Is Organic Farming Risky?

Improving Crop Insurance for Organic Farms

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The contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA or NIFA.

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We owe special thanks to our advisory committee, which included experts on organic farming and crop insurance from around the country. They are named individually on the title page and represented the following organizations: Center for Farm Financial Management, Montana State University, Florida Organic Growers, National Center for Appropriate Technology, Food Action, New England Farmers Union, Kansas Rural Center, Oregon Tilth, Michael Fields Agricultural Institute, New Mexico Department of Agriculture, Midwest Organic & Sustainable Education Service, Rural Advancement Foundation International, Montana Organic Association, and Washington Sustainable Food and Farming Network. While they did not serve on our advisory committee, we also frequently consulted with Ferd Hoefner, Paul Wolfe, and the other experts on crop insurance at the National Sustainable Agriculture Coalition.

Staff members at the USDA Risk Management Agency (RMA) were generous with their time and expertise, made data available to our project that had never previously been released to the public, listened to our suggestions with an open mind, and helped us understand both nuances of crop insurance and the challenges of administering a complex and controversial federal program.

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Finally, we'd like to thank the 1,042 farmers who took our grower survey, the 96 crop insurance agents who took our agent survey, and the hundreds of farmers, organic advocates, adjusters, and other insurance industry professionals who participated in our educational workshops or agreed to be interviewed.

All of these people contributed to the ideas in this report and saved us from many errors. But we, the authors, are solely responsible for the contents of this report and for any errors that remain.

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Executive Summary

Although organic farmers in the United States have been legally entitled to use federal crop insurance for almost two decades, many still report difficulty finding policies that meet their needs, insuring the full value of their crops, locating agents who understand organic farming, and filing successful claims. All USDA-certified organic farms are highly regulated, follow approved plans, and manage production risks with proactive methods such as diversifying crops and building soil fertility. Many organic producers feel that these efforts are not acknowledged or rewarded within the current crop insurance system, and may even be penalized. Until 2014, all organic farmers were required to pay a five percent surcharge on their crop insurance premiums. They continue to face restrictions and penalties for using proven organic farming practices—even when these practices are encouraged by federal conservation programs.

This report describes the status of crop insurance for organic farms, documents problems, and makes recommendations for solving those problems. Our findings are summarized below:

Contrary to a common stereotype, organic growers are just as interested in crop insurance as any others. Their main problem is not a lack of interest or education, but rather the cost, usefulness, and reliability of the products and services available to them. Organic field crop growers are already purchasing crop insurance at high rates. Low overall participation rates among organic producers can largely be explained by the limited availability of coverage for horticultural crops—fruits, vegetables, and other specialty crops—which make up the great majority of production from organic farms.

Grower education efforts should be targeted to farms with high need and low current participation rates. The organic farmers most interested in buying crop insurance tend to be large, grow field crops, grow a modest number of different crops, use just a few organic methods, sell wholesale, and are driven more by economic motives than by ecological ones. Unmet needs are greatest among medium- to large-scale horticultural crop farms, especially those growing certain crops and in certain regions. The need for education is lower among field crop farms and very small direct-marketing farms.

Educating insurance industry professionals about organic farming is a high priority, with potential for great impact. Most crop insurance agents are interested in working with organic farms but have a limited understanding of organic systems. Many want more training. Reviews of Whole-Farm Revenue Protection (WFRP) by agents are mixed and somewhat negative, with agents noting the product's advantages but also the intense paperwork and other problems.

Insurance policies for organic crops have had consistently higher loss ratios than policies for equivalent non-organic crops, creating a perception that organic farming is inherently risky. There are several possible explanations for these differences, however. WFRP loss ratios are a more plausible indicator of revenue risk than average loss ratios across all crops and insurance products, and to date there has been no significant difference in WFRP loss ratios between organic and non-organic farms. Likewise, a study of hypothetical WFRP loss ratios for a random group of Midwestern farms showed no significant difference between the organic and non-organic farms. These two studies, while limited, provide some support for the conclusion that the organic farms that are buying crop insurance may be riskier than average.

Despite significant progress, organic farms that are growing horticultural crops still face severe difficulties in insuring their crops, mainly because individual coverage for these crops remains spotty and geographically limited. Insurance access is better for farms growing field crops, although all organic farms are at risk of having their crops underinsured or having their claims denied because their methods are not recognized as good farming practices.

Only a small percentage of the farms that have bought WFRP to date have been either certified organic or highly diversified, a sign that WFRP is not yet meeting the needs of these farms very well. Nonetheless, WFRP offers the best hope for organic farms that are growing horticultural crops to gain better access to crop insurance. The problems with creating single-crop policies for the full range of horticultural crops are intractable, and become even harder for organic crops because of the small number of organic farms growing many of these crops. By contrast, the major problems with WFRP can be solved. Moreover, organic farms are excellent candidates for WFRP because they already keep detailed records documenting both their revenue history and their productions plans. Organic farms also undergo annual third-party inspections, addressing concerns about the reliability of self-reported data from WFRP applicants.

