



Project Coffee +

Agripreneur
Development
Programme



*Coffee Based
Farming System*



Trainer's Manual
Philippines

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FOREWORD

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and local partners from Ghana, Nigeria, Côte d'Ivoire and Cameroon have developed the Farmer Business School (FBS) approach for cocoa production systems in 2010. Since then, FBS has been introduced in 18 African countries with an overall outreach of over 1 million smallholders. Major impacts are better incomes from smallholder's investments in good agricultural practice and recommended inputs, the emergence of producer organizations and better access to financial services.

The FBS Advisory Facility of the regional programme Sustainable Smallholder Agri-Business (SSAB) has supported the adaptation for smallholder coffee farmers in selected areas in Indonesia, Philippines and Thailand.

The goal of the initiative "Improving smallholder coffee farming systems in Southeast Asia" is that smallholder coffee farmers in selected areas in Indonesia, Philippines and Thailand improve the economic viability of their farming system. Introducing FBS in the coffee value chain in Southeast Asia shall contribute to achieve the following specific objectives:

- *Improve incomes and living conditions of 10,500 smallholders and their families*
- *Increase their coffee productivity (yield/ha) on average by 20% in Indonesia and Thailand, and 50% in the Philippines.*
- *Smallholder farmers adopt profitable and best-integrated and/or diversified farming systems with coffee*
- *Systems of/or access to local service delivery by farmer groups/organizations for smallholder coffee farmers are improved.*

Only FBS-Trainers that underwent a special qualification program including classroom and learning trainings with farmers are well prepared to deliver the training in line with the principles of adult and discovery learning and the quality standards of FBS.



INTRODUCTION



This Farmer Business School (FBS) manual for coffee was developed within the framework of the project “Improving smallholder coffee farming systems in Southeast Asia” (Project Coffee+). It was elaborated jointly by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the private partner Nestlé and in consultation with relevant Philippine institutions; such as the Department of Agriculture (DA), the Agricultural Training Institute (ATI), the Department of Agrarian Reform (DAR), and other partners from the private sector such as the East West Seed Company. The present materials build upon the extensive experiences in Farmer Business School approaches developed and applied by GIZ across the world as well as on a multitude of learnings from the Philippine DA-ATI/DAR/FAO’s Farm Business School.

The training modules are intended to be used primarily by the project’s field technicians and agronomists to train 1,500 farmers from the provinces of Bukidnon and Sultan Kudarat in southern Philippines under the Nestlé-GIZ partnership on Project Coffee+. As part of the sustainability of the capacity building intervention of the project, these training materials shall be made available to the public. Thereby, other players in the coffee industry will be able to make use of these innovative training materials, multiply those and utilize them across their activities to strengthen the coffee sector. Particularly, key government partners such as the DA, ATI, DAR, local government units, and other stakeholders engaged in the advocacy, promotion and further development of the Philippine coffee industry shall benefit from this training curriculum.

By taking the perspective of farming as a business, the so called “FBS trainings” shall sensitize and encourage smallholder coffee farmers to optimize the use of their resources in order to enhance their farm production and ultimately establish better integrated, sustainable and income yielding coffee-based farming systems.

THE JOURNEY: The making of the FBS Manual for Coffee

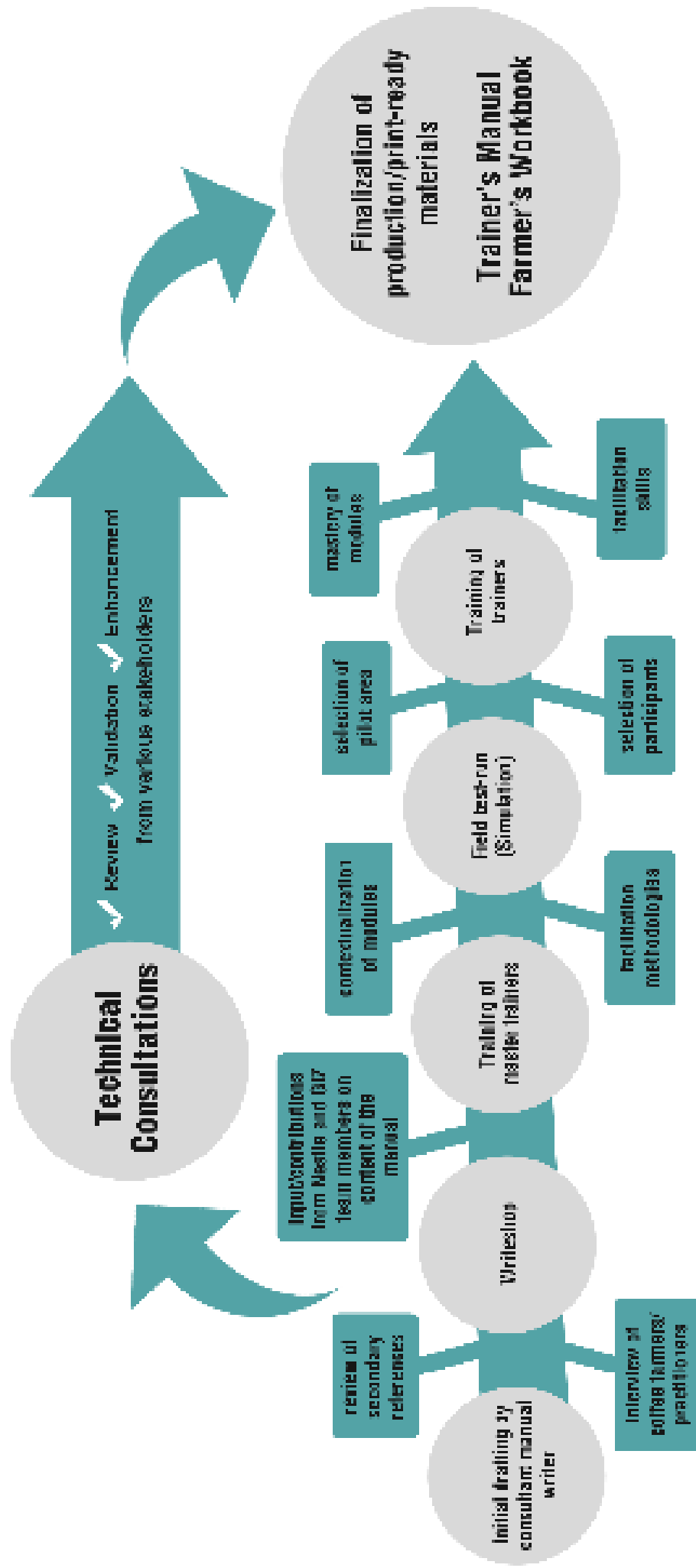
The development of the FBS-Coffee trainer's manual and its modules went through a series of inter-related processes.

- 1 First adaptation of GIZ's global Cocoa FBS materials to coffee through GIZ's FBS facility.
- 2 Review of similar materials and documented experiences of DA-ATI/DAR/FAO FBS and of GIZ in other countries and in the Philippines, and within the context of the Filipino smallholder coffee farmers. It also included interviews with selected coffee farmers practicing integrated and/or diversified coffee-based farming system
- 3 Workshop on the initial crafting of the manual: topic outline and content area.
- 4 Series of technical consultations, review and enhancement of the manual. The consultations involved primarily the project team from Nestlé and GIZ. However, for further validation and enhancements of the content, a workshop consultation was conducted with relevant government and private institutions as DA-ATI, DAR, and East West Seed Company.
- 5 Development of "costings" and relevant economic calculations for the manual specifically on the different crop combinations of integrated coffee-based farm system models.
- 6 Training of master trainers (*with other master trainers from the project proponents in Indonesia and Thailand*) to have sharing of learnings across participating countries, and a better contextualization on the content, as well as for enhancement of training methodology and of skills on the delivery of the training modules.
- 7 Pilot test run of the materials at the community/farmers level to simulate the 5-half day sessions.
- 8 Training of Trainers. This is primarily to further enhance the mastery on the different modules, and the facilitation skills of the prospective FBS trainers in the delivery of the training modules. This also served as an opportunity for final validation and enhancement on the technical content area (*specifically on the integrated and diversified coffee-based farm system models*) and, the practicality and adaptability of the model at the farmers level.
- 9 Finalization of the manual to include illustrations, lay-out and editing for the production/print ready materials.

The training materials comprise a Trainer's Manual to guide the trainers/facilitators at the community level on how to conduct the session activities, adult learning exercises, farm business record keeping and calculations, on-site demonstrations, and reflections.

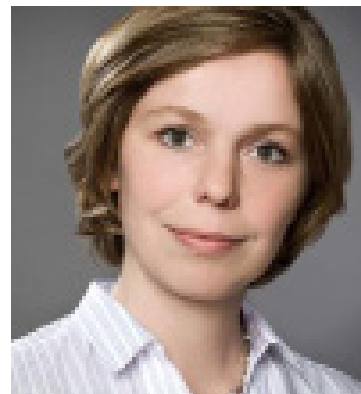
The trainer's manual has a companion Farmer's Workbook which shall be used by the farmer-participants for hands-on exercises during the training, and for application (by the individual farmers after the training) on farm business record keeping and calculations, and on the overall planning and operation of an integrated/diversified coffee-based farming system.

Figure i. Process Flow : The making of the FBS Manual for Coffee



MESSAGE


Irina Scheffmann
*Country Director
GIZ Regional Office Philippines and Pacific
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)*



The German government, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, is pleased to partner with the Philippine government and Nestlé Philippines in increasing the income of Filipino coffee farmers using the Farmer Business School approach.

Increasing the income of farmers is of course critical globally to ensure food security. However, it is also at the heart of Germany's global commitment to support development that leaves no one behind, and of GIZ's vision of a future worth living for all people around the world.

In the Philippines, we support the government's efforts to grow the country's coffee industry to uplift the lives of Filipino coffee farmers.

Responsible business creates added value when official development cooperation and the private sector join hands: Together we support economic development and employment, make use of the technical and market expertise of the private sector to make development happen ... sustainably!

That is why Germany and GIZ value highly our partnerships with the private sector, such as Nestlé Philippines, and hope that more companies will join us in improving lives.

This workbook will help Filipino coffee farmers raise their incomes by seeing farming as a business. This approach has proven successful in many other countries where GIZ works. Such success happened, however, because the farmers used the approach until they reaped the rewards. We hope you will too, and when that happens, we hope you will share the approach with other farmers.

Here's to a most fruitful future to you!

MESSAGE



Kais Marzouki

*Chairman and CEO
Nestlé Philippines, Inc.*



Working together towards a better life for Filipino Coffee Farmers

Magandang araw! On behalf of Nestlé Philippines, I congratulate our partners—our valued trainers, coffee ambassadors and farmers from Bukidnon and Sultan Kudarat, for participating in the **Agripreneur Development Program!** Attending this program is a step towards a better future for our coffee farmers!

Through the Nescafé Plan, we, at Nestlé are committed to uplifting the lives of Filipino coffee farmers like you by providing the support that you need — from world-class training, high quality plantlets, to eventual procurement of your produce at world market prices. It is our ambition at Nestlé to continue growing the coffee sector and build better lives for you, our dear coffee farmers and your families.

We strongly believe that with our adherence to the Good Agricultural Practices for coffee that are an integral part of this manual, we are assured of a bountiful harvest.

Maraming salamat sa mga Nestlé agronomist, technicians and Local Government Units who work hard with farmers to provide coaching support and technical assistance. Our meaningful collaboration helps transform farmers into successful agripreneurs.

Together with our project partner GIZ, I wish you all the best as we work together for a progressive local coffee industry.

Mabuhay!

MESSAGE



Matthias Radek

Chief Advisor

Development Partnership Projects in Agriculture

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)



Experiences from many agricultural development projects and programs from the Philippines and across the globe indicate that adoption of efficient and productive farming techniques by farmers will be most successful, if farmers can clearly see the economic value of these. The farmer business school approach, applied in this manual, aims at achieving exactly this. Through being trained on how to identify and properly calculate the potential benefits from applying Good Agricultural Practices, venturing into inter- and multi-cropping, enhancing quality of their produce, producers will start looking at the entrepreneurial potential of their farms and aspire for their improvement. Through interactive training sessions farmers will develop an entrepreneurial mindset and learn about the economic opportunities a coffee-based farming system can offer. While enhancing their financial management skills and their agricultural knowledge, farmers will be empowered to take better and informed decisions for running their coffee production, which will enable them to improve the productivity of their farms and their incomes.

By supporting the development of this training curriculum, GIZ and its partners want to contribute to the sustainable development of the coffee sector in the Philippines and to improve rural livelihoods by supporting the country's efforts to alleviate poverty and progress on the path towards the achievement of the Sustainable Development Goals.

ACKNOWLEDGEMENT

This training manual was developed within the framework of sustainable coffee-based farming system for the small-holder coffee farmers with technical and financial support from both the government and the private sector.

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6 Steps for Good FBS-Groundwork before Training

1

Inform local authorities (*barangay/municipal*) and the community on Project Coffee + and the upcoming FBS training schedules and content. Discuss possible counterpart arrangements and inform that training materials are provided free of charge. Answer questions related to contents, purpose and organization.



Ensure the following commitments for the agreed-upon date:

a. Constitution of a group of trainees according to the following criteria

- Criteria of Selection of Trainees
 1. Existing coffee grower
 2. Member of 4 Cs
 3. Accessibility (*distance of farm and of the residence to the training venue*)
 4. Willingness to participate continuously for the 5 day course. No substitution allowed during the course schedules.
- Minimum of 25 and maximum of 30 trainees
- Preferably able to read and write
- Gender mix: Young, old, men and women (*at least one third*)

b. Organization of venue in the community

- This can be a school, church, warehouse, barangay hall, cooperative meeting room or a protected place which has been identified and coordinated with the Barangay/Local Authorities



2

3

Determine if local facilitator for the trainings are available. Discuss their roles.



5

Communicate planning to your supervisor



6

Prepare yourself the required training material (*Trainer should consider power or no power situation in preparing the presentation materials*). Use of flip charts and other visual aids which are not dependent on electrical power.



6

Quality criteria for the preparation, delivery and follow-up of FBS Trainings

Work Plan

Each FBS trainer identifies beneficiary farmer groups in collaboration with his supervisor and project. He/she submits his/her monthly work plan latest by the 15th of the preceding month to the Technical Advisor per text message or Email. The information on the work plan comprises:

- ✓ Name of Municipality/Barangay
- ✓ Farmer organization (cooperative or others to be specified)
- ✓ Starting date for training
- ✓ Ending date of training

Training venues

Each FBS Trainer team identifies in advance convenient training venues at community level in collaboration with representatives of the community or the FBS group.

Duration of each FBS training

Each FBS Trainer conducts FBS training in a block of continuous five days (Monday to Friday) per the designed modules; starting in the morning 8:00 am and ending preferably 12:30 pm.

Training material

Only the standard training material, i.e. training notebook and workbook for participants and training posters shall be used. Each FBS trainer informs supervisor/ project lead via text message in time on the needs of training material for upcoming trainings.

Quality of delivery

FBS trainers prepare the FBS trainings properly following the guidelines of the trainer's file:

The FBS trainings are to be conducted in an interactive manner, combining presentations, discussions, group work, practical exercises and role plays. The adult learning approach is expected to take advantage of male and female participants' experiences and build their confidence

Proof of delivery

Each FBS trainer provides a list of participants and the proof of delivery signed by the focal person designated by the trained group.

Use Proof of delivered Farmer Business School Training page 140







Follow-up of FBS trainings





Each FBS Trainer maintains periodic contacts with FBS focal persons of groups he/she has trained

- Organizes periodic meetings with FBS groups to refresh knowledge and to check the extent of adoption of tools
- Identifies and reports new evolutions to his superior and to the project
- Identifies and reports difficulties in the application of tools to his/her superior and to the project
- Makes recommendations for further improvement of the curriculum and communicates them to his/her superior and the project

Schedule of FBS trainings

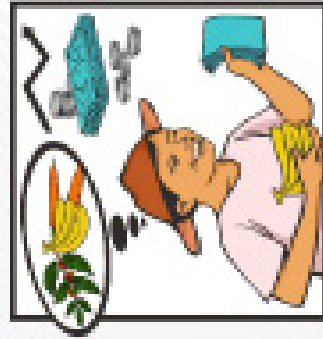
Module		Duration	Session	Day
0	Warming-up and introduction	45 minutes	Pre-Session	Monday
1	Is farming a business?	1 hour 30 min	1	
2	Know your assets : Economic and social assets (<i>What do I have?</i>)	1 hour 15 min	2	
3	Manage your farm for enough and good quality food	1 hour 15 min	3	
4	Money-out – Money-in	2 hours	4	Tuesday
5	Decisions for doing good business	1 hour	5	
6	Seize opportunities : Diversify your farm enterprises for more income	2 hours	6	Wednesday
7	Manage your money throughout the year	1 hour 30 min	7	
8	How to get good financial services	1 hour 30 min	8	Thursday
9	Make more money with improved productivity and optimized production costs	1 hour 30 min	9	
10	Benefits from membership in organised farmer groups	1 hour	10	
11	Earning more money: Investing in rejuvenation and rehabilitation of coffee	1 hour 30 min	11	Friday
12	Becoming an entrepreneur in practice Evaluation by farmers Issuance of certificates to farmers	1 hour 30 min	12	

I. Trainer	Specialized FBS-Trainer
II. Time	45 minutes
III. Target group	Smallholders/land owners (<i>male and female</i>)
IV. Objectives	 Key objectives <ol style="list-style-type: none"> 1. Know the other participants 2. Have an overview and understanding of the training curriculum, the schedule of training sessions and understand its purpose, and what the participants will gain in attending the training 3. Participants appreciate the FBS concept and are willing to commit to the whole FBS process  Acquired Knowledge <p>FBS is a way for farmers to shift to being entrepreneurial and understand farming as a business</p>  Acquired Attitude <p>For the participants to have an open mind to shift to being entrepreneurial and appreciate farming as a business.</p>
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Composition as a group, profile of participants and their motivation to participate	 Workshop or Plenary <p><i>Introduction of the Participants; Trainers, GIZ, Nestle, Project Coffee+.</i></p> <p>Participants are asked to give their names and brief description of their farm (<i>size, age of coffee trees, location</i>).</p>
Expectation Setting	 Workshop or Plenary <p>Ask participants:</p> <p>What do I want to learn in the Farmer Business School?</p> <ul style="list-style-type: none"> - Use metacard for responses - Post responses(<i>grouping similar responses</i>) <hr/>  Materials <ul style="list-style-type: none"> • Meta Card • Pentel Pens • Brown Paper

<p>Learning objectives and contents of the Farmer Business School</p>	<p> Lecture</p> <p>Present and explain the modules on what FBS is all about using overview of icons - What is FBS about? M0-A p.6</p> <p>Discussion: Level off the course/module content with expectation of participants.</p> <p>Post the FBS Modules in the venue (<i>as a reference for progress of daily activities</i>).</p> <hr/> <p> Materials</p> <p>Farmer Business School Poster with module icons and module titles M0-A p.6</p>
<p>Group organization</p>	<p> Workshop or Plenary</p> <ul style="list-style-type: none"> • Present to the group the training schedule (<i>Schedule of FBS Training</i>) p.3 • Establish rules with the group during the training <ul style="list-style-type: none"> - Timeliness - Respect for other participants - Switch mobile phones off (or on silence mode) - Others • Formation of Host Teams per day and Functions <ul style="list-style-type: none"> - Designate groupings - Group leader who ensures discipline if necessary - Provide unfreezing activities - Creative recap <hr/> <p> Materials</p> <ul style="list-style-type: none"> • Schedule of FBS Training on p.3 • Manila paper • Pentel Pens • Blackboard/whiteboard
<p>VI Wrap-up/ Synthesis</p>	<p>Summarize group profiles:</p> <ul style="list-style-type: none"> • Number and composition of participants gender etc. • Size of Coffee Farm • Age range of coffee plants <p>Reiterate the FBS Modules (refer to poster M0-A p.6)</p>
<p>VII. Bibliography, references / credits</p>	<p>FBS Training material from GIZ/SCB</p>

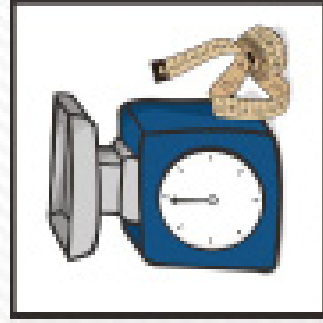
M0-A Farmer Business School: The Training

What is FBS about?



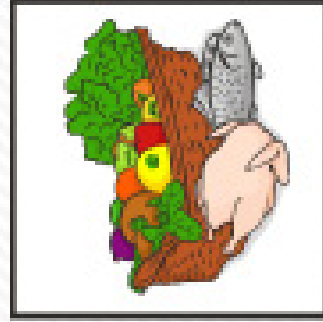
M1

Is farming a business?



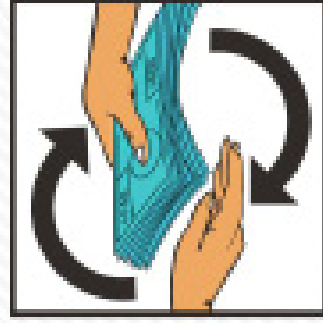
M2

Know the unit to know your assets



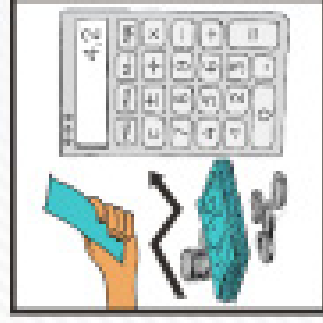
M3

Manage your farm for enough food



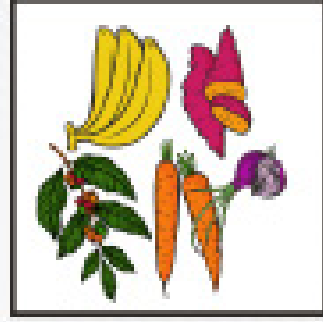
M4

Money-out/Money-in: Know whether you do a good business



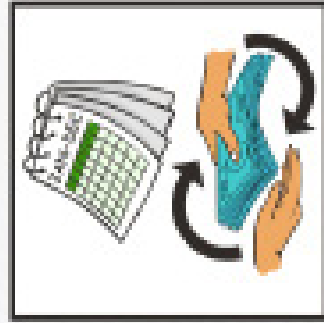
M5

Decisions for more income



M6

Seize opportunities to diversify your farm enterprises



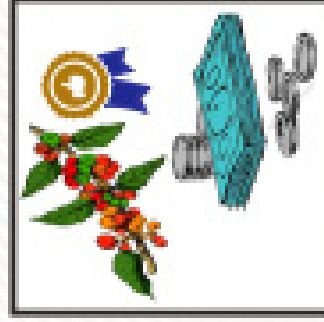
M7

Manage your money throughout the year



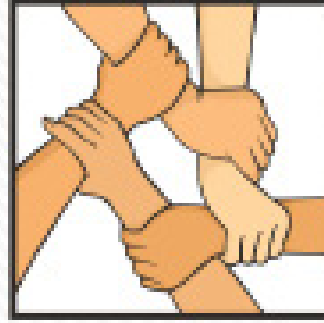
M8

How to get good financial services



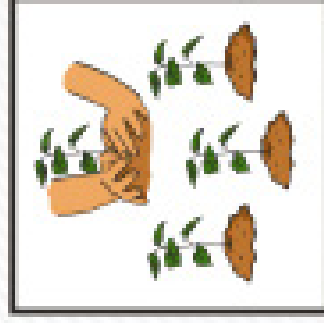
M9

Make more money with good quality coffee



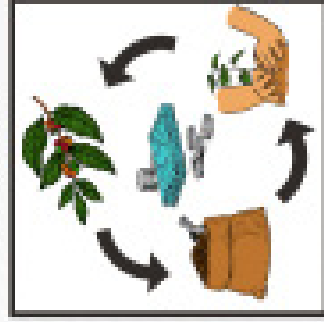
M10

Benefits from membership in farmer organization



M11

Investing in rejuvenation and rehabilitation of coffee










M12

Becoming an entrepreneur in practice

The skills learned at the Farmer Business School help the farmers to become better entrepreneurs who:

- Take advantage of improved technologies and market opportunities to increase income
- Plan and adapt/optimize their production to maximize farm productivity and profitability
- Lead professional negotiations with buyers, input suppliers, credit institutions and land owners.
- Manage money, savings and loans

Module 1 Is Farming a business?

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour 30 minutes
III. Target group	Smallholders/land owners (<i>male and female</i>)
IV. Objectives	<p> Key objectives</p> <p>Know basic concepts of why a farm is an enterprise (objectives of the enterprise, market, price, production factors/resources of the farm and external inputs, expenditure, cost, benefit and loss) and understand the necessity of planning.</p> <p> Acquired Knowledge</p> <p>Participants</p> <ul style="list-style-type: none"> • Understand the global and local demand for coffee • Understand the difference and commonalities between commercial agriculture and other businesses <p> Acquired Skills</p> <p>Participants know how to:</p> <ul style="list-style-type: none"> • Identify requirements of farming as a business • Create a simple cropping calendar <p> Acquired Attitude</p> <p>Participants</p> <ul style="list-style-type: none"> • Initiate self-perception as entrepreneur • Perceive the family farm as an enterprise
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Global and local demand for coffee	<p> Lecture</p> <p>The trainer presents the global and local demand for coffee. Use M1-A p.11</p> <hr/> <p> Materials</p> <ul style="list-style-type: none"> • Page 11 : M1-A The Coffee Market (<i>Content</i>) • Page 15-18 : M1-D Journey of Coffee (<i>Reference</i>) • Page 19 : M1-E Supply Chain Segments and Activities (<i>Reference</i>)
Farming as a business	<p> Workshop or Plenary</p> <ul style="list-style-type: none"> • What examples of businesses do you know? What are needed to operate this business? • Write/list down the examples provided by the participants

Farming as a business



Lecture

- Refer to the example of businesses provided by the participants. Link the discussion to the comparison of farming as a business with other businesses. Use **M1-F p.20**
- Objectives of the agricultural enterprise and key concepts
 - a. What do you produce on your farm and what do you do with these products?
 - b. To produce these product from your farm what do you need (*for farming as a business*)?

