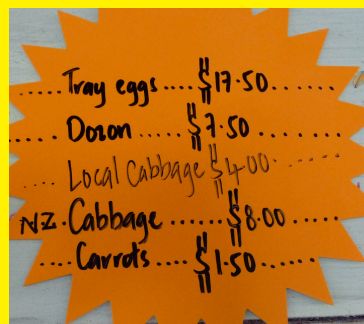


Cook Islands



Young Agricultural Entrepreneurs Program

Business development manual



12 steps to success

1. *Choose* to cultivate passion and love for your agricultural business and in producing food that others will love and be healthy eating.
2. *Ask* what buyers want to buy from you and how much they are willing to pay for a high quality product – don't guess.
3. *Learn* all you can about how you can produce a product well and at least cost.
Be a lifelong learner.
4. *Know* (or make an informed estimate) what it costs to produce a product – even before the first seed is sown. Include a competitive hourly wage for your efforts. Choose a reasonable mark-up and set a competitive price.
5. *Deliver* a product that meets or exceeds expectations. Ask your buyer how your product or service can be even better the next time.
6. *Pay* your bills and workers on time, every time. This cultivates your business reputation.
7. *Develop* a brand identity to differentiate your product from your competitor's. Be different, be unique, be proud of your professionalism.
8. *Stop* each month and balance your accounts – don't guess if you are making money – *know it.*
9. *Save* a minimum of 10 percent of your profits from each sale in the bank. Never spend all your profits.
10. *Contribute* an amount of money to activities that make the world better or that contribute to the wellbeing of your family and community.
11. *Keep* your eyes and ears open for new opportunities to grow your business and address the wants of customers.
12. *Care* for yourself and those you love, they are your biggest supporters.



Cook Islands



Young Agricultural Entrepreneurs Program



2008 – 2009

Authors and contributors

James R. Hollyer, Resource Research and Evaluation, Honolulu, Hawaii
Makiroa Beniamina, Consultant, Rarotonga, Cook Islands
Nooroa Tokari, Cook Islands Ministry of Agriculture, Rarotonga
John Akavi, Cook Islands Ministry of Agriculture, Rarotonga
Lafaele Enoka, Consultant, Solomon Islands
Taukea Rau, Consultant, Rarotonga, Cook Islands
Tai Manuela, Consultant, Rarotonga, Cook Islands
Heiko Bammann, Enterprise Development Officer, FAO, Rome, Italy

Abstract

The basics of agricultural business development are explored in this manual. Focus is placed on farm and business planning and on using money management tools (market appraisal, cost of production, business plans, and cash flow) and on other best business practices. Some attention is given to best practices in crop production. Other “plug-in” publications are used to provide additional information to users.

Acknowledgements

This book’s authors and the organizers of this training program wish to thank the following for their contributions to this program.

- National Program Task Force
- Tricia Thompson, Educator
- Farmers whose photo were on informational materials
- Learners who contributed feedback and ideas
- Kimiora Beniamina for her careful editing of the final text

Funding

This project was funded by the FAO, Rome, through TCP/CKI/3102 (D), *Enhancing the capacity of young farmers in farm management, marketing and agribusiness*.

Contact information

Ministry of Agriculture
Government of the Cook Islands
P.O. Box 96
Rarotonga, Cook Islands
email: cimoa@oyster.net.ck
phone: 682.28711
fax: 682.21881

Foreword

Kia Orana,

I am pleased to introduce this manual for the Cook Islands Young Agricultural Entrepreneurs Program. The program has been kindly funded by FAO under its technical co-operation programme, and covers all islands in the southern Cook Islands.

The purpose of this entrepreneurs program is to impart knowledge and skills to participants on all aspects associated with crop production as a business. It covers crop production and management aspects, post-harvest, marketing, value adding, farm including risk management, and any other necessary activities that farmers will need to do, to ensure successful farming as a business. The Ministry of Agriculture is there to support your farming business success, please ask us if you need help – we will do our best.

I trust that participants will make the most of this opportunity provided to them to help with their agricultural business activities.

Meitaki maata,

Nga Mataio
Secretary of Agriculture

August 2008
Rarotonga, Cook Islands



A modern and productive agricultural sector is the basis for national food security and has the potential to offer income and employment for many people, including in remote locations in the Pacific Islands. In times of rising costs for natural resources, energy and food, producing food locally by supporting rural livelihoods and agriculture is challenging but considered a timely and opportune investment. Indeed, trends in commodity prices suggest good prospects for farmers in the immediate and mid-term future.

FAO is providing technical assistance to national programmes aiming at offering career opportunities for youth and young agricultural entrepreneurs in a number of Pacific countries. In the Cook Islands – with constantly growing tourist numbers and increasing demands for healthy and nutritious fresh food – the conditions to establish a viable agriculture business are especially good.

It is hoped that this manual contributes to the education of you, young agricultural entrepreneurs, and assists you to develop a robust business and life, earning good money and allowing you to stay in the Cook Islands.

Vili A. Fuavao
FAO Subregional Representative for the Pacific Islands
FAO Representative for the Cook Islands

This manual belongs to:

_____ (name)

_____ (address)

_____ (island)

_____ (phone)

_____ (email)

I get good at something when I focus my energy on it . . .

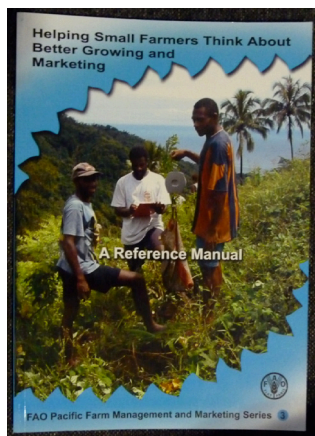
Right now in my life, I am best at the following skill:

I am good at this skill because:



Table of Contents

Introduction	2
About you	4
Making and putting plans into action	6
Business opportunities for you in agriculture	10
The costs of doing business	18
Managing the business's money	22
Relationships and partnerships	32
Excellent customer service	36
Business and marketing plans	38
Best practices in production and postharvest	44
Managing risk and recovery from missteps	54
Adding value by processing and services	56
Super summary	62



For more detailed information on the business of agriculture, read FAO's *Helping Small Farmers Think About Better Growing and Marketing* (2003).

“Commercial growers . . . produce high quality food and other products at a profit.”

Introduction

Cook Island agriculture is serious *business*! Each year the people of the Cook Islands import more and more of their food and while that might be good for some aspects of our lives, it puts the Cook Islands, you, and your family at risk if food prices go up as supplies become less available. Also, over 65% of our food is imported – we are sending our money overseas, rather than keeping it circulating in the Cook Islands economy. While you might say (or think) that this does not affect you, eventually it will and it is time we make a serious commitment to produce more of our own (healthy) food as we have done for hundreds of years. Cook Islanders must begin, again, to feed Cook Islanders!

This educational program is focused on your desire and needs to become the most educated *agricultural entrepreneur* possible. While some like the term *farmer*, we are going to purposely change the idea about what commercial (professional) growers do: they produce high quality food at a profit.

Entrepreneur = Business Person

Certainly, we value, encourage, and support traditional subsistence (home production) agriculture and the sharing of what you grow with your family and friends. We also vigorously support you:

- Selling your produce.
- Making a profit.
- Saving a good portion of that profit and paying your bills first.
- Sharing what you can with others, and,
- Spending the rest of your profit on the needs and joys of life.

Doing well financially in agriculture does not require a lot of formal education. What it does require, however, is for the agricultural entrepreneur – YOU! – to learn how:

- To grow the best food (or other products) possible.
- To pay close attention to the production situations for each crop.
- To really understand the market place.

Your notes

- To provide superior customer service.
- To become very aware of your business' finances, and,
- To respond to missteps (problems) gracefully and quickly.

In other words, you have to pay close attention and continually make improvements to your business so that you increase your chances of being successful. You can do this! With a bit of practice, it will become a part of your life.

This training manual has been developed by people who know their subject area and are willing to share their knowledge with you. Each unit starts with the learning objectives and learning outcomes; you will be tested in a written, oral, or activity form at the end of each unit. We have to test you so that we both know whether or not you have learned the topic well – that is our responsibility to you. The manual's content has been designed to give you a basic understanding of important business skills. Each one of these areas could have its own book, but we realize you are here to get a solid understanding of the topic, not a university degree. And, yet, if you would like to understand a topic better, we encourage you to spend time with our coaches and to read up on a topic – great entrepreneurs are lifelong learners; always willing to learn a new skill or improve on an existing ability.

We hope you will take this learning opportunity seriously and give it 100% of your energy, thought and concentration – you will not be disappointed. If it takes you a while to catch on to the information in this course, please be patient with yourself, ask a LOT of questions of us, and spend some time thinking about the questions yourself – you will be surprised that you really already know the answer. Best of luck and thank you for making a commitment to feeding people in the Cook Islands and beyond.

Now, are there any questions about the business of agriculture?

“Great entrepreneurs are life-long learners; always willing to learn a new skill or improve on an existing ability.”

Module specifics

Time required

0.45 mins – 1.0 hour

Learning objectives

The purpose of this unit is for you to:

- 1) understand your work and career desires.
- 2) understand your cost of living (including saving).
- 3) give you a financial goal to achieve should you decide to go into commercial agriculture.

Class work format

Individual activity

Materials required

A pen, pencil, calculator.

Learning outcomes

At the end of this module you will be clear about:

- 1) your thoughts on career desires.
- 2) your current life costs.
- 3) know whether you are generating “profit” in your life.

About you

Being an entrepreneur can be a very rewarding experience. There is freedom, creativity, personal ownership of success (and failures). It is a wonderful feeling to know that you are taking care of someone’s needs and wants, and also being in charge of your finances. It can be exciting, stressful, fun, difficult and many combinations of other feelings. But, nothing in life that is worth having comes for free and entrepreneurs who are able to think around problems and create solutions for themselves and their customers become successful *if* they are able to master the basics of the product they are growing and as many business skills as possible. In this module we want to learn a bit about you, your dreams, how much it costs you to live, and other factors that will help us understand your needs better. With this information we can better see if agriculture can provide you with the job satisfaction and money you will need to meet your needs. This information will NOT be shared with other people and we need you to be honest with yourself about this information.

What do you really want to do as a job/career in life?

If you did not write down, “agricultural entrepreneur” or “farmer,” can you please briefly tell how agriculture fits into your future?

Your notes

Exercise – Please answer these questions

What are your monthly and yearly income and costs of living?

In order for you to understand if an agricultural business could meet your monthly and yearly needs, it is important to write down all the costs that you have or might have in an average year. If you are in a multi-income household, ONLY write down your part of the costs, rather than all the costs that people would share. If you don't know the exact numbers, then make the best estimate and rounding is fine.

To start, what was your total income last year? \$ _____

Please estimate all your living costs for last year

Item (e.g. food, rent, telephone)	Monthly cost	Multiply	Number of Months	Equals	Yearly total
Example: <i>Petrol</i>	\$35	x	12	=	\$420
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
	\$	x		=	\$
Total living costs					\$

What's bigger – total income or total costs? (circle which one)

On average, last year how much money did you put in the bank or save each month? \$ _____ /month or \$ _____ per year?



Making and putting plans into action

Every one of us makes plans each day. Some plans are more complex, such as going on a two-week trip to New Zealand, and some are simpler, such as deciding to go to the store for food or planning to gather the chicken eggs by 7a.m. In all cases, however, planning includes thinking about the final outcome of the task (what do you want or what do you want to achieve), gathering and using resources (time, money, favors, knowledge, etc.), and then actually doing the task, or putting the plan into *action*. To be a successful agricultural entrepreneur you will need the ability to make and implement plans – almost daily! Start with a vision or goals of what you want to get done.

Visions and goals

At the start of every sports season, every team has a vision or goals – their success target for the year. Maybe it is to be Number 1, maybe it is to finish in the Top 5, maybe it is just a rebuilding year. The same is true of your business – you need to set a vision or goal for yourself and your company.

Exercise 1 – Getting good with goals

Take 5 minutes now to write down your success goals for the next year (example vision or goal: *To be the most respected and trusted farm operation on island and the Number 1 supplier to three large hotels*). Whatever you choose for your agri-business, go for excellence, just like your favorite sports team!

Module specifics

Time required

0.30 – 0.45 minutes

Learning objectives

The purpose of this unit is for you to:

- 1) understand how to create a detailed plan of action for a desire or task.

Class work format

Small group activity

Materials required

A pen or pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) how to create a step-by-step list of “to-do’s”.

Planning

Planning toward your vision or goal is really important. What are the rewards of planning?

- To use time and money and other resources wisely.
- To prioritize (order) tasks – which ones are first or can be done at the same time.
- To increase the chances that your plans will happen the way you organized them.
- To clearly communicate to others what you are thinking or how you all decided to do a particular task.

Exercise 2 – Are you a planner?

In your life, are you a planner, non-planner or a follower? Let's see! Get into small groups and create a plan for a traditional Cook Islands hair cutting ceremony (or other traditional activity) – work quickly and do not get stuck on tiny, tiny details. List all the tasks in order with a time frame, even the ones that can be done at the same time, put names next to each person to do the task, and finally, make a list of all the necessary supplies or inputs for this traditional event. (Use the table on page 8).

