

t h e n e w s l e t t e r o f

CCOF

California Certified Organic Farmers

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Creating a Living Standard for Healthy Food

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The Best of Agroecology



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PRESIDENT'S CORNER



A GROWING LEADER AT 30 YEARS OLD

By Brian Leahy, CCOF President

WITHIN THE SPAN OF A LIFETIME agriculture went from a biological-based, wealth generating activity at the center of society to an economic basket case at the margins of society, reliant upon toxic chemistry and off-farm inputs. CCOF was formed to return agriculture to an organic, biological system that fairly rewards producers and values the culture within agriculture. CCOF was also formed to address another radical change that concurrently took place—the consumer's changing relationship to food. Consumers went from eating primarily locally produced food, eaten in season, and prepared at home to eating highly processed food, prepared and eaten away from home, rarely produced locally or eaten in season. There have been many changes within organic agriculture and within CCOF itself during the thirty years of CCOF's existence. Organic agriculture has gone from being viewed as a fringe movement to a regulated industry under the control of the United States Department of Agriculture (USDA). And CCOF has gone from being a loosely connected collection of volunteers to a centralized organization

of paid staff issuing a federal license on behalf of USDA.

CCOF has recently formed a new entity to respond effectively to the intervention of USDA into organic agriculture. As of October 21, 2002, any farmer or handler with greater than \$5,000 in sales who uses the term organic must be certified by a USDA accredited organic certifier using organic standards written by USDA. One of the requirements of USDA's National Organic Program is that no certification agent may have on its Board any member who is also certified by that same certification agent. CCOF's first attempt to meet the conflict of interest requirement was rejected by USDA, and CCOF was told to separate the Board from certification or be denied USDA accreditation. The new entity is called CCOF Certification Services LLC. It is a limited liability company wholly owned by CCOF.

The certification LLC will conduct organic certification. A management committee appointed by the CCOF Board will govern it. All profits from the certification LLC will flow to CCOF. The certification LLC will pay CCOF for the use of the CCOF seal, and if you are certified by CCOF you will be able to use the CCOF seal. This new organization will meet USDA requirements and will allow certification to focus on the new complexities of certification. It should strengthen the CCOF certification pro-

gram. There are now three distinct CCOF entities:

1. California Certified Organic Farmers (CCOF) Inc.
2. CCOF Foundation
3. CCOF Certification Services LLC.

The function of California Certified Organic Farmers, Inc. will be to act as a classic trade association with an emphasis

on advocacy for governmental policies that protect and encourage organic agriculture. A strong, effective voice advocating for a healthy farm economy based on biological agriculture must develop if agriculture is to survive economically in the quickly changing world of food politics. There is a very definite push by the WTO and international banks to have poor nations earn hard currency by feeding rich nations. At my local food store, I just pur-

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chased dried apricots from CCOF member Big Tree Organic Farms that were twice the cost of the organic Turkish apricots in the adjacent bin. Without government policies that encourage and foster local agriculture, how will farmers survive the competition from China, Chile, or Africa? CCOF needs to become the vehicle to change agriculture policy in the United States. As organic agriculture grows, the premiums received will dwindle even more than they already have. We will never see a free market in food, but we will see the federal government spend billions of dollars on agricultural supports. Some European nations are already placing a value on the environmental effects of organic agriculture and paying farmers for their contributions to the environment instead of paying them to flood an already flooded market. To become the dominant force in agriculture, CCOF must lead the way in effective political action.

OUR PURPOSE

CCOF's purpose is to promote and support organic agriculture in California and elsewhere through:

- A premier organic certification program for growers, processors, handlers, and retailers.
- Programs to increase awareness of and demand for certified organic product and to expand public support for organic agriculture.
- Advocacy for governmental policies that protect and encourage organic agriculture.

“*Conservation is ethically sound.
It is rooted
in our love of the land,
our respect
for the rights of others,
our devotion to the rule of law.*”

-Lyndon Baines Johnson

New CCOF Supporting Member

Thank you to **JOHN R. SINGLETON** who recently became a Sustaining Supporting Member of CCOF. Your donation and those of others that we receive every day will help us to continue our educational efforts to expand public awareness of and demand for certified organic product, and to help promote governmental policies that encourage and protect organic agriculture.

Submissions to the Newsletter of CCOF

Letters to the editor are gladly accepted, provided the letter is succinct and remains on topic. Letters must include complete contact information, including daytime telephone number, and must be signed. Letters are subject to editing and will not be returned. Submitting a letter to the editor does not guarantee printing.

For information about submitting articles to *The Newsletter of CCOF*, or to discuss article ideas, please contact Keith Proctor toll free at 1-888-423-2263, ext. 12, or e-mail to keith@ccof.org

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To place a classified advertisement, contact Keith Proctor at 831-423-2263, ext. 12, fax 831-423-4528, or keith@ccof.org. Advertisements submitted via e-mail are greatly appreciated.

To place a display advertisement, please contact Helge Hellberg, Marketing and Communications Director, at ext. 21 or helge@ccof.org to inquire about rates or for more information.

Distribution

The Newsletter of CCOF, with a circulation of 10,000, is distributed quarterly to certified clients and supporting members and consumers in California and around the United States. It is also mailed to supporting members in Australia, Brazil, Canada, Chile, Italy, Japan, and Mexico.

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FEATURE ARTICLE



AGROECOLOGY PRINCIPLES AND STRATEGIES FOR DESIGNING SUSTAINABLE FARMING SYSTEMS



By Miguel A. Altieri
University of California, Berkeley

THE CONCEPT OF SUSTAINABLE agriculture is a relatively recent response to the decline in the quality of the natural resource base associated with modern agriculture (McIsaac and Edwards 1994). Today, the question of agricultural production has evolved from a purely technical one to a more complex question characterized by social, cultural, political, and economic dimensions. The concept of sustainability, although controversial and diffuse due to existing conflicting definitions and interpretations of its meaning, is useful because it captures a set of concerns about agriculture which is conceived as the result of the co-evolution of socioeconomic and natural systems (Reijntjes et al. 1992). A wider understanding of the agricultural context requires the study between agriculture, the global environment and social systems given that agricultural development results from the complex interaction of a multitude of factors. It is through this deeper understanding of the ecology of agricultural systems that doors will open to new management options more in tune with the objectives of a truly sustainable agriculture.

The sustainability concept has prompted much discussion and has promoted the

need to propose major adjustments in conventional agriculture to make it more environmentally, socially and economically viable and compatible. Several possible solutions to the environmental problems created by capital and technology intensive farming systems have been proposed and research is currently in progress to evaluate alternative systems (Gliessman 1998). The main focus lies on the reduction or elimination of agrochemical inputs through changes in management to assure adequate plant nutrition and plant protection through organic nutrient sources and integrated pest management, respectively.

Although hundreds of more environmentally prone research projects and technological development attempts have taken place, and many lessons have been learned, the thrust is still highly technological, emphasizing the suppression of limiting factors or the symptoms that mask an ill producing agroecosystem. The prevalent philosophy is that pests, nutrient deficiencies or other factors are the cause of low productivity, as opposed to the view that pests or nutrients only become limiting if conditions in the agroecosystem are not in equilibrium (Carrol et al. 1990). For this reason, there still prevails a narrow view that specific causes affect productivity, and overcoming the limiting factor via new technologies, continues to be the main goal. This view has diverted agriculturists from realizing that limiting factors only represent symptoms of a more systemic disease inherent to unbalances within the agroecosystem and from an appreciation of the context and complexity of agroecological processes thus underestimating the root causes of agricultural limitations (Altieri et al. 1993).

On the other hand, the science of agroecology, which is defined as the application of ecological concepts and principles to the design and management of sustainable agroecosystems, provides a framework to assess the complexity of agroecosystems (Altieri 1995). The idea of agroecology is to go beyond the use of alternative practices and to develop agroecosystems with the minimal dependence on high agro-

chemical and energy inputs, emphasizing complex agricultural systems in which ecological interactions and synergisms between biological components provide the mechanisms for the systems to sponsor their own soil fertility, productivity, and crop protection (Altieri and Rosset 1995).

PRINCIPLES OF AGROECOLOGY

In the search to reinstate more ecological rationale into agricultural production, scientists and developers have disregarded a key point in the development of a more self-sufficient and sustaining agriculture: a deep understanding of the nature of agroecosystems and the principles by which they function. Given this limitation, agroecology has emerged as the discipline that provides the basic ecological principles for how to study, design and manage agroecosystems that are both productive and natural resource conserving, and that are also culturally sensitive, socially just and economically viable (Altieri 1995).

Agroecology goes beyond a one-dimensional view of agroecosystems—their genetics, agronomy, edaphology, and so on—to embrace an understanding of ecological and social levels of co-evolution, structure and function. Instead of focusing on one particular component of the agroecosystem, agroecology emphasizes the interrelatedness of all agroecosystem components and the complex dynamics of ecological processes (Vandermeer 1995).

Agroecosystems are communities of plants and animals interacting with their physical and chemical environments that have been modified by people to produce food, fiber, fuel and other products for human consumption and processing. Agroecology is the holistic study of agroecosystems, including all environmental and human elements. It focuses on the form, dynamics, and functions of their interrelationships and the processes in which they are involved. An area used for agricultural production, e.g. a field, is seen as a complex system in which ecological processes found under natural conditions also occur, e.g. nutrient cycling, predator/prey interactions, competition, symbiosis, and successional changes. Implicit in

agroecological research is the idea that, by understanding these ecological relationships and processes, agroecosystems can be manipulated to improve production and to produce more sustainably, with fewer negative environmental or social impacts and fewer external inputs (Altieri 1995).

The design of such systems is based on the application of the following ecological principles (Reijntjes et al. 1992) (see also Table 1):

1. Enhance recycling of biomass and optimizing nutrient availability and balancing nutrient flow.
2. Securing favorable soil conditions for plant growth, particularly by managing organic matter and enhancing soil life activity.
3. Minimizing losses due to flows of solar radiation, air and water by way of microclimate management, water harvesting and soil management through increased soil cover.
4. Species and genetic diversification of the agroecosystem in time and space.
5. Enhance beneficial biological interactions and synergisms among agrobiodiversity components thus resulting in the promotion of key ecological processes and services.

These principles can be applied by way of various techniques and strategies. Each of these will have different effects on produc-

tivity, stability, and resiliency within the farm system, depending on the local opportunities, resource constraints and, in most cases, on the market. The ultimate goal of agroecological design is to integrate components so that overall biological efficiency is improved, biodiversity is preserved, and the agroecosystem productivity and its self-sustaining capacity is maintained. The goal is to design a quilt of agroecosystems within a landscape unit, each mimicking the structure and function of natural ecosystems.

BIODIVERSIFICATION OF AGROECOSYSTEMS

From a management perspective, the agroecological objective is to provide a balanced environment, sustained yields, biologically mediated soil fertility and natural pest regulation through the design of diversified agroecosystems and the use of low-input technologies (Gliessman 1998).

Agroecologists are now recognizing that intercropping, agroforestry, and other diversification methods mimic natural ecological processes, and that the sustainability of complex agroecosystems lies in the ecological models they follow. By designing farming systems that mimic nature, optimal use can be made of sunlight, soil nutrients, and rainfall (Pretty 1994).

Agroecological management must lead management to optimal recycling of nutrients and organic matter turnover, closed energy flows, water and soil conservation

and balance pest-natural enemy populations. The strategy exploits the complementarities and synergisms that result from the various combinations of crops, tree, and animals in spatial and temporal arrangements (Altieri 1994).

In essence, the optimal behavior of agroecosystems depends on the level of interactions between the various biotic (living) and abiotic (non-living) components. By assembling a functional biodiversity it is possible to initiate synergisms which subsidize agroecosystem processes by providing ecological services such as the activation of soil biology, the recycling of nutrients, the enhancement of beneficial arthropods and antagonists, and so on (Altieri and Nicholls 1999). Today there is a diverse selection of practices and technologies available, which vary in effectiveness as well as in strategic value. Key practices are those of a preventative nature and which act by reinforcing the "immunity" of the agroecosystem through a series of mechanisms (Table 2).

Various strategies to restore agricultural diversity in time and space include crop rotations, cover crops, intercropping, crop/livestock mixtures, and so on, which exhibit the following ecological features:

1. **Crop Rotations.** Temporal diversity incorporated into cropping systems, providing crop nutrients and breaking the life cycles of several insect pests, diseases, and weed life cycles (Summer 1982).

Table 1. Ecological processes to optimize in agroecosystems

- Strengthen the immune system (proper functioning of natural pest control)
- Decrease toxicity through elimination of agrochemicals
- Optimize metabolic function (organic matter decomposition and nutrient cycling)
- Balance regulatory systems (nutrient cycles, water balance, energy flow, population regulation, etc.)
- Enhance conservation and regeneration of soil-water resources and biodiversity
- Increase and sustain long-term productivity

Table 2. Mechanisms to improve agroecosystem immunity

- Increase of plant species and genetic diversity in time and space.
- Enhancement of functional biodiversity (natural enemies, antagonists, etc.)
- Enhancement of soil organic matter and biological activity
- Increase of soil cover and crop competitive ability
- Elimination of toxic inputs and residues

2. **Polycultures.** Complex cropping systems in which two or more crop species are planted within sufficient spatial proximity to result in competition or complementation, thus enhancing yields (*Francis 1986, Vandermeer 1989*).

3. **Agroforestry Systems.** An agricultural system where trees are grown together with annual crops and/or animals, resulting in enhanced complementary relations between components increasing multiple use of the agroecosystem (*Nair 1982*).

4. **Cover Crops.** The use of pure or mixed stands of legumes or other annual plant species under fruit trees for the purpose of improving soil fertility, enhancing biological control of pests, and modifying the orchard microclimate (*Finch and Sharp 1976*).

5. **Animal integration** in agroecosystems aids in achieving high biomass output and optimal recycling (*Pearson and Ison 1987*).

All of the above diversified forms of agroecosystems share in common the following features (*Altieri and Rosset 1995*):

- a. Maintain vegetative cover as an effective soil and water conserving measure, met through the use of no-till practices, mulch farming, and use of cover crops and other appropriate methods.
- b. Provide a regular supply of organic matter through the addition of organic matter (manure, compost, and promotion of soil life activity).
- c. Enhance nutrient recycling mechanisms through the use of livestock systems based on legumes, etc.

d. Promote pest regulation through enhanced activity of biological control agents achieved by introducing and/or conserving natural enemies and antagonists.

Research on diversified cropping systems underscores the great importance of diversity in an agricultural setting (*Francis 1986, Vandermeer 1989, Altieri 1995*). Diversity is of value in agroecosystems for a variety of reasons (*Altieri 1994, Gliessman 1998*):

- As diversity increases, so do opportunities for coexistence and beneficial interactions between species that can enhance agroecosystem sustainability.
- Greater diversity often allows better resource-use efficiency in an agroecosystem. There is better system-level adaptation to habitat heterogeneity, leading to complementarities in crop species needs, diversification of niches, overlap of species niches, and partitioning of resources.
- Ecosystems in which plant species are intermingled possess an associated resistance to herbivores as in diverse systems there is a greater abundance and diversity of natural enemies of pest insects keeping in check the populations of individual herbivore species.
- A diverse crop assemblage can create a diversity of microclimates within the cropping system that can be occupied by a range of noncrop organisms—including beneficial predators, parasites, pollinators, soil fauna and antagonists—that are of importance for the entire system.
- Diversity in the agricultural landscape can contribute to the conservation of biodiversity in surrounding natural ecosystems.

- Diversity in the soil performs a variety of ecological services such as nutrient recycling and detoxification of noxious chemicals and regulation of plant growth.
- Diversity reduces risk for farmers, especially in marginal areas with more unpredictable environmental conditions. If one crop does not do well, income from others can compensate.

AGROECOLOGY AND THE DESIGN OF SUSTAINABLE AGROECOSYSTEMS

Most people involved in the promotion of sustainable agriculture aim at creating a form of agriculture that maintains productivity in the long term by (*Pretty 1994, Vandermeer 1995*):

- optimizing the use of locally available resources by combining the different components of the farm system, *i.e.* plants, animals, soil, water, climate and people, so that they complement each other and have the greatest possible synergistic effects;
- reducing the use of off-farm, external and non-renewable inputs with the greatest potential to damage the environment or harm the health of farmers and consumers, and a more targeted use of the remaining inputs used with a view to minimizing variable costs;
- relying mainly on resources within the agroecosystem by replacing external inputs with nutrient cycling, better conservation, and an expanded use of local resources;
- improving the match between cropping patterns and the productive potential and environmental constraints of climate and landscape to ensure long-term sustainability of current production levels;
- working to value and conserve biological diversity, both in the wild and in domesticated landscapes, and making optimal use of the biological and genetic potential of plant and animal species; and
- taking full advantage of local knowledge and practices, including innovative approaches not yet fully understood by scientists although widely adopted by farmers.



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Agroecology provides the knowledge and methodology necessary for developing an agriculture that is on the one hand environmentally sound and on the other hand highly productive, socially equitable and economically viable. Through the application of agroecological principles, the basic challenge for sustainable agriculture to make better use of internal resources can be easily met by minimizing the external inputs used, and preferably by regenerating internal resources more effectively through diversification strategies that enhance synergisms among key components of the agroecosystem.

The ultimate goal of agroecological design is to integrate components so that overall biological efficiency is improved, biodiversity is preserved, and the agroecosystem productivity and its self-regulating capacity is maintained. The goal is to design an agroecosystem that mimics the structure and function of local natural ecosystems; that is, a system with high species diversity and a biologically active soil, one that promotes natural pest control, nutrient recycling and high soil cover to prevent resource losses.