Draw and note down the responses from the participants.

Present the production factors

- land
- labor (*family and hired labor*),
- money (*own money and credit*)
- Inputs (*including the difference between own inputs and purchase of inputs*)
- Equipment and tools
- c. What is a good business in agriculture? What affects prices of production?
Draw and note down the responses.
 - Market, knowledge of product and input prices
 - Good yields, good products, good timing of planting, good seeds, good prices,
- d. Supply and demand.

Present the Market Dynamics (**M1-B p.12**)



Materials

- Page 12 : Annex M1-B Market Dynamics (*Content*)
- Page 20 : Annex M1-F Examples of Businesses (*Content*)



Key Learning Points

The agricultural entrepreneur identifies the necessary inputs, tools, labor, capital necessary for his production needs at the right quantity and the right time.

Planning is necessary







Lecture

Discussion and progressive visualization of the cropping calendar

- When do you start farming as a business in the year?
Specifically with coffee?
- What is the first activity you do and when?
- What are the succeeding activities and when are they realized?
- How do you now plan the cropping season?

Present and explain the Agricultural Calendar (poster **M1-C p.13-14**); Farmer's Workbook **p.4-5**

<p>Planning is necessary</p>	<p> Workshop or Plenary</p> <p>“Let us now plot your activities and the timelines.”</p> <p>Workshop: Agricultural Calendar to plan production of a crop</p> <ul style="list-style-type: none"> • Divide participants into groups of 6-8 member per group • Instruct them to prepare Agricultural Calendar by group Use M1-C p.13-14 (Farmer’s Workbook p.4-5) <p>Note to trainer: Important to explain and fill-up properly as reference for module 4</p> <hr/> <p> Materials</p> <p>Page 13-14 : Annex M1-C Agricultural Calendar to Plan the Production of coffee</p> <hr/> <p> Key Learning Points</p> <p>For a good yield, and with the use of the Agricultural Calendar, the agricultural entrepreneur plans when to do the necessary work in the field and applies the inputs at the right time.</p>
<p>Identification as a group</p>	<p> Group Photo (<i>during short break</i>)</p>
<p>VI Wrap-up/ Synthesis</p>	<p>Reiterate key learning points and main lesson below.</p>
<p>VII. Bibliography, references / credits</p>	<p>FBS Training material from GIZ/SCB Nestlé : The Coffee Market and Journey of Coffee 2017-2022 Philippine Coffee Industry Roadmap</p>



Main Lesson

The agricultural entrepreneur (man or woman) plans and organizes him/herself to have inputs, tools, labor and money necessary for the production ready at the right time.

Module 1: Is Farming a business

1. **M1-A** : The Coffee Market *p.11 (Content)*
2. **M1-B** : Knowing the Market Dynamics *p.12 (Content)*
3. **M1-C** : Agricultural Calendar to Plan the production of Coffee *p.13-14 (Content)*
4. **M1-D** : Journey of Coffee *p.15-18 (Reference)*
5. **M1-E** : Supply Chain Segments and Activities *p.19 (Reference)*
6. **M1-F** : Examples of Businesses *p.20 (Content)*

M1-A : The Coffee Market

THE COFFEE MARKET

THE COFFEE MARKET

GLOBAL MARKET

Coffee is the 2nd largest-traded commodity after petroleum

THE COFFEE MARKET

GLOBAL MARKET

Coffee is the 2nd most consumed beverage inside the household next to water

THE COFFEE MARKET

DOMESTIC CONSUMPTION

Filipinos consume

80,000 - 90,000 MT
(1.6M bags)

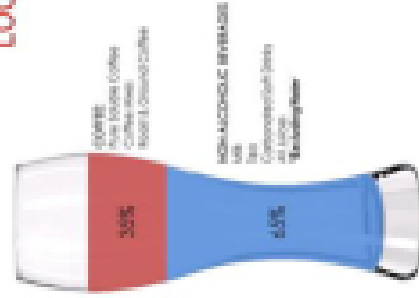
of green coffee every year.

Source: Philippine Coffee Exporters' Survey Report - May 2018

THE COFFEE MARKET

LOCAL CONSUMPTION

9 out of 10 households in the Philippines have coffee in their pantries

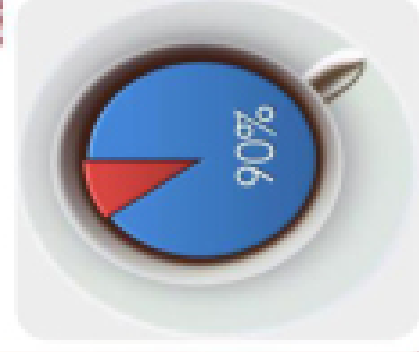


POTENTIAL IN COFFEE

SIZE OF THE INDUSTRY

TOTAL CONSUMPTION

Instant Coffee
Roast & Grind



M1-B : Knowing the Market Dynamics

The market for agricultural produce	The market for inputs and equipment
<ul style="list-style-type: none"> • The location of the market • Who needs the product and wants to buy it? • The quality of product that is demanded by the market • The price of the product compared to other markets • What volumes are needed, in what frequency 	<ul style="list-style-type: none"> • The locations of sale • Who sells the inputs and equipment? • The quality of the inputs and equipment • The price of sale of the inputs and equipment

<p>The prices of agriculture products change according to the season of the year</p> <ul style="list-style-type: none"> • At times of abundance, the prices are lowest. • Prices are highest at times of scarcity for example during the dry season, weather disruptions (typhoon). 	<p>The prices of agricultural products change between years.</p> <ul style="list-style-type: none"> • The price of a product that is needed by more and more people will rise from one year to the next. • The price of a product that is produced in greater abundance will fall from one year to the next.
--	---

Relationship of Price to changes in supply and demand

	Changes in Situation			
	Scenario A	Scenario B	Scenario C	Scenario D
Supply	High	Low	Constant	High
Demand	Low	High	Low	Constant
Prices	↓	↑	↓	↓



Main Lesson

To do successful business, the agricultural entrepreneur (man or woman) informs him/herself on the prices of inputs and products at different markets at different moments.

This allows the farmer to plan production and to make decisions on the purchase of inputs and the sale of produce.

M1-C : Agricultural Calendar to plan the production of coffee (and other crops as may be applicable)

The times of work...

- of the main activity are shown by a square ■
- of the off-season activity are shown by a circle ●

For this exercise, the trainer shall determine with the participants whether they are existing planters of coffee (in which case he starts with the section from maintenance, harvesting and marketing) or just starting to plant coffee (in which case, he starts from establishment, maintenance, harvesting and marketing).

	Year _____											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
The tasks of the entrepreneur												
A. Establishment												
Prepare the Field												
• Brushing												
• Plowing												
• Lay-out and Staking												
• Hole Digging												
Purchase of Seedlings and Inputs												
B. Planting												
• Hauling Inputs/ Seedling												
• Fertilization (Basal)												
• Planting												

	Year _____												Year _____											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
The tasks of the entrepreneur																								
C. Maintenance																								
• Weeding/Spraying																								
• Fertilizer Application																								
• Spraying Fungicide/insecticide																								
• Pruning																								
D. Harvesting/Post Harvest																								
• Picking																								
• Depulping																								
• Drying																								
• Dehulling																								
• Sacking																								
• Storage																								
• Dehulling																								
• Sorting (optional)																								
• Re-drying																								
E. Marketing																								
• Transport																								
• Labor/Hauling																								



Main Lesson

For a good yield, the agricultural entrepreneur (man or woman) plans to do the necessary work in the field and apply the inputs at the right time.

M1- D : Journey of Coffee

1500

Coffee arrives in Europe through the port of Venice. The first coffee house opens in Italy in 1550.

1615

King Louis XIV is presented with the coffee tree. It is believed that sugar was first used as an additive in his court.

1650

The Dutch become the first to transport and cultivate coffee commercially.

Coffee is smuggled out of the Arab Port of Mocha and transported to Capten S. Beer for celebration.

1725

Coffee plants are introduced in the Americas for cultivation.

M1- D : Journey of Coffee

1300
 Brazilian coffee industry
 gets its start from
 seedlings smuggled
 from Guayana

1800

1822
 The prototype of the
 first espresso machine
 is created in France

1900

1906
 The invention of the
 world's first drip
 coffee maker


1933
 The first coffee
 advertisement

1950


1963
 By Ennio Illy develops
 the first authentic
 espresso machine

2000



M1- D : Journey of Coffee



1930
 Instant coffee is
 invented by Nestlé company
 as it solves the Brazilian
 government's problem of
 surplus coffee.



20th Century
 Brazil experiences huge coffee surplus
 and asked the manufacturer Nestlé to
 develop a product from the surplus
 coffee. For 8 years Max McGraw,
 Trader of Nestlé Research Center
 developed the world's 1st instant
 soluble coffee - Percolé

October 20th 1844
 American brook brought
 Percolé to Philippines
 through storm during WWII

M1-E : Supply Chain Segments and activities







Source: 2017-2022 Philippine Coffee Industry Roadmap

M1-F : Examples of Businesses?

What examples of businesses do you know?

Example of businesses	Start and end of activities	Capital Needs	Income Sources
 Sari-sari Store	Upon completion of Business License and purchase of goods	One needs capital to buy goods to be sold in the store	Gives income daily
 Trading/Buy and Sell	Upon approval of license. One can start and stop at any time	One needs capital to buy merchandise and to pay employees	Gives income all year long
AGRICULTURE			
 Processing of agricultural products	One can start the processing at any time if one has the equipment and primary materials	One needs capital to buy raw material and equipment	Gives income all year long as long as you have raw material
 Rice and corn milling, process cassava	One stops the processing when the primary material is no longer available.	One needs machinery and capital	Gives income per operating time
 Agriculture * farm *nursery	One needs to start the agricultural work at the beginning of the season	One needs capital for tools, equipment, inputs and paid workers	Gives income once a year, monthly, weekly

Module 2 Know your assets: Economic and Social Assets (What do I have?)

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour 15 minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	 Key objectives <p>For the participants to identify his/her farm assets and have an accurate measurement of his/her farm</p>  Acquired Knowledge <p>Participants</p> <ul style="list-style-type: none"> • Know the most common production factors, products and inputs • To identify the basic costs of production – land, labor, inputs, equipment, capital, social capital  Acquired Attitude <ul style="list-style-type: none"> • To practice recording and recognizing costs and expenses, accurate measurements • Develop skills on how to measure accurately one's farm size
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Know the units and measure to know your farm assets	 Lecture <p>These are different methods on how to measure your farm area:</p> <ol style="list-style-type: none"> 1. Pace factor 2. Steel Tape 3. GPS (<i>Global Positioning System</i>) and ODK (<i>Open Data Kit</i>) <p>Present and explain the Standard Measures and Unit (M2-B p.28); Farmer's Workbook p.7</p>



Workshop or Plenary

Group Exercise:

Option 1: Pace Factor Exercise

Preparatory work before the session: The trainer shall prepare a measured distance of 20 meters using steel tape. Place marker on start and end of the 20 meters.

1. Divide the participants into 3 groups.
2. Each group shall assign:
 - a. Person who shall act as post for the starting point of the 20 meters
 - b. Person who shall act as post for the end point of the 20 meters.
 - c. Two (2) persons who shall do the walking to measure the pace factor
 - Tallest among the group
 - Shortest among the group
 - d. Person who shall act as recorder for the group
3. Each group shall do the exercise while the others act as observers.
4. Each group:

The tallest shall walk through the 20 meters distance from the start post to the end post while the other team members and other participants count the number of steps.

Recorder shall write down the number of steps for the 1st trial.

From the end post, the person walks back to the starting post and the other team members and other participants count the number of steps for the return to the starting post (2nd trial).

The person walks back to the end post (3rd trial).

Recorder writes down the number of steps for the 2nd trial and 3rd trials.

Team gets the average by adding the number of steps in trial 1 and that in trial 2, and trial 3: then, divide by 3.

$$\frac{\text{No. of steps trial 1} + \text{No. of steps trial 2} + \text{no. of steps trial 3}}{3}$$

= average no. of steps for 20 meters

Pace factor = 20 meters/average number of steps
= meter equivalent (per step)

Repeat the process in the group with the shortest person in the group to do the walk- through of the 20 meters.



Each group shall do the same until all groups have gone through the exercise.

5. Trainer records the pace factor per group (*tallest and shortest individual*)

No. of Steps	Group 1		Group 2		Group 3	
	Tall	Short	Tall	Short	Tall	Short
Trial 1						
Trial 2						
Trial 3						
Average No. of Steps						
Pace Factor (<i>meter equivalent</i>)						

Option 2 (if applicable): 3 Methods of area measurement

Divide the participants into 3 groups

Each group shall measure a pre-determined area/farm using the different methods

- Group 1 will measure using pace factor,
- Group 2 will use steel tape and
- Group 3 will use GPS/ODK.

Go to nearest farm or pre-determined area. Let each group measure the area using pace factor, steel tape and GPS/ODK.

Draw the farm layout and compute for area of the farm.

Measure and Calculate the Surface of a Field. Compare the results of the 3 methods using summary format below.

	Method	Length	Width	Computed Area
Group 1	Trial 1 Estimation by Steps (Pace Factor)			
Group 2	Trial 2 Steel Tape Measure			
Group 3	Trial 3 Measurement by GPS or ODK			
Average from the 3 trial				



Materials

- Page 28 : Annex M2-B Standard Measures & Units (*Content*)
- Page 31 : Annex M2-E GPS and ODK guide (*Reference*)
- Steel tape
- Calculator



Key Learning Points

There are different ways of measuring distances and area, and with different accuracy levels. Use the method that is most accurate and available to your situation.

Farm Assets



Workshop or Plenary

Make the participants do a listing of their individual farm assets using Sample listing of farm assets (**M2-C p. 29**); Farmers Workbook **p.8**

Ask for one volunteer to present his/her farm assets (*in brown paper*). Ask participants on their observation from the presentation.

*Facilitator shall note that in addition to physical assets, we also have **social assets**: This is the good will and good relationships established among our family, relatives, friends and neighbors which farmer can also harness for their farm enterprise. They can be a source of labor, source of financial resources... Example is our “sense of bayanihan”, “hunglos”, “tinabangay”, “dagyaw”, “convoy” etc.*



Assignment

Review of the “farm identity card” or the “Coffee Farmer Information.”

Check and review with participants if they have the Nestlé “Farm Identity Card” or the “Coffee Farmer Information” sheet.

Explain the entries and assignment to fill-up (*individually*) the “Coffee Farmers Information” sheet Annex **M2-D p.30**; Farmer’s Workbook **p.1-2**



Materials

- Page 29 : Annex M2-C Sample Listing of Farm Assets (*Content*)
- Page 30 : Annex M2-D Farm identity card or Coffee Farmer Information (*Content*)
- Brown Paper
- Pentel Pen



Key Learning Points

Farmers are able to identify and record their farm assets and know the resources available to them.

VI Wrap-up/ Synthesis	Reiterate the key learning points and main lessons.
VII. Bibliography, references / credits	Nestlé Farm identity card or Coffee Farmer Information Economics of Farm management (<i>Conversion table</i>) FBS Training material from GIZ/SCB



Main Lessons

Measures and units are essential to do good business in agriculture.

1. Measures of the size of field by using walking-steps is an estimation and are not always accurate.
2. The agricultural entrepreneur (*man or woman*) who
 - underestimates field size risks using too little fertilizer and too little seeds or other planting materials. This can lead to reduced yields.
 - overestimates field size risks using too much fertilizer and to plant too close together. This can lead to reduced yields and unnecessary spending.
3. Accurate knowledge of the size of the farm is important to plan production, to correctly apply inputs, and to correctly space plants and seeds.
4. The agricultural entrepreneur (man or woman) measures his fields with a measuring steel tape or with GPS (Global Positioning System)/ODK (Open Data Kit) applications. GPS and ODK measurements are available modern techniques/applications to measure farm sizes. Ask your extension agent.
5. A field in the shape of a rectangle or square is easy to measure. On such a field it is easier to sow or plant in lines respecting the correct spacing distances.
6. Units and measures are important for the agricultural entrepreneur (man or woman). They are necessary:
 - To know precisely your assets: land, labor, financial capital/money, social capital, equipment
 - To correctly plan production and the quantities of inputs that need to be purchased in time
 - To apply correct amounts of chemical inputs
 - To know the quantity harvested
 - To correctly evaluate losses or profits
 - To sell your products better.

Module 2: Know Your Assets

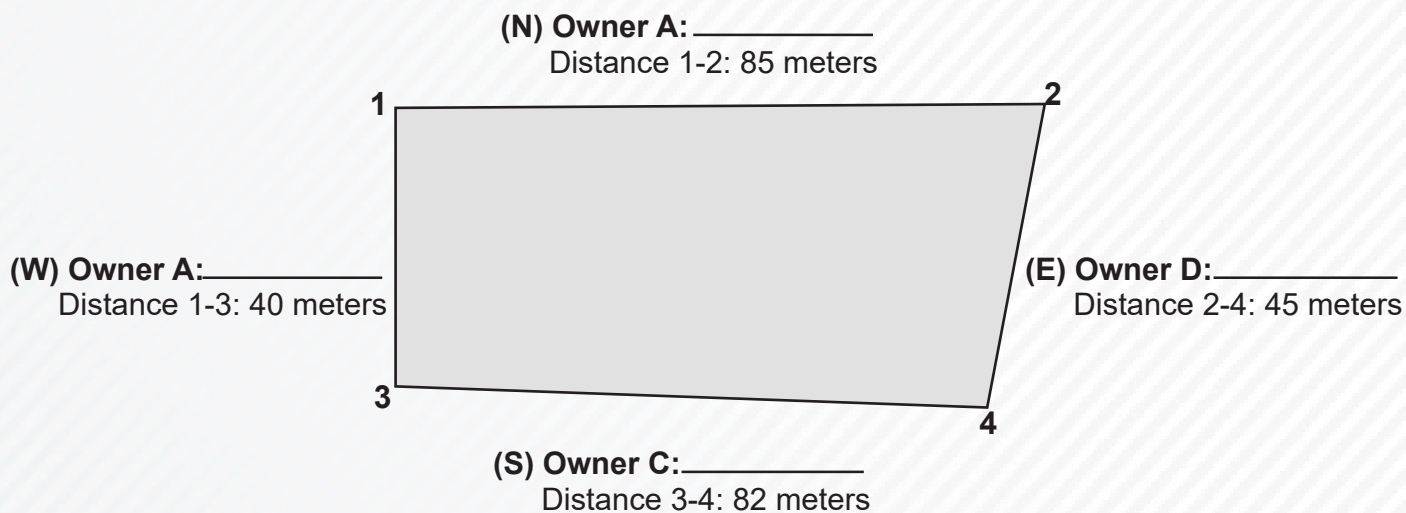
1. **M2-A** : Measure and Calculate the surface of a field *p.27 (Content)*
1. **M2-B** : Standard Measure & Units *p.28 (Content)*
2. **M2-C** : Sample Format of Farm Assets *p.29 (Content)*
3. **M2-D** : Coffee Farmer Information *p.30 (Content)*
4. **M2-E** : GPS/ODK Instructions *p.31 (Reference)*

M2-A : Measure and calculate the surface of a field

The size or surface area of a field is measured in square meters or hectares.

1 hectare (ha) is 10,000 square meter (m²).

Sample of Farm Lay-out and Exercise Output



Area Computation to Determine Total Area (Hectare)

$$\text{Area} = \text{average length } \left(\frac{1-3 + 2-4}{2} \right) \times \text{average width } \left(\frac{1-2 + 3-4}{2} \right)$$

Example:

$$\frac{40 + 45}{2} \times \frac{85 + 82}{2}$$

$$\frac{85}{2} \times \frac{167}{2}$$

$$42.5 \times 83.5$$






$$= 3,548.75 \text{ m}^2$$

1 ha = 10,000 m²

so: $\frac{3,548.75}{10,000}$

Area = 0.3548 ha

M2-B : Standard Measures and Units

Distance	Kilometer (km) : 1 km is 1,000 meters (m)
Length or width of a field	Meter (m) : 1 m is 100 centimeters (cm)
Surface Area	Square Meter (m ²) Hectare (ha) : 1 ha is 10,000 m ²
Yield per Unit Area	Yield per hectare: Formula : $\frac{\text{Harvest/Yield(kg)}}{\text{Area Planted(ha or m}^2)}$ example : 400 kg/ha dried coffee beans
Volume	1 Liter : 1,000 ml 1 Gallon : 3.6 Liters
Weight	Grams (g) Kilograms (kg) : 1 kg is 1,000 g Metric ton (mt) : 1 Ton is 1,000 kg
Time	Minutes (min) Hour (h) = 1 hour has 60 minutes Day (D) = 1 day has 24 hours
Agricultural work	<p>Man-day (MD): The work of an adult person in one day.</p> <p>Example: Work on one hectare requires 10 Man-days. (10 MD / ha). The work can be done by 1 man in 10 days or 10 men in 1 day.</p>  <p>Man-animal day (MAD): the work of 1 head animal/ day and 1 person It is important to specify the number of hours in a work day.</p> 
Coffee Conversions (Robusta)	<p>1 kg Green Coffee Beans(GCB) = 5 kg red picked cherry</p> <p>100 kg fresh Cherry =</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>40-45 kg dried cherry</p> </div> <div style="text-align: center;">  <p>26 kg dried parchment coffee</p> </div> <div style="text-align: center;">  <p>20-22 kg Green Coffee Beans</p> </div> </div>

M2-C : Sample Listing of Farm Assets

	Cost/Purchase Price
A. List of Equipment, tools, farm animals	
1.	
2.	
3.	
4.	
5.	
B. Inventory of Inputs (fertilizers, chemicals, herbicide, etc.)	
1.	
2.	
3.	
4.	
5.	
C. Available Labor	
1. Family labor: Number of Persons	
2. Outside labor: rate/day	
3. Hired Man-Animal Day: rate/day	
4. Hired Machinery or equipment	
D. Land	
Area: _____ hectares	
E. Crops Planted No. of Hills/Area	
1.	
2.	
3.	
4.	
5.	
F. Credit Sources: interest rate _____%/yr	
1.	
2.	

M2-D : Coffee Farmer Information

Source: Adopted from Nestle Coffee Farmer's Handbook - Farm Identity Sheet

Farmer Information		
Name:		Age:
Home Address:		Educational Attainment:
Contact Number:		
	Age	Educational Attainment
Spouse:		
Name of Children/Dependent:		

Farm Information		
Farm Address		
Age of Coffee Trees (years)		Area (ha)
Number of bearing trees		Number of Newly Planted Trees (0-3 years)
Total Production GCB Coffee (kg/yr) Cropping Year		
Intercrop(s)	Area	Total Yield : (kg/year)
Other Crops		

FARM SKETCH MAP – Draw based on all actual parcels

M2-E Measurement of surface area using Global Positioning System (GPS) and Open Data Kit (ODK)

Using a handheld GPS to Calculate:

1. Ensure that the GPS Gadget has new batteries, and take it outdoors. Turn on the unit, and wait while it acquires a satellite signal. A question mark will flash on the screen until the satellites are located.
2. Travel to the area you want to measure. From the main menu, select “Area Calculation” and then “Start.”
3. Walk around the edges of the area you want to measure. The GPS will record your position periodically, tracking the distance you’ve walked in each direction.
4. Tap “Calculate” on the handheld’s menu. If the area measurement is expressed in a unit other than hectares or square meter press “Change Units” and then “Enter.” Select “hectares or square meter” as your unit and then press “Enter” again to view the result.






2.1 Manual Calculation

1. Set your handheld to start a new track. Walk the perimeter of the area you want to measure. When you’re finished, view the track on your map and write down its measurements.
2. Calculate the area of a square or rectangular property by multiplying its length by its width.. For a triangular property, divide that area by half. To measure oblongs, polygons or other complicated shapes, divide them into rectangles, triangles or half-circles and calculate the square footage of each portion separately.

Tips

- The specific instructions and menu choices for other handheld GPS models with the area calculation feature will vary, but the overall process is similar. In essence, it boils down to measuring the track, calculating the area and then selecting hectares or square meter as your unit of measurement.
- A number of online calculators provide area calculations, based on measurements you enter.

Module 3 Manage your farm for enough and good quality food

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour 15 minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Key objectives</p> <p>The farmer understands the importance of good nutrition for the family to successfully operate the farm business</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Knowledge</p> <p>Participants</p> <ul style="list-style-type: none"> • Understand that different food types have different content in major nutrients and need to be combined for a balanced and healthy nutrition • Understand that food needs differ according to sex and age of household members </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Use the food calendar • Identify supply gaps (food insecurity) and design strategies to fill food gaps • Enhance smallholdings' capacity to respond / adjust to food insecurity </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Attitudes</p> <p>Production/provision of food for balanced nutrition requires planning. The basis for this work is dialogue within the family</p> </div> </div>
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Food Needs	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Workshop or Plenary</p> <p>Start the session with the trigger questions.</p> <ul style="list-style-type: none"> • What food did you eat for breakfast? • What food do you eat in your household? • What do the different food types give you? <p>List the responses in brown paper or board according to GO, GROW and GLOW category (Use M3-A p.36)</p> <p>Present additional inputs on GO, GROW and GLOW (Use M3-B p.37-39)</p> <p>Option: Use Nestlé Go, Grow and Glow video (<i>if available</i>)</p> </div> </div>



Lecture

- *(Optional: If data are available)* Input on malnutrition rates of province by municipality (Bukidnon: **M3-G p.43**). Highlight the specific municipality where you are conducting the training
- Present poster on energy, protein and fat content of food. **M3-C p.39**; Farmer's Workbook **p.10**
- Let the participants determine the richest types of food

How much food do we need to cover our daily needs?

