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So You Want to Grow Organic Avocados

Culturally speaking, it is not hard to grow organic avocados. In fact, avocados probably are a crop that most easily lends itself to organic practices because of the relatively low pest pressure, low nutrient demand and, when mature, low weed pressure. The most daunting task for most growers is the certification process to comply with the organics labeling rules. There are quite a number of growers who use predominantly organic methods, but refuse to go through the certification process. Although, for those who have a strong belief in organic practices and/or those who see a market opportunity, the certification process is not insurmountable.

The organic industry has grown significantly during the past 15 years. For the United States as a whole, the total market value (retail sales) of organic food products, including processed products, grew from about $1 billion in 1990 to an estimated $7.8 billion in 2000, while the Organic Trade Association estimated 2005 organic food sales at around $13.8 billion. California producers have led this trend, showing an increase in both numbers of organic farmers and total acreage. From 1992 to 2003, the number of registered organic farms in California grew by almost 30 percent, from 1,273 to 1,765 growers. Over the same period, organic acreage quadrupled, increasing from 42,000 acres in 1992 to almost 172,000 acres in 2003. Organic avocado production in California currently is 3,312 acres, with 1,165 acres in San Diego County alone.

The major cultural issues for most organic growers are sourcing nutrients, pest control and weed management. Organic nutrient sources tend to be bulky (low percentage of a given nutrient on a weight basis) and expensive, anywhere from 10 to 100 times more expensive than a conventional source of nitrogen, for example. Organic pest management practices tend to be higher, too. And the scourge of most organic growers is finding an economic method of weed control.

What makes avocados so amenable to organic practices are their relatively low nutrient demand, generally good biological pest suppression, and, with a thick layer of leaves, low weed pressure. These leaves recycle nutrients back to the tree, so tree demand is less than with other conventional crops, and these leaves possibly help in pest suppression by harboring large numbers of predators and parasites. Until this leaf layer develops, weeds are controlled by weed whips and cover cropping. Cover cropping and mulches also start the process of increasing soil organic matter which is critical for plant growth and health in an organic system. This organic matter is supplemented with organic nutrients, such as kelp, fish emulsion, soy bean meal, compost and other sources of nutrients.

The most formidable problem in the avocado grove is dealing with root rot. There are no fungicides or fertilizers registered that can help control the disease. The first line of defense in any orchard is proper irrigation. This keeps the tree growing well, producing leaf mulch which is antagonistic to the fungus. The stress of poor water management along with other stresses, such as freeze, topworking or even heavy fruit loads, is what makes the tree susceptible to disease.

Fortunately we do have rootstocks that are tolerant of the disease, and in planting or replanting an orchard, they should always be used. They are not completely resistant to the disease, but they perform much better than seedling rootstocks. Use of mulches and "organically-labelled" gypsum also should be used to help control root rot.

Now comes the issue of actually selling "organic" avocados. The process of going through registration and certification as an organic grower is regulated by the USDA National Organic Program (NOP). California organic producers and handlers (e.g., wholesale

distributors, retailers, and some processors who market direct to retail or consumers) are regulated by the CDFA through the State Organic Program (SOP). In California, all organic growers, regardless of gross sales, must be registered with CDFA. In addition, any producer who grosses more than $5,000 per year in total sales must be certified through an accredited certification agency.

Registration is through your County Agricultural Commissioner and involves providing that office with a map of the production area, a list of crops that are intended to be produced as organic, and a 3-year history of substances or materials applied. Verification of land use history must be established, and an initial minimum registration fee (currently $75) is required.

Certification is a separate process from registration. NOP regulations establish who must become certified in order to use the organic label on their products. Producers can choose from any of the USDA accredited certification agencies and should select the one that will best serve their needs and budget (for a list, google USDA NOP). There are currently 13 agencies registered under the California SOP. All certifiers who want to operate in California must register with CDFA. An application fee is required from most certifiers, as are inspection fees. The certifying agency monitors grower practices to assure that the grower is in compliance with NOP regulations.

