims to address poverty by improving the performance of markets in an inclusive manner, especially by modifying the incentives and behaviour of businesses and other market players to ensure large-scale change that is lasting and beneficial.

This HTG focuses on the Lead Farmer Business Incubator approach. Lead farmers are farmers who act as points of contact in their communities, are exemplary in their farming practices, and are good communicators and organisers. They are often informal leaders of a farmer group and are recognised as such by other farmers and community members. Businesses and projects often interact with farmer groups through lead farmers. Lead farmers take up specific tasks and responsibilities in a project or coordinate activities for a company. They can build strong relationships with farmers in the village and act as primary contacts for the project, company or partner organizations.

During the implementation of CHAIN, we cooperated with many partners, including NGOs and private sector companies. We helped these market actors provide extension and training to farmer groups, facilitate market linkages, support access to market information and inputs, coordinate production planning and interact with the government. But we cannot expect these partners to continue the relatively intense follow-up of farmer activities without the project's support. Lead farmers could continue these activities (they may get a small cost allowance or other incentive from the project), but they often stop doing so when the project ends. With this in mind, we devised a micro-business model that lead farmers can employ to continue providing services. We began by recruiting lead farmers who could incubate a micro-business with an extension service model. A new lead farmer is a vegetable producer who has good technical experience and the potential to run a business, and is willing to become a micro-entrepreneur. The lead farmer must attend a capacity-building program and can then act as a technical, marketing and agricultural input supporter and extension agent for other farmers in the community.

CHAIN started to work with lead farmers in 2018. Sixty farmers were recruited in the first year and underwent business incubation support. By 2020, 40 of them had started additional business besides farming. An additional 50 lead farmers were recruited in 2021.

2. Methodology Overview

What were the problems?

When CHAIN started, vegetable farmers received little or inadequate extension support, did not have access to updated and timely market information, and had difficulties in obtaining quality inputs. We found that while some farmers achieved good results in vegetable cultivation and used modern horticultural technologies, such as drip irrigation and plastic mulch, many of their neighbours in the same village did not follow the same smart cultivation practices. Realising that there was insufficient knowledge transfer between farmers and their peers, the CHAIN team began to think about how to recruit the most successful farmers and train them to become effective extension agents and play a role in coordinating market actor activities, pass on information, motivate group members and be proactive in facilitating business relationships. We worried about the sustainability of our interventions after conclusion of the project; in this respect, too, we felt that lead farmers had an important role to play. Lead farmers needed a business incentive to perform this role; they were most likely to continue being lead farmers if doing so provided them continued business opportunities.

What did we expect to achieve?

We designed a solution that would (1) reduce the workload for both project staff and partner staff; (2) impart technical knowledge as well as business and leadership skills to lead farmers; (3) increase the lead farmers' confidence in transferring knowledge to others; and (4) strengthen project staff and partners' capacity so that they could provide aggregate services to farmer groups, develop more micro-enterprises, and support the private sector to expand the market and innovate in target areas. We wanted lead farmers in the community/village to teach, coach and share knowledge with other farmers to improve technical skills and develop a business mindset. We designed the incubator program to help interested farmers start micro-businesses that could generate additional income while simultaneously addressing market gaps.

What were the solutions/methods?

The training program created for this purpose, known as 'Lead Farmer Business Incubator', includes both technical training and a business curriculum. It consists of five steps:



1. Identification of potential lead farmers



2. Recruitment of lead farmers



3. Incubation training and coaching program



4. Developing business plans



5. Business matching and start-up support

RESULTS

The Lead Farmer Business Incubator – combined with other CHAIN interventions – produced strong results in the target provinces:

- 109 lead farmers have been recruited.
- 50 lead farmers (47% female) have started micro-businesses and provided services to their peers.
- The majority of lead farmers have integrated what they learned from the program into their daily business activities.
- 76% of those who completed the capacity-building program started different types of businesses, while 24% have not yet started a business or dropped out of the program.
- Among the lead farmers who graduated from lead farmer incubator program, 53% are vegetable collectors, 39% are agricultural input dealers/agents and 8% are seedling suppliers.
- Lead farmers, as a result of their training, are now able to manage their expense and incomes and build connections with buying companies and clients.
- 20 vegetable traders and 25 input retailers worked through CHAIN-supported lead farmers and expanded their business relationships.
- 6 national-level private sector companies worked formally and informally through CHAIN-supported lead farmers and expanded their business efforts in the target provinces.
- Several local partners reported that their views had changed over the life of CHAIN, and that they saw the benefit of encouraging farmers to think like businesspeople and connecting all the actors within the market
- 96% of lead farmers who started a micro-business increased their working capital.
- Most lead farmers (95%) now have a better understanding of vegetable-growing technologies through social media and wider communication with other farmers and traders.
- Most lead farmers are more confident in supporting other farmers to solve farming issues like pest and disease management and water management.



The CHAIN Experience



LEAD FARMER IN ODDAR MEANCHEY

Huy Yean, 62, is vegetable grower, wholesaler and retailer who lives in Anlong Veng district, Oddar Meanchey province. She is the leader of a group of farmers in Sontepheap village. She has been a part of CHAIN since phase 1 and learned how to improve her business of selling vegetables with the support of the project team. 'Age is not a problem and does not limit my learning process', she says. By attending the incubator program, she learned new technical and business skills. What she remembers most is the key concept of a 'Business Model Canvas' – the image of the nine bricks being stacked together was etched in her memory. Since then, she has consistently applied what she learned, such as how to record expenditures and sales. What she learned from CHAIN has led to business success and a higher income, so that she can now afford to support her two children at university.



LEAD FARMER IN STUNG TRENG

Keo Udom is a lead farmer in Reachea Nukol village, Stung Treng province. He recently joined the program. He is a creative young farmer who always looks for solutions on YouTube when he faces problems on his vegetable field. His efforts to better his growing techniques sometimes failed, he admits, but things improved significantly after he received coaching from another lead farmer, who also encouraged him to participate in the incubator program. Having completed all the training, he now understands business concepts, including entrepreneurship and basic micro-business management

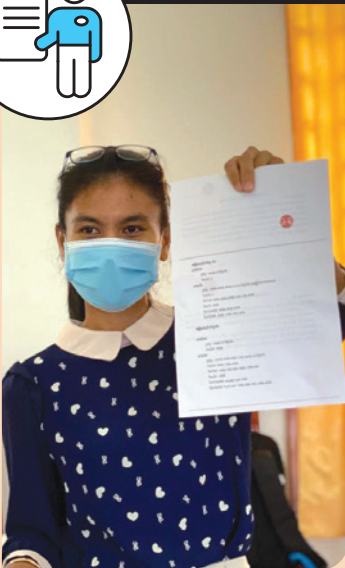
" I've learned a lot about business from the incubator program, such as business plan preparation, marketing, business management and bookkeeping. Now I feel more confident in running my own business as a drip irrigation service provider in addition to my job as a vegetable grower."



HORTICULTURE TECHNICAL ADVISER

Sieng Vansitha, 32, has been participating in CHAIN 3 as a technical adviser since early 2021. His main role is to provide training in horticulture technologies to focal persons from PDAFF as well as the provincial marketing facilitators (PMFs) and junior agronomists (JAs) in the project's target areas. He used to be a technical adviser in the private sector, conducting research and offering training to farmers. With CHAIN, he has the chance to train and coach the project's staff. He thinks the Lead Farmer Business Incubator is useful because lead farmers can receive timely, problem-based solutions from local staff, and can share them with others in their communities. The incubator program offers an agronomy curriculum on crop density, disease identification, crop scouting and crop layout, to the local project partner's staff who, in turn, train the lead farmers.