Exercise 3 – Let's plan a crop of lettuce

Planning for fun events is typically less serious than business, but business should be fun, too! As a group let's make up a list of costs and labor needs for growing 1,000 sq metres of a crop of lettuce. Don't worry too much about accuracy, just try your best to use your historical knowledge and work with the group to come up with the best plan, including costs. (Use the table on page 9).

What is your planning task, and how do you know when it is done with excellence?

Step or Task	Who	Time (mins/hrs)	Need by what time	Supplies or inputs	Notes
Example: <i>Get event place</i>	J. T.	3 hrs for visits	8/25, 6:30pm	\$600	12 choices to chose from
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13					
14.					
15.					
16.					
17.					
18.					
Totals					

What inputs, time, and costs does it take to grow 1,000 square meters of lettuce?

Step or Task	Who	Time (mins/hrs)	Need by what time	Supplies or inputs	Notes
Example: <i>Field clearing</i>	Hire	3 hrs	8/25, 6:30pm	\$90	3 service companies to choose
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
Totals					



Business opportunities for you in agriculture

Module specifics

Time required
2 – 2.5 hours

Learning objectives

The purpose of this unit is for you to:

- 1) be able to understand market statistics.
- 2) be able to see where opportunities might be.

Class work format

Small group activity

Materials required

Pen, pencil, ruler.

Learning outcomes

At the end of this module you will be clear about:

- 1) how to read and interpret statistical tables.
- 2) identify some possible market openings.

It is impossible to have an “ag-less” day. What we eat all comes from agriculture (including, the sea and aquaculture), at least at the beginning. The bed we sleep on typically has a wooden frame and is covered in cotton materials. Even if we sleep on pandanus mats, that material came from a plant. Plants covering the land helps protect and filter our life-giving water. And there are many more examples of where agriculture enters our lives each day. Let’s also be clear – food does not magically come from the shop or store – it first comes from farms! A shop is just a convenient place for people to come and purchase food.

Our world, even here in the Cook Islands, is highly connected. We can buy food from just about any place on the planet with enough money. For Cook Island farmers it is important to be aware of market niches or gaps (special or unique) where perhaps they can provide a high quality product to the market place at a price the consumer can afford, and the farmer can make a reasonable return/profit.

The search for opportunities is like treasure hunting – you need to put clues (data, experience) together in order to detect possible market demand that you can possibly fill by production on your farm.

On an annual basis, your government Statistics Office summarizes the import data for each shipment of food that is brought into the country. That data is critical to understanding potential market opportunities because if you can grow a crop of equal or better quality to the imports and a price that is equal or lower to the CIF (Cost, Insurance and Freight) price of the product delivered to the dock or airport, then perhaps you have a market for

[illegible]

A draft availability chart of local produce in Rarotonga. Supply times may or may not apply to all islands.

[illegible]

your product. What is even more exciting is that a local import tax or tariff might also be placed on the imported product so if you can produce the crop lower than $\text{CIF} + \text{Tariff}$ (if there is one) then you have extra breathing room when it comes to pricing.

A July 2008 study of the local import and export markets in the Cook Islands indicates that there are some opportunities to sell more locally-grown produce in the country.

	<h1>Domestic Market Appraisal of Fresh Agricultural Produce</h1> <h2>Cook Islands</h2>
JULY 2008	A REPORT PREPARED FOR THE FAO AND THE COOK ISLANDS MINISTRY OF AGRICULTURE UNDER THE TCP/CKI/03/102 (D) PROJECT
	<p>"Enhancing the Capacity of Young Farmers in Farm Management, Marketing and Agribusiness"</p>
	<p>Prepared by: Lafaele Enoka FAO Consultant Marketing Extension Training July, 2008</p>

*Domestic Market Appraisal of
Fresh Agricultural Produce:
Cook Islands. Lafaele Enoka for
FAO. July, 2008.*

What do you need to be comfortable to start growing a new product or expanding your production in an existing crop? Typically, you will need to know:

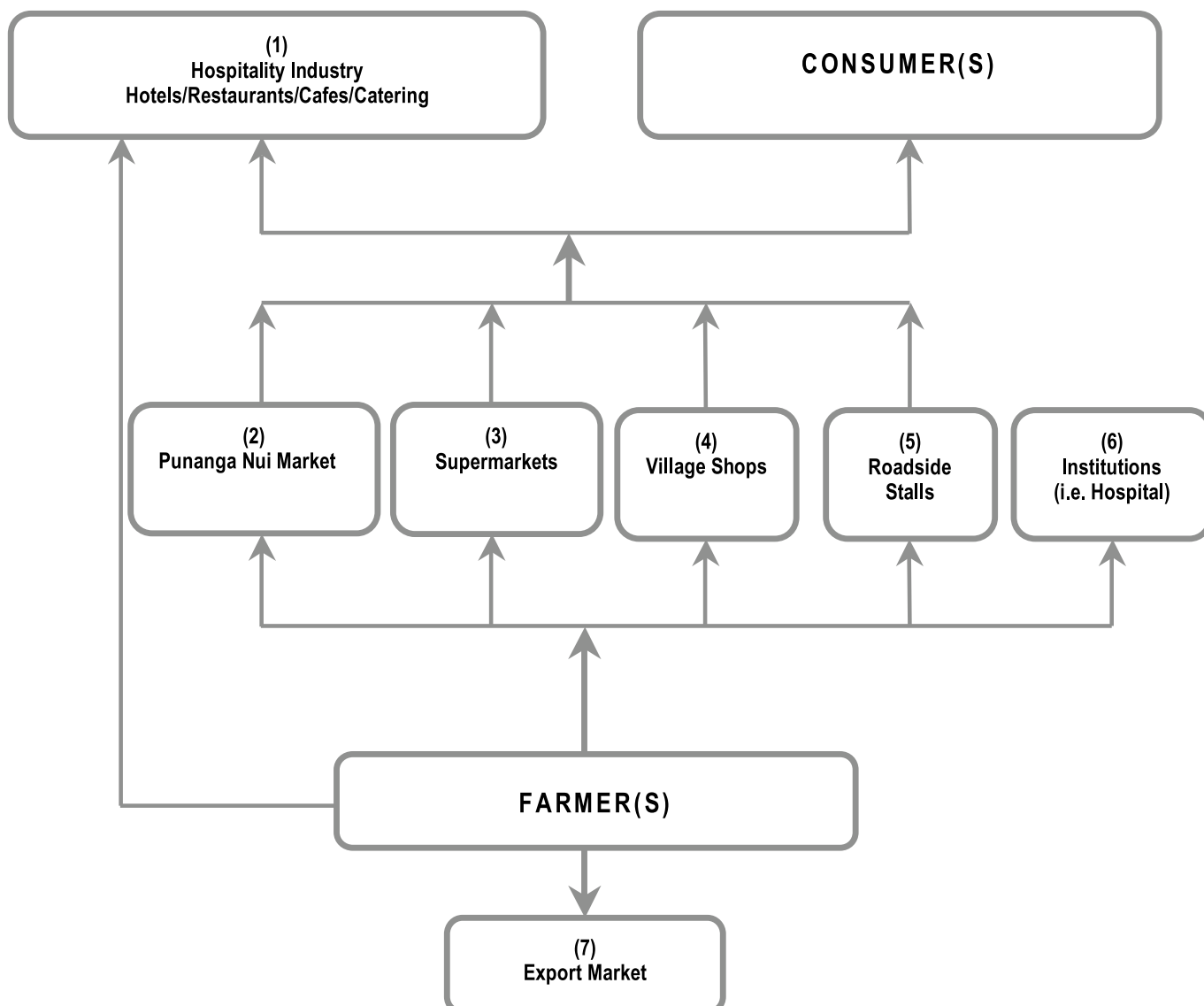
1. How does produce “flow” through the marketing system?
2. What products are being sold – over the last few years what is the amount (volume) and what is the CIF price (at a minimum)?
3. Who specifically is buying this crop? It is important not to just grow and “hope” that someone will buy your crop over another supplier. The buyer may have a long-term relationship with a product supplier and just because you can deliver it cheaper, doesn’t mean the buyer will automatically switch to you. Go and meet with the buyer and start developing a business relationship.

Your notes

4. Can you grow this crop as good as the imported one given your skill and knowledge, your seeds, your soil conditions, and your water source?
5. Can you *consistently* deliver this product on the *buyer's schedule*?
6. What is the cost of growing this product?

The answer to Question #1 about the marketing system in the Cook Islands is illustrated below. There are many ways that products flow and each person in the marketing “chain” will need to be paid adequately for the service they provide in moving a product toward the consumer – this is a fact that many agricultural entrepreneurs overlook.

Marketing chain of fresh agricultural produce in the Cook Islands.



The answer to Question #2 on market size comes in two parts:

1. What market demand is being taken care of by local producers, and
2. What market demand is being taken care of by growers in other countries and brought in by a variety of importers (wholesalers, retailers, other middlemen).

The new market study estimates the following market demand for local products in Rarotonga (*in NZ/Cook Island dollars*):

Domestic market for produce supplied by local growers in Rarotonga.

	ROOT CROPS	FRUITS	VEGETABLES	HERBS	Total
HOSPITALITY INDUSTRY					
Volume (mt)	20	65	104	2	191
Value (\$)	\$42,000	\$55,000	\$308,000	\$15,000	\$420,000
PUNANGA NUI MARKET					
Volume (mt)	45	36	19	0.5	100
Value (\$)	\$63,000	\$57,000	\$46,000	\$4,000	\$170,000
SUPERMARKETS					
Volume (mt)	22	22	40	1	85
Value (\$)	\$54,000	\$54,000	\$123,000	\$7,500	\$238,500
VILLAGE SHOPS					
Volume (mt)	18	2	1	-	21
Value (\$)	\$46,000	\$2,000	\$3,000	-	\$51,000
ROADSIDE STALLS					
Volume (mt)	3	2	1	-	6
Value (\$)	\$18,000	\$3,000	\$2,000	-	\$23,000
INSTITUTIONS (i.e. Hospital)					
Volume (mt)	2	5	3	-	10
Value (\$)	\$6,000	\$5,000	\$11,000	-	\$22,000
Estimated Total Volume (mt)	110	132	168	3.5	413
Estimated Total Value	\$229,000	\$176,000	\$493,000	\$26,500	\$925,000

mt = metric ton

As for the amount of agricultural products being imported to satisfy Cook Island demand, that question can be answered by looking at detailed data (page 15) for 2005-2006 from the Statistics Office (SO). *At the moment, there is no way to clearly understand the complete demand for each product, especially in the case of non-*

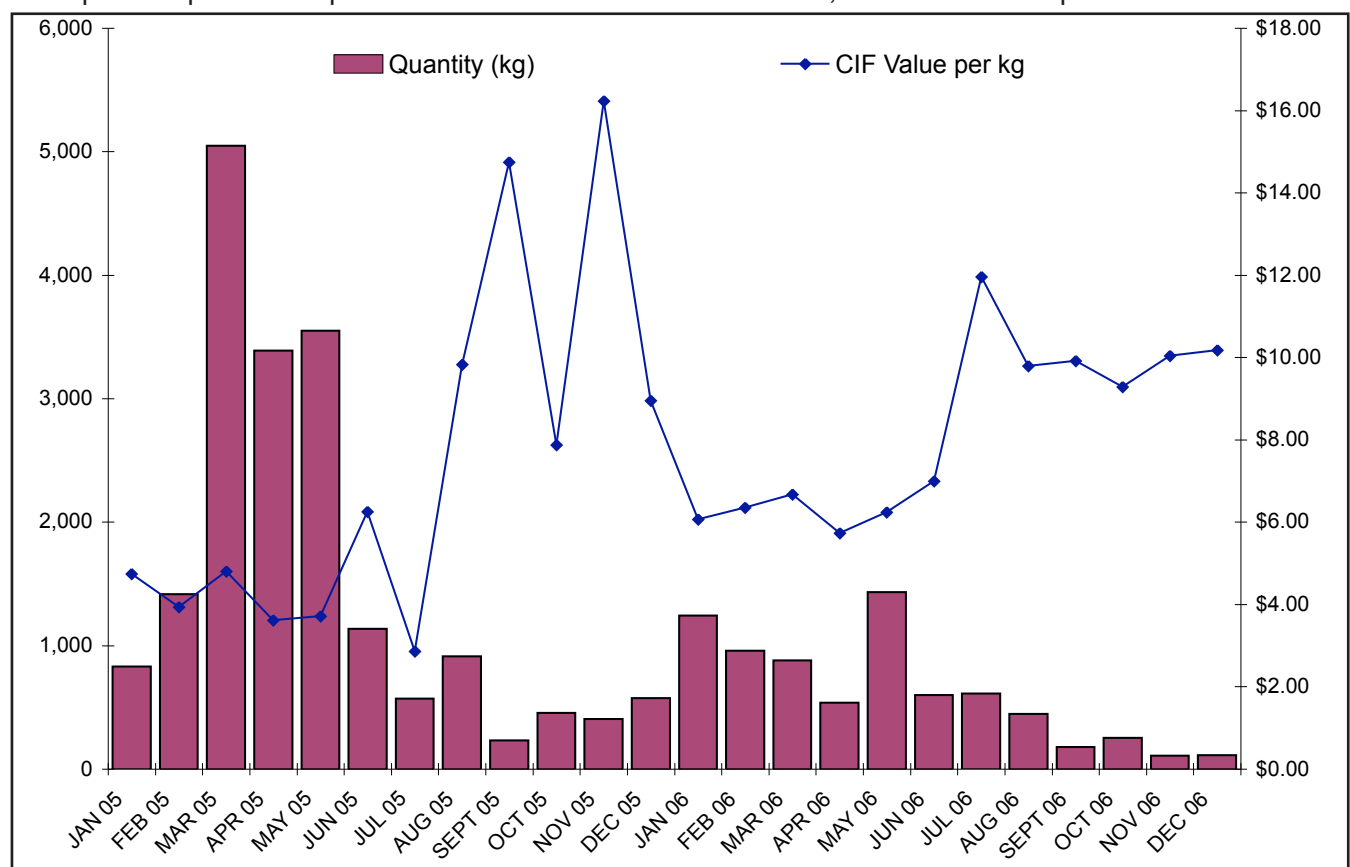
Your notes

traditional vegetables and fruit, is being provided by either local growers or by imports. It is generally felt, however, that the demand for traditional crops in Rarotonga and in the Outer Islands, is being met by local growers and thus, there is little room for market growth at this time.

