An Agricultural Law Research Article

# Advising Producers of Organic Crops

by

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Originally published in DRAKE JOURNAL OF AGRICULTURAL LAW
2 DRAKE J. AGRIC. L. 137 (1997)

# ADVISING PRODUCERS OF ORGANIC CROPS

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## I. INTRODUCTION

Organic foods sales are increasing rapidly in conventional as well as alternative outlets. Once relegated to health food stores, organic products are now attracting mainstream consumers with their appearance, high quality, and good taste. The organic market continues to grow, fueled by this widening consumer base. In addition to a growing market base, organic foods generally receive a premium price, ranging from 20% to 75% above conventional foods. While the economic news is good, attorneys must give clients who produce organic crops or who are considering

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the transition to organic production advice concerning the complex requirements that must be met before any product can be sold as organic.

Producers considering the transition to an organic production system need to know the changes that will be required in their production methods, the legal requirements for selling food as organic, and the marketing channels used in organic sales. Although the role of the attorney is usually limited to advising clients on legal and regulatory requirements, the attorney can further assist the client by explaining these requirements in the context of the organic production and marketing systems which are inextricably linked to the regulatory requirements. Advising clients who grow organic crops, therefore, can require knowledge of agricultural production systems, economics, marketing, and even exporting and importing practices, in addition to the federal and state organic laws and the laws of foreign countries.

Organic food law is a developing and changing field. Organic production is currently regulated only on the state level in the United States. However a national organic program was legislated by Congress in the Organic Foods Production Act of 1990 (OFPA).[1] The United States Department of Agriculture (USDA) is preparing regulations based on recommendations of the National Organic Standards Board to implement the program.[2] Proposed regulations are expected to be published in 1997.

After the USDA organic regulations are published, producers should know the production and marketing requirements, even though these requirements may be phased in over a period of time. This article presents an overview of the information that organic producers and those considering organic production need and includes a description of the organic market, important regulatory matters, and what to expect during transition to an organic production system. Regulatory requirements are summarized and are not intended to be a complete review. Examples drawn from various state laws illustrate the types of requirements and the diversity of state organic programs. The laws of California are emphasized because it has the most organic farmers and the largest organic market.

The most important set of organic standards, the USDA national standards, will supersede some, but not all, of the state requirements. Because the national standards are not yet available, references are made to the recommendations submitted to USDA by the National Organic Standards Board. It is not known yet whether these recommendations will be incorporated into the USDA regulations.

## II. THE MARKET FOR ORGANIC FOODS

### A. *Market Opportunities*

For the last six years, the organic market has grown steadily at an annual rate of more than 20%. In 1995, sales of fresh and processed organic foods reached $2.8 billion,[3] with organic produce sales accounting for $402 million.[4]

The wide variety of organic products on the market includes almost all conventionally-grown crops and also many new crops and varieties sold in the

1. 7 U.S.C. § § 6501-6522 (1994).

2. FINAL RECOMMENDATIONS (National Organic Standards Board 1994).

3. Ken Mergentime & Monica Emerich, *Widening Market Carries Organic Sales to $2.8 Billion in 1995,* NATURAL FOODS MERCHANDISER, June 1996, at 36.

4. *Id.* at 37.

"gourmet" market. Organic grains, fruits, vegetables, nuts, and herbs already have well-established markets. Organic dairy products, a fairly new market, that includes fluid whole and nonfat milk, yogurt, cheese, butter, and ice cream. This market is enjoying rapid growth with sales reaching $30 million in 1995.[5] Organic wine and wines made with organically grown grapes are also available.[6] Other organic products include maple syrup and imported coffee and tea. Meats and poultry cannot be sold as organic until the national organic program has been implemented, but a large market is expected for these products. With the growth of the organic livestock sector, organic feed and forage markets will expand. Other types of organic crops include nursery and floral products and seed.

Sales of value-added organic products are also growing rapidly. Fresh value-added products include pre-cut vegetables and pre-packaged salad items. Frozen organic food sales increased 36% in 1995. Processed organic products, such as tomato sauces, oils, cereals, and convenience foods are relatively recent additions to the organic market and are growing rapidly. Organic herb sales increased 33% in 1995, reflecting fresh herb sales as well as herbs used in vitamins and supplement products.[7]

### B. *Market Channels*

Two-thirds of retail organic sales are in natural products stores including fast-growing chains such as Texas-based Whole Foods and Colorado-based Wild Oats. Distributors who specialize in organic foods and buy directly from farmers supply most of these outlets. Organic sales in mass-market outlets, such as conventional supermarkets, are increasing and reached $210 million in 1995, up 22% from 1994. Exports and direct sales reached almost $715 million in 1995.[8] Direct sales include sales at farmers markets, roadside stands, CSAs[9] and catalog sales. The export market is especially strong for organic grains, dried fruits, and nuts. Europe, Japan, and other Pacific Rim countries are the leading importers of organic products.