" I learned a lot during the CHAIN project and had the opportunity to train extension staff in some easily applicable technologies. I can see that the lead farmers showed quick improvement in technical knowledge after joining the program, and are able to teach others."



PDAFF OFFICER IN STUNG TRENG

Khe Dalin, 28, has been a PDAFF officer since 2017 but had no background in vegetable cultivation or business development. While working with CHAIN, she took part in several trainings, including crop cultivation technology, gender issues and business development. In addition, she got the chance to participate in study visits to other provinces to see farming activities first hand. Once she joined the incubation program, she was also trained in facilitation skills, financial management, leadership, and business concepts, by business experts from SHE Investments. The program also includes agronomy courses taught by experienced technical advisers.

" I now feel confident when I train lead farmers and other people. I started with zero knowledge but now I know a lot, including horticulture knowledge and business skills, and I got all these things from CHAIN. Without joining CHAIN, I don't think I could have come this far."

3. Lead Farmer Business Incubator Steps

The table below summarises CHAIN's five-step lead farmer business incubator approach.

Methodological Step	Purpose/Objective	Output
1 Identification of potential lead farmers	<ul style="list-style-type: none"> Define possible roles and responsibilities and selection criteria for lead farmers Identify potential lead farmers Develop a plan to make these lead farmer roles sustainable 	<ul style="list-style-type: none"> List of expected roles and responsibilities for lead farmers Selection criteria List of interested lead farmers
2 Recruitment and registration of lead farmers	<ul style="list-style-type: none"> Ensure the roles, responsibilities and type of business options available to lead farmers are understood Register identified lead farmers 	<ul style="list-style-type: none"> Lead farmer recruitment and registration list
3 Incubator training program and coaching	<ul style="list-style-type: none"> Ensure lead farmers have good agronomic, extension and entrepreneurial skills Ensure lead farmers have adequate knowledge and skills to operate their new businesses profitably 	<ul style="list-style-type: none"> Increased knowledge and technical skills in horticulture and agronomy Lead farmers can train others and share knowledge with them Enhancement of business management and entrepreneurial skills
4 Develop a business plan	<ul style="list-style-type: none"> Develop a business plan to help lead farmers start their own micro-businesses 	<ul style="list-style-type: none"> Start-up business plan
5 Business matching and start-up support	<ul style="list-style-type: none"> Ensure viability of the business Commence operations 	<ul style="list-style-type: none"> Signed contract between lead farmer and business partners Business relationships established

4. STEP BY STEP GUIDANCE

4.1 Identification of potential lead farmers

It is difficult to know whom to contact when looking for a potential lead farmer. First, you can collect background information from direct communication with project partners, government departments and NGOs in the target area. Second, you can define what a lead farmer should do and what characteristics he/she should have. This should be done in a participatory way with market actors and farmers themselves – they are the ones who will have to work with the lead farmers. Third, a list of potential lead farmers should be drawn up and interviews held to select and motivate them.



Important note:

Development projects often choose village or community leaders as lead farmers. They are natural authority figures and often act as points of contact for development projects. However, they may not be the best candidates to be lead farmers, as they may not be good farmers themselves and may lack technical skills or business understanding. Also, they may be overly conservative and traditional when innovation and technology promotion are needed. And they are almost always men, even when the majority of vegetable farmers are women. So, it is important to define carefully what makes a good lead farmer and translate it into the required personal characteristics and skills.





Below are suggested steps for identifying potential lead farmers:

a. Develop lead farmer roles, responsibilities and selection criteria

- Project and partner staff can brainstorm together to come up with lead farmer selection criteria, roles and responsibilities. Each participant thinks about what technical, marketing and agricultural input supporting roles the lead farmers should perform and then shares these ideas based on their experience working with the project or in the community.
- The roles and responsibilities of lead farmers can be classified into three categories:

Technical	Marketing	Agricultural input support
<ul style="list-style-type: none"> • Provide agricultural advice to farmers • Assist farmers in preparing crop calendars • Monitor farmers' practices • Assist farmers in solving farming issues • Seek new knowledge, techniques and experiences and share them with farmers • Organise farmer groups • Assist farmers in monitoring vegetable production • Hold farming demonstrations 	<ul style="list-style-type: none"> • Organise vegetable producer groups • Find new vegetable markets for farmers • Share vegetable market demand and prices with farmers • Train farmers on vegetable grading, packaging and storing • Facilitate contracts between farmers and companies • Coordinate with wholesalers and collectors • Assist farmers in preparing production plans in accordance with market demand 	<ul style="list-style-type: none"> • Communicate with agricultural input companies and shops • Share information about agricultural inputs • Guide farmers on how to use agricultural inputs correctly • Negotiate with input suppliers on price and quality • Find supporting partners, such as NGOs and PDAFFs • Monitor and strengthen farmers' implementation

- Think about and discuss what criteria/qualifications the lead farmers should meet. The selection criteria should correspond to the roles and responsibilities listed above. Below is a list of possible lead farmer selection criteria:



- Has a permanent address in the community/village



- Respected by neighbours



- Successful in vegetable production and has a commercial mindset



- Able to read and write



- Willing to participate



- Open-minded



- Possesses enough land and means of transport



- Not a heavy drinker or gambler

Investment in staff capacity building

To conduct the lead farmer incubator, we strongly recommend investing in your staff's capacity to facilitate business incubation training. Although we include here the links to detailed training modules and YouTube videos on business incubation training, we suggest you hire a specialized service provider, such as SHE Investments, to increase your staff's capacity. Typical capacities your staff will need are general facilitation skills and understanding of basic business incubation. We recommend you invest in a face-to-face training of trainers (ToT) program and coaching session for your staff. The estimated cost of capacity training is USD 10,000–20,000.



b. Identification of lead farmers

- Collect names and profiles of vegetable growers in the target area, review their information and note who grows crops commercially. This can be done through direct communication with project partners and local authorities.
- Make a list of these farmers and visit them directly or invite them to an initial meeting.
- Match the profiles to the selection criteria and make a list of potential lead farmers. Those who meet all the selection criteria are qualified to be lead farmers, so note down their names and visit them in their home, store or on the field to explain what a lead farmer is and what the expected roles and responsibilities are. Observe whether their commercial operations or agricultural fields demonstrate good technical knowledge.

c. Consultation workshop

- Hold a workshop with lead farmer candidates you have identified to present the objectives of the lead farmer incubator program and discuss their participation in it.
- Determine what date, time and venue are best to organise the workshop.
- Before the event, project staff should prepare all the logistics for participants and choose a main facilitator.
- Invite potential lead farmers to join the workshop. Ask participants what they see as benefits of becoming lead farmers. Add to their answers, making sure the following items are included: helping others, growing the community, being recognised in the community and earning a higher income from business activities.
- Describe the training program; explain how long it will last (a full day of training per week over a period of five months) and what they will learn.

