CHAPTER 1

CHOOSING SUSTAINABLE AGRICULTURE
CHOOSEING SUSTAINABLE AGRICULTURE

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Use this document in conjunction with the companion website:

Links for New Farmers
http://www.ctahr.hawaii.edu/sustainag/newFarmer/links.asp

hosted by the Sustainable Agriculture Program at the University of Hawaii College of Tropical Agriculture and Human Resources. Extensive additional information and updates are posted there.
They are a scattering of verdant islands resting in the vast expanse of Pacific blue. These lands are the descendants of ancient and powerful volcanic forces, which have left a legacy of abundance. Awe-inspiring mountain ridges and cliffs rise along their horizons, harvesting fresh water from the trade winds. Remote from all major land masses, they are home to hundreds of plant and animal species, many of them uniquely evolved and adapted to these isles.

These are the islands of Paradise: Hawai‘i.

The beauty and luxuriance of the Hawaiian islands have long stirred people’s hearts and enticed adventurers to stay and make their homes here. These lands excel in growing food and fiber — agriculture, in many forms, has been long practiced. From the original Hawaiians who grew kalo (taro), u‘ala (sweet potato) and ulu (breadfruit), through the industrial sugar plantation era, and up to today’s contemporary vision of diversified agriculture, we have learned much.

How do we cultivate the ‘aina (land), these magnificent island ecosystems, while maintaining their inherent natural wealth in perpetuity? What will agriculture look like in this century? How will the new farmers of Hawai‘i manage the natural resources with which they are entrusted?

THE PROMISE OF SUSTAINABLE AGRICULTURE

While no one will deny the remarkable increases in food production which we have enjoyed as the result of conventional farming, it has come at a price. The accelerated decline of family farming, environmental damage to air, soil, water, plant and animal resources, and lingering concerns about the health effects from chemical residues in the food supply were unintended consequences of conventional farming systems.

General consensus supports the opinion that the future of agriculture in the Pacific islands must be “sustainable.” Sustainable farming systems are “capable of maintaining their productivity and usefulness to society indefinitely. Such systems... must be resource-conserving, socially supportive, commercially competitive, and environmentally sound.”

DRAFT: AN INTRODUCTION TO SUSTAINABLE FARMING IN HAWAI‘I
The primary goals of sustainable agriculture include:

- Providing a more profitable farm income
- Promoting environmental stewardship, including:
  - Protecting and improving soil quality;
  - Reducing dependence on non-renewable resources, such as fuel and synthetic fertilizers and pesticides; and
  - Minimizing adverse impacts on safety, wildlife, water quality and other environmental resources
- Promoting stable, thriving farm families and communities.²

Management decisions for sustainable agriculture are not based on short term “bottom line” profits, but rather on long-term prosperity.

<table>
<thead>
<tr>
<th>Conventional Farming Systems</th>
<th>Sustainable Farming Systems</th>
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<tr>
<td>Strong reliance on rapid technological innovation and skills</td>
<td>Strong reliance on farmer management, knowledge, and skills</td>
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<tr>
<td>Large capital investments required for production and management technology</td>
<td>Smaller capital investments required in general</td>
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<td>Large-scale farms</td>
<td>Small to medium scale farms</td>
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<td>Monoculture: single crops/row crops grown continuously over many seasons</td>
<td>Diversified cropping systems</td>
</tr>
<tr>
<td>Extensive use of pesticides, fertilizers, and energy; external energy inputs</td>
<td>Reduced use of pesticides, fertilizers, alternate sources of fertilizer and tight cycling of nutrients; use of natural cycles.</td>
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<tr>
<td>Lower labor cost (less labor required, lower better worker wages, higher reliance on migrant and seasonal labor)</td>
<td>Higher labor costs (more labor required, worker wages)</td>
</tr>
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<td>Dependency on commodity supply chains and premium corporate vertical integrators for marketing</td>
<td>Emphasis on direct marketing and on pre-specialty markets; product and enterprise diversification; value adding</td>
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<tr>
<td>Produce livestock in confined, concentrated livestock systems</td>
<td>Produce livestock in pasture-based systems</td>
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<td>Reliance on fossil fuels to grow and transport crop.</td>
<td>Less used of fossil fuels in production. Emphasize locally grown regional food systems</td>
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A GOOD MATCH FOR PACIFIC ISLANDS

Sustainable agriculture makes sense for Pacific island ecosystems. Ecology-based farming which mimics nature provides long-term protection to our vulnerable land and water resources, to our endangered fauna and flora.

Sustainable agriculture is a good match for island ecosystems for a number of reasons.

- Human health is better protected. Sustainable methods emphasize using the least toxic chemicals available to produce food and fiber. Farmer, farm family, and farm workers’ health are less at risk.