### C. *Supply of Organic Products*

The organic market is supplied by more than 4,000 certified organic farmers in the United States,[10] and by non-certified organic farmers in states that do not require certification.[11] The number of farmers has grown 43% in three years.[12]

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5. *Id.*

6. Many wines made from organic grapes cannot be referred to as organic because prohibited substances are used in the wine making process.

7. Mergentime & Emerich, *supra* note 3, at 37.

8. *Id.* at 38.

9. CSA refers to Community Supported Agriculture, a system under which consumers subscribe to weekly deliveries of farm products. For more information on CSAs, see Neil Hamilton, *Tending the Seeds: The Emergence of a New Agriculture in the United States*, 1 DRAKE J. OF AGRIC. LAW 7, 15-16 (1996).

10. JULIE A. DUNN, U.S. DEP'T OF AGRIC., ORGANIC FOOD AND FIBER: AN ANALYSIS OF 1994 CERTIFIED PRODUCTION IN THE UNITED STATES, 1 (1995).

11. OFPA will require all organic farmers to be certified when it is implemented. 7 U.S.C. § 6506(a)(1)(A) (1994).

12. Mergentime & Emerich, *supra* note 3, at 38.

Approximately 500 food processors, distributors and retailers in the United States are certified to handle organic food and fiber.[13] Certified organic acreage, including cropland, pasture and range, and woodland was 1.127 million acres in 1994, more than double the 1991 acreage.[14] Food crops are produced on more than half the certified organic acreage and livestock feed is produced on about one quarter of the land. Organic produce, including fruits, vegetables, herbs, and nuts, are grown on about one quarter of the organic acreage.[15]

In California, almost 1200 organic farmers produced 70 different commodities on approximately 50,000 acres in 1992-93.[16] Because California does not require organic farms to be certified, these figures include certified and uncertified production. By 1996, the number of registered organic producers had increased to 1640.[17] Fruits, nuts, and vegetables were produced on 75% of the organic acres. About 200 organic food processors are registered in California.[18] Approximately, 80% of the California organic farmers reported $100,000 or less in annual sales of organic products. Some larger conventional farms have a small amount of organic acreage. Ten growers reported more than $1 million in annual sales of organic crops.[19]

National and regional promotional campaigns have helped to increase organic sales. The Organic Trade Association (OTA) sponsors "Organic Harvest Month" each September and provides educational and promotional materials to retailers nationwide. The Midwest Organic Alliance, a non-profit organization, is effectively promoting organics in a five-state region of the upper Midwest.

## III. REGULATORY STRUCTURE FOR ORGANIC FARMING

### A. *Overview*

After the federal organic program is implemented, organic production will be regulated at three levels: federal, state, and certifier. Federal regulation will be coordinated by the National Organic Program (NOP) of USDA's Division of Agricultural Marketing Services, pursuant to the federal Organic Foods Production Act of 1990 (OFPA).[20] Implementation of OFPA will be phased in after USDA's final regulations have been promulgated.

OFPA mandated the establishment of a National Organic Standards Board (NOSB) to assist in the development of standards.[21] The NOSB submitted recommendations for the regulations in 1994. OFPA will be enforced by the relevant agencies of USDA (such as Food and Safety Inspection Service) and by other federal

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13. DUNN, *supra* note 10, at 2.

14. Mergentime & Emerich, *supra* note 3, at 38.

15. DUNN, *supra* note 10, at 3.

16. KAREN KLONSKY & LAURA TOURTE, COOPERATIVE EXTENSION, DEP'T OF AGRIC., U. C. DAVIS, STATISTICAL REVIEW OF CALIFORNIA'S ORGANIC AGRICULTURE 1992-1993 (1995).

17. Telephone Interview with Charlotte Davis, Supervisor, Organic Food Program, Cal. Dep't of Food & Agric. (Sept. 30, 1996).

18. CAL. DEP'T OF HEALTH SERV., REPORT ON THE REGISTRATION OF CALIFORNIA ORGANIC PROCESSED FOOD FIRMS, 1 (1995).

19. KLONSKY & TOURTE, *supra* note 16, at 28.

20. 7 U.S.C. § § 6501-6522 (1994).

21. 7 U.S.C. § 6518 (1994).

agencies, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the Federal Trade Commission (FTC), and the Bureau of Alcohol, Tobacco, and Firearms (BATF, for organic wine, beer, other alcoholic beverages, and tobacco). USDA also expects to work with the states and certifiers to enforce OFPA.