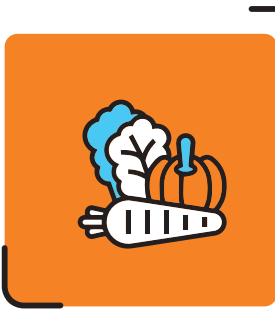


Important note:

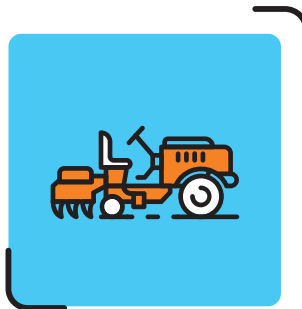
The lead farmer incubator program covers two aspects: agricultural production techniques and business incubation. It is important to explain this dual content to potential lead farmers on the program and confirm their interest in the program.



- Hold a brief face-to-face survey on the type of business the candidates would like to develop. Sample questions: Do you already have a business, and if so, what would you like to learn so that you can improve it? What skills are important for you? If you don't have a business, what kind of business would you like to set up? Make sure that interested farmers are willing to participate fully in the program. Try to convince them to participate in exchanging ideas as much as possible and keep the tone of the survey informal and pressure-free. At the end, the facilitators collect and consolidate all the responses. Below is a sample list of businesses that lead farmers may want to start:



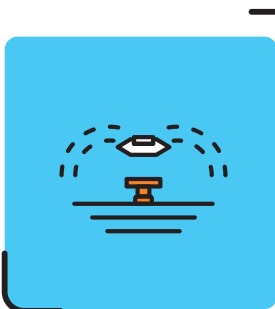
1. Vegetable wholesaler /trader/collector



2. Agricultural input supplier



3. Seedling supplier



4. Drip irrigation installer



5. Greenhouse installer

- To further analyse the potential lead farmers' qualifications, prepare a self-evaluation form to assess each candidate's socio-economic characteristics, technical skills, and professional and personality traits. See **Annex 1** for a sample self-assessment form. Explain the form and ask the candidates to fill it in. Provide clarifying support if needed. Facilitators collect the self-assessment forms from the participants and sum the scoring. Farmers can score between 1 (poor) and 10 (very good). The facilitator can ask the candidates why they gave themselves certain scores and invite others to react.



- Next, facilitate a brief discussion of the roles and responsibilities of a lead farmer to better understand what candidates see as services and products their fellow farmers might need, and what they think they could provide.

Divide the participants into small groups and let them discuss a few of the following questions:

1. Do you know what it means to become a lead farmer?
 2. What are the key criteria for being a good lead farmer?
 3. What should be roles and responsibilities of a lead farmer?
 4. What type of business would you like to set up?
 5. What kinds of services and support do you plan to offer to your fellow farmers?
 6. What are the opportunities and main challenges of working as a lead farmer?
 7. How would you build good collaborative relationships with farmers in your group or neighbourhood?
- In a plenary session, have one participant per group answer one of the questions, ask for comments/opinions, then move to the next group and the next question.

d. Provincial dialogue with key informants

- Identify key informants who could be involved in the lead farmer intervention, including (1) the private sector, such as input retailers, buyers, etc.; (2) NGO partners; and (3) staff from government agencies, such as PDAFF. Interview them informally before inviting them to the meeting.
- Develop separate interview guides for each key informant. The questionnaires should include questions about the perceptions key informants already have about the role of lead farmers, what the key informant thinks lead farmers should do as a business, and the kind of training farmers would need to receive. See **Annex 2** for a sample questionnaire guide.
- Conduct individual, face-to-face interviews with key informants using the interview guide to collect their perceptions of lead farmers. Take notes and document everything.
- Consolidate the information and develop a report for further sharing. Develop a short presentation for the meeting.
- Now organise an event inviting lead farmers and key informants in each target area to explore how market actors can work with lead farmers and what kind of support they can provide. Schedule the meeting at a date, time and place convenient for them to participate.
- During the meeting, the project's staff leads a plenary discussion about the opportunities and challenges of the businesses that lead farmers may want to start. This can be kicked off with a presentation on the findings from the key informant interviews. Give everyone space and time to ask questions. List all the points on a flipchart.
- If the group is too large, the discussion can be held in smaller groups. Divide the participants into smaller groups and choose a representative in each group. Every group should have a mixture of farmers and other stakeholders.
- Discuss the criteria for lead farmer selection, identify who can provide what services for lead farmers to start a business, what services lead farmers need, and how the project can facilitate win-win relationships between lead farmers and private sector actors.

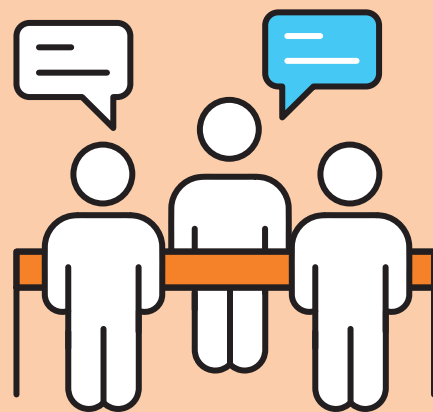




TIPS

1. Keep a contact list of all private sector participants and share it with lead farmers later so that they can contact them directly.

2. For private sector players, time is money, so ensure that the meeting is purposeful and productive. Keep it short and come to the point with the presentation and discussions. Highlight business opportunities for the private sector.



3. Ensure the meeting is well prepared with informative handouts, appealing visual presentations and plentiful snacks.

4.2 Recruitment of lead farmers

It's important to repeatedly confirm each candidate's decision to become a lead farmer, his/her willingness to participate fully in the business incubator program, and his/her plan to start the chosen business.

Below are suggested actions

- Staff should make a field inspection visit to lead farmers to re-evaluate their vegetable cultivation and their market experience. Staff should also assess the farmer's business orientation. What type of business is the farmer interested in? Will he/she be successful in running it?
 - During the visit, staff should confirm the potential lead farmer's interest in the program and that they have enough spare time to participate. In addition, you should ask about their investment plan, farmland size and the budget they are prepared to invest.
- 
- The potential lead farmers who meet all the criteria and understand and agree to all the roles and responsibilities may register by filling in a registration form. (See **Annex 3** for a sample of the registration form, which also enumerates the requisite responsibilities.)
 - Make a copy of the signed form and deliver it to the registered lead farmer, so that they may be reminded of their roles, responsibilities and commitment.

TIPS

1. Some farmers are reluctant to become lead farmers because they are not sure about their roles and responsibilities and/or they do not know what type of business is best suited to them. The staff should explain the types of business they could start and offer suggestions. Of course, a lead farmer may change the type of business they are interested in before the training program begins.

2. Lead farmers should be registered under the business interest stated in the form. The advantages of registering them by type of business are (1) this helps to provide the right capacity training program, and (2) to assist project staff in following up.

4.3 Incubator training program and coaching

The lead farmer business incubator covers two types of training: production techniques and business management.

The program is designed to ensure that lead farmers have adequate knowledge and skills to operate their own businesses. It is important to have project staff or government staff in the province learn the necessary skills from business incubation and agriculture experts first before providing the training to the registered lead farmers. Lead farmers should learn from project or government staff, not directly from the experts, because the experts must be hired, often at a significant cost, and probably do not reside in the province, so they may be unavailable for follow-up training. Moreover, lead farmers may absorb information more easily from provincial government staff or project staff whom they already know personally. Once lead farmers have started their businesses, they can share what they have learned with other farmers in their communities.

