GETTING STARTED AS A DIRECT MARKET GROWER

Publication Number 31-093C
(updated Nov. 2007)

AUTHOR: Cindy Fake, Horticulture and Small Farms Advisor, Nevada & Placer Counties

You have made the decision to put in a commercial orchard, start a flower farm, or market vegetable operation. Congratulations, you are about to become a small-scale grower! But where do you start?

As a new grower, you have numerous decisions to make before you even plant a crop: how much time, money, and property to invest in your enterprise; what to grow, how much to grow, how, where, and to whom you will market your crops, what kind of cropping management techniques you will use, among others. If you are a newcomer to the agricultural world, it can be difficult to navigate the maze of organizations and regulations that you need to understand in order to succeed as a commercial grower. This publication is intended to help you find your way through the process.

FIRST STEPS - PLANNING AND MARKET RESEARCH

One of the most common mistakes new growers make is to view themselves as producers and not as marketers and business people. In the current American agricultural environment, small-scale growers cannot survive selling their produce on the wholesale market. Land and production costs are too great to allow wholesale prices. In order to succeed, your primary markets must be at or close to retail prices. This generally means direct marketing - from the farm, through farmers' markets, the internet, or directly to institutions or independent stores willing to pay close to retail prices for quality product.

Market Research

Given this reality, before you plant anything, you must know who is going to buy it, where they are, and what they want. You need to find out what your target clientele is looking for and you need to plan your farming operation to grow what they want.

You will need to target a particular clientele, and find out what they want to buy. Growing what you like can be a good thing, but only if you also have clientele who like it and are willing to pay a fair price.

Just as in any business, market research is essential. You will need to find or develop your own market niche. A niche is about targeting a particular consumer community. You need to identify who your target clientele is and then work on developing the awareness of that clientele for your product and the service you provide.

Before you plant anything you need to answer these questions:

- Who are your customers?
- Where are they?
- How will they find out about you and your product?
- What is your product?
- How is your product different than others of the same type?
- Why should a customer want to buy your product instead of someone else's?

If you don't know who is going to buy your product, you will not succeed at selling it.

Planning

Often, the best strategy is to find out what will sell in the particular market you have targeted and then sell to that market. How do you accomplish that?

Start planning early, at least a year before you want to sell. Visit the local farmers' markets (see resource section) and make a list of what is and isn't there in different seasons. Concentrate on what isn't there, but also note products that sell well and seem to be in short supply.

COOPERATIVE EXTENSION, UNIVERSITY OF CALIFORNIA

Placer County **WEB SITE: ceplacernevada.ucdavis.edu** **Nevada County**

11477 E Avenue *(Bldg 306, DeWitt Center)*
Auburn, California 95603
(530) 889-7385
FAX (530) 889-7397
E-Mail: ceplacer@ucdavis.edu

255 So Auburn *(Veterans Memorial Bldg)*
Grass Valley, California 95945
(530) 273-4563
FAX (530 273-4769
E-Mail: cenevada@ucdavis.edu

Talk to the growers. Go to market early, observe what sells quickly and what customers buy. Collect ideas and take notes.

After visiting local farmers' markets, go to the Davis Farmers' market and/or the Sacramento market under the freeway. Compare what is sold there to what is in local farmers' markets. Talk to growers and keep track of your observations.

Visit local produce stores such as Newcastle Produce or Lincoln Produce and note what is and isn't there. Use the annual market wish list as a guide for researching potential crops. The wish list is intended to help growers diversify production and fill gaps in local markets. Talk to managers of the local farmers' market associations (Foothill Farmers' Markets and Nevada County Growers' Markets) and the Placer County Ag Marketing Director for ideas. Contact information may be found in the resources section at the end of this document.

Do your homework on which crops might work for you. Make a short list of possibilities, then go to the markets again and see how your choices would fit.

ASSESSING YOUR RESOURCES

In addition to researching market demand for specific crops, You will need to assess the resources of your property and decide whether your preferred crop is suitable for your particular microclimate and soil. What do you need to know about your property? You need to find out about your soil, water availability, and microclimate.