- Present and discuss the poster on daily energy and protein needs. **M3-D p.40**; Farmer's Workbook **p.11**

Highlight the increased needs of boys, girls (*10-17 years old*) and of pregnant and breastfeeding women.



Workshop or Plenary

Let the participants fill up Nutritional Calendar M3-E p.41;
(Farmer's Workbook **p.12**)

- Fill the Nutritional Calendar with participants for production and purchase of food
- Identify seasons with food gaps (*low availability, complementary purchase*)
- Identify whether food types required for a balanced nutrition are lacking

At the start of activity, identify a volunteer to prepare and present his/her nutritional calendar in plenary using poster M3-E p.41

Discuss with participants: highlight seasons/months with food gap



Materials

- Page 36 : Annex M3-A Poster Food Groups and their functions
- Page 37-38 : Annex M3-B Go, Grow and Glow
- Page 39 : Annex M3-C Poster on energy, protein, fat and carbohydrates content of food
- Page 40 : Annex M3-D Poster on How much energy and protein do we need per day?
- Page 41 : Annex M3-E Nutritional Calendar

Manage the farm to satisfy the family's food needs





Lecture

How to have more and better food?

- Referring to seasons with food gaps or requiring purchase of food (*in terms of quantity and quality*), discuss the table on adaptation strategies (**M3-F p.42**)

Highlight also strategies on:

- Promotion of food for the home/natural farming system of food
- Home gardening/container gardens

	 <p>Materials</p> <p>Page 42 : Annex M3-F Poster on adaptation strategies; How to have more and better food?</p> <hr/>  <p>Key Learning Points</p> <ul style="list-style-type: none"> • The need for a balanced, healthy food should be considered in farm planning. • Plan to budget or produce more nutritious food • Understanding food needs for better health • Well-nourished farm family members are healthy: lesser expenses on medical needs, more savings
<p>VI Wrap-up/ Synthesis</p>	<p>Reiterate KLP's & Main lesson below</p>
<p>VII. Bibliography, references / credits</p>	<p>FAO. 2004. Family Nutrition Guide FBS Training material from GIZ/SCB Nestle Healthy Kids Module National Nutrition Council Office of Provincial Government, Bukidnon</p>



Main Lesson

The agricultural entrepreneur (man or woman) knows that each type of food is necessary for a good and balanced nutrition of the family.

Module 3: Manage Your Farm for Enough and Good Quality Food

1. **M3-A** : Food Groups and Their Functions *p.36 (Content)*
2. **M3-B** : Go, Grow and Glow *p.37-38 (Content)*
3. **M3-C** : Food Products and their content *p.39 (Content)*
4. **M3-D** : How much energy and protein do we need per day *p.40 (Content)*
5. **M3-E** : Nutritional Calendar *p.41 (Content)*
6. **M3-F** : How to have more and better food *p.42 (Content)*
7. **M3-G** : Malnutrition Prevalence rate, Bukidnon *p.43 (Reference)*

M3-A Food Groups and their functions

Making money with agriculture is good, but the farm must provide also enough good food for your family. For this reason we want to tackle this issue.



Energy and Physical Strength to work and to grow

GO



Physical Strength and Mental Force

GROW



Rice



Corn



Munggo



Chicken



Sweet Potato



Potato



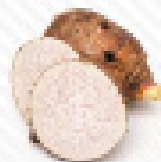
Peanuts



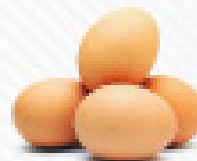
Meat



Cassava



Taro



Eggs



Fish



Saba



Protective Food and Clean Water

GLOW



Oils give us energy and make the meals tasty



Fruits give us energy (sugar) and health



Vegetables give us health and make meals tasty



Clean drinking water gives us health

Source: adapted from FAO 2004. Family Nutrition Guide

• Lesson 1: Go, Grow & Glow

• Lesson 2: Go Foods - Grains

GO FOOD
 Nagbibigay lakas
 at enerhiya sa katawan

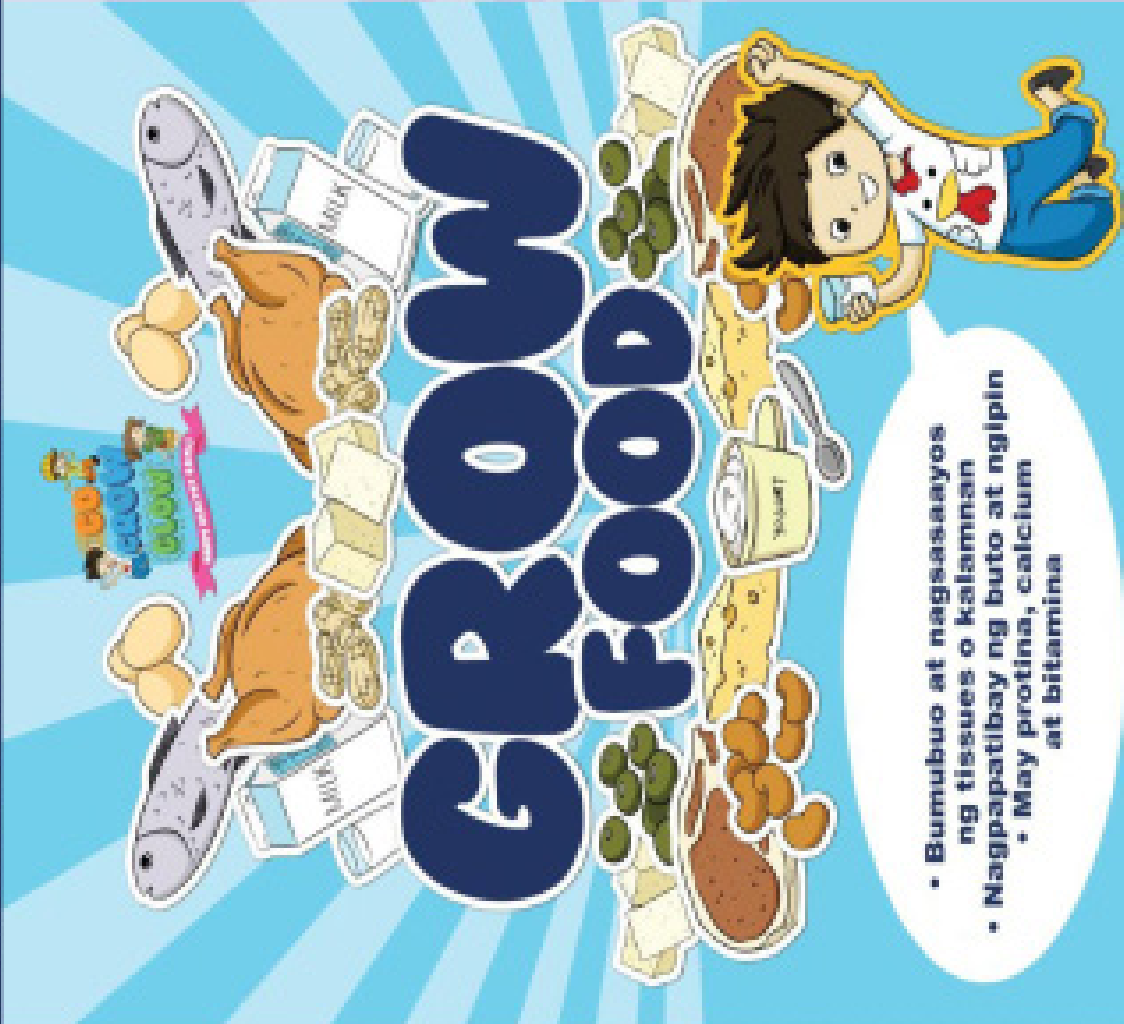
GROW FOOD
 Bumubuo
 at nagsasagayos
 ng tissues o kalamnan
 Nagpapatibay
 ng buto at ngipin

GLOW FOOD
 Nagpapanatili
 ng kalusugan
 Nagpapakinis ng balat
 Tumutulong sa regular
 na pag-dumi

GO FOOD

- Nagbibigay lakas
 at enerhiya sa katawan
- Mayaman sa carbohydrates
 at taba

• Lesson 3: Grow Foods - Protein & Dairy


























- Bumubuo at nagsasaayos ng tissues o kalamnan
- Nagpapatibay ng buto at ngipin
- May protina, calcium at bitamina

• Lesson 4: Glow Foods - Vegetable & Fruits



- Nagpapanatili ng kalusugan ng katawan
- Nagpapakinis ng balat
- Tumutulong sa regular na pagdumi
- May bitamina, mineral at fiber

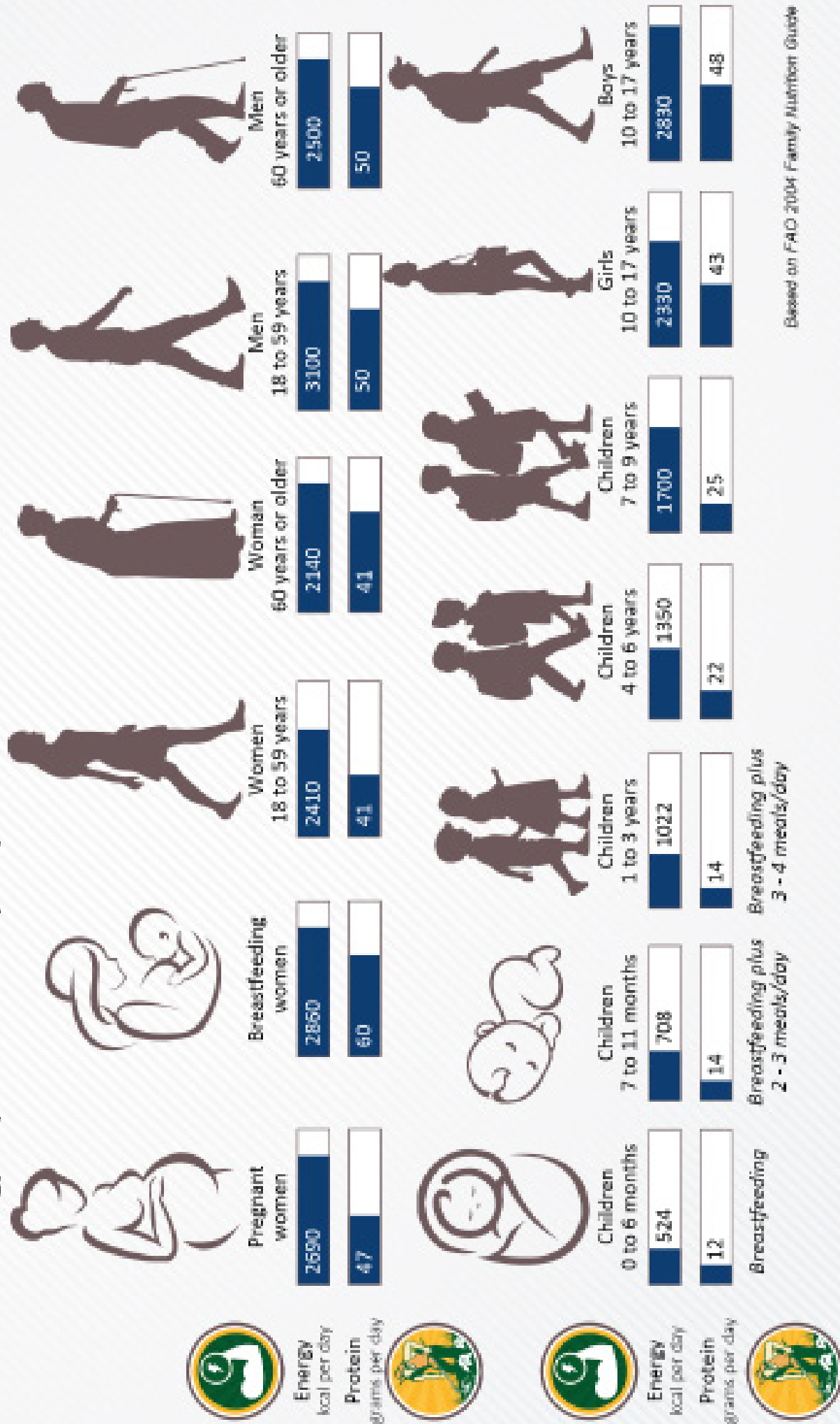
M3-C Food products and their content in energy, protein, fat, carbohydrates
(food composition at 100 grams edible portion)

Food		Energy (Kcal)	Protein (g)	Fat (g)	Carbohydrates (g)	
	Rice, Well milled	356	7.4	0.5	80.4	
	Corn Grits, white	357	8.3	1.5	77.5	
	Sweet Potato Yellow	135	1.1	0.4	31.8	
	Cassava	145	0.6	0.2	35.3	
	Pork Belly less fat	307	17.3	26.3	0.2	
	Chicken	215	17.4	16.2	0	
	Fish Galunggong	100	20.4	2.1	0	
	Dried Fish Tamban	215	43	4.8	0	
	Eggs	139	12.3	9.4	1.4	
	Fruits Banana (Lacatan)	126	14	0.2	29.6	
	Vegetables (Kalabasa)	68	1.2	0.2	15.3	
	Leaves Swamp Cabbage – Kangkong	39	3.3	0.4	5.5	

Source: Philippine Food Composition Table, Food and Nutrition Research Institute, DOST

Explanation: A kilocalorie (Kcal or 1000 calories) is a measure for the energy of a food. The number of kilocalories of one kg of a given food shows you whether the food is rich or poor in energy. **100 grams = ½ cup** (Approximate)











M3-D How much energy and protein do we need per day?



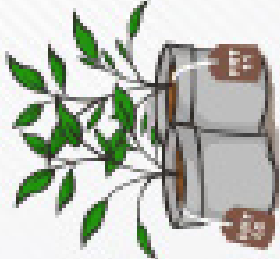
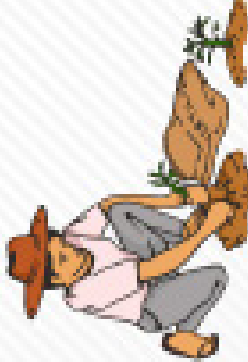
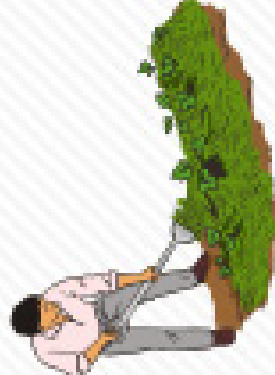


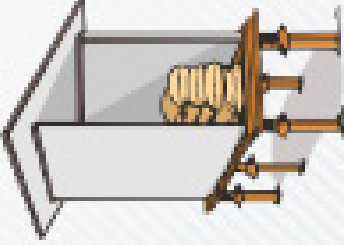



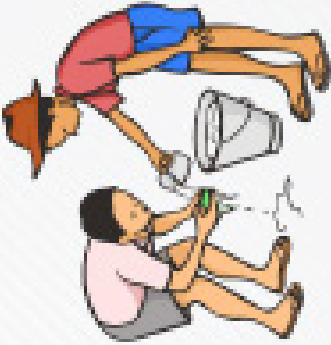
Based on FAO 2004 Family Nutrition Guide

M3-E Nutritional Calendar : How do you cover the food needs of your family?

- Mark a square if the product is sold
- Mark a circle if the product is eaten
- Mark a triangle in the months you need to buy the product
- Indicate by a line _____ how long the product is available from own production
- What are the months of high prices and the months of low prices for a food item; indicate ↑₱ or ↓₱

Product/Food Items	SELL <input type="checkbox"/>	EAT <input type="radio"/>	BUY <input type="checkbox"/>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
 Coffee															
 Cassava															
 Rice															
 Potato															
 Taro															
 Corn															
 Beans															
 Peanut															
 Meat															
 Fish															
 Fruits															
 Vegetables															

M3-F How to have more and better food?

Improving yields		Diversity cropping		Intercropping	
<p>Improved varieties</p> 	<p>Fertilization</p> 	<p>Mulching to conserve water</p> 			
<p>Reduce losses in storage</p> 	<p>Manage money to buy food</p> 	<p>Raise animals</p> 	<p>Prepare food well</p> 	<p>Clean water and hygiene</p> 	

Source: Adapted from FAO 2004, Family Nutrition Guide

Other possibilities






- Produce crops that ripen early or that resist to drought
- Harvest water for small irrigation
- Some families might have the opportunity to establish fish ponds

M3-G Malnutrition Prevalence Rate % - Bukidnon
(Combined Low and Very Low)
By Municipality/City

Municipality	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malaybalay City	8.13	6.82	6.43	7.20	5.37	5.94	7.58	6.06	5.81	6.53
Valencia City	5.37	3.94	3.69	2.99	2.84	5.74	2.01	1.51	1.36	1.02
Baungon	15.04	14.01	10.87	8.98	7.23	6.69	7.47	5.53	4.79	4.62
Cabanglasan	10.45	12.16	12.41	12.93	10.76	10.78	9.13	8.37	7.31	6.59
Damulog	16.84	20.6	17.37	20.08	15.03	13.03	14.45	12.42	12.38	9.95
Dangcagan	18.10	16.92	15.27	14.14	10.68	11.52	8.8	7.22	8.25	8.83
Don Carlos	17.14	15.86	14.60	12.99	9.35	7.43	5.76	5.41	4.94	4.55
Impasug-ong	23.32	17.9	12.40	10.78	6.32	6.34	5.25	6.14	9.94	10.18
Kadangilan	8.37	6.48	5.98	4.94	2.89	2.75	3.66	6.29	4.14	3.97
Kailangan	20.06	18.65	19.10	14.14	15.15	12.14	9.27	7.86	6.85	6.09
Kibawe	18.43	16.92	13.76	10.85	7.19	7.37	6.93	2.64	1.59	2.07
Kitaotao	16.15	12.73	9.53	11.16	8.84	10.03	9.25	9.02	9.33	7.05
Lantapan	13.42	7.79	9.01	8.45	4.97	4.48	4.81	4.83	4.63	4.25
Libona	6.40	5.26	4.00	3.41	3.81	9.75	9.14	3.02	6.66	7.32
Malitbog	10.18	8.26	8.23	12.14	5.79	6.65	5.45	4.21	3.31	3.66
Manolo Fortich	11.17	6.49	4.87	6.39	3.05	4.43	2.47	1.75	1.89	0.79
Maramag	9.22	3.78	3.03	2.10	1.34	1.33	1.05	0.77	0.63	0.62
Pangantucan	17.45	16.02	14.74	13.94	11.86	9.97	12.74	8.30	6.84	6.85
Quezon	14.13	14.02	13.18	12.57	9.81	9.61	9.19	8.28	6.84	6.45
San Fernando	16.43	20.22	15.60	13.81	9.06	10.87	8.91	10.42	9.58	10.12
Sumilao	10.17	9.14	9.05	10.80	5.94	5.75	4.52	2.75	2.52	2.10
Talakag	16.89	13.74	14.29	14.34	14.62	13.43	10.17	8.02	14.66	8.43
(Average)	12.33	10.41	9.33	9.01	6.82	7.26	6.33	5.25	5.40	4.88

Source: Provincial Health Office, Bukidnon

Module 4 Money out - Money in : Know whether you are doing a good business

I. Trainer	Specialized FBS-Trainer
II. Time	2 Hours
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	 Key objectives Understand the economics of operating the farm as a business enterprise  Acquired Knowledge Participants <ul style="list-style-type: none"> • Know the composition of costs/expenditure and the difference between gross revenues and profit (money in money out) • Are familiar with the concept of profit and loss (per farm enterprise and per product unit)  Acquired Skills Participants know how to <ul style="list-style-type: none"> • Identify and calculate costs/expenditures (money-out) and receipts (money-in) • Analyze main cost centers and action plan to optimize use of resources • Determine profit or loss of a farm enterprise  Acquired Attitudes Control and recording of money inflows and outflows is the basis for business decisions and management of money
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Determine profit or loss for farm enterprises	 Role Playing Preparatory Work: Select 2 farmers prior to the scheduled session to be briefed by the trainer for their role-play activity. Role game: two farmers discuss whether they have made good or bad business with coffee during the last production season. One farmer knows, he/she keeps records. One farmer does not know, no proper record keeping. What did you observe in the role play? Note down the keywords of the responses Synthesis: To determine whether you have done good or bad business in an agriculture enterprise; one has to do good record keeping



Materials

Role play script to be prepared by Trainer prior to session (*script on cost and returns to farmer who plays the role of knowing his business*) use **M4-B p.51** Money out-Money in for Coffee



Key Learning Points

Good record keeping is the basis for evaluating if business is good or bad.



Workshop or Plenary

How to know whether you are doing good or bad business?

Group Task: (Note: Preparatory work of trainor/organizer)

- Prepare and explain one example of money out – money in using the production cost and return of a particular farm

Instruction:

- Form 4 groups (of 7-8 members per group)
- Each group shall select a specific farm enterprise from among their group members as the focus of their group work and analysis of the enterprise (a good farm enterprise example would be one that has other crops integrated in their coffee farm)
- Each group should have a calculator or a cellphone with a calculator function
- Each group does the calculation for one farm enterprise using the corresponding sheet (**M4-B, C and D p.51-53**); Farmer’s Workbook **p.17-19**
note: prepare blank posters/tables for the workshop
- Assist each group by providing a facilitator from among the training team
- Each group designates a reporter

Plenary Presentation: Each group shall present and discuss the results of the group work



- register results on the summary table **M4-E p.54**; Farmer’s Workbook **p.20**
-



Lecture

Synthesize workshop results:

1. Compare results by group and provide input based on main lessons
2. What farm enterprise results in loss or profit?
3. What would you change to improve profit?

	 <p>Materials</p> <ul style="list-style-type: none"> • Module 4 : Money-Out, Money-In: Know whether you are doing a good business M4-A,B,C,D,E p.51-54 • Blank posters/tables for the workshop <hr/>  <p>Key Learning Points</p> <p>Different crops have different economic variables</p> <p>Knowing whether you make profit from a farm enterprise is key for business success and decisions on improvements (<i>cost reduction, adoption and investment in improved technology, management of labor force, financial management and planning</i>)</p>
VI Wrap-up/ Synthesis	<p>Use whip statement: “I learned that _____”</p> <p>Generate responses from participants. Reiterate KLPs and main lessons below.</p>
VII. Bibliography, references / credits	<p>FBS Training material from GIZ/SCB</p>



Main Lessons

1. To know if you are doing successful business with a crop, you need to know the “Money-In” and “Money-Out” with precision.
2. The agricultural entrepreneur (man or woman) tracks the inputs and labor used in a field, and calculates the “Money-In” and “Money-Out”
3. From the “Money-In” the entrepreneur subtracts the “Money-Out”. The result tells him if he made profit or loss.
4. The agricultural entrepreneur (man or woman) makes a **profit**, if the “Money-In” is greater than the “Money-Out”. In that case he/she does **good business**.
5. The agricultural entrepreneur (man or woman) makes a **loss**, if the “Money-Out” is greater than the “Money-In.” In that case he/she does **bad business**.
6. You recognize a loss with the minus(-) dash in front of the number:
7. The Return on Investment (ROI) tells you how much income you get from your capital invested. The entrepreneur then decides whether the returns are acceptable or not (levels of satisfaction) and also analyze how to make the investment better.
8. To make sure that he/she will make a profit, the agricultural entrepreneur calculates “Money-In” and “Money-Out” **before production** (*projected costs and returns*). The ability and know -how to project and analyze should be emphasized

Module 4: Money-In Money-Out

- 1. M4-A** : Establishment Cost of Coffee (Bukidnon Case) *p.48-49 (Content)*
- 2. M4-B** : Coffee Production Cost and Return - Green Coffee Bean *p.51 (Reference)*
- 3. M4-C** : Production Cost and Return - Yellow Corn *p.52 (Reference)*
- 4. M4-D** : Production Cost and Return - Ginger as Inter-Crop *p.53 (Reference)*
- 5. M4-E** : Comparative Analysis Table *p.54 (Reference)*

Reference Materials for Module 4

Money-out, Money In: Know whether you are doing a good business

M4-A BUKIDNON: 1 Hectare Establishment Cost of Coffee (Bukidnon Condition)

As reference material for the trainer, make an example of a full blown calendar starting from land prep (*establishment of coffee farm*) and the 3 years cycle - till start of good harvest for coffee.

