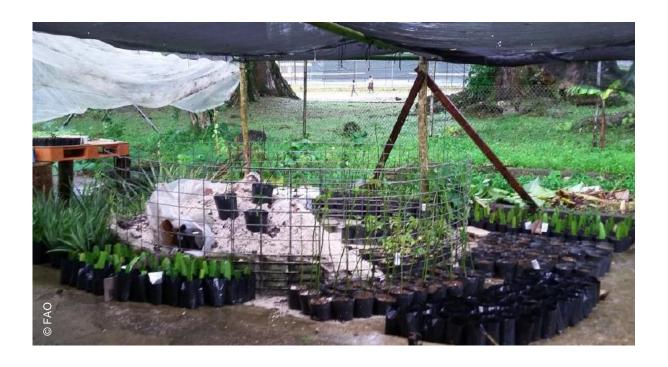




FARM MANAGEMENT GUIDE

Farming as a business in Pohnpei and Yap, FSM



Farm management guide

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How to use this Manual?

This manual is for those farmers and individual who wish to start farming as a business. It will also serve as a useful document for Extension Agents wanting to support farmers making a transition from subsistence to commercial or semi-commercial farming. The decision to become a business farmer is not a light one and involves many variables and a lot of effort. With this guidebook, we hope to make the process in Pohnpei and Yap clearer so those interested in farming as a business will understand the work involved. For those willing to put in the effort, we hope this guide will ease the transition from interested party to agribusiness owner.

The first section of this manual is about basic concepts of farm management so that the farmer understands what a farm is, what his/her function is as a farm manager, and what skills and information are needed to successfully manage a farm.

The next sections of this manual are comprised of 12 Tools that will help the farmer move step by step towards running a small or medium scale farm as business. Using these tools will help farmers acquire more knowledge, comply with regulations, reduce risk of failure and raise more funding for farming activities. Each tool has a list of resource at the end for further information.

In order to become a successful business farmer and have high satisfaction ratings from customers and other stakeholders', a farmer needs to follow almost all of the steps provided in different tools.

The tools are shown in the diagram below: 1. Access to 12. Record keeping 3. Defining 11. Cost of 10. Food Farm 4. Develop Safety skills Management Marketing plans 6. Comply 8. Access & Regs capital

Introduction

Congratulations on your interest in starting your own farm as business! The decision to become a farmer is not a light one and involves many variables and a lot of effort. With this guidebook, we hope to make the process here in FSM clearer so those interested in farming will understand the work involved. For those willing to put in the effort, we hope this guide will ease your transition from interested party to agribusiness owner.

At the beginning, we have included a list of key service providers to provide a quick glance reference list. Many of these resources are mentioned again under sections related to the services they offer. A checklist is also included so you can keep track of your progress as you go through the steps. At the end of the guide, as well as throughout, there are useful websites or organizations listed that can further help you make your farming venture a success.

Note: Efforts were made at the time of publication to ensure accurate information and up-to-date listings for resources and organizations mentioned in this guidebook. Due to the dynamic nature of websites, we cannot guarantee that all websites will be active in the future.

Objectives of the manual

- To equip the farmer to take advantage of improved technologies and market opportunities to increase income.
- To assist the farmer to make proper plan and adopts his/her production to assure food security for the family.
- To empower the farmer for professional negotiations with buyers, input dealers and credit institutions.
- To educate the farmer to make profitable farm business

Farm and farm management basics

What is a farm?

A farm is a socio-economic unit. It is composed of a farm family, the farm operations and farm structures. A business farmer is a grower and also a farm manager who has to decide how much land, labor, capital and type of technology to use to produce the desired product. Ultimately, the farmer has to earn a profit to support their livelihood.

Why farm management is important?

Using farm management techniques, a farmer would efficiently use the available resources to increase profits through deciding among the best alternatives available.

What are functions of a farm manager?

The farmer performs following basic functions to effectively manage the farm:

- 1. <u>Diagnosis</u>: Analysis of past performance of farm, for both its weaknesses and strengths.
- 2. <u>Planning</u>: Planning for future crops and animals considering the opportunities and threats.
- 3. <u>Implementation</u>: Efficient implementation with least cost.
- 4. <u>Monitoring</u>: Reduce the losses and increase the profits by reducing the costs and choosing better technologies based on the observed opportunities.
- 5. Evaluation: Evaluating the actions for repeating the success in future.

What is the objective of farming as a business?

- Make farming profitable
- How to choose best variety/crop/cropping pattern
- How to minimize input cost
- How to increase production and productivity
- Market How to enhance quality
- Market-driven production
- How to choose the market that offers the optimum price
- How to choose the better source of finance and better avenues for investment
- Efficient risk management

What will happen if the farmer does not do farm management?

In the absence of good farm management, the farmer may not make a profit or may experience economic losses from farming. Reasons for farm production costs going up or down could include any of the following:

- There is a change in the supply and price of agricultural inputs like seeds, fertilizers, irrigation, or power.
- There is a change in the prices of produce (outputs) at the markets due to changes in demand or supply.
- There are improvements in farm technology that can decrease production costs.
- there is a change in climate or a natural disaster that impacts the farm productivity.

For better farm management, what kind of knowledge is needed by the farmer?

It is strongly recommended that the farmer obtain the following information about their farm:

- Farm map
- Soil slope and topography
- Soil type (physical and chemical properties)
- Soil color such as red soil or black soil
- Weather parameters such as rainfall, temperature, relative humidity, etc.
- Vegetative cover such as trees, weeds, etc.
- Irrigation potential from on-site or nearby water sources
- Site drainage and tendency for site flooding or saturation
- Physical and infrastructure facilities such as roads for transport, vehicles, custom hiring centers, etc.
- Market facilities information such distance from farm, frequency of operation, typical prices
- Ease of access to farm production assistance and technology advice from service providers
- Communication facilities like cell phone and internet connectivity
- Risk factors like high rates of interest
- Supporting programs and schemes/subsidies
- Confidence that the farmer can produce the desired crop/animal profitably, after considering the above conditions.

Twelve 12 tools of "farm as a business"

Twelve tools that will help the farmers move step by step towards running a small or medium scale farm as business. Using these tools will help farmers acquire more knowledge, comply with regulations, reduce risk of failure and raise more funding for farming activities. Each tool has a list of resource at the end for further information.