CONCLUSION

Agroecology provides guidelines to develop diversified agroecosystems that take advantage of the effects of the integration of plant and animal biodiversity such integration enhances complex interactions and synergisms and optimizes ecosystem functions and processes, such as biotic regulation of harmful organisms, nutrient recycling, and biomass production and accumulation, thus allowing agroecosystems to sponsor their own functioning. The end result of agroecological design is improved economic and ecological sustainability of the agroecosystem, with the proposed management systems specifically in tune with the local resource base and operational framework of existing environmental and socioeconomic conditions. In an agroecological strategy, management components are directed to highlight the conservation and enhancement of local agricultural resources (germplasm, soil, beneficial fauna, plant biodiversity, etc.) by emphasizing a development methodology that encourages farmer participation, use of traditional knowledge, and adaptation of farm enterprises that fit local needs and socioeconomic and biophysical conditions. ☺

MIGUEL A. ALTIERI is an associate professor of agroecology at the Department of Environmental Science, Policy and Management, University of California, Berkeley.

He has published many papers and several books dealing with such topics as world hunger, agricultural biotechnology, pest management, sustainable agriculture, and chemical inputs into the agroecosystem, all from an agroecological point of view. Born in Santiago, Chile, he studied agronomy at the University of Chile, gained a master's degree in poly-culture from the National University of Colombia, then moved on to study entomology at the University of Florida where he earned his doctorate. In 1980 he filled the vacated position of professor of entomology at University of California Berkeley where he has continued to research and support the practices of sustainable agriculture while coordinating the United Nations Development Program's Sustainable Agriculture Networking and Extension Program (SANE). His expertise in sustainable agriculture is respected around the world. He has been called upon to advise Prince Charles and the Pope.

Reference list for this article available at www.ccof.org/newsletter/extras/agreferences-ma.pdf

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AGROECOLOGY



MAKING THE CONVERSION TO SUSTAINABLE AGROECOSYSTEMS

GETTING FROM HERE TO THERE WITH AGROECOLOGY

By Stephen R. Gliessman
Alfred Heller Professor of Agroecology
University of California, Santa Cruz

FARMERS HAVE ALWAYS HAD A reputation for being innovators and experimenters, willingly adopting new practices when they perceive that some benefit will be gained. This has been especially true in organic agriculture, where over the past 20 years creative farmers have made bold moves into a manner of farming that challenges conventional wisdom on how agriculture should be done, as well as what kind of agricultural products consumers are willing to buy. Remarkable increases in area devoted to organic agriculture have been observed during the past decade (*USDA 2000*). In California alone, growth in average annual organic sales was 15% while acreage growth was estimated at 10% per year between 1992 and 1998 (*Klonsky et al. 2001*). Continued growth is



Conversion Study. Site of a multiple-year comparison of strawberries grown conventionally and plots undergoing conversion to organic at Swanton Berry Farms on the north coast of Santa Cruz County, CA (see Gliessman et al. 1996).

predicted in organic acreage and markets (*Sweezy and Broome 2000*).

But as this transition occurs, we are constantly faced with the question of how sustainable these new agricultural systems really are. When we examine farming systems as ecological systems (more broadly known as agroecosystems), and use the science of agroecology for their design and management, we begin to realize that farmers and researchers must work together very closely to ensure that these new agroecosystems are not just trading one set of problems for others. Defined as the application of ecological concepts and principles to the design and management of sustainable agroecosystems (*Gliessman 1998*), agroecology offers a set of guiding principles for making sure that sustainability is part of our framework while we make the conversion to organic production. We are not satisfied with an approach that merely substitutes conventional inputs and practices with organically acceptable alternatives. We are not satisfied with an approach that is determined primarily by market demands and does not include the economic and social health of the agricultural communities in which food is produced. And we are not satisfied with an approach that does not ensure food security for all consumers in all parts of the world. A much broader set of tools must be developed to evaluate the conversion process. Agroecology provides the ecological foundations for such an evaluation.

PRINCIPLES GUIDING THE CONVERSION PROCESS

The conversion process can be complex, requiring changes in field practices, day-to-day management of the farming operation, planning, marketing, and even philosophy. The following principles can serve as general guidelines for navigating the overall transformation (*Gliessman 1998*):

- Shift from throughflow nutrient management to recycling of nutrients, with increased dependence on natural processes such as biological nitrogen fixation and mycorrhizal relationships.
- Use renewable sources of energy instead of non-renewable sources.

- Eliminate the use of non-renewable off-farm human inputs that have the potential to harm the environment or the health of farmers, farm workers, or consumers.
- When materials must be added to the system, use naturally-occurring materials instead of synthetic, manufactured inputs.
- Manage pests, diseases, and weeds instead of “controlling” them.
- Reestablish the biological relationships that can occur naturally on the farm instead of reducing and simplifying them.
- Make more appropriate matches between cropping patterns and the productive potential and physical limitations of the farm landscape.
- Use a strategy of adapting the biological and genetic potential of agricultural plant and animal species to the ecological conditions of the farm rather than modifying the farm to meet the needs of the crops and animals.
- Value most highly the overall health of the agroecosystem rather than the outcome of a particular crop system or season.
- Emphasize conservation of soil, water, energy, and biological resources.
- Incorporate the idea of long-term sustainability into overall agroecosystem design and management.

The integration of these principles creates a synergism of interactions and relationships on the farm that eventually leads to the development of the properties of sustainable agroecosystems. Emphasis on particular principles will vary, but all of them can contribute greatly to the conversion process.

For many farmers, rapid conversion to organic farming is neither possible nor practical. Regulations require a three-year transition period, but for the re-establishment of many ecological processes and relationships, this even may not be enough. As a result, many conversion efforts proceed in slower steps toward the ultimate goal of sustainability, and meanwhile make the minimal changes necessary to meet organic standards. Studies on the conversion process are still very limited (*for examples see Sweezy et al. 1994, 1999, Hendricks 1995, Gliessman et al. 1996*). They tell us

that there is a lot of research that still needs to be done to improve yields and pest management, as well as improve the indicators of sustainability. Current research efforts point out three distinct levels of conversion. These levels help us describe the steps that farmers actually take in converting from conventional agroecosystems, and they can serve as a map outlining a step-wise, evolutionary conversion process organic systems should take in order to achieve sustainability. They are also helpful for categorizing agricultural research as it relates to conversion.

Level 1: *Increase the efficiency of conventional practices in order to reduce the use and consumption of costly, scarce, or environmentally damaging inputs.*

This approach is what we might call the “pre-organic.” Its goal is to use conventional inputs more efficiently so that fewer inputs will be needed and the negative impacts of their use will be reduced as well. This approach has been the primary emphasis of much conventional agricultural research, through which numerous

agricultural technologies and practices have been developed. Examples include optimal crop spacing and density, improved machinery, pest monitoring for improved pesticide application, improved timing of operations, and precision farming for optimal fertilizer and water placement. Although these kinds of efforts reduce the negative impacts of conventional agriculture, they do not help break its dependence on external human inputs, and do not qualify for organic certification.

Level 2: *Substitute conventional inputs and practices with organic practices.*

We might call this approach the “commercial organic.” The goal at this level of conversion is to replace resource-intensive and environment-degrading products and practices with those that are more environmentally benign. Most organic farming research has emphasized such an approach. Examples of alternative practices include the use of nitrogen-fixing cover crops and rotations to replace synthetic nitrogen fertilizers, the use of biological control agents rather than pesticides, and the shift to

reduced or minimal tillage. At this level, the basic agroecosystem structure is not greatly altered; hence many of the same problems that occur in conventional systems also occur in those with input substitution.

Level 3: *Redesign the agroecosystem so that it functions on the basis of a new set of ecological processes.*

We might call this level the “sustainable organic.” At this level, overall system design eliminates the root causes of many of the problems that still exist at Levels 1 and 2. Thus rather than finding sounder ways of solving problems, the problems are prevented from arising in the first place. Whole-system conversion studies allow for an understanding of yield-limiting factors in the context of agroecosystem structure and function. Problems are recognized, and thereby prevented, by internal site- and time-specific design and management approaches, instead of by the application of external inputs. An example is the diversification of farm structure and management through the use of rotations, multiple cropping, and agroforestry.

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In terms of research, agronomists and other agricultural researchers have done a good job of transitioning from Level 1 to Level 2, but the transition to Level 3 has really only just begun. Agroecology provides the basis for this type of research. And eventually it will help us find answers to larger, more abstract questions, such as what sustainability is and how we will know we have achieved it.

ON FARM CONVERSIONS

As farmers undertake to convert their farms to organic management, it becomes important to develop systems for evaluating and documenting the success of these efforts and the changes they engender in the functioning of the agroecosystem. Such evaluation systems will help convince a larger segment of the agricultural community that conversion to sustainable organic practices is possible and economically feasible.

The study of the process of conversion begins with identifying a study site. This should be a functioning, on-farm, commercial crop production unit whose owner-operator wishes to convert to organic management and wants to participate in the design and management of the farm system during the conversion process (Swezey, et al. 1994; Gliessman, et al. 1996). Such a “farmer-first” approach is considered essential in the search for viable farming practices that eventually have the best chance of being adopted by other farmers.

The amount of time needed to complete the conversion process depends greatly on the type of crop or crops being farmed, the local ecological conditions where the farm is located, and the prior history of management and input use. For short-term annual crops, the time frame might be as short as three years, and for perennial crops and animal systems, the time period is probably at least five years or longer.

Study of the conversion process involves several levels of data collection and analysis:

1. Examine the changes in ecological factors and processes over time through monitoring and sampling.
2. Observe how yields change with changing practices, inputs, designs, and management.

3. Understand the changes in energy use, labor, and profitability that accompany the above changes.
4. Based on accumulated observations, identify key indicators of sustainability and continue to monitor them well into the future.
5. Identify indicators that are “farmer-friendly” and can be adapted to on-farm, farmer-based monitoring programs, but that are linked to our understanding of ecological sustainability.

Each season, research results, site-specific ecological factors, farmer skill and knowledge, and new techniques and practices can all be examined to determine if any modifications in management practices need to be made to overcome any identified yield-limiting factors. Ecological components of the sustainability of the system become identifiable at this time, and eventually can be combined with an analysis of economic and social sustainability as well.

THINKING AHEAD

Converting an agroecosystem to organic management, as well as to sustainability, is a complex process. It is not just the adoption of a new practice or a new technology. There are no silver bullets. Instead it uses the agroecological approach described above. The farm is perceived as part of a larger system of interacting parts—an agroecosystem. We must focus on redesigning that system in order to promote the functioning of an entire range of different ecological processes (Gliessman 1998, 2001). As the use of synthetic chemical inputs is reduced and eliminated, and recycling is reemphasized, agroecosystem structure and function change as well. A range of processes and relationships begin to transform, beginning with aspects of basic soil structure, organic matter content, and diversity and activity of soil biota. Major changes begin to occur in the activity of and relationships among weed, insect, and pathogen populations, and in the functioning of natural control mechanisms. Ultimately, nutrient dynamics and cycling, energy use efficiency, and overall agroecosystem productivity are affected. Changes may be required in day-to-day management of the farm, planning, mar-

keting, and even philosophy. The specific needs of each agroecosystem will vary, but the principles for conversion can serve as general guidelines for working our way through the transition. It is the role of the agroecologist to work with the farmer to measure and monitor these changes during the conversion period in order to guide, adjust, and evaluate the conversion process. Such an approach provides an essential framework for determining the requirements for and indicators of sustainability. ☺

Reference list for this article available at www.ccof.org/newsletter/extras/agreferences-sg.pdf

After earning his doctorate in plant ecology at UC Santa Barbara, STEVE GLIESSMAN spent nine years in Latin America where he farmed coffee and vegetables in Costa Rica, ran a nursery in Guadalajara, Mexico, and taught and did



*research at a small college of tropical agriculture in Tabasco, Mexico. He was founding director of the Agroecology Program and teaches in Environmental Studies at UC Santa Cruz. Presently he occupies the Heller Endowed Chair of Agroecology at UCSC and has been a Kellogg Fellow. Gliessman has published extensively on traditional agriculture in Mexico, agroecology, and sustainable agriculture. His textbook *Agroecology: Ecological Processes in Sustainable Agriculture*, now appears in four languages. He leads short courses and training seminars in agroecology in many parts of the world. He also farms organic wine grapes and olives with his wife at their family ranch in Central California. Gliessman can be reached at gliess@zzyx.ucsc.edu or visit www.agroecology.org*

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PROFILE



TWO DOG FARM

By Ann Baier, CCOF Organic Inspector

IN AUGUST, I HAD THE OPPORTUNITY to inspect Two Dog Farm, a Central Coast Chapter farm located near Davenport, just north of Santa Cruz. Often at this time of year and day, a stiff cold wind and fog blow along this stretch of coast. I recall my first season of inspecting, shivering through an inspection near here at the end of July. But today, I sat with Nibby Bartle in their field of dry-farmed tomatoes on a plateau just south of the town of Davenport. Papers rustled only gently in the breeze as I reviewed her Organic System Plan and input records for the year. I looked up occasionally to gaze out across the blue Pacific Ocean.

This parcel is one of two leased parcels that make up Two Dog Farm. There are no buffer concerns here! The land drops off steeply on three sides, and on the fourth, no one is farming. No irrigation water is available. Is the lack of water a deterrent? Hardly. Nibby draws on 17 years of farming experience. Together with her husband

and farming partner Mark, they have learned to grow successfully in this environment. I imagine there has been a good deal of wisdom shared among other innovative CCOF certified organic farmers growing in this area.

There is clear evidence that Nibby and Mark have learned to work with the forces of nature. The tomato plants are dark green, vigorous, and loaded with fruit. They know when to plant and how to cultivate. Well acquainted with the wonderful flavor of dry-farmed tomatoes, they know that good tomatoes fetch a



price worthy of their quality at the Heart of the City Farmers' Market. Twice a week Mark makes the trek up Highway 1 and into San Francisco to sell their produce—vegetables and flowers—to appreciative city-dwellers on Wednesdays and Sundays.

Their marketing strategy consists of these two markets, and direct to retail sales at Santa Cruz's array of natural food stores. Nibby described the tomatoes as the crop that will pay for orthodontia and college. The vegetables and flowers provide for the daily needs of their family. Nibby and Mark have two children: Lily who is 3, and Miles who is now 8.

Paperwork complete, we proceeded north. We stopped briefly by the produce cooler which resides next to Swanton Berry Farm's produce stand where the south end of Swanton Road meets Highway 1. I

recommend this stop to anyone traveling anywhere in the region. As is my habit when in the area, I went into the historic building after our inspection was complete. I tasted the first and second year Chandler variety berries, labeled as such at Swanton's sampling table. Last time I came through, the sampling table had Seascape and Chandler varieties. While the Seascape variety is quite good when picked ripe—as they do—Chandlers still top the list. I confirmed my discerning taste recently when I spoke with a Swanton Berry Farm employee. In her obvious good taste, (and the opportunity to know the very best), she said "Oh, I only eat Chandlers." Is there such a thing as berry snob? So, I picked up a few baskets of the sweet, flavorful, smaller second-year Chandler berries, and left my money in the basket. Honor system. It still works. Now, with that diversion, I will leave you with one emphatic recommendation for visiting Swanton Berry Farm's stand: Buy more than two baskets. Otherwise, you won't have any left by the time you get home!!

Two Dog's other parcel is located next to Waddell Creek Beach and Marsh (part of Big Basin State Park), behind a locked gate just past the Nature Center. Going in to this land made me smile at its beauty. Rich dark bottomland and the most aesthetically pleasing planting arrangements. On the way we passed some fields that are part of Route 1 Farm (also CCOF certified), planted in gorgeous rows of different colors of lettuces and other greens. All the plants were neatly spaced on long beds that followed the contour of the gentle slope, all expertly cultivated. Two Dog's parcels are



an absolutely gorgeous array of sunny sunflowers, zinnias, snapdragons, lettuces and cabbages and several other varieties. Two healthy smiling young guys said hello as they finished putting in transplants and moved sprinkler pipe into place. This acre and a half of rich soil receives the luxury of irrigation. However, the hillside portion adjacent to this field is planted in dry farmed tomatoes, as well as dry farmed winter squashes and pumpkins, all thriving and setting fruit that will carry the farm's harvest well into the fall.

Nibby walked through the trials of a dozen or more different tomatoes, at least half a dozen squashes. I asked about their pest prevention and any materials used. Nibby described their rotation and strategies that keep plants strong and help prevent disease. She said, "If you are looking at spraying copper, you're already on your knees." That's one way of describing the circumstances for use of a "regulated" material (which they have not had to do for a couple years now). Nibby's comment demonstrates the ecological systems-approach thinking that is behind the actions described in NOP section 205.206, that "the producer must use management practices to prevent crop pests, weeds, and diseases." They are also well aware of minimizing the risk of erosion. Nibby says that dry farming along this slope reduces that possibility. In the winter, this ground will be protected by a soil-enriching cover crop.

Nibby's quiet observations make it obvious that she is not new to this profession. Another great part of the visit was hearing the change in her tone of voice as she came



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across the beginning flowering of a new variety of sunflower she planted this year. Experience, knowledge of plants, weeds, diseases, insects, keen observation, skillful use of equipment, creative marketing, ability to make a plan, and the capacity to adapt to the changing reality of circumstances are all critical elements for farming successfully. Still, of the many things that motivate and enable people to farm, I think that taking delight in seeing things grow is essential.

It's not part of my inspection protocol, but I asked anyway. "So, is farming compatible with parenting?" Nibby said she doesn't know how she'd do it otherwise. "I drop Lily off to play at that house" (she indicates to the house up the hill just above the other dry farmed tomato field). The other day, Nibby said, her daughter came out on the deck at the house above.

"Hi Mommy!"

"Hi Lily!" she called back from the field, and continued her work.

I do hope that USDA's Natural Resources Conservation Service (NRCS)'s new Conservation Security Program comes through for farmers nationwide, so that all those who have been practicing good farm stewardship can be rewarded. I think that there is great potential for the organic community can work closely with NRCS when that time comes. There is a striking commonalities among the goals of natural resources conservation, the requirements of the Conservation Plan required for NRCS programs, and the Organic System Plan required by the NOP for all certified oper-



ations (as outlined in NOP section 205.201, together with nutrient management, erosion control requirements described in sections 205.203 (c), 205.203 (d), 205.205, and 205.207).