Assumptions:		
Production Cost and Returns (per hectare)	=	Plantation Establishment up to 3 Years
Productive years	=	25 Years
Distancing: 2 m x 3 m; Total Population	=	1,666 plants/hectare

1. Establishment costs		Amount (₱)
• Land Clearing (piece rate or pakyaw)	@ 3,000/ha*	3,000
• Lay-outing and Staking, Hole Digging	1,666 @ 5.00/hole	8,330
• Herbicide	3.0 liters @ 400/liter	1,200
Sub-Total		12,530
2. Inputs		
• Seedlings	1,666 @ 26/pc	43,316
• Chicken Dung - 30 kgs/sack	40 bags @ 100/sack	4,000
• Furadan – 16 kg/bag	1 bag @ 1,200/16 kg. bag	1,200
• Fertilizer – 50 kgs/bag	5 bags complete @ 1,200/bag	6,000
• Chemical/Pesticides	2 liters @ 850/liter	1,700
Sub-Total		56,216
3. Labor		
• Hauling	10 MD @ 346/MD**	3,460
• Planting	6 MD @ 346/MD	2,076
• Fertilizer Application	6 MD @ 346/MD	2,076
Sub-Total		7,612
Total Establishment Cost/hectare		76,358

* Based on Precleared area- not new break-in land. For newly opened areas budget P10,000/ha or use local rates.

** ₱346/MD Minimum wage, Category II (DOLE -NWPC R10 Northern Mindanao Per Wage Order No. RX-20 effective Nov. 1, 2018)

4. Maintenance (over 3 years)		
• Spraying	2 MD x 4/year x 3 years @ 346/MD	8,304
• Fertilization	3 MD x 4/year x 3 years @ 346/MD	12,456
• Fertilizer – 50 kg/bag	10 bags/yr x 3 years @ 1,200/bag	36,000
• Furadan 3,5, G – 16 kg/bag	1 bags/yr x 3 years @ 1,200/bag	3,600
• Fungicide – 1kg/box	4 kg/yr x 3 years @ 250/kg	3,000
• Herbicides	6 liters/year x 3 years @ 400/liter	7,200
• Pruning	3 MD/quarter x 12 quarters @ 346/MD	12,456
Total Cost = 3 years		83,016
Total Cost of Maintenance for 3yrs/3 = Maintenance Cost/year		27,672/yr

Projected Yield	Selling Price @ 84/kg	Volume	Gross Sales	Net Income (₱)
@ 1.00 kg/tree	84	1,666 kg	139,944	112,272
@ 2 kg/tree	84	3,332 kg	279,888	252,216
@ 2.5 kg/tree	84	4,165 kg	349,860	322,188

Contribution Margin @ 84/kg selling price				
Year	Yield Levels	Production Cost/Tree	Contribution Margin/Tree	
3	1	16.60	67.40	
4	2	8.30	75.70	
5 th upwards to 8 th year	2.5	6.64	77.36	

Harvesting and Processing		Amount (₱)
Handpicking (pick red)	@ 4.20/kg cherry*** x 5.0 kg/tree* x 1,666 trees	34,986.00
Drying	@ 12 MD @ 346/MD	4,152.00
Dehulling	@ 4.00/kg** x 1,666 kg/ha GCB	6,664.00
Total		45,802.00

* Conversion rate of 1 kg GCB = 5 kgs of Red Cherry

** Own dehuller, other local rates in Bukidnon: Pangantucan, Kalilangan, Maramag = 5.00/kg GCB; Lantapan = 5.50/kg GCB; Malaybalay = 4.50/kg GCB

*** Formula to determine rate of buy back(cherry) = current price GCB x 0.05%

* Refer to Production Cost details **M4-A p.48-49**

Table of Formulas to determine:	Sample Computation*
<p>1. Value of Coffee trees up to three (3) years establishment period</p> <p>Formula: $\frac{\text{Total Establishment Cost} + \text{Maintenance Cost for 3 years}}{\text{Total Plant Population}}$</p> <p><i>Note : Consider mortality rate of planted trees that survived</i></p>	$= \frac{76,358 + 83,016}{1,666 @ 100\% \text{ survival}}$ $= \frac{159,374}{1,666}$ $= 95.66/\text{tree} @ 100\% \text{ Survival Rate}$
<p>2. Production Cost/Tree (Yearly)</p> <p>Formula: $\frac{\text{Maintenance Cost/Year}}{\text{Number of trees}}$</p>	$= \frac{27,672}{1,666}$ $= 16.60/\text{tree/year}$
<p>3. Break-even Production/Tree (kg) BEPC (kg)</p> <p>Formula: $\frac{\text{Production Cost/Tree/Year}}{\text{Current Buying Price}}$</p>	$= \frac{16.60/\text{tree/year}}{84/\text{kg GCB}}$ $= 0.198 \text{ kg/tree GCB or } 198 \text{ g GCB/tree or } 990 \text{ g cherry/tree}$
<p>4. Break-even Production Cost/kg (GCB) BEPC (₱)</p> <p>Formula: $\text{Production Cost/Tree} + \text{Harvesting Cost/kg}$</p>	$= 16.60 + 27.49$ $= 44.09/\text{kg}$
<p>5. Harvesting & Processing Cost/kg</p> <p>Formula: $\frac{\text{Total Harvesting and Processing Cost}}{\text{GCB recovered}}$</p>	$= \frac{45,802}{1,666 @ 100\% \text{ recovery GCB}}$ $= 27.49/\text{kg}$
<p>6. Net Income/Hectare/Year</p> <p>Formula: $[\text{Selling Price} - \text{BEPC}(\text{₱})] \times \text{GCB recovered (kgs)}$</p>	$= (84 - 44.09) \times 1,666 \text{ kg (@ } 100\% \text{ recovery)}$ $= 66,490.06/\text{ha/year}$
<p>7a. Return of Investments (ROI)/Year (<i>without depreciation</i>)</p> <p>Formula: $\frac{\text{Net Income/Ha/Year}}{\text{Maintenance Cost} + \text{Harvest Cost}}$</p>	$= \frac{66,490.06}{27,672 + 45,802}$ $= \frac{66,490.06}{73,474}$ $= 0.90\%/\text{year or } 90\%/\text{year}$
<p>7b. ROI/Year (<i>with depreciation</i>)</p> <p>Depreciation Value/Year = Total Establishment Cost/ Lifespan</p>	$= \frac{76,358}{25 \text{ Years}}$ $= 3,054.32/\text{year}$
<p>ROI (<i>with depreciation</i>)</p> <p>= Net income/Ha/Year</p> $\frac{\text{Depreciation value/year} + \text{Maintenance Cost} + \text{Harvesting \& Processing Cost}}$	$= \frac{66,490.06}{3,054 + 27,672 + 45,802}$ $= \frac{66,490.06}{76,528}$ $= 0.87\%/\text{year}$

Module 4 Money-Out, Money-In: Know whether you are doing a good business (intercrop or diversified crop choices)

Here we will see how to determine if business was good or bad. We will calculate the “money-in” and “money-out” from different produce.

M4-B Exercise Sheet 1: Coffee



Steps:

- Multiply the quantity with the price in each line.
- Sum the money spent (“Money-Out”) on inputs and labor
- Multiply the yield by the price of sale (“Money-In”)
- Subtract the sum of “Money-Out” from the “Money-In”
- Determine if there was a profit or a loss

1 ha Coffee: 2x3 m distancing 1666 trees/hectare		Unit	Qty	Price (₱)	Total (₱)
1. Money-Out					
Inputs					
Insecticides - Furadan	bag	1	1,200	1,200	
Fungicides	kgs	4	250	1,000	
Herbicide	liters	6	400	2,400	
Fertilizers – 50 kg/bag	bags	10	1,200	12,000	
Total cost of inputs				16,600	
Labor and services					
Pruning	MD	12	346	4,152	
Fertilization (<i>organic/inorganic</i>)	MD	4	346	1,384	
Spraying (<i>herbicide/insecticide/fungicide</i>)	MD	8	346	2,768	
Harvesting (<i>piece rate</i>)	per kg	8,330	4.20	34,986	
Drying and bagging	MD	20	346	6,920	
Total cost of labor needs and services				50,210	
Other costs					
Interest Charges @ 16%/yr	%/yr	21,400		3,424	
Dehulling	per kg	1,666	4.-/kg	6,664	
Transport/Hauling	per bag	33	20/bag	666	
Coffee Bags – jute sack	bags	33	50	1,650	
Total of other cost and cost of services				12,404	
Total Cost (<i>inputs + labor and services + other costs</i>)				79,214	
2. Money-In					
Yield x Price of Sale	kg	1,666	84	139,944	
3. Profit or loss?	Money-In - Money-Out		☺ or ☹		60,730

Return of Investment (ROI)

= Income/Capital Invested = 60,730 / 79,214
 = 0.767 X 100
 = 77%/year

M4-C Exercise Sheet 1: Yellow Corn (Separate plot from coffee)



Steps:

- Multiply the quantity with the price in each line.
- Sum the money spent (“Money-Out”) on inputs and labor
- Multiply the yield by the price of sale (“Money-In”)
- Subtract the sum of “Money-Out” from the “Money-In”
- Determine if there was a profit or a loss

1 ha of 2nd crop local variety Yellow Corn Planting distance @ .20cm x 0.75cm rows planted in Furrows

	Unit	Qty	Price (₱)	Total (₱)
1. Money-Out				
Inputs				
Seeds – Hybrid Variety	9 kg/bag	2	6000	12,000
Inorganic Fertilizer – 50 kg/bag	Bags	10	1,200	12,000
Organic Fertilizer (Chicken Dung)	Bags	30	100	3,000
Herbicides	Liters	3	400	1,200
Total costs of inputs and services				28,200
Labor and Services				
Land preparation – Plowing, Harrowing and Furrowing	MAD	6	500	3,000
Fertilization (Basal and Sidedress)	MD	6	346	2,076
Manure Spreading	MD	6	346	2,076
Planting	MD	10	346	3,460
Herbicide Application	MD	2	346	692
Harvesting – piece rate	Per Kg	6,000	1.50	9,000
Shelling	Per Sack	120	15	1,800
Transport to Dryer	Per Kg	6,000	0.50	3,000
Labor - Drying	MD	12	346	4,152
Labor – sacking and loading	Per Sack	120	15	1,800
Transport to Buyer	Per Kg	6,000	1	6,000
Total cost labor and services				37,056
Other Costs				
Sacks – Plastic 50 kg	Piece	120	15	1,800
Interest Cost	Per Cropping	28,200	16%	4,512
Total Other Cost				6,312
Total costs (Costs of inputs + labor and other services + other costs)				71,568
2. Money-In				
Yield x Price of Sale	kg	6,000	17.00	102,000
3. Profit or loss?	Money-In - Money-Out		😊 or 😞	30,432

Return on Investment (ROI)

= Income/Capital Invested = 30,432 / 71,568

= 0.42 X 100

= **42%/cropping**

M4-D Exercise Sheet 1: Ginger (*Intercrop with coffee*)



Steps:

- Multiply the quantity with the price in each line.
- Sum the money spent (“Money-Out”) on inputs and labor
- Multiply the yield by the price of sale (“Money-In”)
- Subtract the sum of “Money-Out” from the “Money-In”
- Determine if there was a profit or a loss

500 m ² of 3rd crop local variety Ginger Planted in between coffee rows @ 0.30 x 0.30 m	Unit	Qty	Price (₱)	Total (₱)
1. Money-Out				
Inputs and services				
Seedlings	kg	500	40	20,000
Insecticides/Fungicides	Litres	1	800	800
Fertilizer 14-14-14, Urea	50kg Bags	2	1,400	2,800
Chicken Dung	Sack	10	100	1,000
Total cost of inputs				23,700
Labor and Services				
Furrowing	MAD	2	500	1,000
Planting	MD	5	346	1,730
Fertilizing	MD	5	346	1,730
Weeding 1	MD	10	346	3,460
Harvesting	MD	8	346	2,768
Washing	MD	8	346	2,768
Trucking (50 kgs/sack)	Sacks	60	50	3,000
Hauling (Labor) loading	MD	2	346	692
Total cost of Labor				17,148
Other Cost Cost of Sacks	Per Sack	60	15	900
Interest Cost @ 16%/cropping @ 23,700				3,792
Total other cost				4,692
Total costs (Costs of inputs + labor and other services + other cost)				45,540
2. Money-In				
Yield x Price of Sale	kg	1,500	40	60,000
3. Profit or loss?	Money-In - Money-Out		😊 or 😞	14,460

Return on Investment (ROI)

= Income/Capital Invested = 14,460 / 45,540

= 0.317 X 100

= **32%/cropping**

M4-E Comparing Results

Please tell what is good and what is bad business and indicate reasons.*

*To be subjected to group discussion on reasons why the business is categorized as good, fairly good, not good business. Input levels of satisfaction as a factor.



1 ha of Coffee



1 ha Yellow Corn






500m² Ginger

Yield	kg/ha	1,666	6,000	1,500 kgs
1. Money-Out	pesos/area	79,214	71,568	45,540
2. Money-In	pesos/area	139,944	102,000	60,000
3. Profit or Loss?	pesos/area	60,730	30,432	14,460
Return on Investment (ROI)		77% per year	42 % per cropping	32 % per cropping
☺ or ☹		Good Business*	Good Business*	Fairly Good Business*

Module 5 Decisions for doing good business

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour
III. Target group	Smallholders/land owners (male and female),
IV. Objectives	<div data-bbox="451 355 535 447" data-label="Image"> </div> <p>Key objectives</p> <p>The participants will know how to compute cost, analyze his production results and decide on how to improve his income</p> <div data-bbox="462 551 527 631" data-label="Image"> </div> <p>Acquired Knowledge</p> <p>Participants</p> <ul style="list-style-type: none"> • Familiarize on concept of unit cost of production/break-even production cost • Know the composition of costs/expenditure and are able to identify and analyze main cost centers • Know the difference between gross revenue and profit (money in-money out) • Are familiar with the concept of profit and loss (per farm enterprise and per product unit) <div data-bbox="454 1010 535 1102" data-label="Image"> </div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Identify and calculate costs/expenditures (money out) and receipts (money in) and record costs and income • Determine profit or loss of a farm enterprise • Compare profit or loss and unit cost across crops and across production techniques • Make decisions for better business (identify new combinations of inputs, crops or technologies and adoption of GAP) • Improve efficiency/optimizing farm management <div data-bbox="462 1492 527 1572" data-label="Image"> </div> <p>Acquired Attitudes</p> <ul style="list-style-type: none"> • Relate business decisions to productivity given scarce resources • Understand the income potential and investment needs of improved production techniques • Optimizing land usage, cost management, investment in inputs & potential returns from productivity increase • Perceive farming as a business

V. Content, teaching method, allocated time	
Subject	Method, Materials and Key Learning Points
Determine profit from improved production techniques	<p> Workshop or Plenary</p> <p>The same workshop groups (module 4) do the calculation for one farm enterprise using the corresponding sheet on improved techniques Use Annex M5-A, B and C p.59-61 (Farmer’s Workbook p.21-23) Let the group identify the techniques that constitute “better business” Workshop groups present their results. The reporters of each group write the results in the overview posters (<i>that will constitute also the basis for module 6 M6-A p.67</i>)</p> <p>Processing of activity: <i>What do the results tell us?</i> <i>What is better business if we look at profit or loss?</i> <i>What would you change if this were your farm to increase profit?</i></p> <p>Calculation of prepared examples (<i>improved techniques: adoption of GAP e.g. right variety, crop protection, pruning, rejuvenation, fertilizer application, optimal land usage + application of inputs + different cropping models</i>) and comparison</p> <hr/> <p> Materials</p> <ul style="list-style-type: none"> • Pages 59,60 & 61 : Annex M5-A, B and C (<i>Content</i>) • Blank Poster of M5-A, B and C • Page 62 : Annex M5-D Reminder on Business Concepts (<i>Reference</i>) • Calculators <hr/> <p> Key Learning Points</p> <p>Changing systems, adoption of better technologies, use of GAP, and application of inputs can increase incomes. Knowing the present income and the competitiveness of farm enterprises is necessary for decisions geared towards improved income and production.</p>
VI Wrap-up/ Synthesis	<p>What are the considerations (basis) to cover decision for good business?</p> <ol style="list-style-type: none"> 1. Key activities, inputs to increase yield (GAP) 2. ROI, income as basis 3. Risks endured 4. Market absorption etc. <p>Reiterate KLPs and main lessons as presented below.</p>
VII. Bibliography, references / credits	FBS Training material from GIZ/SCB



Main Lessons

- 1.** The Difference between Money-In and Money-Out indicates whether we are making a loss or profit from the use of the land.
- 2.** The Unit Cost of a crop indicates if it can compete with other markets or international market with the same crop produced elsewhere. In the case of food crops, the Unit Cost indicates if it is better to buy the crop on the market.
- 3.** The good agricultural entrepreneur (man or woman) calculates well ahead of the season to decide what he/she will produce and which techniques to use.
- 4.** During the production season the good agricultural entrepreneur (man or women) records money spent for farm operations and inputs.
- 5.** After the harvest, the good agricultural entrepreneur evaluates his/her profit and identifies what changes are needed to improve the planning and profit for the next production season.

Module 5: Decisions for Doing Good Business

- 1. M5-A** : Comparing Results - 2 Scenarios for Coffee *p.59 (Content)*
- 2. M5-B** : Comparing Results - 2 Scenarios for Yellow Corn *p.60 (Content)*
- 3. M5-C** : Comparing Results - 2 Scenarios for Ginger *p.61 (Content)*
- 4. M5-D** : Reminders on Business Concepts *p.62 (Reference)*

Module 5 Decisions for doing good business

How to do better business? In this section we will see the possible improvements and how to make good decisions. We will use our results and do the same calculations for improved techniques. The calculations are explained on page 62.

M5-A Exercise 1 : Comparing Results - 2 Scenarios, Coffee

		Coffee without Fertilizer and pruning (1 ha)			Coffee with Pruning and Fertilizer (1 ha)		
	Unit	Qty	Price (₱)	Total (₱)	Qty	Price (₱)	Total (₱)
1. Money-Out							
Inputs							
Insecticides	liters	1	1,200	1,200	1	1,200	1,200
Herbicides	litres	6	400	2,400	6	400	2,400
Fungicides	sachets	0			4	250	1,000
Fertilizer	50 kg bags	0			10	1,200	12,000
Bags - Jute sacks	pcs	3	50	150	34	50	1,700
Cost of Inputs				3,750			18,300
Labor							
Pruning	MD	0			12	346	4,152
Fertilization	MD	0			4	346	1,384
Spraying	MD	8	346	2,768	8	346	2,768
Harvesting	MD	750	4.20	3,150	8,330	4.20	34,986
Drying, bagging	MD	6	346	2,076	20	346	6,920
Cost of Labor				7,994			50,210
Money-Out (Pesos)				11,744			68,510
2. Money-In							
Yield x Price of Sale	kg	150	84	12,600	1,666	84	139,944
3. Profit or Loss		😊 or 😞					
Money-In - Money-Out				856			71,434

M5-B Exercise 2 : Comparing Results - 2 Scenarios, Corn

	Unit	2 nd crop Yellow Corn Without Fertilizer : Local variety (1 ha)			2 nd crop Yellow Corn with Fertilizer : Hybrid (1 ha)		
		Qty	Price (₱)	Total (₱)	Qty	Price (₱)	Total (₱)
1. Money-Out							
Inputs							
Seeds – Hybrid Variety	9 kg/bag	2	17	2,754	2	6,000	12,000
Inorganic Fertilizer 50 kg/bag	bags				10	1,200	12,000
Organic Fertilizer (Chicken Dung) 30 kg/bag	bags				30	100	3,000
Herbicides	liters				2	800	1,600
Cost of Inputs				2,754			28,200
Labor and Services							
Land preparation – Planting, Harrowing and Furrowing	MAD	6	500	3,000	6	500	3,000
Fertilization (Basal and Sidedress)	MD				6	346	2,076
Manure Spreading	MD				6	346	2,076
Planting	MD	10	346	3,460	10	346	3,460
Herbicide Application	MD				2	346	692
Harvesting	per kg	2,500	1.50	3,750	6,000	1.50	9,000
Shelling	per bag	50	15	750	120	15	1,800
Transport to Sheller and Drying	per kg	2,500	0.50	1,250	6,000	0.50	3000
Labor – Drying	MD	3	346	1,038	12	346	4,152
Labor – sacking and loading	per sack	50	15	750	120	15	1,800
Transport to Buyer	per kg	2,500	1	2,500	6,000	1	6,000
Labor and Services				16,498			37,056
Other Cost							
Sacks – Plastic 50 kg	piece	50	15	750	120	15	1,800
Interest Cost	per cropping				28,200	16%	4,512
Other Cost				750			6,312
Money-Out				20,002			71,568
2. Money-In							
Yield x Price of Sale	kg	2,500	17	42,500	6,000	17	102,000
3. Profit or Loss Money-In - Money-Out				22,498			30,432

*Bukidnon Conditions

M5-C Exercise 3 : Comparing Results - 2 Scenarios, Ginger







0.30 x 0.30 m 500 m ² 3rd crop local variety	Unit	3 rd crop Ginger without Fertilizer (500 m ²)			3 rd crop Ginger with Fertilizer (500 m ²)		
		Qty	Price (₱)	Total (₱)	Qty	Price (₱)	Total (₱)
1. Money-Out							
Inputs							
Seedlings	kg	500	40	20,000	500	40	20,000
Insecticides/ Fungicides	liters				1	800	800
Fertilizer 14-14-14, Urea	bags				2	1,400	2,800
Chicken Dung	sack				10	100	1,000
Cost of Inputs				20,000			24,600
Labor							
Furrowing	MD	1	500	500	2	500	1000
Planting	MD	5	346	1,730	5	346	1,730
Fertilizing	MD				5	346	1,730
Weeding 1	MD				10	346	3,460
Harvesting	MD	2	346	692	8	346	2,768
Washing	MD	1	346	346	8	346	2,768
Trucking (50 kgs sack)	sacks	20	50	1,000	60	50	3,000
Hauling (Labor) loading	MD	1	346	346	346	2	692
Cost of Labor				4,614			17,148
Other Cost							
sacks	piece	20	15	300	60	15	900
Interest Costs @ 16%/cropping		20,000		3,200	23,700		3,792
Other costs				3,500			4,692
Money-Out				28,114			45,540
2. Money-In							
Yield x Price of Sale	kg	800	40	32,000	1,500	40	60,000
3. Profit or Loss							
Money-In - Money-Out				3,886			14,460

*Based on farmer interview from Bagong Silang, Maramag.

Module 5: Reminder on business concepts

Calculation	Explanations
Money-out (Variable Costs) = Cost of Inputs + Cost of Labour	<p>The variable costs are the money spent on Inputs and Labour for the crop.</p> <p>They are called “variable” because they increase with the size of the field. If you plant 2 hectares instead of 1; the variable costs are multiplied by 2. You will need 2 times as much inputs and labour. If you plant 0.5 hectare instead of 1, the variable costs are divided by 2. You need half as much inputs and labour.</p> <p>To finance the next season an entrepreneur must save enough money to cover the “variable costs”</p>
Money-in (Gross Revenue) = Yield x Sale Price	<p>The Gross Revenue is the income from the sale of the crop. In case of home consumption, it is the value of the harvest if you had to purchase it.</p>
Profit or loss (Gross margin) = Gross Revenue – Variable Costs	<p>The Gross Margin is the benefit of using the land expressed in money terms. It indicates whether there was profit or loss. The comparison between the gross margins of different crops or agricultural production techniques helps to choose the best form of production to generate income.</p>
Unit Cost = Variable Costs/Yield	<p>The Unit Cost is the cost of producing one kilogram of product.</p> <p>If the Unit Cost of producing a crop is greater than the Sale Price, it is better to simply purchase the crop. The production of the crop is only a good business if the Unit Cost of the crop produced on the farm is smaller than the Purchase Price of the crop.</p>
Fixed Costs	<p>Certain costs are called fixed costs. These are costs for equipment and tools that the farmer owns and are used on multiple crops or over multiple years, such as sprayers or irrigation pumps. The Fixed Costs do not vary with the size of the field. To recover the value of fixed cost items, it is assigned a depreciation value. Depreciation value is computed by dividing the purchase cost of a fixed cost item by the number of years it is usable.</p>

Module 6 Seize Opportunities: Diversify your Farm enterprises for more income

I. Trainer	Specialized FBS-Trainer
II. Time	2 hours
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<p> Key objectives</p> <p>To recognize opportunities and risks and be able to decide on how best to maximize revenue from land</p> <p> Acquired Knowledge</p> <p>Participants know</p> <ul style="list-style-type: none"> • The opportunities for more and better distributed income and related risks • Mitigation measures on risk • It is possible to manage / to reduce risks (<i>market, production</i>) by diversifying to other crops (<i>plants + livestock</i>) • It is possible to assess risks with the profit or loss calculation <p> Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Identify opportunities and related risks using profit-loss calculation • Make decisions on the opportunities by combining them (<i>adoption of GAP and better farm management</i>) for more income <p> Acquired Attitudes</p> <ul style="list-style-type: none"> • Look for opportunities, assess them and seize them • From business as usual to better business
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Identify opportunities for better income from one farm enterprise	<p> Lecture</p> <p>Let's see what is the best business (<i>Optimizing current business</i>)</p> <ul style="list-style-type: none"> • Prepare and use the overview on profit or loss from exercises in module 5 (<i>Coffee, Yellow Corn and Ginger</i>) traditional and improved techniques M6-A p.67 • Compare the farm enterprises and technique according to profit or loss • Discuss the results and decisions the participants would make on this basis. <hr/> <p> Materials</p> <p>Page 67 : Annex M6-A Comparative Productivity/Profitability - 3 Crops</p>



Workshop or Plenary

What are other possibilities/opportunities you know or practice to get income throughout the year?

Participants give and explain examples from their experience (other crops or animal husbandry)

List down responses.

From responses. Provide inputs on the opportunities

- Optimize use of land for main crop: coffee using GAP
- Value adding on existing crops
- Intercropping
- Diversification

Then, proceed to succeeding lecture for details on intercrop.



Lecture

Principles of intercrop, What are crop mix?