This section of the import chart is one of six pages of data from the Statistics Office and it takes some time to begin to see some of the opportunities, but they are there for the motivated and business-minded Cook Islands grower. One way of looking at the data is to begin to graph it and see if there are any trends – year-to-year – so you can have some confidence that the potential market demand and price is not just temporary. Below is a good example of a graph that shows two years of quantity and price data for imported crop (you will find out which one later).

- Do you see any opportunities here? How do you know?
- What months are good and what months are not good?

Example of a product imported to the Cook Islands 2005-2006, volume and CIF price.



Cook Islands import of selected commodities in detail by monthly - 2005 to 2006

Caution: These figures only best estimates and it is known that some data is missing. This data is not guaranteed.

Description	Jan 2005			Jan 2006			Feb 2005			Feb 2006			Mar 2005			Mar 2006			Apr 2005			Apr 2006		
	Qty (kg)	CIF / Kg		Qty (kg)	CIF / kg		Qty (kg)	CIF / kg		Qty (kg)	CIF / kg		Qty (kg)	CIF / Kg		Qty (kg)	CIF / Kg		Qty (kg)	CIF / Kg		Qty (kg)	CIF / Kg	
Vegetables																								
Asparagus, Fresh or Chilled	25	\$26.64		62	\$8.76					10	\$19.90		50	\$21.98		15	\$27.80		40	\$15.53		79	\$13.39	
Broccoli, Headed; Fresh or Chilled	250	\$9.84		372	\$10.27		144	\$9.81		192	\$8.39		735	\$10.70		413	\$8.28		558	\$7.53		217	\$10.30	
Cabbages	533	\$5.26		2,129	\$4.06		388	\$6.82		3,513	\$2.15		3,877	\$3.45		4,060	\$2.76		2,616	\$3.68		645	\$4.70	
Capsicum or of the Genus Pimenta	314	\$12.40		860	\$8.61		255	\$14.60		440	\$9.34		925	\$12.51		640	\$10.24		955	\$11.25		500	\$9.56	
Carrots and Turnips, Fresh or Chilled	1,938	\$2.60		1,620	\$2.67		1,360	\$1.87		1,300	\$2.45		3,660	\$1.84		2,640	\$2.34		3,760	\$1.67		3,960	\$1.49	
Cauliflowers, Fresh or Chilled	296	\$7.78		396	\$5.68		140	\$7.27		400	\$5.39		743	\$7.66		379	\$7.14		570	\$7.15		277	\$5.88	
Celery other than Celeriac; Fresh or Chilled	298	\$5.73		806	\$4.24		218	\$3.61		765	\$3.18		810	\$4.81		804	\$3.36		600	\$4.11		500	\$3.69	
Courgettes, including Marrows and Legumes, Fresh or Chilled	50	\$15.94		241	\$5.81		40	\$16.98		90	\$7.93		380	\$6.51		288	\$6.02		300	\$6.74		181	\$6.82	
Cucumber, Fresh or Chilled	45	\$6.20		7	\$5.20		10	\$5.60		10	\$3.00		713	\$4.20		52	\$5.38		190	\$5.56		95	\$5.17	
Garlic, Fresh or Chilled	550	\$4.77		400	\$3.56		10	\$103.50		370	\$4.10		450	\$5.26		860	\$3.81		736	\$6.33		950	\$5.56	
Leeks and other Alliaceous Vegetables Fresh or Chilled	129	\$4.95		247	\$5.19		141	\$6.80		104	\$5.21		304	\$5.64		143	\$4.71		207	\$6.73		115	\$4.45	
Lettuce, Fresh or Chilled	827	\$4.74		1,244	\$6.06		1,415	\$3.93		956	\$6.35		5,046	\$4.80		878	\$6.68		3,390	\$3.62		538	\$5.73	
Mushrooms and Truffles, Fresh or Chilled	442	\$21.17		1,016	\$9.94		270	\$15.61		474	\$9.88		594	\$17.28		956	\$9.88		623	\$13.51		544	\$9.07	
Mushrooms and Truffles, Whole, cut, sliced, broken or in powder but not further prepared, Dried				20	\$17.30								40	\$22.10		44	\$13.43		60	\$11.52		44	\$11.09	
Onions and Shallots, Fresh or Chilled	2,563	\$1.22		9,030	\$1.46		3,265	\$1.33		2,065	\$1.07		4,314	\$1.21		11,627	\$0.92		6,110	\$0.67		8,256	\$0.82	
Onions, Whole, cut, sliced, broken or in powder but not further prepared, Dried				200	\$1.31		300	\$0.50		210	\$0.96		30	\$2.80		20	\$3.05		0			80	\$2.79	
Peas, Beans etc; Uncooked or cooked by Steaming or Boiling in Water, Frozen				408	\$2.15		129	\$2.26		166	\$2.61		255	\$2.49		495	\$2.79		678	\$2.52		72	\$3.36	

- What could be causing a decrease in lettuce imports – is it less consumers or less production in New Zealand or both?
- What is the relationship between CIF price and import quantity?
(*hint: this relationship is critical to your business!*)

Coach's note:
Do Exercise 1 first, then come back and do Exercise 2 with the table below.

Exercise 1 – Graphing imported lettuce data

Using the data and graph paper on page 17, graph the imports of lettuce to the Cook Islands and see what trends and opportunities might be available for locally-produced lettuces that are of equal or better quality, and at a competitive price to the imports. Look at the example on page 14 for hints on how it should look. Plot 2005 information, then 2006. Don't worry about being exact with your markings, just close enough will do for this exercise as we want you to get an understanding of how to do this process on your own.

Exercise 2 – Graphing imported lettuce data

Finally, let's take a look at the summary from the FAO report to see what opportunities the writer has identified. The consultant's report contains graphs and summaries for each of these potential crops. Can you produce a crop cheaper than the CIF + duty value identified in the report? If so, then perhaps you have a new market!

Imported vegetable and fruits that may be substituted by locally-produced products given that the local product is of equal or better quality and at a competitive price.

Imported Commodity	Estimated Average Monthly Supply (kg)	Estimated Average Price CIF (\$/kg)	Potential Target Months to substitute Imports
Broccoli	300	\$9.00	January – December
Cabbage	1,900	\$3.00	March – July
Capsicum	600	\$12.00	March – July
Cauliflower	380	\$6.00	November – May
Celery	600	\$4.00	January – December
Courgette	200	\$8.00	January – December
Mushroom	800	\$11.00	January – December
Tomato	1,500	\$8.00	March – July
Pineapple	400	\$4.00	January – December
Melon—including watermelon	500	\$7.00	January – December

Lettuce, Fresh or Chilled

Jan 2005		Jan 2006		Feb 2005		Feb 2006		Mar 2005		Mar 2006		Apr 2005		Apr 2006	
Qty (kg)	CIF / Kg	Qty (kg)	CIF / kg	Qty (kg)	CIF / kg	Qty (kg)	CIF / kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg
827	\$4.74	1,244	\$6.06	1,415	\$3.93	956	\$6.35	5,046	\$4.80	878	\$6.68	3,390	\$3.62	538	\$5.73

May 2005		May 2006		June 2005		June 2006		July 2005		July 2006		Aug 2005		Aug 2006	
Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg
3,549	\$3.72	1,432	\$6.24	1,136	\$6.25	599	\$6.99	568	\$2.86	611	\$11.96	913	\$9.82	446	\$9.79

Sept 2005		Sept 2006		Oct 2005		Oct 2006		Nov 2005		Nov 2006		Dec 2005		Dec 2006	
Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg	Qty (kg)	CIF / Kg
233	\$14.74	178	\$9.92	456	\$7.88	252	\$9.28	403	\$16.23	108	\$10.04	575	\$8.95	110	\$10.17





The costs of doing business

Okay, in the last unit you might have got excited about some crops you can grow and know that there is a market for them – good job! Now the question becomes, can you grow these crops *profitably*? Let's take a moment to define some words we will be using in this unit:

- Income or Revenues: money coming into your business because of the sale of a quality product or service.
- Costs: money, or other forms of inputs, that are spent in order to produce a product or service for sale.
- Gross Margin: Total Income *minus* Variable Costs.
- Profits: the remaining (hopefully) difference when we subtract: Income/Revenues *minus* Total Costs.

Many farmers love to grow food/plants and that is often enough satisfaction for them especially if they have another income, but as a *professional agricultural entrepreneur* your goals should be:

- To meet the needs of paying consumers as well as or better than any other grower.
- To enjoy your work with a passion.
- To make enough profit to live the life that you want, and, hopefully,
- To share some of your abundance with others.

In our first unit we worked on a 'to-do' list for growing lettuce. While some crops such as coconut and breadfruit don't require a lot of inputs and time to produce a usable/salable crop, vegetables such as cabbage, tomatoes, capsicum, and lettuce required more inputs and time. Now, let's add some numbers to the

Module specifics

Time required

1.5 – 2 hours

Learning objectives

The purpose of this unit is for you to:

- 1) Understand the items that go into a costing.
- 2) Be able to calculate costs for a product.

Class work format

Small group activity

Materials required

Pen, pencil, calculator.

Learning outcomes

At the end of this module you will be clear about:

- 1) The importance of knowing your cost of production.
- 2) How to do a cost of production for most any crop.

Your time has a value – every minute of it. We all have an “opportunity cost” to our time – what else we could be doing. The question is between different options, which option pays us more or gives us more enjoyment, or both. Your time never has a zero value. Always add some amount of cost for your labor time. The profit you make is also a payment to you – the value of your knowledge and management skills.

inputs required to grow that crop. Typically, there are two types of costs:

- **Fixed:** A cost that does not vary depending on production or sales levels, such as rent, property tax, insurance, or interest (loan) expense. The fixed costs need to be paid, even if you are not producing a crop!
- **Variable:** A cost of labor, material or overhead that changes according to the change in the volume of production units. Combined with fixed costs, variable costs make up the total cost of production. While the total variable cost changes with increased production, the total fixed costs stays the same.

Exercise 1 – Fixed and Variable costs

What are examples of Fixed and Variable *business* costs for a typical farm operation in the Cook Islands? (*it's okay to guess!*)

Please list general examples of each cost type

Fixed Cost	\$	Variable	\$/Unit
Example: Land rent	\$200/ha/yr	Labor	\$5/hour
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

Exercise 2 – Estimating cost of growing lettuce?

Now lets use the following sheet to put in what you think are the costs to grow a 1,000 sq. meters of lettuce.