No one can legislate attitude or belief. The NOP addresses only actions and use of materials related to organic farming practices. But I can say with certainty that character, belief, and attitude sure help. I have found that overwhelmingly, organic farmers believe in their work and their approaches. They rely on their experience, develop awareness, and work with the actual nature of their environments. And in so doing, they will do much better than those who think they have to fight nature all the way.

I wish I could bring some of those folks who have to sit in agency offices out to see these farms. Any old notions that organic farming is about unkempt weedy fields and bug-infested produce would crumble. And they would meet some innovative and dedicated people who represent some of the rich diversity of organic farming in this country. For all the challenges and changes that the National Organic Program brings, I like their basic definition of organic production: "A production system that is managed...to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity." Two Dog Farm is one of several farms along this coast that is both beautiful and a productive manifestation of an agriculture that is well adapted to its environment. ☺

Photos courtesy of Ann Baier



FOCUS ON FOOD

Apples

FALL'S FRESH FLAVOR

By Lisa M. Hamilton

HISTORY

Let's start by clearing the record: the whole fall-of-the-Garden-of-Eden thing was not the apple's fault. For one, the Bible does not mention an apple specifically; it is possible the fruit was not even known in the Middle East when Genesis was written. That is not to say that apples are not a symbol of pleasure—even the earliest societies recognized that fruit and honey are nature's most tangible embodiments of joy. They planted orchards to harness the wild versions, and ever since, apples have been associated with love, luck, fertility, health, and wisdom. But blame the fruit for being tantalizing? That is our fault—we are the ones who made it taste so good.

The progenitor of today's edible fruit, *Malus X domestica*, is thought to be one or a mix of the wild apples native to Western Asia and Europe. While possible ancestor *M. sieversii* is sweet, the sour fruit of most wild apples encouraged early farmers to tame the trees for taste and beauty. As early as 5000 B.C., Chinese diplomat Feng Li had to resign his position due to an obsession with grafting apple and other fruit trees. Alexander the Great moved some of the dwarfed varieties of Central Asia to Greece in 300 B.C., and by 79 A.D., Pliny the Elder described 20 varieties in his *Natural History*.

By 1903, there were 7,000 varieties of apples growing in the United States. By 1983, more than 6,000 of those were extinct. Today, 10 kinds make up 90% of U.S. production, and the centuries-old orchards of the Northeast are declining as

California and Washington take over the market. So what happened? The short answer is that the few varieties we know best are uniform in size and color, and tough enough to store for months and ship around the world. What has been sacrificed is taste.

Tim Bates of The Apple Farm in Philo, CA, grows nearly 80 varieties—no Red Delicious, he is proud to note, but plenty Duchess of Oldenburg, Ashmead Kernel, and Rhode Island Greening. He adds one or two varieties each year, coaxed by stories of perfect pies that someone's grandmother used to make from these special apples. In its variety, his orchard is proof of how complex and specific apples are. Some ripen perfectly in the Andersen Valley's hot summers. Others, like his Westfield Seek-no-further trees, prefer cool Julys and so produce a good crop maybe every five years. While his friend in Sonoma grew Calleville Blanc D'hiver apples that tasted great, they came out mushy over the mountains at Bates' place. You never know if a tree will work, he admits. But when it does, you realize what delicious really is.

GROWING

When you plant an apple seed in the ground, the tree that arises will not necessarily be identical to the one that bore the seed. However, you can decide a tree's identity by grafting a branch from a desired variety onto an existing rootstock—it has happened since even before old Feng Li. This simple technology has enabled growers to tailor trees to an orchard's microclimate. In turn, apples can now grow nearly anywhere, even in places that might have seemed impossible centuries ago.

Still, bound by basic genetic material, all apples maintain some elemental traits. They bloom late, which allows them to grow farther north than most fruits without danger of cold-temperature damage to blossoms and fruit. All require a modicum of winter in order to meet chilling require-

ments, the certain time spent below 45° F during which the tree rests. All rely on bees for pollination and taste best when picked at peak ripeness. But beyond that, it is a matter of variety—and opinion.

Take thinning. The idea is to eliminate some percentage of the fruit to direct the tree's energy into a crop that is well-sized and as sweet as possible. Even the largest orchards thin, but most perfunctorily; others, such as Bill Denevan of Happy Valley, take extra care. "It's like we're creating a piece of art," he says. "We go crazy." He and his workers begin in spring, thinning blossoms; following are a light thinning for the young fruit, a heavy-handed thinning mid-season, and a clean-up thinning that leaves only perfect Fuji apples. He even prunes mid-season, "so the sun shines all around the apples." Most growers would not bother, but Denevan swears it makes the difference between Fujis that simply taste okay and, well, his.

Water is another variant. Denevan waters his Fujis in Watsonville only twice a season, for less water means less foliage, and thus more energy to the fruit. With no irrigation in his orchard of Pippins and pears, he relies on rain. But then, his trees are older varieties with deep root systems planted in a

wet area. Plus, they are planted on clay soil, which acts "like a reservoir." By contrast, orchards in the Central Valley have sandy soil that acts like a sieve, and their dwarf trees (essential for intensive commercial planting) have shallow roots. For this, they need frequent watering, especially

in the hot summer months.

Fertilizing is a matter of choice. Some think too much nitrogen encourages foliage growth to a fault, making for smaller fruit and disorders such as bitter pit. Others, including Tim Bates, swear by cover crops and compost. Industrial-sized orchards have no choice: their soils so depleted from intense cultivation that the trees cannot survive without supplemental nutrients.

*What plant we in this apple-tree?
Sweets for a hundred flowery springs
To load the May-wind's restless wings,
When, from the orchard row, he pours
Its fragrance through our open doors;
A world of blossoms for the bee,
... We plant with the apple-tree.*

-William Cullen Bryant
The Planting of the Apple Tree

Along the same lines, larger orchards have greater issues with diseases, damaging insects, and weeds. Common large-scale conventional practice includes fumigating the soil before planting to rid it of nematodes and lingering diseases, spraying pesticides throughout the year to control insects, and laying down weeds with repeated herbicide applications (see below).

Small farms fall prey to the same problems, but the methods of control, especially on organic farms, are quite different. They control weeds by mowing and cultivating. They plant cover crops to increase water filtration, reduce soil compaction, fertilize, and attract beneficial insects. Some even build homes to attract owls, which eat the rodents that damage young trees. They use biological sprays and parasites to control pests such as leafrollers and San Jose scale, and boost tree health naturally so they can fight insects on their own (or at least withstand damage). There is even a county-wide alarm system around Watsonville, a sort of phone chain that alerts farmers to when codling moths will likely mate so they can set traps. But that is a story unto itself.

CODLING MOTH

If you have ever been unfortunate enough to discover a worm in your half-eaten apple, then you know what a codling moth is. And if you are an apple or pear farmer, you have likely laid awake at night, obsessing like Captain Ahab about how to conquer the damned things. They would be harmless enough, tiny moths whose copper-rimmed wings span less than an inch—if only they did not reproduce. But they do, up to three generations a season, each round bringing larvae that bore through developing fruit. Hosting a codling moth quickly renders fruit unmarketable, not just for its unsightly holes but for the rot they promote. Catch it early and the fruit can go to the cannery; too late, and it is pure loss.

Farmers who apply chemicals have obvious recourse: spray the hell out of the apples—three to six times a year. But the codling moth has fooled them, developing resistance to insecticides and demanding that farmers—organic and not—pay more attention.

Cultural practices provide some control but are labor-intensive. Fruit where pupae can overwinter must be cleaned up and buried. Bark must be covered in burlap or

cardboard to prevent gestation within.

During the season, some farmers take the time to inspect for codling moths while thinning, then cull the fruits and destroy them. But because one moth can lay up to 40 eggs, and the cycle can repeat itself three times a season, it takes a real commitment. Some choose to have the parasitoid *Trichogramma platneri* do the work for them, preying as it does on codling moth larvae, but even huge doses of them—200,000 per acre per week for three months—usually cannot control the moth alone.

The most effective control is that which starts at the source. Codling moth copulation happens when the male tracks down the female by her pheromone, a scent like an airborne path leading to her fecund body. When mating begins, farmers can confuse the sorry males by releasing a cloud of like pheromones (one puff equal to the scent of seven to 10 million moths), rendering the real female's trail just one anonymous enticement in a sea of perfume.

Between culling, pruning, and pheromone release, Bill Denevan has reduced his codling moth damage from a crippling 20% a decade ago to 1% today. Because scab is Tim Bates' main peril, he relies on pheromones alone to control his codling moth population, and reports 6–9% damage. And even that is not a total loss. When the fruit has been hurt but not the flavor, the apples simply go toward value-added products without cosmetic demands. In a northern version of the old lemons-to-

lemonade adage, when life gives him codling moths, he makes apple cider vinegar.

NUTRITION

Yes, an apple a day will keep the doctors away, but not for the obvious reasons. Apples are not nutritional powerhouses, though they do contain small amounts of minerals such as potassium, magnesium, and calcium and Vitamins A, C, and B-complex. (Unfortunately, these are easily lost; Vitamin C in cooking, and Vitamin A in drying.) The fruit's real benefit is its high content of pectin, a fiber used to coagulate jam. That gel-forming property benefits the gastrointestinal tract by both improving the muscle's ability to propel waste, and attaching to and guiding out toxins, even mercury and lead. On top of that, pectin lowers cholesterol and promotes weight loss.

More of apples' gifts to the digestive system include malic and tartaric acids, which ferment and inhibit disease-producing bacteria in the intestines. Plus, the whole body benefits from the anti-cancer properties of raw apples' ellagic, chlorogenic and caffeic acids. It is true, though, that the seeds contain trace amounts of cyanide, and so should not be eaten in quantity. Likewise, raw apples can be too good for you, causing digestive trouble when eaten too many, too often. So track down a perfect Fuji, or a Cox's Orange Pippin if you can find it, and while you savor its juicy flesh, thank Eve for taking that first bite. 🍏

As American as Pesticide Residue?

MAYBE THOSE KIDS WHO GAVE THEIR TEACHERS APPLES WERE NOT SO SWEET AFTER ALL. Maybe they already knew what the Environmental Working Group found in its 1995 report: apples have more kinds of pesticides on them than any other fruit or vegetable—36, to be precise. What's more, the EPA identified eight of those as possible or probable human carcinogens and 15 as neurotoxic organophosphorous compounds. Not as rosy as we thought.

The USDA's 1999 survey of 11 apple growing states found that insecticides were used on 97% of the acreage, fungicides from 80–99%. Chemicals are used to control several things, but the primary targets are codling moths and apple scab spores. For codling moth, the chemicals of choice are Azinphos-methyl and Chlorpyrifos. The former is being phased out for acute toxicity, meaning a likely increase in the use of Chlorpyrifos. Like all organophosphorous compounds, it inhibits the body's production of cholinesterase (an enzyme essential to the nervous system) and in turn can cause poisoning and death.

While the most common fungicides, sulfur and lime sulfur, are approved for organic use, a 1994 study showed sulfur was responsible for the highest number of farmworker injuries in California. Used up to once a week or every time it rains (whichever is more often), and in great quantities, sulfur causes skin and eye poisonings in workers who encounter its potent residues. Of course, it remains preferable to the top non-approved fungicides—in California that would be Mancozeb, a carcinogen and developmental/reproductive toxin.

YOUR BODY



ORGANIC COSMETICS AND YOU

By Gay Timmons
Handler/Processor
Chapter President



“ORGANIC” has moved beyond the farm, beyond the food processor and into the world of body care...how much do you care for your body?

Whenever I write an article I like to identify my audience. In preparing this article for *The Newsletter of CCOF*, I realized that, even though many of the readers are growers and processors of organic products, all of us (hopefully) use soap, shampoo, lotions, and other body care products. So, while you may benefit from this emerging use for organic agricultural ingredients as a producer, you will also be affecting your body and health by the products you use every day.

This article will look at what is happening out there in the “organic view” of the personal care world—and what it means for the organic industry—growers, processors, and consumers.

THE WORLD OF CONSUMER DEMAND
Americans assume that our government protects us—sort of. We all know that they dropped atom bombs on sheep and their farmers before WW2 and gave them cancer; we know they let a major pharmaceutical company damage people’s hearts with Phen-Phen...but for some reason most people think that if they buy a product off the shelf it should have some governmental blessing of safety. After all, what does FDA get paid to do with our tax dollars?

What they are *not* paid to do is monitor how much of any given organic ingredient is in a cosmetic. They are also *not* paid to monitor what other questionable chemicals are in that product. This means that, as of

today, body care products claiming to be “organic” can have a milliliter of an organic ingredient in them and the rest be filled with some of the most toxic ingredients known to man, woman, or child.

THE BIG BAD GOVERNMENT...

...is actually pretty good—considering... The National Organic Program office has committed to address organic cosmetic claims—to state minimally that if they say there are “organic” ingredients that they must be from a certified agricultural source. Score one for the farmers—but, there are no rules at the federal level, yet, about a minimum content required before that claim is made. One could put a hundredth of an ounce in and it would be a true “organic” statement. This is to be addressed by an NOSB sub-committee whose reported task it will be to assess issues affecting organic body care products and make some recommendations for standards to the NOP.

On the State of California side, AB 2823 is moving through the legislature—it will set a minimum of 70% organic content before an “organic” claim can be made, although the other potentially toxic ingredients can still go in the bottle.

WHAT DOES THIS DO FOR ORGANIC GROWERS AND PROCESSORS?

The passage of AB 2823 will create a whole new market for organically grown and produced ingredients. There will be a potential to sell everything from organic walnut shells to olive pits to dried aromatic herbs. Personal care companies that have created and promoted organic labels are growing at the rate of 30% plus per year. As consumers learn more and care more, they are asking for “cleaner” body care products. This is the promise of a new and creative outlet for organic growers and processors. Stay tuned to the possibilities.

WHERE DOES THIS LEAVE THE CONSUMER?

Get informed and share your knowledge. Look at the list of frightening ingredients (*facing page*) and try to protect your family from products that contain them.

- Write a letter to the state and to the NOP about these issues.

- Ask for cleaner products at the store—and then ask again. Consumer demand drives the market.
- Ask your CCOF Chapter representative to include discussion about personal care products as part of the CCOF certification effort.

Most of all—read labels and become familiar with what you are putting on your body. The skin is the largest organ you have—and it absorbs minimally 40% of what you put on it. The very idea of putting petroleum products on my children’s skin frightens me for their future. Let’s get the oil fields out of personal care products and get organic fields into them! ☺

Update

During the last week of the California legislative session, the State passed a series of amendments to the California Organic Foods Act of 1990 (COFA). These amendments will:

- Allow the creation of a full enforcement program for the USDA/NOP.
- Prohibit the use of the word “organic” on the front label of personal care products with less than 70% certified organic product.
- Let Californians take the “Grown and processed in accordance with...” statement off of labels.
- Allow the State to offer mediation services for disagreements between certifiers and certified parties.
- NOT allow the State to certify products or operations.

California Department of Food and Agriculture (CDFA) and Department of Health Services (DHS) will apply to USDA/NOP as “State organic programs” in the next few weeks.

The expanded oversight of “organic” label claims is expected to expand the market for growers and processors. The public may view the new law on the web at: www.leginfo.ca.gov and enter AB 2823 and/or contact Ray Green, CDFA California Organic Program Manager: 916-654-0919.

NON-ORGANIC COSMETICS AND YOU

By Gay Timmons, Handler/Processor Chapter President

AFTER HAVING MY FIRST CHILD, I STARTED READING THE LABELS OF EVERYTHING I used on her perfect little body. I tossed the baby powder because it was talc (acts a bit like asbestos on the lungs). I banned baby oil because it was mineral oil (a petroleum derivative, blocks pores, damages skin). I bought only soaps that were "glycerin" because I (mistakenly) thought that all the other soaps were full of animal fat and horse hooves. Then I got rid of all the bleach and fabric softener in the house. Why? Every one of those products contains toxic ingredients. Why would I use them on an infant? Why would I use them on myself? Why would you use them on yourself?

Here are a few of the really bad ingredients...and a brief explanation that tells why.

ALUMINUM: Found in antiperspirants, cosmetics, aspirin and processed foods—links between Alzheimer's and the toxicity of aluminum.

AMMONIUM CUMENE SULFONATE: Derived from coal tar or petroleum, used as a solvent.

BUTYLENE GLYCOL: See *Propylene Glycol*.

CETYL ALCOHOL: Found in spermaceti, derived from the head of the sperm whale.

COLLAGEN: Protein substance found in connective tissue, derived from animal tissue.

DEA (diethanolamine): Hormone-disrupting chemical known to be carcinogenic. Restricted in Europe, but still readily available in the United States. Used as emulsifiers and foaming agents in shampoos, shaving creams and bubble bath. The FDA is currently investigating.

DMDM Hydantoin: See *Urea*.

FABRIC SOFTENERS: See *Quaternary Ammonium Compounds*.

FD&C COLOR PIGMENTS: Synthetic colors made from coal tar, containing heavy metal salts that deposit toxins onto the skin. Studies have shown almost all of them to be carcinogenic.

FRAGRANCES, synthetic: Chemical components found in pure essential oils are duplicated synthetically and used widely in the perfume and fragrance industry. Often contain animal urine or feces, and many are toxic or carcinogenic. Can affect the central nervous system, causing depression, hyperactivity, irritability and other problems.

HYALURONIC ACID: A protein found in umbilical cords, sperm, testes, and the fluids around the joints, used as a cosmetic oil.

ISOPROPYL ALCOHOL: Prepared from Propylene, a petroleum by-product. A drying, irritating, dehydrating solvent that strips the skin's moisture, encouraging bacteria, molds, and viruses. Used to make antifreeze, it is found in many skin and hair products. May cause headaches, nausea, depression, and vomiting. Fatal ingested dose is one ounce or less.

MEA (monoethanolamine): See *DEA*.

MINERAL OIL: Petroleum derivative. Clogs the pores and blocks the skin's ability to eliminate toxins.