Recommendations

1. Maintain and increase general education aimed at introducing basic concepts of crop insurance, along with new options for organic farms, to wide audiences.
2. Launch new educational efforts targeted to specific commodities and markets, especially mid- to large-scale horticultural crop growers and others with low historic crop insurance participation rates.
3. Continue to adjust single-crop policy rates so they better reflect the growing body of experience among organic farmers.
4. Conduct further research on how adverse selection impacts the use of crop insurance by organic producers.
5. Establish a policy to the effect that having a current valid organic certification and being in compliance with an approved Organic System Plan suffices as prima facie evidence that an organic grower is using good farming practices.
6. Establish a policy that any practice approved through NRCS conservation programs meets the standard of a good farming practice.
7. Improve access to single-crop revenue-based policies with organic price elections in more counties nationwide.
8. Pilot a type of simple and inexpensive Catastrophic Risk Protection (CAT), possibly within WFRP, aimed at small and diversified fruit and vegetable growers.
9. Eliminate the cap on contracted prices and allow the use of full, actual contracted prices in the Contract Price Addendum.
10. Improve public availability of organic price data, particularly in field crops and livestock products.
11. Provide more education and outreach to RMA employees, AIPs, insurance agents, and claim adjusters about organic certification and production systems.
12. Eliminate the WFRP requirement to report operating expenses and indemnity penalties related to expenses.
13. Reduce the burden of proof on growers when estimating insurable revenue and completing the WFRP Intended Farm Operations Report.
14. Develop farmer-friendly tools to ease WFRP paperwork burdens.
15. Provide more education and outreach to organic farmers about the WFRP alternative, particularly those in locations where no alternative single-crop revenue policies exist.
16. Count indemnity payments as historic farm revenue for WFRP claims adjustment purposes.
17. In determining a farm's historic average revenue for WFRP purposes, allow lower-than-average years to be replaced or adjusted.
18. Raise or eliminate the 35% WFRP limit on expansion.
19. Lock in expected price and yield upon acceptance of the WFRP Revised Farm Operations Report.

Introduction

Why crop insurance matters to organic farms

Few things are more important to the growth and success of commercial organic farming in the United States than access to crop insurance. Crop insurance is required for many loans, and allows farms to withstand years when crop yields are poor or prices are low. When a disaster such as a hailstorm, flood, or drought strikes, farms with crop insurance can survive and rebuild while those without it are more likely to fail.

Access to crop insurance also affects organic adoption and certification rates: Non-organic farms may be encouraged to undertake a daunting transition to organic certification if they think they will have the protection of crop insurance during the process. Or a farm might be discouraged from transitioning if they think they will have to accept inferior coverage during the transition process or after they are certified.

Despite recent improvements in the crop insurance options available to organic farmers, these growers still frequently report problems such as:

- Limited availability of policies for the crops they are growing;
- Restrictions and penalties for using legitimate organic farming practices;
- Difficulty insuring the full value of certified organic crops;
- Difficulty finding crop insurance agents who understand organic farming;
- Difficulty filing successful claims;
- Dismissive or disparaging attitudes towards organic farming;
- Burdensome and seemingly pointless paperwork; and
- Contradictions between requirements for crop insurance and other USDA programs.

The goal of our project was to enhance the profitability and economic success of USDA-certified organic farmers by improving their opportunities and ability to use crop insurance.

Goal and objectives

In this report we present findings from the project *Is Organic Farming Risky?*, a research and education effort (2014-19) aimed at understanding and improving access to crop insurance by organic farms.

The overall goal of our project was to enhance the profitability and economic success of USDA-certified organic farmers by improving their opportunities and ability to use crop insurance. Specific objectives were to:

- research the current status of crop insurance for commercial-scale organic farms, determining if there is a lack of adequate federally-subsidized crop insurance;
- better understand the financial and production risks of organic farming;
- make research-based policy recommendations that will lead to improving federally-subsidized crop insurance and economic performance for organic farms; and
- provide extensive education about crop insurance to organic producers and other stakeholders.

Audience

This report is written primarily for those responsible for administering the federal crop insurance system, as well as other stakeholders and groups interested in making the system better. These include:

- The USDA Risk Management Agency (RMA);
- Other federal agencies within and beyond USDA that are involved, directly or indirectly, in crop insurance;
- Crop insurance companies and their agents and adjusters;
- Legislators and policy makers;
- Advocates for sustainable agriculture;
- Agricultural organizations, such as commodity groups; and
- Groups already advocating for changes in the existing system, from all parts of the political spectrum.

We have tried to help insurance professionals understand organic farming and help organic advocates understand the realities and constraints faced by crop insurance professionals.