Gross Margin Budget for Lettuce (2008)

Variety: Takii-Red Fire (head lettuce)

FOR EXAMPLE ONLY

Assumptions

(A) Plot size (ha)	0.1	
Area in sq. metre	1,000	
Equivalent area in acre	0.25	
Plant spacing (m): 0.3m within row and 0.4m between row	0.3 x 0.4	
Area per plant (sq m)	0.12	Plant spacing (0.3m x 0.4m)
(B) Total number of plants		Plot size (0.1ha) divided by area per plant
Growth period to harvest (months)		
Average weight per head (kg)		
(C) Total yield (kg) : Total number of plants multiply by the average weight per head of lettuce		
Estimated yield (kg) kept for family use (5%)		
Estimated yield (kg) loss to pests and diseases (30%)		
Total yield for sale: total yield (C) less portion kept for family use and less the loss to pests and diseases		
Average number of working hours per day		
Cost of labour per day - minimum wage (\$)		

Income (\$)

Source	Quantity	Unit	Unit Price (\$)	Total (\$)
Sale of lettuce	-	kg		\$0
(D) Total Income				\$0

Variable Costs (\$) excluding labour cost	Quantity	Unit	Unit Cost (\$)	Total
Land Preparation - tractor hire		hrs		\$0
Fertilizer:				
Rustica blue		kg		\$0
Ammonium sulphate		kg		\$0
Seed		g packets		\$0
Transport to market		trip		\$0
Hire of market space		days		\$0
(E) Total Variable Costs				\$0

(F) Gross Margin - excluding labour cost (D-E) **\$0**

Labour Inputs (days)

Tasks	(G) Hired	(H) Self/Family	Unit	Total Days
Land preparation			days	0
Planting			days	0
Weeding			days	0
Watering			days	0
Harvesting, packaging, and packing			days	0
Selling			days	0
Total Labour Required - (days)				0

(I) Average wage rate (\$ _____/hr per _____ hr day)	\$0
(J) Total cost of hired labour (I*G)	\$0
(K) Total cost of family labour (I*H)	\$0
(L) Total Labour Costs (J+K)	\$0

(M) Gross Margin - including labour cost (F-L) **\$0**

(N) Share of Fixed Costs

Profit/Net Income: Total Income – ((Variable + Labour Cost + Fixed Costs) (D-(E+L+N))

Gross Margin Budget for Lettuce (2008)

FOR EXAMPLE ONLY

Variety: Takii-Red Fire (head lettuce)

Assumptions

(A) Plot size (ha)	0.1				
Area in sq. metre	1,000				
Equivalent area in acre	0.25				
Plant spacing (m): 0.3m within row and 0.4m between row	0.3 x 0.4				
Area per plant (sq m) (0.3 x 0.4)	0.12				
(B) Total number of plants - plot size / area per plant	8,333				
Growth period to harvest (months)	3				
Average weight per head (kg)	0.30				
(C) Total yield (kg) : Total number of plants (B) multiply by the average weight per head of lettuce	2,500				
Estimated yield (kg) kept for family use (5%)	125				
Estimated yield (kg) loss to pests and diseases (30%)	750				
Total yield for sale: total yield (C) less portion kept for family use and less the loss to pests and diseases	1,625				
Average number of working hours per day	6				
Cost of labour per day - minimum wage (\$)	5				

Cost of Production Summary		
Quantity sold (kg)	1,625	\$ per kg
Total income	\$3,250	\$2.00
Variable	\$986	\$0.61
Labour	\$960	\$0.59
Fixed cost	\$344	\$0.21
Total costs	\$2,290	\$1.41
Net Income	\$960	\$0.59

Cost/Qty (kg)

BK-even P

Income (\$)

Source	Quantity	Unit	Unit Price (\$)	Total (\$)
Sale of lettuce	1,625	kg	\$2.00	\$3,250
(D) Total Income				\$3,250

Variable Costs (\$) excluding labour cost	Quantity	Unit	Unit Cost (\$)	Total	Cost/kg
Land Preparation - tractor hire	6	hrs	\$50	\$300	\$0.18
Seed sowing medium - Black Magic	1	bag	27.95	28	0.02
Seed Trays	20	tray	8	160	0.10
Fertilizer:					
Rustica blue	40	kg	\$1.48	\$59	0.04
Ammonium sulphate	20	kg	\$1.08	\$22	0.01
Seed	5	20 g packets	\$5.50	\$28	0.02
Transport to market	6	trip	\$50.00	\$300	0.18
Hire of market space	6	days	\$15.00	\$90	0.06
(E) Total Variable Costs				\$986	\$0.61

(F) Gross Margin - excluding labour cost (D-E)	\$2,264
---	----------------

Labour Inputs (days)

Tasks	(G) Hired	(H) Self/Family	Unit	Total Days
Land preparation		3	days	3
Planting		1	days	1
Weeding		10	days	10
Watering		6	days	6
Harvesting, packaging, and packing		6	days	6
Selling		6	days	6
Total Labour Required - (days)				32

(I) Average wage rate (\$5/hr per 6hr day)	\$30
(J) Total cost of hired labour (I*G)	\$0
(K) Total cost of family labour (I*H)	\$960
(L) Total Labour Costs (J+K)	\$960

(M) Gross Margin - including labour cost (F-L)	\$1,304
---	----------------

(N) Share of Fixed Costs	\$344	\$0.21
---------------------------------	--------------	---------------

Net Income: Total Income - ((Variable + Labour Cost + Fixed Costs) (D-(E+L+N))	\$960
---	--------------

Net Income Sensitivity Analysis (what would happen if saleable yield or sales price varied +/- 10%?)

Saleable yield (kg/0.1ha)	Price (\$ / kg)		
	\$1.80	\$2.00	\$2.20
1,463	\$316	\$635	\$901
1,625	\$609	\$960	\$1,259
1,788	\$901	\$1,285	\$1,616



Managing the business's money

Money is not the reason to go into business – serving customer's needs and wants with great food and products – is. As a result of providing a product, service, or a combination of the two, at a price people can afford, you will generate income/revenues. As you have learned, income is NOT profits, because you still need to subtract all your costs in order to arrive at your *profits*. Profit is the amount of money that is yours to spend on your needs, reinvest in your business, and save for the short and long terms. In this module we will briefly cover the following topics:

- Basic record keeping (accounting)
- Cash flow and planning
- Paying your bills
- Selling and collecting (*marketing is discussed later*)
- Saving, reinvesting and sharing profits.

We will make this learning as simple as possible, but this is an important business skill, so please do your best. Many agricultural entrepreneurs can grow and sell a product, but they don't manage their money well enough to accumulate wealth. Saving some of what they make so that in future years they have a large savings account to draw upon. Also, many growers spend all the income they make and then don't have enough for the next crop, and then get frustrated. This is simply a matter of poor planning and can be easily fixed with good planning and a determination to save some profits to reinvest in the business. We want you to be successful now and in the future. If managing money is not something you do well, find a trusted advisor or partner to help you manage your income and spending.

Module particulars

Time required
1.5 – 2.0 hours

Learning objectives

The purpose of this unit is for you to:

- 1) Learn the basics of record keeping.
- 2) Understand how cash flow works and is important.
- 3) Selling and collecting from buyers.

Class work format
Small group activity

Materials required
Pen, pencil, calculator.

Learning outcomes

At the end of this module you will be clear about:

- 1) Be able to explain the importance or record keeping.
- 2) Be able to fill out a cash flow budget based on a made-up situation.

Basic record keeping – Income/Expense ledger

It is important to get into the habit of writing on paper your farm activities and business transactions. Use this ledger to keep track of your Income and Costs. This will help you understand how your business' "bank" balance is doing *at all times*.

Exercise 1 – Tracking income and costs

Take the lettuce cost of production from the last unit, and list all income/revenue and costs – are your Totals and Profit the same as the original table? If not, why not?

Date	Item	Received (Income \$)	Spent (Cost \$)	Running Balance \$
Example: Today	Starting business balance			\$250.00
11/11/08	Fertilizer		-\$10.43	239.57
2/12/09	Lettuce sales	\$47.25		286.82
	Your starting business balance (your investment)			\$1,000.00
Totals		\$_____	\$_____	\$_____

Cash flow – How money moves through your business

The Income/Expense table helps you keep track of your money on a day-to-day basis, but it is also important, especially for loan or grant applications, to be able to track and predict your costs, income/revenues and cash flow for longer periods of time. It is like using a combination of a planting calendar and the Income/Expense table on page 23. Why is having this longer-term view valuable to you and others? Well, imagine lending a friend money for their business. They have great plans to make a lot of money *with your money*, but there is no proof of this in the beginning of their business. Having them write down their expected income and costs will help them, and you, understand if they really have a chance of making money, and, paying you back the money they borrowed.

Exercise 2 – Tracking cash flow over time

To start on this Cash Flow table, take the numbers from the cost of production for lettuce. At the beginning you will need to pay for supplies and field preparation – that should go in month 1. Then, write in the costs over the three months of this crop; mostly labor and perhaps fertilizer if there is a mid-growth cycle application. Naturally, you should not have any income (Cash In) until the crop is ready to sell; that would probably be in month 4 since the crop is 60–90 days. Well, did you make any money?

What would this table look like if you had three of the same or different crops growing and selling at the same time? (following page). What would income and cost flows look like on a calendar? Lots of Cash In and Cash Out – correct? Now, can you see why having this form is important? It helps you, your banker, and your partner, understand if you will make any profit after all the expenses are paid.



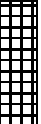
Cash Flow Plan: Lettuce Example

Exercise: Decide what activities shown in the Key should go in the Cropping Plan. Then, assign costs for each activity over time in the Cash Flow Plan.

Cropping Plan (decided by agricultural entrepreneur and sales opportunities)

Crop(s)	Months					Summary
	1	2	3	4	5	
Lettuce 1 ----->						

Key

Land Preparation	
Growing	
Harvesting / Sales	

Cash Flow Plan (numbers from cost of production sheet)

Cash In					
Starting Balance					
Lettuce 1					
Total Cash In					
Cash Out					
Fixed Costs (some or all of rent, loans, insurance)					
Lettuce 1					
Variable Costs					
Land preparation					
Seed sowing media					
Seed tray					
Fert - Rustica Blue					
Fert - Ammonium sulphate					
Seeds					
Transport					
Hire space					
Labor					
Total Cash Out					
Profit					

Combination Cropping Plan and Cash Flow Plan: Multiple Crops of Lettuce

Note: In this example, lettuce crops have been purposely put end-to-end to make the numbers easier to understand. However, a grower could overlap the crops tighter and even grow a range of crops at the same time.

Example Cropping Plan (decided by agricultural entrepreneur and sales opportunities)

Crop(s)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Summary
Lettuce 1 ----->																
Lettuce 2 ----->																
Lettuce 3 ----->																

Key	Land Preparation	Growing	Harvesting / Sales

Cash Flow Plan (numbers from cost of production sheet)

Cash In																
Starting Balance	\$1,000															
Lettuce 1				\$1,625	\$1,625											
Lettuce 2																
Lettuce 3																
Total Cash In	\$1,000	\$0	\$0	\$0	\$1,625	\$1,625	\$0	\$0	\$0	\$1,625	\$1,625	\$0	\$0	\$0	\$1,625	\$10,750
Cash Out																
Fixed Costs (some or all of rent, loans, insurance)																
Lettuce 1																
Lettuce 2																
Lettuce 3																
Variable Costs																
Land preparation	\$300					\$300										
Seed sowing media	\$28					\$28										
Seed tray	\$160					\$160										
Fert - Rustica Blue	\$29	\$30				\$29	\$30					\$29	\$30			
Fert - Ammonium sulphate	\$11	\$11				\$11	\$11					\$11	\$11			
Seeds	\$28					\$28						\$28				
Transport				\$150	\$150				\$150	\$150				\$150	\$150	
Hire space				\$45	\$45				\$45	\$45				\$45	\$45	
Labor	\$90	\$270	\$240	\$180	\$180	\$90	\$270	\$240	\$180	\$180	\$90	\$270	\$240	\$180	\$180	
Total Cash Out	\$950	\$310	\$281	\$375	\$375	\$950	\$310	\$281	\$375	\$375	\$950	\$310	\$281	\$375	\$375	\$6,873
Profit	\$1,000	-\$950	-\$310	-\$281	\$1,250	-\$950	-\$310	-\$281	\$1,250	\$1,250	-\$950	-\$310	-\$281	\$1,250	\$1,250	\$2,877

This number is 3 x \$960 (the profit from one crop of lettuce). It is short \$3 because of rounding

Paying your bills

If you were a banker and had money to lend, plus interest, would you expect people to pay you back on time? If your friend borrowed \$100 and promised they would pay it back in one month, would you expect them to pay you back? You probably said, “yes,” in both cases because lending someone money is based on the concept of trust. People do not lend money to those they cannot trust. Thus, when you borrow money from the bank, or order a shipment of fertilizer and promise to pay for it by the end of the month (or another time), naturally, like you, others will expect you to pay on time.

Exercise 3 – Paying your bills

Please list two reasons why you should pay your bills on time.

1. _____
2. _____

What should you do if you cannot pay a bill on time?

1. _____

Selling and collecting

Like paying your bills, you expect others to pay for your product if they decide to purchase it. In your case, however, people have to be *willing and able* to pay for your produce. Both of these factors have to be in place for you to sell your product. As we discussed above, you are typically a “price-taker” – other sellers in the market have generally set a market price for your product by setting a price for their product, or a buyer tells you what they are willing to pay for your produce. There may be room for some negotiation, so don’t hesitate to suggest a different price if you feel you deserve more for your product. Beware, however, the

buyer can say “no” and you might lose a customer.

In other cases, people will not be willing or able to pay you what you spent growing your product! That’s right, even after you spent a lot of time and money growing a product, some buyers will not buy at the price you need to make a profit (or at least cover your fixed and variable costs). This is the very reason:

- To estimate a cost of production for your crop.
- To develop a cash flow statement for the crop cycle, and
- To meet with buyers BEFORE you plant anything!

In order for you to keep track of your sales, it is best to have an “Invoice” book. On the next page is an example of the type of document you should be dropping off with a buyer when you deliver produce. If you purchase an invoice book from a stationery store, it will have at least one additional copy of the invoice so you can see who owes you money and when they are supposed to pay you back. It is important to be very clear with all buyers what your payment policy is. The bank is very clear, the hardware store is clear, so you should be too. Tell the customer that payment is due on whatever terms you suggest. For example, it could be:

- Partial or full payment at the time of sale.
- Full payment in fortnight after receiving the product.
- Full payment in 30 days after receiving the product, or
- A variation on any of these.

See the example Invoice, it says clearly “total payment in 30 days.” When someone signs for the shipment of your product, they are actually signing a form of contract by signing your invoice. Once you get payment, you should be entering that payment on your Income/Expenses ledger as indicated above.

Exercise 4 – Write an invoice

Take a blank invoice and fill it out – be careful to include all the details! Remember, it is like a mini contract.