PARAFFIN: Petroleum wax obtained from the residue of gasoline and motor oil.

POLYETHYLENE GLYCOL (PEG): A product of petroleum gas or dehydration of alcohol, widely used in hand lotions.

PROPYL ALCOHOL: A synthetic substance derived from crude fuel oil.

PROPYLENE GLYCOL (PG): A petroleum plastic used in everything from deodorants, to lipstick, to baby lotions. The EPA considers PG so toxic that it requires workers to wear protective gloves, clothing, and goggles in order to avoid brain, liver, and kidney damage. In 1992, the FDA proposed a ban on PG, but this ingredient is still allowed in concentrations up to 50 percent with no warning label. PG is the main ingredient found in antifreeze and brake fluid.

QUATERNARY AMMONIUM COMPOUNDS: (Fabric Softeners): Synthetic derivatives of ammonium chloride widely used in deodorants, shampoos, hand creams and other personal care products.

SODIUM LAURYL SULFATE (SLS) & SODIUM LAURETH SULFATE (SLES): Detergents and surfactants used as foaming agents in car washes, garage floor cleaners and engine degreasers. Abundantly used in personal-care products such as shampoos, lotions, bubble baths and toothpastes. Prolonged use poses serious potential medical problems including eye damage, skin irritations, depression, labored breathing, weakening of the immune system, and cancer.

SQUALANE: Unless it says Olive Squalane (which is derived from olives), this ingredient has traditionally been obtained from shark liver oil. Also found in human sebum, a fatty matter secreted by certain glands in the skin.

TALC: Chemically similar to asbestos, a known cancer causing agent. Found in baby and body powders; and as a lubricant in condoms, resulting in fallopian tube fibrosis and infertility. An *American Journal of Epidemiology* study found talcum powder to cause increased risk of ovarian cancer and urinary tract disorders.

TALLOW: The fat from the fatty tissue of bovine cattle and sheep in North America. Used in shaving creams, lipsticks, shampoos, and soaps.

TEA (triethanolamine): See *DEA*.

TRICLOSAN: A synthetic antibacterial ingredient, registered by the EPA as a highly toxic pesticide. With a chemical structure similar to Agent Orange, this carcinogenic, hormone-disrupting chemical is widely found in popular antibacterial cleansers and hand washes, toothpastes, deodorants and household products. Potential problems include birth defects and liver, kidney, brain, heart, and lung dysfunctions.

UREA (Imidazolidinyl): A product of protein metabolism excreted from human urine. Used as a preservative. The second most identified cosmetic preservative causing contact dermatitis, according to the American Academy of Dermatology. Often releases formaldehyde which may cause joint pain, skin reactions, allergies, depression, and an assortment of medical problems. Carcinogenic.

URIC ACID: The end product of nitrogen metabolism of birds and scaly reptiles.

***Sources:** *Consumers Dictionary of Cosmetic Ingredients*, U.S. Dept. of Health & Human Services' National Toxicology Program—NTP.

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ORGANIC AGRICULTURE TAKING ROOT AT CAL POLY, SLO



By Hunter Francis

IN THE SPRING OF 2000, CAL POLY State University in San Luis Obispo offered its first ever course in Organic Agriculture. Taught as an “experimental” course and co-coordinated by Dr. John Phillips (Crop Science), Dr. Tom Ruehr (Soil Science) and Hunter Francis (a graduate student in Soil Science), this introductory-level course explored the fundamental aspects of organic agriculture, including its history, production, certification, and marketing. The course was unique since it was taught largely by guest lecturers. Students had the opportunity to learn about the topic first hand from leading organic growers, researchers, certifiers and inspectors. Speakers traveled from as far as Marin County to participate in the course and brought with them a wealth of information to the benefit of both students and faculty in attendance. The course was offered again successfully in the spring of 2001. In that offering, it was expanded to include a hands-on, field-oriented laboratory component.

Cal Poly is pleased to announce that in May of this year, Organic Agriculture (now AG 315), was approved for General Education credit. In the future, most Cal Poly students (especially those outside the College of Agriculture) will be able to take the course to fulfill a degree requirement. Enrollment in the course is expected to increase significantly as a result. Previously, the course was popular with agriculture students and “non-ag” students alike, but was taken as an elective only and not applicable to specific graduation requirements. The new status of the course makes it one of the few full-fledged university offerings dedicated specifically to organic agriculture in the country and an important addition to one of the nation’s largest undergraduate programs in agriculture.

The development of the Organic Agriculture course is part of a wider movement at Cal Poly to increase campus and community awareness about organics. The Student Experimental Farm, established in 1989 and CCOF certified since 1995, has served as the primary venue for student projects in organic agriculture in the past. In the fall of 2000, the Sustainable Agriculture Resource Center (SARC) was established, in part, to help coordinate Student Farm programs. Initiated by a small group of College of Agriculture students and faculty, the SARC is dedicated to promoting sustainable food and agricultural systems, and now receives support from dozens of Cal Poly staff and faculty involved in SARC programs. Helping the university respond to the burgeoning role of organic agriculture in the food production industry by developing curricula (such as AG 315), providing professional training for future managers of organic operations, expanding research in organics and improving the Student Farm as a model demonstration site is a priority of the SARC workgroup.

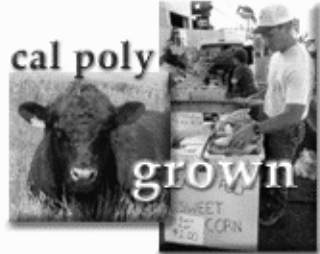
One of the most successful SARC/ Student Farm projects in recent years has been Cal Poly’s Community Supported Agriculture (CSA) program. Initiated in June, 2000 by SARC co-founder and then Student Farm Manager, Terry Hooker, the CSA is now in its third season and pro-

vides weekly, fresh organic produce for 40 memberships. The CSA is run by students enrolled for credit in Cal Poly’s hands-on Student Enterprise for Organic Vegetable Production under the direction of the current Farm Manager, David Beller. In addition to the CSA and the Enterprise project, the Student Farm has been the home to numerous SARC workshops, seminars and Extended Education classes on a wide range of topics, including Biodynamics, Permaculture, market gardening, nutrition, strawbale building and agricultural education for youth.

The creation of the Campus Sustainability Initiative (CSI) at Cal Poly earlier this year has helped link SARC to a larger network of people and organizations who are interested in promoting sustainable practices on campus through education, conservation of resources, and the protection of health and the environment. New friendships are being formed across disciplinary lines that are assisting the SARC in providing a focus for sustainability within the College of Agriculture. These and older relationships are very valuable to SARC since much of its support and funding to date has come from outside sources. We are especially grateful to CCOF and many fellow CCOF members who been exceedingly generous with their time and support, and have helped make these new initiatives possible. Thank you all! ☺

For more information about SARC and the Cal Poly Organic Program and ways you can support them, please contact:

Hunter Francis, *Program Coordinator*
Sustainable Agriculture Resource Center
c/o Horticulture and Crop Science Dept.
California Polytechnic State University
San Luis Obispo, California 93407
(805) 756-5086; sarc@calpoly.edu



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WORLD WIDE WEB

ORGANIC INTEGRITY ONLINE

THE NEW CCOF WEBSITE

WITH THE COMING IMPLEMENTATION of the USDA National Organic Program, and the overall increase of business within the organic industry, it was time to make a few more changes at CCOF. In order to provide greater access to documents and information, both for CCOF certified clients and the general public, CCOF Marketing recently redesigned the website for California Certified Organic Farmers, located at www.ccof.org



After some months of reviewing design options and layouts for the site, CCOF launched a completely redesigned website in August. This new site features a revised edition of CCOF's "Organic Directory," an organic search engine to locate certified organic products, farms, and services in California, throughout the U.S., in Canada, and Mexico. It is the online version of the annually printed *CCOF Membership Directory*.

The new web site easily enables farmers, producers, consumers, retailers, the media, and other interested organizations and businesses to find information on organic agriculture, organic food, organic certifica-

tion, the new National Organic Program, and organic nutrition and health. With the help of the searchable Organic Directory, visitors can find CCOF certified organic farms, processors, handlers, packers, or retailers. In addition, visitors can search for CCOF certified organic crops, livestock, processed organic products, or organic business services. The use of the CCOF web site and the CCOF Organic Directory search engine is free of charge.

"CCOF has always emphasized organic education and outreach, and with this new web site everyone can access superb organic information right here, on one site, just a mouse-click away," says Helge Hellberg, Marketing and Communications Director for CCOF. "Our goal is to re-establish a connection, a better understanding, a dialog, between the consumer, the organic farmer, and the retailer. This new site will help us accomplish this goal," Hellberg adds.

LAYOUT OF THE NEW SITE

The front page of the new website allows the visitor to either enter the website, or view a five-minute video about organic, in which Miguel A. Altieri of UC Berkeley, Judith Redmond of Full Belly Farm, Carl Rosato of Woodleaf Farm, and CCOF President Brian Leahy are all interviewed. Once inside, the new website has been divided into two sections: CCOF Certification and CCOF Foundation. Two lists of links for both sections are available on the screen at the same time. Other important links are located at the bottom of the lists.

CCOF CERTIFICATION

Here visitors and certified clients can access:

- the **Seven Steps to Certification**
- information on becoming **CCOF Certified Transitional**
- the **Chapter Map** with RSR (Regional Service Representative) contact info
- a comprehensive page with the CCOF **Application**, Certification Affidavit, certification manuals, and every **OSP (Organic System Plan)** page, and
- the **Certified Clients Corner**

The Certified Clients Corner offers information to CCOF certified operations regarding various aspects of the CCOF certifica-

tion program, the USDA National Organic Program standards, and CCOF International certification under our accredited IFOAM program (the International Federation of Organic Agricultural Movements). It was created to answer some frequently asked questions and offer for download some of the most often needed forms.

INFORMATION IN THE CERTIFIED CLIENTS CORNER INCLUDES:

- Add acreage/parcels/products/processes
- Assessment fees
- Buffers
- Certification manuals
- CCOF contacts
- Certificates
- Certified transitional
- Clopyralid
- Commercial availability
- Compost
- Fertility
- Genetic engineering
- IFOAM/CCOF International Standards
- Inspections
- Integrated Pest Management (IPM)
- Labeling
- Manure (raw and processed)
- Materials/OMRI List
- National Organic Standards Board (NOSB)
- Organic System Plan (OSP)
- Parcel Transfer
- Pesticide Drift
- Pheromones
- Post-Harvest Handling
- Renewal Contract/Fees
- Regional Service Reps (RSRs)
- Seed (Treated)
- Strawberry Crowns
- Trade Association
- Transplants
- USDA/NOP
- Water Use
- Withdraw Parcel/Operation



CCOF staff will add new information and pages to the Certified Clients Corner as needed. Staff will also add each Certification Corner article and Handler Highlights article from recent issues of *The Newsletter of CCOF*.

CCOF FOUNDATION

The CCOF Foundation offers programs for farmers, consumers, educators, and researchers to increase awareness of and demand for certified organic products and to expand public and governmental support for organic agriculture.

The Foundation portion of the website contains a variety of information directed mainly at the consumer, but is also of great use to certified clients.

Here, visitors can:

- become a **CCOF Supporting Member**
- search the **Organic Directory** of CCOF certified clients and services (formerly the Find-A-Farmer search engine)
- read and download the online version of *The Newsletter of CCOF*
- read the **Industry News Briefs**, including reports on organic vs. conventional produce, updates on the Glassy-winged Sharpshooter and Pierce's Disease, organic industry news, and other news of agriculture from around California, the nation and the world
- read about agricultural genetic engineering and get CCOF's **GE Report**
- take action against the untested and unregulated release of agricultural biotechnology into our environment and our bodies at our **Action Alerts** page, including links to state and federal government websites (executive and legislative branches)
- view the **Apprenticeship List** to search for a rich learning experience with a CCOF certified business



- explore the **Classifieds** for land for sale or lease, employment opportunities, equipment for sale, etc.
- peruse the **Calendar of Events**
- visit the **CCOF Store** to purchase a CCOF t-shirt, hat, bumper sticker, or supplies for certified clients (signs, stickers, twist-ties, stamps, etc.), and

continue your journey in the organic community at our **Organic Links** page.

ODDS AND ENDS

Want to learn more about CCOF, its structure and history?

Then simply visit the **About CCOF** page at the end of the list of links on the left.

Need to contact a staff member or a Regional Service Representative?

Click on **Contact CCOF**.

Want to work for CCOF?

We would be honored! Visit **Employment with CCOF**.

The staff of CCOF has worked long and hard on this exciting new website. We had a lot of fun putting it together and we hope you enjoy it and find it very useful. If certified clients and the general public have questions, comments, or suggestions about the website, please send e-mail to:

webmaster@ccof.org

Thank you for supporting CCOF!

We appreciate your confidence in CCOF and belief in its mission! ☺

Government Links on the Action Alerts page at www.ccof.org

STATE GOVERNMENT

- California Homepage—Links all state agencies
- California Department of Food and Agriculture (CDFA)
- California Department of Pesticide Regulation (CDPR)
- California State Assembly
- California State Senate

FEDERAL GOVERNMENT

- The White House—Links all state agencies
- United States Congress
- THOMAS: A Service of the Library of Congress—U.S. Legislative Information on the Internet
- U.S. House Committee on Agriculture
- U.S. Senate Committee on Agriculture, Nutrition and Forestry
- United States Department of Agriculture (USDA)
- Food and Drug Administration (FDA)
- Environmental Protection Agency (EPA)
- National Organic Program (NOP)

1973 ~ 2003

Celebrating 30 Years of Leadership in the Organic Community

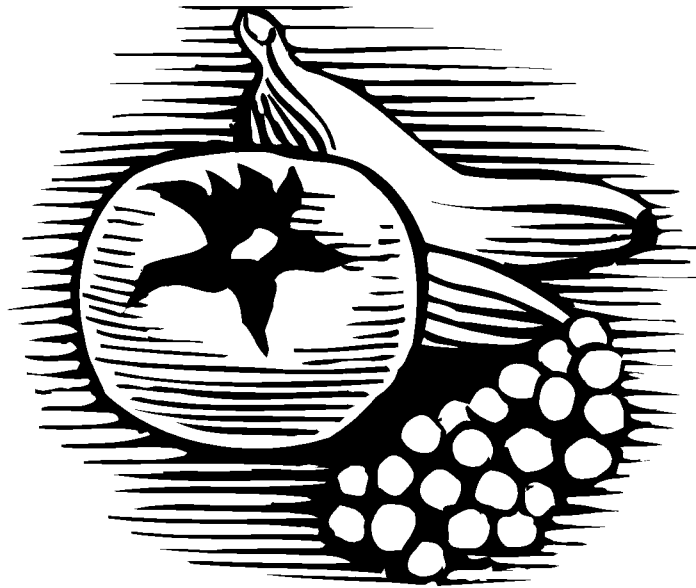
CCOF will celebrate its 30th Anniversary of organic certification, integrity, and advocacy in February 2003 at the Annual General Membership Meeting, hosted by the Sierra Gold and Processor/Handler Chapters of CCOF.

CCOF will also publish a special 60-page full-color Anniversary Issue of *The Newsletter of CCOF* in January 2003. Watch for it in your mailbox in the New Year!

Detailed information about next year's Annual Meeting will be published on the CCOF website (www.ccof.org) and in the 30th Anniversary Issue of *The Newsletter of CCOF*.

We hope you'll come celebrate with us!





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BECOME A CCOF SUPPORTING MEMBER

support the roots of certified organic food and agriculture

There are many important causes in this world that need and deserve our support. CCOF's Certified Members, Supporting Members, and staff believe that one of these causes is organic food. CCOF has been working for three decades to increase public awareness of and demand for certified organic products, and to expand support for sustainable agriculture. CCOF has a long history of helping implement organic legislation, and emphasizes public education on the benefits of organic food for our own health, the health of our children, and the health of our planet.

Please help ensure that CCOF continues to be a leader in the organic movement. CCOF offers different supporting membership levels and benefit packages for both individuals and businesses. Please select your membership level, and decide how much you would like to contribute. Become a Supporting Member today. For more information visit our website at www.ccof.org or call CCOF toll free at 1-888-423-2263.

SUPPORTING MEMBERSHIP LEVELS AND BENEFIT PACKAGES

	INDIVIDUAL	BUSINESS
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CONTRIBUTING	\$75 to \$249 Receive our Newsletter, organic cotton T-shirt, Membership Directory, listing in the Membership Directory, and Bumper Sticker	\$250 to \$499 All of the above plus a one-time 1/12 page space for your advertisement in the Newsletter
SUSTAINING	\$250 to \$499 All of the above plus a one-time listing in the Newsletter	\$500 to \$1,249 All of the above plus a one-time 1/8 page space for your advertisement in the Newsletter (instead of a 1/12 page ad)
LIFETIME	\$500 and over All of the above plus a one-time listing with picture in the Newsletter, CCOF Supporting Member Sign, and Lifetime Supporting Member Certificate	\$1,250 and over All of the above plus a one-time full page space for your advertisement in the Newsletter (instead of a 1/8 page ad), CCOF Supporting Member Sign, and Lifetime Supporting Business Certificate
AG ADVISOR	—	\$50 Receive our Newsletter, Membership Directory, Handbook, and Bumper Sticker
STUDENT/ LIMITED INCOME	\$20 Receive our Newsletter and Bumper Sticker	—

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 Contributing Business \$250 to \$499
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 Student/Limited Income \$20
- T-shirt color:* Natural Granite Sage
T-shirt size: S M L XL

Please select your membership level, include a check payable to CCOF, and mail to: CCOF, 1115 Mission St., Santa Cruz, CA 95060-3526.

NEWS BRIEFS



NEWS OF THE GLASSY-WINGED SHARPSHOOTER

LOCAL ASSESSMENTS WIN BIG!

