Factors Associated with Deregistration among Organic Farmers in California

by

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Executive Summary

With increasing consumer awareness of its health, environmental, and social benefits, the U.S. organic sector has been growing by a vigorous 15-20% annually in recent years. Nonetheless, organic food represents only 2% of total retail food sales in the United States. Consequently, despite being one of the leading producers of organic commodities in the United States, organic agriculture plays an extremely small role in California's overall agricultural landscape. There were only 1,795 registered organic farms in 2005, representing just over 2% of all farms. Similarly, California's 195,000 acres reporting organic sales represent a mere 0.63% of all farmland.

California is one of a few states with a state-run organic program. The California Organic Products Act, signed into law in 2003, requires all producers, handlers, processors, and retailers of commodities labeled as organic to register with the California Department of Food and Agriculture Organic Program. This registration requirement is different from, and in addition to, certification requirements for marketing products with the USDA organic seal, as mandated by federal law and overseen by the USDA National Organic Program. It is important to note registration and certification are only required when the word "organic" is used in a market transaction. Neither state nor federal regulations require any action from growers who are using organic methods but are not marketing their product as organic. Therefore, the set of growers registered with the CDFA Organic Program includes only growers marketing their product as organic; it undoubtedly does not include all farmers using organic methods. Nonetheless, although not designed for this purpose, California's unique registration process provides a database of organic producers operating within the state, allowing for analysis of trends in the organic sector. These registration data indicate an approximate 20% turnover rate among registered organic producers each year. However, the numbers of new registrants and deregistrants are similar, signifying little, if any, overall growth in the numbers of registered organic producers.

The aforementioned trends raise important questions, with broad and critical implications regarding California's capacity to transition to a more sustainable food system. The approximately 20% annual rate of deregistration among organic producers is particularly perplexing. Who are these growers and what do these numbers signify? Do growers discontinuing Organic Program registration leave farming altogether or do they revert to conventional production? What are the main challenges they face and what sort of assistance would allow them to continue farming organically?

Answers to these questions were sought via mail surveys and in-depth telephone interviews with deregistered producers. We received 104 responses to the mail survey of deregistered growers. A total of 21 growers were interviewed by phone to help frame the mail survey. Key findings follow.

[1] Whereas registration with the CDFA Organic Program is required for anyone selling product using the word "organic," USDA organic certification is only required for those with annual sales of over $5,000.

Interpretation of CDFA Registration Data

The findings reveal that CDFA deregistration figures do not accurately reflect actual numbers of producers who have stopped farming using organic methods.

- Only 77 of 104 (74%) respondents identified by CDFA as having discontinued organic registration were actually deregistered. The other 27 were mistakenly identified as such. Fifteen stated that they were never registered to the best of their knowledge and 12 were listed as deregistered for a variety of reasons, including late submissions, being listed under another grower's name, or changing farm name. Eight respondents stated they did not know why they were listed as deregistered. This result lowers the expected turnover rate to 15% from the observed rate of 20%.
- Of the 77 "true" deregistrants, 27 (35%) had stopped farming altogether while 48 (63%) were still farming.[2]
- Of the 48 respondents still farming, 29 (60%) reverted to conventional production practices, while 19 (40%) were either still using organic methods (n=12) or farming using methods they described as "beyond organic" (n=7).

In summary, of 104 respondents identified as deregistered organic producers by the CDFA Organic Program, 27 were mistakenly categorized as deregistered, while 19 reported they were still farming using organic methods. Two deregistered producers did not state their current farming status. Therefore, only 56 (54%) of those identified as deregistered by the CDFA Organic Program were, in fact, no longer farming using organic methods.

Farm and Farmer Characteristics of Respondents

Age and Gender

Consistent with the demographics of U.S. farmers in general, the respondents reported a mean age of 57 years, with a range of 28 to 82 years. The majority (70%) are between the ages of 45-65. Among the respondents, 61% are male while 22% are female. Members of both genders jointly responded to two surveys (3%), while 11 (14%) respondents did not specify gender.

Years farming

At the time they deregistered, the respondents had farmed a mean of 19.8 years (median=18), with a minimum of three and a maximum of 50 years. Two "true" deregistrants did not state whether or not they were still farming.

Years farming organically

The respondents reported farming organically for a mean of 9.8 years (median=8), with a range of 1-34 years, representing an average of 58% (median=67%) of their farming career.

[2] Two "true" deregistrants did not state whether or not they were still farming.

Farm Size and Organic Acreage
Respondents reported farming a median of 8.5 total acres during the last year they farmed organically. Respondents who stopped farming entirely were smaller (median=5 acres) than respondents who had deregistered but continued to farm (median=14 acres).

At the time they deregistered, two-thirds farmed 100% of their acreage organically. The percentage of land in organic production at the time of deregistration varied by farm size, with larger farms more likely to report mixed organic and conventional acreage.

Geographic Location and Principal Crops
The majority of respondents (68%) are located in the Central Coast, South Coast, and San Joaquin regions of California. The Desert, Mountain, and North Coast regions represent the remaining respondents. The majority of growers produced fruit and nut crops (88%) and vegetables (80%). Significantly smaller numbers produced field crops (6%), nursery plants (3%), and livestock (2%).

Revenue
Most of the growers in our sample were very small, with 43% reporting $0-$4,999 in total farm revenues the last year they farmed organically. The second largest group, representing 25% of respondents, reported farm revenues of $10,000-$49,999. The respondents reported a mean of 27% (median=10%) of total household income from farming with a range of 0 to 100%.

Marketing Channels
Close to half (48%) of respondents reported marketing their organic products exclusively through wholesale or other intermediary marketing channels. Slightly over one-fourth of respondents engaged in direct marketing.

Motivations for Adopting Organic Production Practices

The principal motivations cited for adopting or transitioning to organic farming were organic market potential (39%), environmental concerns (17%), and the fact that the land was already in organic production (17%). Environmental and personal health concerns topped the list of non-economic reasons that farmers started farming organically.

Several survey questions were included to assess the degree of philosophical or pragmatic attitudes toward organic farming: 40% of respondents rated as ‘philosophical’ in their outlook, while 17% were primarily ‘pragmatic.’ The remaining 43% were balanced between the two attitudes. Small-scale (less than 50 acres) farm operators tended to be more philosophical in their attitude toward organic farming. Almost 50% of these farmers fell in the “philosophical” category, with just 8% in the “pragmatic” category and the remainder in the “balanced” category. Conversely, there were no farm operators over 50 acres that could be categorized as predominantly “philosophical.”

Reasons for Discontinuing CDFA Organic Program Registration

The main reasons offered for discontinuing organic registration or production were organic regulatory issues (45%); issues unrelated to organic production (26%); production issues (16%); market issues (16%); management issues (8%); and price issues (8%).

The majority (63%) of respondents still farming cited regulatory issues related to organic production as one of the main reasons for discontinuing organic registration. In contrast, of those no longer farming, only five (19 %) cited reasons specifically related to organic production as a reason for leaving farming.

Half of the respondents that stopped farming entirely did so for reasons unrelated to organic farming or marketing, such as changes in land tenure (lease or land sale) or personal issues. In contrast, almost all (87%) of deregistered respondents that were still farming cited reasons related to organic farming for discontinuing organic registration, with regulatory issues being the single most important factor (63%). Regulatory problems were an issue for 74% growers still farming using organic methods, compared to 55% of those who had reverted to conventional production.

Principal Challenges in Organic Agriculture

The respondents were asked to rank the main issues they faced as organic farmers by broad categories. Regulatory problems (i.e. paperwork, certification, etc.) were ranked as the main issue by 30% of all respondents. That was followed by price issues (27%), production problems (22%), market access problems (17%), and management issues (5%).

When asked to rank specific challenges within those broad categories on a scale of 1 to 5 (where 5 = “serious problem”), the main issue ranked as 4 or 5 was “paperwork and record-keeping,” as reported by half (50%) of all respondents. That was followed by certification costs (44%), the high cost of organic inputs (38%), and time requirements associated with organic farming (36%).

Technical Assistance Needs

Respondents were asked to describe types of assistance that would have helped them continue farming organically. Regulatory-related assistance was the most frequently cited form of assistance as cited by 41% of respondents. Specific types of assistance cited include certification cost-share programs, paperwork reduction, and help with the application process, registration simplification, and more trained and experienced organic certifiers. Other areas of assistance cited included production (21%), market (21%), and management (17%) related assistance.

Conclusions and Recommendations

The findings indicate that regulatory issues presented significant challenges to organic producers and were cited as the principal reason for reverting to conventional production among deregistered producers that are still farming.

Recommendations based on the research findings include the following:

- Programs and policies to help organic farmers continue farming organically should include efforts to reduce the paperwork and regulatory burdens associated with organic farming, as well as efforts to help farmers deal with the high cost of organic inputs and certification costs.
- Farmers considering adopting organic methods should be made fully aware of the challenges involved with doing so, particularly in terms of paperwork and record-keeping, certification costs, the high cost of organic inputs, and greater time requirements associated with organic production.
- Deregistration rates based on CDFA registration data should be adjusted to take into account deregisteration that does not represent exit from the Organic Program.

Introduction

With increasing consumer awareness of its health, environmental, and social benefits, the U.S. organic sector has been growing by a vigorous 15-20% annually in recent years (Faber 2006, Greene 2006). Nonetheless, organic food represents only 2% of total retail food sales in the United States. Consequently, despite being one of the leading producers of organic commodities in the United States, organic agriculture plays an extremely small role in California's overall agricultural landscape. There were only 1,795 registered organic farms in 2005, representing just over 2% of all farms. Similarly, California's 195,000 acres reporting organic sales represent a mere 0.63% of all farmland.