Crop risks, Market driven and as Savings

What are the considerations or criteria for choice of crops for intercrop or diversification?

- market
- for intercrop, does not compete with coffee and does not adversely affect coffee
- Cash flow to match cash needs of farmers

Present principles and guidelines of intercropping **M6-B p.68;**
Farmer's Workbook **p.26**

Present intercrop and diversification opportunities/scenarios i.e. daily, weekly, monthly, quarterly and annual (coffee). Use **M6-C, D, E and F p.69-72;** Farmer's Workbook **p.27-30**

Note to trainer: For SK use **M6-G p.73-80**



Materials

- Page 68 : Annex M6-B Principles & guidelines of intercropping.
- Page 69-72 : Annex M6-C, D, E & F Intercrop and diversification opportunities/scenarios.
- For Sultan Kudarat, page 73-80 : Annex M6-G.1-6



Key Learning Points

Knowing other product market opportunities allows for better decision making in diversifying farm incomes.

Identify and assess risks



Workshop or Plenary

Input and Plenary

- ***What risks do we face in agriculture as a business?***
- ***What happens with the profit if prices and yield go down?***
Let's calculate first!

	Risks	Probability of Risk (H,M,L)*	Impact on Business	Mitigating Measures
	1. Market Risks			
	• Drop in price of crop say from <u> x </u> to <u> y </u>			
	2. Production Risks			
	• Reduced yields • Low quality • Disease infestation			Crop Insurance
	3. Natural Risks			Crop Insurance
	• Flooding • Drought • Earthquake			
	4. Man Made			
	• Peace and Order • Theft • Conflicts			
	* H = High M = Medium L = Low			
	Discuss results			
	<ul style="list-style-type: none"> • How probable are these risks according to your experience? • What would you do to avoid/mitigate these risks? (discuss) • Are the risks acceptable? Controllable? Avoidable? 			
VI Wrap-up/ Synthesis	Reiterate key learning points and main lessons below.			
VII. Bibliography, references / credits	FBS Training material from GIZ/SCB			



Main Lessons

1. Analyzing profits of different crops and production techniques helps to make decisions on using the land to maximize revenue. This comparison is important to all agricultural entrepreneurs (*man or woman*)
2. Production decisions are based on the analysis of the production cost + returns of crops selected.
3. The good agricultural entrepreneur knows that a fluctuation in prices constitutes a risk on revenue. Risks are a concern for traditional as well as improved varieties and techniques.
4. To evaluate the impacts of this Market Risk, the entrepreneur calculates the Money-In with a much lower price (*“pessimistic”*) than the current price (*or last season’s price*). If the “pessimistic” profit can still satisfy the revenue objectives or the farmer’s **“level of satisfaction”**, then the risk is acceptable.

Module 6: Seize Opportunities to Diversify

1. **M6-A** : Comparative Crop Productivity/ Profitability *p.67 (Content)*
4. **M6-B** : Intercropping in coffee: Guidelines *p.68 (Content)*
2. **M6-C** : Sayote : Cost and Return as Diversification Crop *p.69 (Content)*
3. **M6-D** : Atsal(*Bell pepper*): Cost and Return as Diversification crop *p.70 (Content)*
5. **M6-E** : Intercropping Model 1 *p.71 (Content)*
6. **M6-F** : Intercropping Model 2 *p.72 (Content)*
7. **M6-G.1-6** : Crop Diversification and Intercropping Options (Sultan Kudarat)
p.73-80 (Reference)

M6-A Comparative Productivity/Profitability - 3 Crops

What crops will you choose?

	Unit	Coffee without Fertilizer and without pruning	Coffee with Pruning and with Fertilizer	Yellow Corn Local variety without Fertilizer	Yellow Corn Improved variety with fertilizer	Ginger Local variety without Fertilizer	Ginger Improved variety with fertilizer
Surface Area	ha						
1. Money-Out	Pesos/ha						
2. Money-In	Pesos/ha						
3. Profit or Loss? 😊 or 😞	Pesos/ha						

M6-B Intercropping in Coffee: Guidelines

A. Rationale/Objectives of Intercropping

1. Increase land productivity by optimizing land use, labor, fertility and inputs.
2. Secure a more regular income, provide year round employment for the household
3. Reduce the risks of financial loss due to price fluctuations from a single crop or from coffee prices
4. Climate adaptation to weather pattern changes- heat, rainfall changes, wind protection

B. General Considerations on the choice of intercrops

1. Crops should not compete for fertility and water with the coffee plants.
2. Crops should not harbor or host to coffee pests and parasites.
3. Competition to sunlight from lateral shading to young coffee plants should be avoided.
4. Considerations to erosion particularly to areas with slopes beyond 15% should be avoided.
5. Adequate spacing must be considered between the coffee plants and the chosen intercrop.
6. Weed control and adequate fertilizer supplement to compensate the nutrient removal.
7. The choice of intercrops should consider availability of a ready market and production technology.
8. Tenurial status of the landholding should be considered (*ownership of land*)

C. Type of intercropping

	Placements		Time of Establishment
	Between rows	Within rows	
1. Temporary intercrops or catch cropping (short term) ≤ 4 months	Beans Soybeans Vegetables Peanuts Sweet potato Yams Ginger Upland rice Corn	Ginger Squash Melons	≤3 yrs. Old Coffee Plantings
2. Permanent intercropping or strip cropping (medium-long term)	Coconut Bananas (table and cooking type) Black pepper Pineapple	Black pepper Avocado Papaya Rambutan Durian	During establishment, Before Establishment or During Rejuvenation
	Perimeters	Between and within rows	
3. Agroforestry (long term)	Narra Falcata Moses Fruit trees Coconut	Falcata Ipil-ipil Coconut	During farm establishment

M6-C Sayote: Cost and Return as Diversification Crop** (for 1 year)

Sayote Distancing: 4 x 5m @ 3 seed pieces/hill crop 500 m²	Unit	Quantity	Price (₱)	Total (₱)
1. Money-Out				
Inputs				
Seed	pcs	75	5.00	375
Insecticide/Fungicide	liters	1	6.00	600
Fertilizer (inorganic) 50 kgs/bag	bags	1	1,200	1,200
Chicken Dung	bags	5	100	500
Propping twine	roll	6	350	2,100
Bamboo stakes and poles	pcs	25	50	1,250
Total cost of inputs				6,025
Labor - Establishment Period				
Hole digging	MD	2	346	692
Planting and fertilization	MD	1	346	346
Trellis construction	MD	6	346	2,076
Total Cost of Labor - Establishment Period				3,114
Labor - Harvesting*				
Harvesting	MD*	cycle**	346	692
Hauling (field)	MD	1	346	346
Trucking (to market)	per kg	750	0.50	375
Other Cost				
Cost of Sacks	pc	13	15	195
Total Labor - Harvesting + Other Cost				1,608
Total Labor- Harvesting + Other Cost per year (x24)*				38,592
Total cost per year (Costs of inputs and Labor and Other Cost)				47,731
2. Money-In				
Yield x Price of Sale (x24)*	kgs per 2 weeks	750	5	90,000
3. Profit or loss? Money-In — Money-Out				42,269

* every 2 weeks

**Data comes from Maramag, Bukidnon- Farmer's Interview

Note: Sayote may continue to produce for 3-5 year from establishment.

Note:

Depreciation cost	=	9,139/3 years production period
	=	3,046.33/year/12 months per year
	=	223.86/month/2 harvest/month
	=	127.00/harvest
Cost of harvesting	=	1,608/harvest
Depreciation Cost + Harvest Cost	=	1,608 + 127
Depreciation Cost + Harvest Cost	=	1,735.00/harvest cycle of 2 weeks
Depreciation Cost + Harvest Cost	=	1.735 ÷ 750 kgs
	=	2.31/kg

M6-D Atsal(Bell Pepper): Cost & Return as Alternative Diversification Crop

Atsal(Bell Pepper) Planting Distance: 0.30 x 0.30 x 1.0m double raw system	Unit	Qty	Price (₱)	Total (₱)
1. Money-Out				
Inputs and services				
Plowing	MAD	4	500	2,000
Harrowing/Pulverising	MAD	2	500	1,000
Bed Forming	MAD	2	500	1,000
Transplanting	MD	4	346	1,384
Fertilization	MD	2	346	692
Seeds	can 250g	1	1,800	1,800
Chicken dung	bags - 30kg	10	100	1,000
Hydrated lime	bags - 30kg	2	200	400
Furadan Granulated Insecticide	packs @ 100 g/pack	3	250	750
Fertilizer Inorganic 14-14-14	50 kg bag	1	1,200	1,200
46-0-0	50 kg bag	1	1,100	1,100
Foliar Fertilizer	50 kg bag	5	300	1,500
Insecticide	liter	1	600	600
Fungicide	kg	2	380	760
Total cost of inputs and services				15,186
Labor				
Spraying	MD	10	346	3,460
Fertilization	MD	2	346	692
Harvesting/Hauling	MD	10	346	3,460
Total Cost - Labor				7,612
Other Cost				
Cost of Sacks	pcs	38	30	1,140
Total other cost				1,140
Total costs (Costs of Inputs and Services + Labor + Other Cost)				23,938
2. Money-In				
Yield x Price of Sale	kgs	1,120	40	44,800
3. Profit or loss? Money-In – Money-Out				20,862
😊 or 😞				

*Data Source: Farmer's Interview - Impasug-ong, Bukidnon

Note:

$$\begin{aligned} \text{Production Cost} &= 20,862 \div 1,120 \\ &= 18.62/\text{kg} \end{aligned}$$

M6-E Examples of Intercropping Mixes

Intercropping Model 1: Coffee + Falcata + Narra (1 hectare lot)

Crop	Spacing	Trees/hectare	Production/crop	Total Production	Price/Unit	Total Income (gross)
Coffee	3x3m	1,111	1 kg GCB	1,111	84.00	93,333
Falcata	8x8	156	0.83 m ³	129 cu. m.*	3,000	387,000
Narra	5m along the perimeter	80		80 cu. m.**	6,000	480,000
Total						960,333

* : In 7 years time

** : In 15-20 years time

Source: Pure Nescafe Plan - agroforestry to create shared values, 2013

Layout :



Legend:

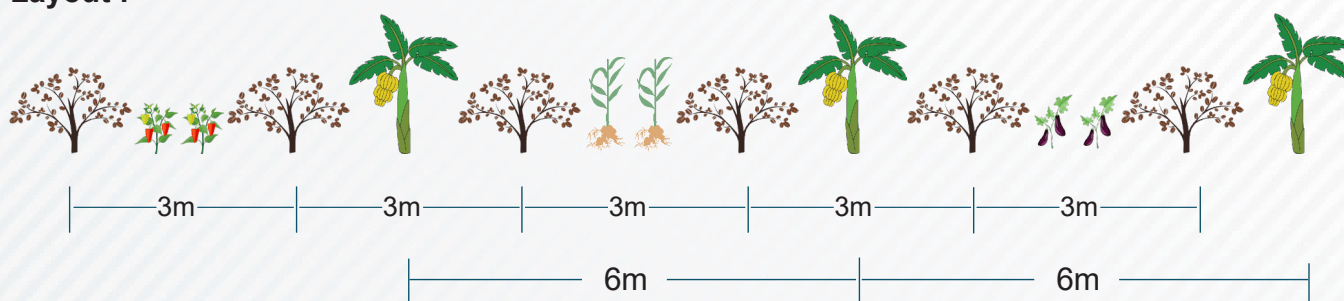


M6-F Intercropping Model 2: Coffee + Table Banana + Mixed vegetable (Ginger, Yam, Bell Pepper, Eggplant*)

Crop	Spacing	Trees/ hectare	Production/ crop	Total Production	Price/ Unit	Total Income (gross)
Coffee	3x3m	1,111	1 kg GCB	1,111 kgs	84.00	93,333/yr
Table Banana	6x3m	555	20 kgs/tree	11,000 kgs	15	166,666 / 18 months
Ginger	500m ² @ 30cmx30cm	555	1 kg/hill	555 kgs	40	5,400/4months
Yams	(within row) 0.5mx0.5m	1,200	0.3 kgs	360 kgs	15	5,400/4months
Bell Pepper	0.3mx0.3mx 1m(row)	333	2.5 kgs	840 kgs	40	33,600/ 4months
Eggplant	0.5mx0.5mx 0.75m (row)	300	1 kg	300 kgs	15	4,500/ 4 months
Total						

* choices of intercropping by farmer

Layout :



Legend:



M6-G Crop Diversification and Intercropping Options (Sultan Kudarat)
M6-G.1 1 ha. SQUASH (*Suprema F1*) PRODUCTION COST
 Intercropped with coffee

COST				
A. Labor	MD	Rate/MD	Freq.	Amount (₱)
Slashing	Contract at 1,200/hectare		1	1,200
Herbicide	Contract at 25/load of Knapsack sprayer x 24 loads		2	1,200
Sowing	5	320		1,600
Side dressing	2	320		640
Hilling up	4	320		1,280
Weeding	4	320		1,280
Covering	4	320		1,280
Foliar spraying	1	320		320
Twisting	1	320		320
Harvesting (85-90 days):				
a. First harvest	5	320		1,600
b. Second harvest	3	320		960
b. Third harvest	1	320		320
Sacking	4.5	320		1,440
Hauling (labor)	Contract at 10 pesos/sack x 150 sack			1,500
Trucking				21,600
Sub-Total				36,540

B. Material	Quantity	Unit	Unit Price	Amount (₱)
Seeds	1	Can (250g)	3,000.00	3,000.00
Herbicide	1	Gal.	1,000.00	1,000.00
Fertilizer:				
a. Complete (14-14-14)	1.5	Bag	1,150	1,725
b. Yara MILA	0.5	Bag	1,560	780
c. Potash	0.5	Bag	1,150.00	575
Foliar Fertilizer	2	Liter	170.00	340
Sack	100	pcs	17	1,700
Plastic twine	2	kg	60	120
Sub-Total				9,240
Cost of Labor + Material				45,780

Production	Yield	Amount (₱)
a. First harvest	6,264 x 15/kg*	93,960
b. Second harvest	4,104 x 13/kg	53,352
b. Third harvest	42 x 7/kg.	294
Total		147,606

Income	Amount (₱)
a. GROSS Sales	147,606
b. NET	101,826
b. ROI (%)	222%

Breakeven = Production Cost 4.24/kg

**Note: This prices are based on occasional price spikes due to shortage of supply. Normal prices for squash market based ranges between 3.50-8.00/kg.*

M6-G.2 COFFEE MAINTENANCE COST (1 hectare) : Farmer 1

COST				
A. Labor	MD	Rate/MD	Freq.	Amount (₱)
Slashing	10	150	3	4,500.00
Herbicide spraying				
Puning (Desuckering)	4	150	2	1,200.00
Harvesting	Contract @ P30/can fresh berries x 83 cans			2,490.00
Processing:				
a. Drying	Contract @ P70/bag x 20 bags fresh berries			1,400.00
b. Dehulling	Contract @ P 3.00/kg. Beans x 250 kgs GCB			750.00
Hauling (farm-residence)	Contract @ P 30.00/bags x 20 bags fresh berries			600.00
Trucking/Marketing	Contract @ P 1.00/kg. Beans x 250 kgs GCB			250.00
Subtotal				11,190.00

B. Material	Quantity	Unit	Unit Price	Amount (₱)
Herbicide				
Subtotal				
Grand total				11,100.00

II. Production	Yield	Amount (₱)
GCB	250 kg @ P 87/kg	21,750

III. Income	Amount (₱)
a. GROSS Sales	21,750.00
b. NET	10,560.00
b. ROI (%)	94%

CORN PRDUCTION (1 hectare; intercrop with coffee)

COST				
A. Labor	MD	Rate/MD	Freq.	Amount (₱)
Slashing	10	150	1	1,500
Planting	16	150	1	2,400
Herbicide spraying				
Fertilization	6	150	1	900
Harvesting	Contract @ P 30.00/sack x 30 sacks			900
Hauling	Contract @ P 20.00/sack x 30 sacks			600
Shelling	Contract @ P 11.00/sack x 30 sacks			330
Drying	Contract @ P 23.50/sack x 30 sack			705
Trucking/Marketing	Contract @ P 1.00/kg. grains x 1,800 kgs			1,800
Subtotal				9,135

B. Material	Quantity	Unit	Unit Price	Amount (₱)
Seeds	1	Bag	3,000	3,000
Subtotal				
Grand total				12,135

II. Production	Yield	Amount (₱)
Grains	1,800 kg @ 9 pesos/kg	16,200

Income	Amount (₱)
a. GROSS Sales	16,200
b. NET	4,065
b. ROI (%)	33%

M6-G.3**COFFEE MAINTENANCE COST (1 hectare) : Farmer 2**

COST				
A. Labor	MD	Rate/MD	Freq.	Amount (₱)
Slashing	10	150	3	4,500
Herbicide spraying	Contract @ P20/load of knapsack sprayer x 24 loads, 3x/yr			1,440
Puning (Desuckering)	4	150	2	1,200
Harvesting	Contract @ P200/sack fresh berries x 17 sacks			3,400
Processing:				
a. Drying	Contract @ P20/bag x 17 sacks fresh berries			1,400
b. Dehulling	Contract @ P 3.00/kg. Beans x 300 kgs GCB			900
Hauling (<i>farm-residence</i>)	Contract @ P 30.00/bags x 17 bags fresh berries			510
Trucking/Marketing	Contract @ P 1.00/kg. Beans x 300 kgs GCB			300
Subtotal				13,650
B. Material	Quantity	Unit	Unit Price	Amount (₱)
Herbicide	2	gallon	1,200	2,400
Subtotal				2,400
Grand total				16,050

II. Production	Yield	Amount (₱)
GCB	300 kg @ P 87/kg	26,100

III. Income	Amount (₱)
a. GROSS Sales	26,000.00
b. NET	10,050
b. ROI (%)	63%

CORN PRODUCTION (1 ha; intercrop with coffee)

I. COST				
A. Labor	MD	Rate/MD	Freq.	Amount (₱)
Slashing	10	150	1	1,500
Planting	16	150	1	2,400
Herbicide spraying	Contract @ P 20.00/load of knapsack sprayer x 24 loads x 3 times spraying			1,440
Fertilization	6	150	1	900

Harvesting	Contract @ P 30.00/sack x 130 sacks			3,900
Hauling	Contract @ P 20.00/sack x 130 sacks			2,600
Shelling	Contract @ P 11.00/sack x 130 sacks			1,430
Drying	Contract @ P 23.50/sack x 60 sack			1,410
Trucking / Marketing	Contract @ P 2.25/kg. grains x 5,100 kgs (from Salumping to Isulan)			11,475
Subtotal				27,055

B. Material	Quantity	Unit	Unit Price	Amount (₱)
Seeds	1	bag	5,400	5,400
Herbicide	3	gallon	1,200	3,600
Fertilizer	8	bags	1,050	8,400
Subtotal				17,400
Grand total				44,455

II. Production	Yield	Amount (₱)
Grains	5,100 Kg @ 14 pesos/kg	71,400

III. Income	Amount (₱)
a. GROSS Sales	71,400
b. NET	26,945
b. ROI (%)	60%

SUMMARY ON COST AND PRODUCTION					
<i>Farmer 1 (Sitio Tumbaga, Sabanal, kalamansig, Sultan Kudarat)</i>					
Crops	Expense	Production	Gross Income	Net Income	Return Of Investment
Coffee	11,190	250 kg	21,750.00	10,560	94%
Corn	12,135	1,800.00	16,200.00	4,065	33%
<i>Farmer 2 (Salumping, Esperanza, Sultan Kudarat)</i>					
Crops	Expense	Production	Gross Income	Net Income	Return Of Investment
Coffee	16,050	300 kg	26,000	10,050	63%
Corn	44,455	5,100 kg	71,400	26,945	60%

M6-G.4 Sultan Kudarat Condition

		Unit	Cost/Unit	Total Cost (₱)
Upland Rice (1 ha)	Clearing 6md x 150	1	1,200	1,200
	Drilling 12md x 150 6 pairs	1	2,400	2,400
	Spray-Herbicide 7 tanks/ha @ 25 pesos per tank	1	175	175
	Fertilizing Urea 1 sack/	1	300	300
	Almex + 24D @ 25 per tank - Tillering Spray	1	175	175
	Pest Control Spray-Insecticide-Chewing	1	175	175
	Hard dough-enhancement Spray	1	175	175
	Garab 20% @ 40 sacks per ha (8 x 75kg x 18 pesos) or 270 pesos/ sack	40	270	10,800
	Threshing @ 10% from remaining (4 x 75 x 18 pesos)	40	135	5,400
	Hauling	40	20	800
	seeds per lata	7	5,00	3,500
	Roundup 1 liter/ha	1	350	350
	Fertilizing Urea 1 sack/	1	1,120	1,120
	24D 1 liter - Tillering	1	400	400
	Almex 1 carton 10 sachets - Tillering	1	350	350
	Cypermethrin	1	400	400
	Crop Giant	1	700	700
	Total Expenses			28,420
	Gross Income	3,000	18	54,000
	Net Income			25,580
	Cost/kg			9.47
	Return of Investment (ROI)			90%






M6-G.5 Sultan Kudarat Condition (Traditional)




		Unit	Cost/Unit	Total Cost (₱)
White Corn: with tillage (1 ha)	Clearing (slashing)	10	150	1,500
	Herbicide-Glyphosate (gallon)	1	1,200	1,200
	Herbicide application (m.d)	1	200	200
	Furrowing (animal-day)	3	500	1,500
	Planting-PANGGAS	10	150	1,500
	Seeds (OPV; 20 kg/bag)	1	2,500	2,500
	Seed Treatment (bottle; Gaucho)	2	250	500
	Fertilizer application (m.d)	4	150	600
	Fertilizer @ 15 & 45 days after planting, DAP (complete, 2 bags; Urea, 3 bag)	5	1,100	5,500
	Weeding (manual)	20	150	3,000
	Harvest (per bag)	120	40	4,800
	Hauling (from field to dryer)	120	30	3,600
	Sheller (per bag)	120	10	1,200
	Dryer (per bag)	60	10	600
	Trucking (from dryer to buying station; per kilo)	4,800	1	4,800
	Snacks (Merienda)	2,000	1	2,000
	Total Expenses			35,000
	Gross Income	4,800	15	72,000
	Net Income			37,000
	COST/kg			7.29
	Return of Investment (ROI)			106%

M6-G.6 Sultan Kudarat Condition (Improved)

		Unit	Cost/Unit	Total Cost (₱)
Yellow Corn: Hybrid (1 ha)	Clearing (slashing)	10	150	1500
	Herbicide-Glyphosate (gallon)	2	400	800
	Herbicide application (m.d)	2	175	350
	Furrowing "Idas"(animal-day)	3	500	1500
	Planting-PANGGAS	8	200	1600
	Seeds (Hybrid)	1	3000	3000
	Fertilizer application (m.d)	8	200	1600
	Fertilizer @ 15 & 45 days after planting, 1 Urea 2 t14-Mat 1120+(2x1100)	2	3320	6640
	Harvest (per bag)	140	44	6160
	Hauling (from field to dryer)	140	20	2800
	Drying - Sacking - Piling	56	30	1680
	Sheller (per bag)	140	10	1400
	Dryer (per bag)	56	10	560
	Trucking (from dryer to buying station; per kilo)	56	80	4480
	Total Expenses			34,070.00
	Gross Income	4480	12	53,760.00
	Net Income			19,690.00
	Cost/kg			7.60
	Return of Investment (ROI)			58%

Module 7 Manage your money throughout the year

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour; 30 minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Key objectives</p> <p>Knowing your expenditure and planning can lead to good cash flow throughout the year</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Knowledge</p> <p>Participants</p> <ul style="list-style-type: none"> • Understand the financial calendar, positive and negative monthly balances and the annual balance </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Identify periods of cash deficit and surplus • Compare inflows and use figures for financial planning • How to plan expenditure of a farm and a household using the financial calendar • How to manage financial deficits • How to manage surplus money </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Attitudes</p> <ul style="list-style-type: none"> • Careful and planned money spending • Make savings for critical periods (deficit months, start of next cropping season, unexpected events) • Become an entrepreneur as independent as possible • Take a loan only when you know that you would be able to pay it back on time based on your cash flow or financial calendar </div> </div>
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Warm-up	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Role Play</p> <p>Prepare your script and role players</p> <p>Identify 2 women participants prior to the start of the session for the role play. Two wives sharing stories: one spent most of their money upon sales (<i>on various items</i>) and the other saved and was able to provide for their household needs as well as for their production needs for the money-deficit months</p> <p>Role Play presentation</p> </div> </div>

	<p>Processing of activity: What can we learn from this story?</p> <ul style="list-style-type: none"> • Note and list the participants learnings/responses. <p>Close the activity with statement: “It is important to know your income and expenditure(cash flow) on a monthly basis throughout the year. This is to identify the deficit months and what we can do about it.”</p> <hr/> <p> Materials</p> <ul style="list-style-type: none"> • Brown Paper • Pentel Pens • Blackboard • Chalk • Eraser <hr/> <p> Key Learning Points</p> <p>It is important to know your income and expenditure (Cash flow) on a monthly basis throughout the year; to identify the deficit months and what you can do about it.</p> <p>Planning and management of liquidity throughout the year is key to improve income thru:</p> <ul style="list-style-type: none"> • successful production and adoption of improved production techniques • sustainable livelihoods • re-investment of profits • take advantage of market/inputs and • technology opportunities
<p>Financial planning - current and improved production techniques</p>	<p> Lecture</p> <p>What household expenditure do you usually have? Identify and list the responses of participants.</p> <p>Use the Poster: M7-A Foresee household expenditure p.86</p> <p>What can be foreseen? What is difficult to foresee? If we can foresee expenditure we can plan them! Let’s see how we can plan expenditure:</p> <p>Show, explain and discuss the financial calendar (<i>monthly money out-money in</i>)</p> <p>Explain that the financial calendar shall be filled up with reference to the exercises in module 4: farm with 3 hectares current and improved techniques; 1 ha of coffee, 1 ha of Yellow Corn, 500 m² of ginger. Use figures from M4-B, C, D and E p.51-54</p>



Workshop or Plenary

Use the same groups and the data of farmer used from modules 4, 5, and 6. Assign from among the training team a facilitator for each group.