L & J Farms

INVOICE

P.O. Box 6543
Rarotonga, Cook Islands
Phone: [000-000-0000]
Fax: [000-000-0000]

DATE: 4/2/09
INVOICE # [123456]
Customer ID [123]

BILL TO:

[Name]
[Company Name]
[Stress Address]
[City, ST ZIP]
[Phone]

SHIP TO (if different):

[Name]
[Company Name]
[Stress Address]
[City, ST ZIP]
[Phone]

ITEM #	DESCRIPTION	QTY	UNIT PRICE	TOTAL
P1	Papaya	15	1.24	18.60
T2	Tomatoes	200	0.35	70.00
				-
				-
				-
				-
				-
				-
				-
				-
				-
				-
				-
				-
				-
				-

SUBTOTAL \$ 88.60
TAX RATE 6.875%
TAX \$ 6.09
S & H \$ -
OTHER \$ -
TOTAL \$ 94.69

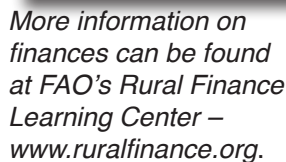
Other Comments or Special Instructions

1. Total payment due in 30 days
2. Please include the invoice number on your check

Make all checks payable to
L & J Farms

If you have any questions about this invoice, please contact
JT., 66881, L&Jfarms@gmail.com

Thank You For Your Business!



While there are more concepts to be learned in the following chapters about money, planning, and business in general, it is important to stop now and talk about what to do when you make a profit. Many people spend 100% of their paycheck or income each week – some people have no choice, but others are simply wasting money. **STOP** wasting money! Part of being a professional agricultural entrepreneur is not only growing a great crop, meeting customer's needs, and making profits, it is also about managing those profits through saving, reinvesting in the business, and where possible, sharing with others. Take a few moments now to write down answers to these questions:

Why should you save some of your profits?

Why should you share some of your profits with others?

On the next page is a summary of best practices in distributing profits. **You MUST SAVE if you are in business for the long term!**

Being Financially Focused



- 1) Know/estimate your cost of production AND know who you will sell to, *before you plant*.
- 2) Estimate your revenue (Quantity Sold x Expected Market Price) and subtract your Total Costs to arrive at an estimated Profit.
- 3) If you can make a Profit, grow the best product possible.
- 4) Sell your product and give GREAT customer service!
- 5) With Revenues in hand, pay your bills.
- 6) With Profits in hand, decide how you will put money in the baskets below.

The BIG Formula: Revenues – Total Costs = Profits

Revenues are:

Quantity Sold x Market Price

Total Costs are:

Fixed Costs

All non-changing costs related to the farm operation such as land rent, loans, insurance, equipment and building depreciation. If only one crop, then all the fixed costs go to this crop, or else divide among the crops or other enterprises.

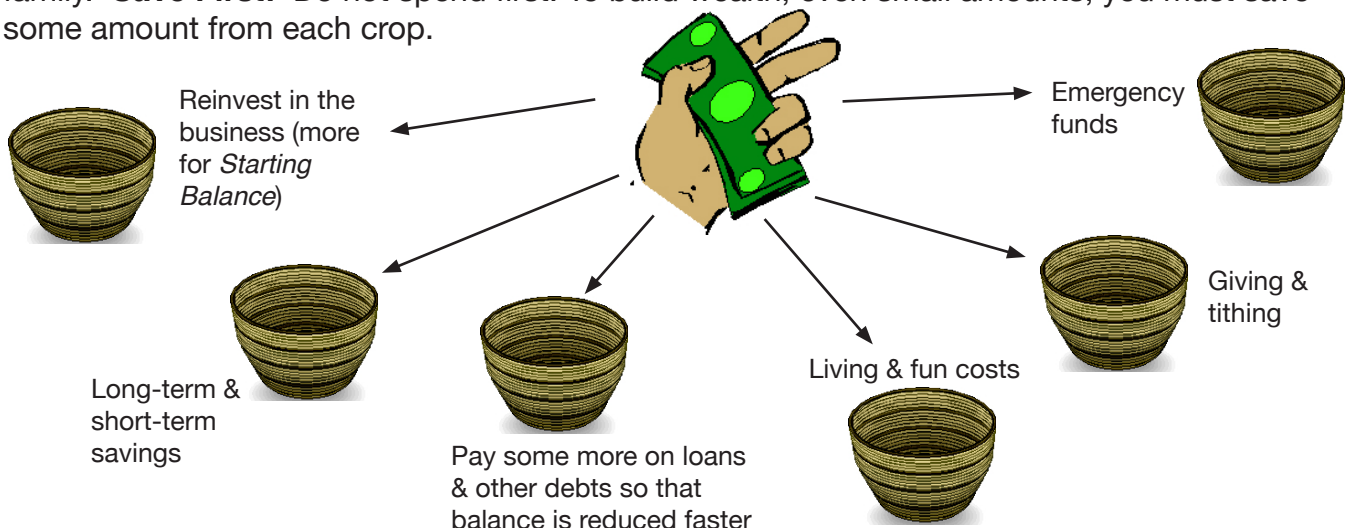
plus

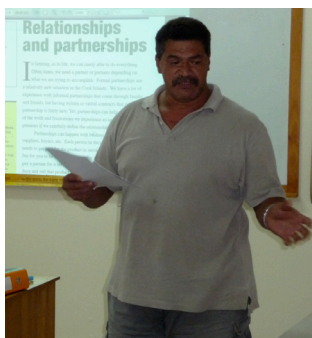
Variable Costs

All costs that relate to the production of a good or service and that can vary by how much is produced. Such as labor, land preparation, seeds, fertilizers, chemicals, fuels, marketing and sales costs.

Profits are:

Money left over after all the agribusiness' costs are paid. It is up to the entrepreneur (partner and family) to decide how best to divide the funds for the long-term health of the business and family. **Save First!** Do not spend first. To build wealth, even small amounts, you must save some amount from each crop.





Relationships and partnerships

In farming, as in life, we are rarely able to do everything. Often times, we need a partner or partners depending on what we are trying to accomplish. Formal partnerships are a relatively new situation in the Cook Islands. We have a lot of experience with informal partnerships that come through family and friends, but having written or verbal contracts that define a partnership is fairly new. Yet, partnerships can help relieve some of the work and frustrations we experience as agricultural entrepreneurs if we can carefully define the relationship we want.

Partnerships can happen with bankers, workers, family, suppliers, buyers, etc. Partnerships can be informal (a handshake or a verbal 'yes') or more formal (via a written contract).

Whatever type of agreement, each person in the partnership typically needs to get paid for the product or services supplied. It is not fair for you to expect to be paid for a product, but not expect to pay a partner for a service they provide. Partners can also support our business in the areas we have little skill or interest. For example, we might be really good at tilling the soil, planting, and harvesting, but we don't know much about pest control – so we call someone to help – they are a partner. Or, say, you are really good at production, but not good with accounting or with selling your product at the market or to a hotel. In these cases, you might want to get help from someone who is passionate about accounting and someone who is equally passionate about marketing and sales and pay them for their service. Simply, growing often requires us to be good at many different things, but we might not be so good at every part of business, so getting some help makes a lot of sense. Let's look at some of the benefits of partnership.

Module specifics

Time required

1.5 – 2 hours

Learning objectives

The purpose of this unit is for you to:

- 1) Understand the purpose and value of contracts.
- 2) To understand that you need to be clear about your contract needs.

Class work format

Large group

Materials required

Pen, pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) How to write a basic contract.

Why have partners?

- We do not always have all the skills to practice farm or business management well all the time. We need to identify our weaknesses and partner with whoever has the skill to fill in that weakness.

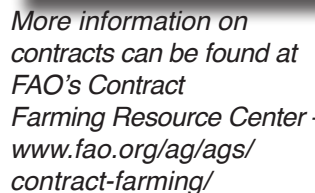
What can be accomplished by partnerships, for example:

- Getting access to sufficient land, labour and other necessary resources.
- Sharing and learning from each other.
- Developing team production plans that help provide a larger volume to the market, thus, perhaps reducing market variations in the supply.
- Encouraging the processing or packing of products, perhaps even adding additional value.
- Developing our skill base by working with others who have a desirable skill.
- Reducing the need for imported produce, thereby, contributing to the food security of the Cook Islands.

Considerations for partnerships

What personal values or business behaviors would you like to see in a professional relationship:

- Treat others the way you want to be treated, pay bills on time, communicate frequently especially when there is difficulty.
- Be honest, transparent (not hiding anything), and accountable.
- Build trust and be committed to the success of the business and the success of the business relationship.
- Maintain a simple, visible accounting system for money put into and taken out of the partnership.
- Develop a simple written agreement for the partnership in terms of duties, tasks, costs, profit sharing and other important business needs.



Exercise – Good contracts

1. _____
2. _____
3. _____
4. _____
5. _____

[illegible]

(EXAMPLE ONLY – SEEK PROFESSIONAL ADVICE ON ANY FORMAL CONTRACT)

Young Entrepreneur Partnership Agreement

_____ (name) and _____ (name) have come to an agreement that we, the undersigned will adhere to the terms of this agreement in its entirety:

1. Principal place of business will be at the partnership's choice and discretion in any given circumstance agreed upon.
2. Purpose of the partnership
 - a. To create a mutually-beneficial arrangement that is prosperous for all parties.
3. The partners:
 - a. Will make an agreement on the crops to be planted and/or products developed and those products [may] / [may not] incur competition within the partnership.
 - b. Will maintain open communication at all times.
 - c. Will maintain a planting/production work plan on each crop throughout an agreed period of time.
 - d. Will share information on best practices and [may] / [may not] share information with others who may seek help.
 - e. The partners must report immediately any business problem to allow for a rapid response (plan).
 - f. This agreement can accommodate other entrepreneurs who may wish to join this partnership, however, a new agreement will be drawn up to formalize the additional relationship(s).
4. If desired, partners may terminate this contract in a period of _____ days/months after a date has been agreed upon by both parties.
5. Contract Term – The partnership shall commence on the date below and continue until dissolved by mutual agreement of partners.
6. Capital – Each partner shall maintain a record of their contributions of time and money to the partnership. This record shall be always accessible by both parties. After all expenses are paid, profits will be distributed by the following formula: _____ % and _____ %.
7. Control – The partners shall have mutual control and equal responsibilities in their conduct of this agreement.
8. Disputes – any dispute that cannot be resolved within ____ days and that it may lead to jeopardise this agreement, both parties must honour this agreement for a period ____ months where all crops have reached its maturity stage. Our agreed upon arbitrator in the case of difficulties is: _____.
9. Non-compete – Partners [can] / [cannot] start a similar business within _____ (months/years) of the termination of this contract (to avoid competition with inside knowledge).

Signatures of Partners

Date _____

Date _____



Excellent customer service

Can you tell the difference between those times when you were treated well by someone, and when you were not? Does good customer service mean much to you or are you so flexible no behavior upsets you? Whatever your experience has been, it is your customer's experience of you (and your employees or partner) that is the most important. Be dedicated to great customer service and your business will be more successful. Here are some tips from professionals on quality customer service:

Customers are Number 1 – We produce food for customers, thus they are the reason we are in business. They don't need us, we need them!

Deliver what you promise – it is **CRITICAL** to your business to provide your customer what you agreed to. If you have to over-plant a little to cover any possible short-fall, then do it. If you do not deliver and your customer has to tell their customer they are out of a product, they may want to find a new supplier. Your reputation is one of the most valuable parts of your business.

Commit to quality service – delivering a great agricultural product every time is important, and so is making sure that your (or your employee's) time and business experience with the customer is good for them.

Be a good listener – really listen when your customer is talking about a problem or need. In that listening you might find you can help them and that can grow your business at the same time.

Identify and anticipate needs – customers don't buy products or services. They buy good feelings and solutions to problems like being hungry. Ask what other products you could supply to them.

Module specifics

Time required

0.50 mins – 1.0 hour

Learning objectives

The purpose of this unit is for you to:

- 1) Understand there is a difference in the quality of customer service.
- 2) Understand the basics of good customer service.

Class work format

Large group and individual activity

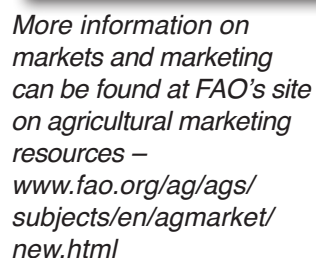
Materials required

Pen, pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) New skills in customer service that will benefit you.
- 2) Demonstrate that you have at least one new skill.



*More information on
markets and marketing
can be found at FAO's site
on agricultural marketing
resources –
[www.fao.org/ag/ags/
subjects/en/agmarket/
new.html](http://www.fao.org/ag/ags/subjects/en/agmarket/new.html)*

[illegible]

Know how to apologize – when something goes wrong, apologize. It's easy and customers like it. The customer may not always be right, but the customer must always win. Deal with problems immediately and let customers know what you have done.

Know how to apologize – when something goes wrong, apologize. It's easy and customers like it. The customer may not always be right, but the customer must always win. Deal with problems immediately and let customers know what you have done.

Get regular feedback – encourage and welcome suggestions about how you could improve. There are several ways in which you can find out what customers think and feel about your services:

- Listen carefully to what they say.
- Check back regularly to see how things are going.

Treat employees well – employees can make you successful or break your business with bad behavior and poor decision-making. Thank them often and let them know they are important to your business' success. Treating customers and employees well is equally important.

Briefly describe a time when you had great customer service?