Tool 1: Farming as a business checklist

	Activities	Date completed	Done	N/
1.	Farming as a business checklist		□	
2.	Access farm service providers			
3.	Set goals			
4.	Acquire essential skills		_ □	
5.	Make a strategic plan and/or business plan	n		
6.	Permits, licenses & business documents			
	a. Business registered with FSM govt.		□	
	b. Business registered with local govt.		□	
	c. Building permit			
	d. Pesticide application license			
	e. Organic Certification (optional)		□	
	f. Food Safety certification (optional)		□	
7.	Access capital		□	
8.	Access land			
	a. Lease		□	
	b. Mortgage		□	
	c. Title documents			
9.	Marketing			
	a. Complete market research			
	b. Develop positioning		□	
	c. Develop brand		_	
10.	Farm to table food safety		□	
11.	Cost of production		□	
12.	Record Keeping (farm records)			

Tool 2: Access to farm services

This section provides a list of key farm service providers in Pohnpei and Yap, FSM, as a means to provide a quick glance reference list. Many of these resources are mentioned again under sections related to the services they offer. At the end of the guide, as well as throughout, there are useful websites or organizations listed that can further help you make your farming venture a success.

Note: Efforts were made at the time of publication to ensure accurate information and up-to-date listings for resources and organizations mentioned in this guidebook. Due to the dynamic nature of websites and contact points, we cannot guarantee that all information will be active in the future.

What services do farmers require?

- Information services (technical, economic, regulatory, etc.)
- Inputs (seed, fertilizer, pest treatment, tools, machinery, etc.)
- Infrastructure (cold storage, warehouse, feed mixing unit, etc.)
- Market (market yard, market price information, transport, etc.)
- Developmental program information
- Credit and insurance, etc.

The above services are needed with dimensions of accessibility, quality, cost effectiveness and timeliness.

Key Farm Service Providers in Pohnpei and Yap, FSM

1. Government and University Services

FSM Department of Resource and Development

Phone: (691) 320-2646; Website: http://www.fsmrd.fm/

Services offered:

- Information and FSM statistics on various agribusiness topics, including marketing and selling, agro tourism, value-added products, and more
- Information on quarantine services and permits for importation of plants and animals

Agriculture Division

Pohnpei Department of Resources and Development

Phone: (691) 320-2400 Services offered:

- Affordable and good quality supply of farm input needs, including seeds, fertilizers, and equipment services
- Livestock support, including multiplication and distribution of improved piglets, importation of day old chicks, and sales of veterinary supplies to local pig and chicken producers
- Trainings at the Pilot Farm site in Pohnlangas, Madolenihmw to pass on new and appropriate methods of vegetable production

Agriculture and Forestry Division – Yap Department of Resources and Development

Phone: (691) 350-2183 Services offered:

- Assistance to individuals and groups with best practices of traditional, modern, and organic agriculture, including nutritional value of local foods
- Assistance to agricultural producers wanting to go into commercial production
- Livestock support, including at-cost distribution of piglets and chicks to local farmers, and assistance with the ordering of commercial feed.

College of Micronesia – Land Grant Program

Pohnpei phone: (691) 320-5731 Yap phone: (691) 350-4319

Website: http://www.micronesialandgrant.org/

Services offered:

- Agriculture extension and outreach, including trainings on new and appropriate production methods
- Extension diagnostics for plant nutritional needs and plant pest treatment
- Cooperative research into climate-smart, locally adapted agriculture products

College of Micronesia - Resident Instruction

Pohnpei phone: (691) 320-2480 (National campus); (691) 320-3795 (Career and Tech. Ed. Center)

Yap phone: (691) 350-5244 Website: http://www.comfsm.fm

Services offered:

- Courses and field experience in agriculture, crop production, animal sciences, agricultural management, food processing, and nursery practices.
- Associate of Science degree in Agriculture and Natural Resource Management (Pohnpei and Kosrae)
- Certificate of Achievement in Agriculture and Food Technology (all state campuses)

U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), Pohnpei Field Office

Pohnpei phone: (691) 320-5893

Website: https://www.nrcs.usda.gov/wps/portal/nrcs/site/pia/home/

Services offered:

- Conservation technical assistance to groups or individuals interested in conserving natural resources and sustaining agricultural production, including on-site Conservation Plans
- Facilitating agriculture trainings, demonstration plots, farmer field schools and other extension methods.

College of Agriculture in FSM

Website: http://www.comfsm.fm

Services offered:

- Short term and associate degree trainings in agriculture, food and agribusiness
- Soil testing for agricultural purposes

2. Local farmer organizations

Pohnpei Farmers Association (PFA); Yap Farmers Association (YFA)

Pohnpei phone: (691) to be determined Yap phone: (691) to be determined

Services to be offered:

- Training of farmers
- Facilitation of linkages to markets
- Project implementation on agriculture and market activities
- Loan and credit facilitation

Food and Agriculture Organization of United Nations (FAO)

Website: www.fao.org
Services to be offered:

- Technical assistance including trainings on crop production, processing & marketing
- Technical assistance on agribusiness management, business planning and farm management
- Facilitating demonstration plots, farmer field schools and other extension methods.
- Provision of planting material and seeds.
- International price information

3. Profit organizations

U.S. Department of Agriculture - Rural Development (USDA-RD), Pohnpei Office

Pohnpei phone: (691) 320-2581

Website: https://www.rd.usda.gov/programs-services/all-programs/business-programs

Services offered:

- Loans, loan guarantees, and grants available to individuals, businesses, cooperatives, farmers and ranchers, public bodies, non-profit corporations
- Business Programs providing financial backing and technical assistance to stimulate business creation and growth

Pacific Islands Small Business Development Center Network (PISBDCN) and the Guam Small Business Development Center (SBDC)

Website: http://www.pacificsbdc.com

Services offered:

- Small business counseling
- Business training
- Business assistance center
- Community and village outreach

FSM Development Bank

Pohnpei phone: (691) 320-2840 Yap phone: (691) 350-2165 Website: http://www.fsmdb.fm/

Services offered:

- Business loans
- Credit lines
- Training on financial maters

Farmer Market in FSM

Website: NA Services offered:

- Linkages to buyers
- Buy products/ future contracting
- Helps you understand customer expectations
- Assist in price setting

Tool 3: Set farming goals

Becoming a farmer is a wonderful goal to have, but farming means different things to different people. You will need to make a lot of smaller, results-driven goals in order to successfully start your agribusiness and become the kind of farmer you want to be. Most of your goals will fit into four main categories: personal goals, economic goals, community goals, and environmental goals. As you make goals in each of these four areas, the type of agribusiness you want to have and ways to make your business a success will become clearer.