Round 1: Fill-Up the Financial Calendar

Assist each group to calculate the monthly balances, *exercise based on a farm using traditional practices M7-B p.87-88; Farmer's Workbook p.32-33 and exercise based on a farm using improved practices M7-C p.89-90; Farmer's Workbook p.34-35*

Ask the group to complete table **M7-D** and **E**

Use red marker for deficit months.

Let participants identify months with deficit or surplus.

Round 2: Comparison of money available under traditional vs improved practices

After round 1 ask the group to discuss their financial calendars under the 2 scenarios and fill up **M7-D** Comparative money available under traditional vs improved practices.

Which situation is preferable?

What changes are necessary?

Round 3: Financial Calendar - Solutions

From the financial calendar on improved practices each group shall identify the months with deficit and surplus.

Use (-) for deficit months

Fill up **M7-E** Financial Calendar - Solutions to identify the activities that can be done to improve liquidity throughout the year.

Processing of the activity: Plenary presentation

Select one group for plenary presentation.

In the presentation the facilitator should take note of the months with deficit and those with surplus.

How much is left at the end of each month?

How much is left at the end of the year?

Also put emphasis on what they propose to do on surplus and deficit months (*Presentation on M7-E*):

- Value of saving during surplus months and weather surplus is enough to fill gaps on deficit months.
- Use of surplus to invest in new crops or new enterprise.
- Need to access credit and loan for deficit months if surplus cannot fill in the gap

End the discussion with KLP statement.



Materials

- Page 86 : Annex M7-A Foresee household expenditure
- Page 51-54 : Annex M4-B, C, D and E
- Page 87 : Annex M7-B Financial Calendar - Exercise based on a farm using traditional practices
- Page 89 : Annex M7-C Financial Calendar - Exercise based on a farm using improved practices
- Page 91 : Annex M7-D Comparative money available under traditional vs improved practices
- Page 92 : Annex M7-E Financial Calendar - Solution
- Brown Paper
- Pentel Pens
- Blackboard
- Chalk
- Eraser



Key Learning Points

Efficient use of income and planning for the deficit months are important for continuous cash flow.

VI Wrap-up/
Synthesis

Reiterate key learning points and main lessons below

VII. Bibliography,
references /
credits

FBS Training material from GIZ/SCB



Main Lessons

1. In the agricultural enterprise, expenditures (Money-Out) for the farm and the household are made each month, but the revenue (Money-In) comes only during the months of harvest or sale of produce. Therefore there are months of the year where the expenditures are greater than the revenues. These months are called “**deficit months.**”
2. For this reason, the good agricultural entrepreneur (man or woman) makes a financial calendar. He or she plans with the spouse the expenditures for production and household needs.
3. To cover the expenditures in deficit months, the good agricultural entrepreneur saves money from the sales of produce (“surplus months”).
4. Improved techniques can improve the revenues of the agricultural entrepreneur.
5. The needs for Inputs can be identified with calculations of Gross Margin and the Financial Calendar. This information can be used to make savings in a targeted way or to solicit credit for production.

Module 7: Manage your Money Throughout the Year

1. **M7-A** : Analysing household expenditure *p.86 (Content)*
2. **M7-B** : Financial Calendar- Farm using traditional practices *p.87-88 (Content)*
3. **M7-C** : Financial Calendar- Farm using improved practices *p.89-90 (Content)*
4. **M7-D** : Comparison Table on Traditional vs Improved Practices *p.91 (Content)*
5. **M7-E** : Financial Calendar - Solutions *p.92 (Content)*
6. **M7-F** : Optimizing my Farm Business : Investments in New Crops *p.93 (Reference)*

Module 7 Manage your money throughout the year

Bad management of money

- How does one know if the money is managed badly?
- What are the causes?
- How to manage money well during the year?

One must Plan! The person, who fails to plan, plans to fail!

M7-A First step: Foresee household expenditure

Below are the expenditures of a Household of __ persons

Can we foresee these expenditures? When is the money needed? Let's calculate how much money is needed for the household in one year.

Money Needs	Can be foreseen	Period	Money-Out	
			Pesos per month	Pesos per year
Food	Yes	Each month		
Clothing	Yes	Each month		
House Repair/ Maintenance	Yes	Each month		
Medical	Yes	Each month		
Other Costs				
Sub-total	Yes	Each month		
School fees (500 Pesos per child, 3 times a year)	Yes	January, April, September		
Clothing	Yes	Once a year		
Happy events Social/Cultural/Religious events (Fiesta)				
Birthday	Yes	Depends on month with birthday		
Christmas	Yes	Once a year (December)		
Total expenditure for household per year that can be foreseen				

M7-B Second Step: Fill financial calendar on p.87-88 using traditional practices

- Let us put these numbers into a financial calendar.
- How much money is left at the end of each month?
- How much money is left at the end of the year?

M7-C Third Step:

Fill out the second financial calendar **p.89-90**. The expenditures for Inputs and Labour are those from the Exercise Sheets in Module 5 – using improved practices. **p.59-61**

M7-B Financial Calendar - Exercise based on a farm using traditional practices

CY _____												
Money-Out	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Coffee (1 ha)												
Inputs												
Labor												
2nd crop (1 ha)												
Inputs												
Labor												
3rd crop (1 ha)												
Inputs												
Labor												
Household												
School Fees												
Happy Events Social/ Cultural/ Religious events (Fiesta)												
Clothing												
Total per month												

CY _____

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Money-In												
Coffee												
2 nd crop												
3 rd crop												
Money-In from other sources												
Remittance Received												
Total per month												
Balance Money-In Minus Money-Out												
Cumulative balance												

M7- C Financial Calendar - Exercise based on a farm using improved practices

CY _____												
Money-Out	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Coffee (1 ha)												
Inputs												
Labor												
2nd crop (1 ha)												
Inputs												
Labor												
3rd crop (1 ha)												
Inputs												
Labor												
Household												
School Fees												
Happy Events Social/ Cultural/ Religious events (Fiesta)												
Clothing												
Total per month												

CY _____												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Money-In												
Coffee												
2 nd crop												
3 rd crop												
Money-In from other sources												
Remittance Received												
Total per month												
Balance Money-In Minus Money-Out												
Cumulative balance												

M7- D Comparative money available under Traditional vs Improved Practices

Which situation is preferable? What changes are necessary?	Can be foreseen?	Period-month	With traditional production techniques per year (Pesos)	With improved production techniques per year (Pesos)
Money-Out for household	yes	each month		
Money-Out for Production (inputs and labour)	yes	different months		
Money-Out for household and production	yes	different months		
Money-In from production and other sources	yes, but can change	different months		
Money available for savings, other expenditure Money-In from Production and other sources minus Money-Out for Household and inputs				
Difference between the two situations (Pesos)				

M7-E Financial Calendar - Solution

What to do for deficit months and what to do for the months of surplus
What other activities can be done to improve liquidity throughout the year

Months	Surplus/Deficit (-) Amount in ₱	What to do on Surplus or Deficit Months
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

M7-F Optimizing my Farm Business: Investments in New Crops*

Existing Farm Business					Investing in New Crops*			
Crop	Coffee	Intercrop 1	Intercrop 2	Crop 1	Crop 2	Crop 3	Crop 4	
Money-out								
Yield Projections								
Money In (Sales)								
Total Income								
My old Farm income (<i>Total of Coffee + Intercrop 1 + Intercrop 2</i>)				My new Farm income (<i>Total of Coffee + income from crops chosen as new crops</i>)				

*New crops have to undergo the basic analysis of Profitability, Risk etc. (Module 4, 5)

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour 30 minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div data-bbox="451 362 532 447" data-label="Image"> </div> <p>Key objectives</p> <p>Understand the linkage of savings and investments in the farming enterprise and the need to access to financial services</p> <div data-bbox="459 562 524 631" data-label="Image"> </div> <p>Acquired Knowledge</p> <p>Participants know the</p> <ul style="list-style-type: none"> • meaning and importance of savings • meaning and importance of credit and different types • importance of taking a loan from official credit providers only • meaning and function of interest rates guarantees • benefits of repayment of credits • financial service providers, their location and their conditions <div data-bbox="451 959 532 1044" data-label="Image"> </div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Prepare for taking a credit using tools of preceding modules (<i>e.g. gross margin, cropping and financial calendar to determine the need of credit and moment of credit availability, period of payment</i>) • Compare conditions of financial services (<i>rates of interest, repayment period, deposits</i>) • Obtain a guarantee for a loan • How to manage financial deficits • Manage the inflows to make savings and repay a loan <div data-bbox="459 1469 524 1549" data-label="Image"> </div> <p>Acquired Attitudes</p> <p>Save money for future needs</p> <p>Take a loan only</p> <ul style="list-style-type: none"> • when you need it based on your capacity to pay (cash flow) • when you are sure to pay it back in time from the investment <p>Stick to the original objective of taking the loans, no diversion of fund use</p>

Subject

Method, Materials and Key Learning Points

Savings



Lecture

Introduce the topic on saving by the trigger question:

“What is your concept on formula for savings?”

Generate responses from the participants.

Recap discussion by introducing the “**Saving Formula**”.

Income - Savings = Expenses

Set aside a specific amount as savings on a regular basis; weekly/ monthly.

Use the filled Financial Calendar - Farm using improved practices, **M7-C p.89-90** from Module 7.

Review the monthly cash flow to determine the deficit periods (amount of money needed) and surplus periods (*savings possible, amount*)

Using the above Financial Calendar:

- How much savings is possible for this case?
- What are the appropriate moments for savings?
- When might you need these savings?
- In what ways can you save money, and what is the benefit?

Elicit responses from the participants.

From the response of the participants, facilitator presents:

- Why is it important to save? Use **M8-A p.99**

Follow-up question: Where do you save?

Elicit responses from the participants.

Present the advantages and disadvantages of saving in home or bank. Use **M8-A p.99**

End the discussion using the key learning points



Materials

- Page 89-90 : Annex M7-C Financial Calendar - Exercise based on a farm using improved practices (*Content*)
Note: This is output of group in module 7



Key Learning Points

- Savings is necessary to cover deficit periods of the year
- Savings deposits are needed for bank guarantees to credit/loan
- **Savings Formula:** Income – Savings = Expenses

Production credit and investment in farm enterprises

 **Lecture**

Review again the financial calendar and identify the purpose, the moment and the amount of credit needed

Option 1: Participant's Testimonial

Choose from among participants who can give a short testimony on experience of availing and repayment of credit

Option 2: Guest Resource Person

If available, in municipality invite resource person with potential for project assistance or credit accessing. (*LGU-MAO, DAR, Financial Institution*)

What is Credit? Use M8-C p.100 What is Credit/Lending Process of obtaining a credit?


- What do you need to prepare?
- What type of credit would you choose in our example?
- How do you manage the loan until repayment?

What happens when you repay a loan in time (*to you, to your group, financial institution*)?

Use example on Mr. Dolor **p.100** to better illustrate credit as a response to farmer's need for inputs (*fertilizer*)

 **Materials**

- Page 99 : Annex M8-A Savings
- Page 100 : Annex M8-B Bank Deposits
- Page 100 : Annex M8-C What is Credit?

 **Key Learning Points**

The need for credit or loan must be for specific needs and periods

Information on available Financial Services


 **Lecture**

Facilitator informs the participants on different possibilities and conditions of credit services in the municipality (*time and documents needed to obtain a credit, limits of credit amounts, interest rate and repayment periods, guaranties, eventually savings deposit*).

Note: The participants are provided in their workbook with the List of Financial institutions and government funding assistance operating in the area (**M8-D and E p.102-106**); Farmer's Workbook **p.41-45**

 **Materials**

- Page 102-106 : Annex M8-D & E List of Financial institutions and government funding assistance operating in the area (*Bukidnon*) (*Reference*)

	 Key Learning Points Credit facilities have different features and terms. Choose one that is appropriate to your business needs and capacity to pay.
VI Wrap-up/ Synthesis	Reiterate key learning points and main lesson
VII. Bibliography, references / credits	FBS Training material from GIZ/SCB List of Credit Services/Financial Institutions Programs/Projects Extending Financial Services



Main Lessons

1. The good agricultural entrepreneur (man or woman) plans his/her expenditures and money entries all along the year to avoid shortages of money and unforeseen loans that are expensive.
2. To meet the needs of money in deficit months, the good agricultural entrepreneur (male or female) makes savings with the surplus money from product sales. **It takes discipline to do so.**
3. Saving money with a rural bank or a micro-finance institution, which is close by, has the advantage that money is safe. Another advantage is that one is obliged to plan for expenses before withdrawing money.
4. There are different types of savings that offer various benefits. Rural banks and micro-finance institutions provide information and advice to their customers.
5. There are different types of loans. Choose the type of credit that offers a convenient interest rate and period of repayment.
6. The good agricultural entrepreneur (male or female) inquires about the possibilities and conditions for savings and loans before making a decision.
7. The good agricultural entrepreneur (male or female) takes a loan only when he/she is sure to be able to repay on time. For this reason, he/she plans the investments and expenditures required. The Gross Margin and the Financial Calendar are the appropriate tools for this planning.
8. Once a loan is received, the good agricultural entrepreneur (male or female) sticks to the objective of the investment. Otherwise, the agricultural entrepreneur is likely to have repayment problems.

Module 8: How to get good Financial Service

- 1. M8-A** : Savings *p.99 (Content)*
- 2. M8-B** : Bank Deposits *p.100 (Content)*
- 3. M8-C** : What is Credit *p.100 (Content)*
- 4. M8-D** : List of Government Funding Assistance and Support Services
(Bukidnon Area) *p.102-105 (Reference)*
- 5. M8-E** : List of Financial Institutions *p.106 (Reference)*

M8-A Savings

Why is it important to create savings?

- With savings you can invest in your enterprise and thereby make greater revenue. For example, by buying fertilizer or improved seeds/variety of planting materials.
- If you save on a bank account, your money is safe.
- With the interests on savings that you receive, you protect your money against inflation (*inflation is when the cost of living increases*).
- Savings on an account are often necessary to obtain a loan.

How can you create savings?

What are the advantages and disadvantages of having your savings at home or in the bank?

	Hide money at Home	Bring money to a bank, other financial institutions
Advantage	<ol style="list-style-type: none"> 1. The Money is immediately available 	<ol style="list-style-type: none"> 1. The money is safe at the bank 2. The bank pays interests on your savings 3. Having savings at the bank facilitates a loan from the bank 4. Saving at the bank reduces the risk of spending money impulsively because it is not immediately available
Disadvantage	<ol style="list-style-type: none"> 1. Money is not safe and can be stolen 2. Money can be destroyed for example by a fire. 3. The money does not produce interest. 4. There is increased risk of making impulsive expenditures 	<ol style="list-style-type: none"> 1. The money is not immediately available

MB-B Bank deposits

Collection of money from the people

Commercial Banks, Rural Banks, Development Banks and Savings and Loans Companies, Micro Finance Institutions collect money from people who have it to spare or who are saving it from their income. They keep the money safe on your account.

If you want to put your money in the bank, you can choose one of the following accounts:

A Current Account or a Checking Account is an account for business people like you. Money put in this account can be taken out without telling the bank to be prepared for your coming to take out money. You use a cheque to take out money or to pay a bill. The bank pays no interest on this account, rather charges commission for the services it has given to you.

Savings Account

You will open a savings account to save money to keep it safe or with objective to get a loan. You can take money only when you are present at the bank. The bank pays interest on the money in this account every three months, every six months or every year. As owner of a savings account you receive passbook or an ATM card (Automatic Teller Machine) from the bank into which money put in and money taken out is recorded.

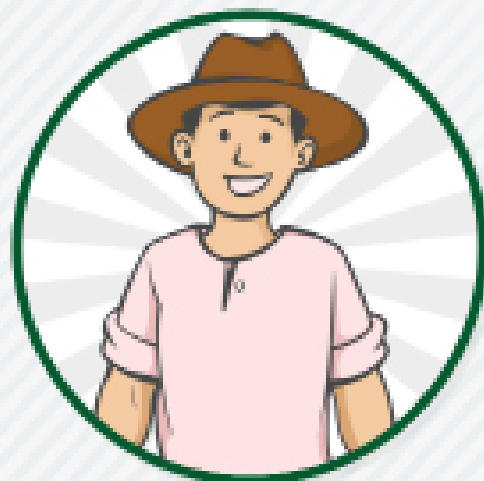
The Fixed Deposit Account helps you to keep money safe and to earn more interest. You can only take out your money at a time you have agreed with the bank, let us say six months. The interest that is paid on the amount in this account depends on how long the money will be in this account. If for any reason, you want to take out the money before the time you have agreed with the bank, the bank charges you a fee. This type of account could be used by a farmer business person planning to put in money into the replanting of Coffee.

MB-C What is Credit (Lending)

It is money you borrow from a person or a bank promising to pay back this money. A credit is a service you get and you pay this service with money on top of the amount you have borrowed. This is called interest rate.

The bank gives you a letter telling you it has agreed to give you the money you have asked for. The bank also shows when you have to pay back the total amount of money.

You, the borrower and the bank know what will be the payments of the loan and how much interest is being paid, and when is it to be paid. This makes planning very simple for all.



EXAMPLE:

Mr. Dolor is a farmer in Pangantucan. He needs Php 72,000 to buy fertilizer for his 2nd crop (1 hectare). He decides to go to the bank to borrow this money.

The bank agrees to give Mr. Dolor the money but told him, he has to pay back Php 78,300 in 7 months.

The Php 72,000 Mr. Dolor borrowed is the credit. The 6,300 Pesos Mr. Dolor will have to add to the money he borrowed is the interest (8.75% of Php 72,000).

The 7 months is how long it will take Mr. Dolor to pay back the money.

A common example of Credit is a Loan

- A loan is money you borrow (*credit*) from a person or a bank.
- Money can be borrowed for a very short time (*1 month to 12 months*).
- Money can be borrowed for a short time (*1 to 2 years*).
- Money can also be borrowed for a long time 3 years onwards.
- Interest can be charged every week or every two weeks, every month or every year on the money you borrowed.

There are two common types of loans

- Business loans
- Personal loans

Business Loan

This loan is given to business men and women like farmers to make their business (*farming*) better or to increase the size of their business (*farm increasing from 1 ha to 2 ha*).

Examples of farm business loans are

Inputs Loan	This is a very short time loan that can be used to buy planting material, seeds, fertilizer, insecticides, and herbicides.
Expansion Loan	This loan helps farmers to increase their farming business by increasing the cropping area.
Other investment loans	For planting or replanting of Coffee or other tree crops, you might need a loan for at least 2 years (<i>see Module 11 Investment calendar</i>)

Personal Loan

This type of loan is not for business. It is rather used to buy things that are needed for the home like a fridge or to pay school fees, or medical needs.

Ways by which money can be borrowed

- You can borrow money as a single person (*individual loan*). In this case, the bank always asks for things like a building, a car or land to be put down before giving out the money. This is called a collateral or security against your loan. If you pay the loan back and the interest in time, the bank will be happy to serve you in the future.
- You can borrow money as a member of Group (*group solidarity loan*). The group can be a cooperative or a registered Farmers' Association. If you pay the loan back and the interest in time, the other group members will be happy to keep you in the group.

M8-D List of Government Funding Assistance and Support Services (Bukidnon Area) as of December 2018

Agency	Support provided	Support type	Farmer level or group level	Requirements to access	Duration of program	Contact persons for information (region 10)	Contact Numbers	Comments
ACPC thru AMAD	(PLEA) 50K funding	Loan	both	membership to conduit agency	until funds run out	Runy Crusio/ Kirstine Gregorio	0906 891 5536 / 0955 955 7333	6% per annum (req insurance, on-going discussion for making gov subsidize for insurance)
ACPC thru AMAD	(CLEA) 5m Working capital	Loan	Group	membership to conduit agency	until funds run out	Runy Crusio / Kirstine Gregorio	0906 891 5536 / 0955 955 7333	6% per annum (See lending Conduit)
ACPC thru AMAD	Machinery funding (MLEA)	Loan	Group	membership to conduit agency	until funds run out	Runy Crusio/ Kirstine Gregorio	0906 891 5536 / 0955 955 7333	2% per annum (See lending Conduit)
ATI	Learning Site Center	Training	Group	Intent	Annual	Cristine A. Galupo	0917 240 9312	6% per annum (See lending Conduit)
ATI	Technical Service Provider	Service	Group	Intent	Annual	Teodosia Jaraba	0917 526 6311	see list of LSC
ATI	Training fund budget	Funding	Group	Intent / Collaboration / Proposal	Annual	Teodosia Jaraba	0917 526 6311	support fot TOT
ATI	Agriculture Technical training	Training	Group	Slot reservation	see website and FB page for updates	ATI FB		
ATI	Farm business school	Training	Group	Intent	Annual	Teodosia Jaraba	0917 526 6311	fb - ATI northern mindanao / ati.
ATI	Agri Mechanization training	Training	Group	Intent	Annual	Teodosia Jaraba	0917 526 6311	
ATI	Soft skills development	Training	Group	Intent	Annual	Teodosia Jaraba	0917 526 6311	

ATI	Youth Empowerment	Training	Group	Intent	Annual	Teodosia Jaraba	0917 526 6311	
CDA	Basic coop strengthening	Training	Group	Intent / Validation	Annual	Neneth Pabaslan / Rubie Bullecer	0917 305 7812 / 0917 506 3389	focused for the out-of-school youth (OSY) and high school graduates to equip them with knowledge and skills in agriculture and entrepreneurship technology.
DA	Vegetable seedlings	Supply	Farmer level	Walk-in	Supply last	Kersten Pagalan	0917 491 4713	Advise to sent intent to CDA region(policy, business permit, tax exemption)
DA	Fertilizer Inputs	Supply	Group	Intent / endorse / SEC-CDA-DOLE-DTI reg / Eligibility	Annual	Kersten Pagalan	0917 491 4713	
DA	Coffee seedlings	Supply	Group	Intent / endorse / SEC-CDA-DOLE-DTI reg / Eligibility	Annual	Kersten Pagalan	0917 491 4713	
DA	Package of Techonology fund	Funding	Group	Intent / endorse / SEC-CDA-DOLE-DTI reg / Eligibility	Annual	Kersten Pagalan	0917 491 4713	
DA	Techno Demo Establishment	Funding	Group	Intent / endorse / SEC-CDA-DOLE-DTI reg / Eligibility	Annual	Kersten Pagalan	0917 491 4713	
DA	Machineries / Facilities (refer HVCDP interventions 2019)	Loan	Group	Intent / endorse / SEC-CDA-DOLE-DTI reg / Eligibility	Annual	Kersten Pagalan	0917 491 4713	
DA thru AMAD	Agriprenership training	Training	Group	Intent	Annual	Jenny Alcobilla	0917 710 0978	

DAR	Machine grant (N/a)	Supply	Group		N/a	Chona Bahian	0916 525 9034	
DAR	Capacity Dev and Coop strengthening training	Training	Group	based of Schedule	Negotiable	Betty	0917 887 7279	focus on CARP beneficiaries
DAR	Technical provider for Cooperative strengthening	Service	Group	Intent	Negotiable	Secenia Gadian	0905 169 1032	
DAR	Enterprise Training course	Training	Group	Intent	annual	Chona Bahian	0916 525 9034	
DENR	Agroforestry Planting Materials	Supply	group	apply for CBFM accreditation	annual	DENR X	0975 643 0041	
DENR	Agriculture inputs	Supply	group	apply for CBFM accreditation	annual	DENR X	0975 643 0041	only covers timberland area/public land
DOLE	Organizational Training	Training	Group	Intent to ACP	Annual	Archie BatICA / Alice Tinhay	0975 388 3328 / 0917 855 8911	only covers timberland area/public land
DOLE	Mechanization	Supply	Group	Intent to ACP	Annual	Archie BatICA / Alice Tinhay	0975 388 3328 / 0917 855 8911	grant thru acp, be an accredited ACP or submit intent to ACP Agency (accredited co-partners) must be Sec/CDA/DOLE reg.
DOST	Machinery thru LGU	Supply	GRoup	Intent / Proposal	Annual (on Q3)	Dr. Meriam B. Alondia	0915 416 1614 / 0922 803 0059	grant thru acp, be an accredited ACP or submit intent to ACP Agency (accredited co-partners)
DOST	Research fund (Pos. for demo plot)	Funding	Farmer	Intent / Proposal	Arrangement	Dr. Meriam B. Alondia	0915 416 1614 / 0922 803 0059	
DTI	Weekly coaching sessions	Training	Group	Intent / Apply for slot	Weekly	walk-in		Collaboration with academe