Business and marketing plans

You are now ready to put your thoughts, dreams, and agricultural business plans down on paper. When you write your ideas on paper you are focusing your energy. Seeing your words in black and white also helps you test whether you have thought completely through an idea. Often times we need to re-write and refine our plan a couple of times with the feedback of others, to close up holes in our plans. It can be difficult to hear the feedback of others, but if we ask at the beginning of the feedback process, “please tell me two *good* things about my plan, and three things I could do to make it *even* better,” we are creating an opportunity to make our plan better and (mostly) avoid getting our feelings hurt. You need to be brave in the business world and getting feedback is just part of the business process. Also, business plans are never really final; your business will change and grow and so will your plan. The important thing is to start writing!

Exercise – Creating a draft business plan

The first part of the plan is to identify yourself and introduce your business to the person reading your plan. Next, do your best to put numbers/data in the plan, even guesses are a good start. You will note in the example here that there is a difference in the amounts of Gross Yield you can get from your farm, and the Marketable Yield. This is because everything you grow is not often salable/marketable – it is of lesser quality or you are saving some for family, so put in a reasonable number in both places. Earlier you learned about doing a cost of production. This is where you put in those costs. Next, you have been out looking in the market at prices, provide a range of prices. Finally, let’s do some “sensitivity analysis,” by seeing how sensitive your plan it to different combinations of quantities and prices. You will see on page 40 in cost Version 1, this crop of oranges lost money, but in slightly more favorable conditions, Version 2, there is some profit. It is best not to ever forecast the most favorable conditions as they rarely come true. Once done with this, move to your marketing

Module particulars

Time required

1.5 – 2.0 hours

Learning objectives

The purpose of this unit is for you to:

- 1) begin to document your yield, costs and market prices.
- 2) describe your business in an organized manner.
- 3) create a brief marketing plan.
- 4) prepare a request for funding assistance.

Class work format

Large and small group activity

Materials required

Pen, pencil, calculator.

Learning outcomes

At the end of this module you will be clear about:

- 1) how much you can grow and sell and at what price.
- 2) clearly describe your business ideas and your needs for assistance.

Your notes

plan to map out your marketing strategy. Here is a brief overview of the parts of a marketing plan.

A marketing plan details all the aspects of promoting a product in a market. It discusses the product, the price, the competition, and other aspects. It is critical to be thorough so as not to be surprised later by something you missed. Here is an example of a very simple marketing plan for fresh, chilled, ready-to-drink coconuts sold on a roadside stand on the northern part of the island.

1. The Product

- Traditional, sweet coconut juice and meat

2. The Customer

- 20% locals, young men, extra money
- 80% visitors, all ages, vacation dollars

3. The Competition

- One similar stand 2K west
- Soft drinks and water
- Coconut sellers in town

4. The Marketing Strategy: The 4 P's

Price

- \$3 for 1 coconut, \$5 for 2 coconuts

Place

- Roadside stand – simple, clean with shade
- Hand washing facilities
- Trash can
- 12K from main center

Promotion

- Clear signage
- Signage in English, German and Japanese
- Informational sign about the biology and growing of coconuts
- 25% of the sales of coconuts goes into seller's college fund
- Nutritional information compared to soft drinks

Product

- Traditional sweet coconut
- Chilled, open with straw – ready-to-drink
- Healthy compared to soft drinks
- Innovation: coconut spoon (made from coconut husk)

Bonus: Sales Goals

- 4 coconuts per hour for 5 hours/day (20 coconuts/day) gives a range of revenues between \$50-\$60/day



Shortened Business Plan (Example)

Your name: _____

Your business name: _____

Mailing address: _____

Physical location of business: _____

What is your total farm size (acres or meter dimensions) _____

What are your estimated low, medium and highs for the crops you want to grow?
Could you use this chart to compare the profits of growing a variety of crops?

Area	<i>Example: Oranges</i>	Crop <i>Lettuce</i>
Area (rows, sq meters, acres)	.25 acre	
Saleable yield (Low)	500 kg	
Saleable yield (Medium)	700 kg	
Saleable yield (High)	800 kg	
Cost of production (Low)	\$0.16/kg	
Cost of production (Medium)	\$0.34/kg	
Cost of production (High)	\$0.70/kg	
Market price (Low)	\$0.50/kg	
Market price (Medium)	\$0.75/kg	
Market price (High)	\$1.05/kg	
Calculate your expected profit – Version 1: Market price (Low) – Cost of production (High) * Saleable yield (Low) = worst case	$(\$0.50 - \$0.70) * 500 \text{ kg} = <-\$100>$	
Calculate your expected profit – Version 2: Market price (Medium) – Cost of production (Medium) * Saleable yield (Low) = medium to low case	$(\$0.75 - \$0.34) * 500 \text{ kg} = \205	

Describe which set of production costs and market situations from the table is most like your operation.

Describe how you plan to keep yields up and production costs down so that your risk is minimized.

Describe how you know there is room in the market for your products (provide data and explain how you gathered other information).

Describe what makes your produce of higher quality than someone else's.

Shortened Marketing Plan (Example)

(think carefully about all the places you plan to sell, but do not over promise).

Product: _____

Customer: _____

Your competition: (describe how many other similar products are in the market place, and how many suppliers)

Price: (describe your farm gate price and how that was determined. Talk about how much money you want to make per kg or unit)

Place: (where exactly will you be selling your product)

Promotion: (what are you doing to promote your product – e.g. conversations, brochures, product testing, etc.)

Good or unique qualities about your product (color, flavor, shelf-like, packaging, product story)

Your Request for Funding

If you intend to ask for a loan or grant, a budget will be required. Please fill out the form below with information about how you will contribute to your business and how you would like funding or other resources from others to contribute to your business. Be realistic, do your homework when it comes to costs. Often times, a funder will require three (3) competing bids or quotes to make sure the funder is only paying what is necessary.

	Your contribution (in-kind, cash, other)	Funding request (dollars)	Total
Salary/wages (and fringe)			
Expendable materials (e.g. supplies)			
Non-expendable equipment			
Travel			
Total Request			

Combination Cropping Plan and Cash Flow Plan: Multiple Crops

Note: In this example, lettuce crops have been purposely put end-to-end to make the numbers easier to understand. However, a grower could overlap the crops tighter and even grow a range of crops at the same time.

Example Cropping Plan (decided by agricultural entrepreneur and sales opportunities)

[illegible][illegible]

Cash In

[illegible]

Cash Out

Fixed Costs (some or all of rent, loans, insurance)

[illegible]

Variable Costs

[illegible]

Profit



Best practices in production and postharvest

Growing great food that people are willing and able to pay you for is the goal of agricultural entrepreneurs. As the grower part of the job, you need to be willing to try out new crops, new ways of growing crops, and to learn from things that go right, and even more important, from things that go wrong. You need to not only be a business person, but also scientist – you need to observe and make changes to your production practices because no one will know your exact production situation. In this unit we will explore some best practices in production. We do not have all the answers, and so please take our advice carefully and try it out first. You will need to see how this advice works best for you and to add your knowledge to ours. Growing generally involves the following steps:

- Knowing that a market exists, when a product is desired, knowing who would be willing to buy your product, and knowing the price they are willing to pay
- Estimating what it might cost you to grow a crop
- Land or greenhouse/shade-house choice and preparation
- Atoll growing media
- Purchase of seeds and supplies
- Increasing the quality and health of your soil
- Pest management (at all stages of production)
- Planting
- Irrigation
- Fertilization
- Weeding
- Harvest, packing, and food safety
- Postharvest treatments
- Transport
- Sales
- Saving and banking
- Field fallow

Module specifics

Time required
2.5 – 3.0 hours

Learning objectives

The purpose of this unit is for you to:

- 1) Get out and see a working farm.
- 2) Get a chance to ask questions about real issues on this farm and your farm.

Class work format

Large group activity on a farm

Materials required

Pen, pencil, notebook, farm field

Learning outcomes

At the end of this module you will be clear about:

- 1) Have a better idea of how you can organize your farm.
- 2) Get some of your production questions answered.

Your notes

Following are some best practices from the trainers, again, add your own.

Knowing that a market exists and knowing who would be willing to buy your produce and at what price (e.g. market checking and marketing) and Estimating what it might cost you to grow a crop

We've discussed this above, but we cannot repeat enough the importance of knowing the market, your cost, and the price people are willing to pay BEFORE you produce a crop. You will waste money and time if you do not have a market when your crop is ready to harvest.

Land and greenhouse choice and preparation

These days growers are using land (soil) and greenhouses/shade-houses to produce food (and other agricultural products). Let's explore each of these production areas.

Land choices

- Pick land that will support the types of plants you are growing. For example:
 - During the rainy season, plant on land that is well-drained (more sandy), because you do not want water to collect at the surface of the soil as it can cause an increase in diseases. However, this type of land loses nutrients faster as they will wash off faster than in more clayey soils.
 - Clayey soils retain moisture and nutrients, but it can be easily waterlogged, thus increasing the risk of root-rots and other diseases.

Land preparation

- If land is on a hillside, till horizontally to reduce the chance of soil erosion during rain.
- Avoid tilling in weeds and then planting a new crop right away because the decomposing roots will: a) release heat that will kill the roots of the new crop, and/or b) compete for nutrients with the new plants. Wait a minimum of 14 days, then re-till, before planting.

Greenhouse/Shade-house choice

- Greenhouses are a great way to manage the amount of water plants get and reduce the impact of disease and pests. They

cost some money, but the reduced costs of time and chemical inputs can often off-set the cost of the greenhouse.

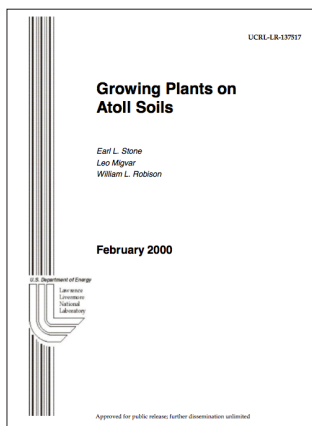
- Typically, greenhouses are made of lightweight materials and they can be easily up-rooted in heavy winds.
- The types of coverings and the amount and type of light of a greenhouse material is dictated by the plants grown. For example, certain crops benefit from receiving more of a certain type of light. Next time you see a rainbow, notice all the colors. Each one of those colors, or type of light, can increase or decrease the production of a crop. These days, it is now possible to get plastic coverings that can favor a certain type of light. If you are interesting in growing crops in a greenhouse, talk to your sales person about what type of light options you have.

Greenhouse/Shade-house preparation

- Set up the greenhouse to take advantage of the direction of the sun – set the house parallel to the path of the sun to get the most of sunlight per day.
- Clear greenery around the greenhouse so that pests will have to travel a long way to get into your building.
- Keep plants elevated on benches so that they are easy to work with and to keep them up out of any flood waters.

Atoll growing media

- Typically, atolls do not have deep soil, so soil needs to be “created” in an enclosed system.
- Enclosures can include a “box” made of tree trunks, a pit in the ground, old boats, old refrigerators, roofing iron, etc.
- The growing media (soil) would come from discards of household food stuffs (not including meat), grass clippings, fallen leaves, coconut husks, seaweed, etc.
- Future growing media starts out as rough compost. Because of that when the plants break down they create heat and you cannot grow in a “hot” media. Thus, your compost needs to be turned two (2) times a week. If possible, add waste water at the time of turning to give the microbes a drink because they are doing the heavy work of breaking down the discards into usable media. It can take a few months until the media is cooled and ready for plants to be planted in it. Again, do not plant into a compost pile that is still undergoing breakdown.



The manual, ***Growing Plants on Atoll Soils***, is a great resource for atolls agriculture. It can easily be found on the internet.

Purchase (or have) seeds and supplies

- To grow a product for sale you will typically need to have or purchase seeds and supplies.
- Good seeds are the key to a quality food. Seeds need to come from a reputable source (e.g. free of weed seeds) and be able to grow well in our climate and soils.
- You can try to collect your own seeds, but if the original seeds were hybrid, you will not have much success as they are typically only good for one growing season – they are purposely “locked.”
- Similarly, your fertilizers and agricultural chemicals need to come from a reputable source to prevent contamination of those inputs. Read and use them as the label describes. Try to use less than the label suggests as you may find it is equally effective, and save you money. NEVER use more than is suggested on the label as you are possibly putting yourself and your buyers (consumers) at risk (and wasting money).
- Try to store your supplies out of the rain and sun, and in a locked area to prevent supplies from growing legs and “walking” away.
- Also, keep the chemicals away from children – they cannot read the label and may drink or spill a dangerous product on themselves. Putting dangerous chemicals in a locked cabinet is a great way to keep your family safe.

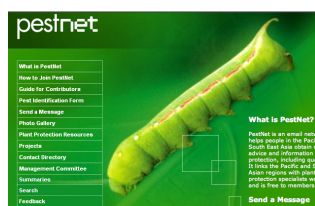
Increasing the quality and health of your soil

- To get a general summary about making compost, see the section above on “atoll soils”.
- Just like humans, soils can get tired. If you grow on them season upon season, they become less productive, they need a rest and soil amendments to bring them back to a productive state.
- One way of rebuilding the soil is to fallow it – just don’t grow anything on it. Yes, weeds will grow, but then in about a year the soil will be somewhat healthier. Plough-in the weeds, wait a couple of weeks for them to break down, turn them again, and you are in an improved production situation.
- A better way to improve soil health is to plant (or apply) “green manure” plants during a fallow period. The type of plant will be an issue for quarantine, but could include clovers and legumes (bean like plants). You could also take some of that floating plant from a taro patch, *azolla*, and spread it on the top of your soil – it is rich in nitrogen.
- Organic practices are typically less “hard” on the soil than using a lot of manufactured chemicals. This is because the soil is a

living system of animals and plants that you cannot see and some are killed or harmed by chemicals, thus you are decreasing the quality of the production environment if you are using too many chemicals. Again, think of your farm and its soil as a living production system and make choices that keep your system as healthy as possible.