The Napa Valley Grape Growers Association reports that the local Glassy-winged Sharpshooter assessment, known as the Napa County Winegrape Pest and Disease Control District, passed with 87.5% of the ballots cast in favor of the tax. This assessment, in its first year, is \$4.51/planted acre (max. \$20/acre). This assessment will help local and state budgets deal fiscally with the PD/GWSS problem.

STATEWIDE ASSESSMENT LOWERED

The State Pierce's Disease/Glassy-winged Sharpshooter Control Board met in June and set the statewide PD/GWSS Assessment for the 2002 crush at \$2.00/\$1,000 grape value. The 2001 assessment was \$3.00/\$1,000 grape value. The statewide assessment was established to generate consistent funding for Pierce's Disease research. The State PD/GWSS Control Board manages the funds collected and awards money to research project proposals that have been submitted to the California Department of Food and Agriculture and meet the Board's approval.

ORGANIC NEWS BRIEFS

ORGANIC FARMERS TO BE EXEMPT FROM ONEROUS PROMO PROGRAM ASSESSMENTS
An eleventh-hour change to the 2002 Farm Bill exempts farmers who produce only organic products from paying assessments to mandatory commodity promotion programs.

"This is a major victory for organic farmers, who have often felt disenfranchised because the dollars they pay into such programs generally are not used to promote their products," said Katherine DiMatteo, executive director of the

Organic Trade Association. "In fact, they have been voicing increasing frustration with such requirements."

The provision exempts only farmers who solely produce and market 100 percent organic products. It does not exempt those who grow both organic and non-organic products, nor handlers of organic products. This amendment requires the Secretary of Agriculture to promulgate regulations regarding eligibility for and compliance with such an exemption within a year of the Farm Bill's enactment.

With this change, a proposal that would have allowed certified organic producers and handlers to credit some of their assessments to a national voluntary generic research and promotion check-off program for organic products was dropped.

Other last-minute changes to organic provisions within the Farm Bill secured \$5 million for a national organic certification cost-share program, and removed language that would have set aside money specifically for marketing value-added organic products. However, the amount of money allocated for marketing value-added products, including organic products, was raised to \$240 million, from an original \$75 million.

"These provisions plus a requirement that data be collected specifically on the production and marketing of organic agricultural products will be very beneficial to U.S. organic farmers and everyone who values how organic agriculture protects the environment and public health," DiMatteo added.

RESEARCH SHOWS MORE VITAMIN C IN ORGANIC ORANGES THAN CONVENTIONAL
Organically grown oranges contain up to 30% more vitamin C than those grown conventionally, it was reported in June at a Great Lakes Regional meeting of the American Chemical Society, the world's largest scientific society. Theo Clark, a visiting chemistry professor at Truman State University (Kirksville, Mo), reported the finding based on work done by him and a group of undergraduate students. He decided to conduct the analysis because of a lack of analytical information about the nutritional content of organically grown produce.

Clark chose oranges to begin the assessment because they are high-profile fruits. "The orange is the traditional source of

vitamin C, and it is highly commercialized, but no one to our knowledge has thought to compare organic and conventionally grown oranges."

Conventional oranges are larger than organically grown oranges, and they have a deeper orange color. Because of their size, "we were expecting twice as much vitamin C in the conventional oranges," said Clark. But to his surprise, chemical isolation combined with nuclear magnetic resonance (NMR) spectroscopy revealed that the organically-grown oranges contained 30% more vitamin C than the conventionally grown fruits—even though they were only about half the size.

In addition to the chemical analysis, Clark and his team conducted a survey of 27 households (approximately 71 individuals) in the rural town of Miller, Mo., to gauge their expectations of organic oranges. Eighty five percent of respondents believed that organic oranges would have a higher nutritional content than their conventionally-grown counterparts, and Clark's research shows that "they were right on."

Clark says these issues are important because consumers have a right to know the real nutritional content of organic produce, and hard numbers such as the vitamin C content can validate the claims of the burgeoning organic industry.

ORGANIC CHICKEN FEED UPDATE

USDA has backed away from considering modifications to the new organic standards set to go into force in October. It says it will not change the rules as requested by chicken processor Fieldale Farms Corp. in order to allow it to feed non-organic feed to its organic chicks. The USDA also said it would look into how much organic chicken feed is available in the U.S.

ORGANIC DAIRYMEN GO TO COURT

Straus Family Creamery, which produces California's premium-quality organic dairy products, and Horizon Organic Holding Corp., America's leading brand of organic foods, have filed a lawsuit in the U.S. District Court for the Northern District of California stating that California's Milk Stabilization & Pooling Plans violate their state and federal constitutional rights to equal protection and due process. Horizon

Organic and Straus Family Creamery are also seeking an injunction to prohibit the continued application of the Milk Stabilization & Pooling Plans to their organic dairy operations. The complaint alleges that the state-imposed pooling fees require the two companies to subsidize the conventional dairy industry.

GROWING ORGANIC

Another sign of the growing importance of organic products comes as Heinz announces the introduction of organic ketchup to the U.S. market. On supermarket shelves in Europe and Canada for some time now, Heinz Organic Ketchup will begin sprouting up in supermarkets and organic food stores nationwide. The decision to launch organic ketchup was spurred by increasing consumer demand for organic products, with sales of organic condiments alone rising 15 percent in the past year.

OTHER NEWS FROM CALIFORNIA, THE NATION & AROUND THE WORLD

PRESIDENT BYPASSES SENATE; MAKES CONTROVERSIAL APPOINTMENT AT USDA
President Bush took the "enough is enough" attitude and used his "recess appointment" power to bypass the U.S. Senate and directly install Iowa farmer Thomas Dorr as Undersecretary for Agriculture and Rural Development. Before the senate's recess, the Ag Committee voted to make no recommendation on the nomination at this time. Shortly after Dorr's nomination in April of 2001, reports came out that he and his family were forced to repay the government \$17,000 after USDA reviewed their farm operation in 1995 and determined that they had not complied with federal payment limits. Iowa's Democratic Senator and chairman of the Senate Ag Committee, Tom Harkin, has said many times that he is not convinced Dorr is the right man for the job. Iowa's Republican Senator, Chuck Grassley, says Dorr can hold the undersecretary position through 2003, and there might be a more friendly senate at that time. Through this appointment, Dorr will also serve as a member of the Commodity Credit Corporation.

Clopyralid Update

Dow AgroSciences has asked U.S. EPA to pull the permit for home and garden products containing clopyralid. The A.I. would continue to be available for use by landscape maintenance firms. In Feb. Calif. DPR issued an emergency ban on clopyralid products. The state Assembly has passed a bill banning the chemical from Calif. and the Senate is expected to approve the measure soon.

Source: *Field Talk*, a weekly e-newsletter of Rincon Publishing; website: www.rinconpublishing.com

BLACK FARMERS CRITICIZE VENEMAN

It started when a group of black farmers from the Black Farmers and Agriculturalists Association stormed a USDA office in Tennessee to protest what they allege is slow and unfair treatment of black farmers awaiting settlement payments from USDA from a 1999 lawsuit. Now it has escalated into a call by that group for the firing of Secretary Ann M. Veneman in a letter sent to President Bush. The protesters, who occupied the Farm Services Agency office conference room, complained Veneman refused to take their phone calls during the occupation. To date, USDA has paid out about \$615 million to settle half of the 22,600 claims filed in a class action suit that charged the USDA had discriminated in making loans to white and not black farmers.

HASS AVOCADO PRODUCERS/IMPORTERS APPROVE NAT'L PROMOTION PROGRAM

Producers and importers of Hass avocados have voted to approve a national promotion program. In the referendum, 86.6% of those who voted favored implementation of the order. The promotion program will be administered by a board of 12 members under USDA supervision, appointed by the Secretary of Agriculture from nominees submitted by the industry. Producers and importers of Hass avocados will pay an initial assessment of 2.5 cents per pound on domestically produced and imported Hass avocados. This will finance a coordinated program to develop, maintain, and expand markets for Hass avocados in the United States. For further

information, contact Julie Morin at (888) 720-9917 (toll free) or e-mail julie.morin@usda.gov.

PAYING WITH PLASTIC

Farm labor employers in Salinas, Santa Maria and Oxnard now have the ability to pay their workers with an ATM debit card. Instead of paper checks, which often were difficult for farmworkers to cash at banks if they did not have checking accounts, the new plastic cards issued by Goleta National Bank in Santa Barbara, require no checking accounts and charge no fees for cashing the payroll checks. The employer deposits the payroll into the bank along with records of who gets paid how much. Each worker has a pin number that allows him to access his own records.

CALIFORNIA FARM BUREAU LEGISLATIVE UPDATES

- A coalition of agricultural organizations, including the California Farm Bureau, removed their opposition to legislation that would keep clopyralid (a.k.a. Transline) and other herbicide residues out of compost.
- A bill to extend the Farmland Security Zone protections against annexations to other enforceably restricted lands, was also approved by the Senate Local Government Committee.
- The Senate Revenue and Taxation Committee approved a bill to extend the income tax carryover provisions for landowners that choose to donate all or a portion of a conservation easement. 🍏

Sources: Napa Valley Grape Growers Assoc., www.napagrowers.org; Organic Trade Association (OTA); American Chemical Society, www.sciencedaily.com/releases/2002/06/020603071017.htm; Straus Family Creamery, www.strausmilk.com; www.heinz.com; Cyndi Young, www.brownfieldnetwork.com; BFAA, www.coax.net/people/lwf/bfaa.htm; USDA, www.ams.usda.gov/news/179-02.htm; California Farm Bureau, www.cfbf.com; *Field Talk*, a weekly e-newsletter of Rincon Publishing, www.rinconpublishing.com



THE GE REPORT



“Beggars can’t be choosers.”

An unnamed State Department official, commenting on Zimbabwe and other nations’ resistance to accepting shipments of U.S. food aid containing genetically engineered ingredients.

Washington Post 8/2/02

KUCINICH INTRODUCES GE FOOD LEGISLATION

Congressman Dennis J. Kucinich (D-OH) has introduced five bills that he said will provide a “comprehensive regulatory framework for all genetically engineered, plants, animals, bacteria and other organisms.”

The five bills would:

- require food companies to label all foods containing ingredients from genetically engineered plants or animals;
- improve the Food and Drug Administration’s (FDA) oversight and testing of transgenic foods;
- better protect farmers and ranchers against powerful biotech companies and restore farmers’ traditional right to save seed;
- clarify and reform liability and other legal issues associated with genetically modified crops and foods; and
- expand research to help developing nations better feed themselves.

AFRICAN COUNTRIES REJECT U.S. AID FOR GE MAIZE

A handful of African nations have rejected a proposal by the United States Agency for International Development (USAID) that the nations use \$50 million in aid to purchase genetically modified maize. Zimbabwe, Lesotho, Malawi, Mozambique, Swaziland and Zambia face widespread food shortages after two years of drought and floods. The U.N. World Food Program says the region needs 1 million metric tons of food aid in the next few months. Zimbabwe rejected the maize until an

agreement was reached between the government and international aid agencies. The agreement provides for the U.N. agency to deliver U.S. corn to the Zimbabwean government, which in turn would give the agency an equal amount of domestic corn from its own reserves to be distributed to hungry Zimbabweans, sources said. The U.S. corn would be milled before release, in order to prevent GMO contamination of Zimbabwe fields. In Zambia, bio-safety regulations have not yet been passed by parliament, which is necessary prior to any importation of GMOs.

U.S. THREATENS TO TAKE EU TO WORLD TRADE ORGANIZATION OVER BIOTECH CROP BAN

A senior U.S. official said that the United States was considering suing the European Union at the World Trade Organization over its four-year-old freeze on approving genetically modified crops. The United States has called the EU freeze an illegal trade barrier. If the WTO agreed, Washington could impose tariffs on the equivalent amount of EU exports. An EU Parliament committee voted on June 4 to require strict labeling of genetically modified organisms, as a latest step toward Europe reopening the process of approving the sale and production of new varieties of GE grains. U.S. grain sector officials said the labeling rules are unworkable and would lead to higher food costs.

GE THREAT TO ORGANIC FARMING

Organic farming will be forced out of production in Britain and across Europe if GE crops are grown commercially, a startling new EU report concludes. The report shows that organic farms will become so contaminated by genes from the new crops that they can no longer be licensed or will have to spend so much money trying to protect themselves that they will become uneconomic. It was drawn up as a result of two years of studies in Britain, France, Italy and Germany. The report studies the effects of growing modified maize, potatoes and oilseed rape commercially on several types of farms. It found that even if only a tenth of a country or region was planted

with them - far less than the 54 per cent of Canada now under GE crops—keeping contamination at a level that would allow organic farming to continue would be “extremely difficult for any farm-crop combination in the scenarios considered.”

WHITE HOUSE OPPOSES BIOTECH LABELS

The Bush administration opposes the labeling of genetically engineered food, Health and Human Services Secretary Tommy Thompson told the world’s premier biotechnology industry gathering. “Mandatory labeling will only frighten consumers,” he said during a breakfast speech recently at the BIO 2002 conference. “Labeling implies that biotechnology products are unsafe.” Labeling food produced through genetic engineering is a touchy subject for the U.S. biotech industry, both at home and abroad.

Domestically, the industry worries that labels would sour consumer demand. Abroad, however, 19 countries require labeling and the European Union has since 1998 banned the sale of any new engineered products. U.S. officials have said the labeling could cost U.S. companies \$4 billion a year.

USDA TOUGHENS RULES ON BIOTECH CROPS

The government is tightening planting restrictions on corn engineered for pharmaceutical uses to ensure the crops don’t contaminate grain supplies and end up in food. The U.S. Department of Agriculture’s rules are meant to prevent biotech corn from cross-pollinating with other crops or from getting mixed with other grain. Corn and other “bio-pharm” crops are being developed to provide vaccines as well as products needed in manufacturing drugs. The USDA is requiring the biotech corn to be planted at different times than corn in nearby fields so that the crops don’t pollinate simultaneously. Beginning next year, there also will be a tougher restriction on the distance between biotech crops and other corn fields. The USDA’s rules will generally prevent biotech corn from being planted within a half-mile of any other corn to prevent the crops from cross-pollinating.



Earlier this year, a committee of the National Academy of Sciences warned that “crops transformed to produce pharmaceutical or industrial compounds might mate with plantations grown for human consumption,” and introduce novel chemicals into the food supply. The academy panel concluded that the USDA came up short in its oversight of such crops, prompting the USDA’s tightening of planting restrictions.

FOOD LABELS ON OREGON BALLOT

A measure to give consumers the right to know whether the food they purchase has been genetically engineered will appear on Oregon’s statewide ballot this fall. State election officials said that sponsors of the food labeling measure turned in more than enough signatures to qualify for a spot on the November ballot. That sets the stage for a high-profile campaign that could prompt agricultural and food industry interests to spend millions to defeat the measure. If approved by voters, the measure would require labeling of all food and food additives that have been genetically engineered. The requirement would apply to all foods sold in Oregon as well as foods distributed from the state. Agricultural and food industry groups have hired a Portland consulting firm to help them defeat the measure this fall. Pat McCormick, spokesman for the firm, said there’s already plenty of government regulation of food quality and the measure’s broadly written labeling requirements would be overly burdensome. Katelyn Lord, co-chief petitioner for the

measure, said that such labeling requirements already exist in Japan and parts of Europe. “Why shouldn’t we be able to know what people in other parts of the world get to know?”

POWERFUL INSECTICIDE FROM GE CORN RELEASED INTO SOIL

Researchers at New York University have shown that BT corn, the genetically modified seed variety which is resistant to corn borer pests, releases an insecticide through its roots into the soil. The powerful toxin remains in the soil as it is not easily broken down. It retains its insecticide properties which could help to control pests or promote insects resistant to the pesticide—the scientists aren’t sure which. The report, published recently in the science journal *Nature*, is the first to show that the toxin from BT corn can seep into the soil. The researchers describe their findings as “surprising and unexpected,” raising fresh fears about the environmental impact of such crops. The concern is that beneficial soil organisms might be killed and that insects living in the soil might become resistant to the poisons. Because the roots are constantly leaking the toxin, there is also the risk that pests in the soil might rapidly become immune to the poison triggering new, resistant strains.

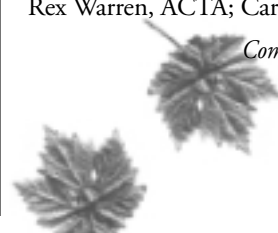
MONSANTO SHIFTING STRATEGY ON GE WHEAT

Leading biotech agricultural concern Monsanto Co. said it was shifting its strategy for introducing the world’s first

biotech wheat to include an emphasis on developing enhanced health, taste and texture traits to appeal to food companies and consumers and hopefully open up world markets to the controversial grain. For the last several years, Monsanto has stressed the high-yield value that a genetically modified Roundup Ready wheat can bring to farmers. But staunch opposition to biotech wheat in many key international markets has made U.S. farmers fearful about adopting the technology and virtually the entire organized U.S. wheat industry has demanded that Monsanto move cautiously in any introduction. The shift came about in the last few months after input from different players in the wheat industry. Monsanto has backed off of its previously-stated timeline for introducing Roundup Ready wheat by 2005. ☺

*Sources: CropChoice, www.cropchoice.com; Rick Weiss, *The Washington Post*; Reuters and Paul Elias, *The Associated Press*; Geoffrey Lean, *Institute for Food and Development Policy/Food First*; Philip Brasher, *Des Moines Register*; Washington Bureau and Mike Toner, *The Atlanta Journal and Constitution*; Andrew Pollack, *NET* and Larry Bohlen, *Friends of the Earth*; Brad Cain, *The Associated Press*; Rex Warren, *ACTA*; Carey Gillam, *Reuters*.*

*Compiled by Brian Sharpe
bsharpe@ccof.org*



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The function of CCOF Foundation will be education of consumers to promote awareness of and demand for organic products and education of producers and their advisors to help foster the growth of organic agriculture. The Foundation will allow individuals and businesses to receive tax deductions for contributions to CCOF. Additionally, it will allow government and private foundations that require IRS tax deduction status to give grants to CCOF. The CCOF Foundation will focus on projects, such as creating a school curriculum that explains how the production of organic food interacts with the environment and the importance of eating healthy food, or programs that help farmers understand the complexity of certification under USDA regulations. One goal of the CCOF Foundation will be to put a face on the farmer — to help consumers understand that they are in partnership with those that feed them and that a local, vibrant farm economy is good for the State of California. The Foundation will also be able to secure grants that will help organic farmers in various ways, such as connecting our certified clients with schemes that encourage local food, or energy savings or wildlife preservation. CCOF will help further the goal of the funding organization and enrich our farmers and handlers at the same time.