We hope this report will facilitate better communication between organic advocates and insurance professionals. We have tried to help insurance professionals understand organic farming and help organic farmers and advocates understand the realities and constraints faced by crop insurance professionals. We have also tried to make this report readable by non-experts and interested members of the public: explaining technical concepts in ordinary language and providing background to help appreciate the issues and principles that are at stake.

Research methods

We studied published data in academic journals and from many USDA sources, including RMA, the National Agricultural Statistics Service (USDA-NASS), Agricultural Research Service (USDA-ARS), Economic Research Service (USDA-ERS), and Agricultural Marketing Service (USDA-AMS).

We conducted two large national surveys: a survey of growers (described in Chapter 3) and a survey of crop insurance agents (described in Chapter 4).

We interviewed hundreds of farmers, representatives from USDA agencies, organic farming advocates, and crop insurance professionals. We spoke to many RMA staff, who were uniformly helpful and gave us access to data about Whole-Farm Revenue Protection usage that had not previously been made public. This data is discussed in Chapter 6.We also compared organic and non-organic farms in the Farm Financial Database (FINBIN) maintained by the Center for Farm Financial Management at the University of Minnesota. Results from that study are reported in Chapter 7.

We also received frequent input from the experts on organic farming and crop insurance who served on our advisory committee and are named on the title page of this report.

Scope and limits of this report

This project was funded by the Organic Agriculture Research & Education Initiative (OREI) of USDA's National Institute of Food and Agriculture (NIFA). The purpose of the OREI program is "to enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products." We have adhered strictly to this purpose throughout the project and in this report.

Crop insurance and organic agriculture are both complicated and controversial topics. We approach these topics broadly: trying to understand specific rules and nuances and also the larger context in which crop insurance and organic farming coexist. We studied insurance products themselves, as well as the ways that these products are delivered, sold, and used.

What is an organic farm?

The USDA defines a farm as "any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold" in a given year (USDA-NASS, 2019).[1]

The term "organic" has many meanings. In a broad sense, farms often call themselves organic if they avoid the use of synthetic fertilizers, pesticides, and other farm chemicals or use methods such as biological pest control, compost, companion planting, green manures, compost tea, trap crops, mulching, and mechanical cultivation for weed control.

In this report, we sometimes use the term "organic" in a loose and broad sense, but usually mean it in the narrower sense of "USDA-certified organic." Our research focused primarily on growers who are organic in the strict and narrow sense of being certified by USDA's National Organic Program.

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In order to understand the needs of USDA-certified farmers, however, we surveyed and interviewed a much broader group. This included many who were not USDA-certified or ran so-called "split operations," with a mixture of organic and non-organic acreage. We spoke to farms that were transitioning some or all of their acreage to certified organic status. And we spoke to many "conventional" (i.e. non-organic) farms for purposes of comparison.[2]

What types of crop insurance?

While much of this report will address insurance policies that provide individual coverage for a specific crop, we also include Whole-Farm Revenue Protection (WFRP). Although not limited to organic production, WFRP is suited to the needs of producers who are selling into organic or other high-value markets. In addition, about 40% of organic farms have some sales into direct-to-consumer markets (Low et al., 2015), and WFRP is currently the only option for obtaining coverage at retail rather than wholesale prices. In 2018, total WFRP liability was $2.7 billion, with 2,537 policies sold nationally (USDA-RMA, 2019).

What kinds of risk?

Risk in agriculture is often described as falling into five main types:

- **Production risk** deriving from the uncertain natural growth processes of crops and livestock, affected by weather, disease, pests, and other factors.
- **Price or market risk** based on uncertainty about market prices and the cost of "inputs" such as fertilizers and pesticides
- **Financial risk** arising from borrowing, interest rates, and debt.
- **Institutional risk** related to taxation and other government actions.
- **Human or personal risk** related to health, accidents, death, divorce, and strain on personal relationships (USDA-ERS, 2018).

Our primary focus is production and price/market risk. Any study of crop insurance is also, to some degree, concerned with institutional risk, inasmuch as we are concerned with the role of the federally-insured crop insurance program in mitigating agricultural risk.

Political and historical context

The federally-insured crop insurance system has been criticized from all parts of the political spectrum.[3] These controversies are largely beyond the scope of this report. In keeping with our purpose of enhancing the success of organic producers, our overriding concern is ensuring that organic farmers gain full and equal access to the benefits of the federal crop insurance system.

We can't ignore the political and historical context of crop insurance entirely, however. As we will explain in Chapter 1, organic farms gained access to crop insurance as part of a campaign to win recognition by the USDA as a legitimate form of agriculture. That campaign was controversial for many reasons:

When first inserted into the federal crop insurance system, organic farming was a "round peg in a square hole."