California is one of the only states with a state-run organic program. The California Organic Products Act, signed into law in 2003, requires all producers, handlers, processors, and retailers of commodities labeled as organic to register with the California Department of Food and Agriculture (CDFA) Organic Program. This registration requirement is different from, and in addition to, certification requirements for marketing products with the USDA organic seal, as mandated by federal law and overseen by the USDA National Organic Program. It is important to note registration and certification are only required when the word "organic" is used in a market transaction. Neither state nor federal regulations require any action from growers who are using organic methods but are not marketing their product as organic. Therefore, the set of growers registered with the CDFA Organic Program includes only growers marketing their product as organic; it undoubtedly does not include all farmers using organic methods. Nonetheless, although not designed for this purpose, California's unique registration process provides a database of organic producers operating within the state, allowing for analysis of trends in the organic sector. These registration data indicate an approximate 20% turnover rate among registered organic producers each year However, the numbers of new registrants and deregistrants – signifying little, if any, overall growth in the numbers of registered organic producers.

The number of organic farms in California reporting sales actually declined by 5% between 2000 and 2005 (Klonsky and Richter 2007). A decrease in the number of organic farms, coupled with an increase in organic acreage and sales, suggests a trend toward consolidation and expansion in the California organic sector. These figures also give the impression that no new growers are entering the industry.

However, closer inspection of CDFA Organic Program registration data reveals that many growers enter the Organic Program every year while a comparable number leave the program or "deregister." CDFA Organic Program registration data indicate that approximately 20% of organic growers discontinue their registration each year. For example, 358 farms discontinued Organic Program registration in 2002, of a total 1,847 registered growers. That same year witnessed the entry of only 303 new organic growers, representing a net decrease of 55 organic farmers in California (Klonsky and Richter 2005).

The above trends raise a number of important questions, with broad and critical implications regarding California's capacity to transition to a more sustainable food system. The 20%

deregistration rate among organic growers is particularly perplexing. Who are these growers and what do these numbers signify? Do growers discontinuing Organic Program registration leave farming altogether, or do they revert to conventional production or do they continue farming organically under different registration status? What are the main challenges they face and what sort of assistance would allow those discontinuing organic production to continue farming organically?

Literature Review

Factors Associated with the Adoption of Organic Farming Practices

The literature associated with reasons for adoption and non-adoption of organic farming is fairly extensive. Darnhofer et al. (2005) identified a spectrum of five types of farmers, ranging from "committed conventional" to "committed organic" producers.

- "Committed conventional" farmers are defined as those who do not see organic farming as more environmentally friendly than conventional production, do not believe the health claims made for organic foods, and do not perceive that organic production is technically and/or economically feasible.
- This group is followed by "pragmatic conventional" farmers, who do not have an ideological stance opposing organic farming, but perceive conversion as entailing profound changes in their farm organization which they are not eager to implement without tangible economic benefits. Darnhofer et al. note these growers are likely to be more open to conversion once "technological uncertainties have been resolved" and once the market for organic products has been established.
- "Environment-conscious but not organic" farmers are defined as "self-declared organic producers who are not registered, who tend to have strong views regarding the perceived disadvantages of certification and/or who want to remain independent of the regulations." While largely organic, these farmers may use some conventional practices based on philosophical or pragmatic reasons.
- "Pragmatic organic" farmers are defined as those whose methods are entirely organic, but whose motivation for organic conversion is largely economic.
- Finally, "committed organic" farmers are described as "deeply rooted in the founding philosophy of organic farming, which is based on the rejection of synthetic fertilizers and pesticides, while seeking closed nutrient cycles and improved soil health." Darnhofer et al. note in contrast to pragmatic organic farmers, "economic considerations are secondary and these farmers are willing to risk foregoing some of their income."

The literature identifies a broad range of factors associated with the adoption of organic farming techniques (Anderson (2004); Darnhofer et al. (2005); Dobbs (2006); Fairweather (1999); Guthman (2004); Hattam (2006), Jackson (2006); Klonsky (2000); Klonsky and Smith (2002); Klonsky and Greene (2005); Midmore et al. (2001); Padel (1994); Padel (2001); Regouin (2003); Rigby et al. (2001); Risgaard et al. (2007), Siemon (2006); Strochlic and Sierra (2007); Walz (2004)) (Table 1).

In contrast to a relatively limited number of factors encouraging farmers to adopt organic practices, the literature has identified a wide range of barriers and deterrents to organic conversion. Some of these are true for farming in general, while some are particular to organic production. Farmers responding to the Organic Farming Research Foundation (OFRF) annual survey (Walz 2004) ranked their top concerns as: (1) production, marketing, or regulatory problems; (2) weather-related production costs; (3) organic certification costs; (4) obtaining organic price premiums; (5) high input costs; (6) lack of organic marketing networks; (7) high labor costs; (8) weed-related production losses; and (9) production losses due to pests or diseases.

In addition to the above, the literature identifies a range of issues that are particular to organic farmers (Table 2). For example, Wolf (2006) notes that, "If a producer is fully committed, prepared to withstand the criticism, financially strong with low debt, preferably owns the ground he farms and is willing to work extremely hard, he can make a good living farming organically."

Table 1: Factors Associated with the Adoption of Organic Farming Techniques

Environmental Considerations	Personal Considerations	Economic Considerations	Social Factors
▪ Land stewardship ▪ Concern for environment	▪ Personal or family health ▪ Farmworker health	▪ Increased market share ▪ Price premiums ▪ Lower input costs ▪ Higher quality products ▪ Increased regulations on conventional farming and greater restrictions on synthetic pesticides	▪ Organic farmers in region (provide support for decision to adopt organic) ▪ Presence of "champion" farmers ▪ Supportive advisory services

Table 2: Barriers to Organic Conversion

Production	▪ Low yields associated with steep learning curves during initial years of organic farming ▪ Poor production due to naïve understanding of what organic agriculture entails and inability to change farming mindset from "input substitution" to a "whole systems" approach ▪ Poor production due to inability to address weeds and pests using organic methods ▪ High production costs, particularly labor[3] and compost[4]
Income	▪ Losses associated with transitional costs – low production and inability to obtain organic price premiums during that period ▪ Potential for losses during post-transitional period due to high costs of production, reduced yields or poor quality product ▪ Opportunity costs of cover cropping and loss of production while land lies fallow
Marketing	▪ Lack of developed marketing and distribution channels for organic farmers ▪ Lack of knowledge of where and how to market organic products ▪ Lack of access to information on prices and markets for organic products[5] ▪ Competition from large-scale organic farms and imports from countries with lower labor costs and/or price supports ▪ Lack of farmer interest or ability to engage in more aggressive types of marketing, such as direct sales, often necessary for organic farming to be profitable ▪ Geographic isolation and lack of local markets for organic products
Technical assistance	▪ Limited access to technical assistance ▪ Limited awareness of how to access technical assistance when available ▪ Discouragement of organic farming on the part of traditional sources of technical assistance ▪ High cost of private technical assistance, particularly for smaller farmers

Table 2: Barriers to Organic Conversion (Continued)

Labor	▪ High labor costs ▪ Lack of access to sufficient labor ▪ Lack of farmer interest in managerial roles associated with higher demand for labor
Financing	▪ Inability to access organic production credit
Management	▪ Unwillingness or inability to spend more time needed to monitor fields and manage organic production
Costs	▪ Certification costs, which can be particularly onerous for smaller farmers ▪ High costs associated with specialized equipment and machinery
Paperwork	▪ High levels of paperwork and record keeping required for organic certification[6]
Materials	▪ Lack of access to raw materials, including fertilizer, pesticides, seeds and animal feed
Social	▪ Concerns about being ostracized or marginalized, particularly in smaller farming communities[7] ▪ Concerns about having "dirty" or "messy" fields ▪ Unwillingness to adopt new techniques, particularly on the part of older and/or more established farmers ▪ Unwillingness to alter established market and other relationships[8] ▪ Lack of geographic proximity to other organic farmers, which can inhibit information sharing and limit support from other organic farmers
Other	▪ Concerns about contamination from genetically engineered crops ▪ Lack of familiarity with other organic farmers who can provide advice and mentorship ▪ Conflicting organic standards internationally, which can affect farmers' ability to participate in export markets[9]

[3]This research was conducted before the California legislature approved a minimum wage increase to $8 per hour by 2008. Since labor costs typically represent 50-60% of production costs on organic farms, it remains to be seen how minimum wage increases will affect farmers' decision to adopt or maintain organic production.

[4] Some growers report that the price of compost has doubled in recent years.

[5] A number of observers (Dimitri and Richman 2000; OTA 2006) note the federal government collects and publishes shipment and price information for many agricultural products, which suppliers and buyers use when making shipment decisions and before entering sales agreements. However, this information is not available for organically grown commodities.

[6] George Siemon (2005), Organic Valley CEO notes "There is nothing that a farmer hates more than another form to fill out."

[7] While those attitudes are generally more prevalent in other regions, they do exist in California. Discussing his decision to adopt organic practices, a farmer explained, "My family didn't go for it. They gave me so much grief when I went organic, how I was going to lose it all, the family farm. I became very marginalized. Now I've taught them. They've got wholesale accounts with $20K loads. Now they think they're the pioneers."

[8] According to George Siemon (2005), CEO of Organic Valley: "Farmers are traditionalists. It is hard to change what you are doing and it is hard to change relationships. We have dairy farmers who could go organic now, but they are hard pressed to change their milk hauler or feed mills because it is based on the relationships. We come to them and say, 'throw all your traditional relationships away and work with us' and that is hard for them."

[9] Organic standards vary not only between the US and the EU, but between the different European countries as well, which can create significant confusion and losses.

Reasons for Discontinuing Organic Production

Many farmers discontinue farming organically because they cease farming entirely, often for reasons unrelated to organic farming. Villarejo (1996) examined all farmers in two California counties (Fresno and Monterey) and found exit rates of 5-6% per year, with significantly higher exit rates in fresh-market field crops, such as green beans and tomatoes. In addition, the study found that smaller scale farms had higher attrition rates than larger farms. In a nationwide study, Hoppe and Korbe (2006) determined that U.S. farm exit rates are 9-10% per year, equivalent to the exit rate of all U.S. small non-farm businesses with no employees. They conclude that the U.S. farm sector has remained stable despite high exit rates because of counterbalancing entry rates. The study also found:

- Exit rates decline as farm size (i.e., sales) increases.
- The exit rate initially declines with age until it reaches 8-9% for farmers between 45 and 54 years of age.
- Exit probability is inversely related to business age; it is substantially higher for recent entries than for older, more established farms.
- Exit probability is particularly low for large farms that are at least 14 years old and are operated by farmers younger than 65.
- The lower exit probability for large, well-established farms may help explain the growing concentration of production among fewer farms, particularly if the farms are passed on to other family members and continue to operate.