Soils

You will need to find out what kind of soil you have, whether it is clay or sandy, how well it holds water, its native fertility, and for which crops it is suitable. You also need to know what underlies the topsoil – the subsoil and parent materials.

Your local Natural Resources Conservation Service (NRCS) office, a US Department of Agriculture (USDA) agency, can help. They have copies of the soil survey and can provide descriptions of your soil(s). They may even be able to print out topographical and soil maps of your property based on your assessor's parcel number. Call your local NRCS office to make an appointment with one of the conservationists.

Nevada County NRCS and RCD
113 Presley Way, Grass Valley
(530) 272-3417

NRCS Placer County
Auburn Ravine Road, Auburn
(530) 823-6830

Placer County Resource Conservation District
(530) 885-3046

Soil testing

In addition to finding out the basic characteristics of your soil, you need to have your soil tested for its chemical properties. Many foothill soils are clay or decomposed granite and fairly acidic. At lower elevations, there are more neutral & slightly alkaline soils. For most crops, a slightly acidic soil is fine, but some may require a more or less acidic soil than yours, which can require major inputs of amendments.

You need to have your soil tested by a commercial lab that will give you accurate information for a baseline. Your amendment and fertilizer program will depend on the results of your soil tests, so in order to avoid costly errors, it is best to use a commercial lab rather than home soil test kits. UC Cooperative Extension does not do soil testing.

Some nearby labs commonly used by local growers include:

A & L Western Ag Labs, Inc.
1311 Woodland Avenue Suite 1
Modesto, CA 95351
Phone: (209) 529-4080
http://www.al-labs-west.com/

Fruit Growers' Lab (formerly Monarch Labs)
563 E. Lindo
Chico CA 95926
(530) 343-5818
http://www.fglinc.com/

Sunland Lab
Phone: (916) 852-8557
11353 Pyrites Way. Ste#4
Rancho Cordova, CA 95760
http://sunland-analytical.com/

Soil labs often have a specific protocol they want you to use for sampling your soil, so call and ask before sending off samples. Focus on sampling the areas that you intend to plant. Generally you will sample an area several times and mix the samples. If some areas of your property have visibly different soil or vegetation, you may need to do separate soil samples. If so, do not mix the samples, it may give you misleading information.

You will need a number of standard soil tests to provide a baseline for soil management. Most labs have a basic package,

which is fine to start with. Have your soil analyzed for pH (acidity or alkalinity), and soil nutrient status (N,P, K at a minimum). You will want to know CEC (Cation Exchange Capacity), a measure of native fertility, organic matter, ppm of Ca, Mg, K, and Na (base saturation %), and the Ca:Mg ratio.

Use a California lab to get accurate information. If you tell the lab before they do the testing what crops you intend to grow, they can provide recommendations on the nutrients or amendments needed. Most labs will give guidance on organic amendments, if you specify that it is an organic farm. For more information on organic amendments, ask for the UCCE information sheet on Organic Amendments (see Resources).

Beyond a general soils map and soil testing, you need to find out how deep your soil is and whether you have a hard pan or not. This can only be done by digging some 6-8 ft holes in the proposed planting area and looking at what is there. This is especially important for perennial crops such as trees or vines.

Before you put in an orchard or vineyard you will probably need to do extensive land preparation, such as ripping, especially on heavy clay or if you have a hardpan of some kind. If possible, add amendments such as lime or compost before ripping so as to incorporate them.

Although some growers have not done extensive soil preparation, most experts consider that to be "penny wise and pound foolish", i.e. your orchard or vineyard and the quality of your fruit will suffer in the long run from the lack of soil preparation. You need to give your plants the best possible opportunity to establish themselves and have a long productive life.

Once your soil is prepared, consider establishing cover crops, especially if you are not planting immediately. A cover crop will protect your soil from erosion in winter rains and can significantly increase soil organic matter and/or soil nitrogen, depending upon what is planted. A cover crop may also facilitate rainy season work in an orchard or vineyard.

Water and irrigation

Water availability is critical to foothill agriculture. Our soils are generally too shallow to store much rainfall, and slopes mean that much of it runs off, so dry farming is rarely possible. Perennial crops require water throughout the year, and if winter rainfall is delayed or inadequate, they may even require irrigation in the “rainy season”.