The certifier is actually a third-party enforcer of the NOP standards, verifying producers' compliance with national standards through annual scheduled inspections of their clients' records, fields, production, and handling areas. They may perform annual soil and tissue tests from clients' operation in accordance with NOP guidelines and may perform a certain number of surprise inspections per year to ensure compliance.

As a certification agent of the NOP, the certifier is forbidden to provide advice on the operation but must provide information to the producer about the certification process and the legal requirements for maintaining certification. This means the certifier should know the client's operation in detail, have current knowledge of NOP regulations and be able to communicate them effectively, but may not act as a consultant to the grower. Certification agents maintain their accreditation through the NOP

Growers should recognize that they also have serious respon-

sibilities and commitments in relation to certification. According to NOP regulations, every certified organic producer is required to develop and keep current an organic system plan (OSP) that describes the practices performed in the orchard and provides a list of substances to be used. The OSP includes land history, sources of planting stocks, all inputs to the trees, a list of all practices and procedures for soil and pest management, including details on monitoring practices, and an explanation of barriers or buffers used to prevent commingling between organic and nonorganic fruit, or drift from non-organic operations. Any additional information needed by the certifiers to document NOP compliance is also required.

Most certifiers provide a form that growers can use to prepare their OSP. These forms may be helpful for some growers, but they are not required; it's possible to write your own OSP as long as you include all the required information. In either case, writing the OSP is useful for planning your farming operations for the year. Some certifiers may provide assistance in preparation of the OSP. The length of time to complete an OSP depends on the level of complexity of the farming operation.

The OSP is central to the certification process. It serves as a management tool to help farmers make decisions and react to changing circumstances. It also describes the human and natural resources of a farm, helps a producer manage those resources in an integrated way, and can assist the grower in budgeting and financial planning. Last, and most important, the OSP constitutes a legally binding contract between the certifier and the certified operation. Breach of that contract can result in denial or loss of certification.

This last point is crucial, and growers must understand that the records they keep constitute the only proof that their "contract" (the OSP) has been fulfilled. The OSP is the commitment or promise to the certifier that production and handling will be carried out in a certain way, but the grower must show through good record keeping how he or she has kept that promise. Growers must get approval from their certifier if they are going to deviate from their submitted Organic System Plan.

In order to be certified organic, it is required that the site not have had any prohibited substances applied to it for 36 months. This can be accomplished if the site is not farmed (either historically or intention-

ally). If the site is actively being farmed, the grower must ensure (and verify with accurate records) that no synthetic, noncompliant materials were used during the 3-year period. The grower might consider hiring a consultant to help prepare for certification. Hiring a consultant is not required and would add to costs, but could help avoid mistakes that might set back progress toward certification. The grower must document in detail the names and amounts of every material they apply and must keep their OSP current. A producer does not need to be certified or registered during the transition period.

It is very important for growers to keep careful records of the exact date the organic transition began, of the last prohibited materials applied and when they were applied, and what specific inputs and practices are used during the 3-year transition period. When you apply for certification, the certifier will need to have detailed production practice records on those aspects. It is recommended to keep receipts and labels of organic inputs, and to get verification from neighbors, PCAs, county agricultural commissioner's pesticide use reports, or other local officials about when you ceased using prohibited pesticides and started the organic transition.

The certifier will send all the application materials you will need to get started. Certifiers expect growers to read the handbooks or literature they provide. The grower's OSP must be fully prepared and submitted with any forms. Many certifiers require that growers sign an affidavit that shows land use history and affirms the truthfulness of the application. It usually takes 2 to 5 months for the application to be reviewed.

Certifiers charge annual certification fees, which generally include: 1) a one-time application fee (ranging from $100 to $300) and 2) inspection costs, which usually pay for an inspector's time to travel and inspect and prepare a report, or it may be based on the gross value of the crop. The specific fees charged by each certifier should be given on their Web sites or by phone before a grower applies.

The certifier will review the grower's application and inspect the operation before certification is approved. A trained inspector calls the grower to set up the first inspection. After the inspection, the inspector submits a report to the certifier for review. The certifier informs the grower of the certification status or informs the grower of any requirements needed to achieve or maintain certification.