For the technical training, we suggest hiring experts who have good practical experience in vegetable production. They should have extensive know-how in dealing with common problems at field level and have worked with farmers before. The curriculum on agronomy was designed by CHAIN horticulture adviser to address gaps in the lead farmers' knowledge and build skills in vegetable growing and running a horticulture operation. For the business training, CHAIN hired a social enterprise, SHE Investments¹, to develop a curriculum and train project and PDAFF staff on entrepreneurship and basic micro-business management.

Below are the recommended steps.

1. Training of trainers (ToT)

- The ToT program is divided into two different trainings developed based on a training needs assessment (see **Annex 4** for a template). A third party like SHE Investments can conduct a group business training, while a technical adviser conducts the technical training on the agronomy curriculum to support and fit the business models typically chosen by lead farmers.

2. Business training (7 days)

- The business training consists of six workshops, each lasting one day, with an additional day for review and wrapping up. Each workshop consists of several topics designed based on farmers' interests and knowledge gaps identified during the needs assessment.





We suggest the following steps:

1. Prepare a list of trainees, including project staff, representatives from PDAFF and relevant partners. A roster of their names, titles, phone numbers and email addresses is sent to the party responsible for business training for registration and creation of online accounts.
2. Before the training begins, each registered participant receives an email from the business trainer inviting them to log into their online account using their email address as user ID. Once the account has been accessed, all course material becomes available, including slide presentations and videos.
3. At least one day before the beginning of classroom training, PDAFF staff should inspect the venue and prepare a checklist of materials to be used.
4. On the first training day, the trainer briefly presents the course content to participants and then conducts the first course. (Refer to **Annex 5** for the business course curriculum developed by SHE Investments.)

¹ SHE Investments is a social enterprise that specialises in designing and delivering business incubator and accelerator programs for women in Cambodia. See <https://www.sheinvestments.com/#home> for more details.

3. Technical agronomy training (11 days)

- For the technical agronomy training, we recommend hiring an experienced technical adviser (agronomist) to design the curriculum and train project and/or PDAFF staff. The total course duration is 11 days – three days of classroom theory and eight days of farm training. The development of the course curriculum is based on a training needs assessment (see **Annex 6**).

We suggest the following steps:

1. Set up demonstration plots for on-farm training in the cultivation of crops that have clear market and production potential.
2. The technical adviser should visit the farms of participating lead farmers to observe what problems are occurring in the fields. PDAFF staff can also be asked to identify the most frequent agronomic problems in the area.
3. Based on information from your own field observation and obtained from PDAFF staff, develop a technical training curriculum and create a training schedule.
4. The agronomist conducts the theoretical training course in the classroom, then holds demonstrations and field trainings at a demonstration farm. PDAFF staff should ask selected farmers to offer space on their farms for demonstrations.
5. In each learning session, PDAFF staff take notes, ask questions and prepare to share their learning with lead farmers. A sample agronomy course curriculum is provided in **Annex 7**.



4. Training the lead farmers

- At least one week in advance, PDAFF staff inform registered lead farmers of the date when the business incubator training will commence.
- Most lead farmers do not use email; some have no internet access at all. If farmers use Telegram, you should create a group for your class and invite the lead farmers to join, so that files can be shared quickly and easily. Some farmers may not have a smartphone or a Telegram account, so PDAFF staff must also print materials and make them available in the classroom.
- Attendance is recorded at every training session. Participants are required to attend all sessions to become official lead farmers.
- PDAFF staff transfer the knowledge they acquired from the business trainer and the technical adviser to registered lead farmers according to the curriculum and schedule. Before starting the training, the PDAFF staff test lead farmers' knowledge using a pre-test or baseline assessment.
- At the end of each training day, training staff should test lead farmers' understanding by asking random questions or conducting a post-test. Details on course content, materials and slide presentations are available from SHE Investments. They can also be accessed by following the YouTube links in **Annex 5**.
- At the end of classroom instruction, each lead farmer must compile a business plan and write it down in a business planning book. The book is developed and distributed by the training staff.

TIPS

1. Lead farmers may be interested in specific business models, but they should all attend some core courses. For more targeted training, they can then attend courses related to their business interest.
2. In each course, the trainer should include energizing games to maintain the trainees' interest and stimulate their participation.
3. The training program should not be rushed. We recommend against conducting the courses on consecutive days. Holding training on one full day per week is ideal.

4.4 Learning assessment and developing a business plan

The assessment of lead farmers' learning measures the impact of the training program and tests their understanding after completion of all the required courses.

The assessment is conducted by the project's staff. The scoring involves two evaluations: classroom performance and observation in the field or at the business site. The results of the assessment can reveal the strengths and weaknesses of the registered lead farmers and guide the trainer on what can be improved.

Below are the steps to follow when conducting the assessment.

- The project's staff should prepare a methodology in advance and invite those involved in decision-making (committee members).
- On the assessment day, lead farmers who completed all the training courses develop a business plan using a template received from the trainer.
- The business planning can be done within a day or continue to the next day, depending on the farmer's capacity. To complete the business plan, the lead farmer should first discuss it with his family or husband/wife. See **Annex 8** for a business plan template.
- Once the lead farmers have done the business planning, the assessment is conducted. The committees evaluate the work of each lead farmer and record it in a scoring form. The scoring is conducted by members of the committees, including the trainer, project staff, partners, PDAFF staff and so on, based on interviews and observation during the training.
- Collect the scoring forms from all scorers and sum up the scores. The lead farmer(s) with the highest score can receive a prize or seed capital. See guidance on supporting seed capital and prizes for lead farmers in **Annex 9**.
- Lead farmers who have a good business plan, a high overall score on the assessment and participated fully in the training program receive a completion certificate of official lead farmer signed by the project's staff and a PDAFF executive.
- Certificates are awarded during a short ceremony attended by project staff, PDAFF staff and lead farmers.





A participant receiving her lead farmer certificate after graduation

TIPS

- 1.** Refresher training may be needed if project staff observe that registered lead farmers have difficulty recalling all the course content and/or haven't used their learning effectively.
- 2.** Based on lead farmer research and the project's experience, lead farmers need financial support to start their new businesses, so CHAIN provided USD 250 in seed capital to each graduate.
- 3.** CHAIN created a 'Best Startup Reward' for lead farmers to challenge themselves. Those who provided the best services to other farmers and had a good business proposal were eligible. The evaluation was carried out by project staff. The challenge fund awarded prizes to two lead farmers in each target area, each of whom received USD 1,000 to invest in their start-up business in addition to the \$250 in seed capital.

4.5 Business matching and start-up support (coaching and seed capital)

Business matching connects lead farmers with stakeholders such as private companies, companies looking for a joint venture, NGOs and distributors or local agents. Matching can take place during or after the training program based on a request by a lead farmer and the availability of the relevant stakeholder. It gives incubator graduates a chance to build their collaboration networks.

Matching between two parties – the lead farmer and the private sector actor – should be conducted under the supervision of someone who can ensure a successful agreement. He/she can be a local authority, project coordinator or government/PDAFF officer.

Recommended steps for business matching:

- Invite the lead farmer and the private sector actor to meet and discuss business collaboration.
- Match each lead farmer individually with vegetable collectors and local private sector actors, such as seed companies, agricultural input suppliers and greenhouse installers, according to the lead farmer's business interest.
- During the matching, the lead farmer should make a brief presentation about their business interest, business plan, budget to invest, business location, and what service support they require. The private sector actor can describe what kind of support they can provide to lead farmers.