Approximately thirty states have enacted organic production laws, although not all states have enacted standards to implement the laws. Some state legislation includes provisions that are not covered by OFPA and these states will continue to enforce their own provisions after OFPA has been implemented. However, many of these provisions must be re-evaluated after the federal program is implemented.[22]

The third level of enforcement is through private and state certifiers. OFPA requires certification of all operations that produce and handle products sold as organic.[23] This certification can be by a state or private certifying agent but the agent must be accredited by USDA.[24] Each of the thirty-three private certifying organizations and 11 state programs currently operating in the United States have developed their own standards and guidelines. However, most of the standards are very similar. Certifiers will be the first level of enforcement for the national standards and are required to report any violation of OFPA to the appropriate state or federal official.[25]

In this article, the regulations affecting organic producers will be classified as procedural or substantive. Procedural regulations have been developed to ensure the integrity of organic products. Substantive regulations refer to standards that directly affect the production process. In addition to enforceable regulatory standards, the federal organic program sets out guidelines that organic producers are encouraged to follow. Certifiers will oversee producers' adherence to regulatory standards and their progress on meeting guidelines.

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22. *See, e.g.*, CAL. FOOD & AGRIC. CODE § 46003.5 (West Supp. 1996) ( requiring state authorities and the California Organic Foods Advisory Board to evaluate the National List within ninety days of its promulgation to determine which materials allowed by the National List may be allowed for use in organic production and handling in California).

23. 7 U.S.C. § 6506(a)(1)(A) (1994).

24. 7 U.S.C. §§ 6502(3), 6503(b),(d), 6514 (1994).

25. 7 U.S.C. § 6519(d) (1994).

### B. *Procedural Rules*

#### 1. *Certification*

OFPA requires that all products labeled as organic be produced only on certified organic farms and be handled only by certified organic operations.[26] Certification can be by a private certifying agent or a state certification program.[27] All certifiers must be accredited by USDA.[28] An exemption from certification is provided for small farmers with less than $5000 annual gross sales of agricultural products.[29]

The first step in certification is filling out an application form and a Farm Plan. The certifier then conducts an on-site inspection, including inspecting the farm, farm facilities, storage areas, materials storage areas and records, and possibly sampling the soil, water, and crops. Confidentiality of proprietary and business related information is protected by OFPA,[30] state laws,[31] and most certifiers' policies. Annual on-site inspections must be conducted at each farm and handling operation.[32] Under the federal law, certifying agents must conduct periodic residue testing of organically produced products.[33]

Because OFPA has not yet been implemented, attorneys must know if certification is required in the states where their clients' products are grown and sold. On the West Coast, for example, Washington requires certification by the Washington State Department of Agriculture (WSDA) or a certification agency that has been recognized by WSDA.[34] California and Oregon do not require certification.[35]

It is also important to confirm the certifier of a client's products is approved in the states where the products are grown and sold. Most states that require certification, and many of those that do not, require organic certification organizations to be registered, recognized or approved by the state enforcement agency.[36]

#### 2. *Registration, Licensing, and Permits*

Several states require organic producers to be registered or to obtain a license or permit, even though they do not require certification. California requires

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26. 7 U.S.C. § 6506(a)(1)(A) (1994).
27. 7 U.S.C. §§ 6502(3), 6503(b), (d) (1994).
28. 7 U.S.C. § 6514 (1994).
29. 7 U.S.C. § 6505(d) (1994). NOSB recommended that the exemption only apply when small farmers market organic products directly to consumers at roadside stands, farmers markets or Community Supported Agriculture, and directly to retail outlets. FINAL RECOMMENDATIONS: ORGANIC CROP PRODUCTION STANDARDS, § 2(B) (National Organic Standards Board 1994).
30. 7 U.S.C. § 6515(g) (1994).
31. *See, e.g.*, CAL. HEALTH & SAFETY CODE § 110845 (West 1996).
32. 7 U.S.C. § 6506(a)(5) (1994).
33. 7 U.S.C. § 6506(a)(6) (1994).
34. WASH. REV. CODE. ANN. § 15.86.090 (West 1993).
35. For marketing purposes, most purchasers of organic products require certification.
36. *See, e.g.*, CAL. FOOD & AGRIC. CODE § 46009 (West Supp. 1996).

registration by organic producers and handlers.[37] Organic farmers and handlers must register with the county Agricultural Commissioner and pay the registration fee. Registration fees, which are set by state law, are used to fund the enforcement program.[38] Organic food processors must register with the California Department of Health Services.[39] In a recent enforcement action, an organic farmer agreed to a $30,000 settlement for failing to register with the county Agricultural Commissioner.[40]

Requirements vary by state. For example, Colorado requires organic products to be certified [41] and organic producers to obtain a license.[42] Maryland requires organic producers, processors, distributors, and retailers to obtain a permit.[43] Iowa requires organic producers to provide vendors with a sworn statement of compliance.[44]

3. *Labeling*

OFPA prohibits use of the term "organic" unless the product has been produced in accordance with the requirements of the Act.[45] Products that have been produced according to OFPA may be labeled with the USDA seal and a statement that the product meets USDA standards for organic products.[46] The USDA regulations will set out rules regarding use of certifiers' seals.