When making goals, make sure they're specific and have an end-date. Giving yourself a time-frame and picturing what you'll have achieved by that time solidifies the goal. Goals should be based on reality. If you have no idea what's attainable, do some research. Look online or ask other farmers at what point they turned a profit, how much time they put in, etc. You can give yourself either more or less time, but it's helpful to have a starting point.

The following are just some of many questions you may want to ask yourself as you begin to make goals. Good goals will motivate you and help you channel your enthusiasm in the right direction. The goals you make now will shape your agribusiness and give you a good starting point for developing a strategic plan and a business plan later on.

Personal

Personal goals include thinking about why you want to farm and what you want to accomplish through farming. Consider the following questions and come up with others that will help you define what kind of farmer you want to be and what kind of farm or agribusiness you want to have. What do you like about farming?

- Do you want to farm as a hobby or as a large producer?
- Is this an opportunity to allow your family to work together?
- Do you want to provide all your family's produce and sell some on the side as well?
- Do you want to provide healthy food to the community?
- Do you want your agribusiness to expand and be your main source of income?
- How much time do you want to spend on the business?

As you make personal goals, inventory the skills you possess (technical or practical knowledge, drive, physical health, family support, etc.). Make a list of necessary skills you lack and set goals to fill in those gaps through education, technical advice, trained farm hands, or other means.

Economic

As you make economic goals for yourself and your agribusiness, inventory your existing resources, income and expenses. Estimate what you will need to start and base your economic goals off those numbers. Think about how much you are willing to spend, how much debt you're willing to accrue, when you'll need to start receiving net income, and whether or not you're financially able to weather a disaster or bad production year.

Environmental

Farming, depending on how it is done, can have a potentially negative or positive effect on the environment. You may not even have land yet for your farm. In that case, think about the natural resources on a property before you buy or lease. Consider the following questions:

- What will you do to minimize or neutralize negative effects?
- What natural or cultural resources are in the area and how will you maintain them?
- Will you practice traditional, organic, or natural farming?
- Will you develop a conservation plan for your farm?
- Is the land steep enough that erosion will be a problem?
- Is there a stream nearby that could be contaminated by fertilizers or pesticides?

- Are there endangered or nesting birds in the area?
- What can you do to protect valuable ocean resources?

Community

Farming is not an isolated enterprise. Your neighbors and community will probably be observing your operation. They may even be part of your market or labor pool, so it is important to develop and maintain good relations with them. How will you do so? Think about how your business will help the community. What local businesses and organizations will you support as you build your business and expand your own resources?

Set your goals to be SMART.

The best goals are **S.M.A.R.T.** This acronym tells us that goals should be **S**pecific, **M**easurable, **A**ttainable, **R**ewarding and **T**imed. Try to be as specific as possible in stating what you would like you achieve. Some way to measure progress in attaining the goal should be included. Make sure that your expectations in setting goals are realistic so that the goals can be attained. If goals are attained, then this helps to motivate you to continue and feel rewarded for your hard work. The goals also need to be timed in order develop a deadline for achieving them.

Here is one example of a SMART goal:

By December 1, 2013, I will have planted, harvested, and successfully sold 2 acres of mixed vegetables.

Further information:

- University of Minnesota Extension.
 https://www.extension.umn.edu/agriculture/dairy/business-tools-and-budgeting/setting-farm-goals/
- University of Missouri. http://agebb.missouri.edu/mgt/settingfandfgoals.htm

Tool 4: Acquire essential skills

As you made goals and inventoried your skills and resources, you probably identified some skills you're lacking that would be useful in your agribusiness. Perhaps you know how to grow crops, but you have no experience with running a business. Maybe you're an entrepreneur, but you've only ever grown a backyard garden. Luckily, there are many options for gaining the skills you need to make your farm a success. Many opportunities are here in FSM. In this section, we outline some options for developing skills and widening your knowledge base.

T.4.1. College classes

Many colleges and universities have agricultural education programs. The College of Micronesia-FSM is a good source to educate yourself on agricultural topics.

T.4.2. Field days/workshops

Several organizations offer field days, on-the-farm workshops that last anywhere from a few hours to a few days. These field days cover a wide variety of topics related to farming and usually showcase a farm that has had success in the topic covered. Field days offer farmers and other agribusiness owners a great way to network and get answers to questions from people with on-the-farm knowledge.

Pohnpei and Yap Agriculture and Extension offices, FAO, USDA-NRCS, Farmers Associations and many other organizations have field days and workshops for agriculture, organic agriculture and farming as a small business.

T.4.3. Training programs

A training program offers guided help through the beginning farming process and provides an opportunity for new farmers to network both with other new farmers and with established farmers. They can be from a few days to several months long. A good way to find free training programs of interest is to connect with other farmers and Extension offices.

T.4.4. Internships/apprenticeships

Internships and apprenticeships offer a way for those with minimal farming skills or knowledge gaps to get into farming. These opportunities allow you to gain experience working on a farm and developing knowledge and skills you can then use on your own farm. Generally, internships last only a few months and interns are often given only a few responsibilities. Apprenticeships are similar to internships, but they usually last a whole growing season and the apprentice is involved in many parts of the farm operation. An apprentice will often be involved in the whole process, from preparing for planting to harvesting and selling. Before accepting a position, it is important to talk to the farmer or producer. Find out what they need the most help with, but also let them know what skills you are hoping to gain. If possible, tour the farm and get to know other workers as well.

If you are interested to learn through internship/apprenticeship, try again to use your network and connect with potential organizations or other farms.

Tool 5: Make a strategic plan or a business plan

Strategic plans and business plans are representations of your agribusiness on paper. They demonstrate how you incorporate your goals, values and skills into the running of your business and how you plan to make that business a success.

T.5.1. Strategic plan

Developing a strategic plan helps keep you on track as you run your agribusiness and develop your business plan. It also guarantees your personal goals are the foundation for your business goals. Questions to ask yourself:

- What do we do?
- Why do we do it?
- For whom do we do it?
- How can we be the best at it?

Identifying the farming industry's values, strengths and weaknesses and comparing your business's values, strengths and weaknesses can help you determine what your business has to offer and why or how you can be the best at what you do. It is important to revisit your strategic plan every so often to determine if your business is still heading in the direction you intended or if goals have changed.