The function of the CCOF Certification Services LLC will be to conduct organic certification in accordance with USDA regulations and organic certification that meets the regulations of other nations that organic producers may require. It may also enter into certification of eco-labels such as small farm, locally grown, or wildlife-friendly. 🍌

CCOF Inc.

- A trade association.
- Primary focus: Government Relations; Public Relations; Education; New Standards
- The members of CCOF will elect the Board of Directors.
- Act as an agent of change in the political process to create governmental policies that return agriculture back to a biological base and create an economic system that allows a fair return for producers of food.
- Members: certified organic farmers, handlers and other supporting members of the industry.
- Develop new standards, such as a small farm or wildlife-friendly. Standards that will give value added to the farmer and allow the consumer to support activities they believe in.

CCOF Foundation

- Education of farmers, handlers, and consumers.
- The Board of CCOF Inc. appoints Trustees of CCOF Foundation.
- Will have IRS tax deductible status.
- Will use education to help farmers and processors understand organic principals and how to meet the requirements of organic certification.
- Educate consumers about organic agriculture and nutrition.
- Secure funding for projects that will help farmers and handlers financially, such as schemes to encourage direct marketing of food in local areas.
- *The Newsletter of CCOF* (a budding magazine), the web page, and media outreach will be conducted through the Foundation.

CCOF Certification Services LLC

- Conduct organic certification.
- The LLC (a limited liability company) meets USDA conflict of interest requirements by creating a separate legal entity with a board (Management Committee) free of conflict of interest.
- The Board of CCOF Inc. appoints the Management Committee.
- Clients: any entity that desires USDA organic certification.
- May certify to other standards, including foreign nations, or other new standards, such as small farm or wildlife-friendly.
- 100% of the LLC stock is owned by CCOF, and all profits from certification will flow to CCOF.



CONGRESSMEN FARR VISITS CCOF GROWER PHIL FOSTER

Congressmen Sam Farr (D-CA 17th), a long time friend of organic agriculture, called a meeting at CCOF-

certified Earthbound Farm to discuss federal farm policy and research issues that affect organic farmers and processors. Later that day, the group toured CCOF-certified **Foster Ranch** in San Juan Bautista. Congressman Farr was instrumental in the passage of the California Organic Foods Act of 1990. He is currently on the House Appropriations Subcommittee on Agriculture and has worked hard to gain federal money and programs for organic agriculture.

For sale to Clients and the general Public

Application Packet (Grower/Processor/Handler/Retailer/Livestock)	\$25.00	CCOF CERTIFIED CLIENTS ONLY	
Certification Handbook (Manuals 1-4)	\$20.00	CCOF Logo Stickers (1000 per roll)	
Membership Directory	\$10.00	• Large (grower only)	\$10.00
		• Small (logo only)	\$ 6.00
		• Transitional (grower only)	\$10.00
SUPPORTING MEMBERS AND GENERAL PUBLIC		CCOF RUBBER STAMP	
Supporting Member Sign	\$25.00	• Grower or Processor w/COFA '90	\$21.00
Organic Cotton CCOF T-shirt	\$15.00	• Small (logo only)	\$10.00
(Colors: sage, natural, blue • Sizes: S,M,L,XL)		Twist Ties (per 900/case 10,200)	
Baseball Hats	\$15.00	6" — \$6.00/\$35.00 • 12" — \$8.00/\$55.00	
Bumper Sticker:	\$.50 each or 3/\$ 1.00	18" — \$11.00/\$90.00	
"Support Organic Farmers"		Grower Signs	\$25.00
"Support Yourself: Eat Organic"		(24" x 18" plastic or aluminum)	
		(Please) Do Not Spray Signs	\$16.00
		(2 styles, black on yellow, 12" x 18")	

To Order, Call Toll Free 888-423-2263, ext. 10 or visit the CCOF Store at www.ccof.org

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2002

“GROWERS’ BLEND” COMPOST



Approved for use in organic production
(Check with your certification program to verify the listing of our product)

Earthwise Organics’ “Growers’ Blend” Compost is approved for use in organic production. “Growers’ Blend” is a 100% dairy manure compost. To show our commitment to manufacturing quality compost, we took the initiative to have OMRI test our material for use in organic production. We are proud to announce that “Growers’ Blend” is the only compost in California that carries a guaranteed label from the CDFA. “Growers’ Blend” compost is sold and delivered throughout the state of California. We have our own fleet of trucks that enable us to have complete control of deliveries. We have treated over 500,000 acres with our products. We guarantee the quality of each and every load manufactured and delivered.

Earthwise Organics also distributes, gypsum, soil sulfur, limestone, dolomite lime, three blends of compost and California organic fertilizer.

Growers’ Blend Compost

	1.2	1.5	2.5	Pounds of Nutrients per ton
	(Guaranteed Analysis)			
TOTAL NITROGEN (N).....	1.20 %			24 lbs
0.02% Nitrate Nitrogen				
0.40% Water Soluble Organic Nitrogen				
0.78% Water Insoluble Organic Nitrogen				
AVAILABLE PHOSPHORIC ACID (P ₂ O ₅).....	1.50%			30 lbs
SOLUBLE POTASH (K ₂ O).....	2.50%			50 lbs
CALCIUM.....	2.70%			54 lbs
MAGNESIUM (Mg).....	1.00%			20 lbs
SODIUM.....	0.27%			5.4 lbs

Derived from: (100% Dairy Manure)

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THE EVER-PRESENT GOPHER QUESTION~

*How can I control gophers
without resorting to
prohibited poisons?*

*Q&A with Amigo Bob Cantisano
of Organic Ag Advisors*

AS WITH MOST PEST PROBLEMS a mixture of techniques may be the best solution for dealing with the Pocket Gopher, *Thomomys bottae*. This article outlines a variety of options that give growers effective gopher control without using poisons or other prohibited techniques. The key to making them work is persistence and learning the intricacies of the technique or tool. Not all are appropriate in every location or crop, but all are used by organic growers with success.

To achieve success, get to know the gopher's biology. Fresh crescent or horseshoe shaped mounds are the active feeding areas of the gopher, although its nest may be many feet away and several feet deeper than the active mounds. Main burrows are often 6–12" deep, but can be deeper. Early detection and action are important to limit damage. Gophers are active year round, with peak activity associated with spring, summer and fall birthing. They primarily feed on succulent underground parts of plants including roots bark from root or trunks, but occasionally will graze aboveground.

Biological control methods include establishing barn owl boxes and red tail hawk perches. Gophers are among their favorite foods. A nesting pair of barn owls can consume more than 500 rodents in a season. You can build or purchase nesting boxes and perches for these raptors. It is important to have adequate numbers of nest boxes and perches to make a significant dent

in a gopher problem. Ask your supplier for advice on placing nests and perches. Other natural predators include snakes, especially gopher snakes and rattlesnakes.

I continue to receive reports from growers who are successfully using ultrasonic sound devices for gophers. This appears to work best on localized problems and smaller areas, but may be worth using on larger fields as well. Small acreage growers and gardeners report success with wind-powered pinwheels and vibrating stakes.

There have been lots of laughs over the idea of using bubble gum as gopher killer, but I have seen it work for two growers, so I am not laughing any more. They put a piece of bubblegum or Juicyfruit gum in a fresh mound, and often are able to kill the gopher.

I have yet to succeed with interplanting gopher repelling plants such as Gopher Purge or Castor Bean. However vegetable growers in Guatemala with whom I work have used Castor Beans as a rotation crop to clear fields of gophers, with much success. A product called Mole & Gopher Med, which is made from castor oil, has proven successful for use in landscapes and ornamentals. It is applied with a sprayer and can repel gophers for 1–3 months, depending on frequency of irrigation or rainfall.

A popular old time technique was the planting of Sour Clover (*Melilotus indica*), which contains Coumarin in its roots. Feeding on this plant is toxic to gophers, as it thins the blood leading eventually to death. Sour clover is nitrogen fixing; a cool weather annual clover that re-seeds readily and can grow up to 4–5 feet of biomass per season. The flowers are attractive to some species of wasps, lacewings, honeybees and syrphid flies. Due to the slow-to-establish nature of this plant, it is probably best used in perennial crops.

Some weeds, especially Bermuda grass and nutsedge, seem to improve gopher populations, either through additional food or protection from predators. Long term clover (except Sour Clover) and alfalfa stands also favor gopher activity. Tillage can have a great impact on gophers. The use of a disc, plow, or especially a spading machine, if properly timed with gopher activity near the surface, can have very negative impact on them.

Exclusion can work on smaller areas or individual plants. Wire gopher baskets can be purchased or home made and give

good protection while the plants are young and getting established, the most vulnerable time for a perennial. Lining the bottom of raised bed boxes and planters with 1" aviary netting will exclude them from plantings. Others have successfully dug an 18" deep trench around the area to be protected. Using 2-foot wide aviary metal netting or plastic netting with smaller than 1" openings, sink the netting to the bottom of the hole, allowing a 6" fence above ground to stop them when they forage above and backfill. I met a grower recently who has "fenced" them out of a 1½ acre parcel by digging a trench with a Ditch Witch and filling the hole with a mixture of soil and glass fragments. He swears it works and was pretty cheap, since it has lasted nearly ten years since installation. I saw only one set of gopher mounds inside his protected field, which he was attacking with a McAbee trap.

The most popular control is the use of traps. There are a number of traps available, all used with success by growers once they learn how to set them correctly. The key is setting them in active main runs, or active side mounds. The common two pronged pincher trap, a.k.a. McAbee, are set in the main run after it has been opened with a shovel. It is best to set traps in both directions if possible. A single trap can be set in the end of a fresh burrow. It is important to make sure that no light enters the run or the gopher is likely to push dirt towards the trap to close off the light. Growers report improved results by baiting the trap with garlic, peanut butter and cabbage leaves. Others use roots or tops from the crop being attacked as a bait attractant. If the trap fails to catch a gopher in two days, move to another part of the mound area.

The squeeze type box trap and the Black Hole Gopher Trap are placed in a main run or in a fresh mound. The gopher thinks these are part of the tunnel, enters and is caught in a noose. These can be little more difficult to place, but are very effective.

We have been hearing glowing reports from most growers who are using Cinch Traps. These are tricky to learn how to use, but once people get the technique they have a very high success rate. The Cascade model seems to work best for the gophers in our area, which make a fairly small burrow.

?



The Agri Zap trap uses 6000 volts to electrocute gophers, ground squirrels, rats and mice. These portable easy-to-use tools are set in the opening of a new mound, where the rodent walks onto them and is zapped. Many growers praise them highly for ease and effectiveness.

Explosive burrow devices (Rodex 4000 and Rodent Torch) are very highly rated by growers and Pest Control Advisors (PCAs). These use a mixture of propane and oxygen, applied through a probe pushed into a fresh mound, which is then ignited by an electronic lighter at the bottom of the probe, powered by a battery or solar panel on the tractor, truck or ATV. These have a high degree of success, are quick to operate (usually less than a minute per mound), and are safe in the hands of a trained operator. Downsides include the sound (similar to a shotgun blast), dust (operator wears ear and eye protection), and risk of fire in dry sites with dry vegetation (dealt with by staying on the gophers during the moist times of the year, when is also a high period for gopher activity.) Another drawback may be the price (\$2–3,000). For smaller growers this would be the perfect tool to co-own with

others. There are few parts to break or wear out, growers normally only need to use them for a few hours or days per month, and they are relatively easy to transport. These devices are also highly effective against ground squirrels, moles, voles, field mice and other burrowing animals. There are a few companies offering custom pest control with these tools. Contact the manufacturers on the Resource List for information and PCAs in your area.

RESOURCE LIST

BARN OWL BOXES AND HAWK PERCHES

Raptor Works 209-385-6470
Air Superiority 760-789-1493
Bio Diversity Products 209-369-8578
Wildlife Research Associates 707-763-6492

PLANS FOR BUILDING BARN OWL BOXES AND HAWK PERCHES

California Raptor Center 530-752-6091
Audubon Society 916-481-5232
www.owlpages.com
www.bsc-eco.org/barnowlbox.html

CINCH TRAPS

Don Sprague Co. 800-841-5676

AGRI ZAPPER

Agri Zap 800-946-4376

BLACK HOLE, WIRE TRAPS, MOLE & GOPHER MED

Harmony Farm Supply 707-823-9125
Peaceful Valley Farm Supply 888-784-1722

RODENTORCH

Rid-A-Rodent 800-743-7177

RODEX 4000

Rodex Co. 800-750-4553

SOUR CLOVER SEED

S & S Seeds 805-684-0436



AMIGO CANTISANO, *an organic farmer since 1974, has advised organic and transitional farmers since 1978. Organic Ag Advisors provides technical assistance for all crops with emphasis on soil and plant nutrition, soil ecology, biological pest and disease management, weed management, equipment selection and use, composting, compost tea, cover cropping, foliar feeding, crop rotations, beneficial insectaries and more.*

Amigo Cantisano, Organic Ag Advisors
530-292-3619 office • 530-292-3688 fax



Ask Amigo! Send your organic farming-related questions to **Ask Amigo**,

c/o CCOF, 1115 Mission St., Santa Cruz, CA 95060;
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Liquid Fresh Fish Fertilizer



Organic 2-3-0

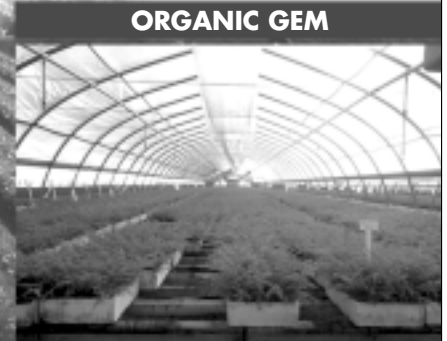


ORGANIC GEM

Organic Gem is a cold processed, enzymatically digested fresh fish fertilizer produced from the pacific dogfish at our plant in Delta, B.C. When applied to the soil, OG performs as a natural bio-stimulant, with the enzymes biologically unlocking nutrients contained in the soil. Because the natural oils and collagens have not been removed, our fertilizer does not leech out into the local water table, but remains in the soil providing a time-release effect. In addition to being a root-feeder, OG is suitable as a foliar spray and compost starter.

OG is completely natural, other than the addition of 3% phosphoric acid needed for pH stabilization. For application, it is mixed with water at a ratio of at least 10 parts water to 1 part OG in order to bring the pH level to neutral to initiate bio-activity. OG has been filtered through an 80-mesh screen and can be applied through conventional methods including aerial spraying and underground drip systems.

Application rate: 5-10 gallons of undiluted OG per acre (diluted at least 10:1, 3 times per year)



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275 gallon IBC \$2.50/gallon
\$50 credit for IBC's returned in good condition

55 gallon drum \$2.50/gallon
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5 gallon pail \$3.25/gallon

1 gallon \$4.00/bottle

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CERTIFICATION CORNER



INTERNATIONAL TRADE, THE NATIONAL ORGANIC PROGRAM & CCOF INTERNATIONAL

By Brian McElroy, Certification Services Manager
and
Janning Kennedy, Handler Certification Director

THERE ARE MORE SIMILARITIES than differences in organic standards throughout the world, but for international trade the devil is in the differences. During the course of evolution of organic standards in individual countries there have arisen different forms of the same idea. The international trade of organic products causes importing countries to analyze the standards of exporting nations and determine if the standards are “compliant with” or “equivalent to” its own. Prior to governmental regulation (state and national programs) of organic food, the evaluation of “equivalence” was done on a private level and was not consistent from one certifier or importer to another.

IMPORTED PRODUCTS

One of the goals of the implementation of the USDA's National Organic Program (NOP) is to standardize the meaning of “organic” in the United States. Products labeled or represented as “organic” in the U.S. must be produced in accordance with the NOP standards, whether produced here or abroad. Importers of foreign organic food products must be aware that, as of October 21, 2002, those products must either be certified by a USDA accredited certification agent (“compliant”), or be certified by a foreign program that the USDA has determined is “equivalent” to the NOP.

Only imported products that are certified by another accredited certification agent, or that are from programs accepted by the USDA will be accepted by CCOF for labeling or sale as “organic,” or use as “organic ingredi-

ents.” Many certification agencies based outside the U.S. have already been accredited by the USDA. To see a list of all accredited certification agents, visit www.ams.usda.gov/nop and click “Accreditation.” Presently, the USDA is working on equivalency assessments with India and Japan, and it is also working with several governments (including New Zealand, the UK, Canada, Israel, Spain, and Denmark) to determine whether their accreditation processes meet USDA/NOP program requirements. However, as of September 3, 2002, only products certified by a USDA accredited certification agent may be approved by CCOF. (See the USDA website for updates on this information under the topic of “Imported Agricultural Products”).

EXPORTED PRODUCTS

Another goal of the NOP is to facilitate international trade of organic products by presenting foreign buyers with a single U.S. standard for organic products. However, there is not yet widespread understanding or acceptance of NOP standards by importing countries. While governments are actively seeking agreements between themselves, CCOF has developed the CCOF International program to satisfy requirements of importing countries. This program places additional requirements on producers and processors beyond the NOP, and is allowed under the NOP. CCOF's International program has been in place for several years and is accredited by the International Federation of Organic Agricultural Movements (IFOAM). For this reason it is also referred to as CCOF's IFOAM program.

If you produce, process, or handle products that may be exported, you should enroll in the CCOF International program. Products that are commonly exported include dried fruits and nuts, grains, wine, tomato products, and some fresh products such as grapes or salad ingredients. Check with your buyer to determine whether you should participate in the CCOF International program.