Labeling of processed products is determined by the proportion of organic ingredients in the product. The use and placement of the term "organic" on the label will depend on whether the product contains less than 50 %, more than 50%, or 95 to 100 % organic ingredients. Federal regulations will specify the labeling requirements.

Because OFPA has not yet been implemented, state laws currently determine labeling requirements. Washington, Oregon, and California allow unrestricted use of the terms "organic" and "organically grown" on the principal display panel of products made from 100% organic ingredients[47] or, in Oregon, if non-organic ingredients are less than 1% of the product by weight and meet certain specifications.[48] If some ingredients are not organic, the term "organic" can be used only if it clearly modifies the organic ingredients and the type size meets statutory specifications. [49] If organic ingredients comprise less than half of the ingredients by weight, Washington limits the use of the term "organic" to the ingredients list.[50]

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37. CAL. FOOD & AGRIC. CODE § 46002 (West Supp. 1996).
38. CAL. FOOD & AGRIC. CODE § § 46010.5, 46011(b) (West Supp. 1996).
39. CAL. HEALTH & SAFETY CODE § 110875 (West 1996).
40. *Farmer Will Pay Fine Over Organic Fruit Claim*, SACRAMENTO BEE, Sept. 13, 1996, at B3.
41. COLO. REV. STAT. § 35-11.5-103(4) (1995).
42. COLO. REV. STAT. § 35-11.5-106 (1995).
43. MD. CODE ANN., AGRIC. § 10-1403 (Supp. 1996).
44. IOWA CODE ANN. § 190B.4 (West 1994).
45. 7 U.S.C. § 6505(a)(1) (1994).
46. 7 U.S.C. § 6505(a)(2) (1994).
47. CAL. HEALTH & SAFETY CODE § 110830(e) (West 1996), OR. REV. STAT. § 616.416 (1995), WASH. ADMIN. CODE § 16-158-040 (1991).
48. OR. REV. STAT. § 616.416 (1995).
49. CAL. HEALTH & SAFETY CODE § 110830(e) (West 1996), OR. REV. STAT. § 616.416 (1995), WASH. ADMIN. CODE § 16-158-040 (1991).
50. WASH. ADMIN. CODE § 16-158-040 (1991).

California law specifies wording that must be used on raw organic agricultural commodities,[51] on processed foods,[52] and on unprocessed eggs or dairy products that are sold in the state.[53]

4. *Record keeping*

OFPA and many state laws require producers, handlers, and processors to keep detailed records so that the organic integrity of the products can be traced to the farm. OFPA requires producers to maintain a detailed history of substances applied to fields and agricultural products and the names and addresses of persons who applied the substances, and the application dates, rates, and methods of application.[54] California requires all of the same records and also specifies that such records must be kept for all substances applied to irrigation water and post harvest rinse water. California also requires records of the quantity harvested from each field, the size of the field, and the date of harvest. Each sale or transfer of an organic product must be documented as to the date, the identity of the parties, and the quantity.[55] Producers of livestock, livestock products, and fish must keep records of the names and addresses of all suppliers of livestock, fowl, and fish and all suppliers of feed, with the date and quantity of each transaction. Records also must be kept of all substances administered and fed to the animals and of all entities to whom the product is sold or transferred, with the date and quantity of each transaction.[56]

5. *Enforcement*

As noted above, OFPA will be enforced through certifiers, state agencies, and various federal agencies. A farmer may be required to prove that he or she did not apply a prohibited substance if a detectable pesticide, non-organic residue, or prohibited natural substance is found on an organic product.[57] Violators of OFPA can be fined up to $10,000 and lose eligibility for organic certification for five years.[58] Additionally, the organic label may be removed from a product that contains a residue resulting from intentional application or a residue that is greater than unavoidable residual environmental contamination.[59] A certifying agent that violates

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51. *See* CAL. HEALTH & SAFETY CODE § 110830(a)(1) (West 1996) (requiring the label to read as follows: "ORGANICALLY GROWN IN ACCORDANCE WITH THE CALIFORNIA ORGANIC FOODS ACT OF 1990").

52. *See* CAL. HEALTH & SAFETY CODE § 110830(a)(2) (West 1996) (requiring the label to read as follows: "ORGANICALLY GROWN AND PROCESSED IN ACCORDANCE WITH THE CALIFORNIA ORGANIC FOODS ACT OF 1990").

53. *See* CAL. HEALTH & SAFETY CODE § 110830(a)(3) (West 1996) (requiring the label to read as follows: "ORGANICALLY PRODUCED IN ACCORDANCE WITH THE CALIFORNIA ORGANIC FOODS ACT OF 1990").

54. 7 U.S.C. § 6511 (d) (1994).