If violations or problems are encountered by an inspector, the grower receives from the certifier a notice of minor noncompliance or major noncompliance. If the noncompliance is minor, the grower is reprimanded and told not to repeat the error, and may be sent a reminder about the particular issue. If the noncompliance is considered to be major, the grower's certification status may be affected. The grower may be required to submit requested documents or update a section of the OSP, or the grower can be decertified in serious cases.

As discussed previously, certification inspectors are not allowed to provide advice or information to the growers while doing inspections. They do not serve as consultants or advisors. This is intended to ensure that the role of the certifier is for enforcement and compliance. However, some certification agencies have departments or divisions that do provide information or educational materials to all growers, separate from the certification enforcement. In addition, many organizations, services, advisors, Web sites, and other resources provide information about organic practices.

All materials that can be used in crop and livestock production are classified into categories under the NOP. In the context of the NOP regulation, the words "nonsynthetic" and "natural" are used synonymously. The National List of allowed materials for organic production is overseen and maintained by the NOP (see the NOP Web site, http://www.ams.usda.gov/nop/NationalList/ListHome.html). The National List indicates generic compounds and materials that are allowed; it does not list specific brand name products. This information is available through the Washington State Department of Agriculture (see http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.htm) and through the Organic Materials Review Institute (OMRI). OMRI is a private, nonprofit organization that provides verification and listings of products that meet the national organic standards. They publish two lists, a brand name list and a generic list, which are regularly updated (OMRI Web site, www.omri.org).

Certified growers are expected to keep track of updates and changes in the approval status of materials they use. Before trying new materials, growers should research the NOP, OMRI, and USDA lists to make sure that the materials are allowed, and also get permission from their certifier to amend their OSP and use the product. Do not

rely on the verbal or written declarations of vendors only. Confirm from other reliable sources any vendor claims.

The certification agency has the final decision on the acceptability of inputs for each farm operation. In making determinations about the acceptability of inputs, the certification agency must evaluate the input based on both the ingredients and the context in which the material will be applied. Prior to using any input on an organic farm, the grower must obtain written approval (e.g., certificate of compliance) from the certifier. The certifier will contact the farmer and/or the manufacturer if additional information is needed to determine compliance of the material. As a word of caution, any input used by the farming operation without the written approval of the certifier could be viewed as a departure from the agreed upon OSP and could be grounds for adverse action by the certifier, the USDA or the State Program.

So that is a lot of acronyms, but it is the process required to go organic.

Table 1. List of certifying agencies in California from USDA's National Organic program website.

Agricultural Services Certified Organic
P.O. Box 4871
Salinas, California 93912
Contact: Katherine Borchard
Phone: 831-449-6365
E-mail: ascorganic@aol.com
Scope: crop, livestock, wild crop, and handling
Accredited: 04/07/06

California Crop Improvement Association
Parsons Seed Certification Center
One Shields Ave.
University of California
Davis, CA 95616-8541
Contact: Dr. Larry Teuber
Phone: 530-752-0544
E-mail: lrteuber@ucdavis.edu
Website: http://www.ccia.ucdavis.edu
Scope: crop, handling
Accredited: 8/7/02

California Organic Farmers Association
3678 North Modoc
Kerman, CA 93630
Contact: Laura Horne
Phone: 866-305-5771
E-mail: cofa2000@cofa.net
Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

CCOF Certification Services
2155 Delaware Ave., Suite 150
Santa Cruz, CA 95060
Contact: Jake Lewin
Phone: 831-423-2263 ext. 21
E-mail: jake@ccof.org
Website: www.ccof.org
Scope: crop, livestock, handling
Accredited: 4/29/02

Global Culture
P.O. Box 1640
Crescent City, CA 95531
Contact: Linda Van Hook
Phone: 707-464-6913
E-mail: globalculture@earthlink.net
Scope: crop, livestock, wild crop, handling
Accredited: 4/14/03