T.5.2. Business plan

A business plan shows you and others that you can be successful by outlining the economic viability of your business. It is essential for getting a loan, but also for reaching your goals for your business. Before you start on your business plan, you need to ask yourself some questions about your agribusiness:

- What size of farm do you want?
- What will you grow?
- Who is your market (CSA / farmer's market / restaurants / grocery stores)?
- How big is the market and is there potential for growth?
- Is there competition?
- Will agricultural tourism to be part of your business?
- Will you be making value-added products?

When you have a good idea of your business goals, you can begin your business plan. Many businesses include a mission statement and a vision statement as part of their business plan. A mission statement clearly defines the main goals or values of the company and how they will be achieved. It serves to keep the company on track. Sound familiar? Strategic plans frequently become the basis for a business's mission statement. A vision statement presents your vision of what your business will accomplish for your customers, industry, or community in the next five or ten years.

T.5.3. Elements of a business plan:

Your well-thought-out business plan lets others know you are serious, and that you can handle all that running a business entails. It can also give you a solid roadmap to help you navigate the tricky waters. The seven components you must have in your business plan include:

- Executive Summary
- Business Description
- Market Analysis
- Marketing Plan/Marketing Mix
- Operations
- Organization Management
- Sales Strategies

- Funding Requirements
- Financial Projections

Resources for developing strategic or business plans/Further information

- Agriculture extension agents at the FSM Department of Resources and Development
- FAO projects and FAO website document repository: www.fao.org
- http://www.beginningfarmers.org/farm-business-planning/
- Cornell University. Farm Business Plan Template http://smallfarms.cornell.edu/plan-your-farm-business/business-plan-templates/
- Sample business plans for Cornel University. http://smallfarms.cornell.edu/plan-your-farm-business/sample-business-plans/

Figure 1
Seedling preparation for farming



Tool 6: Comply with rules and regulations

Many countries and states have farm-related laws and regulations in place to try to protect you, your workers, your neighbors, and the environment. In Pohnpei and Yap, FSM, you will need to apply for and be granted permits, licenses, and other documentation. In this section, we list the most common documentation needed. Not all may apply to your agribusiness and there may be some we have not listed that you will need. Do your research, as missing documentation can result in fines or even halt work on your business.

T.6.1. Zoning

Pay attention to zoning. Land you farm must be zoned for the type of agriculture you want to do. Make sure you know what kind of structures and activities are allowed on the land. You can check with the zoning or planning department of your municipality or state for current zoning maps.

T.6.2. Permits

Common permits which might be applicable to each farming business:

- Building permit
- Grading/grubbing permit. If you will be moving much dirt or removing much vegetation in preparation for planting, a grading and grubbing permit may be required.

T.6.2. Licenses

Common licenses recommended:

- Pesticide applicator license—certain pesticides are restricted and anyone using them must be trained and have a current license.
- Ownership and Movement Certificate or Dealer's License—In order to reduce agricultural theft, food producers must produce an Ownership and Movement Certificate when asked and any non-producers dealing in agricultural commodities must obtain a Dealer's License (recommended)
- Food Safety Certification- Department of Health. Though not necessarily required, if you will have a packing plant or be selling to restaurants, a food safety certificate will help you be competitive.

T.6.3. Other requirements

- Labor law
- Insurance
- Registration—your business must be registered for tax purpose.
- Environmental protection practices and compliance with local law.

Resources for Complying with Rules and Regulations

- FSM Business Regulations
- FSM Foreign Investment Regulations
- Land Lease Law
- Mortgage Law
- Chuuk For Inv. Law CSL 4-99-03
- Investment-PNI
- Mortgage Law Yap
- Survey & Registration of Land YAP
- Yap For Inv Law 2002 YSL 5-72

Tool 7: Accessing capital

Loans and grants are the most common way of securing capital. Some farmers are able to borrow money from friends or family or interested investors. Not everyone is so lucky, but there are several other options for raising necessary funds.

T.7.1. Loans

There are four main places to get commercial loans for agribusinesses.

- 1. Commercial banks and credit unions
- 2. FSM Development Bank
- Government Lending Programs such as the Pohnpei Business and Guarantee Loan Scheme (PBGLS)

Common requirements for loans:

- Clear business plan
- Marketing plan
- Good credit history
- Organized, accurate, and up-to-date records, including: Income/expense statements
 - Financial Statements
 - Tax returns

T.7.2. Grants

Grants are particularly appealing, as you do not need to pay back money given you as you would with a loan. However, be aware that many grants require up front funding matches by the farmer and it takes time and effort to locate, apply for, and write reports for grants. Grants will rarely fund beginning ventures, but may be a way to expand your agribusiness after a few years in operation.

Common requirements for grants:

- Detailed and organized business records
- Clear purpose that matches the goal of the grant
- A clearly defined way to accomplish goal and a way to measure results
- Support from community members or partnerships
- Match for funding (amount for match varies widely between grants)
- Final Report detailing how grant funds were used and what was accomplished

Resources for accessing capital:

- FSM Development Bank http://www.fsmdb.fm/
- Bank of FSM

Tool 8: Accessing land

Land for farming can be part of lands already owned by your family, rented, leased and in some occasions, purchased. Which option you choose will depend greatly on your goals and the availability of land. Land availability may affect your options for expansion or the market or goals for your farm may change.

T.8.1. Buying

Currently, there is less agricultural land available in FSM for purchase than there is for renting or leasing. Here are ways to find what is available:

- Realtors—sometimes realtors will be aware of listings for agriculture land.
- Retiring farmer—if you know a farmer that is retiring and does not have children to take over the farm, he or she may be willing to sell in order to keep the land in farming.
- Approach owners—look for land that is zoned for agriculture, but is not currently in production. Find out who the owners are and ask if they are willing to sell.

T.8.2. Renting/Leasing

Rented or leased land is usually more readily available and gives you the flexibility to develop your product and market base. There are several options for finding lands to rent or lease.

- Large landowner leases—large landowners may lease out agricultural land. They may know which of their tenants is willing to sub-lease smaller parcels of land for agricultural production.
- Retiring farmer—Retiring farmers not willing to sell their land may be willing to lease it.

Resources for accessing land:

Land Lease Law

Figure 2
Vanilla protected production farming



Tool 9: Marketing

In order to have a successful agribusiness, it is essential that you know who you are selling to and why they would want to buy your product.

T.9.1. Identifying your market: Do your research

Identify your target market:

- Individual/business
- Location
- Family/business size
- Annual income/revenue
- Buying style (when, how much?)
- Ethnicity
- Values (convenience, quality, aesthetics, etc.)