- Many early organic farmers identified with homesteading and the "back-to-the-land" movement. They were committed to an ideal of self-sufficiency that they saw as incompatible with relying on government subsidies.
- Some organic farmers saw themselves as part of a social movement, and viewed crop insurance as an integral part of the system and industrial way of thinking that they were trying to change.
- Organic farming is based on the idea of proactive risk reduction: reducing the frequency and magnitude of crop losses by building healthy soil, rotating crops, encouraging beneficial insect populations, and so on. This creates an inherent tension with crop insurance, which is fundamentally reactive and aimed at recovering from losses viewed as uncontrollable.
- Many early organic farmers held anti-government attitudes, or believed strongly in decentralization and local control.[4]

All of these themes still resonate within the organic farming community and can be heard in the grower comments that we will report in Chapter 3. There is certainly a case to be made for stronger incentives encouraging farmers to transition to organic production—not just for environmental benefits but as a way of reducing public expenditures on crop insurance. USDA-certified organic farmers take many precautions at their own expense to reduce risks and ensure their resilience, self-sufficiency, and long-term viability. In a sense, all organic producers are required to maintain their own safety net, at their own expense.

A recurring theme in this report will be the difficulty of including organic farming within a crop insurance system that was largely built on insuring conventional corn, soybeans, wheat, rice, and cotton, and that largely defines success and failure in terms of crop yield and revenue. For organic farmers, by contrast, success also includes other values and goals, such as improving soil quality, increasing biodiversity, and enhancing the environment.

When first inserted into the federal crop insurance system, organic farming was a “round peg in a square hole.” Accommodating and including organic farms within the crop insurance system has not been an easy task and will take many more years, if it is ever fully achieved. The goal of this report is to accelerate the pace of accommodation: identifying barriers and making recommendations for overcoming them.

Previous research

Organic farms have only had meaningful access to crop insurance since 2002, and the academic literature on crop insurance and organic farms is sparse. Researchers have only recently had enough data and years of grower experience to reach meaningful conclusions.

The 2008 Farm Bill required a review of underwriting, risk, and loss experience of organic crops, compared to non-organic crops grown in the same counties. The resulting studies by Watts and Associates, released in 2009-2010, were a landmark. They were the first detailed and comprehensive studies of their kind, and stimulated many researchers to conduct related studies. For example, Singerman et al. (2011) looked at organic prices, yields, and revenue, concluding that organic crop markets had unique characteristics that needed to be taken into consideration when setting crop insurance policy.

Other researchers studied the risk attitudes of organic farmers.[5] Examples are Constance and Choi, 2010; Gardebroek, 2006; Läpple and Rensburg, 2011; and Rhoades, 2010. Some of these researchers concluded that organic crop producers were less risk-averse than conventional producers, as might be expected with early adoption of new technology. Delbridge et al. (2011) disagreed, arguing that risk aversion did not impact organic or non-organic production systems significantly.

In more recent work, Delbridge and King (2016) have discussed the impact of recent changes in organic crop T-yields, concluding that these changes would likely lead to similar organic and non-organic loss ratios in yield and revenue policies for corn and soybeans. There have also been a number of studies (such as DiGiacomo and King, 2015) attempting to understand why more farmers are not transitioning to organic production. However, these studies, to date, have rarely considered crop insurance as an issue.

Although they do not usually publish in academic journals, groups calling for public policy reform have done significant research on crop insurance and organic farming. In particular, the National Sustainable Agriculture Coalition (NSAC) has closely studied the impact of crop insurance rules on sustainable and organic growers, and submitted comments related the 2014 and 2018 Farm Bills. (See, for example, NSAC, 2017.) The Rural Advancement Foundation International (RAFI-USA) has likewise been studying usage of crop insurance by organic farmers since at least 2014, offering practical advice to growers, and conducting a study of adverse selection in organic crop insurance. (See Glenn et al., 2014.)

About the recommendations

The vision that guides our recommendations is that of a strong, actuarially sound system of insurance policies and procedures that reduces unnecessary burdens to taxpayers and is implemented with integrity by producers, adjusters, sales agents, and all other participants in the process. We present and explain our recommendations in Chapter 8 (Improving crop insurance for organic farms) and Chapter 9 (Improving Whole-Farm Revenue Protection). Our recommendations are empirically grounded, specific, and (we believe) all achievable and realistic within the current crop insurance system.

Since crop insurance rules change frequently, some of our recommendations will inevitably become outdated quickly. Other parts of this report—including most of our research findings—are less time-specific.

The vision that guides our recommendations is that of a strong, actuarially sound system implemented with integrity by all participants in the process.

NOTES

1. Note that the USDA definition of a "farm" includes livestock operations that might more commonly be called "ranches." In this report, we often use the term "farm" broadly, to include both farms and ranches.
2. Throughout this we report we generally use the term "non-organic" instead of "conventional," since "conventional" implies a value judgment and is considered objectionable by some organic growers and advocates. When we use the term "conventional," we simply mean "non-organic."
3. For a review of arguments for abolishing federally-subsidized crop insurance entirely, see McKenzie, 2019. Groups that have advocated eliminating or drastically changlng the current crop insurance system include both environmental groups, such as the Environmental Working Group and Union of Concerned Scientists, and conservative think tanks, such as the Cato Institute and Heritage Foundation.
4. For a discussion of the many influences that shaped the organic movement, see Guthman, 2014.
5. For a review of this history, see Delbridge and King, 2016.