Guaranteed Organic Certification Agency
41911 5th St. #202
Temecula, CA 92590
Contact: Charles Heermans
Phone: 951-676-5154
Fax: 951-676-5156
E-mail: Heermans@tfb.com
Website: http://www.goca.ws/
Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

Marin County
Agriculture – Weights and Measures
1682 Novato Bldg., Suite 150-A
Novato, CA 94947
Contact: Fred Crowder or Anita Sauber
Phone: 415-499-6700
E-mail: fcrowder@co.marin.ca.us or asauber@co.marin.ca.us

Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

Monterey County Certified Organic
Monterey County Agricultural Commissioner's Office
1428 Abbott St.
Salinas, CA 93901
Contact: Kenneth Allen
Phone: 831-759-7325
E-mail: allenke@co.monterey.ca.us
Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

Scientific Certification Systems d/b/a NutriClean
2200 Powell St. Suite #725
Emeryville, CA 94608
Contact: Heena Patel
Phone (general line): 510-452-8000
Phone (direct line): 510-452-8024
Phone: (cell): 510-821-9818
Fax: 510-452-8001
E-mail: hpatel@scscertified.com
Scope: crop, livestock, handling
Accredited: 4/29/02

Organic Certifiers, Inc.
6500 Casitas Pass Rd.
Ventura, CA 93001
Contact: Susan Siple
Phone: 805-684-6494
E-mail: organic@west.net
Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

Primuslabs.com
2810 Industrial Parkway
Santa Maria, CA 93455
Contact: Brian A. Mansfield
Phone: 805-922-0055
Fax: 805-922-8462
E-mail: brian@primuslabs.com
Scope: crops and handling
Accredited: 1/22/06

Quality Assurance International
9191 Towne Centre Dr., Suite 510
San Diego, CA 92122
Contact: Joe Smillie
Phone: 858-792-3531
Fax: 858-792-8665
E-mail: qai@qai-inc.com
Scope: crop, livestock, wild crop, handling
Accredited: 4/29/02

Yolo County Department of Agriculture
70 Cottonwood St.
Woodland, CA 95695
Contact: John Young
Phone: 530-666-8141
Fax: 530-662-6094
E-mail: John.Young@yolocounty.org
Scope: crops, livestock, wild crop, and handling
Accredited: 1/22/06

Further Reading

Dimitri, C., and C. Greene. 2002. Recent growth patterns in the U.S. organic foods market. USDA Economic Research Service Publication AIB-777. ERS Web site, http://www.ers.usda.gov/Publications/aib777/.

Klonsky, K., and K. Richter. 2005. A statistical picture of California's organic agriculture: 1998–2003. UC Agricultural Issues Center Web site, http://aic.ucdavis.edu/research1/organic.html.

Klonsky, K., and L. Tourte. 1998. Statistical review of California's organic agriculture: 1992–1995. UC Agricultural Issues Center Statistical Brief No. 6 (May). AIC Web site, http://aic.ucdavis.edu/research1/organic.html.

<3M>. 2002. Statistical review of California's organic agriculture: 1995–1998. Oakland: University of California Agriculture and Natural Resources Publication 3425. UC Agricultural Issues Center Web site, http://aic.ucdavis.edu/research1/organic.html.

OTA (Organic Trade Association). 2006. OTA's 2006 manufacturer survey. Summary at the OTA Web site, http://www.ota.com/pics/documents/short%20overview%20MMS.pdf

Internet Resources

ATTRA (National Sustainable Agriculture Information Service), http://attra.ncat.org/organic.html.

California Organic Program (Processors), http://www.dhs.ca.gov/fdb/HTML/Food/organreq.htm.

Organic Farming Compliance Online Handbook, http://www.sarep.ucdavis.edu/organic/complianceguide/.

OrganicAgInfo (Scientific Congress on Organic Agricultural Research), http://www.organicaginfo.org/

Organic Materials Review Institute, http://www.omri.org.

Rodale Press, http://www.rodale.com/

USDA National Organic Program, www.ams.usda.gov/nop/indexNet.htm.

Washington State Department of Agriculture Organic Food Program, http://agr.wa.gov/FoodAnimal/Organic/default.htm.