Pest management

- Pests can be animal, plant, or disease. First, not all “pests” are pests – some insects may eat other insects, some birds might eat insects, so first we need to understand if a pest is really a pest, or if in fact, they are helpful.
- Next, we need to break down the types of pests.
 - Animals include big ones – dogs, cats, chickens, goats, etc. Or smaller ones – beetles, aphids, mites, and so forth. First, you need to decide if the animal pest is just a nuisance or is really causing serious economic impact on your crop. For big animals, management options include fencing and using spray irrigation to keep the animals out of the fields and orchards. For smaller ones, there maybe noncommercial or chemical options.
 - Plant pests or invasive species – such as mile-a-minute, pigweed, and Australian birch are in the Cook Islands. Most are managed, but other invasive species are just a boat ride away – we need to be watchful. The Ministry of Agriculture contributes to the regional Pest List database <www.pestnet.org> of harmful species and will assist you in identifying a plant and will suggest management options.
 - Plants often have many diseases, some cause great economic loss while others just make the plant look unhealthy. Plant diseases are in the Pest List database and include Powdery Mildew, Bacterial wilt, among others. Each disease has its own life-cycle and management options, confer with the Ministry of Agriculture when you are trying to manage a disease before it consumes your entire crop.
 - When using chemicals to manage pests, be careful! The reason they can kill a pest is that the chemicals contain poisons, and these poisons can kill humans, too. Wear protective clothing and equipment when applying chemicals – always!
 - All chemicals whether they be herbicides or insecticides are potentially harmful to you and those who eat your crop. Know how to properly use “systemic” and “contact” herbicides.



More information on regional pests can be found at www.pestnet.org

-
- Follow the “**re-entry**” period guidelines as well as having your skin protected from highly active chemicals that can be extremely hazardous to you or whoever may be in the production field. And, be mindful of the wind and rain. These forces of nature can move hazardous chemicals to places where they can harm other animals and the environment.
 - Commercial chemicals also have another time restriction called the **withholding or waiting period**. This is the minimum time between the last spray and harvest. *It is critical that you do not violate this time protection – it is there to protect consumers from the residues of chemicals.*

Planting

- ***Plan before you plant!*** This is one area that cannot be stressed enough – so many farmers (and we are using this term deliberately) plant and hope that someone will buy their crop when it is ready. No, agricultural entrepreneurs do NOT do this. They have a good idea of the market and who they will sell to before they even get their hands dirty.
- The crop will then dictate what your next step will be. If your buyer wants something like lettuce, cabbage, or papaya they do best by starting out in a nursery. This is because the stems of young plants are very fragile and if planted directly into a field do not typically do well. So, they need to be planted and raised in a nursery, away from harsh conditions, for a few weeks until their stems can handle more stressful field conditions (high winds, hard rain drops, birds looking for young soft seedlings).
- If, however, the buyer wants watermelon, corn, or beans, their seeds can be planted directly into a prepared field. Their stalks grow more sturdy than other plants and can often withstand more severe production conditions.
- It is important, either in the nursery or field, to thin down the number of plants in a specific growing area once stronger plants have risen above the weaker ones. Plants need to be thinned so that they do not compete for moisture and light as they grow.
- More detailed production advice can be gathered from the Ministry of Agriculture or from the seed companies.

Irrigation

- Like humans, plants need water to be healthy. Plants use water to transport nutrients (fertilizers) to the appropriate cells, water also helps “inflate” the cells and keep the plant standing firm,

and plants also transpire (“sweat”) water to keep cool, among other reasons.

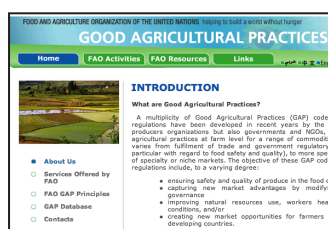
- Water can be brought to a field via rain, city pipes, rivers, hoses, and irrigation channels. It is then applied to a crop by flooding an area (taro), drip irrigation, overhead sprinklers, and buckets.
- Applying the right amount of water at the right time in the production cycle is a desired goal. However, in an open production environment we cannot manage “Mother Nature.” Rain happens (or not). It is important to plant a crop where you know you will have access to sufficient water throughout the production cycle. Some crops, such as watermelon, require more water at certain times, in this case, during flowering. Of course, there are times when too much water (rain) can destroy a crop with the sheer force of the rain drops, or in increased disease pressure, or that the field is so wet that the crop cannot be harvested. Again, water needs are crop specific.

Fertilization

- Plants need nutrients in order for them to grow quickly and to their fullest potential. Commercial fertilizers provide measured quantities of Nitrogen (N), Phosphorus (P), and Potassium (K) to plants. The amount of nutrients in a fertilizer is generally a lot higher than in compost or (composted) manures. Compost provides micro-nutrients and aids in the drainage of soil by providing coarse materials to the soil.
- Nitrogen (N) is primarily used to increase leaf growth which in turn helps with photosynthesis – the main energy production system in the plant.
- Phosphorus (P) is necessary for young plants, cell division, root growth, and to feed the growing tip of the plant. It helps transfer energy from sunlight to plants.
- Potassium (K) helps with plant vigor and disease resistance. It also helps form and move starches, sugars and oils in plants, and can improve fruit quality.
- Each type of plant requires different nutrient combinations at different stages of production. Seek assistance from the Ministry of Agriculture for their advice on fertilizer planning and applications.
- One more thing, over fertilization is wasting money and if there are heavy rains fertilizers can get into streams and out into the ocean where they can harm the reef and other marine life. Use them carefully and be watchful of the weather.

Weeding

- Weeds in planted fields compete with (food) plants for light, space, and nutrients, we want to manage them so that they are not “stealing” from the crop. There are a number of ways of managing them – each has a cost and benefit and needs to be looked at before you plant your field.
- Manual – hand pulling of weeds is a great way to make sure you get all the weeds out of your plants. It also ensures that you are not uprooting plants which could then dry out and die. Of course, it takes a long time to clear a small area unless there are a lot of people.
- Animal weed eaters – goats are good weed control for orchard crops (and during fallow periods). Pigs can also be used during fallows, but must be watched to manage damage to the production area.
- Mechanical – using a hand weed eater or tractor-driven implements (slasher, rotary hoe, plow), can cut or uproot weeds quickly. However, it requires money to be spent on equipment and is less precise than weeding by hand. If you are using a tractor to do weed control, you will need to leave room around rows to turn the equipment.
- Chemical – typically, agricultural chemicals are applied from backpack sprayers, rather than tractors, and that is good as the applicator can have more control over where the chemical is applied. Chemicals are quick, but costly and can be dangerous if mishandled. Wear your protective clothing at all times, and **Keep chemicals out of the reach of children!**



More information on Good Agricultural Practices can be found at FAO's site – www.fao.org/prods/GAP/index_en.htm

Harvest, packing, and on-farm food safety

- *Wash your hands with soap and water before harvesting and handling other people's (future) food.* Whatever is on your hands after using the bathroom, changing a diaper, petting an animal or cleaning out its pet box, can easily be transferred to food when you harvest. It is important that you treat your farm like you would your kitchen and make sure your hands, harvest equipment, cutting boards, and harvest bins are clean and sanitized before they come in contact with food.
- If you used any chemicals in the production of your crop, it is important to observe and follow the manufacturer's advice on the “pre-harvest” period. Chemicals can be active, and thus dangerous, for a number of days and if you harvest when the

chemical is still active, you can harm the person who consumes your product.

- If you have planned correctly, you should be harvesting at a time that your buyer is waiting for your crop – remember planning before planting? The buyer should have given you their expectations of quality, size, quantity. Make sure that is what you are giving them.
- Once harvested, keep your product out of the sun and heat of the day. If you have a cooler, get the plants inside as quick as possible because the “field heat” – the heat at the inner core of the plant – will cause the plant to break down quickly.
- Do not stack produce too high as the lower products can be damaged if there is a lot of bouncing in the delivery.



More information on Post Harvest can be found at FAO's site – www.fao.org/inpho/

Postharvest

- Generally, if you can get your product to your buyer within a few hours of harvest, you are in great shape.
- If you are exporting, however, you may be required to put your product through additional postharvest treatments such as a heat treatment. It is important to be aware of any postharvest requirements before you decide to grow a crop.

Transport

- When you are ready to deliver your product to your buyer or the market, pack it up in a way that reduces damage when the vehicle is moving and bouncing. For example, papayas are frequently damaged because they are bounced against the shipping container or when they rub vigorously against each other. The damage might not show up for 2 or 3 days, but the shelf life is greatly reduced because of the poor handling and your buyer might not buy from you again.
- Like harvest containers, transport bins and surfaces need also to be cleaned. Melons, for example, can be a hazardous food if the outside of the melon is not clean and then someone slices into the melon. If there is harmful bacteria on the outside of the melon it is now on the inside and because it is a low-acid fruit the harmful bacteria can multiply rapidly in this tropical climate. Thus, having clean hands, clean produce, clean harvest containers, and clean shipping surfaces will ensure a higher level of food safety for your consumer. *This is what professional agricultural entrepreneurs do!*

Sales

- Again, you probably know that you are going to make a sale because you have already planned for it! Good for you!
- Sales is not the same as marketing – sales is the financial transaction where money is exchanged for goods. Marketing is the 4Ps and other activities.
- Buyers typically want you to provide an invoice with each delivery. We talked about invoices above and they are important to keep track of your sales and who owes you money.

Saving and banking

- Save 10% of what you make and you will become wealthy, or so says *The Richest Man in Babylon*. As a professional agricultural entrepreneur it is important for you to develop a habit of saving. It might not be part of your past behavior, but no one ever got wealthy by spending everything they made.
- Banks and other lending institutions often require you to show that you have a habit of saving because they want to be sure that you will have enough money, and restraint, to pay them back. Showing a positive bank balance is proof that you have the discipline to pay back a loan.
- Oh, and as you are saving, consider sharing some of your abundance with others – what comes around, goes around!

Fallow to start the cycle of success again

- *Congratulations! You have successfully planned a crop cycle, used best practices to grow a crop, delivered a safe product to your buyer, got paid, and saved some of your profit. **Yahoo!*** And, now, it is time to do it again by giving one of your fields a rest, fallow, and moving to the next opportunity.
- It is also time for you to take a bit of time to celebrate your success and “recharge” yourself.
- As you get more experienced you will be able to manage multiple crops and multiple crop cycles, just like a professional juggler. The trick is to be a lifelong learner and be motivated to do your next crop or business transaction even better. *Keep going, we are there to support you!*



Managing risk and recovery from missteps

Everyone is going to make one mistake, or 100 mistakes, in their lifetime and with work – making mistakes, and learning from them, is how we personally evolve and grow. Yet, it is also important to make and implement plans to reduce *risk* in your business (and in life) as much as possible. Risk is the mathematical possibility of something not happening the way we planned.

- For example, having 90% of a crop destroyed by a cyclone. Is this possible? If so, then there is a risk, and in business we want to reduce our risk whenever we can. What could we do if we knew a cyclone was coming?
- Would you leave 10 new bags of fertilizer on the side of the road for a week before you took it back to your shed? Why not? What is the possibility that someone would “think” *your* fertilizer was *their* fertilizer and take it home?
- Should you spray a crop just before harvest when the time is inside of the chemical’s “withholding” or “waiting” period? Why or why not?
- Would you plant a crop that is easily damaged by rain or high moisture during the rainy season? Why or why not?

Throughout this week we have been talking about risk – where have we talked about it? (class discussion)

1. _____
2. _____

Module specifics

Time required

0.30 mins – 1.0 hour

Learning objectives

The purpose of this unit is for you to:

- 1) Learn about the concept of risk.
- 2) Learn how to think about reducing risk.

Class work format

Large group activity

Materials required

Pen, pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) Where risk might be in your business.
- 2) Learn how to build into your plan a risk-reduction strategy.

Your notes

3. _____
4. _____
5. _____

So, what do we do to reduce risk in our businesses and how do we put that in our plan? (class discussion)

1. *For example, staggering production over different fields/time.*
2. _____
3. _____
4. _____
5. _____

Another thing that might happen is that you make a mistake during a normal, non-risk time in your business. Ok, what do you do about a mistake?

1. Concentrate your energy on fixing the problem quickly, inexpensively and without much “noise.”
2. Apologize as quickly as possible to all parties involved.
3. Tell the truth – if you lie about it and people find out, what does that do to your reputation?
4. Be willing to forgive the person, including yourself, for making the mistake.
5. Look for the source of the problem and ask, “why” three (3) times, to dig to the core of the problem.
6. Now that you know the real problem, put in place a new SOP or “standard operating procedure” that eliminates or manages this issue should it come up again.
7. Move on, do not think about it over and over – you are just adding negative energy to the situation.