- If the counterparty is a vegetable collector, bring them to visit the lead farmer's growing fields; for private sector actors, bring them to the lead farmer's shop area.
- The business contracting process should be conducted under the supervision of a reliable person, such as project staff, PDAFF staff, a consultant or a local authority. These individuals can also support by preparing the necessary documents, including the contract, order forms, etc.

Even though registered lead farmers develop the business plan on their own and have it in hand, they may need support on how to start up their business in practice. Therefore, start-up support is necessary to make sure that their business is going well and can generate an income. The trainer should coach the farmer one on one, either in person or by phone, as follows:

- Visit the business start-up site or the location where the farmer wants to set up a shop and advise them on suitable shop design and decoration, what equipment or merchandise should be ordered, and how to sell to buyers.
- Track the farmer's start-up process by auditing their business notebook. If you find that the business isn't going well, tell them, make suggestions, and train them again on site.

TIPS

1. Farmers can quickly forget what they learned, especially the business lessons. Keep their contact number and add it to Telegram or another social media so that you can contact them easily.

2. If the lead farmer requests financial support for their start-up, the project should introduce a co-investment plan or broker a loan from a microfinance institution (MFI).



5. Conclusion



While the principles and methods outlined here focus on horticulture, they are applicable to many different commodities and markets. We hope especially that they will stimulate NGOs and local government agencies in Cambodia to adopt the Lead Farmer Business Incubator approach, which has delivered valuable results for CHAIN. It constitutes a sustainable working model for selected farmers to provide useful services (such as extension and market information) in their communities. It also allows them to acquire new knowledge; build connections to the private sector, NGOs and other stakeholders; and encourages them to start a business.

To access CHAIN's manuals (in Khmer) on specific agronomic technologies and horticultural techniques, please visit MAFF's e-library at <https://elibrary.maff.gov.kh>.

The annexes in the following pages provide samples of various materials that were developed by CHAIN for its lead farmer incubation program. Soft versions are available from MAFF's e-library at <https://elibrary.maff.gov.kh>.

ANNEXES

ANNEX 1

Self-assessment form for lead farmer candidates (60 min)

I. Background Information

1. Name:
2. Gender: Male Female
3. Age: (years)
4. Respondent is head of household: Yes No
5. Education level:
 - a. Illiterate
 - b. Primary school (1–6)
 - c. Secondary school (7–9)
 - d. High school (9–12)
 - e. University
 - f. Other (.....)
6. Permanent address:

Village: Commune:

District: Province:
7. Contact number:
8. List of household occupations (in chronological order):
 - a. (experience: years)
 - b. (experience: years)
 - c. (experience: years)
 - d. (experience: years)
 - e. (experience: years)
9. Business interests

Business type	Rank
Agricultural extension agent	
Vegetable wholesaler/trader/collector	
Agricultural input supplier	
Seedling supplier	
Drip irrigation installation service provider	
Greenhouse installation service provider	
Other (.....)	

II. Lead farmer self-evaluation

Socio-economic characteristics

Characteristics	Score									
	1	2	3	4	5	6	7	8	9	10
1. Understands and participates in social issues (contributing to natural disaster prevention, charity, etc.)										
2. Has a successful farm business										
3. Actively participates in a farmer group										
4. Motivation for group activities										
Total score (1+2+3+4)										

Scoring rubrics: 1=Lowest, 5=Moderate, 10=Highest

Technical skills

Characteristics	Score									
	1	2	3	4	5	6	7	8	9	10
1. Technical knowledge										
2. Business knowledge										
3. Communication skills										
4. Moderation skills										
5. Innovativeness										
Total score (1+2+3+4+5)										

Scoring rubrics: 1=Lowest, 5=Moderate, 10=Highest

Professional traits

Characteristics	Score									
	1	2	3	4	5	6	7	8	9	10
1. Experience in leadership										
2. Creativity and problem-solving										
3. Consultation skills										
4. Early adopter of new developments										
5. Approachable										
Total score (1+2+3+4+5)										

Scoring rubrics: 1=Lowest, 5=Moderate, 10=Highest

Personality and ethics

Characteristics	Score									
	1	2	3	4	5	6	7	8	9	10
1. Popularity										
2. Self-confidence										
3. Empathy										
4. Integrity/honesty										
5. Gender sensitivity										
6. Interest in leadership										
7. Fairness										
Total score (1+2+3+4+5+6+7)										

Scoring rubrics: 1=Lowest, 5=Moderate, 10=Highest

II. Perceptions regarding lead farmers

1. Do you know about the lead farmer concept?
2. What are the key criteria for being a lead farmer?
3. What should be the roles and responsibilities of a lead farmer?
4. What kinds of services and support do you expect lead farmers to provide to other farmers?
5. What are the opportunities and main challenges of working with lead farmers?
6. Do you think financial incentives are important for lead farmers? Who should provide these incentives?
7. What kind of institutional support can you provide to lead farmers?
8. What capacity-building programs should be provided to lead farmers?
9. How do you plan to collaborate with lead farmers?

Guide questions for PDAFF staff (about 60 minutes)

I. Background Information

1. Address:
2. Name of respondent:
3. Role of respondent:
4. Years of involvement with CHAIN: (years)

II. Perceptions regarding lead farmers

1. Do you know about the lead farmer concept?
2. What are the key criteria for being a lead farmer?
3. What should be the roles and responsibilities of a lead farmer?
4. What kind of service and support do you expect lead farmers to provide to other farmers?
5. What are the opportunities and main challenges of working with lead farmers?
6. Do you think incentives are important for lead farmers? From whom?
7. What kind of institutional support can you provide to lead farmers?
8. What capacity-building programs should be provided to lead farmers?
9. How do you plan to collaborate with lead farmers?

ANNEX 3

Lead farmer registration form

<p>I. Lead farmer details</p> <p>1. Name:</p> <p>2. Gender: Male <input type="checkbox"/> Female <input type="checkbox"/></p> <p>3. Date of birth:</p> <p>4. Head of household: Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>5. Permanent address:</p> <p> Village: Commune:</p> <p> District: Province:</p> <p>6. Contact number:</p> <p>7. Business interest:</p> <p> a. Vegetable wholesaler/trader/collector <input type="checkbox"/></p> <p> b. Agricultural input supplier <input type="checkbox"/></p> <p> c. Seedling supplier <input type="checkbox"/></p> <p> d. Drip irrigation installation service provider <input type="checkbox"/></p> <p> e. Greenhouse installation service provider <input type="checkbox"/></p> <p> f. Pesticide spraying service provider <input type="checkbox"/></p>	<p>Photo</p>
<p>II. Roles and responsibilities</p> <p>Technical:</p> <ul style="list-style-type: none"> ✓ Providing agricultural technical training and consultation ✓ Assisting farmers in preparing crop calendars ✓ Sharing market demand information with farmers ✓ Monitoring farmers' practices ✓ Assisting farmers in solving farm issues ✓ Seeking new knowledge, techniques and experiences and sharing them with farmers ✓ Organizing farmer groups ✓ Assisting farmers in monitoring vegetable production ✓ Holding farm demonstrations and trials <p>Marketing:</p> <ul style="list-style-type: none"> ✓ Organizing vegetable producer groups ✓ Finding new vegetable markets for farmers ✓ Sharing vegetable market demand and prices with farmers ✓ Training farmers about vegetable grading, packaging and storage ✓ Organizing contracts between farmers and companies ✓ Coordinating with wholesalers and collectors ✓ Assisting farmers in preparing crop calendars in accordance with market demand ✓ Organizing vegetable collection centres <p>Agricultural input support:</p> <ul style="list-style-type: none"> ✓ Facilitating and communicating with agricultural input companies and shops ✓ Sharing information about agricultural input use ✓ Guiding farmers on how to use agricultural inputs ✓ Negotiating with agricultural input suppliers about price and quality ✓ Finding supporting partners, such as NGOs and PDAFF ✓ Monitoring and strengthening farmers' implementation 	