In contrast to the literature regarding organic adoption, the literature on why some organic producers discontinue organic certification or revert to conventional production is sparse. Based on a review of CDFA Organic Program data regarding the characteristics of farms entering and exiting organic production, Klonsky and Smith (2002) found a turnover rate of approximately 20% each year, with smaller farms and those producing vegetable crops most likely to discontinue organic production. The authors suggest that the higher propensity for vegetable growers to exit organic certification may in part be explained by the fact that "markets for organic vegetables are more volatile and easily saturated than those for organic fruits and nuts."

Klonsky and Smith also note that "highly diversified organic-produce farms," for example, those producing both fruits and vegetables or both livestock and field crops, are more likely to remain in the organic sector. Years of organic farming experience was also found to be associated with continued organic production, "consistent with the hypothesis that organic operators build long-run reputations as part of their marketing strategies and are likely to be able to maintain their markets once they have developed them."

Based on a review of 66 producers in the Netherlands, Regouin (2003) identified a number of reasons for discontinuing organic production. These included: stopped farming (40%), lack of market (12%), not economically viable (11%), restrictive legislation (8%), and other (16%). Regouin hypothesizes that smaller organic farms may be less viable than larger ones, noting:

> Another interesting factor that came out of the studies on farms that withdrew from certification was that the average size of the 50 farms was about 13 hectares. Contrast this with those farms that have been converting to organic agriculture recently, with an average size of about 28 hectares. It may be concluded with some caution that small farms for some reason are less viable.

Rigby et al. (2001) identified four categories of reasons for discontinuing organic production, based on interviews with 35 farmers in the United Kingdom: (1) marketing and market incentives; (2) cost issues; (3) agronomic problems, including access to technical information; and (4) other issues, including changing personal circumstances. In that regard, the authors note there appear to be two main types of producers who discontinue organic production: (a) those motivated by economic considerations, "who reverted primarily because they could not sell their produce or could not get a premium sufficient to cover the additional costs of production," and (b) those motivated by lifestyle choice or other ideals, "who started up in organic production with little experience and knowledge and failed to make a sufficient living."

Rigby et al (2001) found that factors associated with increased likelihood of "reversion" to conventional production are age and education (with older farmers and those with higher education more likely to revert); gender (with female producers more likely to revert); membership in a producer group or association; and "organic conversion with a motive of cost reduction."

Conversely, factors decreasing the likelihood of "reversion" include: accessing information through producer associations, organic advisory boards, publications or other producers; membership in an organic-producer association; membership in a cooperative and organic conversion with a motive of improving consumer health or the image of agriculture.

Rigby and Young (2000) also identified a number of other factors "beyond the farm gate" that had a significant effect on farmers' decision to cease organic production. These include "the difficulties some [meat] producers had in finding appropriate abattoirs, processors, or wholesalers and, hence, in realizing the organic premiums necessary to cover the additional costs associated with organic production." That is corroborated by Holly Givens, Communications Director at the Organic Trade Association (OTA)[10], who notes that high-unmet demand for organic meat is associated with the lack of infrastructure, particularly certified organic slaughterhouses. Givens notes that the meat industry is very vertically integrated and that there are few incentives for certified slaughtering facilities, given the small size of the organic meat market.

OFRF survey data (Walz 2004) indicate that approximately 5% of producers nationwide discontinue organic production each year. The OFRF survey identified the main reasons for discontinuing organic production as cost and availability of inputs, and cost and availability of labor. Krieder (2004) found a 14% "dropout" rate in her research on organic farmers in New York State, which she principally attributes to certification costs and changes in certification rules under the National Organic Program.

[10] Personal communication. February17, 2006.

Based on telephone interviews with 20 organic farmers in Fresno County who had discontinued registration with the CDFA Organic Program, Strochlic and Sierra (2007)[11] found that the principal reasons these farmers offered for leaving organic production were associated with economic rather than production factors. A number of farmers referred to "spinning their wheels " noting that price premiums – when they were to be had – were often offset by higher production costs, reduced yields, and/or a reduced percentage of marketable yield.

Specific reasons for deregistration included the following:

- Increased costs of production, particularly attributed to higher input and management costs
- Higher management costs due to increased time needed to monitor crops for pests and disease
- Difficulties finding buyers for organic products
- Lower yields and higher rates of second grade or unmarketable product
- Increased cost of weed control, due to higher labor needs and additional tractor passes

External Issues Affecting Organic Transition

In addition to the above, a number of additional issues have exerted an influence on the decision to adopt or continue organic production practices in recent years. Factors discouraging organic production include the penetration of large "industrial" farms in the organic sector. With economies of scale and access to large markets, that sector has created significant competition for small and medium growers, who may not have access to some markets. Growing foreign competition from countries with low labor and other costs, or that enjoy price supports, has also created competition for U.S. organic producers. Klonsky and Greene (2005) report that "organic imports from countries with lower labor and input costs have nearly replaced some U.S. organic production in some commodity sectors." While increasing penetration of Wal-Mart and other large retailers, promising low markups on organic products, has the potential to further depress prices for organic growers, some observers feel that may ultimately benefit large growers.

An additional factor is the plethora of "green" labels entering the marketplace and muddying the distinction between organic and "sustainable" products. Marketing tactics such as the decision of two large conventional dairies to produce conventional milk without synthetic growth hormones (CCOF 2006) have the potential to decrease the demand for organic dairy products, since much of that demand is spurred by the desire to avoid growth hormones. Contamination from genetically modified organisms also presents threats to the future of the organic sector, a risk some conventional producers may be unwilling to take.

Revisions to the federal regulations applicable to organic production may also affect consumer demand for organic products. A rider on the 2006 Agriculture Appropriations Bill legalized, "the use of synthetic substances in the processing and post-harvest handling of organic foods". While proponents of those changes see them as clarifying or strengthening the National Organic Program, opponents fear that they "will dilute the organic standards and, potentially, render the USDA stamp irrelevant" (Whitney 2007), which will ultimately resulting in reduced consumer

[11] Not necessarily the same as discontinuing organic production or certification.

confidence and a loss of markets and price premiums. As a Marin County, California farmer notes, "if big business kills the name…why go organic?" (Whitney 2007).

In contrast to the above, growing consumer demand for organic food and non-food products has the potential to significantly increase markets for organic farmers, particularly those who can develop successful niches through product choice, branding, or market relationships. Implementation of the National Organic Standards has been associated with increased consumer confidence in the organic label (Strochlic 2005), spurring demand for those products. At the same time, increased interest in local food and the burgeoning number of farmers' markets, Community Supported Agriculture operations, and other forms of direct marketing have the potential to create additional markets, particularly for small and medium organic producers.

Policies Promoting Organic Agriculture

The United States and the European Union currently represent the majority of organic production and consumption (Willer and Yussefi 2006). Nonetheless, policies regarding organic agriculture are vastly different in those two regions. The European Union has proactively promoted the organic sector through a broad range of policies, which are "based on an understanding of organic production as a means of mitigating environmental problems, managing marginal lands, and addressing falling farmer incomes" (Dabbert et al. 2004). These policies include setting targets for land in organic production, "green" payments for organic conversion and maintenance, and market-based policies promoting price premiums via coordination of supply and demand of organic products.

In contrast, the United States currently offers almost no direct payments for transition to organic agriculture. Organic agriculture appeared in a Farm Bill for the first time in 2002, when $20 million in funds over five years for cost-share of organic certification was mandated. The 2002 Farm Bill also mandated $3 million for organic research and provided funds for the first Organic Data Initiative carried out by USDA. The 2007 Farm Bill, not passed at the time of this writing, had significant increases for organic research and certification cost share compared to the 2002 version (OFRF 2007).

Policy mechanisms to promote organic agriculture at the U.S. federal level include limited funding in the Environmental Quality Incentive Program (EQIP), as a means of subsidizing transitional costs, and implementation of certain practices used by organic farmers.[12] Funds are also available to organic farmers through the Conservation Security Program. These programs do not, however, provide maintenance payments beyond the transitional period on the assumption that price premiums will allow organic farming to be viable past the transitional phase. Despite – or perhaps because of – the lack of large federal support, a number of local jurisdictions and private entities have taken it upon themselves to offer incentives for organic production. In 2005, Woodbury County, Iowa "became the first government in the United States to financially support organic farmers by offering a property tax rebate to transition to organic agriculture" (Mark 2006). Woodbury County has also sought to incentivize organic production through local procurement policies and has enacted legislation requiring the county's food

[12] That is currently an option in six states: Iowa, Massachusetts, Minnesota, Missouri, Montana and Nebraska.

service contractor to purchase organic food that is grown and processed within 100 miles of the county courthouse whenever it is available.

The state of Vermont recently approved $1 million in interest-free loans to organic dairy farmers "to offset some of the costs of converting operations to organic dairy production" (Sustainable Food News 2006), while Washington State has initiated a pilot program providing payments for organic farmers in western Washington to improve water quality in the Skokomish River, "where dissolved oxygen concentrations [from conventional farming] have led to a series of fish kills in recent years" (Beecher 2006).

University of California Cooperative Extension efforts aimed at helping organic growers improve their farming and marketing practices have been supported through private funding from the Columbia and Heller Foundations, in coordination with the University of California Sustainable Agriculture Research and Education Program (SAREP). The Fresno County Small Farm Advisor position, which has historically served conventional farmers, also has conducted research on organic production with this funding. An evaluation of this program in Humboldt, Ventura, and Marin Counties has found that the program has helped solve some of the problems facing transitioning and experienced organic farmers who recommend continued support for this program.