55. CAL. HEALTH & SAFETY CODE § 110840(a)(2) (West 1996).

56. CAL. HEALTH & SAFETY CODE § 110840(b)(2)) (West 1996). *See also* OR. REV. STAT. § § 616.406(5)(d),(6), 616.421 (1995); WASH. REV. CODE ANN. § 15.86.080 (West 1993) and accompanying regulations.

57. 7 U.S.C. § 6511(c)(1) (1994).

58. 7 U.S.C. § 6519(a),(c) (1994).

59. 7 U.S.C. § 6511(c)(2) (1994).

OFPA can lose its accreditation and be ineligible for accreditation for a minimum of three years.[60]

State enforcement of organic programs varies. In California, complaints can be filed by any person who suspects noncompliance[61] and county agricultural commissioners can conduct spot inspections.[62] Penalties include civil money penalties up to $5000 for each violation,[63] misdemeanor prosecution,[64] impounding and destroying any product produced by a person who has not registered or who otherwise violates the law,[65] and third party injunctions.[66]

### C. *Substantive Production Standards*

The following overview of organic standards is given to alert attorneys and producers to the issues involved in organic production and is not meant to be a comprehensive review of all organic standards.[67] Organic farmers and those making the transition must be aware of the laws and regulations of each state where they grow or sell organic products. Certifying organizations advise producers of the organization's standards and, presumably, the requirements of the states where they operate.

Most organic production standards include prohibitions against use of certain materials and production practices. Most also include various mandatory practices, which are meant to enrich the soils and the biological system. Additionally, OFPA will require each producer, in consultation with the certifier, to establish an Organic Farm Plan for continual improvement of the production system over the long-term.[68] Provisions of the Organic Plan will serve as guideposts for improving farming practices, rather than standards that must be followed to achieve and maintain certification.

#### 1. *Materials Used in Organic Production*

A key issue in organic standards is the determination of which materials or substances are allowed and which are prohibited. The materials issue affects every phase of organic production and handling and the so-called National List will determine which materials can be used on seeds, transplants, crops, in livestock production, as ingredients in processed foods and in the handling of all organic products. The basic principle of OFPA[69] and most state organic production laws[70] is

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60. 7 U.S.C. § 6519(e) (1994).
61. CAL. FOOD & AGRIC. CODE § 46004(a) (West Supp. 1996).
62. CAL. FOOD & AGRIC. CODE § 46005 (West Supp. 1996).
63. CAL. FOOD & AGRIC. CODE § 46007(a) (West Supp. 1996).
64. CAL. FOOD & AGRIC. CODE § 46006 (West Supp. 1996).
65. CAL. FOOD & AGRIC. CODE § 46012 (West Supp. 1996).
66. CAL. HEALTH & SAFETY CODE § 11910(a),(b) (West 1996).
67. For a more thorough review of California standards and standards legislated by OFPA, see SUZANNE VAUPEL, A SUMMARY OF CALIFORNIA & FEDERAL ORGANIC PRODUCTION LAWS (3d ed.) (forthcoming 1997).
68. 7 U.S.C. § 6513(a) (1994).
69. 7 U.S.C. § 6517(b) (1994).
70. *See., e.g.*, CAL. HEALTH & SAFETY CODE § 110815 (p)(1)(A),(3) (West Supp. 1996); WASH. REV. CODE ANN. § 15.86.030 (West 1993).

to allow natural substances to be used unless they are specifically prohibited and to prohibit synthetic substances unless they are expressly allowed.

OFPA specifies guidelines and procedures for determination and promulgation of a National List of Allowed Synthetic and Prohibited Natural Substances.[71] The NOSB has submitted a partial set of recommendations for the National List and is continuing to work on its recommendations. Knowledge of allowed and prohibitive substances is crucial for organic farmers and those making the transition to organic, because they can lose certification if they apply a prohibited material.

The forthcoming National List and most current state lists, however, name only generic substances, and give no direction to organic farmers regarding formulated fertilizers, soil amendments, and pest control products. Most such products do not list all inert ingredients, so farmers have no way of knowing from the label if the product is allowed in organic production.

To assist farmers in determining which brand-name products are allowed in organic production, several certification organizations have established voluntary materials review processes. Manufacturers who wish to have their products approved by the certifier must disclose all ingredients during the review process. Products that meet the certifier's standards are published on a list and farmers are assured they will not lose their certification if they use the named products. The largest review process is currently operated jointly by California Certified Organic Farmers (CCOF) and Oregon Tilth. Their list of approved materials consists of approximately 150 blended fertilizers, composts and compost teas, fish and aquatic plant products, humate products, microbiological products and mined minerals. CCOF, Oregon Tilth, the Organic Certifiers Caucus, and the Organic Suppliers Advisory Council of the Organic Trade Association have formed the Organic Material Review Institute, an independent non-profit organization, to expand the review process to a national program.