To accept organic products into their countries, most countries require that the products must be accompanied by an Export Certificate (or an “Import Certificate,” depending on which way you look at it) issued by the certification agent. CCOF issues these certificates to CCOF International program clients. Many countries also require a copy of the most recent inspection

report before they will approve the importation of a particular product into their country. Most of the information they seek is found in the CCOF IFOAM report, an additional report written only for clients in the CCOF International program.

The CCOF International program screens growers and processors for materials and practices that may not be allowed outside of the U.S. These include the use of sodium nitrate, potassium chloride, and giberillic acid for products headed to the European Union countries. Recently the United Kingdom has determined that giberillic acid is not allowed for use under the EU regulations. Fresh grape and raisin producers are significantly affected by this ruling. Operations must also demonstrate active organic management for 12 months prior to annual crop harvest or 18 months prior to perennial crop harvest. For products headed to Japan under the U.S.-Japan export arrangement, three products must not have been used after April 29, 2002: lignin sulfonate, potassium bicarbonate, and humic acids derived by alkali-extraction.

For multiple-ingredient products certified under the CCOF International program, whether they are commingled single ingredient-products like rice or nuts, or processed products with multiple ingredients, only products or ingredients that are certified by CCOF International may be used. CCOF International is able to review and may “approve” products certified by other certification agencies under its document review program. This essentially provides “certification transference” from one agency to the CCOF International program, and usually takes several weeks to complete.

CCOF International is working to provide its clients with the assistance they need to move their products into international markets, to understand new NOP requirements for ingredients not available from domestic sources, and to allow certified importers continued access to the overseas suppliers. CCOF staff is aware that individual importers may demand additional documentation and that each country's regulatory process is a bit different. Our goal is to ensure that CCOF certification is respected by all and supports the sale of your product. ☺



ACRONYM UPDATE: CCOF, USDA/NOP, NOSB & OMRI

By John McKeon, Grower Certification Associate

AS THE FEDERAL RULE APPROACHES on October 21, growers and processors have many unanswered questions about materials that were previously allowed but are now awaiting review and action by the National Organic Standards Board (NOSB) or reclassification by the Environmental Protection Agency (in the case of list 3 inert ingredients requested to be re-classified to list 4). There are also concerns about compost and organic/untreated seed availability and seed treatments. Many people are working hard on materials issues. Changes in materials determinations are happening weekly and should be expected to continue through October. The following is current information and resources from CCOF, OMRI, and USDA.

CCOF/OMRI

CCOF uses the *Organic Materials Review Institute Materials Lists* to determine allowable/restricted products. Note the updated list on the next page. We have issued Generic and Brand Names Lists to all members. If you have not received these lists, please contact the CCOF Statewide Office. Page 26 of the *OMRI Brand Names List* details products removed from the OMRI list. Note that CCOF will treat the use of these products as a minor non-compliance until April 21, 2003. For current complete OMRI listings by generic material, product name or supplier, visit www.omri.org

"But what if I want to use a material that is not on the OMRI materials lists?" Our position is this; if it is not on the OMRI list, it is the producer's responsibility to verify that all the product ingredients meet the NOP rule. Get the product label and check the ingredients against the OMRI generic list. If you can

verify that all ingredients, including inerts, are allowed, then the product can be used. You the producer are assuming full responsibility for the use of the material. If CCOF determines the material used does contain prohibited materials, the organic status of the crop(s) and land may be in question. Keep labels and any other information used to determine the product's allowability on file for your inspections and to evidence that you have researched the product.

Two non-USDA/NOP related sites for pesticide labels and fertility product information are:

- *California Department of Pesticide Regulation Product and Use Databases.* You can search them online at www.cdpr.ca.gov/dprdatabase.htm
- *Appropriate Technology Transfer for Rural Areas (ATTRA) website,* www.attra.ncat.org/attra-pub/plant

Note that these products do not indicate allowability under the NOP rule.

Advertisers within this Newsletter are also a good source for products and they do cater to organic producers. Look for the OMRI logo on advertisements in this and every Newsletter.

A quick note on seed. Treated seed is prohibited under the Federal Rule. Prohibited seed treatments may not be allowed after October 21, 2002. Note the OMRI update in this newsletter and the OMRI website as there are new allowed seed treatments listed. Treated seed used after October 21, 2002 will be dealt with as a minor non-compliance until April 30, 2003. The OMRI website now maintains an organic seed list, and ATTRA maintains a comprehensive organic/untreated seed listing at www.attra.ncat.org/attra-pub/altseed.html

USDA/NOP

By the time you read this Newsletter, the September NOSB meeting will have come and gone. This meeting's agenda includes materials review and NOSB actions for many crop, livestock and processing materials. The determinations of the NOSB will affect the allowability of many generic materials and their use in brand name products. For a list of all materials considered at this recent NOSB meeting, please visit www.ccof.org/newsletter/extras/nosbupdate.pdf

The NOSB is currently doing Technical Advisory Panel (TAP) reviews on inert ingredients used with pheromones and other products and determinations will be made at the next NOSB meeting. A complete listing of petitioned products and their current status is maintained on the USDA/NOP website: www.ams.usda.gov/nop/nop2000/nosb%20recommendations/Petitions/petiton_list.htm The NOSB Compost Task Force did issue a final report including the following that was accepted by the USDA/NOP:

COMPOST

- must be made from only allowed feed-stock materials
- must undergo an increase in temperature to at least 131°
- remains at that temperature for 3 days
- pile is mixed or managed to ensure all feed stock heats to the minimum temperature
- monitoring of this process must be documented and available at inspection.

VERMICOMPOST

- must be made from only allowed feed-stock materials
- aerobicity is maintained by regular additions of thin layers of organic matter at 1–3 day intervals
- moisture is maintained at 70–90%
- duration for outdoor windrow composting is 12 months, indoor and angled wedge systems is 4 months, continuous flow reactors is 60 days.

PROCESSED MANURE MATERIALS

- must be made from manure heated to temperature in excess of 150° for one hour or more and dried to a moisture level of 12% or less or equivalent drying process.

COMPOST & VERMICOMPOST TEAS

- Still under review and therefore not eligible to satisfy the section of the rule (as yet).

The USDA/NOP website contains valuable information and has regular NOP policy updates, accreditation information, FAQs and NOSB meeting minutes (among other things). As October approaches, a weekly check of the NOP website at www.ams.usda.gov/nop will be a good source for current information. ☺

ADDITIONS TO THE OMRI BRAND NAME PRODUCTS LIST

AUGUST 2002

PRODUCT	MANUFACTURER	GENERIC	STATUS
CROP PRODUCTS			
Acadian Kelp Meal (Crop)	Acadian Seaplants Limited	kelp meal	A
AllDown Green Chemistry Herbicide	Summerset Products	herbicides, nonsynthetic	R
Bio Nutrient "S"	Bio Master Inc	sulfur, elemental†	R
Bull Enterprises Pelleted 9-2-2	Bull Enterprises Inc	fertilizers, blended	R
Compost Tea Catalyst	Growing Solutions Inc	microbial products	A
Cyto-Gem Organo Organic	Natural Resources Group	kelp extracts	A
dinoSoil	dinoSoil	mined minerals unprocessed†	A
EcoExempt IC	Eco SMART Technologies	botanical pesticides	A
EcoTrol	Eco SMART Technologies	botanical pesticides	A
Fortify	Botanic Solutions Inc	micronutrients, synthetic	R
Garden Treasure Humic Powder	Western Industrial Clay Products	humates	A
Garden Treasure Hydro Powder	Western Industrial Clay Products	humates	A
Garden Treasure Leonardite	Western Industrial Clay Products	humates	A
Garden Treasure Soil Amendment	Western Industrial Clay Products	diatomaceous earth†	A
Garden Treasure Worm Castings	Western Industrial Clay Products	worm castings†	A
Griffin 8-5-5 Organic Fertilizer	Griffin Industries / Nature Safe Fertilizers	fertilizers, blended	A
Griffin 9-4-0 Organic Fertilizer	Griffin Industries / Nature Safe Fertilizers	fertilizers, blended	A
Guardian Film	American Biodynamics	adjuvants, nonsynthetic	A
LM-32	Live Earth Products	fulvic acids	A
Mycormax	JH Biotech Inc	microbial products	A
Natural & Organic Lawn Fert 7-4-2+2Fe	California Organic Fertilizers	fertilizers, blended	R
Natural Organic Phosphate Fertilizer	Archipelago Bat Guano LLC	mined minerals, unprocessed†	A
Naturalis H&G	Troy BioSciences Inc	biological controls†	A
Naturalis L	Troy BioSciences Inc	biological controls†	A
Organic and Natural Turf Fert 8-2-2+2Fe	California Organic Fertilizers	fertilizers, blended	R
Organic BioLink Micronutrient Fertilizer	Westbridge Agricultural Products	micronutrients, synthetic	R
Organic BioLink Seaweed-29	Westbridge Agricultural Products	kelp extracts	A
Phyto-Plus Calcium 5%	Baicor LC	calcium chloride (CaCl ₂)†	R
Phyto-Plus Iron 5%	Baicor LC	iron products	R
ProGibb 4%	Valent BioSciences Corp	gibberellic acid	R
PyGanic Crop Protection EC 1.4 II	MGK Company	pyrethrum†	R
PyGanic Crop Protection EC 5.0 II	MGK Company	pyrethrum†	R
Rex Lime Sulfur Solution	OR-Cal Inc	lime sulfur†	R
Safer Brand Houseplant Insecticidal Soap	Woodstream Corporation	soap	A
Safer Brand Houseplant Insecticidal Soap Concentrate	Woodstream Corporation	soap	A
Safer Brand Insecticidal Soap Concentrate	Woodstream Corporation	soap	A
Safer Brand Insecticidal Soap Multi-purpose Insect Killer	Woodstream Corporation	soap	A
Safer Brand Insecticidal Soap Multi-purpose Insect Killer	Woodstream Corporation	soap	A
Seednique	BioGenesis Systems Inc	seed treatments	A
Symbex 4X	Agro-K Corp	micronutrients, synthetic	R
Symspray 10X	Agro-K Corp	micronutrients, synthetic	R
TAP Organic Powder	Acadian Seaplants Limited	kelp extracts	A
Tender Loving Compost	Fessenden Dairy LLC	compost--windrow†	A
Tender Loving Compost - Vermi	Fessenden Dairy LLC	worm castings†	A
LIVESTOCK PRODUCTS			
Acadian Kelp Meal (Livestock)	Acadian Seaplants Limited	kelp meal	A
EC&S C1 3-4 Poultry	Enviro Consultant Services LLC	enzymes, natural	A
EC&S C1 5-4 Swine	Enviro Consultant Services LLC	enzymes, natural	A
K-Mix	Helfter Feeds Inc	minerals, synthetic	R
P-Mix	Helfter Feeds Inc	minerals, synthetic	R
Se Top Choice	Helfter Feeds Inc	minerals, synthetic	R
S-Mix	Helfter Feeds Inc	minerals, synthetic	R
T-Mix	Helfter Feeds Inc	minerals, synthetic	R
TS K-Mix	Helfter Feeds Inc	minerals, synthetic	R
UTREsept	Integrated Bio Systems Inc	botanicals	A
PROCESSING PRODUCT			
Real Salt	Redmond Minerals Inc	salt	A

NEW! OMRI Listed...

Professional SUNSHINE Mixes!

The Sunshine Professional Mix Family now includes organic loose-fill versions of our popular Sunshine mixes. The new mixes are formulated with an organic fertilizer, dolomitic lime and wetting agent (Yucca extract) which all meet OMRI requirements in organic production.

Developed in response to customer requests, these mixes are formulated to help the professional organic grower cultivate strong, healthy crops.



Listed by the Organic Materials Review Institute (OMRI) for the use in production of organic food and fiber, the OMRI Logo assures our product's compliance to OMRI's comprehensive product review process. Organic certifying organizations recognize the value of OMRI listed products during their certification process.



Traditional Compressed Mix

Traditional Loose-fill Mix

New Organic Loose-fill Mix

Mix # 1	LC1	Sunshine Complete Organic
Mix # 2	LB2	Sunshine Basic Organic
Mix # 3	LG3	Sunshine Germination Organic
Mix # 4	LA4	Sunshine Aggregate Organic
Mix # 5	LP5	Sunshine Plug Organic
Mix # 6	LPM6	Sunshine Premix Organic
N/A	Growers Gold Organic	Sunshine Growers Organic

The entire Sunshine Organic Professional Mix Product line is available in 2.8 cf. bags, 60 cf. totes and bulk. Sunshine Professional Peat Moss is also OMRI Listed.



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1-888-797-7328
Fax 1-888-797-6497

Hubbard, OR
1-800-842-3256
Fax 1-888-896-3005

CCOF CERTIFIED OPERATIONS



MAY 15–AUGUST 15, 2002

NEWLY CERTIFIED MEMBERS

CGD FARMS (NV)
Manuel & Mary Massa
P.O. Box 295
Princeton, CA 95970
530-519-8628

Acres Certified: 22.9
Products Certified: Rice

CANTISANO FOODS (PR)
Ed Maguire
815 W. Whitney Road
Fairport, NY 14450
716-377-9151
Products Certified: Pasta Sauce
Certified Services: Processing Pasta Sauce
& Salsa

CHRISTOPHE BAKERY (PR)
Alex Hamade
518 Lighthouse Avenue
Monterey, CA 93940
831-375-8464
Products Certified: Cookies, Granola

CINNAMON RANCH (FT)
Richard Moss
1049 Cinnamon Ranch Road
Bishop, CA 93514
760-933-2295
Acres Certified: 940
Products Certified: Alfalfa, Oat Hay,
Sudan Grass

CROSSLAND RIVER RANCH (FT)
Bill Crossland
PMB 364, 7081 N. Marks
Fresno, CA 93711
559-675-1121
Acres Certified: 275.37
Products Certified: Cherries, Grapes (raisin)

DeBENEDETTO ORCHARDS (FT)
Rich DeBenedetto
26393 Road 22 1/2
Chowchilla, CA 93610
559-665-1712
Acres Certified: 145
Products Certified: Figs

DEWIT DAIRY (NV)
Jack DeWit
P.O. Box 603
Maxwell, CA 95955
530-438-2920
Acres Certified: 144.3
Products Certified: Alfalfa, Rice, Sudan Grass

EARLS ORGANIC PRODUCE (PR)
Chris Riley
1910 Jerrold Avenue
San Francisco, CA 94124
415-824-7419
Services Certified: Repacking & Distribution

EBC FARMS (FT)
Steve Dabbs and Ernie Costamanga
P.O. Box 857
San Joaquin, CA 93660
559-693-2700
Acres Certified: 150
Products Certified: Oat Hay, Tomatoes
(processing)

EGGOLOGY INC.
Brad Halpern
6728 Eaton Avenue
Canoga Park, CA 91303
818-610-2222
Service Certified: Egg Packing (Liquid Egg
Whites)

FANTOZZI FARMS (BV)
Paul Fantozzi
1825 Walnut Avenue
Patterson, CA 95363
209-892-2554
Acres Certified: 52
Products Certified: Apricots

FMP VINEYARDS, LLC (KE)
Frances Pavich
232 Hermosa Drive
Bakersfield, CA 93305
661-631-1849

Acres Certified: 687
Products Certified: Grapes

FOOTEPATH FARMS (PS)
Dean Foote
36650 Glen Oaks Road
Temecula, CA 92592
909-693-9008
Acres Certified: 20
Products Certified: Avocados, Figs, Grapes
(table), Grapefruit, Lemons, Limes,
Pomegranates, Quince, Tangelos,
Tangerines

GORDON & GORDON (NV)
Ben, Tina, and Betty Gordon
P.O. Box 329
Princeton, CA 95970
530-439-2353
Acres Certified: 125
Products Certified: Rice

**HARMS VINEYARD AND LAVENDER
FIELDS (NC)**
Patricia Damery and Donald Harms
3185 Dry Creek Road
Napa, CA 94558
707-255-6818
Acres Certified: 7.5
Products Certified: Lavender

HEATH & LEJEUNE INC.
Harland Heath & Patrick Lejeune
P.O. Box 21387
Los Angeles, CA 90021
213-614-1909
Services Certified: Handling

HOLLYHOCK FARMS (SL)
Richard Rogers
200 Hollyhock Lane
Templeton, CA 93465
805-239-4713
Acres Certified: 28.79
Products Certified: Apples, Cantaloupe,
Cucumbers, Flowers, Peaches, Plums,
Pluots, Pumpkins, Squash (summer),
Tomatoes (fresh market)

KOZLOWSKI FARMS (NC)
Perry Kozlowski
5566 Gravenstein Hwy N.
Forestville, CA 95436
707-887-1587
Acres Certified: 64
Products Certified: Apples

KRUEGER FARMS (NV)
William and Dianne Krueger
3748 Co. Rd. MM
Orland, CA 95963
530-865-3126
Acres Certified: 18
Products Certified: Almonds

MACULANS' FARMS (FT)
Raimonds & Livia Maculans
13368 Avenue 19
Chowchilla, CA 93610
559-665-3311
Acres Certified: 55
Products Certified: Almonds, Pasture

MARK EVANS (NV)
Mark Evans
9266 N. Butte Road
Live Oak, CA 95953
530-695-2547
Acres Certified: 101.38
Products Certified: Rice

MAZAZUL ORGANIC (PR)
Cara Smiley
Calle Chiapas 98-01, Colonia Roma
Mexico D.F., Mexico, 06700
011-525-5574-9862
Acres Certified: 242
Products Certified: Mangos

MORRIS FARMS (FT)
Richard Lee Rose
P.O. Box 310
Avenal, CA 93204
559-386-5748
Acres Certified: 3296
Products Certified: Pasture, Wheat

MULTI FRUIT USA
Greg Palmer
P.O. Box 316
Haddon Heights, NJ, 08035
856-547-2713
Certified Services: Handling