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Chapter 1:

How organic farms gained access to crop insurance: a very brief history

Organic farms in the United States have only had meaningful access to the federally-subsidized crop insurance program since 2002. Opportunities and access have improved considerably since that time, but progress has been sporadic and at times contentious. Federal agencies and the crop insurance industry have struggled to meet the unique needs of organic growers, who have often felt misunderstood or frustrated by the slow pace of change.

Two decisions, above all, have created unhappiness among organic growers: a 5% crop insurance premium surcharge that was in place until 2014 and T-yield reductions that began when the premium surcharge was eliminated.

Gaining access to the federal crop insurance program was an integral part of the campaign for official recognition of organic farming by the USDA.

How it all got started

Gaining access to the federal crop insurance program was an integral part of the campaign for official recognition of organic farming by the USDA. In order to understand why that campaign took place, we need to know something about the history of the organic farming movement in the United States.

Origins of the modern organic farming movement

According to historian Julie Guthman, organic farming in the United States grew out of at least five distinct movements that shaped its ideology:

- the campaign for alternative, less soil-damaging agricultural production technologies;
- the health and pure food movement;
- the 1960s counterculture, including utopian experiments and the back-to-the-land movement;
- environmentalism, including the idea of sustainable development and the appropriate technology movement of the 1970s; and
- agrarian populism, with its focus on family-owned and -operated small-scale farms (Guthman, 2014, pp. 3-12).

Guthman describes all five of these movements as *critiques of industrialization*: attempts to find alternatives to industrial processes and thinking, which were seen as responsible for a host of problems such as soil erosion and depletion, less nutritious and safe food, disconnection from nature, monotonous and de-humanizing work, environmental pollution, and the loss of the family farm and associated rural values. As we will see in the responses to our grower survey (Chapter 3), all of these critiques of industrialization remain very much present in the organic sector as we know it today.

Why early organic farmers couldn't insure their crops

Prior to 1990, farmers who called themselves "organic" could have been certified under a myriad of state and private programs and labels. Many of these early organic farmers were not interested in being engaged with the federal government because they were committed to self-reliance and believed that their ecological methods (cover crops, beneficial insects, crop diversification, and so on) provided all the risk protection that they needed. (See Scowcroft, 2015.)

The Agricultural Risk Protection Act of 2000 designated organic farming, for the first time, as a "good agricultural practice."

These early organic farmers certainly met the basic eligibility requirements for obtaining federal crop insurance, which state that purchasers must: (1) meet the legal definition of a farm,[1] (2) be 18 years old, and (3) have a bona fide insurable interest in an insurable crop (U.S. Congress, 1938). Nothing would have prevented these farmers from buying crop insurance, but filing successful claims would have been problematic since crop insurance adjusters would likely not have recognized organic methods as "good farming practices."[2]

As defined by the USDA, “good farming practices” allow the insured crop “to make normal progress toward maturity and produce at least the yield used to determine the production guarantee or amount of insurance” (USDA-RMA, 2018). In crop insurance, as in many other types of insurance, policyholders are required to exercise reasonable care and skill. If they are found to be grossly negligent or incompetent, using poor farming practices or failing to make a normal effort to grow a successful crop, their claims will be denied. And anyone who files a crop insurance claim after intentionally causing their crop to fail is committing insurance fraud, a federal crime.

The campaign for USDA recognition

The campaign for USDA recognition of organic farming began in the late 1980s. To say that this campaign was controversial among organic producers would be an understatement.

On the one hand, there were obvious advantages to tapping into the full resources of USDA. These included research dollars to improve organic methods, support from the Land Grant universities and Cooperative Extension Service, cost-sharing through the Natural Resources Conservation Service, consistent data collection by the USDA National Agricultural Statistics Service and Economic Research Service, marketing and promotion support from the Agricultural Marketing Service, and credibility and name recognition with consumers. Gaining access to crop insurance from the Risk Management Agency was one of the prizes on this list, although it was just one of many.

On the other hand, many organic farmers and advocates felt that aligning with the USDA and "mainstreaming" the organic movement was a kind of Faustian bargain: a betrayal of their ideals or an abandonment of their goal of challenging and changing the industrial approach to agriculture. These doubts certainly applied to the federal crop insurance system, which appeared in many ways to be built on industrial thinking, with crops viewed as tradeable and insurable "commodities."