Public-private sector initiatives to promote organic farming include the CCOF Foundation "Going Organic" program, which promotes organic conversion by matching aspiring organic farmers with peer mentors. Private entities, including Organic Valley, Horizon, and Stonyfield Farms, currently offer transitional payments of $2 per cwt to encourage dairy farmers to adopt organic practices and help them weather transitional costs. Stonyfield and Organic Valley expect to spend approximately $2 million on incentives and technical assistance in 2006 (Quaid 2006).

Harrison (2005) suggests that such subsidies may play a key role in encouraging the adoption of organic practices, citing the success of the cost-share program of the Natural Resource Conservation Service and the fact that "so many farmers are interested in the $3.9 billion [of NRCS funding] that only one in four applicants is given funding." However, she cautions that financial incentives must be accompanied by market coordination to ensure continued price premiums. She cites the case of Austria, where "about 10 percent of farmers in the country decided to go organic because of subsidies offered by the government" making Austria the "leading organic producer in the EU in the mid-1990s." However, Harrison notes that increased production was met with "inadequate information, distribution, and marketing channels; as a result, many threw in the trowel. They had the money – they just needed a market."

Moran (2002) cites a strategy used in the UK through which supermarkets "facilitate the development of the organic market by helping to minimize the risk to producers…through providing financial support for conversion." He explains:

> In the UK the supermarket chain ASDA is supporting livestock conversion under its meat conversion scheme worth £3million. Further up the marketing chain, four major abattoir wholesalers have provided loans to the major organic meat marketing operation in the UK – the Organic Livestock Marketing Co-operative (OLMC) – to improve and develop consistent supplies.

Research Methods

The research was conducting using the following methods:

1) Semi-structured telephone interviews were conducted with 21 growers who had discontinued registration with the CDFA Organic Program during the period January 2003-December 2005. The purpose of those interviews was to obtain information regarding these farmers' reasons for discontinuing organic registration, and recommendations regarding forms of assistance that would help current organic farmers continue to farm organically. The telephone interviews also provided formative data that contributed to the formulation of the survey questions and response categories. Interviews were conducted with randomly selected individuals representing the following categories: small (<10 acres) vegetable farmers; large (>= 10 acres) vegetable farmers; small (<10 acres) non-vegetable farmers; large (>= 10 acres) non-vegetable farmers; livestock farmers, Latino farmers, and Asian farmers. All interviews received a letter explaining the purpose of the study, which was followed up with a telephone call.

2) A mail survey was sent to 501 producers who had discontinued organic registration during the period January 2003-December 2005 (based on CDFA Organic Program records). This represents all of the known deregistered farmers minus individuals contacted for semi-structured telephone interviews. The survey included questions regarding current registration status, reasons for discontinuing organic production or registration status, challenges faced as an organic farmer, and farm and farmer characteristics. The survey was sent in February 2007. Two follow-up postcards were sent at two-week intervals. Fifty-six surveys were returned as undeliverable. We received 107 completed surveys, representing a response rate of 24%. Three surveys were not included in the analysis because of a lack of sufficient responses or inconsistent answers. The final analysis therefore consists of 104 surveys.

3) The survey data were entered, coded and analyzed using SPSS. Data analysis included frequencies and cross-tabs.

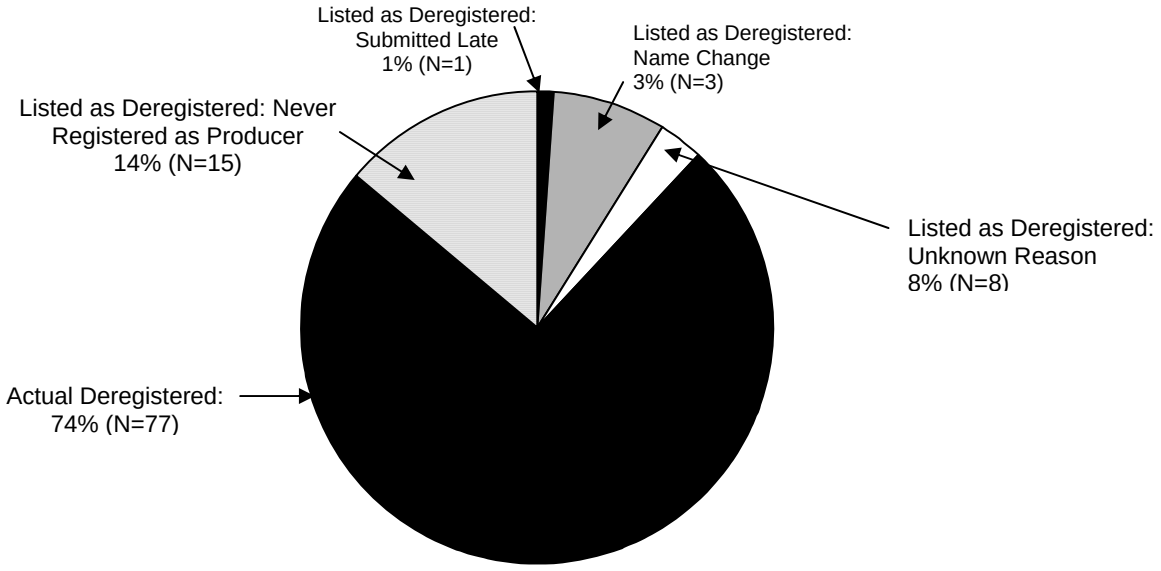
Results

Characteristics of Respondents

Organic Registration Status

Out of 104 respondents, 77 (74%) were actually deregistered, while 27 were mistakenly interpreted as deregistered. Of those, 15 stated that they were never registered as organic producers while 12 were listed deregistered for a variety of reasons, including a late submission, being listed under another grower's name, or changing the farm's name. (Figure 1)

Figure 1: Registration Status for All Respondents (N=104)



These findings indicate that CDFA Organic Program data overestimate deregistration rates among organic producers by approximately 5%. Based on a 95% confidence interval calculation, we can estimate the true percent of deregistered organic farmers as being between 66% and 82% of the reported numbers. This translates to an expected "dropout" rate of organic farmers of between 13% and 16% a year compared with the 20% rate previously assumed.

This rate of error is supported and further explained by responses we received from telephone interviews. Three out of 21 respondents who were listed as deregistered stated that they should not be categorized as a "deregistered producer" for the following reasons:

- One farmer believed he was listed as deregistered because he switched farmland location. He lost a lease on one parcel and found another one, and had no gap in production.
- One farmer believed he was listed as deregistered because he was late in registering, but intended to re-register.
- A processor claimed he had mistakenly registered as a producer. Having learned of this option, he is now registered as a processor.

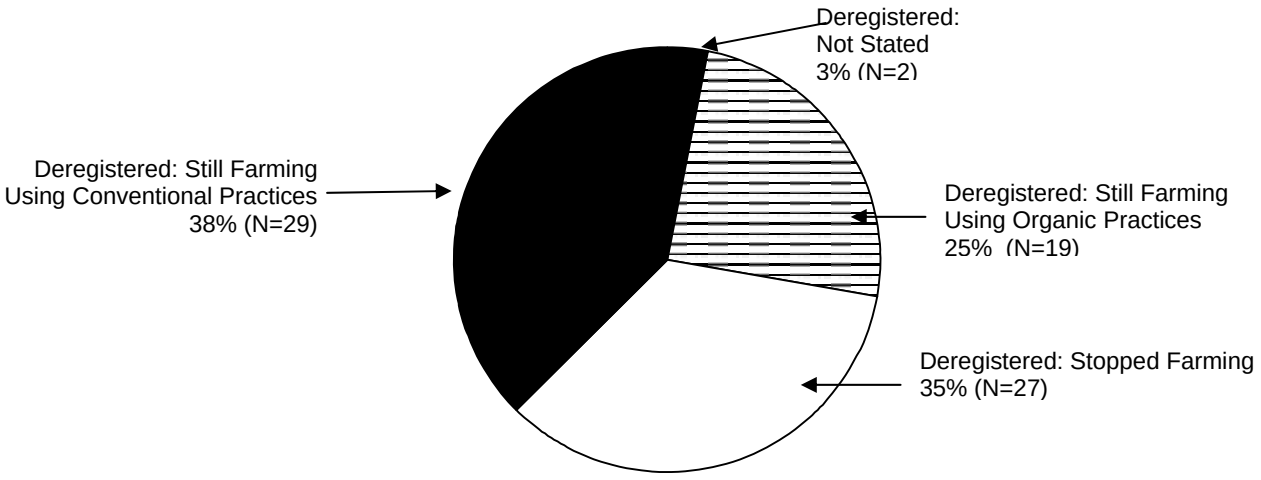
Farming Status and Practices

In examining the registration and farming practices of the 77 respondents who were accurately recorded as deregistered producers, 27 (35%) had stopped farming altogether while 48 (63%) were still farming[13] (Figure 2).

Of deregistered growers no longer farming, 22% (n=6) cited reasons specifically related to organic production, marketing, or regulatory problems as reasons for leaving farming. The majority of those no longer farming (78%, n=19) cited issues not related to organic farming, such as retirement, poor health, or changes in land tenure as reasons for leaving agriculture. Of the 48 respondents still farming, 29 (65%) reverted to conventional production practices, while 19 (35%) were either still using organic methods or farming "beyond organic." Farmers using organic practices stated that they had discontinued organic registration because they did not require organic certification (and consequently CDFA Organic Program registration) for marketing purposes.[14] Of these, seven identified themselves as "beyond organic." Additionally, some of the "beyond organic" farmers noted that they were using systems such as biodynamic, which are not recognized by the USDA National Organic Standards.

As such, of the 77 respondents accurately identified as deregistered organic producers 56 (73%) exited organic farming either because they stopped farming altogether (n=27) or because they reverted to conventional production practices (n=29). Nineteen (25%) claimed to be still farming organically but are no longer registered with the CDFA Organic Program.

Figure 2: Current Farming Status of Actual Deregistered Growers (N=77)



[13] Two actual deregistrants did not state whether or not they were still farming.