DTI	Business Literacy training	Training	Group	Intent	Annual	Robert Sual	0915 048 2721	
DTI	Machine grant (SSF Program)	Supply	Group	Intent	Annual	Robert Sual	0915 735 6220	
DTI	Business Plan training	Training	Group	Intent	Annual	Danielle Baula	0917 804 5408	
DTI	Marketing Plan training	Training	Group	Intent	Annual	Danielle Baula	0917 804 5408	
NEDA	Proposal Project Training	Training	Group	Intent	as per request	nedardc10@yahoo.com / nedardc10@gmail.com		
PhilFida	Abaca Planting Material	Supply	Group	Intent / site validation	Annual	Boy Salinas	0926-345-8644	
PhilFida	Grading & Classification	Training	Group	Intent	Annual	Boy Salinas	0926-345-8644	
PhilFida	Abaca Technical Orientation	Training	Group	Intent	Annual	Boy Salinas	0926-345-8644	
PhilFida	Abaca Trader License	Service	Group	Intent	Always	Boy Salinas	0926-345-8644	

M8-E List of Financial Institutions

Bukidnon	
1. Landbank of the Philippines (all branches)	<ul style="list-style-type: none"> • 100 Cacao Program • Agrarian Production Credit Program (APCP) • Banana Financing Program • Agricultural Credit Support Program (ACSP) • Rubber Financing Program • Attainable and Accessible Lending Program for Small Farmers • PLEA Program • Sikat Saka (rice only)
2. RCBC (Valencia and Cagayan de Oro)	<ul style="list-style-type: none"> • Agri Finance c/o conduit branch Rizal Microfinance • Commercial Window
3. Mindanao Consolidated Cooperative Bank (Malaybalay)	<ul style="list-style-type: none"> • LBP assisted conduit bank for all Landbank programs including agri-financing
4. Bank of Philippine Islands (Malaybalay)	<ul style="list-style-type: none"> • Agri-financing under commercial banking
5. One Network Bank (all branches)	<ul style="list-style-type: none"> • Agri-financing • Personal loans • Commercial loans
6. MetroBank (Malaybalay)	<ul style="list-style-type: none"> • Commercial loans • Personal loans
7. AUB (Malaybalay)	<ul style="list-style-type: none"> • Commercial/Industrial loans • Personal loans
8. Development Bank of the Philippines (all branches)	<ul style="list-style-type: none"> • Conduit bank for government projects • No direct access for Peoples Organizations • Financing
9. First Valley Bank (all branches)	<ul style="list-style-type: none"> • Agri-financing (rice, corn, sugar, plantation crops under contract growing with agri-companies)
10. D'Asian Hills Bank	<ul style="list-style-type: none"> • Agri financing • Personal Loans
11. Rural Bank of Manolo Fortich	<ul style="list-style-type: none"> • Agri-financing (rice, corn and vegetable production)
12. FICCO (all branches)	<ul style="list-style-type: none"> • Personal Loan • Cooperative membership needed
13. Agronomika Finance (Davao Based)	<ul style="list-style-type: none"> • Cacao, Coffee, Abaca allied with Kennemer Foods

Module 9: Make more money with improve productivity and optimized production costs

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour; 30 minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div data-bbox="451 408 532 486" data-label="Image"> </div> <p>Key objectives</p> <p>Participants will understand the value of productivity, quality and income</p> <div data-bbox="457 569 522 647" data-label="Image"> </div> <p>Acquired Knowledge</p> <p>Participants have deeper understanding about</p> <ul style="list-style-type: none"> • GAP that reflect their productivity (<i>including using right variety of coffee, pruning, weeding, fertilizer application and soil management</i>) • Influence of production and processing techniques to quality (including post-harvest treatment) • Optimized production to improve productivity and income • Quality criteria : triage, moisture test and cupping • Relationships between quality-cost, quality-price-income <div data-bbox="451 1065 532 1148" data-label="Image"> </div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Implement GAP to improve productivity • Identify good quality coffee (mainstream) • Produce good quality coffee following GAP techniques • Calculate the benefit of quality coffee • Use the skills for bargaining <div data-bbox="457 1455 522 1533" data-label="Image"> </div> <p>Acquired Attitudes</p> <ul style="list-style-type: none"> • Following GAP has a cost and a potential benefit on productivity and income • Quality has a cost and an added value • The producer plays a key role in productivity and coffee quality • Invest in productivity and quality for more money

V. Content, teaching method, allocated time

Subject

Method, Materials and Key Learning Points

Warming-up



Workshop or Plenary

Role play: Assign two farmers as producers/seller and a third participant as the buyer.

Role game:

Option 1:

Two farmers meet the coffee buyer. One farmer has well dried and clean coffee beans while the other one had not taken time for good drying. The quality of his coffee is not up to standard. The buyer reacts.

Option 2:

Role game to show GAP and fertilization + improvement of genetics (variety). One farmer adopts GAP + fertilization + improved variety and yield better quality and more quantity of harvest and more income. The second farmer does bad practices resulting to poor quality and less harvest and less income.

Processing of activity:

What did you observe from the role play?

Elicit responses from participants

Recap the discussion :

“Investing in GAP and post-harvest treatment = ↑ productivity
= ↑ quality
= ↑ price”

Refresher knowledge on GAP techniques and post-harvest handling



Lecture

Post the questions:

- What is good coffee?
- What is bad coffee and why is the quality bad?

Elicit responses from the participants.

The facilitator shall note that this is a refresher or review of Nescafe Better Farming Practices and GAP

Present the review of GAP, Make more money with improved productivity and optimized production cost. **M9-A p.111-117**



Materials

Page 111-117 : Annex M9-A Make more money with improved productivity and optimized production cost.

Economics of quality Coffee



Lecture

Good quality coffee can further be enhanced through quality harvesting and post-harvest activities. (Use **M9-B p.118-119**)

If the farmer can change this, let's see whether good quality is good business

Explain the calculations for the cases

1. Manual threshing & winnowing, drying and storage badly done
2. Threshing & winnowing with machine, drying and storage well done

Participants calculate (trainer writes) and compare the results

Discussion:

- What is better business?
- What are your experiences?
- What have you learned? What would be your decision?

End the lecture by presenting the key learning points.



Materials

- Calculators
- Page 118-119 : Annex M9-B Quality : Harvesting and post-harvesting



Key Learning Points

- Investing in proper post-harvest processing leads to higher productivity and better quality product, thus translates into better revenue, and possibly better prices compensating the investment of money and labor
- Lower production and the majority of quality deficits are preventable. The coffee producer can avoid them as they are under his/her control.
- Quality product = better price.

VI Wrap-up/
Synthesis

Use the whip statement: "My most important learning is _____"
Draw several responses.
Wrap-up the session by elaborating on the main lessons below

VII. Bibliography,
references /
credits

Nestle GAP modules and ppt presentation
Pictures, illustrations



Main Lessons

1. The quality of Coffee beans determines the price and income of producers, exporters and coffee processors.
2. Investing in GAP and post-harvest treatment leads to higher productivity and better quality product, thus translates into better revenue, and possibly better prices compensating the investment of money and labor (profitability).

Module 9: Make more money with improve productivity and optimized production costs

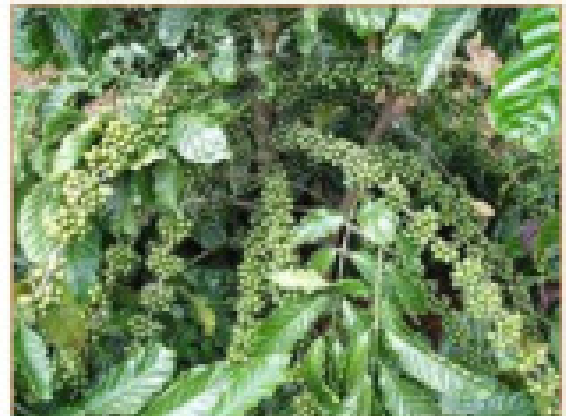
1. **M9-A** : Make more money with improve productivity and optimized production costs *p.111-117 (Reference)*
2. **M9-B** : Quality: Harvesting and Post-harvesting *p. 118-119 (Reference)*

Module 9: Make More Money with Improved Productivity and Optimized Production Cost

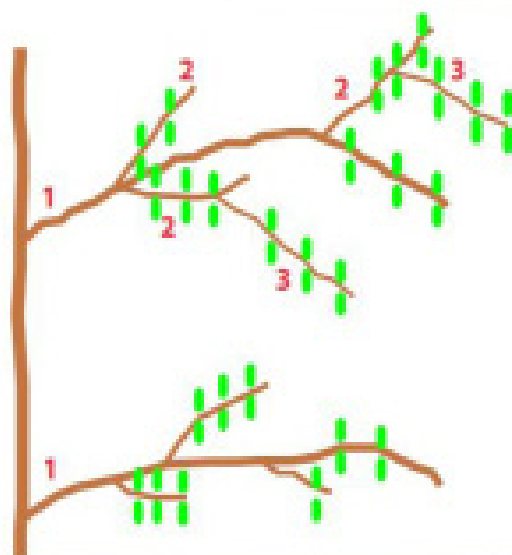


1 WHAT IS THE PURPOSE OF PRUNING?

- **Remove unproductive branches**
 - To guide the nutrient flow directly to flowers and fruit bearing branches
 - Development of non fruit-bearing branches requires unnecessary energy from the plant and thus more fertilizer inputs
- **Remove branches infected with diseases**
 - To prevent diseases from spreading
- **Avoid flowering far away from the stem**
 - Nutrient transport towards the far ends of the branches is slower and less efficient; it requires more energy from the plant and thus more fertilizer inputs
- **Open up the canopy**
 - To increase photosynthesis as the trees will have better access to light
 - To reduce pests and disease and facilitate their control because the plantation will be better aerated
 - To facilitate coffee harvesting
 - To enhance farm management



2 WHAT ARE THE DIFFERENT BRANCH TYPES?

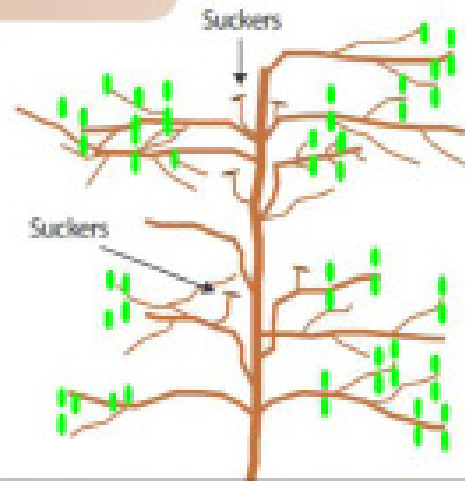


- **Primary branches (1)**
 - They grow directly from the stem
 - They cannot regenerate; i.e. once cut, they won't grow again
 - They guide the nutrient flow to the flower and fruit bearing branches
- **Secondary branches (2)**
 - They grow from the nodes on primary branches
- **Tertiary branches (3)**
 - They grow from the nodes on secondary branches
- **Besides, there are also fourth, fifth, etc. generation branches on coffee trees**

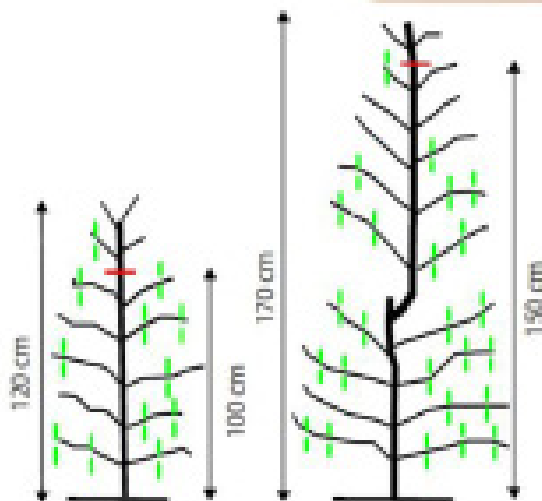
2 WHAT ARE THE DIFFERENT BRANCH TYPES?

➤ Suckers

- Suckers can grow from the stem or any other branch type (primary, secondary or higher level branches)
- They have no particular function
- They can be used to regenerate missing parts of the canopy (cf. remedial pruning)
- They can be used as scion for grafting; this should only be considered if the mother tree is healthy, highly productive and disease-resistant (e.g. leaf rust)



3 FORMATION OF THE CANOPY STRUCTURE



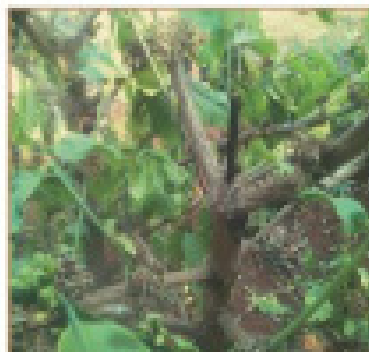
➤ Single stem pruning

- Capping or cutting off the top of the stem
- **1st time: When the tree reaches a height of 120 cm**
 - i.e. after circa 3 - 4 years (immature coffee)
 - It could be earlier in case of a fast-growing coffee variety
 - Cut of the stem at a height of 100 cm
 - New stems will develop; select the strongest one to develop the second canopy layer while removing the weaker stems
- **2nd time: When the tree reaches a height of 170 cm**
 - Cut of the stem at a height of 150 cm
 - New stems will develop; select the strongest one to develop the third canopy layer while removing the weaker stems

Note:

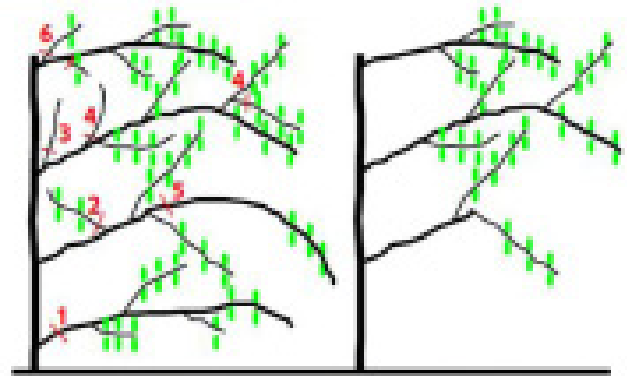
How to avoid the main stem from splitting due to heavy fruit bearing?

- Cut the stem 2 - 3 cm above the underlying node; or
- Cut 1 of the 2 top fruit bearing branches



4 MAINTENANCE PRUNING

- Cut off lateral branches growing at unfavorable positions such as:
 - Branches touching the ground (1)
 - Branches growing towards the stem (2)
 - Branches growing vertically downwards (3)
- Cut off dead, disease-infected, old or stunted branches (4)
- Cut off weak branches because they compete with other fruit bearing branches for light and nutrients (4)
- Cut off old branches which are expected to produce fewer cherries in the next harvesting season; this enhances the nutrient flow to stronger fruit bearing secondary branches (5)
- Cut off secondary branches growing above the main canopy; this provides more light to the lower canopy and hence better photosynthesis (6)



4 MAINTENANCE PRUNING



➤ Timing

- 15 - 20 days after harvesting
- Maintenance pruning is best combined with cleaning the garden

GENERAL RULE

- Continuously remove suckers throughout the year, in particular when the canopy is too dense
- However, make use of suckers in case remedial pruning is required

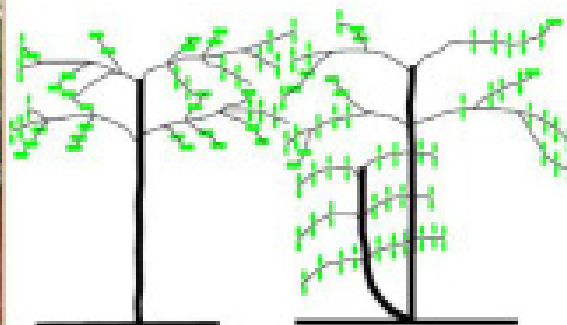
5 REMEDIAL PRUNING

> When?

- When the lower canopy is sparse or when the tree has an umbrella-like shape (i.e. completely missing the lower canopy)

> How?

- Nourish suckers near the soil surface and select the strongest to further develop
- Cut off the top of the new stem when it reaches a height of 1.3 - 1.4 m



> When?

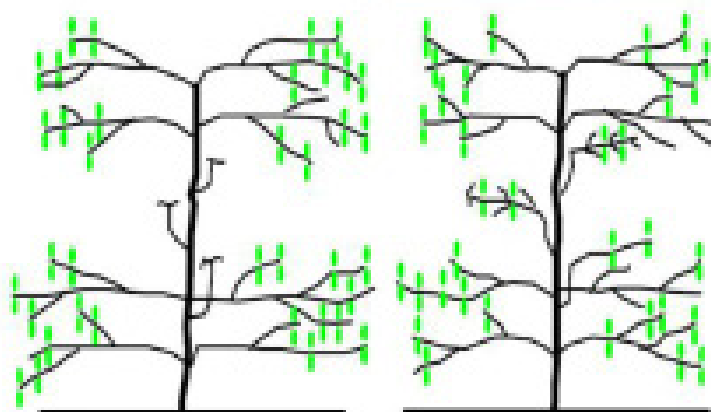
- When the upper part of the canopy is sparse or completely missing

> How?

- Cut off the old and poorly developed upper stem
- Nourish suckers at the top and select the strongest to further develop (cf. capping); remove the weakest suckers



5 REMEDIAL PRUNING

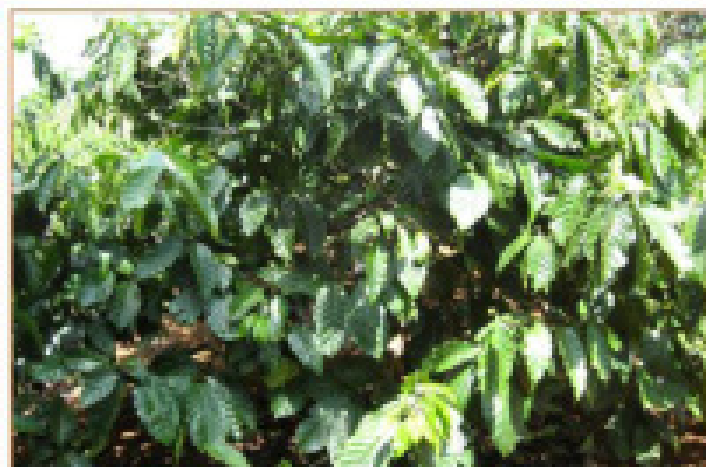


> When?

- When the middle part of the canopy is sparse or completely missing

> How?

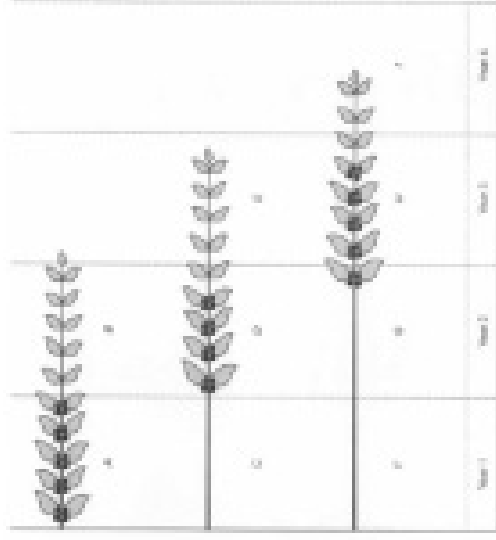
- Nourish suckers that grow out on the stem at the missing canopy part
- When each sucker has one pair of primary branches, select the strongest outer branches and remove all other branches



Grafting



Pruning

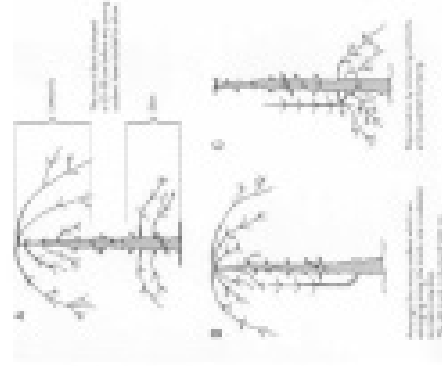


Coffee lateral life cycle

- Lateral fruiting life is limited (has a limited productive life)

Pruning

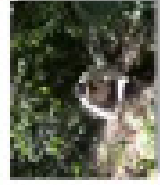
If coffee is unpruned it will decline into a tree with **more wood than fruit**



- Fruits are borne in lateral
- Pruning maximizes fruiting laterals



Weeding



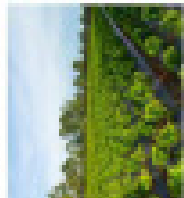
Manual or Mechanical

Chemical

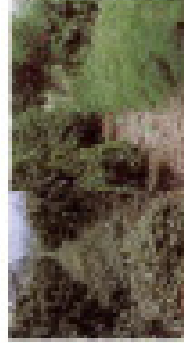
- Competition for space, water and nutrients
- Alternative host for pest and disease



Mulching

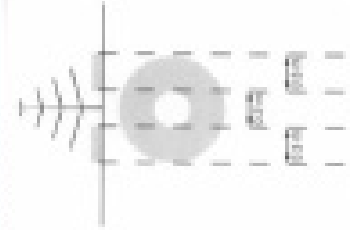


Cultural

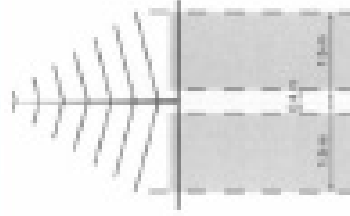


Cover Crop

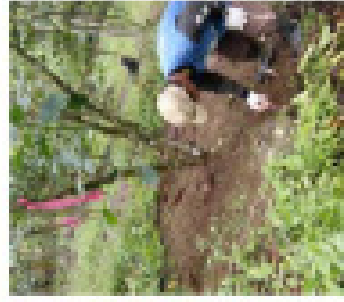
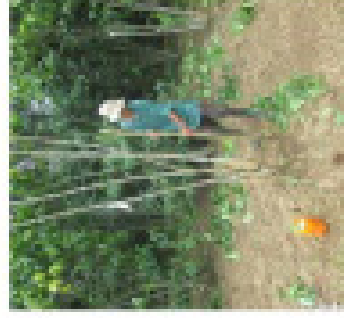
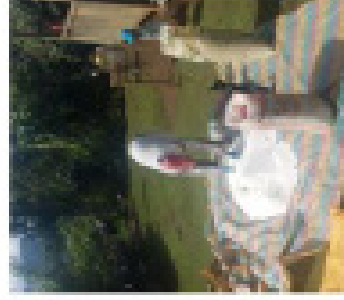
Fertilization



Ring Application in Young Plants



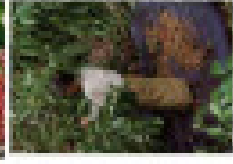
Strip Application in Older Plants



Harvesting



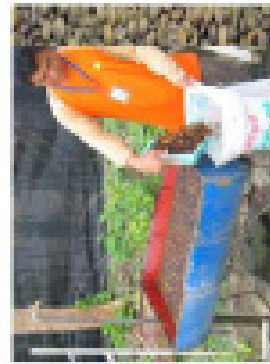
- Harvest only yellow, orange and red berries



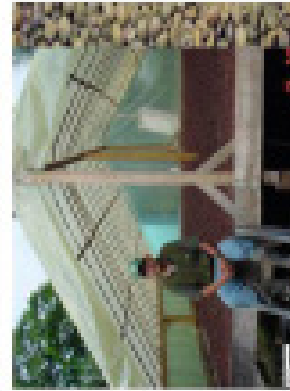
- Green berries have **lower weight** and have harsh and bitter taste
- Overripe berries have acidic taste
- Black cherries dried on the tree have **woody flavor**
- Tarpaulin laid on the floor can aid harvesting

M9-B QUALITY: HARVESTING AND POST-HARVESTING

Post-Harvesting



Flotation



Drying

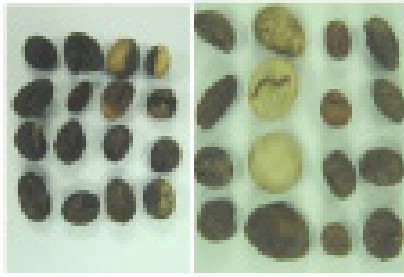


Hulling

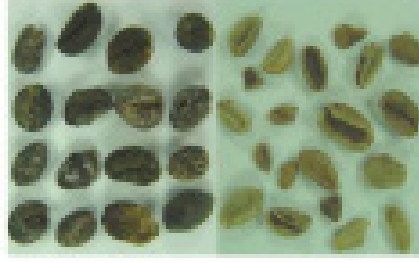


Sorting

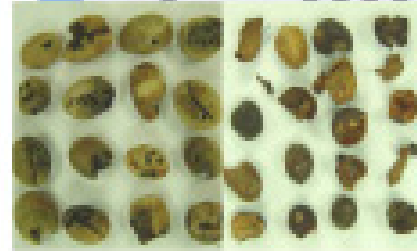
Common Quality Defects



Defect	Cause	Action
Black Bean	Harvesting of immature Berries	1. Harvest only ripe 2. Separately dry immature
Immature Bean	Harvesting of immature Berries	1. Harvest only ripe 2. Separately dry immature








Defect	Cause	Action
Moldy Bean	Green beans exposed to moisture	Protect beans against moisture
Broken Bean	1. Hulling of partially dry beans 2. Improperly adjusted corn mill	1. Hull only dry cherries 2.) Use huller designed for coffee



Defect	Cause	Action
Insect Damage	Coffee Berry Borer	1. do not leave un-harvested berries in the tree 2. collect fallen berries
Hulk fragments/ Oried Cherry/ Parchment fragments	No sifting/sorting	1.Sort 2. Use huller with sifter

Module 10 Benefits from Membership in Organized Farmer Groups

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Key objectives</p> <p>To illustrate the big advantage in working as a group</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Knowledge</p> <p>Participants have a deeper understanding about</p> <ul style="list-style-type: none"> • Success factors of organized farmer groups • Advantages (social and economic) and obligations of membership to an organization • Specific opportunities of collective business actions • Informed decision making on their choice of type of organization </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • Assess an organised farmer group • Contribute to strengthen organized farmer groups in business • Assess a cooperative business opportunity • Assess economies of scale and individual benefits of cooperative business • Use key tools to participate in decision-making </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Attitudes</p> <ul style="list-style-type: none"> • Collective action for visible quality, more income and better prices, leverage in negotiations • There are business opportunities that can only be seized by collective action • This has a cost to be supported by members and should provide a net benefit to member • Trust, transparency, solidarity and governance / leadership </div> </div>
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Warming-up	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Lecture</p> <p>Introduction</p> <p>Pose the question:</p> <ul style="list-style-type: none"> • Who among you have had experience in being members/officers of an organization? • What organization/s? <p>Draw responses from participants</p> <p>Present the Basic Characteristics of Different Types of Organizations</p> <p>M10-A p.125</p> </div> </div>



Materials

Page 125 : Annex M10-A Basic Characteristics of Different Types of Organization



Key Learning Points

- Organized farmer groups provide economies of scale and services to their member to improve market access, ensure efficient input supply and enhance value addition in marketing and in processing.
- Important to know what type of organization is suited to your group.
- There are economic benefits to being a member of an organization.