Growers reactions to the USDA organic program

Growers reacted to the creation of the USDA organic program in various ways. Some skilled and committed organic growers chose not to become certified, while many conventional growers became certified to take advantage of high organic prices and the new support from the USDA. Guthman argues that the result was a "bifurcation" of the organic movement:

> "Two sets of growers have persisted. One set primarily (though not solely) comprises those who were once—or still are—in part conventional growers, who grow and sell product for major distributors, processors, and national chains. The other comprises those who primarily (though not solely) sell in local and regional markets and tend to also and sometimes solely engage in direct marketing. Most but not all in this latter group have always grown organically but don't necessarily certify. They also tend to engage the production practices of agroecology in a deeper way" (Guthman, 2014, p. 173).

Guthman's "bifurcation thesis" is highly relevant to the topic of crop insurance. As we will see in the results of our grower survey (Chapter 3), the farmers most interested in crop insurance tend to resemble to Guthman's first group: They tend to be large, selling through wholesale channels, less diversified in the number of crops they grow, and motivated by the desire for profit as much (or more) than by agroecological ideals. Many of these farmers began as conventional growers and now maintain "split operations" with both conventional and organic acreage.

Early milestones

In order to file successful claims, organic farmers needed to have their methods legally recognized as good farming practices (GFPs), and accepted as such by the insurance industry. This was accomplished through a series of steps:

- In 1990, Congress passed the Organic Foods Production Act, creating a national standard for organic products and requiring the USDA to develop regulations.
- In 2000, the Agriculture Risk Protection Act (ARPA) of 2000 designated organic farming, for the first time, as a GFP.
- Shortly thereafter, several organizations successfully petitioned the Federal Crop Insurance Corporation (FCIC) to offer crop insurance to certified organic farmers.[3] In July 2001 the FCIC directed the USDA Risk Management Agency (RMA) to provide insurance coverage "by written agreement on all crops grown using organic farming practices in all areas where an organic farming practice is recognized as a good farming practice[4] for the 2002 crop year only" (FCIC, 2001).[5]
- Despite limited available production and pricing data, RMA wrote the first underwriting guide for organic crop insurance (RMA, 2001) and approved coverage by written agreements for 110 organic farmers in the 2002 growing season, with policies covering 20 different crops (FCIC, 2010).
- Also in 2001, the National Organic Program (NOP) was created. After many struggles and public comment, rules for the new program went into effect in the fall of 2002.

Challenges of implementation

After these events had taken place, there was no longer any doubt that organic farmers were legally entitled to crop insurance. This new legal status did not immediately translate into equal treatment, however. Interpreting the laws, adjusting policies, and training insurance providers—all of these things have been going on for almost two decades, and the process is far from complete.

In many ways, organic farmers are a difficult group to insure. Only about one percent of U.S. farms are certified organic. As we shall see in the next chapter, these farms grow mainly specialty crops for which there is limited production and price data. They use a wide variety of methods, sell to various markets, and use site-specific production systems that can only be understood in their full context. Organic growers are required by the rules of the National Organic Program to use diversified cropping systems,[6] and they routinely plan far into the future: rotating crops and accepting short-term yield reductions for the sake of long-term gains in soil health or biodiversity. To an extent, this kind of integrated, multi-year approach to risk management is alien to the crop insurance system, which is largely based on making risk calculations for one crop and one growing season at a time.

Organic farms routinely plan far into the future: growing cover crops and accepting short-term yield reductions for the sake of long-term improvements in soil health or biodiversity.

Some persistent difficulties with insuring organic farms relate to the way that GFPs are defined and interpreted. Clear cases of failure to follow GFPs include things like using insufficient amounts of seed or fertilizer, grossly underwatering an irrigated crop, or allowing weeds to take over the field. But the RMA does not maintain a list of GFPs, letting insurance adjusters and outside experts decide. There are many gray areas. Because of the complexity and integrated nature of organic production systems, it can be difficult for an adjuster to judge whether a given organic farm is using GFPs, unless he or she is intimately familiar with the operation.

For example, suppose an organic grain farm interseeds a cover crop into the insured crop. Is this a good or bad practice? The academic research is not clear. While interseeding has multiple long-term benefits, it may in some cases reduce yields, so a crop insurance adjuster might view it as a bad farming practice. But what does "normal" crop growth mean anyway? And does it mean the same thing on organic and non-organic farms?

The 2008 was a landmark for organic production, requiring the Federal Crop Insurance Corporation (FCIC) to find ways to improve crop insurance for organic crops.

Organic crop insurance expands

The 5% premium surcharge

In 2004, organic growers were allowed, for the first time, to purchase crop insurance without written agreements, but only for a few major commodity crops (such as corn, soybeans and wheat)[7] and in a limited number of counties. And there were two fairly large strings attached. First, indemnities were generally based on prices for conventional crops, even though these prices were frequently lower than organic prices. Second, organic growers were charged an extra 5% on their premiums, over and above the premium cost for non-organic crop coverage.

The 2008 Farm Bill

The 2008 Farm Bill was a landmark for organic production: the first to include a Horticulture and Organic Agriculture title. The Bill required the Federal Crop Insurance Corporation (FCIC) to find ways to improve crop insurance for certified organic crops, requiring the FCIC to review underwriting, risk, and loss experience of organic crops, comparing organically-grown crops to crops produced in the same county with non-organic methods. The FCIC hired a contractor, Watts and Associates, which released its findings in a series of reports in 2009-10.