[14] A number of farmers may be confusing CDFA Organic Program registration with certification by an USDA certification agency, despite the fact that these are two entirely different processes. Whereas registration with the CDFA Organic Program is required by state law, certification is required by federal law.

Eighteen (62%) of the 29 farmers who have reverted to conventional production reported that they now farm more sustainably as a result of their experiences farming organically, while only three (11%) reported not retaining any of the "sustainable" practices adopted as organic farmers.

Impacts of Farm Characteristics on Organic Production and Registration Status

Age and Gender

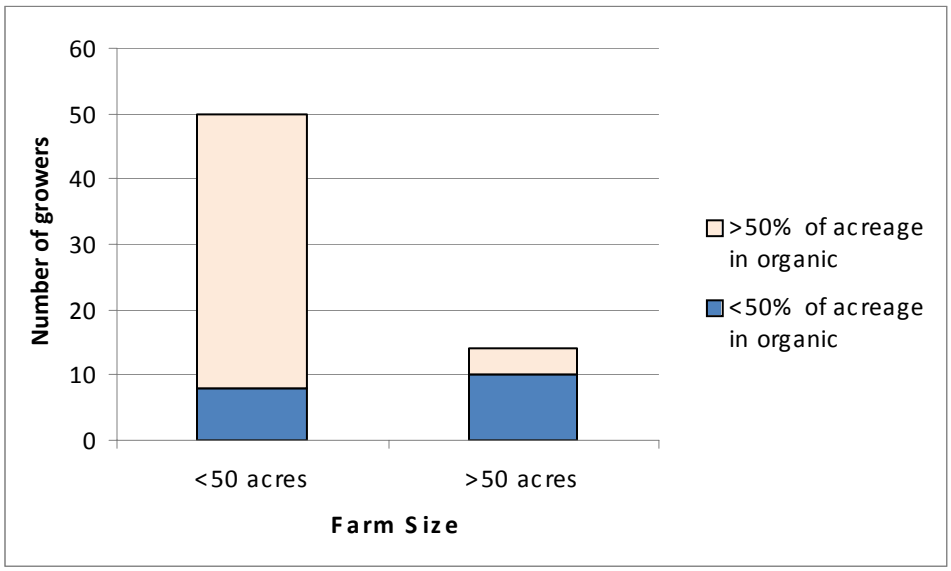
Consistent with the demographics of U.S. farmers in general, the respondents report a mean age of 57 years, with a range of 28 to 82 years. The majority (70%) are between the ages of 45-65. Of the respondents, 61% are male while 22% are female. Members of both genders jointly responded to two surveys (3%), while 11 (14%) respondents did not specify a gender.

Farm Size, Tenure, and Organic Acreage

The respondents reported farming a median of 8.5 acres during the last year they farmed organically, with a range of 0.2 to 4,660 acres. Smaller scale is associated with increased likelihood of leaving agriculture altogether. Respondents who stopped farming entirely had a median of five acres, while deregistered respondents who continue to farm reported a median of 14 acres.

The percentage of land in organic production at the time of deregistration varied by farm size as well, with larger farms more likely to report mixed organic and conventional acreage than smaller farms. Eighty four percent of farms under 50 acres in size farmed more than half of their land organically compared with only 29% of farms over 50 acres in size (Figure 3).

Figure 3: Growers with More/Less than Half of Total Acreage in Organic Production by Farm Size



At the time they deregistered, the respondents farmed a mean of 19.8 years (median=18), with a minimum of three and a maximum of 50 years.

The respondents report farming organically for a mean of 9.8 years (median=8), with a range of 1-34 years. This represents an average of 58% (median=67%) of their farming career. Overall, 30% of deregistrants had less than 10 years of total farming experience. Small farm operators tended to have less farming experience than larger farm operators. Of the respondents, 85% started their careers as conventional growers and transitioned to organic production. Only 15% began their careers as organic. Almost two thirds (61%) had spent the majority of their time farming organically. Among the deregistrants with more than 20 years total faming experience, 81% had farmed less than half that time as organic farmers.

Geographic Location and Principal Crops

The respondents are located in every region defined by CDFA. Most are from the Central Coast, South Coast, and San Joaquin Valley (Table 3). Almost two thirds of the respondents primarily sold fruits or nuts and another third primarily grew vegetables. Only two respondents listed something other than produce as their primary source of organic sales.

Table 3: Primary Commodity Group, Number of Growers by Region*

Top Commodity Group in Sales	North Coast		Central Coast		South Coast		Desert		San Joaquin		Sacramento Valley		Mountain		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Vegetable	5	71%	7	44%	3	21%	0	0%	4	33%	0	0%	1	25%	20	32%
Fruit or nut	2	29%	8	50%	11	79%	2	100%	8	67%	6	86%	3	75%	40	65%
Livestock	0	0%	0	0%	0	0%	0	0%	0	0%	1	14%	0	0%	1	2%
Other	0	0%	1	6%	0	0%	0	0%	0	0%	0	0%	0	0%	1	2%
Total %	7	100%	16	100%	14	100%	2	100%	12	100%	7	100%	4	100%	62	100%

* Number of respondents and percent within region

Most of the respondents had sold either fruit and nut crops (88%), vegetables (80%) or both during the last year respondents were registered as organic (Table 4). Significantly smaller numbers produced field crops (6%), nursery plants (3%), or livestock (2%).

Table 4: Commodity Groups, Number of Growers with Any Sales

Commodity Group	N	%*
Fruit or nut	56	88%
Vegetable	51	80%
Field crops	4	6%
Nursery	2	3%
Livestock	1	2%

* Total percent is greater than 100 because respondents could provide more than one response

The survey respondents produced a variety of different crops. However, they reported low levels of crop diversity with a median of only one organic crop during the last year they farmed organically. Mixed operations reported somewhat higher levels of diversity, with a mean of one conventional crop and two organic crops.

Revenue

Most of the growers in our sample are very small, with 43% reporting $0-$4,999 in total farm revenues the last year they farmed organically (Table 5). The second largest group, representing a quarter of respondents, reported farm revenues of $10,000-$49,999.

Table 5: Farm Revenue

Revenue	N	%
$0-4,999	27	43%
$5,000-9,999	6	10%
$10,000-49,999	15	24%
$50,000-99,999	8	13%
$100,000-249,999	2	3%
$250,000-499,999	1	1.5%
$500,000-1 million	1	1.5%
$Over 1million	3	5%
Total	63	100%

The majority of respondents (63%) reported between 81% and 100% of farm revenues from organic sales. The respondents reported a mean of 27% (median=10%) of total household income from farming. As would be expected for farms with less than $10,000 in income, 89% stated that farm revenue comprised less than 50% of their total household income.

Marketing Channels

Close to half (48%) of respondents marketed their organic products exclusively through wholesale or other intermediary marketing channels, while 11% reported exclusive reliance on direct marketing. The remaining 41% reported a mix of marketing channels (Table 6).

Table 6: Marketing Channels

Marketing Channels	N	%
Wholesale (WS) only	29	48%
Direct retail (DR) only	2	3%
Direct to consumers (DC) only	5	8%
WS and DR	8	13%
WS and DC	6	10%
DR and DC	9	15%
WS, DR and DC	1	2%
Total	60	100%

Motivations for Adopting Organic Production Practices

Fifty-nine respondents provided answers to an open-ended question eliciting reasons for adopting organic farming practices (Table 7). These were coded into 10 different categories. The principal motivations cited were organic market potential (39%), environmental concerns (17%), and the fact that the land was already in organic production (17%).

Table 7: Reasons for Adopting Organic Practices

Reasons	N	%*
Organic market potential	23	39%
Environmental concerns	10	17%
Land already organic	10	17%
Personal or family health	7	12%
Tradition	6	10%
Belief system or ethics	6	10%
Organic practices are 'good farming' practices	4	7%
Organic improves product quality	3	5%
General health	3	5%
Diversify farming operation	1	2%

* Total percent is greater than 100 because respondents could provide more than one response.

The survey also included questions attempting to gauge whether the respondents' primary motivation for adopting organic methods was "pragmatic" (i.e., economic motivations), "philosophical" (i.e., commitment to organic farming as better for the environment and human health), or a combination of the two.[15] Based on that typology, 40% of all respondents were identified as having adopted organic practices primarily based on a philosophical commitment to organic farming, while only 17% were identified as having primarily economic or "pragmatic" motivations. Nonetheless, many (43%) respondents were identified as having a balance of both philosophical and pragmatic motivations for adopting organic farming.

Only small-scale (less than 50 acres) farm operators were found to be more philosophical in their attitude toward organic farming. Half of these farmers fell in the "philosophical" category, with 42% in the "balanced" category and just 8% identified as "pragmatic." Conversely, there were no farm operators over 50 acres that could be categorized as "philosophical."

Responses to the open-ended question, "Please describe the main reasons you started farming organically," illuminate the differences between responses in each of these categories.

[15] This typology represents a spectrum rather than a dichotomy, since farming is an inherently economic enterprise and all farmers are interested in the economic viability of their farm operations.