Advantages of group sales of products and group purchase of inputs



Workshop or Plenary

Let's see whether you can do good business if you become member of a functional group or organization?

Explain the poster on group sales (**M10-B p.126**); Farmer's Workbook **p.46** and on group purchase of inputs (**M10-C p.126**); Farmer's Workbook **p.46**

Ask for volunteer participant (*who had experience in group sales of product and in group purchase of inputs*).

Using the above poster, ask volunteer participant to calculate. Write the responses in the poster.

Follow-up question:

- What do the results tell you?
- What would you do?

Draw responses from participants

Conclude the activity: *"There are economic benefits in organization specifically on higher group sales and on lower group purchase of inputs."*



Materials

- Page 126 : Annex M10-B Exercise Sheet Group Sales (*Content*)
- Page 126 : Annex M10-C Exercise Sheet Group Purchase of Inputs (*Content*)
- Calculators

Tips on good/functional organizations



Lecture

Introduction *(linkage with previous activity)*

From the previous exercise, we have seen the advantages/economic benefits of working in groups.

What are some signs of good and functional organization?

Draw-out and acknowledge the responses.

Present “simple tips/signs of good/function of organizations”

1. Members willingly pay annual contributions
2. Members attend regular meetings and activities
3. There are defined organization rules, systems and procedures
4. Transparency: regular reporting of physical and financial performance.
5. Members patronize services of organization
6. Evolution of group business activities on group sales (volume) and in group purchase of inputs



Materials

- Examples of functional organizations *(provide pictures of the group and the facilities/activities; short description)*
- Examples - Bayanihan Millennium Multi-purpose Cooperative BMMPC *(Pangantucan)*
- New Eden *(Coffee milling)*
- Lebac- Keytodac Coffee Growers Association: caselet and video
- Masiag Coffee Growers Association *(Bagumbayan SK)*- consolidation/processing/marketing



Key Learning Points

- A strong organization is dependent on the quality of its membership and leadership
- Benefits of working in groups :
 - use of common services facilities
 - higher group sales
 - lower cost on group purchase of inputs
 - better chances for credit

VI Wrap-up/
Synthesis

Reiterate the main lessons

VII. Bibliography,
references /
credits

FBS Training material from GIZ/SCB



Main Lessons

1. Agricultural entrepreneurs (*men or women*) form groups or associations to do things they are not able to do alone.
2. Groups or associations of agricultural entrepreneurs (*men or women*) have a common business objective. To achieve their common goal, the members learn together, from each other and support each other.
3. For service providers, it is easier and cheaper to work with farmer groups or associations than with individuals. A group of agricultural entrepreneurs (*men or women*) can more easily seek financial services or information on production techniques from extension.
4. For input suppliers, it is easier and cheaper to work with farmer groups or associations than with individuals. A group of agricultural entrepreneurs (*men or women*) can organize group purchases of agricultural inputs and can negotiate better prices from the input supplier.
5. For buyers of agricultural products, it is easier and cheaper to work with farmer groups or associations than with individuals. A group of agricultural entrepreneurs (*men or women*) can organize group sales of coffee and of other agricultural products.
 - The group can get better prices from the buyer – if the quality of the product is acceptable.
6. Associations or groups of agricultural entrepreneurs that function well have clear rules that are respected. When the rules are broken by members, sanctions are applied.
7. Good leaders of farmer associations play their role to improve the business of all members.
8. Agricultural entrepreneurs (*men or women*) that are members of well-functioning associations or groups do better business.
9. Agricultural entrepreneurs that are doing better business with the support of their association pay their membership fees without reluctance.



Benefits from Membership in Organized Farmer Groups

1. **M10-A** : Basic Characteristics of different types of organization *p.125 (Content)*
2. **M10-B** : Exercise sheet- Group Sales *p.126 (Content)*
3. **M10-C** : Exercise sheet- Group Purchase of Inputs *p.126 (Content)*

M10-A Basic Characteristics of Different Types of Organization

Type of Organization	Registering Office/Agency	Requirements	Basis of Decisions	Other Features
1. Cooperative	<ul style="list-style-type: none"> Cooperative Development Authority (CDA) 	<ul style="list-style-type: none"> Share Capital Constitution and By Laws List of Members Registration Certificate Basic Orientation Seminar (Members) 	<ul style="list-style-type: none"> One Man, One Vote General Assembly 	<ul style="list-style-type: none"> Minimum 15 members Private Service oriented with Profit Sharing
2. Association	<ul style="list-style-type: none"> Securities and Exchange Commission (SEC) Department of Labor and Employment (DOLE) Department of Trade and Industry (DTI) Bureau of Rural Workers (BRW) Local Government Unit (Municipal/City/Province) 	<ul style="list-style-type: none"> Board of Trustees List of members Constitution and By Laws Registration Certificate 	Depends on By Laws as agreed by members	<ul style="list-style-type: none"> Private, usually Sectoral in Composition Lobby Purposes or Common interest Related
3. Corporations	<ul style="list-style-type: none"> Security and Exchange Commission (SEC) 	<ul style="list-style-type: none"> Shares of Stock Constitution and By Laws Board of Trustees Registration Certificate Authorized Stock Certificate 	<ul style="list-style-type: none"> Based on Stock Holdings General Assembly 	<ul style="list-style-type: none"> Public/Private Business Orientation (For Profit)

M10-B Exercise Sheet Group sales

		
with pruning and Fertilizer	2nd Crop Improved variety with Fertilizer	3rd Crop Improved variety with Fertilizer

	Unit	Individual Sale	Group Sale	Individual Sale	Group Sale	Individual Sale	Group Sale
Surface Area	ha	1	1	1	1	1	1
1. Money-Out	pesos						
Production	kg						
Price	pesos/ kg						
2. Money-In	pesos						
3. Profit of sales	pesos						

M10-C Exercise Sheet – Group Purchase of Inputs






Calculation of the profit of group purchase of Inputs – in the case of Improved farming techniques Inputs can be provided less 10% less expensive through grouped purchase
Cite/identify institutions/companies that grant this discount

		
with pruning and Fertilizer	2nd Crop Improved variety with Fertilizer	3rd Crop Improved variety with Fertilizer

	Unit	Individual Purchase	Group Purchase	Individual Purchase	Group Purchase	Individual Purchase	Group Purchase
Surface Area	ha	1	1	1	1	1	1
Cost of Inputs and services	pesos						
Profit of purchase	pesos						

Total Benefit of group purchase of inputs	Pesos
Total Benefit of group sales	Pesos
Total Benefit of group business <i>(group sales and input purchase)</i>	Pesos

Module 11: Earning more money: investing in rejuvenation and rehabilitation of coffee

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Key objectives</p> <p>Increased income from your coffee farm from investing in rehabilitation and rejuvenation</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Knowledge</p> <p>Participants refresh their knowledge about</p> <ul style="list-style-type: none"> • Different possibilities (rejuvenation-diversification module, gap filling, replanting) to improve the coffee production potential, related investment (inputs, labor, technique, equipment) and income • The evolution of production, inflows, outflows, balanced cash flow and period of negative cumulated cash flow (valley of tears) • The investment needs </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Skills</p> <p>Participants know how to</p> <ul style="list-style-type: none"> • assess different options, their performance, investment and financial needs of planting and replanting from the economic and financial point of view </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>Acquired Attitudes</p> <ul style="list-style-type: none"> • Replanting / Planting is an investment in my land and key for more income from coffee • Decision making based on economic parameters -- key for investment success • Planning these investments is important for my success </div> </div>
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Warming-up	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"></div> <div> <p>Workshop or Plenary</p> <p>Quick survey with participants:</p> <ul style="list-style-type: none"> • Who has 8 year old coffee and below? • Who has above 8 year old coffee? • Who has rejuvenated/rehabilitated coffee trees? • Who has replanted coffee? • How is your production trend in the last five years? trends are indicated by arrows (<i>up, down, horizontal</i>) <p>Record responses of participants to each question on the board or brown Paper</p> <p>Mark arrows from replanted coffee farm with R</p> <p>Note if there is decreasing trends in production for old coffee plants</p> </div> </div>



Materials

- Brown Paper
- Pentel Pens
- Blackboard
- Chalk
- Eraser



Key Learning Points

Age of the coffee plant is related to its productivity (yield)

Options for rejuvenation and rehabilitation



Lecture

What can we do to increase coffee production?

- Options from module 5 (*fertilization, pruning*)
- Rejuvenation and rehabilitation and other possibilities

Present the review of rejuvenation in Annex **M11-A p.132-134**

Present illustrations and explain advantages and disadvantages (*using illustrations, plot map, perennial calendar, yield*)

- Option 1 (*using 4-6 varieties in alternating bands, improved coffee variety*)
- Option 2 rehabilitation of existing plot
- Option 3 complete replanting (*total replacement*)



Workshop or Plenary

What is the cost and the benefit of rejuvenation or replanting coffee?

Option 1: Testimonials

Select a farmer-participant who has done rejuvenation/replanting to give the testimonials (for 10 minutes):

Focus on

- Process
- Cost
- Effect on production

Processing of activity:

What are your observations/thoughts from the testimonial?

Elicit responses from the participants.

Note from the responses the benefits from rejuvenation.

What then is the cost and the benefits of rejuvenating/replanting of coffee?

Some estimation/considerations on cost:

Cost of Rejuvenation

- Rental + labor of chainsaw = PhP 500. Can cut for rejuvenation an average of 150 trees

Cost of grafting to new verticals

- PhP 5/scion Replanting
- Holing and planting (*by farmer or family labor*)
- Cost of hauling of planting materials from Source/house to farm
- Cost of planting materials (*no additional cost if done by local selection from farmer's existing Farm*)


For informed decision: Use money-out for inputs and labor/services and money-in. It will take 2-3 years to have good harvest (*income*) from rejuvenation. Analyze your cash flow and what can be done on those period.

**Q: What option would you choose as entrepreneur?
What are your reasons?**



Materials

Testimonials of those who have done rejuvenation and replanting and its effects on productivity

	 Key Learning Points <ul style="list-style-type: none"> • Economics determines the choice of a farmer to do rejuvenation or rehabilitation work (<i>options</i>). • Investing in new coffee plants, rejuvenation and rehabilitation of coffee plants has related costs but translates into higher productivity and can increase mid-term and long-term income. • Use your cash flow as tools for rational and conscious investment decision-making. • Different options imply different investment needs.
VI Wrap-up/ Synthesis	Reiterate key learning points & main lessons below
VII. Bibliography, references / credits	Nestle Technical Guide



Main Lessons

1. When a coffee farm is older than 8 years, the production of the trees starts to diminish. At this moment, the agricultural entrepreneur (man or woman) prepares for rejuvenation, replanting etc.
2. The returns from rejuvenated plants in terms of higher production per tree outweighs the cost. This likewise ensures the long term sustainability of the crop /coffee plantation.

Module 11: Earning more money: investing in rejuvenation and rehabilitation of coffee

1. M11-A : Rejuvenation *p.132-134 (Contents)*

Rejuvenation



Name: Bernardina Lim
Location: Satanagasser, Backyon, Lantapan
No. of Trees Cut: 250 Trees



Name: Loreto Magadan
Location: Satanagasser, Backyon, Lantapan
No. of Trees Cut: 150 Trees



Name: Andresa Tejano
Location: Cabilahan, New Eden, Pangantuan
No of Trees Cut: 211 Trees



Name: Lila Espinosa
Location: Cabilahan, New Eden, Pangantuan
No. Of Trees Cut: 117 Trees



Name: Mel Palomero
Location: La Esan, Maramag
Date Accomplished: July 31, 2008
No. of Trees Cut: 250 Trees

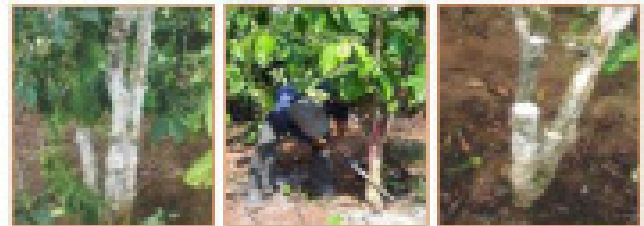
1 REJUVENATION

> Why?

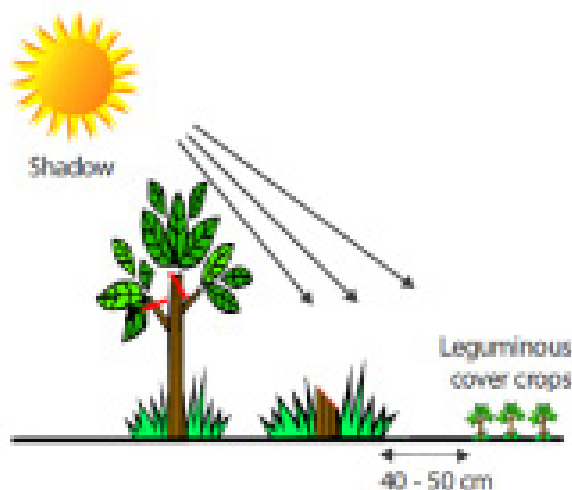
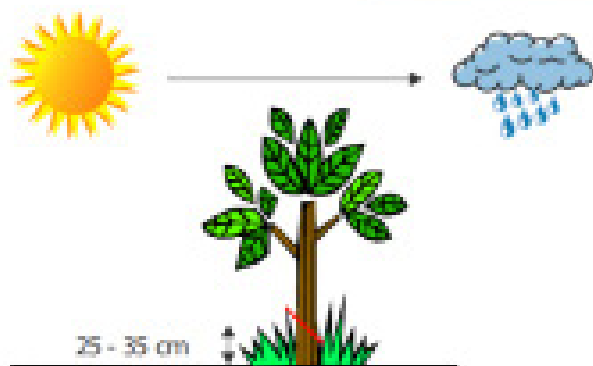
- When the coffee trees become old and unproductive
- When the coffee trees are affected by pests and diseases (e.g. leaf rust)
- Generally between 18 and 25 years

> Techniques

- Stumping: i.e. cut down the stem near the soil surface and let new suckers develop into a new stem (natural regrowth)
- Grafting: i.e. cut down the stem near the soil surface and let new suckers develop; graft a scion of a new high productive and disease resistant variety on the strongest sucker; remove all other weaker suckers



2 REJUVENATION



> Stumping

• When?

- 1 month before the rainy season
- Rejuvenation should only be considered when the coffee trees are between 18 and 25 years old, with a well-developed root system which is not infected with fungi or nematodes

• How?

- Cut down the stem at a height of 25 - 35 cm above the soil surface in a 45° angle facing in Southeastern or Southern direction to avoid direct sunlight on the surface of the cutting so that it won't dry out
- Make sure the surface of the cutting is smooth
- Apply 500 - 1,000 kg of lime / ha
- Plough the soil to about 15 - 20 cm depth, 40 - 50 cm away from the stumps
- Plant leguminous cover crops (e.g. groundnut, beans, etc.) to improve soil fertility
- Prune shade trees to provide more light for the coffee trees to develop

3 REJUVENATION

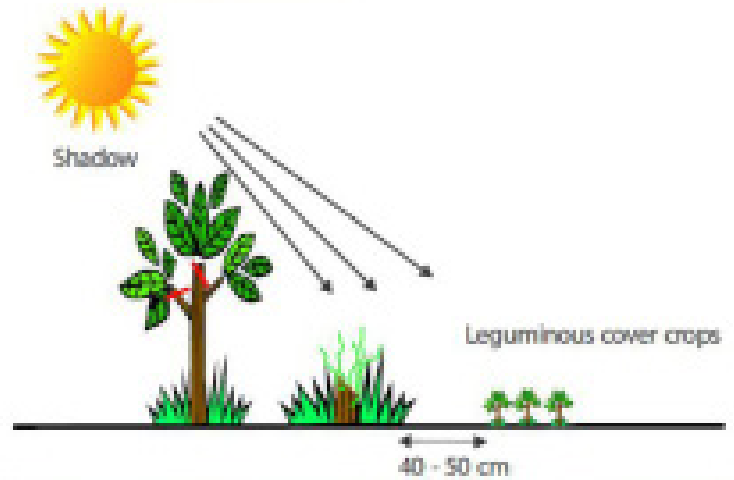
➤ Stumping

• How?






- Select the strongest suckers that develop on the stump
- Remove weak suckers twice
- 1st time: select 4 - 5 suckers, 10 - 15 cm tall
- 2nd time: select 2 - 3 suckers, 20 - 30 cm tall

Note

- Make sure the selected suckers are equally distributed around the stump
- Cap the newly developed stems when they are 1.3 - 1.4 m tall



Module 12 Becoming an entrepreneur in practice

I. Trainer	Specialized FBS-Trainer
II. Time	1 hour 30minutes
III. Target group	Smallholders/land owners (male and female)
IV. Objectives	 Key objectives The participant has successfully undergone the FBS training and understood the key learning points and the main lessons  Acquired Knowledge Participants know <ul style="list-style-type: none"> • The FBS workbook providing business tools • That the key tools of the FBS constitute a toolbox for decision making  Acquired Skills Participants know how to use the FBS tools to <ul style="list-style-type: none"> • Evaluate their farm enterprises and farm income • Make business and investment decisions and succeed • Identify the needs for, and access to support services  Acquired Attitudes <ul style="list-style-type: none"> • Keep records to evaluate my enterprise • To seize income opportunities, I do business decisions on the basis of evaluation
V. Content, teaching method, materials	
Subject	Method, Materials and Key Learning Points
Reminder and overview on FBS Farmer's Workbook	 Lecture Reminder on Farmer's Workbook that should be used after FBS-training. Present and explain the content of the FBS workbook comprising the key tools for application in practice. Questions of participants are discussed. Purpose of the workbook and overview on tools <ul style="list-style-type: none"> • Identity card of farm (My enterprise) – require measured plots (<i>to be checked by trainer</i>) • Blank financial calendar to plan money out and money in throughout the year There are five templates (i.e. one set for 1 plot) p.141-148 (Farmer's Workbook p.50-71) <ol style="list-style-type: none"> 1. Blank cropping calendar for planning of work to be done on one plot. 2. Sheets for Profit-loss calculations per plot of the farmer 3. Templates to record labor and inputs, money-out and money-in per plot 4. Evaluation sheet of the production year for one plot 5. Template on manage loan and repayment Encourage participants to write in the workbook



Materials

- FBS Farmer's Workbook for entrepreneurs
- Forms on action plan/commitment by group



Key Learning Points

- Small Farmers can be entrepreneurs
- Application of FBS tools will lead to more rational business and investment decisions and will enhance access to support services

Evaluation and preparing for change



Workshop or Plenary

Action Planning

Depending on grouping on association of participants, ask each group to prepare action plan/commitment for the next 3 months.

Use **M12-A p.138**

Individual Commitment

Reflecting on the 5 days training, what action will you take as farmer entrepreneur?
what are your recommendation to further improve the training?

Use **M12-B p.139**

Evaluation of FBS

Round 1 with individual participants

- Reflecting on the 5 days of the training what have you learned?
- What will you change on your farm and in your household?

Round 2 with the group of participants

What will you change as an entrepreneur?

Round 3 with the group of participants

Explain the evaluation with the symbols 😞 😊 😐 on a sheet of brown paper

Place it where it cannot be seen by the participants and by you


Participants tag under 😞 😊 or 😐 according to their assessment.

Discuss what worked well, what needs improvement.



Materials

- Metacards/stickers with face icon
- Course Schedule in tarpaulin (**M0-A**)
- Evaluation Sheet for the conduct of the training (*with emoticon*)
- Page 138 : Annex M12-A Action Plan/Commitment by Group (*Contents*)
- Page 139 : Annex M12-B Action Plan/Commitment by Farmer FBS Graduate
- Page 140 : Annex M12-C Proof of delivered Farmer Business School Training - Coffee Production System
- Page 141 : Annex M12-D Identity Sheet of Farmer that receive FBS Training
- Certificates for graduation

Determine the Focal Person of the group	 Workshop or Plenary Who is your focal person to stay in contact with us? This person should be active and helpful for you and have your trust. Please choose this person among you and indicate the name and phone to your trainer. The Focal Person of the group should be <ul style="list-style-type: none"> • a reliable and well recognized person and participant of the training • able and willing to stay in contact with the group members, to support them in application of FBS tools and to take over leadership in group activities • able and willing to stay in contact with the trainer of the group, supervisors and the project. • Preference should be given to literate persons with mobile phones The group should nominate this person (if not yet clear) and give him/her the mandate to represent them and to assist them as indicated above.
Graduation ceremony	Distribute the certificates with congratulation to each participant
VII. Bibliography, references / credits	FBS Training material from GIZ/SCB

Reporting for monitoring and templates	Trainer and focal person after closing of FBS and before leaving the training venue 1. Finalize proof of delivery including signature by focal person (M12-C p.140) 2. List of participants 3. Prepare and submit SMS-report on delivered training comprising <ul style="list-style-type: none"> • Community (Barangay) • Municipality • Province • Start Date • End date • # male • # female • # smileys • name focal person • phone of focal person
--	--

M12-B Template for the Action Plan/Commitment by Farmer-FBS graduate

I, FBS graduate _____, commits to:

Activity/Action	When?
<input type="checkbox"/> Adoption of improved planting materials/seeds	
<input type="checkbox"/> Apply Fertilizer	
<input type="checkbox"/> Plant additional crops (<i>intercropping</i>)	
<input type="checkbox"/> Bank Savings	
<input type="checkbox"/> Keep Records	
<input type="checkbox"/> Apply agrochemicals (<i>if required</i>)	
<input type="checkbox"/> Group Formation	
<input type="checkbox"/> Others (<i>Specify</i>)	
Recommendation/s to improve training	

M12-C Proof of delivered Farmer Business School Training – Coffee production system

Community/ Barangay		Municipality	
Province		Farmer organization	
Start Date		End Date	
Name of FBS Trainer			

	Men	Women	Total
Number participants first day:			
Number participants second day:			
Number participants third day:			
Number participants fourth day:			
Number participants last day:			
Smileys 😊 received from participants			

Most important changes envisaged by FBS graduates	<ul style="list-style-type: none"> <input type="checkbox"/> Adoption of improved planting materials/seeds <input type="checkbox"/> Apply fertilizer <input type="checkbox"/> Plant additional crops (<i>intercropping</i>) <input type="checkbox"/> Bank savings <input type="checkbox"/> Keep records <input type="checkbox"/> Apply agrochemicals (<i>if required</i>) <input type="checkbox"/> Group formation <input type="checkbox"/> Others (specify) <hr/> Recommendation to improve training: <hr/> <hr/>
---	--

Complete name of Focal Person of FBS	
Phone contact of FBS focal person	
Address of FBS focal person	

I hereby certify the correct delivery of the above mentioned Farmer Business School Training and the participants' degree of satisfaction

Signature of FBS focal person

Signature of Trainer's superior

M12-D Identity sheet of farmers that received the FBS training

FBS trainer provides the filled sheets together with proof of delivery and list of participants

Name of head of farm :	Telephone number / Cel no.
man <input type="checkbox"/> woman <input type="checkbox"/>	Age:
Salaried employment? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Number of people to feed	
Location of farm (Barangay, Municipality)	Area of the entire farm (Size)
Surface area of the farm plots (size)	
Plot 1.	Plot 4.
Plot 2.	Plot 5.
Plot 3.	Plot 6.
Member of a farmer organization? Yes <input type="checkbox"/> No <input type="checkbox"/>	Name of the farmer organization
FBS – graduate Yes <input type="checkbox"/> No <input type="checkbox"/>	Registered? Yes <input type="checkbox"/> No <input type="checkbox"/> Registered by? Number of Registration

Attachments 1: Forms & Work Sheets

Use the following templates to

- Plan production
- Record Money-Out and Money-In
- Calculate whether you make Profit or Loss
- Plan expenditure and income from sales and
- Schedule the payment of loans (if any)

Profit or Loss plot 1

Plot area :	Expected before production				Evaluation after harvest		
	Unit	Qty	Price (Pesos)	Total (Pesos)	Qty	Price (Pesos)	Total (Pesos)
1. Money-Out							
Inputs							
Total cost of inputs							
Labor (Man-Days)							
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
	MD						
Total Labor needs and costs		MD					
Total Money-Out Costs of inputs + Cost of Labor			Pesos				
2. Money-In Production X sales price			Pesos				
3. Profit or Loss? Money-In MINUS Money-Out			Pesos				
4. Unit Cost (Pesos/kg) Money-Out / Production			Peso/kg				

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