The 2008 Farm Bill included language prohibiting a surcharge on insurance premiums for organic crops, unless greater loss history was confirmed for those crops. Responding to these instructions, as well as complaints by organic farmers and accumulating data on organic production, RMA dropped the 5% organic surcharge on some tree crops in 2010 (FCIC, 2010, p.1).

In its 2010 report, Watts and Associates noted the lack of "significant, consistent, and systemic variations in loss history between organic and non-organic commodities," and recommended that "the organic practice be established as a separate type/practice" (Watts and Associates, 2010, pp. 128, 131). The RMA accepted this recommendation and, in 2011, began offering organic price elections: meant to reflect the generally higher prices for organic crops, and allowing organic growers to collect indemnities that were not simply based on conventional crop values. In the initial year, USDA offered organic price elections for just four crops: cotton, corn, soybeans, and processing tomatoes. The list of crops available with organic price elections grew to eight in 2013 and 16 in 2014.

The 35 percent T-yield reduction

Besides the 5% premium surcharge, another cause of unhappiness among organic growers was related to the somewhat technical issue of how actual production history (APH) yields are calculated. APH yields are used to set premiums and determine when enough losses have occurred to trigger indemnity payments. These yields are ordinarily based on four to 10 years of crop yield history, but in the case of new farmers (who do not have an established yield history), and various other circumstances where a farm has less than four years of experience or yield records are missing, the APH calculation uses substitute values known as "transitional" yields (T-yields). T-yields are based on the average yields of the insured crop in the county where the insurance applicant is located.[8]

In 2011 the RMA began offering organic price elections, meant to reflect the generally higher prices for organic crops.

When organic growers started buying crop insurance in 2002, they often lacked the historic data to establish an actual production history, and RMA simply allowed them to use "conventional" (non-organic) T-yields. In its 2009-10 reports, Watts and Associates found that this policy was causing excessive indemnity payments to organic producers, and recommended that T-yields for organic crops be reduced by 35%. RMA acknowledged that organic T-yields were too high, but did not (at least initially) lower them, stating that "the production data currently available [was] too 'thin' to support a methodology for setting separate transitional yields for organic crops" (OIG, 2013, p. 3).

On February 22, 2013, USDA's Office of Inspector General (OIG) issued an audit of the RMA Federal crop insurance program for organic farming practices. Among other things, the audit concluded that

> Transitional yields offered to organic producers overstated actual production capabilities of farmers producing crops using organic farming practices. This resulted in excessive insurance coverage and higher indemnity payments for 35 of 48 crop policies with losses. Because the policy guaranteed yields it underwrote were excessive, RMA paid at least $952,000 of $2.56 million in additional indemnities to insured producers for these policies" (OIG, 2013, p. 1).

To correct this problem of overpayment to organic growers, OIG recommended that "transitional yields for crops produced using organic farming practices [be reduced] by 35 percent or by an appropriate percentage as determined by RMA" (OIG, 2013, p. 7).

February 27, 2013 was a "good news-bad news" day for organic growers. RMA announced that it would eliminate the much-despised 5% surcharge for crops insured under organic farming practices.[9] The bad news was that RMA accepted the OIG recommendation to reduce T-yields for organic crops, as Watts and Associates had originally suggested in 2009-10. RMA acknowledged that "For a number of crops, RMA data indicates that the organic practice tends to yield less than the conventional practice" (OIG, 2013, p. 7).

RMA also explained how it would henceforth determine T-yields for organic crops:

> "The county organic transitional yields will be determined as a percentage, or factor, of the corresponding conventional transitional yield based on sufficient data of actual yields as reported to RMA. The percentage or factor will be the ratio of yields of organic commodities to yields of corresponding conventional commodities" (OIG, 2013, p. 8).

This decision resulted in a general lowering of organic T-yields, most often by 35% compared to the T-yields of non-organic crops. We will return to the question of appropriate T-yields for organic growers in Chapter 5. As we will see in that chapter, RMA has only partially completed the job of adjusting T-yields for organic commodities. For many organic crops the T-yield reduction remains at 35%.

The Contract Price Addendum

In addition to dropping the 5% premium surcharge and applying 35% T-yield reductions in the 2014 crop year, RMA also allowed growers to use a Contract Price Addendum (CPA) on organic crops. A CPA essentially allows farmers who have a written contract from a buyer to insure organic crops at almost the contract price.[10] This option is important to organic growers, because their crops often have prices higher even than the RMA organic price election value.

In one fell swoop, Whole-Farm Revenue Protection seemed to address three of the biggest problems that had plagued organic growers.