Answering the following questions will help you determine whether or not your identified target market will be able to sustain your business:

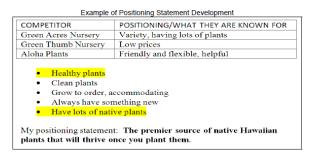
- Can you easily identify your target market?
- Why would your target market want to buy from you?
- Do they have a need that isn't already being satisfied?
- Do you have a way to communicate with your target market?
- Is your target market large enough to support your sales goals?

If you're unsure, as you likely are, of the answers to any of the above questions, you will want to do more research and possibly get some help. Ask the extension officers and reach to development organizations that can help you identify your target market, as well as help develop the next two steps in marketing, **positioning** and **branding**.

T.9.2. Positioning

Positioning allows you to differentiate yourself from your competition and show your potential customers why your company is better to work with or your product is the best or most desirable.

- 1. Research your competition. What are they known for?
- 2. List the defining characteristics and strengths of your business.
- 3. Why would your target market choose your company or products over a competitor's?
- 4. Write a concise Positioning Statement that describes one or two things you want customers to associate with your agribusiness and products.



T.9.3. Branding

Once you've decided on your positioning, emphasize it with your brand. You need to be the one who determines how your customers view your business. Your positioning, reinforced by your brand, will do that work for you. Design all of the following using your new positioning and brand:

- Company name/brand name
- Tagline/slogan
- Logo

- Color scheme
- Packaging
- Labels
- Advertising

T.9.4. The marketing mix (4Ps)

Attracting your target market through an integrated effort

Given what you know about your target market and positioning and branding, what might you change in each of the following areas (products, price, place, promotion) to better appeal to them and reinforce/convey your positioning/branding?

An example: Your target market is health-conscious, Pohnpei-based young adults without or with young children, and your desired positioning is "The most nutritious vegetables, grown right here in Pohnpei." A few appropriate things you might do with your Marketing Mix are:

Product

- Bag your product in clear bags to accommodate a label, which includes your company name, logo, and website, emphasize Pohnpei-grown, and show a comparative analysis of the nutrient content of your product versus a mainland competitor.
- Label space permitting, explain the environmental benefit of being grown here (significant portion of your target market is also concerned about the environment).
- Package each bag to include around two single servings.

Price

• Premium versus imports. On a per pound basis, slight premium pricing over imports (target is typically not a "value" buyer, small quantity bag should make premium pricing less of an issue, and can enhance perception of a premium product).

Place

- Sell and deliver to specialty grocers (and supermarkets if volume permits) in Pohnpei, Yap and other states focusing on areas of high concentrations of your target market.
- Sell over the Internet for on farm pickup.

Promotion

- Shelf tag with your brand, slogan, logo and expanded descriptions of nutritional (and possibly environmental) benefits of your products.
- Web site with a blog about what you're doing to maximize the nutrient content of your products.
- Get food providers at events that attract healthy young adults to use your products (perhaps donated) with mention of your company and slogan somewhere (menu, program, table cards where food is served).

Resources:

- FAO Agriculture and Food Marketing Management http://www.fao.org/docrep/004/W3240E/W3240E00.HTM
- http://www.marketing-schools.org/types-of-marketing/agricultural-marketing.html

Tool 10: Farm-to-table food safety

Introduction

Assuring the safety of our food supply begins long before food reaches the table. At each stage of the food chain, from the producer to the consumer, food safety strategies can be followed to minimize contamination and help lower the risk of foodborne illness.

- **Growers** can implement proven best practices to reduce crop exposure to contaminants and minimize the potential for bacterial growth before planting, during production, and throughout harvest and post-harvest handling.
- Retailers and food service workers can be trained in safe food handling practices and local health department regulations regarding storing, displaying, preparing, and serving foods safely.
- Consumers can adopt safe food handling practices when purchasing, storing, preserving
 foods at home, and preparing meals that will help to protect their family's health.
 Infants and preschool children, pregnant women, adults 65 years and over, and immunecompromised children and adults have a higher risk of experiencing a foodborne illness and
 may need to take additional food safety precautions.

Good agricultural practices (GAPs) and good handling practices (GHPs) encompass the general procedures that growers, packers, and processors of fresh fruits and vegetables should follow to ensure the safety of their product. GAPs usually deal with pre-harvest practices (i.e., in the field), while GHPs cover postharvest practices, including packing and shipping. This factsheet covers harvest practices associated with sanitation in the field.

GAP and GHP

A new initiative born from recent concerns and recalls due to food-borne illnesses is the adoption of GAP and GHP. If you produce fresh fruits and/or vegetables for sale through larger distribution channels such as a packer, you should consider becoming certified. Many larger packers of fresh fruits and/or vegetables are now requiring that their growers become certified. This is because their customers (including the Federal government) are requiring that the products they purchase come from GAP and GHP certified producers. This will require another level of recordkeeping and documentation. You will have to designate a coordinator for your farm who will handle all the record keeping needed and work with the certifying agency. You will need to train your harvest workers about safe handling practices and document that training.

Organic production

One of the most rapidly increasing methods of production is organic. To become organically certified you will again need to work with a certifying agency and provide records and documentation of production practices for the three previous years before applying for certification. These records will include what forms of fertilizers and pesticides and all production practices used prior to applying for certification. Check with the certifying agency for your state for more information concerning what records are needed.

Microbial hazards

Fresh produce can become contaminated with pathogenic microorganisms any time before, during, and after harvest. Sources of microbial hazards in the field can include soil, soil amendments (any input intentionally added to the soil), water, workers, and equipment. Improper management and cleaning of field equipment and unsanitary harvesting practices are examples of poor field sanitation that can increase the risk of contaminating fresh produce.

How to control potential hazards

GAPs are critical in ensuring the safety and quality of fresh produce. The US Food and Drug Administration identified the following GAPs that should be considered during harvesting and equipment maintenance to mitigate microbial risks in the field.

General harvest considerations

- Clean and disinfect storage facilities used for harvest containers prior to use.
- Inspect facilities for evidence of pests, such as rodents, birds, and insects.
- Clean and sanitize reusable containers before using them to transport fresh produce.
- Discard containers used to store produce if they are damaged or cannot be thoroughly cleaned.
- Take care not to contaminate fresh produce that is washed, cooled, or packaged in the field.
 Contact with any source of pathogens, such as manure or biosolids, contaminated water,
 workers with poor hygiene, and unclean containers and boxes can contaminate fresh
 produce in the washing, cooling, packaging, or storage process.
- Remove as much dirt and mud as practicable from the produce before it leaves the field. In times where removing mud in the field is not practical, mud should be removed at the packing facility before sorting, grading, and packing.