Producers should also be aware that all pest control products and most fertilizers and soil amendments, whether organic or conventional, must be registered at the national and/or state levels. The Federal Insecticide, Fungicide, and Rodenticide Act requires all "pesticides" to be registered.[72] A pesticide is defined as "any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. . . ."[73] Most states have similar laws. California for example, requires additional data submissions beyond those required by FIFRA, including efficacy data to support each claim.[74] California also prohibits the possession or use of an unregistered pesticide.[75] Most states require registration of fertilizers and soil amendments, but there is no federal registration requirement for these products.

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71. 7 U.S.C. § § 6517(c)-(d), 6518(k)-(o) (1994).

72. 7 U.S.C. § 136a (1994).

73. 7 U.S.C. § 136(u) (1994).

74. CAL. FOOD & AGRIC. CODE § 12811 (West 1986); CAL. CODE REGS. AGRIC. 3, § 6186 (1996).

75. CAL. FOOD & AGRIC. CODE § 12995 (West Supp. 1996).

2. *Transition Periods*

Federal and state laws and certifying organizations require that no prohibited materials have been applied to fields for a specified "transition" period before products grown in the field can be labeled as organic. OFPA and most states and certifiers require a three-year transition period. However, a few states require only one or two years.

For livestock production, transition periods are given in the length of time each species is fed organic feed and the length of time from the use of medication for specific maladies until slaughter or the taking of milk or eggs. Prohibited materials must not be used in areas where livestock are kept or handled.

3. *Production Practices*

Federal and state organic production laws and regulations should be reviewed carefully for required production practices. Certifiers may require additional practices. These standards may address any aspect of farming that is considered important to maintain the organic integrity of the production or the ecological balance of the system. For example, OFPA prohibits use of raw manure in circumstances that could contaminate food crops or water sources.[76] OFPA also prohibits the use of plastic mulches unless they are removed at the end of each growing season.[77]

California law requires the growing medium for commodities such as mushrooms, sprouts, and transplants to be produced without prohibited materials.[78] Several states regulate certain organic livestock production practices. For example, California prohibits the use of any artificial rumen stimulants, such as plastic pellets, and any manure intentionally fed or re-fed.[79]

4. *Miscellaneous Practices*

State laws contain various additional prohibitions of which organic farmers must be aware. For example, several states prohibit use of irradiation in the handling or processing of organic foods.[80] California prohibits commingling of organic commodities with conventional commodities.[81] The forthcoming federal regulations probably will expand this list.

76. 7 U.S.C. § 6513(b)(2)(B),(C) (1994).
77. *See, e.g.*, 7 U.S.C. § 6508(c)(2) (1994).
78. CAL. HEALTH & SAFETY CODE § 110820(a)(5)(A)(i) (West 1996).
79. CAL. HEALTH & SAFETY CODE § 110815(p)(1)(C),(D) (West 1996).
80. CAL. HEALTH & SAFETY CODE § 110820(a)(1) (West 1996).
81. CAL. FOOD & AGRIC. § 46015 (West Supp. 1996).

5. *Organic Plan*

OFPA will require organic producers to prepare a Crop Production Farm Plan and/or Livestock Plan in consultation with their certifiers.[82] This provision is intended to help producers identify long term goals to improve their overall farming practices. Many provisions of the Plan will not be mandatory for organic certification, but will be desirable practices for improving sustainable farming.

Under OFPA, a Crop Production Plan must contain provisions for increasing soil fertility through proper tillage, crop rotation, and manuring. Livestock Production Plans are required to include provisions fostering organic production of livestock. The NOSB has recommended that the Livestock Production Plan address manure management, livestock health care and breeding practices, animal sources, feed sources, contingency plans for feed shortage, housing and living conditions, pasture and grazing, and other key elements of livestock management.[83]

A plan for management of wild crops sold as organic is also required by OFPA. This plan must designate the area from which the wild crop will be gathered and a plan for harvesting the crop in a manner that is not destructive to the environment and which will sustain growth of the crop.

D. *Exporting Organic Products*

The laws and regulations of the country to which organic products are exported determine whether the products can be sold as organic. Currently, the European Union, Australia, and Argentina have national organic standards, and Canada will implement an organic program soon.

Exporting organic product to these jurisdictions requires a determination by the importing country that the standards and inspection system for organic production in the country of origin is equivalent to those of the importing country. The preferred method is to make a determination on the national level by evaluating a country's national standards and inspection system. Because the United States law is not yet implemented, however, the determination for United States exports must be based on the standards and inspection system of the certifying organization. Organic producers in the United States must be sure that their certifying organization has been approved or accepted in the country to which they export. Additionally, each shipment of organic food must have a certificate which declares that the organic products were produced according to equivalent standards.