Ground water from wells is available in a few areas. Most agriculture relies on “ditch water”, delivered through a series of canals and ditches that are remnants of our mining heritage. Water delivery is measured in miner’s inches, a flow rate of 11.22 gallons per minute or 0.0248 (approx. 1/40) acre-inch per hour.

The irrigation canals and ditches are managed by a number of irrigation districts. In Placer and Nevada Counties, these are

- NID, the Nevada Irrigation District, which serves Nevada County and Placer County west of I-80 and east of Highway 65
- PCWA, the Placer County Water Agency, which serves much of Placer County
- San Juan Water District, which serves Granite Bay and part of Roseville
- Camp Far West/South Sutter Irrigation District, which serves a small portion of western Placer County

Most agricultural users buy raw water, that is, untreated water, which costs less than treated water. Some farms in residential/ ag areas must use treated water because raw water is not available, making farming more costly. This is especially true in areas where residences are encroaching on farmland.

With increasing development, water availability has become more uncertain, so it is important to develop a relationship and contract with your local water agency for irrigation water. As a result of development pressures, the Placer County Water Agency currently has a policy of allotting new customers ½ miner’s inch, regardless of acreage. This is not adequate for most crops. In addition, if your property does not have an existing allotment, you will have to pay for the infrastructure to deliver water to your farm.

Most users get water seasonally, from April 15th to October 15th, but in some areas, it is also available in the winter.

Nevada Irrigation District
1036 W Main St.
Grass Valley, CA 95945
(530) 273-6185
From Auburn & Lincoln: 1-800-222-4102

Placer County Water Agency
144 Ferguson Road
Auburn, CA 95604
(530) 823-4850

San Juan Water District
9935 Auburn-Folsom Road
Granite Bay, CA 95746
(916) 791-0115

Once you have water, you will need to decide what kind of irrigation system you need. As a result of the scarcity of water, most growers use micro-irrigation systems, delivering water in small amounts. These systems include a variety of drip systems, microjets or microsprinklers, and other types of low volume irrigation. While overhead sprinklers may be desirable in some locations for frost protection, often they are not very efficient and contribute to runoff. With the scarcity of water and regulations regarding runoff from agricultural land, they are not the best option for most foothill agriculture.

While local plumbing and irrigation suppliers have considerable experience in designing and installing irrigation systems, free assistance with agricultural irrigation systems is available from your local NRCS and Resource Conservation District (RCD) offices. They can help you determine water needs for your crop and soil, and provide assistance with irrigation system design.

Microclimate

Microclimate is influenced by elevation, slope, aspect (which direction your property faces) and exposure. As a result of the varied topography of the foothills, you may have a very different microclimate than your neighbor less than a quarter mile down the road. In addition to figuring out directions and elevations, you need to start collecting data on weather at your site.

A good start is to place maximum-minimum thermometers around your property, at different elevations, and record the max and minimum temperatures on at least a weekly basis. Max-min thermometers are available in low-tech versions – a simple thermometer with two columns of alcohol and a peg on each side that will stop at the high and low temperatures recorded since you last reset it. These cost $5-$10 each and are available at most hardware stores and nurseries. A higher tech version is digital with a memory, cost $20-30 and are also widely available. Simple data loggers, which allow you to download information to a computer cost $40-100 each, and with the necessary shuttles and software range from $200-400. Finally, a full weather station will provide you with all the data you could possibly want for between $400 and $3,000.

You will need to record temperatures throughout the year if you considering a perennial crop. Knowledge of winter lows is critical if the potential crop is cold sensitive. Keeping track of chilling hours can be important if you are in a borderline area for crops which require winter chilling for fruit or flower production. Records of spring temperatures will help you determine when to plant or transplant annual crops. Summer temperatures may be important as well, if your crop is sensitive to heat. Keeping records of the weather on your property is important for many other aspects of growing including pest management, irrigation scheduling, and the timing of other operations. The sooner you start, the better.