Equipment maintenance

- Improperly managed field equipment, such as harvesting machinery, knives, containers, tables, baskets, packaging materials, brushes, buckets, etc., can be a source of contamination. Regularly cleaning and maintaining equipment can help prevent contamination of fresh produce. The following GAPs should be considered:
- Use harvesting and packing equipment appropriately and keep it clean. Equipment used to haul garbage or manure should be cleaned and sanitized before coming in contact with or hauling fresh produce. Document the cleaning and sanitizing of equipment to help establish "clean breaks" between different lots of produce.
- Keep harvest containers clean to prevent cross-contamination of fresh produce. If containers
 are used repeatedly during a harvest, they should be cleaned after each load is delivered,
 prior to each reuse. Containers stored outside should be inspected and/or cleaned before
 use.
- Assign responsibility for maintenance to the person in charge of managing equipment. The
 person in charge must know what and how equipment is being used, ensure equipment is
 functioning properly, and make sure equipment is cleaned and sanitized regularly.

Resources/further information:

- FAO http://www.fao.org/english/newsroom/news/2003/15903-en.html
- FAO GAP http://www.fao.org/prods/gap/
- FAO GAP guideline http://www.fao.org/3/a-a1193e.pdf

Tool 11: What is cost of production? Or farm budgeting

Determine your true costs per unit to evaluate pricing and more

Cost of Production reflects the dollar amount associated with growing a specific crop. Cost of Production is commonly expressed as a unit quantity (e.g., dollars per pound). For example, to produce an acre of tomatoes, you may need seed, fertilizer, irrigation water, labor, machinery time, etc. In addition, you may have office, advertising, and insurance expenses. Each of these is associated with a dollar value. When you add them up, you can determine the cost to produce each pound of tomato.

T.11.1. Why is this important?

Understanding your Cost of Production helps you:

- Determine the optimum product pricing and sales volume
- Forecast the impact of changing costs (e.g., rising fuel prices)
- Determine individual product profitability
- Prioritize cost-cutting efforts

T.11.2. Getting started

Cost of Production can be calculated in several ways, depending on the intended use. In general, calculating the Cost of Production requires identifying all costs associated with your operation, then allocating them to either a specific crop (aka "Direct Costs") or towards general business expenses (aka "Indirect Costs").

Identify Expenses – Specific expenses can be determined using historic information (from tax forms, your financial recordkeeping, or receipts) or gathered estimates. The costs you list on the Cost of Production Worksheet should reflect the current cost (rather than historic costs).

Estimate Annual Production – Production can be determined based on your prior experience or can be based on the average of a smaller sample. For example, if on average, one tomato plant produces 15 pounds of tomatoes per cycle and you have 2,000 plants per acre, your production estimate would be 30,000 pounds per cycle per acre. If you have 4 cycles per year, your annual tomato production is 120,000 pounds per acre-year. The Cost of Production Worksheet and instructions referenced in this document can be used for crop production (e.g., vegetables, nursery plants). Value-added product calculations will differ.

T.11.3. Determining direct costs (variable cost)

Direct Costs can be thought of as those costs directly associated with a specific crop. Examples of Direct Costs include:

- Farm Labor
- Planting Expenses
- Weeding Costs
- Fertilizer Costs
- Other Materials
- Packaging Costs
- Delivery Costs Use the Crop Specific Worksheets to document information about your crop as well as all tasks and corresponding costs associated with each crop.

Table 1: Direct cost itemized in crop worksheet example

Task	Lab	or Cost / Hr	Time (hrs) per Application		oor Cost per		aterial Cost Application	M	tal Labor and laterial Cost r Application	Number of Applications per Crop		al Labor and Iterial Cost
Planting	S	10.00	10	\$	100.00	S	300.00	6/3	400.00	1	S	400.00
Weeding	S	10.00	4	\$	40.00	\$	-	s	40.00	1	s	40.00
Fertilizing	S	10.00	2	\$	20.00	S	300.00	un,	320.00	1	s	320.00
Watering						S	20.00	6/h	20.00	120	S	2,400.00
Picking	S	10.00	2	S	20.00	S	-	S	20.00	8	S	160.00
Delivery to Packing Shed	\$	10.00	1	\$	10.00			S	10.00	80	S	800.00
Grading	\$	10.00	1	\$	10.00	\$	-	Ş	10.00	80	S	800.00
Selecting	S	10.00	1	S	10.00	S	-	S	10.00	80	S	800.00
Packing	S	10.00	2	\$	20.00	\$	2.00	Ş	22.00	80	S	1,760.00
Labeling	S	10.00	2	\$	20.00	\$	0.75	ş	20.75	80	\$	1,660.00
Delivery to Shipping Location	S	10.00	2	S	20.00			S	20.00	80	S	1,600.00
									Labor and M	aterial Cost per Crop	\$	10,7/000
									Labor and Ma	terial Cost per Pound	S	0.09
									Labor and M	aterial Cost per Plant	S	4.84
							La	bor	and Material Co	st per Acre per Crop	\$	2,685.00

T.11.4. Determining indirect costs

Indirect Costs are those required for the farm business to operate and typically do not vary greatly by individual crop. Examples of Indirect Costs include:

- **Utilities**
- Insurance
- Advertising and Marketing
- Bank Fees and Interest
- Professional Services (e.g., accountants and attorneys)
- Office Supplies Use the Indirect Cost Allocation Worksheet to document annual expense information on your Indirect Costs. Indirect Cost Allocation Worksheet example The Indirect Cost Allocation Worksheet will calculate your total annual Indirect Costs.