Pragmatic

- Higher price for produce
- Better prices in bad times
- The price was supposed to be much higher; never happened
- In order to fill a market and take advantage of a profitable 'niche' market. Work in better concert with the environment
- Older trees with low production could be farmed economically with high organic prices at the time

Balanced

- Favorable market price; compatible with existing practices; improve and build soil
- I worked for a big company for about 14 years, and the last year that I worked for them I got sick from the pesticides. It was when I first started learning how to farm organically
- Good stewardship demands some organic practices, polyculture, and organic material. We are doing most of it but when it comes to pests, some weeds, and diseases, I need technology.
- Location and lack of use of pesticide history
- Ethics and product money
- To supply market with specialty; didn't want to spray on homestead
- To obtain price premiums while being good stewards of the earth
- Prices, Mother Nature

Philosophical

- (I'd) rather not destroy beneficial insects, but rather create a climate of mother nature working as she was meant to - not upsetting the ecosystems
- Use of poisons and commercial products depletes nature's balance. Reflects negatively on those who apply them, work with them, and consume the produce. Extremely high cancer rate among farm workers and their children.
- I was a lifetime follower of Robert Rodale's principles. I found that high quality produce could be grown easily without significant losses to pests or diseases.
- I have always been a steward of the land and sensitive to microorganisms. I don't believe it is good to till the soil
- Better for my family and earth
- Since I was a young kid in the 60s, I was taught this farming style
- Best way to treat the land and food supply

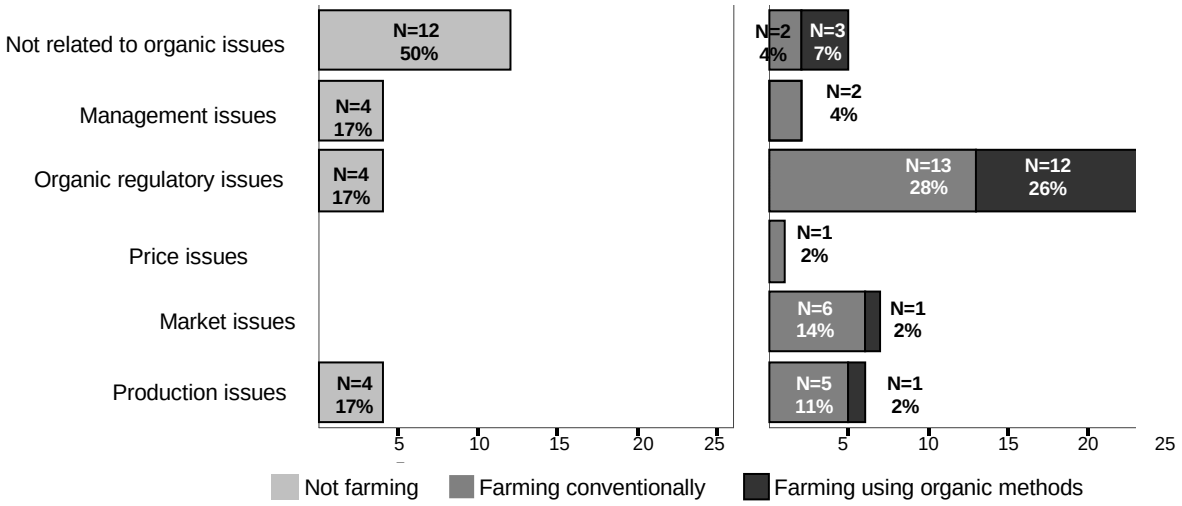
Reasons for Discontinuing Organic Registration

We attempted to elicit reasons for discontinuing Organic Program registration through open and closed-ended questions. More than 90% of respondents provided answers to the open ended question "Please describe the main reasons you stopped farming organically or why you are no longer registered with the California Organic program." Their responses were categorized into six broad issues: management, organic regulations, price, market, production, or some other reason not related to organic farming. Many respondents provided more than one reason. The principal reasons were based on the predominance of issues or by the order of the responses.

These principal reasons are displayed in Figure 4. An analysis of principal reasons for deregistering by current farming status reveals different factors at play between (a) respondents no longer farming; those who have (b) respondents who have reverted to conventional production, and (c) respondents still farming organically. Half of the respondents who stopped farming entirely did so for reasons unrelated to organic farming or marketing, such as changes in land tenure (lease or land sale) or personal issues, which included retirement or health problems. The remainder cited a mix of reasons related to organic farming, including management, regulatory, and production problems (Figure 4).

In contrast, the majority of deregistered respondents still farming cited reasons related to organic production for discontinuing organic registration, with regulatory issues being the single most important factor. Regulatory problems were the primary issue for more growers currently using organic methods than respondents who had reverted to conventional production. In contrast, farmers reverting to conventional production were most likely to cite market and production issues with respect to their decision to discontinue organic farming practices. Those issues did not weigh heavily for growers currently using organic methods but no longer marketing their products with an organic label nor with respondents no longer farming.

Figure 4: Main Reasons for Discontinuing Organic Farming or Organic Registration by Current Farming Status



When accounting for all of the stated reasons for deregistering, we see that regulatory issues remain as the dominant issue for deregistrants who continue to farm (Table 8). Deregistered growers who currently farm conventionally cited market issues 8 times and production issues six times, compared with only once each among deregistered growers farming using organic methods. This may indicate that farmers who deregister and revert to using conventional production methods have problems implementing organic production methods or working in the organic markets. Farmers that claim to still use organic methods seem to have successfully implemented organic production methods and find enough markets for their production. Some of the specific market and price issues referred to consolidation at the retail level and large

growers entering organic production resulting in lower organic premiums and market saturation (Tables 9 and 10).

Table 8: Reasons for Discontinuing Organic Registration by Farming Status

	No Longer Farming		Continue to Farm						Total*	
			Organic Methods**		Conventional Methods		Subtotal			
	N=27		N=19		N=29		N=48		N=75***	
	N	%	N	%	N	%	N	%	N	%
Organic regulatory issues	4	15%	14	74%	16	55%	30	63%	34	45%
Not related to organic	13	48%	4	21%	2	13%	6	13%	19	26%
Production issues	5	19%	1	5%	6	13%	7	15%	12	16%
Market issues	3	11%	1	5%	8	28%	9	15%	12	16%
Management issues	5	19%	0	0%	1	3%	1	4%	6	8%
Price issues	1	4%	1	5%	4	14%	5	10%	6	8%
No response	3	11%	2	11%	0	0%	2	4%	5	7%

* Total percent is greater than 100 because respondents could provide multiple responses.
** No longer registered with the CDFA Organic Program.
***The current farming status of two respondents could not be determined from their responses.

Table 9: Sample of Responses to Question "What Are the Main Reasons You Stopped Farming Organically?" by Respondents No Longer Farming

Regulatory	▪ I had no avenue to sell nuts. The dryers would NOT accept registered nuts, only certified ones. I did not want to sell at farmers' markets or roadside stands, hence no market.
	▪ We are no longer in the business as it was not profitable as organic or non-organic. It didn't help to be certified organic; it was just more expense and time consuming.
Production	▪ Too difficult to grow organic; also market was bad. As an example, the cost of fertilizing with organic fertilizer for my orange grove was far more than I could hope to get in harvest. So no fertilizing - as a result, the health of the grove declined.
Management	▪ Could not do it economically
	▪ We are no longer in the business as it was not profitable as organic or non-organic. It didn't help to be certified organic; it was just more expense and time consuming
Other, not related to organic	▪ We couldn't get financially stable and knowledgeable organic farmers interested in renting our farm. We rented the farm to conventional grower.
	▪ Leased land and orchard to (farm name) - they went out of business.
	▪ Lost lease. We are negotiating to get a new lease.
	▪ Farming was not profitable and it created a huge amount of stress for myself and family.

Table 10: Sample of Responses to Question "What Are the Main Reasons You Stopped Farming Organically?" by Respondents Currently Farming

Regulatory	▪ I am still farming organically. However, I don't see any reason to register and then have to get certified to sell my product as organic. ▪ There was a lot of paperwork involved and we started to, but realized our customers know we are organic and use organic practices. So we never certified. We are also downsizing to local markets as well. ▪ The cost (time, money, energy) was far greater than the return of being 'certified organic" for my small farm. One has to be 'registered' organic before becoming certified organic, but if one believes it is not cost effective to become certified then there is no need to be registered. Also, produce buyers will not buy produce that is only "registered' organic. However I may 'register' once more because our proceeds are less than $5000/year. ▪ Operation too small for amount of work it requires.
Production	▪ Soil condition and terrain made it not cost effective to follow many of the practices necessary for a healthy orchard, i.e. steep hillsides prevented and fertilizing; everything had to be distributed by hand and labor costs too high to be viable. Soil is thin and poor quality, which exacerbated the problems. ▪ Was farming apricots and couldn't do it profitable (sic), even organically. Removed apricots and planted almonds. Developed serious squirrel problem which was seriously affecting neighbor's crop. The only way to control them effectively was with poison. ▪ Too much hand work. Couldn't afford labor cost. Certification got too expensive for the amount of fruit I sold. ▪ Growing cost too high, especially fertilizer. We were getting gouged with very limited products available.
Other, Not Related to Organic Issues	▪ I have a small grove and simply forgot to keep up my paperwork and donated the fruit to friends and charities. ▪ Because of a very busy schedule, I am usually late registering. ▪ I was diagnosed with illness and had to slow down.
Price Issues	▪ One large grower in northern CA decided to enter the organic market when conventional prunes were in oversupply. He single handedly in one year drove the supply of organic prunes and lowered his prices to near conventional levels to sell his crop. After years of successful marketing at high prices, it collapsed in six months never to return to the price points of 1998 or 99 again. ▪ Organic sales not economically viable for large production. The premium is not enough to justify the length of time it takes to market the crop. That was the case when we discontinued about three years ago. ▪ Market prices too low.
Market Access Issues	▪ Massive consolidation on the retail buying end. My main crop was fresh market tomatoes. The 'new' consolidated had unrealistic grade expectations (US #1) but they were unwilling to pay a premium for the new higher grading standards that caused my cull rates to increase by 30% or more. ▪ I am no longer farming organically because I had no one interested in buying my Valencia (orange) crop.
Management Issues	▪ Unable to keep up with my business and do all the paperwork. I was in transition to a new crop (bamboo) and it was a stressful period of time (mother's care).

The 21 telephone interview responses also support the survey findings, with most farmers citing more than one reason for discontinuing organic registration. Some growers discontinued organic practices altogether, while others continued farming using organic methods, albeit without registration or certification. Seven of these farmers discontinued organic registration because of paperwork burden and costs. Most discussed certification and registration as synonymous, despite the fact that they are separate processes. A grower farming 490 acres in Lake County cited “massive and ridiculous registration and inspection fees,” while others cited a lack of need for organic certification. As one grower explained, “the fees and bureaucracy aren’t worth it to me. My customers don't care if I'm certified because they trust me.” Similarly, enough explained that “there was a lot of paperwork involved and we started to certify, but realized our customers know we are organic and use organic practices. So we never certified.”