III. Commitment

- Participate actively in capacity-building programs on business and technical training provided by the project
- Be open-minded and share all information related to the business with the project
- Respect and follow roles and responsibilities set out in the two points above

IV. Benefits

- Improve business and technical skills (3–6 months)
- Receive seed capital for USD 250 after completing the program
- Opportunities to link your business with other businesses
- Chance to participate in a business competition with a financial reward

V. Consent

I have read or have received oral explanation about the information in this form, and I have had the details of the project explained to me. My questions have been answered to my satisfaction. I understand that I have an obligation to abide by the terms and conditions of this project.

I agree to participate in this project under the conditions and participant rights set out in this form.

<p style="text-align: center;">Lead farmer’s signature or thumbprint</p> <p>Name:</p> <p>Date:.....</p>	<p style="text-align: center;">Confirmation of permanent address of lead farmer</p> <p style="text-align: center;">Village chief</p> <p>Name:</p> <p>Date:</p>
<p style="text-align: center;">Seen and approved by the project</p> <p>Name:</p> <p>Date:</p>	<p style="text-align: center;">Witness’s signature or thumbprint</p> <p>Name:</p> <p>Date:</p>

ANNEX 4

Training needs assessment template

Training needs assessment (TNA) is the process of determining whether a training need exists and, if it does, what kind of training is required to fill the knowledge gap.

Training needs = Desired capability – Current capability of participants

(Source: K. Gupta, *Manual on Training Needs Assessment*, 2007)

Name:	Date:
Sex:	Mobile phone:
Address:	

1. What type of business do you want to start up in the future?

2. In the table below, please circle the answer that best describes you:

a) What is your level of interest in the area of business?	High	Medium	Low	None
b) How would you rank your overall familiarity with the topic of business?	High	Medium	Low	None
c) How many years of professional experience do you have in business?	5+	3–4	1–2	0

3. The table below describes various topics that are relevant to the development of lead farmers' capacity and knowledge. For each topic, please circle the box that describes how knowledgeable you are.

Business training course				
a) Personal strengths and weaknesses	Expert	Good knowledge	Some knowledge	No knowledge
b) Smart goals	Expert	Good knowledge	Some knowledge	No knowledge
c) Personal financial management	Expert	Good knowledge	Some knowledge	No knowledge
d) Loans and interest	Expert	Good knowledge	Some knowledge	No knowledge
e) Market channel mapping	Expert	Good knowledge	Some knowledge	No knowledge
f) Value proposition/service	Expert	Good knowledge	Some knowledge	No knowledge
g) Business model canvas	Expert	Good knowledge	Some knowledge	No knowledge
h) Analysing the product	Expert	Good knowledge	Some knowledge	No knowledge
i) Income analysis	Expert	Good knowledge	Some knowledge	No knowledge
j) Cash and net income	Expert	Good knowledge	Some knowledge	No knowledge
k) Time management	Expert	Good knowledge	Some knowledge	No knowledge

Agronomy training course				
a) Land preparation	Expert	Good knowledge	Some knowledge	No knowledge
b) Vegetable production plan	Expert	Good knowledge	Some knowledge	No knowledge
c) Fertiliser and pesticide application	Expert	Good knowledge	Some knowledge	No knowledge
d) Identification of pesticides, diseases and nutrient deficiencies in vegetables	Expert	Good knowledge	Some knowledge	No knowledge
e) Grafting and seedling techniques	Expert	Good knowledge	Some knowledge	No knowledge
f) Irrigation systems	Expert	Good knowledge	Some knowledge	No knowledge
g) Water system	Expert	Good knowledge	Some knowledge	No knowledge
h) Making compost and natural pesticide	Expert	Good knowledge	Some knowledge	No knowledge
i) Land management	Expert	Good knowledge	Some knowledge	No knowledge
j) Pest and disease management	Expert	Good knowledge	Some knowledge	No knowledge
k) Post-harvest technology	Expert	Good knowledge	Some knowledge	No knowledge

4. Please describe what business-related capacity-building topic would be the highest priority for you personally. You can include up to three topics.

1. _____
2. _____
3. _____

5. Is there any other non-business capacity-building training that you would like to receive in the next few months? If so, please list it below.

6. Do you want to receive training in any specific topic that could help your future business start-up? If so, please list it below. You can include up to three topics.

1. _____
2. _____
3. _____

ANNEX 5

Business course curriculum developed by SHE Investments

Workshop unit	Topic	Description
Workshop 1		
1	Introduction to the program	Provides a brief explanation of the lead farmer incubation program, the reason for developing this program, and why it is important to participate.
2	Partner vision board	Participant is trained to have a long vision on their business, learns to think together with partners for a long business collaboration.
3	Personal strengths and weaknesses	Allows participants to reflect on their strengths and weakness. The class teaches them to know themselves well enough to change or improve their daily activities, to overcome their weaknesses and maintain their strengths.
4	Smart goals	Everyone should make a plan, whether it's for family matters, business or investment. This class teaches how to set goals and prepare a results-oriented plan. YouTube link: https://www.youtube.com/watch?v=OHJf-sUMMmmo
Workshop 2		
1	Feelings about money	Starts the training by inquiring how participants feel about money management.
2	Personal financial management	Focuses on expenses and teaches how to manage cashflows, identify what is needed the most and record-keeping. Participants learn to decide what to spend on in order to achieve their goals.
3	Family financial management plan	Covers how to allocate family income for consumption, investment, savings, and the need to pay one's own salary as an entrepreneur.
4	Goal of saving	Teaches participants to make a savings plan to achieve their financial goals. Participants learn that there are many ways/ places to invest their money, such as the home, a bank/MFI, by buying property, etc.
5	Loans and interest	Describes the different types of loan/credit. Participants learn to determine when they should take out a loan and for what purpose. They can consider using their loan to investment in a business activity. They also learn why it's important to always make interest payments on time.