Slope can be an important factor in microclimate as it may affect cold air drainage, and the amount of sunlight your property receives. Cold air runs downhill like water, so lower areas will be colder, often significantly colder, if there is a barrier to air movement such as a blackberry patch or another hill. Roads and ponds or other bodies of water will moderate low temperatures to some extent, but you need to know how much. If you are planting a crop that may be sensitive to cold, you need to know how far the cold air backs up the hill, and avoid planting in the areas where cold air sits. If you are planting in a canyon or area shaded by other topography, you may not get sunlight until mid-morning and it may disappear by mid-afternoon. The number of hours of sunlight can be critical for many crops. Most fruiting and flowering crops require at least 6-8 hours of sunlight per day for production.

Aspect and exposure determine how much sun your crop will receive and ambient temperatures as well. Sub-tropical and warm season crops require warm soils and higher ambient temperatures than many temperate crops. If you are considering a cold-sensitive crop such as citrus, a S-SW exposure is critical. Most fruit crops do best on south or southwest-facing slopes so they get adequate sunlight for good fruit quality and frost or freeze damage is

minimized. A few crops such as blueberries and apples do well planted on north-facing slopes, but most need the warmth of the south-SW exposure.

CROP SELECTION

There are a wide variety of crops, from temperate to sub-tropical, that grow well in Placer and Nevada Counties, including citrus ,apples, blueberries and caneberries, stone fruit, warm and cool season vegetables, annual and perennial cut flowers, Christmas trees, and herbs.

Factors to consider in crop selection

Selecting crops for a small scale enterprise can be a time consuming educational process. You need to take a number of factors into consideration in your decision. Environmental factors include:

- Farm Location
- Elevation
- Exposure
- Soil depth
- Slope and frost potential
- Distance to market for highly perishable crops

Your farm location has a great impact on what you can grow. Each crop has a set of ecological requirements that must be met for optimum crop production. These include factors such as temperature, relative humidity, amount of sunlight, etc. You need to know the needs of the crop and whether or not it suits your microclimate. Also, consider carefully how far your farm is from your markets, especially given current gas costs.

COSTS & BUSINESS PLANNING

Before you plant any crop you need to evaluate the costs involved. Initial capital costs may include:

- Infrastructure such as trellising, irrigation, etc.
- Soil preparation & amendments
- Plants or seeds

Ongoing costs may include:

- Water
- Fuel and electricity
- Inputs such as pesticides, fertilizers, and amendments
- Labor
- Taxes, etc.

The University of California, Davis produces cost of production studies for a number of crops grown in California. Look at the studies for information on costs to establish a crop, the operations and equipment involved, and potential yield and profits. The studies are available at http://www.agecon.ucdavis.edu/outreach/crop/cost.htm or through your local UC Cooperative Extension office.

Farming is an economic endeavor, and like any other business, you should develop a business plan. Lack of business planning is why many new farming operations fail. There are many different resources, but one of the best, tailored to farming is ***Building a Sustainable Business***, a workbook guide developed by the Minnesota Institute for Sustainable Agriculture. It is available online for purchase or download at: http://www.sare.org/publications/business.htm.

Other Considerations

Other factors to consider in choosing your crop include the availability of labor. Placer/Nevada has a very limited labor pool and skilled labor can be particularly difficult to find.

Time to production for perennial crops is a critical factor because it means that the return on your investment comes a long time after your initial capital costs. It may make sense to start out with a mix of annual and perennial crops to allow some income during the non-bearing period of your perennial crops.

The availability of planting stock may also factor into your planning. Some plants or seeds may only be available in certain seasons. For new or specialty varieties, planting stock may have to be ordered a year or two ahead of time. New or patented varieties may also be very costly. For small scale growers, finding planting stock at reasonable prices may be difficult because many large nurseries have minimum orders and may not be willing to sell small numbers of plants. Network with other growers to see if you can share an order, if this is the case.

REGULATORY REQUIREMENTS

There are some regulations with which all farmers must comply. Commercial farming is defined by the act of selling the produce of your farm. If you sell ***anything*** produced on your farm, you are subject to these regulations. Produce is defined as articles produced from or grown in the soil, usually sold fresh. This includes fruits, nuts, vegetables, herbs, cut flowers, and nursery stock, among others.