Table 2: Indirect cost allocation worksheet example

Non-Cash Costs, Annual		
Depreciation	\$5,0	00
Decrease in inventory		\$0
Total annual non-cash costs	\$5,0	00
Production area	304,	120
Noncash costs/sqft	\$0.01	64
Noncash cost per sqft per month	\$0.00	14
Machinery & Eqiupment (M&E) Costs, Annual		
Fuel and oil	\$ 6,0	00
M&E Repairs & maintenance	\$ 12,0	00
Other machinery& equipment cost	\$ -	
Total annual M&E costs	\$ 18,0	00
Production area	304,	320
Unallocated M&E costs/sqft	\$0.05	90
Unallocated M&E cost per sqft per month	\$0.00	49
Overhead Costs, Annual		
Utilities	\$ 1,2	00
Insurance	\$ 10,0	00
Repairs & maintenance	\$ 10,0	00
Advertising & promotion	\$ 10,0	00
Rent	\$ 12,0	00
Travel & entertainment	\$ 6,0	00
Cash Interest expense	\$ 1	20
Other overhead	\$ -	
Total annual overhead costs	\$ 49,3	20
Production area	304,	320
Overhead costs/sqft	\$ 0.16	17
Overhead costs per sqft per month	\$ 0.01	35
Total Indirect Costs	Per Month	Per Year
Noncash cost per sqft	\$ 0.00	14 \$ 5,000
Unallocated M&E cost per sqft	\$ 0.00	-
Overhead cost per sqft	\$ 0.01	
Total indirect costs per sqft	\$ 0.01	

T.11.4. Allocating costs

If you are producing a single crop, you can add your annual direct and indirect expenses and divide the sum by your annual sales volume to determine your cost of production per unit; however, if you are producing multiple crops, you will need to allocate a percentage of your Indirect Costs to each crop. Allocating Indirect Costs per square foot of production is a common practice. The Cost of Production Worksheet will calculate the Indirect Cost per square foot and allocate it per crop.

Table 3: Production space worksheet example

XX Farm			
20XX Total Production Space			
Production Space	Sqft	Acres	
Production Area	261,360	6.0	
Aisles, office, roads, etc (non-producing areas)	43,560	1.0	Г
Total Space	304,920	7.0	

Use the Crop Worksheets to enter information about the size of specific crops and use the Production Space Worksheet to enter information about your non-producing areas.

The Cost of Production Worksheet uses the entered information to allocate Indirect Costs based on the acreage of each production. It will also allocate a percentage of the non-producing areas to each crop.

T.11.5. Investment information

Use the Capital Investment Worksheet to enter information about start-up costs and equity provided to the company. The desired return on the initial capital investment can also be included here. The Cost of Production Worksheet calculates your desired return per square foot and allocates the amount to each crop.

Table 4: Capital Investment Worksheet example

XX Farm	
20XX Capital Investment	
Capital Investment	
Land & Improvements	\$0
Buildings and improvements	\$75,000
Machinery & equipment	\$50,000
Inventory and supplies	\$0
Equity	\$100,000
Total	\$125,000
Desired return on investment	10%
Desired total return on investment	\$12.500
Production area	264,00
Desired return per sqft per year	\$0.048
Months in year	12
Desired return per sqft per month	\$0.0040

T.11.6. Cost, volume, and profit analysis

Use the Crop Worksheet to enter your estimated annual production and sales volume for each crop.

Table 5: Annual production itemized in Crop worksheet example

Tomato
3
4
174,240
2,000
8,000
15
120,000
250,000
240,000
12
-

Use the Unit Sales Analysis Worksheet to enter your sales price per pound.

Figure 3
Farm products in the market place



Table 6: Unit Sales Analysis Worksheet example

XX Farm				
20XX Unit Sales Analysis				
Sales analysis per plant	Tomato		Cuc	umber
Sales price per pound	\$ 0.	75	S	1.50
Direct costs per pound (per plant DC wkst)	(\$0.	09)		(\$0.34)
Unit contribution margin	\$0.	66		\$1.16
Indirect cost allocation per pound	(\$0.	19)		(\$0.27)
Less desired return on investment per pound	(\$0.	.03)		(\$0.05)
Cost of plant losses	(\$0.	28)		(\$0.61)
Total indirect cost per plant plus return on investment				
adjusted for plant losses	(\$0.	51)		(\$0.92)
Expected profit (loss) per pound	\$0.	15		\$0.24
Breakeven Price	\$0.	60		\$1.26
Indirect cost allocation detail				
Sqft per plant		3		2
Number of months in production		12		12
Indirect cost rate per sqft per month	\$ 0.02	31	\$	0.0231
Total indirect cost allocation per plant	\$ 0.83	01	\$	0.5534
Total indirect cost per pound	\$ 0.19	29	\$	0.2679
Plant loss percentage		4%		6%

The Cost of Production Worksheet will calculate a plant loss percentage based on production and sales information.

T.11.7. Using the results

After documenting the information above in the Cost of Production Worksheet, you will be able to analyze the following:

Forecasting – You will be able to estimate your annual revenues and expenses.

Breakeven Price – You will know how much you need to sell your product for in order to breakeven. Oahu RC&D Agribusiness Training Series 15 Breakeven Units – You will know how many products you need to sell at specific prices to cover your costs.

Cost Reduction Targeting – You can identify high cost items and target specific costs for possible reduction.

Product Mix Selection – You can evaluate the profitability of each product and determine whether you should change your crop mix.

Adjustments – You can use the worksheet to evaluate the effects of adding staff, changing prices and expenses, and increasing or reducing production.

Further information

- FAO Reference manual. Helping Small Farmers Think About Better Growing and Marketing
 - $\frac{http://www.fao.org/sustainable-food-value-chains/training-and-learning-center/details-materials/en/c/273885/$
- Hawaii Agribusiness Guidebook, https://www.ctahr.hawaii.edu/sustainag/Downloads/HI%20Ag%20Guidebook%20Final.pdf
- University of Minosota Extension
 https://www.extension.umn.edu/agriculture/business/farm-financial-management/
- Michigan State University http://msue.anr.msu.edu/news/getting_started_with_farm_finance_management
- https://gofarmhawaii.org/wp-content/uploads/2017/10/hawaii_new_farmer_guidebook_2013.pdf

Figure 4
Tropical tomatoes



Tool 12: Book keeping

Tracking your money for compliance and business success

Bookkeeping is the recording of all financial transactions for a business. Keeping good financial records ("books") is an essential part of sound business management and a requirement for success. Good financial records will provide you with information to make sound business decisions and are necessary to get financing and to pay taxes.

T.12.1. Why is this important?

You need accurate records of your transactions to monitor the progress of your farming business — to determine whether your business is improving, which crops are selling, and what changes you could/should make. You need records to prepare accurate financial statements for grants and loans and to manage your business. You can maximize your tax savings by identifying non-taxable income and tracking deductible expenses. Good records allow you or your tax preparer to easily prepare your tax return, saving your business time and/or money.

T.12.2. Methods of record keeping

T.12.2. 1. Paper methods

Many records are currently kept by the traditional paper method. This may involve a ledger book for financial records with a list of all debits and credits recorded daily. If this is your current method and it is adequate for you that is fine. The most important things are to keep records and to be consistent. Many very successful businesses still use pen and paper record keeping.