Workshop 3		
1	Market chain mapping	Market chain mapping is the mapping of all people, businesses and institutions involved in a common market system, including the relationships between people, businesses and institutions, functions and issues that make up a sector. It teaches on what kind of activities involved in production and how to prepare for that.
2	Define your customer	Teaches how to identify a target customer segment. Participants learn how to identify the customer who best matches the goal of their business, so that they may develop the right product and market strategy to fit this target customer.
3	Value proposition / service	Participants learn how to produce products or services that provide value to customers. The class teaches participants to pay attention to the quality of their products, including labelling, sizes and shapes of product containers, colouring and smell. YouTube link: https://www.youtube.com/watch?v=MUegXkq8t_g
4	Business Model Canvas	The Business Model Canvas consists of nine components: 1) value proposition, 2) customer segmentation, 3) distribution/marketing channels, 4) customer relationships, 5) key resources, 6) key activities, 7) key partners, 8) cost structure, and 9) revenue streams. YouTube link: https://www.youtube.com/watch?v=k31XdZ4kc0Y
Workshop 4		
1	Introduction to marketing mix	Explains the definition of a market – a place for exchanging goods or services. It describes and clarifies the differences between ‘marketing’, ‘advertising’ and ‘promotion’. A marketing mix is a combination of the 4Ps: product, price, place and promotion. Participants learn about the 4Ps and apply this knowledge by creating a marketing plan for their start-up business. YouTube link: https://www.youtube.com/watch?v=XsQ-R9VtI04
2	Objectives of marketing	A short topic that will help participants formulate their own marketing objectives. Why should they do marketing for their business? By what percentage do they expect to increase their sales volume per day/ months after implementation of marketing activities?
3	Analysing product	Teaches how to choose the right product/service to sell in the market. YouTube link: https://www.youtube.com/watch?v=HH29NctYcus
4	Analysing place	Describes the relationship between product and place, i.e., how to reach the target customer. It trains participants to set prices based on place. The price of a product relates to the cost of transportation/distribution. YouTube link: https://www.youtube.com/watch?v=1LCYndv9dM4
	Analysing price	Teaches how to determine the correct sale price of one’s product or service. The price depends on demand, the quality of the product and the place where it is sold. Participants learn to set a reasonable price for each product to satisfy the customer. YouTube link: https://www.youtube.com/watch?v=nvDpwIYo_dM
	Review and integration of marketing principles	Participants learn to do marketing for their product/service by integrating

Workshop 5		
1	Key terms in accounting	Explains the essentials of accounting that every business owner should understand.
2	Income analysis	Helps participants understand the cost structure of a business and its ability to earn a profit.
3	Cash and net income	Explains how cash and net income differ. Cash is important to cover the company's expenses; it includes cash in hand and in the bank. Net income is the income after deducting all operational costs.
4	Record-keeping	Teaches how to record all transactions.
5	Six-month cash-flow forecast	Participants learn to forecast product expenses and/or salaries for the next six months, as well as revenues.
Workshop 6		
1	Time management	Teaches participants to understand the importance of time management, to use time effectively, and how to prioritise activities. YouTube link: https://www.youtube.com/watch?v=iDbdXTMnOmE
2	Attitude and mindset of a good leader	Participants learn to understand what a good leader is, and what attitude and mindset she/he should have. YouTube link: https://www.youtube.com/watch?v=2IEp4TVpxgA
3	Proactive management and accountability	Focuses on proactive management and accountabilities. YouTube link: https://www.youtube.com/watch?v=00AmQoumD6I
4	Graduation	At the end of the program, participants share their feelings and experiences in class and reflect on what they learned.

ANNEX 6

Steps for training needs assessment

A training needs assessment (TNA) can be divided into five steps: 1) identify problems and needs; 2) determine the design of the assessment; 3) collect data; 4) analyse the data; and 5) provide feedback.

Step 1: Identify problems and needs

- Determine organisational context (policy, goal, role and responsibilities)
- Perform gap analysis
- Set objectives

Step 2: Determine the design of the assessment

- Determine target groups to be trained, interviewees, methods and schedule
- Designate persons in charge of the TNA

Step 3: Collect data

- Conduct interviews
- Lead farmer questionnaires and surveys
- Review documents on existing trainings
- Observe people at work

Step 4: Analyse the data

- Conduct quantitative and qualitative analyses
- State findings, draw conclusions and make recommendations for training content
- Write a report

Step 5: Provide feedback

- Make a presentation to all participants in the assessment
- Determine the next steps for training preparation

(Adapted from K. Gupta, Manual on Training Needs Assessment, 2007)

ANNEX 7

Agronomy course curriculum developed by a technical agronomy adviser based on TNA

No.	Topic	No.	Content
1	Land preparation		
		1.1	Ridging
2	Vegetable production plan		
		2.1	Seed/variety selection
		2.2	Understanding the importance of crop rotation and intercropping
		2.3	Crop calendars and cycles
3	Fertiliser and pesticide application		
		3.1	Pesticide input efficiency
		3.2	Safe-use practice for pesticides
		3.3	Pesticide toxicity and hazard (high, moderate, low)
		3.4	Fertiliser application (chemical, organic, natural, biological)
4	Identification of pests, diseases and nutrient deficiencies in vegetables		
		4.1	Identification of pests and how to prevent/control them
		4.2	Identification of diseases and how to control them
		4.3	Beneficial insects and natural enemies, biological control agents (BCAs)
		4.4	Nutrient deficiencies in vegetables
5	Grafting and seedling techniques		
		5.1	Seedlings
		5.2	Grafting methods (before, during, after)
6	Irrigation systems		
		6.1	Understanding soil types (sand, loam, clay)
		6.2	Types of irrigation (dripline, garden sprays, micro-sprinklers)
		6.3	Irrigation systems and plastic mulch installation
7	Making compost and natural pesticides		
		7.1	How to make compost and its benefits
		7.2	How to make a natural pesticide and its application
8	Water system control		
		8.1	Managing irrigation water on farmland
		8.2	Understanding water sourcing (ground water, reservoirs, ponds)
9	Land management		
		9.1	Managing farmland
		9.2	Soil properties and types
		9.3	Cover crops

10	Pest and disease management	
	10.1	Seedling management
	10.2	Crop scouting
	10.3	Farm layout and crop density
	10.4	Disease identification
11	Harvest and post-harvest	
	11.1	Vegetable harvesting methods
	11.2	Packaging and transportation

ANNEX 8

Lead farmer business plan template

Lead Farmer Incubator Program

Business Plan

Business interest.....

Farmer's name/title.....

Date:.....

Part 1: General information

1-	Farmer's full name:
2-	Sex:
3-	Address:
4-	Business type (e.g. vegetable collector):
5-	Business size (sales per month or for six-month period):
6-	Total budget:
7-	Business location:

Part 2: Objectives of start-up business**2.1 Business objective**

2.2 Business Model Canvas

1. Target customers

2. Product/service value proposition

3. How to build good relationships with buyers/customers

4. How to do promotion/marketing extension

5. Other business activities for start-up

6. Necessary resources/funding

7. Business partners

8. Main sources of income

9. Main expenditures

2.3 Reason to selecting this business type

2.4 Marketing strategies

Product/service	Target market (where to sell)	Buyer	Estimated sales/day	Selling time (morning, afternoon, evening)	Estimated price

Part 3: Financial plan

3.1 Start-up expenditure

No.	Description	Quantity	Price	Total
	Total expense			
	Total expense for six months			

3.2 Expected sales per crop cycle (one month)

Description	Quantity	Price	Total
	Total sales (one month)		
	Total sales (six months)		
	Total expenses for six months (copy from above)		
	Total income for six months		
	Net income		

3.3 Sources of income

Budget for six-month plan:

Cash in hand:

Revenue expected from the project:

Other sources of funding:

(Please detail other sources such as moneylender, bank loan, support from children, salary of a family member, selling livestock/rice, etc.)

Part 4: Activity plan

Activity description	Timeframe										Responsible person	Expected results	Risks
	2021			2022									
	10	11	12	1	2	3	4	5	6				

Declaration of applicant

I declare that the above-mentioned information is correct. I have seen, read and agreed. I understand that if the said information as given by me is proved to be false, I will face punishment as mentioned in the program. I acknowledge that acceptance or rejection by the CHAIN project committee is a final decision, and I will not lodge any complaints.