You do not need a license to grow & sell agricultural produce *from your farm*, unless you are selling rooted live plants. If you are selling live plants, you need a nursery license from the State of California, which is applied for through your county ag commissioner's office. The license fee is based on sales, and it is fee exempt for the first $1000 dollars of sales, if sold in the county where they are grown.

If you use any pesticides on produce for sale, you must obtain a pesticide identification number and report pesticide use on a monthly basis to the Agricultural Commissioner. Pesticides include any material that is intended to kill, repel, or check the development of an insect, weed, disease, or other organism damaging your crops. Pesticides include herbicides such as Round-up®, horticultural soaps and oils, insecticides, and fungicides such as sulfur, among other materials. If the product has an EPA number on the label, any use must be reported.

Certified Farmers' Markets

A Certified Farmers' Market (CFM) is a market authorized by the county's ag commissioner to sell produce directly to consumers. The market certifies that the products in the market are produced by the growers selling them. This is assured by the requirement that each grower display his or her *Producer's Certificate* at each market.

If you wish to sell produce in a Certified Farmers' Market, you will need to obtain a Producer's Certificate and have your farm inspected. Apply for the producer's certificate through your County Ag Commissioner's office. You will need to fill out an application listing each type and variety of crop grown, approximate acreage or number of plants, and estimated production. The ag department staff will then schedule an appointment for an inspection of your farm in order to certify that you are producing what you intend to sell. Allow several weeks for this process, especially during the spring and summer.

The *Producer's Certificate* gives you the right to sell fresh fruits, nuts, vegetables, shell eggs, honey, flowers, and nursery stock directly to consumers at CFMs without the usual size, standard pack, and some container and labeling requirements. However, all produce must comply with California regulations on quality and maturity. Seconds, or cull fruit may not be sold as first quality fruit, and if requested, the grower should be able to demonstrate that fruit and vegetables meet the state's maturity standards, usually determined by % Brix or sugar concentration. This is particularly important for fruit. Growers may try to push the season, and end up selling green fruit. This is not good for either the grower or the customer. Repeat customers are the backbone of grower clientele. If you sell poor quality or unripe fruit, customers will not buy from you again. Especially as a new grower, it is important to establish a reputation for quality produce.

Markets may have a non-certified section, where crafts and other handmade products are sold.

Get Started!

Do your research before you plant the crop, and be sure you understand who your clientele is and what they want to buy. If possible, test the crop a year before you intend to sell it. And taste, smell, or try your product before you sell it!

Resources for getting started

University of California Cooperative Extension

Also know as the Farm Advisor's Office. Provides grower information, referrals to other resources, and education on crop selection, production practices, pest management, marketing and other topics.

Placer County
11477 E Avenue, Auburn
(530) 889-7385

Nevada County
255 So. Auburn Street, Grass Valley (530) 273-4563.

Placer County Ag Department.
(530) 889-7372. Christine Turner, Agricultural Commissioner

Nevada County Ag Department
(530) 273-2648. Jeff Pylman, Agricultural Commissioner

Contact your county ag department for assistance with:

- Certified Grower's Certificate
- Pesticide Identification Number
- Pesticide Use Reporting
- Organic Certification

Local Farmers Markets

Foothill Farmers' Markets

P.O. Box 3343
Auburn, CA 95604
(530) 823-6183
info@foothillfarmersmarket.com

Auburn
Saturday, 8 AM -12 noon, all year, Auburn-Folsom Rd & Lincoln Way
Colfax
Wednesday, 4:30-7:30 PM, late May thru September, Main Street
Homewood
Sunday, 9AM– 1PM, late June thru August, Homewood Resort
Lincoln
Saturday, 5:30-8 PM, July thru August Beerman Plaza
Rocklin
Saturday, 8-12 noon, June thru August, Sunset Community Center
Roseville
Tuesday, 9AM -1PM, June thru September, Roseville Square
Truckee
Tuesday, 8 AM -1 PM, mid-June thru September, Truckee River Park
Tahoe City
Thursday, 8 AM -1 PM, late May thru October.