- The natural environment greatly benefits. Island water resources are less likely to be damaged by toxic agricultural chemicals. Conservation methods used on sustainable farms reduce soil erosion, protecting fishery resources by keeping reefs productive and sediment free. Diversified land uses on sustainable farms tend to improve wildlife habitat crucial to endangered plants and animals on Pacific islands.

- Sustainable agriculture stimulates the production and consumption of locally and regionally grown produce. Strong local food production helps to buffer our island food supplies from external forces. Our food security is enhanced. Our dependency on imported foods decreases.

- Healthy, tasty, fresh food can often command a price premium. Locally grown foods are fresher and, as a result, are often more tasty than imported foods. Fresh foods tend to have more vitamins and minerals.

- Sustainable agriculture focuses on getting more of the food dollar directly into the farmer’s hands. As a result, sustainable agriculture tends to stimulate rural economies as well. Sustainable farms bring in more money, hire more people, and contribute to a more economically stable rural community.

- Often tourism plays an important role in Pacific island economies. There are opportunities for sustainable farms to expand into agritourism and to develop product lines to direct market to restaurants, hotels and resorts.

- With long distances and market forces dictating high fuel costs in the islands, sustainable agriculture with its emphasis on reducing fuel dependency is a logical choice.
A GOOD MATCH FOR NEW FARMERS
Many beginning farmers are finding that sustainable agriculture is very compatible with their resources and expectations.

- New farmers often may have limited fiscal resources. Sustainable agriculture tends to reduce reliance on purchased inputs by substituting them with greater management skills and more labor. For example, a beginning farmer may rely more on crop diversification, crop rotations, cover cropping and rotational grazing. However, the sustainable ag “equation” includes getting more cash directly into the farmer’s pocket.

- Initially new farmers usually produce such small volumes that their products must be direct marketed. Direct marketing techniques actively promoted by sustainable agriculture give new farmers excellent opportunities to hone their entrepreneurial and marketing skills. For example, at the local farmers’ market beginners can develop their niche markets, test new products, and get consumer feedback.

- A number of new farmers will make the choice of producing organic or sustainable products because of their personal philosophies of nutrition, health, animal rights, or economic equity. Sustainable and organic agriculture can give them an outlet and an income to follow through on their principles and convert their dreams into their quality of life.

AGRICULTURE: NOT FOR THE FAINT OF HEART
Contemporary farming is not an easy venture. The Northeast New Farmer Network report Listening to New Farmers identifies many of the factors required to be successful in farming today.

Farming production skills and knowledge: Successful farmers must possess knowledge, information and skills combined with practical expertise in a wide range of day-to-day physical tasks required to produce food or fiber products. Varying greatly with each farm enterprise, a farmer needs to know about planting and harvesting multiple crops, animal husbandry, controlling pests and diseases, managing soil and water resources, and operating, maintaining and repairing farm equipment and facilities. Many of these skills are acquired only through experience. Generally those from a farming background (raised on a farm, from a farm family) have already obtained a large part of this skill set. Those from a non-farm background can “catch up” through farm employment and apprenticeships.

In addition to the practical hands-on production skills described above, the successful farmer today must possess (or have access to) superb farm management skills. Farm business, financial and marketing abilities cannot be overemphasized to be successful in today’s agri-business climate.

Farm management expertise: This includes skills needed to manage finances, people, time, and community relations. Business
and marketing skills (budgeting, marketing, publicity, promotion, sales) are crucial. Planning ability for dealing with daily production tasks as well as long-range goals is required. Addressing legal issues and regulations for labor and land use are also included in this category.

**Resources:** Includes access to resources, particularly land (land ownership, land rental, special lease arrangements), water (for irrigation), capital, and markets (both market demand and actual outlets). Resources also include the accessibility to farming institutions and infrastructure such as consultants, input suppliers, repair and market facilities, credit institutions.

**Family and community support, farming networks:** Whatever a farmer’s background, family and spousal support is critical, as is a farmer-peer network for obtaining information and sharing resources, experience, and solving common problems. Social support encompasses overall community understanding and encouragement of farming, acceptability and tolerance of farming, and access to farming expertise, including farming mentors. Social recognition and respect affects resource access, including availability of expertise, land and credit. Lenders may not provide credit if they perceive farming to be an unacceptable investment.

**THE DOWN SIDE**
It would be naïve to consider a farming lifestyle without candidly examining some of the negative issues associated with agriculture.

- **Uncertainty of income:** It is frequently necessary to live on off-farm income and life’s savings in the early stages of a new farm business.

- **Risk of losing your entire investment:** Your farm could fail. Your new business is weather-dependent and subject to damage from insects, diseases, or thieves. Consider how likely this is to happen. Can you lower this risk?

- **Long hours and hard work:** Farming is not a 9 to 5 job. It requires high stamina and is physically demanding. The types of work and the demands on your time vary significantly and may be seasonal. During the start-up phase of your farm business you will have little time or energy for anything else.