Another seven (33%) telephone respondents cited combinations of production problems, the high cost of inputs, and low price premiums behind their decision to stop farming organically. In terms of production, a grower explained that, “We developed serious squirrel problems which were affecting our neighbor's crop as well. The only way to control them effectively was with poison.” Another grower cited the high cost of organic inputs: “It was too difficult to grow organic. The cost of fertilizing my orange grove with organic fertilizer was far more than I could hope to get in harvest.” Another grower cited the lack of profitability of farming in general. He explained that, “We are no longer in the farming business as it was not profitable, as organic or non-organic. It didn't help to be certified organic. It was just more expensive and time consuming.”

Three farmers cited price premium issues that they traced to competition from foreign imports and wholesale buyer pressure. Finally, eight respondents cited issues unrelated to organic farming, including changes in land tenure (losing a lease, losing a tenant, or changing farm sites), retirement, or natural disasters.

Principal Challenges in Organic Farming

The survey elicited information regarding the principal challenges the respondents faced as organic farmers, in the areas of production, market access, price, regulatory issues, and management. The survey asked respondents to rank these broad categories of problems and also to rate specific challenges within each category on a scale of 1-5, where 1 was “not a problem” and 5 was a “severe problem.” The respondents were then asked to identify the two greatest challenges within each category.

Primary Challenges

When asked to rank the main challenges they faced as organic farmers by broad category, regulatory problems were ranked as the main issue. That was followed by price issues, production problems, market access, and management concerns (Table 11).

Table 11: Principal Challenges

Issues Ranked #1 or #2	N	%
Regulatory	18	30%
Price	16	27%
Production	13	22%
Market access	10	17%
Management	3	5%
Total	60	100%

We examined the principal challenges with respect to the amount of time farming, to better understand how farming experience plays a role in determining the types of challenges. Twice as many (35%) farmers with less than 10 years total farming experience listed ‘production’ as their main challenge, compared with only 16% of farmers with more than 15 years experience. In a similar trend, 24% of farmers with less than 10 years total farming experience cited ‘market access’ as a main challenge, compared with 13% of farmers with more than 15 years experience. Obtaining organic price premiums was the principal challenge for a third of farmers with more than 10 years farming experience, and the case for 12% of farmers with less than 10 years farming experience. Production and market access were less likely to be cited by experienced farmers, who were more likely to complain about being able to receive price premiums.

An analysis of the specific problems respondents ranked as 4 or 5 (serious or severe problem) across all categories indicates that paperwork/record keeping is the most significant concern, as were reported by half of all respondents (Table 12). That concern is followed by certification costs (44%), the high cost of organic inputs (38%), and the time requirements associated with organic farming (36%). Conversely, at the low end of the scale, respondents reported relatively few problems in terms of issues including learning about organic production practices (8%), finding organic inputs (6%), and access to production information (5%).

Table 12: Specific Challenges Across All Categories

Issues	Category	Cases Rated 4 or 5	N*	%
Too much paperwork/record keeping	Regulatory	31	62	50%
Certification costs	Regulatory	28	64	44%
Cost of inputs	Production	24	63	38%
Overall time requirements	Management	22	61	36%
Marketing	Management	19	60	32%
Premiums too low	Price	17	62	27%
Low yields	Production	17	66	26%
Lack of price information	Price	15	59	25%
Competition w/ farmers or imports	Market Access	16	63	25%
Lack of transition price premium	Price	13	58	22%
Interpreting standards	Regulatory	13	61	21%
Insufficient capital	Management	13	61	21%
Pest/disease related losses	Production	14	67	21%
Problems w/ wholesalers	Market Access	13	63	21%
Fertility	Production	12	66	18%
Prices inconsistent	Price	10	59	17%
Poor product quality	Production	11	66	17%
Meeting regulatory requirements	Regulatory	10	62	16%
Couldn't supply volume	Market Access	10	64	16%
Weed-related losses	Production	10	66	15%
Not enough customers	Market Access	9	64	14%
Labor management	Management	8	59	14%
Access to labor	Production	8	66	12%
Access to credit	Management	7	60	12%
Identifying crops to grow	Production	7	66	11%
Production management	Management	6	60	10%
Financial management	Management	5	59	9%
Could not find any markets	Market Access	5	64	8%
Learning about organic production practices	Production	5	66	8%
Finding inputs	Production	4	63	6%
Access to production Information	Production	3	66	5%

*Number of respondents ranking the issue

Production Challenges

Respondents ranked the high cost of organic inputs as the production issue of greatest concern, which was 38% rated 4 or 5 on the above scale by 38% of respondents (Table 13). That was followed by low yields (26%), losses related to pests and/or disease (21%), and fertility problems (18%). Nonetheless, when all yield-related questions are combined, 28 (42%) respondents rated at least one yield-related issue as a serious concern. Finding inputs and access to production information were ranked as less serious problems.

Table 13: Principal Production Issues

Production Issues	Cases Rated 4 or 5	N	%
Cost of inputs	24	63	38%
Low yields	17	66	26%
Pest/disease related losses	14	67	21%
Fertility	12	66	18%
Poor product quality	11	66	17%
Weed related losses	10	66	15%
Access to Labor	8	66	12%
Identifying crops to grow	7	66	11%
Learning about organic production practices	5	66	8%
Finding inputs	4	63	6%
Access to production Information	3	66	5%

* Total percent is greater than 100 because respondents could provide more than one response.

When asked to rank the top two production problems, three-fourths of the respondents selected at least one yield-related issue as one of their top two production problems (Table 14). One third (30%) identified pests as their first or second most challenging production problem, followed by low yields (28%), and the high cost of organic inputs (26%). Of note is the fact all of the top five challenges, except input costs, had to do with yield. Poor product quality was a high concern for only 17% of respondents.

Table 14: Top Two Production Problems

Production Problems	N	%*
Pest/disease related yield losses	18	30%
Low yields	17	28%
Cost of inputs	16	26%
Weed related yield losses	15	25%
Fertility related yield losses	15	25%
Insufficient access to labor	12	20%
Learning about organic production methods	8	13%
Poor quality or high rates of unmarketable product	7	12%
Difficulty finding organic inputs	6	10%
Insufficient access to production information	1	2%
Identifying which crops to grow	0	0%

* Total percent is greater than 100 because respondents could provide more than one response.

Market Access Challenges

The survey also elicited information regarding market access issues. The market issue most frequently cited was competition from other farmers and/or cheap imports (25%), followed by problems with wholesalers (21%). Thirty-five respondents cited at least one of the specific market issues as a serious or severe (ranked 4 or 5). Nonetheless, in light of the many market access problems cited by organic farmers in general, the fact that only 25% or less of respondents rated these problems as serious challenges was somewhat surprising (Table 15).

Volume is an important issue as well. The number of respondents who could not supply enough volume was approximately the same as the number who could not find enough customers for their product. This points to the fact that the market for organic products can be highly variable, depending on the commodity and/or location.

Table 15: Principal Market Access Issues

Market Access Issues	Cases Rated 4 or 5	N	%*
Competition w/ farmers or imports	16	63	25%
Problems w/ wholesalers	13	63	21%
Couldn't supply volume	10	64	16%
Not enough customers	9	64	14%
Could not find any markets	5	64	8%

* Total percent is greater than 100 because respondents could provide more than one response.

When asked to rank their top two market access problems, half (50%) of all respondents cited competition from other farmers or cheaper imports as one of their top two market access problems, followed by inability to supply enough volume for customers (37%) (Table 16).

Table 16: Top Two Market Access Problems

Market Access Problems	N	%*
Competition from other farmers or imports	26	50%
Could not supply enough volume for customers	19	37%
Problems with handler/wholesalers	18	35%
Could not find any markets for organic product	14	27%
Could not find enough customers to absorb production	14	27%

* Total percent is greater than 100 because respondents could provide more than one response.

Price Challenges

Price was second most cited principal challenge by 27 percent of the respondents (Table 11). When asked to rate the severity of specific price challenges, the responses were fairly evenly distributed. Low organic premiums and lack of price information were rated as serious or severe problems by 27% and 25% of respondents, respectively (Table 17). .

Table 17: Principal Price Issues

Price Issues	Cases Rated 4 or 5	N	%
Premiums too low	17	62	27%
Lack of price information	15	59	25%
Lack of transition price premium	13	58	22%
Prices inconsistent	10	59	17%

* Total percent is greater than 100 because respondents could provide more than one response.

When asked to rank the two most important price-related problems they faced as organic farmers, low organic price premiums was by far the main concern (69%), followed by a lack of organic price information (46%). Twenty-eight respondents rated at least one of the specific price issues as serious or severe (ranked 4 or 5) (Table 18).

Table 18: Top Two Price Problems

Price Problems	N	%*
Organic price premiums too low	33	69%
Lack of organic price information	22	46%
Organic prices too inconsistent	18	38%
Lack of price premiums during transition	14	29%

* Total percent is greater than 100 because respondents could provide more than one response.

Regulatory Challenges

Based on the percentage of respondents citing these issues as serious or severe problems, regulatory concerns are clearly the most challenging set of issues among the survey respondents (Table 19). Fully 50% of all respondents cited paperwork and record keeping as severe concerns, followed by certification costs (44%).

Table 19: Principal Regulatory Issues

Regulatory Issues	Cases Rated 4 or 5	N	%*
Too much paperwork/recordkeeping	31	62	50%
Certification costs	28	64	44%
Interpreting standards	13	61	21%
Meeting regulatory requirements	10	62	16%

*Total percent is greater than 100 because respondents could provide more than one response.

A ranking of the top two regulatory problems reveals a similar pattern, with 75% of respondents citing too much paperwork and record keeping as one of the top two regulatory problems, followed by certification costs (71%). As seen in Table 20, difficulties interpreting the USDA organic standards and meeting regulatory requirements rank significantly lower in importance. Forty-three respondents marked at least one of the specific regulatory issues as serious or severe (ranked 4 or 5).

Table 20: Top Two Regulatory Problems

Regulatory Problems	N	% *
Too much paperwork/record-keeping	41	75%
Certification costs	39	71%
Difficulty interpreting organic standards	13	24%
Difficulty meeting regulatory requirements	11	20%

*Total percent is greater than 100 because respondents could provide more than one response.