T.12.2. 2. Electronic methods

Software packages for record keeping are becoming as industry specific as production agriculture. It seems that most industries have software packages developed to assist with record keeping. This is very apparent in the program crop area. There are several companies who have developed software packages that will assist in record keeping from mapping to profit and loss statements for each field. You will need to spend considerable time in data entry when you begin to use the package however, entering information after set up can be made very easy with the addition of a smart phone or tablet computer.

T.12.2. 3. Combination

You may also choose to use a combination of paper and electronic. If you are uncomfortable with computer use, keeping a daily record of events on paper then entering them into a computer may be your option. You may also have another family member (children or grandchildren may enjoy this) or employee use the computer. Recording all transactions and happenings on a daily basis is preferred however, during the busy planting or harvesting season, this may not be possible for smaller operations without a dedicated book keeper. As previously stated, whatever method you choose, be diligent and consistent.

T.12.3. Basic system components

A basic manual bookkeeping system should include the following:

Sales receipt book – Book of receipts, each with a unique number, with carbon-copy duplicates for filing, which are used for evidence of sales and for capturing information for the Monthly Income Record. Fill this out each time you make a sale; give the original to the customer.

Checking account – Bank checking account that is used only for your business transactions, with a checkbook that generates carbon copies. Use this account to pay vendors who don't accept cash or credit cards, help manage your cash flow, assist in tracking business expenses, as evidence of payment, and to capture information for the Monthly Expense Record. Pay for business expenses using the checks from this account. Don't pay for nonbusiness items using this account.

Expense filing folder – Durable 12-pocket accordion folder, with each pocket labeled with the months of the year. The folder is used to track business expenses, as evidence of payment, and to capture information for the Monthly Expense Record. Place all receipts for business purchases into the corresponding month pocket.

Monthly income record – Log sheet to record sales information for the month, with each crop/product/service receiving a separate sheet. This record provides (at-aglance) a recap of total sales per product and who it was sold to, and captures information for the Annual Income Summary. Transfer information from the Sales Receipt Book and record any sales for which you do not use the Sales Receipt Book for the month. Different products go on different sheets.

Table 7: Monthly Income Summary

Month/Year			Crop:								
Receipt #	Date	Sold To	# of units sold (piece, kg, bag)	Price per unit	Total Dollar Amount						
					40						
		Totals Average price	(a)	Divide (b)/(a)	(b)						

Monthly expense record – Log sheet to record expenses for the month, categorized by expense type. This record provides a recap (at-a-glance) of expenses per category, and captures information for the Annual Expense Summary. Record information from the Expense Filing Folder for the month, along with the checks written in the month and any other business expenses paid with cash or credit card. Write down the amounts for each item or service purchased in the correct category.

Table 8: Monthly expenses for month/year:

Check # Or Cash	Date	Paid To	Car/Truck expenses	Chemicals	Custom hire (machine work)	Feed	Fertilizer	Gas/Oil	Insurance	Labor	Rent or Lease	Repairs and maintenance	Seed/Plants	Supplies	Taxes	Utilities
Totals																

Annual summaries of income and expenses – Log sheets to record income (sales) and expenses for the year, categorized by crop and expense category, which give you an "at-a-glance" recap of all farm income and expenses throughout the year and to determine net profit/loss. Transfer totals from the Monthly Income and Expense Records to the corresponding fields on these tables. For the Annual Income Summary, total the entries by month and then by crop/product/service. For the Annual Expense Summary, total the entries by month and then by category.

Table 9: Annual Income Summary for Year: XXXXXX

	Crop	Crop	Crop	Crop	Crop	Total (\$)
Jan						
Feb						
Mar						
April						
May						
June						
July						
August						
September						
October						
Nov						
Dec						
TOTAL Annual Income (\$)						

Table 10: Annual Expense Summary for: XXXX Farmer/Company

	Car/Truck expenses	Chemicals	Custom hire (machine work)	Feed	Fertilizer	Gas/Oil	Insurance	Labor	Rent or Lease	Repairs and maintenance	Seed/Plants	Supplies	Taxes	Utilities
January														
February														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														
TOTAL														

Capital expense record – Log sheet to record equipment purchased for the business that are depreciable on your tax returns, used in preparing your tax returns to calculate depreciation, amortization or depletion deduction and to determine your basis for computing gain (or loss) when you sell or otherwise dispose of the equipment. You will maintain this record for as long as there are items on the list that you are still depreciating, amortizing, or depleting.

Table 11: Capital Expenses

Date	Bought From	Description	Units Bought	Price Per Unit	Total
		(Files by first latter			Dollar
		Used in Description)			Amount

Folders for Other Records – Six-pocket accordion folder, used to organize documents, with the following sections (labeled):

- Bank Account Statements
- Equipment and Capital Expense Records
- Loan and Credit Card Statements
- Payroll Taxes (Federal and State)
- General Excise Taxes
- Income Taxes (Federal and State) File copies of related documents in each section as you receive or generate them. Order the items chronologically, with the newest documents toward the front of each pocket.

T.12.4. How long should you keep records?

- You must keep your records as long as they may be needed for the administration of any provision of the Internal Revenue Code. Generally, you must keep records that support an item of income or deduction for at least 3 years from when your tax return was due or filed or within 2 years of the date the tax was paid, whichever is later.
- If you have employees, you must keep all employment tax records for at least 4 years after the date the tax becomes due or is paid, whichever is later.
- Keep records relating to property until the period of limitations expires for the year in which you dispose of the property in a taxable disposition. You must keep these records to figure any depreciation, amortization, or depletion deduction and to figure out your basis for computing gain or (loss) when you sell or otherwise dispose of the property.
- When your records are no longer needed for tax purposes, do not discard them until you check to see if you have to keep them longer for other purposes. For example, your insurance company or creditors may require you to keep them longer than the IRS does.

Source/ Further information:

- Hawaii Agribusiness Book.
 https://www.ctahr.hawaii.edu/sustainag/Downloads/HI%20Ag%20Guidebook%20Final.pd
- Go Farm Hawaii, https://gofarmhawaii.org/
- Hawaii Guide for new farmers, https://gofarmhawaii.org/wp-content/uploads/2017/10/hawaii new farmer guidebook 2013.pdf

Further reading

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Let's entertain the earth, it will entertain us with food, timber and fuel.

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