NICK KORETOFF RANCHES (FT)
Nick Koretoff
8025 W. Kearney Blvd.
Fresno, CA 93706
559-289-0275
Acres Certified: 20
Products Certified: Almonds

OCCIDENTAL MUSHROOMS (NC)
Don Lareau
P.O. Box 101
Occidental, CA 95465
707-874-1704
Acres Certified: .375
Products Certified: Mushrooms (Maitake,
Oyster, Reishi, Shitake, Turkey Tail)

ROYAL MEDJOOOL DATE GARDENS (DV)
David Nelson
P.O. Box 930
Bard, CA 92222
760-572-0524
Acres Certified: 18
Products Certified: Dates

STEPHENS RANCH INC. (YO)
Jeff Stephens
8540 Garden Hwy.
Yuba City, CA 95991-9413
530-674-1204
Acres Certified: 25
Products Certified: Peaches

UC DAVIS STUDENT FARM (YO)
Mark Van Horn
Student Farm, Pomology Dept., UC Davis
Davis, CA 95616
530-752-7645
Acres Certified: 21.5
Products Certified: Alfalfa, Beans (dry),
Cotton, Grain, Grapes (table), Mixed
Vegetables, Olives, Popcorn, Sweet Corn

YUMA ORGANIC (DV)
Martin J. Lara
2517 E. Co. 16th St.
Yuma, AZ 85365
928-317-0548
Acres Certified: 10
Products Certified: Herbs

DECERTIFIED

BRIANS ORGANIC FARMING (CC)
Grant Brians

**CALIFORNIA PACIFIC RICE
MILLING (PR);** Patrick Brandon

CARRIAGE HOUSE COMPANIES (PR)
Merianne Morris

CEBRIAN ENTERPRISES, INC. (SC)
Joe Cooper

COLLEGE CITY WAREHOUSE LLC (PR)
John Wallace, Pat Daddow & Joe Lauwerijssen

FLAGSTONE FARM (CC)
Bradley Keith Partin

FLORIDA SELECT CITRUS INC (PR)
Thomas Resler

HEDONE ORGANIC FOODS (PR)
Hans H. Kim

IIDA SAKE RICE INC. (PR)
Fred Hirata & Tom Sato

PACIFIC GRADING SERVICE (PR)
Brenden Aragon

RINCON FARMS, INC. (CC)
Wayne & Robert Gularte

SEASON PRODUCE CO. (PR)
Pat & Bob Carnavelli

SID, BRENT, & LEO LAGRANDE (NV)
Sid, Brent & Leo LaGrande

SONORA MILLS (PR); Martin Basch

STAGG FARMS (BV); Mark Spilker

VEG COOL (PR); James Kerns

INACTIVE

BERA RANCH (YO); Frank Bera

DE VERA RANCH (KE)
Reydan De Vera

SUSPENDED

ALEX R. THOMAS & CO. (PR)
Tom Thomas

PARKER ORGANIC PRODUCE (NV)
Karen, Bob, John, Rob Parker

SANDRA & ELIAS C YUSTE (CC)
Sandra Yuste

SANTA BARBARA OLIVE CO., INC. (PR)
Craig Makela

WITHDRAWN

AVP-I (PS); Richard I. Taylor

CARLSON FARMS (FT)
Gary & Susan Carlson

CURRAN RANCH (FT); Samuel Curran
DAVICO FARMS (YO); Runjit Davit

FELIPE ELIAS (CC); Felipe Elias

GREEN HILL FARMS (YO); Michael Ridolfi
**HIDDEN VALLEY ORGANIC FARM INC.
(HT);** Louis & Jackie Rapacilo

J. YRIBARREN FARMS (FT); Jeff Yribarren
KOBAYASHI SHIMIZU SHIMIZU (YO)
Sharman Kobayashi &
Shirley & Sharon Shimizu

LARREY FARMS (FT); Ken & Martin Larrey

LEMON HILLS RH. (PS); Richard Hart

MAKANI FARMS, LLC. (ME); Jonathan &
Katrina Frey & Caroline & Ryan Pote

MALIBASTA RANCHES (DV)
Rick Bradford & Nick & Mike Bozick

NEPTUNE FARMS (CC)
Jo Ann Baumgartner & Sam Earnshaw

NEW LEAF COMMUNITY MARKET (PR)
Sarah Miles

NOR SUN FOOD GROUP INC. (PR)
Travis Blacker

OIL SEEDS INTERNATIONAL (PR)
John Gyulai, Yoko Ozawa

PUCCI & PUCCI (YO); Kenneth Pucci

RALPH JOHNSON/DAN QUARESMA (SL)
Dan Quaresma & Ralph Johnson

ROBERT J. STINEMAN (YO)
Robert J. Stineman

**SINGH FARMS/NCFS/HAPPY VALLEY
ORCHARDS (SG);** Paul Singh

SPAICH BROS., INC, PASEO RANCH (YO)
Milan Tica & Gavril N. Spaich

TERRA VIN, INC. (NC)
James William Pawlak

TRAYNHAM (LEE) (YO)
Lee Traynham



BUSINESS RESOURCES

BIOLOGICAL CONTROL VIRTUAL INFORMATION CENTER

Showcasing some of the most beneficial insects and where to purchase them, including links to government, university, nonprofit, and commercial websites focusing on biological control/integrated pest management.

The Biological Control Virtual Information Center is part of the National IPM Network and is maintained by the NSF Center for Integrated Pest Management and the Consortium for International Crop Protection. Additional funding for this site has been provided by USDA/APHIS.

Contributing authors include David Orr, Steve Bambara, and Jim Baker, and Webmaster Ron Stinner, all from the Department of Entomology, No. Carolina State University.

<http://ipmwww.ncsu.edu/biocontrol/biocontrol.html>

NEW ATTRA PUBLICATIONS

Cucumber Beetles: Organic & Biorational IPM
Organic Pumpkin and Winter Squash Production
Water Quality Protection in Organic Crop Production
Organic Alternatives to Treated Lumber
Flame Weeding for Vegetable Crops
Scheduling Vegetable Plantings for Continuous Harvest
Creating an Organic Production and Handling System Plan: A Guide to Organic Plan Templates
Freeze Protection for Solar-powered Livestock Watering Systems
Poultry Processing Facilities for Use by Independent Producers in the Southern Region
Biodiesel: A Brief Overview
Rye as a Cover Crop
Edible Soybean Production and Marketing
Woody Ornamentals for Cut Flower Growers
Stored Grain Pest Management

UPDATED ATTRA PUBLICATIONS

Suppliers of Plugs for Medicinal Herb Crops
Organic Plug and Transplant Production
Constructed Wetlands
Echinacea as an Alternative Crop
Ginseng, Goldenseal, and Other Native Roots
Agroforestry Overview
Evaluating a Rural Enterprise
Sustainable Agriculture Curricula K-12
Conservation Tillage
Suppliers of Seed for Certified Organic Production (Note Title Change—Used to be Suppliers of Organic and/or Non-GE Seeds and Plants)

ATTRA:
Appropriate Technology Transfer for Rural Areas
www.attra.ncat.org



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NCAT/ATTRA

ANUNCIA NUEVO NUMERO TELÉFONO GRATIS EN ESPAÑOL ANNOUNCES NEW SPANISH LANGUAGE HELPLINE 7

¡Ola! NCAT tiene el gusto de comunicarle que hay un nuevo número teléfono gratis (800-411-3222) en Español para la agricultura sostenible. Llame por teléfono entre ocho de la mañana y cinco de la tarde Lunes a Viernes, o salga una mensaje durante las horas de no negocios. Este servicio nuevo a escala nacional da información en Español por teléfono o por escrito de opciones comercializados, producción orgánica de frutas y verduras, manejo de plagas, producción animales, y mucho mas.

¡Ola! NCAT is pleased to announce a new, toll-free Spanish language sustainable agriculture helpline at 800-411-3222. Call between 8AM to 5PM (Pacific Time) Monday through Friday, or leave a message during non-business hours. This new nation-wide service provides callers with information in Spanish over the phone or in writing about marketing options, organic production of fruits and vegetables, pest management, livestock production, and much more. Of course, the ATTRA English language service can still be accessed at 800-346-9140 or www.attra.ncat.org and has tons of information useful for farmers and those folks who work with farmers.

The Conservation Security Program (CSP) in the new farm bill has some exciting provisions for organic growers, or for those interested in transitioning to organic or sustainable production. If the CSP is implemented on a nationwide basis, farmers will be paid (not a cost-share, it's an entitlement) to implement a range of sustainable practices. ATTRA has much information that is likely to be applicable to CSP requirements. In addition to the 14 new and 10 updated publications listed below, ATTRA has literally hundreds of other useful publications, available free of charge!

Restore Your Soil's Health and Provide Nutrition with Compost Tea

Growing Solutions® is your source for dependable and easy-to-use compost tea equipment and ingredients. Our line of systems includes 25, 100 and 500 gallon models for the widest range of applications.



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POSITIONS AVAILABLE

Experienced Farm Manager needed for existing 85-acre certified organic herb farm in Southern Oregon. Must be experienced in farm/crew management, organic farming tech. & working with diversified crops. Permaculture experience helpful. See our web site for details: www.herb-pharm.com. Reply to: Herb Pharm, HR 197, P.O. Box 116, Williams, OR 97544; Fax: (541) 846-6891 or e-mail: gmcDaniels@herb-pharm.com

Work/Study Program in HerbaCulture at Herb Pharm offered on our 85-acre certified organic farm in southern Oregon. The program runs May 5–July 18, 2003. 30hrs/wk of work includes cultivation and harvest of medicinal herbs in exchange for 10–12hrs/wk of classes covering topics on organic farming and herbalism. A strong interest in organic farming is essential. For application write: Work/Study, Herb Pharm, P.O. Box 116, Williams, OR 97544; E-mail: workstudy@herb-pharm.com or phone: (541) 846-9121. For more details visit www.herb-pharm.com/Education/workstudy_fw.html

Caretaker/Farm Manager needed for 40-acre walnut and mixed fruit & vegetable farm, CCOF certified since 1987, in the Northern Sacramento Valley, 14 miles north of Chico, CA (zone 8). We are looking for a motivated, responsible individual or couple to live on and run the farm from June to October 2003 (including 1-month training), with possibility of long-term position. Salary is negotiable.

Duties include irrigation, mowing, cover crop rotation, orchard maintenance and miscellaneous caretaking chores. The ability to communicate in Spanish is required. Must have basic tractor driving and mechanical skills; knowledge of farm equipment is a strong asset. However, willingness to learn, attention to detail and serious interest in sustainable agriculture is as important as past experience. The farm has a large home garden (excellent vinya loam soil) and fruit orchard for personal consumption, as well as potential for market income if applicant is interested. It is secluded, on beautiful grounds with swimming pool. Housing is provided. Please send resume together with letter telling us why you would be the ideal applicant. We would like to interview in Fall 2002. Contact: Robert Clark & Katie Getchell, Rancho Sandia, 15345 Cana Pine Creek Rd., Chico, CA 95973

Ceres Center Farm Steward

Heifer International, a progressive non-profit world hunger organization, seeks a farm manager for Ceres Center, an education center about sustainable agriculture near Modesto, CA to develop a master plan to demonstrate sustainable agricultural, educational, & environmental systems at the Ceres Center.

Responsibilities include planning and managing education programs and all agricultural aspects of the six-acre center, including the gardens, livestock, buildings, etc., to share the work of Heifer w/visitors. Requires college degree with 5 yrs farm operations (preferably in organic/sustainable ag), plus exp relating farm/livestock practices in an educational setting. Salary DOE, plus benefits. For more info about Heifer, detailed job desc & a downloadable application please visit www.heifer.org Send resume, cover letter & application to:

HR, Heifer Int'l,
1015 Louisiana St.
Little Rock, AR 72202
fax: (501) 907-2805; e-mail: jobs@heifer.org

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For more information: Toll-free 1-877-BIONEER (246-6337)
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CALENDAR



OCTOBER 4, 2002

Farm to Cafeteria: Healthy Farms, Healthy Students, organized by the Community Food Security Coalition, will be held at the Seattle Center, Seattle, WA. For more info visit www.foodsecurity.org or call 310-822-5410.

OCTOBER 5-7

The 6th Annual Community Food Security Coalition Conference "Eating Locally, Thinking Globally," organized by the Community Food Security Coalition, will be held at the Seattle Center, Seattle, WA. For more info visit www.foodsecurity.org or call 310-822-5410.

OCTOBER 5

Occidental Arts and Ecology Center: Two-hour tour of organic gardens, which preserve thousands of varieties of rare and endangered food, medicinal, and ornamental plants. Begins at 10:00 A.M. Suggested donation of \$10.00, Occidental, CA. 707-874-1557 ext. 201.

OCTOBER 6-9

Crop Life America Annual Meeting (with Calif. Plant Health Assoc.) Indian Wells, 202-296-1586, chorner@croplifeamerica.org

OCTOBER 11-12

California Ag Leaders Conference, Fish Camp, CA. 800-678-GROW rincon@rinconpublishing.com

OCTOBER 12

Produce for Better Health Foundation Banquet and Auction, Fish Camp, CA. 800-678-GROW; rincon@rinconpublishing.com

OCTOBER 13

Occidental Arts and Ecology Center: Open House. 12:00-5:00 P.M. Tickets are \$25-\$100 per person, Occidental, CA. 707-874-1557 ext. 201.

OCTOBER 22 & 23

Soil and Soul-From Microcosmos to Cosmic Forces: Dr. Elaine Ingham and Glen Atkinson will share their innovative research, observations and practical techniques of holistic and dynamic farming systems at this exciting workshop. CA, TBA, \$195, 877-246-6337 ext. 111, www.bioneers.org

OCTOBER 27

Occidental Arts and Ecology Center: Two-hour tour of organic gardens, which preserve thousands of varieties of rare and endangered food, medicinal, and ornamental plants. Begins at 10:00 A.M. Suggested donation of \$10.00, Occidental, CA. 707-874-1557 ext. 201.

OCTOBER 28-30

Agricultural and Food Processing Applications of Ozone, Fresno, CA. 559-561-0112, confcoordozone3@earthlink.net

OCTOBER 31

21st Agribusiness Conference, Fresno, CA. 559-278-4405; mpaggi@csufresno.edu

NOVEMBER 8

Northwest Symposium on Organic and Bio-Intensive Farming, "Advances in Research and Education." For more information or to receive the full symposium announcement later this summer, contact David Granatstein at 509-663-8181 ext. 222, granats@wsu.edu, or go to the Symposium web page at <http://csanr.wsu.edu>

NOVEMBER 8-10

Biodynamic Farming and Gardening Association's Annual Conference: Lectures and workshops given by Trauger Groh, Gloria & Steven Decater, Hugh Courtney, Gunther Hauk, and many others address topics from milk processing and holistic animal care to pest management and compost microbiology, Eugene, OR. Ph: 888-516-7797, fax: 415-561-7796, biodynamic@aol.com, www.biodynamics.com

NOVEMBER 10-13

Western Growers Association Annual Meeting, La Quinta, CA. 949-885-2265; www.wga.com

NOVEMBER 12-14

Ag Fresno, Fresno, CA. 559-650-3255, ballison@fresnofair.com

NOVEMBER 12-15

Almond Production Pomology Short Course, Davis, CA. 530-757-8899, kprice@unexmail.ucdavis.edu

NOVEMBER 15-17

Introduction to Permaculture Course, Fee: \$350.00 (\$50.00 discount with 30-day advance registration) Occidental Arts and Ecology Center, CA. 707-874-1557 ext. 201.

NOVEMBER 17-19

17th Annual Small Farm Conference, Ventura, CA. 530-756-8518 ext. 16, will@caff.org

NOVEMBER 17-19

North American Agromedicine Consortium Annual Meeting, San Diego, 530-752-5232, gaoliver@ucdavis.edu

NOVEMBER 17-20

17th Symposium of the International Farming Systems Association, "Small Farms in an Ever-Changing World: Meeting the Challenges of Sustainable Livelihoods and Food Security in Diverse Rural Communities," will be held in Lake Buena Vista, FL; information is available on the Internet at <http://conference.ifas.ufl.edu/ifsa>

NOVEMBER 20

Napa Valley Grape Growers Association Viticultural Fair, Napa, CA. 707-944-8311, nvga@i-cafe.net

DECEMBER 11-13

Western Alfalfa & Forage Conference, Reno, NV, 530-752-8982, dhputnam@ucdavis.edu

DECEMBER 11

Olive Committee Fiscal Year Meeting, Fresno, jnelson@calolive.org

JANUARY 22-25, 2003

The 23rd Annual Ecological Farming Conference: "Planting Local Values in a Global Environment," Pacific Grove, CA. Ph: 831-763-2111, fax: 831-763-2112, www.eco-farm.org

FEBRUARY 21-23, 2003

Camp Stevens Family and Adult Programs: Cool Weather Garden Projects, Julian, CA. Ph: 760-765-0028, fax: 760-765-0153, info@campstevens.org, www.campstevens.org

APRIL 14-OCTOBER 17, 2003

The Farm and Garden Apprenticeship: Six-month training course in organic gardening and farming at the Center for Agroecology and Sustainable Food Systems, U.C. Santa Cruz, CA. Application deadline: November 1st, 2002. 831-459-3240, www.ucsc.edu/casfs, apprenticeship@cats.ucsc.edu

MAY 16-18, 2003

Camp Stevens Family and Adult Programs: Growing Your Summer Garden, Julian, CA. Ph: 760-765-0028, fax: 760-765-0153, info@campstevens.org, www.campstevens.org

MAY 27-30, 2003

Fifth Conference on Organic Agriculture, "For a Sustainable and Ecological Agriculture in Harmony with Nature and Society," in Havana, Cuba will focus on the analysis of the results achieved by ecological agriculture in the determination of transforming the rural area in order to guarantee not only the current but also the future feeding of the people. Individuals interested in these exhibitions should contact: Ms. Violeta Rodreguez, Specialist, Palacio de Convenciones, Cuba, Fax. (537) 2028382 / 2087986 / 2083470, violeta@palco.cu

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