Signature/thumb print

Place:

Date:

ANNEX 9

Guidelines on seed capital and prizes for lead farmers

Background

CHAIN identified lead farmers as actors who can support the provincial market system, especially after CHAIN phases out. In 2019, CHAIN conducted a thorough assessment of the lead farmer concept, involving the farmers themselves as well as other relevant stakeholders. The results were used to inform the design of various lead farmer interventions, including the incubation program.

The concept of the program is to build up the micro-market actors in rural areas so they can provide knowledge and information to other farmers according to their business interests, such as becoming a trader or input agent. There were 80 lead farmers identified, but only 59 were recruited for the capacity-building program. Of these, 51 are still fully engaged in the program (eight farmers gave up for one reason or another).

CHAIN collaborated with PDAFF to provide technical capacity building in the classroom and on the farm. Each farmer received 11 days of technical training. CHAIN also collaborated with SHE Investments (a social enterprise) to provide capacity building on entrepreneurship skills and basic micro-business management to partners such as PDAFF, PDoWA and NGOs, who were then able to train lead farmers. Each lead farmer received seven days of training on entrepreneurship, basic micro-business management and one-on-one coaching before starting up their business. The lead farmers who completed the capacity building program received seed capital worth USD 250 from the project and a chance to receive an award to extend the business, worth USD 1,000.

How to obtain seed capital

All lead farmers who participated in the capacity-building program in full received a completion certificate signed by CHAIN and PDAFF. They also received seed capital disbursed upon successful completion. In each province, the CHAIN team monitored attendance in all program sessions (both technical and business classes). Two excused absences were acceptable; those with more absences and/or unexcused absences were not eligible for the certificate. All lead farmers were required to complete a business plan based on the business canvas. Accurate bookkeeping was also required of all participants.

Supporting documents to receive seed capital

- One copy of the completion certificate
- One copy of the business plan or at least the notes from the business canvas session
- Copy of bookkeeping records for the preceding three months
- Current photo of their store or activities to demonstrate that their business is operational
- Incubator program attendance record

How to participate in the competition

CHAIN challenged the lead farmers to provide better services to their fellow farmers and focus on their business by organising a competition. The challenge fund selected two winning lead farmers in each province, with each receiving USD 1,000 to scale up their business. Selection committees for these prizes were set up in each province; each committee was made up of three CHAIN staff and two PDAFF staff. The scoring methodology is shown below.

Competency	Evaluation method	Maximum score
Knowledge and skill in production	Interview	20
Business management	Interview	20
Extension skill	Observation during training offered by the lead farmer to other farmers	30
Outreach to farmers	Interviews with farmers who received services from the lead farmer	30
Total		100

The scoring was completed by the five committee members using the following form:

Farmer name: _____ Sex: Male Female
 Business title: _____ Address: _____
 Date of scoring: _____ Name of evaluator: _____

Competency	Scoring item	Score
Knowledge and skill in production	Own farm establishment and production (1–5 points)	
	Key technical skills applied at the farm, e.g. GAP, technology, etc. (1–5 points)	
	Ability to identify pests and diseases and practise pest control (1–5 points)	
	Post-harvest practices (1–5 points)	
Business management	Following the business plan with a clear goal/vision (1–5 points)	
	Applying market strategy (1–5 points)	
	Good bookkeeping (1–5 points)	
	Progress in sales during the previous three months (1–5 points)	
Extension skill	Ability to advise farmers (1–5 points)	
	Use of training materials (1–5 points)	
	Use of apps to support farmers (1–5 points)	
	Training ability (1–5 points)	
Outreach to farmers	Number of farmers who received advice <input type="radio"/> < 15 farmers = 0 points <input type="radio"/> 15–30 farmers = 5 points <input type="radio"/> > 30 farmers = 10 points	
	Number of farmers who followed the advice <input type="radio"/> < 10 farmers = 0 points <input type="radio"/> 10–20 farmers = 5 points <input type="radio"/> > 20 farmers = 10 points	
	Number of satisfied farmers (based on interviews) <input type="radio"/> < 5 farmers = 0 points <input type="radio"/> 5–10 farmers = 5 points <input type="radio"/> > 10 farmers = 10 points	
Total score		

Scoring summary:

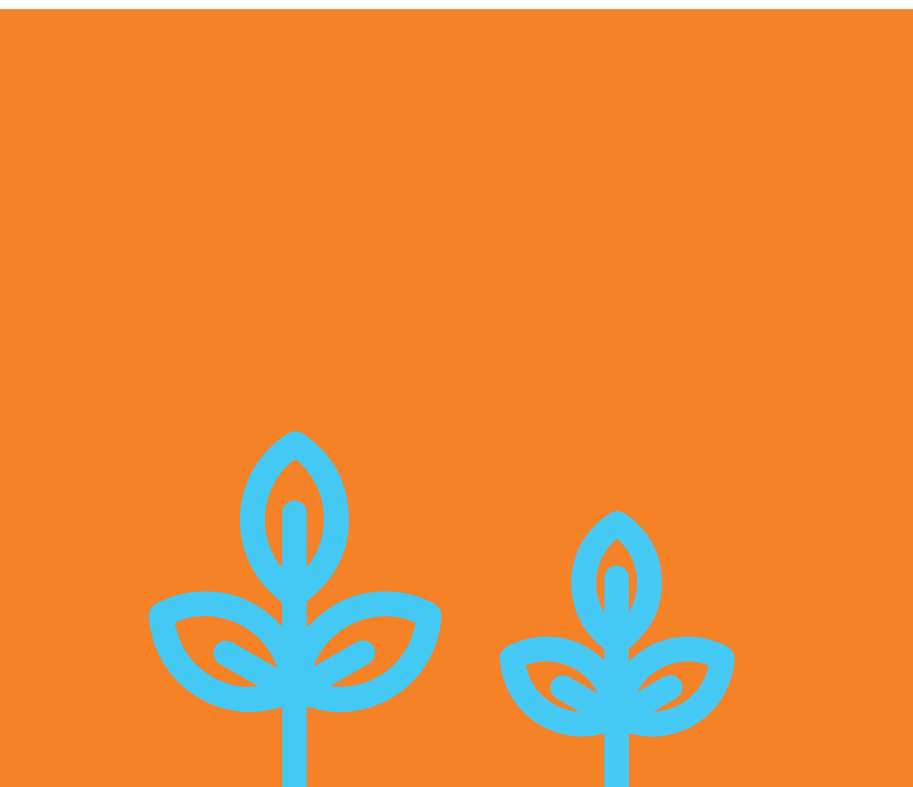
Farmer name	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female
Business title:	Address:
Date of scoring:	
Name of evaluator 1:	Score:
Name of evaluator 2:	Score:
Name of evaluator 3:	Score:
Name of evaluator 4:	Score:
Name of evaluator 5:	Score:
Grand total score	

Overall scoring table:

No.	Lead farmer name	Sex	Address/ phone	Knowledge and skill	Business management	Extension skill	Outreach	Total score

Supporting documents to receive the prize

- Original scoring sheet of each committee member and summary form with signature of each committee member
- One copy of the business plan or at least the notes from the business canvas session
- Copy of bookkeeping records for the preceding three months
- Current photo of their store or activities to demonstrate that their business is thriving
- Incubator program attendance record



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