Let’s talk about someone getting sick from left over chemicals on a crop – what is your response plan? (class discussion)

Step 1, Step 2, Step 3 . . . (ask “why” 3 times)



Adding value by processing and services

Growing food (and plants and flowers) is a wonderful thing to do with your time, knowledge and money. And, there are times when you want to make something additional out of that raw product – the fruit or vegetable. This manufacturing or transformation process is called “adding-value,” because we take one form of a product and change it into another form and by doing so we have added additional value to the consumer. Adding a service to a product, such as home delivery of pizza, is another way to add-value. Examples of this are all around us and include:

- The wholesaler in New Zealand that delivers your Cook Island product to a store where people want to buy it.
- Harvesting a coconut, husking it, putting it on ice and selling it to someone with a straw in it. Most visitors, for example, could not harvest a coconut from a tree, husk it, or know where to put in the straw. You have transformed that raw product from a tall tree into something *easy to consume* and people are willing to pay for the additional value.
- Fertilizer is a common product that has a lot of value added to it. The ingredients in your fertilizer have come from thousands of miles away and probably many different mining operations – most of the ingredients are dug out of the ground. So, fertilizer manufacturers gather up these ingredients and blend your fertilizer, just like you would blend the ingredients before you bake poke. Fertilizer manufacturers have added value to raw ingredients by bringing them together, blending them in specific quantities, and then delivering them to the Cook Islands. And, for that product and service, you pay more than you would for the ingredients alone.

Let’s see if you can briefly explain the original product or ingredients in 2 of 4 photos, the basic steps that the “transformer” went through to make a new product, and some costs of adding-value.

Module specifics

Time required

45 mins – 1.25 hours

Learning objectives

The purpose of this unit is for you to:

- 1) Understand the concept of value-added.

Class work format

Small group activity

Materials required

Pen, pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) Value-adding.
- 2) Be able to discuss some of the aspects and costs of adding value to a product.

Exercise 1 – Learning about adding value

In small groups, “reverse engineer” 2 of 4 products, then rebuild them with all the costs – can your team make a profit?



Ingredients: _____

Transformation steps

1. _____
2. _____
3. _____
4. _____
5. _____

Cost of ingredients (variable) / supplies for one unit \$ _____

Cost of utilities (cooking fuel, phone, petrol) for one unit \$ _____

Minutes to produce one unit _____ minutes X \$ _____ / minute = \$ _____

What is their Fixed Cost per unit \$ _____

Total cost for one unit \$ _____

Final selling price \$ _____

Profit \$ _____



Ingredients: _____

Transformation steps

1. _____
2. _____
3. _____
4. _____
5. _____

Cost of ingredients (variable) / supplies for one unit \$ _____

Cost of utilities (cooking fuel, phone, petrol) for one unit \$ _____

Minutes to produce one unit _____ minutes X \$ _____ / minute = \$ _____

What is their Fixed Cost per unit \$ _____

Total cost for one unit \$ _____

Final selling price \$ _____

Profit \$ _____



Ingredients: _____

Transformation steps

1. _____
2. _____
3. _____
4. _____
5. _____

Cost of ingredients (variable) / supplies for one unit \$ _____

Cost of utilities (cooking fuel, phone, petrol) for one unit \$ _____

Minutes to produce one unit _____ minutes X \$ _____ / minute = \$ _____

What is their Fixed Cost per unit \$ _____

Total cost for one unit \$ _____

Final selling price \$ _____

Profit \$ _____



Ingredients: _____

Transformation steps

1. _____
2. _____
3. _____
4. _____
5. _____

Cost of ingredients (variable) / supplies for one unit \$ _____

Cost of utilities (cooking fuel, phone, petrol) for one unit \$ _____

Minutes to produce one unit _____ minutes X \$ _____ / minute = \$ _____

What is their Fixed Cost per unit \$ _____

Total cost for one unit \$ _____

Final selling price \$ _____

Profit \$ _____

Considerations for adding value to a product

It is really tempting to want to get into manufacturing a product once you see the price in the market. But, that price can be misleading if you don't know all the steps and costs that went into making a particular product. The products we have just explored are pretty simple to make but did they need any special equipment? Here are some things to consider when exploring the idea of adding value to your agricultural product(s):

1. Do you really think you can produce a quality agricultural product that meets the needs of buyers, on their schedule, and manage a small (or large) manufacturing operation at the same time?
2. Do you have the money or can you get the money to expand your business?
3. Will you have enough time at the end of the day with your new business to enjoy your family and life?
4. Do you have the expertise to make a high-quality product or can you learn it or hire someone who has the expertise you need?
5. What do you think other people will do when they see your new product on the store shelf? Can you handle the competition?
6. Could you partner or invest with someone to process your product, while you still focus most of your attention on your main job – *growing* a great product?
7. How will you determine the size of your market?
8. Do you plan to run some market tests before you go full scale?
9. Have you written a good business plan?
10. Where are the biggest risks in this enterprise, and have you made plans to minimize them?

There are many more questions to answer, but if adding-value is your passion – go for it (with a solid plan)! Let's now look at some local value-added products.

Locally-Produced, Value-added Products in the Cook Islands (2008)

Vegetables	Name or type of value-added product	Price range per unit	Seasonality	From what Island	Export	Do visitors	Notes
Capsicum green	Chutney, pickled, relish	\$6.00/200g	When available	Rarotonga	No	Yes	Fruits of Rarotonga
Capsicum red	Relish	\$6.00/200g	All year round	Rarotonga	No	Yes	Fruits of Rarotonga
Capsicum yellow	Relish	\$6.00/200g	All year round	Rarotonga	No	Yes	Fruits of Rarotonga
Cucumber	Chutney, pickled, relish	\$6.00/200g	When available	Rarotonga	No	Yes	Fruits of Rarotonga
Eggplants	Chutney, pickled	\$6.00/200g	When available	Rarotonga	No	Yes	Fruits of Rarotonga
Pumpkin	Poke (cake), pies, baked,		When available	Rarotonga/Aitutaki	No	Yes	Locals going back overseas
Rukau	Cooked, baked		All year round	All islands	No	Yes	Locals going back to NZ or Aus
Tomato cherry	Chutney, fruit salad	\$6.00/200g	When available	Rarotonga	No	Yes	Fruits of Rarotonga
Tomatoes	Chutney	\$6.00/200g	All year round	Rarotonga	No	No	
Fruit							
Banana	Poke (cake), pancake, cakes, fruit salad		All year round	Rarotonga	No	Yes	Locals going back overseas
Breadfruit	Chips, baked, kuru smack, soup		When available	Rarotonga	No	Yes	Locals going back overseas
Chestnut	Cooked whole chestnut, baked (kanaka)	\$10.00/1.8kg	When available	Southern Cooks	No	Yes	Locals going back overseas
Coconut dry	Copra, oil, cream, poke		All year round	All islands	No	Yes	Locals going back overseas
Coconut green	Juice, eat flesh, whole nut husked nut		All year round	All islands	No	Yes	Locals going back overseas
Governor's plum	Jam, chutney, fruit salad		When available	Rarotonga	No	Yes	Fruits of Rarotonga
Grapefruit	Juice		When available	Rarotonga	No	No	Locally consumed
Guava	Jam, chutney, fruit salad	\$5.00/200ml	When available	Rarotonga	No	Yes	Fruits of Rarotonga
Lemon	Jam, juice, chutney	\$6.00/200ml	When available	Rarotonga	Yes	Yes	Fruits of Rarotonga
Lime	Juice		When available	All islands	No	No	Locally consumed
Mandarin	Juice		When available	Rarotonga	No	No	Locally consumed
Mango	Juice, preserved, fruit salad, chutney	\$6.00/200ml	When available	Southern Islands	No	Yes	Fruits of Rarotonga
Melon, Honeydew	Fruit salad		When available	Rarotonga	No	No	Locally consumed
Melon, Rock	Fruit salad		When available	Rarotonga	No	No	Locally consumed
Melon, Water	Juice, fruit salad		When available	Rarotonga	No	No	Locally consumed
Oranges	Juice		When available	Rarotonga	No	No	Locally consumed
Passionfruit	Juice, fruit salad		When available	Rarotonga	No	No	Locally consumed
Pawpaw/Papaya	Juice, poke, chutney, fruit salad,		All year round	Rarotonga	Yes	Yes	Fruits of Rarotonga
Pineapple	Juice, preserved, fruit salad		When available	Rarotonga	No	Yes	Fruits of Rarotonga
Star Fruit	Juice, preserved, chutney, pickled		When available	Rarotonga	No	No	Locally consumed
Root crops							
Cassava	Chips		All year round	Rarotonga	No	No	Locally consumed
Kumara	Chips		All year round	Rarotonga	No	No	Locally consumed
Potato	Chips		All year round	Rarotonga	No	No	Locally consumed
Taro	Chips, cake (poke)		All year round	Rarotonga	No	No	Locally consumed
Tarua	Chips, mayonnaise (substitute for spuds)		When available	Rarotonga	No	No	Locally consumed
Yams	Chips		When available	Rarotonga	No	No	Locally consumed

Your notes

One way of really evaluating any idea is to do a S.W.O.T. analysis of it: Strength, Weakness, Opportunity, Threat – analysis. It can be a hard exercise to do on your own product, but it can show you great strengths and weakness of you idea. It is pretty easy to do, just answer the following questions:

Strength: what is good about this idea?

Weakness: what is weak about this idea?

Opportunity: if it works well, what are the opportunities?

Threats: If it works well, what or who could threaten this idea?

Yes, this is a lot of questions, but again, we want to reduce risk by getting good answers to our most important questions.

Exercise 2 – S.W.O.T. on papaya juice

Let's do a S.W.O.T. analysis on the Cook Island papaya juice export industry to New Zealand (yes, this is a made-up value added product). The positive things we don't have to worry about, however, if there is a weakness or threats, we must plan to manage them.

Overall, adding some level of value to your product is easy and worthwhile (meaning, you get back what you invested in the “upgrade” to your product). If you will not get a positive return on your investment in added-value, it is not a good idea to keep making that investment, unless you can lower its cost.



Super summary

We have come to the end of our 5-day educational journey. We hope you have had some fun, and certainly, that you learned some new skills that will benefit your business for years to come. It was a real pleasure sharing our knowledge with you and we appreciate you for sharing your knowledge and questions with us – you have made this program much better.

It is important now to wrap up this week with a small exercise to see how much you have learned and remembered. Break into two teams and work on these questions, then we will have a contest! There are no half points, on a two-part question you must have both correct to get the point.

1. What is the purpose of this training program?
2. What is *Opportunity Cost* and why is it important for you to think about this?
3. When is “spending money to make money” a wise business decision?
4. Give two reasons for doing a cost of production calculation on all your business enterprises (crops, value-added).
5. What are “hybrid” seeds, and what happens when you extract the seeds and try to use them to grow the next crop?
6. If you are going to plant on a steep hill, do you plow the field vertically or horizontally, and what are the reasons for doing this?
7. When you make a mistake, what do you do?
8. Why do we have to ask “why” three times when there is a problem?

Module specifics

Time required

0.30 mins – 1.0 hour

Learning objectives

The purpose of this unit is for you to:

- 1) Summarize your learning.
- 2) Look for learning that was very important for you.

Class work format

Two-team activity

Materials required

Pen, pencil.

Learning outcomes

At the end of this module you will be clear about:

- 1) Your biggest learning items.

Your notes

9. Why is it important to be “on time” in life and business (and attending this training)?
10. When you are growing tomatoes on YOUR farm, which costs are bigger, the Fixed Cost or the labor costs?
11. List two examples of Variable costs.
12. List two examples of Fixed costs.
13. Every time you pull the trigger on your backpack sprayer, how are you impacting your business?
14. What is an example of adding value through a service in your business?
15. What are two things you must consider before you decide to start adding value to a product?
16. What important *personal* activity must you do before you harvest someone else’s “food”, and why are you doing this?
17. If your family has a regular salary income and a farm income, which of these should be positive when you subtract total income/revenues from total costs?
18. What is the “BIG Formula” of business?
19. What is the importance of following the “withholding” period on agricultural chemicals?
20. What does S.W.O.T. stand for and why would you do a S.W.O.T. on your business?
21. As a result of this training, what two things are you going to do better in your business starting next week?

Thank you and good luck!

Availability of vegetables, fruit, and root crops in the Cook Islands market

Vegetables													High
Beans													Medium
Broccoli													Low
Cabbages													None
Capsicum													
Carrots													
Cauliflowers													
Celery													
Chinese cabbages- Pokchoy													
Chili													
Chinese cabbages													
Chives & Spring Onions													
Corn													
Courgettes, Marrows, (Zucchini)													
Cucumber													
Eggplants													
Herbs													
Lettuce													
Pumpkin													
Radish													
Rukau													
Sliverbeet													
Spinach & Watercress													
Tomatoes													

Fruit													High
Bananas													Medium
Breadfruit													Low
Chestnut													None
Coconut, Drinking													
Coconuts, Dry													
Grapefruit													
Guavas													
Lemons													
Limes													
Mandarins													
Mangoes													
Melons, Honey Dew													
Melons, Rock													
Melons, Water													
Oranges													
Passionfruit													
Pawpaw													
Pineapples													
Star Fruit													

Root Crops													High
Ginger													Medium
Cassava													Low
Kumara													None
Onion													
Potato													
Taro													
Tarua													
Yams													

Notes

[illegible]

Notes

[illegible]

Over the next month, I commit to these changes in my agricultural business

1) _____

2) _____

3) _____

4) _____

5) _____