The 16 Member States of the European Union (EU) also have the option of authorizing an importer to bring in organic products from a country that is not included in the EU list of approved countries.[84] Under this provision the importer must furnish sufficient evidence to the Member State to show that the imported product was produced according to organic production rules equivalent to EU standards, that it was subject to equivalent inspection measures, and that the inspection measures will be permanently and effectively applied. A separate

82. 7 U.S.C. § 6513 (1994).

83. FINAL RECOMMENDATIONS-ORGANIC CROP PRODUCTION STANDARDS, § F(2) (National Organic Standards Board 1994).

84. Council Regulation (EEC) No. 2092/91, Art. 11 (6)(a).

authorization must be obtained by each importer for each product from each country.[85]

### E. *Importing Organic Products*

Some organic producers and food processors in the United States import organic products to expand their product offerings or to use as ingredients in processed foods. OFPA will require a determination by the Secretary of Agriculture that imported products have been produced and handled under an organic certification program with standards and safeguards that are at least equivalent to United States standards.[86]

> The NOSB has recommended three methods of approval by the Secretary:
> (1) Recognition that a foreign country, international organic standards organization, or regional entity that regulates the certifier ensures that organic standards are at least equivalent to those in the United States;
> (2) Accreditation of the certifying agent or state agency which certified the product; or
> (3) Determination by the Secretary that the certification program has standards equivalent to United States standards.[87]

## IV. WHAT TO EXPECT DURING THE TRANSITION TO ORGANIC PRODUCTION

For most farmers the transition from a conventional production system to an organic system involves short term losses and long-term benefits. Adopting an organic system is not simply replacing one set of inputs with another. The conversion establishes a new ecological balance in the soil, crops, and biology of the fields. Yields are usually reduced during the transition period, but not always. The transition process varies by crop, region, soils, weather, past practices, and new practices. The producer must allow sufficient time to plan the transition, observe the changes, and develop modifications of the system as it develops. Additional initial expenditures also may be required to implement an organic system. For example, most organic and sustainable systems require a comprehensive crop rotation system for annual crops. The new crops may require additional equipment and new storage or packing facilities. "The transition 'to what, from what' is a site-specific, individual journey."[88]

After one to five years of biological transition, most farmers realize economic and environmental advantages. For many, the organic price premiums mean higher incomes. The subtle gains of an organic transition can be more stable

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85. For more information on requirements for importing organic products into major international markets, see Suzanne Vaupel & Ken Commins, *Guide to the Requirements for Importing Organic Foods into Major International Markets*, IFOAM ACCREDITATION PROGRAMME (forthcoming 1997).

86. 7 U.S.C. § 6505(b) (1994).

87. FINAL RECOMMENDATIONS: PROPOSED RULE REGARDING IMPORTATION OF ORGANIC AGRICULTURAL PRODUCTS (National Organic Standards Board 1994).

88. Jill S. Auburn, *Society Pressures Farmers to Adopt More Sustainable Systems*, CAL. AGRIC., Sept.-Oct. 1994, at 7.

than higher prices. If the producer has added crop rotations and more diversity in the cropping pattern, he or she can reduce financial risks and improve returns. Elimination of most chemical inputs usually reduces costs and the producer becomes less vulnerable to input price fluctuations. Farmers have also found that organic and sustainable production systems are less vulnerable to natural stress, such as drought and floods. Another economic advantage is the continual increase in effectiveness of an organic and sustainable system. While conventional systems face increasing pest resistance to chemical pesticides and decreasing fertility, an ecologically balanced system produces cumulative beneficial effects. These include increasing fertility and an increased balance in predator-pest relationships.[89]

Most producers realize advantages other than the purely economic that may not be immediately quantifiable. These benefits include reduced soil erosion, less contamination of ground water by nitrates and pesticides, better habitat for wildlife and beneficial insects, and a decrease in personal exposure to toxic chemicals.

As has been mentioned, planning a transition to organic farming is site-specific. However, the International Federation of Organic Agricultural Movements (IFOAM) suggests four objectives to be achieved during the transition: "(1) develop a fertility-building rotation; (2) develop a proper manure management system; (3) develop an appropriate tillage/cultivation system; (4) develop an environment that reduces the occurrence of pests and disease."[90]

Over the last 10 years, research on specific results of transitions from conventional systems has increased greatly[91] and more help is now available for farmers. The University of California has reported the results of the first four years of a twelve year, 20-acre study. The study involves a four-year rotation of processing tomatoes, safflower, corn, and wheat or beans.[92] Results of the study have been reported for yields, soil fertility and biology, insect and weed problems, and profitability. For illustrative purposes, a few of the many findings are reviewed here.

In the first year, tomato yields in the organic system were 29% less than in the conventional systems, but by the fourth year, there were no significant differences in yields from the four different systems and all systems produced well above the county average. Yields of organic dry beans were the same or better than

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89. FREDERICK KIRSCHENMANN, N. PLAINS SUSTAINABLE AGRIC. SOC'Y, SWITCHING TO A SUSTAINABLE SYSTEM: STRATEGIES FOR CONVERTING FROM CONVENTIONAL/CHEMICAL TO SUSTAINABLE/ORGANIC FARMING SYSTEMS, 3 (1988).