Nevada County Certified Growers' Markets

P.O. Box 2477
Grass Valley, CA 95945
(530) 265-5551

Grass Valley

Saturday, 9 AM -12 noon. Fairgrounds, gate 4

Penn Valley

Thursday, 3-6 PM, June thru September, Western Gateway Park

Nevada City

Tuesday 3-6 PM, July thru September, Zion Street

For other farmers' market locations in California, go to http://www.cafarmersmarkets.com/.

Placer County Agricultural Marketing Program

(530) 889-7372

For assistance with marketing, advertising, and promotion; contacts for marketing produce.

Grower Associations

Mountain Mandarin Growers Association
http://www.mountainmandarins.com/

Sierra Grape Growers Association
http://www.sierragrapegrowers.org/index.htm

Placer County Wine & Grape Association
http://www.placerwineandgrape.org/

Information Resources

Small Farm Information

http://www.sfc.ucdavis.edu/ UC Small Farm Center

http://www.attra.org/index.html Appropriate Technology Transfer for Rural Areas –sustainable ag

http://smallfarms.oregonstate.edu/about/index.php Oregon State University Small Farms program

http://www.ianr.unl.edu/pubs/horticulture/nf107.htm University of Nebraska Lincoln

http://agebb.missouri.edu/mac/

So You Want to Farm

http://pubs.cas.psu.edu/

Penn State Alternative Crop Publications

Organic Farming

http://www.ams.usda.gov/nop/ National Organic Program Information

University of California Publications and Information Resources http://anrcatalog.ucdavis.edu/InOrder/Shop/Shop.asp UC Division of Agriculture and Natural Resources Publications.

All UC ANR Publications are also available in county UCCE offices.

http://extension.ucdavis.edu/index.asp UC Davis Extension ag classes

Information sheets available at UCCE Placer/Nevada

Mandarins & Citrus

Citrus Nurseries in California. 2005. Commercial Horticulture One Sheet Answer 10C.

Fertilizing Citrus in the Foothills 2004. Commercial Horticulture One Sheet Answer 11C. UCCE Placer & Nevada.

Links to Mandarin & Citrus Info. Updated 2005. Commercial Horticulture One Sheet Answer 12C.

A Mandarin by Any Other Name. 2004. Horticulture One Sheet Answer 111.

Ornamentals

Cut Flower Production Information. 2005. Commercial Horticulture One Sheet Answer 31C. UCCE Placer & Nevada.

Lavender Plant and Seed Sources. 2006. Commercial Horticulture One Sheet Answer 32C. UCCE Placer & Nevada.

Resources for Lavender Production. 2006. Commercial Horticulture One Sheet Answer 30C. UCCE Placer & Nevada.

Sample Costs to Produce Christmas Trees, Choose and Cut Tree Farm. 2005. Production costs in El Dorado, Nevada, & Placer Counties.

Winegrapes

Importing Grape Planting Stock into Placer and Nevada Counties. 2002. Commercial Hort. One Sheet Answer 50C. UCCE Placer & Nevada.

Vine Mealybug Alert for Grape Growers. 2003. Commercial Horticulture One Sheet Answer 51C. UCCE Placer & Nevada.

Sustainable Farming Practices

Cover Crops for the Sierra Nevada Foothills. 2006. Commercial Horticulture One Sheet Answer 71C. UCCE Placer & Nevada.

Foothill Hedgerow Species. 2006. Commercial Horticulture One Sheet Answer 70C. UCCE Placer & Nevada.

Using Organic Amendments. 2003. Commercial Horticulture One Sheet Answer 72C. UCCE Placer & Nevada.

Information Resources

Internet Information Resources for New Growers. 2006. Commercial Horticulture One Sheet Answer 91C. UCCE Placer & Nevada.

Internet Resources on Organic Farming. 2005. Commercial Horticulture One Sheet Answer 92C. UCCE Placer & Nevada.

Resources for Apple Production. 2006. Commercial Horticulture One Sheet Answer 20C. UCCE Placer & Nevada.

n.b. Use of trade names does not imply endorsement of a product, nor is criticism implied of products not