In response to the open-ended question "Please describe the main reasons you stopped farming organically or why you are no longer registered with the CA Organic Program," several respondents described concerns with the registration process:

- Didn't want to continue with paperwork or fees. I know we are 100% organic and that's good enough for me.
- You had people inspecting us who have never farmed. The rules have changed so much I did not feel I was keeping up, nor cared to. The worst was when your inspector told us what to do, when they had never farmed.
- Organic registration fee was expensive and customers do not require organic certification.
- I would like to have kept my certification, but the price for renewing when you plant both conventional and organic rice was expensive and we are not planting organic at this time. We did dry and storage organic rice but decided to let it go because of cost.
- After making 5K we are required to certify with an independent agency. The fees and bureaucracy aren't worth it to me. My customers don't care if I'm certified because they trust me. My practices exceed the standards of other agencies and they are set up for (agribusiness) rather than the small farmer.
- Too much paperwork. Farmers hardly ever even have time to eat and use the bathroom. Yet the certification agency wanted/needed me to keep track of every single detail of what I grow, harvested, sold, threw away and it was burdensome- actually it would require a full-time bookkeeper to do all this paperwork.
- The first year I became un-registered, I sent the (registration) form back labeled 'NO-CHANGES,' with the advice of the local Farm Advisor, and this was not accepted, so I got discouraged and ran out of time also.

Management Challenges

The percentage of respondents citing management challenges as serious concerns was higher than market access, price, and even production problems. Overall time requirements associated with organic farming ranked as a 4 or 5 by 36% of respondents, followed by managing marketing processes[16] (32%). Nonetheless, 25 respondents ranked one of the categories associated with access to capital, credit, or financial management as a serious concern, representing approximately 40% of all respondents (Table 21).

Table 21: Management Issues

Management Issues	Cases Rated 4 or 5	N	% *
Overall time requirements	22	61	36%
Marketing	19	60	32%
Insufficient capital	13	61	22%
Labor management	8	59	14%
Access to credit	7	60	12%
Production management	6	60	10%
Financial management	5	59	9%

*Total percent is greater than 100 because respondents could provide more than one response.

Overall time requirements is by far the greatest management challenge facing deregistered organic producers, as cited by over half (56%) of respondents. Marketing management follows at 42% (Table 22). The other concerns were cited as top issues by 27% or less of the respondents.

Table 22: Top Two Management Problems

Management Problems	N	%*
Overall time requirements	31	56%
Marketing	23	42%
Production management	15	27%
Labor management	14	26%
Insufficient capital	10	18%
Access to credit	4	7%
Financial management	3	6%

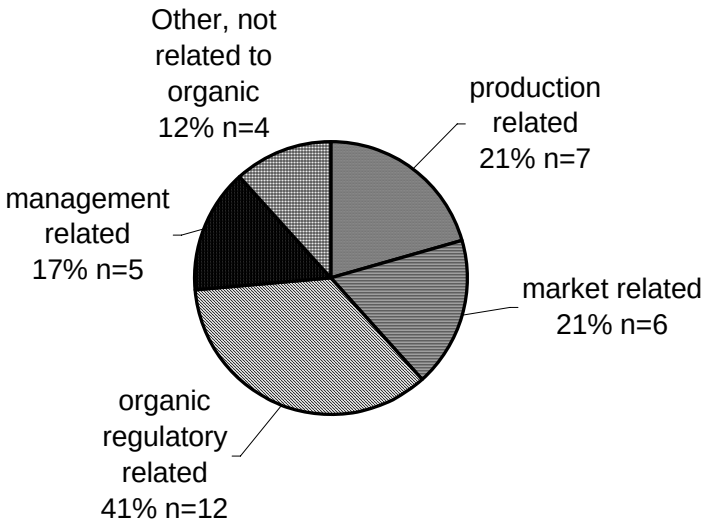
* Total percent is greater than 100 because respondents could provide more than one response.

[16] As distinguished from market access, management issues associated with marketing include customer relations, billing, invoicing, supply chain management, etc.

Technical Assistance Needs

Thirty four individuals responded to an open-ended question eliciting information regarding the types of assistance that would have helped them continue farming organically. Because this was an open-ended question, the responses included a range of ideas. The principal forms of technical assistance cited were coded into one of four types of primary responses. In keeping with the percentage of respondents citing regulatory issues, the main form of technical assistance identified was related to regulatory issues (41%). That was followed by production (21%), market (21%) and management (17%) related assistance (Figure 5).

Figure 5: What Types of Technical Assistance Would Have Helped You Continue to Farm Organically? (N=34)



Specific types of organic regulatory-related assistance include cost-share programs, paperwork reduction, and help with the application process, registration simplification, and more trained and experienced organic certifiers. Production-related assistance includes direct technical assistance, information and greater organic inputs effectiveness, such as for fertilizer and pest or disease control. Market-related assistance includes price and buyer information, and market interventions such as price controls and policies for restricting imports of organic products. Management-related assistance refers to access to skilled and unskilled labor, and access to credit (Table 23).

Table 23: Sample of Responses to Question "Are There Any Types of Assistance That Would Have Helped You Continue to Farm Organically?"

Regulatory	• More efficient processes for maintaining organic status
	• Organic certification fees subsidy
	• Need better inspectors
	• Lower-cost regulatory process/inspections. Easier regulatory system
	• Form co-op for small farmers to get certified together
Production	• Financial assistance to buy equipment that I need to do my work easily, effectively, and faster
	• More effective weed control. Could not pay laborers enough to combat weed problems
	• Organic seed starting dirt mix is our highest expense
	• Consideration could be given to using controlled amounts of cheaper, more effective fertilizers
Management	• Having an organic farmer as a foreman
	• Better management and help
	• Responsible help
	• If my children were interested and had helped to maintain the place I'd have been greatly relieved. You cannot support your life solely on a small ordinary farm.
	• Labor issues
Market	• More wholesalers willing to work with smaller growing operations
	• Limiting fruit from Mexico, Chile
	• Need winery to buy my grapes
	• Buyers for only 'registered' organic products

Farming experience appears to be related to the types of assistance identified. Thirty-nine percent of farmers with less than10 years of organic farming experience chose production-related assistance, compared with virtually no farmers with over 10 years of organic farming experience. In contrast, half of all farmers with more than 10 years of organic experience expressed a need for regulatory types of assistance.

The telephone interview respondents offered a number of recommendations regarding ways to help organic growers continue farming organically. These included assistance in identifying viable crops and alternative farming methods, having certifiers computerize their paperwork, more clarity among certifiers regarding allowed inputs and incentives for organic feed companies to address the under-supply of organic feed. Additional recommendations from the producer survey include: fewer agencies to deal with; relaxing regulations to make it easier to establish farmworker housing; and better enforcement of USDA organic standards on large farms. One respondent noted that the CDFA Organic Program cost-share assistance for reimbursement of certification costs was "a good deal" and provided an incentive to obtain organic certification.

Conclusions

The findings indicate that CDFA figures regarding the numbers of producers that have discontinued organic registration overestimate the actual number of deregistrants. Only 77 (74%) of the 104 respondents identified as having discontinued organic registration were in fact no longer registered. Additionally, of the 77 who had discontinued organic registration, 19 were still farming using organic or "beyond organic" methods. In sum, of the 104 respondents identified as deregistered organic producers by the CDFA Organic Program, 27 were incorrectly categorized as deregistered, while 19 were still farming using organic methods. Therefore, only 56[17] (73%) of those identified as deregistered were in fact no longer farming using organic methods.

An analysis of the main problems the respondents faced while farming organically confirms the importance of regulatory issues, which were cited as the principal challenge by 30% of all respondents, followed by price (27%), production (22%), market access (17%), and management (5%) concerns.

The most frequently cited reason for discontinuing organic registration was concern with regulatory issues, including paperwork, record keeping, and certification costs. Among those still farming, regulatory concerns appear to figure even more highly among growers who are still farming using organic methods, compared with those who have reverted to conventional production.

An analysis of the specific issues respondents ranked as serious concerns (4 or 5 on a scale of 1 to 5) indicates that paperwork/record-keeping are the top concern, as cited by half (50%) of all respondents. That is followed by certification costs (44%), the high cost of organic inputs (38%), the time requirements associated with organic farming (36%), and challenges with respect to managing marketing (32%). The respondents reported a range of technical assistance needs, particularly with respect to regulatory issues, the certification process, production, marketing, labor management, and economic assistance.

It appears that production and management related issues precede market and price issues as factors as the primary reasons farmers stop farming organically. Farmers who stopped farming entirely did not cite market or price issues as a principal reason for stopping farming and cited them the fewest times (11% and 4% respectively) among all issues that played a factor for stopping farming. Farmers who reverted to conventional farming practices cited production issues, while their counterparts who continue to farm using organic methods focused on regulatory issues.

[17] two respondents did not state their current farming status

Recommendations

The findings indicate that regulatory issues present significant challenges to organic producers and were cited as the principal reason for reverting to conventional production among deregistered producers who are still farming. Recommendations based on the research findings include the following:

- Programs and policies to help organic farmers continue farming organically should include efforts to assist with the paperwork associated with organic farming to help farmers pay for certification costs. USDA cost-share programs are key to the maintenance and growth of organic agriculture, especially for small farmers. The California Organic Program (COP) should consider a state-run cost share program to assist farmers in paying COP registration fees. The COP should consider restructuring its fee schedule to assist low-income farmers.
- Technical assistance to farmers considering adopting organic methods should include explanations of paperwork and record-keeping, certification costs, the higher cost of organic inputs, and greater time requirements associated with organic production.
- Technical and financial assistance for organic farmers should target growers grossing under $100,000 per year and farming less than 50 acres.
- Deregistration rates based on CDFA registration data should be adjusted to take into account deregisteration that does not represent exit from the Organic Program.

For more accurate measurement of the changes in organic acreage, farms, and sales, the registration process could be improved to specifically track the history of operators and land to take into account changes in ownership.

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