90. *Id.* at 4.

91. Funding for much of this research has been supplied by the USDA-Sustainable Agriculture Research and Education Programme (SARE), similar state programs such as the U.C. Sustainable Agriculture and Research Education Program (SAREP), and private foundations, such as the Organic Farming Research Foundation (OFRF) based in Santa Cruz, California. Each organization publishes research results.

92. Four systems are compared in the study: conventional, low-input, organic, and a shortened two-year conventional rotation of tomatoes and wheat only. Steven R. Temple et al., *Conventional, Low-Input and Organic Farming Systems Compared*, CAL. AGRIC., Sept-Oct 1994, at 14; *See also* Rebecca W. Andrews et al., *Convertible to Sustainable Farming Systems* and J. Patrick Madden, *The Economics of Sustainable Low-Input Farming Systems, in* SUSTAINABLE AGRICULTURE IN TEMPERATE ZONES, 281, 315 (Charles A. Francis et al. 1990) (transition results for field crops from various studies); Sean Sweezey, *Conversion Studies: Theory and Practice, in* PROCEEDINGS, ORGANIC FARMING SYMPOSIUM (U.C. SAREP 1992).

conventional yields in all four years.[93] Despite problems in establishing adequate soil fertility during the transition, after four years, pH and the percentage of nitrogen were consistently higher in organic and low-input plots than conventional plots for all crops. Phosphorus and potassium levels were higher in the organic plots than the others, and significantly higher than the two-year conventional plots. Microbial biomass levels were consistently higher in the organic and low-input systems and plant parasitic nematode counts were lower.[94] Overall abundance of most pests did not differ dramatically in any of the systems, except for fruitworm damage to the organic tomato crops in one year.[95] Several weeds became more prevalent on organic plots, while other weeds became more prevalent on conventional plots.[96]

The farmer considering transition is usually most interested in a comparison of gross returns and profitability. The organic system with organic price premiums had the highest profitability of any of the four-year systems for the overall four-year period and in three of the four years.[97] Organic farming without the organic price premium had the lowest overall profitability.[98]

In sum, the four-year experiment has shown that organic production of the crops studied can obtain the same yields as conventional production and costs can be lower. Profitability from the organic products of the crops studied can be equivalent or higher than in conventional production when organic price premiums are received.[99]

## V. CONCLUDING COMMENTS

Clearly organic price premiums are important to organic producers and those making the transition to organic. The premiums consumers are willing to pay are based on their confidence in the integrity of the organic claim. For this reason, the organic market in the United States should expand significantly when USDA implements the national organic program and promulgates regulations establishing national standards. The international market for United States organic products will be strengthened if the EU. determines that the United States organic program is equivalent to EU requirements.

In the long run, however, organic production should bring significant benefits to the producer in addition to price premiums. An ecological balance will be established in which the production system will be continually enriched and animals should become stronger. The producer will have fewer problems with loss of fertility

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93. Steven R. Temple et al., *Conventional, Low-Input and Organic Farming Systems Compared*, CAL. AGRIC., Sept.-Oct. 1994, at 16-19. In a survey concerning transition in field crops by Rodale Institute, 34% of farmers reported decreased yields, nearly half had no change in yields and 12% reported a yield increase. Andrews et al., *supra* note 92, at 283.

94. Kate M. Scow et. al., *Transition from Conventional to Low-Input Agriculture Changes Soil Fertility and Biology*, CAL. AGRIC., at 20.

95. Additionally, the organic tomato crop suffered significant stink worm damage in one year, but this damage was not important in processing tomatoes. W. Thomas Lanin et al., *Researchers Find Short-Term Insect Problems, Long-Term Weed Problems*, CAL. AGRIC., at 27-30.

96. *Id.* at 31-33.

97. Karen Klonsky & Peter Livingston, *Alternative Systems Aim To Reduce Inputs, Maintain Profits*, CAL. AGRIC., at 34.

98. *Id.*

99. *Id.* at 42.

and pesticide-resistant insects. Economically, risk will be reduced by diversifying and the organic system will be more resilient to natural stresses such as drought and floods.

To obtain organic price premiums and other benefits, the producer must implement a new production system and find new marketing channels. Planning for the agronomic transition is important and a successful organic system will require continual learning and experimenting by the producer.

Equally important is a knowledge of the legal requirements for organic production and sales. Currently, the producer must follow the requirements of every state where the product is produced and sold. Federal regulations for organic production and handling will establish national standards. However, many state organic programs still may have special requirements that affect the producer. Attorneys who advise organic producers must stay updated on developments in federal and state laws and regulations concerning the production and handling of organic products.