- **Safety Issues:** Many farming activities are hazardous, working around mechanized equipment and using certain farm chemicals. Health coverage is expensive but necessary.

- **Lower initial income:** During the first few years of your new farm business you must be able to adjust to living with less money.

- **High levels of stress:** Starting and running a new farm business is highly stressful. You may be investing all of your assets into this business, planning to borrow large sums of money and perhaps giving up a steady job.

**OBSTACLES FOR BEGINNING FARMERS**

- Low income – farming does not pay well.
- Finding land and facilities
- Financing land acquisition
- Lack of start up capital (often financed via off farm jobs)
- Lack of production expertise
- Lack of marketing and business planning skills

From Finding the Niche: Case Studies of Beginning Small-Scale Farmers,
Wisconsin Rural Development Center

**Papaya (K. Love)**
DO YOU HAVE WHAT IT TAKES?

While we hope we haven’t overly frightened you, it’s very important to realize just how difficult farming really is. Once they are actively employed in agriculture, many beginning farmers commonly observe that they had no idea how little they knew about farming. Plan on investing ample time and energy to research and learn about your prospective new career.

Here’s some advice from successful farmers on where to get more information.

Talk to successful farmers. You should not expect free advice - pay for their time or offer some form of compensation (your labor, etc.). Schedule your request for times when the farmer is not as busy. Farmer mentorship programs which connect beginning farmers with experienced ones may be locally available in your area.

Work on a farm. There is no substitute for hands on training and experience in this career. Check into apprenticeship programs with successful farms which you think you’d like to own.

Attend sustainable agriculture field days, workshops and conferences. Focus on programs that feature farmer panels and farmers as presenters. While there, take advantage of your time by connecting with the speakers and other farmers attending. They can help encourage and support you.

Join farming organizations. There are farmer organizations for most agricultural commodities and for many niche products as well. Connect with them for sources of information and to attend annual conferences and workshops.

Read sustainable agriculture farming newsletters and other publications. Acres, USA, Stockman Grass Farmer and Small Farm Today are well respected sources of this type of information and many carry a large stock of books on related topics.

Surf the internet. Information on all aspects of sustainable and organic agriculture is abundant. Become proficient with computers and the internet - they’re an integral part of agribusiness today.
RESOURCES AND RECOMMENDED READING

COMPANION WEBSITE
Use this document in conjunction with the CTAHR website *Links for New Farmers*. Additional information and updates are posted there.
<www.ctahr.hawaii.edu/sustainag/newFarmer/links.asp>

SUSTAINABLE AGRICULTURE

**ATTRA (Appropriate Technology Transfer for Rural Areas).** The National Sustainable Agriculture Information Service is a very comprehensive source of information about all aspects of sustainable agriculture. Major topic areas include: what is sustainable agriculture, horticultural crops, field crops, soils and compost, pest management, organic farming, livestock, marketing and business, energy and agriculture, education, resources.
<attra.ncat.org/fundamental.html>

*Sustainable Agriculture Research and Education (SARE).* Website for USDA national sustainable agriculture program. <www.sare.org>

**Exploring Sustainability in Agriculture** (Sustainable Agriculture Research and Education, SARE). Available in both html and Adobe Acrobat versions, this is a great introduction to the concept of sustainable agriculture (what is sustainability, elements of sustainability) with ten excellent case studies (farmer profiles) to illustrate how these concepts can be applied.
<www.sare.org/publications/exploring.htm>

**The New American Farmer** (Sustainable Agriculture Research and Education, SARE). A collection of 50 in-depth interviews with farmers and ranchers which illustrate the great variety of production methods and the marketing creativity of sustainable farming operations thriving around the country. <www.sare.org/publications/naf.htm>

**The New Farm: Farmer-to-Farmer Know How from The Rodale Institute.** The Rodale Institute’s farming website features information, articles, products and services for “regenerative agriculture.” The Rodale Institute works worldwide to achieve a regenerative food system that renews the earth. Their activities include research, training, workshops, and information dissemination. <www.newfarm.org/>

Hawaii’s Agricultural Gateway (Hawaii DOA)  <www.hawaiiag.org>

MAGAZINES

**Acres USA, A Voice for Eco-Agriculture.** Describes itself as a national magazine devoted to sustainable agriculture. Their on-line catalogue features a wide array of publications relating to alternative agriculture. <www.acresusa.com/magazines/magazine.htm>

BOOKS

**Exploring the Small Farm Dream: Is Starting an Agricultural Business Right for You?** from the New England Small Farm Institute. This decision-making workbook uses a series of worksheets to guide you through the decision-making process to go into farming.
<www.smallfarm.org/>  

**Making Your Small Farm Profitable,** by Ron Macher; published by Storey Books. <www.storey.com>

**You Can Farm: The Entrepreneur’s Guide to Start and Succeed in a Farming Enterprise,** by Joel Salatin; published by Chelsea Green Publishing.