In 2016, growers were also allowed to use a CPA for crops grown on acreage transitioning to organic status—reflecting the reality that higher prices were increasingly available for transitional crops. In 2019, there were about 80 crops for which a CPA was available. However, as with organic price elections, CPA's are only available in the counties where policies for these crops are also available. We will make suggestions for improving the CPA rules in Chapter 8.

The 2014 Farm Bill

Like its 2008 predecessor, the 2014 Farm Bill continued to require improvements in crop insurance for organic producers, instructing RMA to create organic price elections for all insurable organic crops in time for the 2015 crop insurance year.[11] RMA responded by creating organic price elections for many crops. Progress has continued at a good clip, and as of August 2019, there were organic price elections for about 83 commodities.[12]

Despite all these changes, organic growers still faced several big challenges: There was often no insurance policy available in their county for the crops that they were growing. Organic farms were often highly diversified, putting them in the awkward position of buying numerous policies if they wanted to cover all of their crops. And organic price elections were available for only a few crops, so it was difficult or impossible for producers to insure the full value of the crops they were growing.

Whole-Farm Revenue Protection

The 2014 Farm Bill authorized USDA to develop a new whole-farm revenue protection policy. The resulting policy, Whole-Farm Revenue Protection (WFRP), was released on November 6, 2014.[13] WFRP was created by merging two predecessor policies, known as Adjusted Gross Revenue (AGR) and Adjusted Gross Revenue Lite (AGR-Lite).

Among its other innovative features, WFRP offered higher coverage levels than its predecessors, higher subsidy rates, premium discounts for commodity diversity, and coverage for expanding operations. Unlike other crop insurance policies, WFRP is based on the adjusted gross revenue of all commodities produced by the farm, based on farm tax records. Most commodities and livestock products are eligible, with the exception of timber, forest, and forest products, as well as animals for sport, show, or pets. Data from tax forms is adjusted to count only revenue from the production of crops and livestock. Hence the term "adjusted" gross revenue.

On August 27, 2015, RMA announced the expansion of WFRP to every state and every county, making it the first crop insurance policy to be universally available nationwide. Although primarily created to serve the needs of diversified farms, WFRP was extremely useful to organic growers, and was promoted as such by RMA. In one fell swoop, it seemed to address three of the biggest problems that had plagued organic growers:

1. It was available in every county in the country, for all crops that could be feasibly grown—whether or not individual coverage was available for these crops in the applicant's county, and whether or not organic price elections had been developed for those crops;
2. It allowed diversified farms to purchase just one policy that covered all of their crops and livestock; and
3. It insured the full value of a farm's crops, even if that farm had been getting premium prices.

In Chapter 9 we will explain in greater detail how WFRP works, and make recommendations for improving it.

The 2019 Farm Bill

The 2019 Farm Bill did not address organic crop insurance directly, but did require RMA to make adjustments to WFRP. We will explain these changes in Chapter 9.

NOTES

1. The USDA defines a farm as "any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold" in a given year (USDA-NASS, 2019).
2. Organic farming was not accepted as a "good farming practice" until 2000, and iactual regulations to implement this decision came years later.
3. The petitioners were Senator Charles E. Schumer (New York); Senator Patrick J. Leahy (Vermont); National Campaign for Sustainable Agriculture; National Organic Standards Board (on USDA Advisory Board); Minnesota Department of Agriculture Organic Task Force and the Organic Trade Association.
4. Note that FCIC referred to organic farming as a practice (singular), instead of a group of practices (plural) or a flexible, integrated approach. The misconception that organic farming is a single practice has caused many confusions in both the writing of crop insurance rules and the enforcement of those rules.
5. A "written agreement" is a special crop insurance policy developed on a case-by-case basis when coverage, rates, terms, or other conditions are not available for a particular crop or county.
6. The rules of the National Organic Program state that "The producer must implement a crop rotation including but not limited to sod, cover crops, green manure crops, and catch crops that provide the following functions that are applicable to the operation: (a) Maintain or improve soil organic matter content; (b) Provide for pest management in annual and perennial crops; (c) Manage deficient or excess plant nutrients; and (d) Provide erosion control" (USDA-AMS. undated).
7. Here the term "major commodity crops" refers to wheat corn, soybeans, rice, and cotton. The term "commodity" is often used by the USDA to include all agricultural products: fruits, vegetables, tree nuts, grains, cotton, other field crops, livestock, and so on. However, at times (and somewhat confusingly) the RMA and other USDA agencies use the term "commodity" more narrowly, for less perishable products such as grains, and reserve the term "specialty crop" for fruits, vegetables, tree nuts, flowers, and nursery products. In this report we will tend to use the word "crop" instead of "commodity," since crops are the main target of the federal crop insurance program.
8. The rules governing the APH calculation are a bit more complicated than simply calculating an average of historic yields. For a full description of the process see RMA, 2019.
9. For example, the National Sustainable Agriculture Coalition called the 5% surcharge "discriminatory" (NSAC, 2014).

10. The Contract Price Addendum is capped at about 85% of the full contract price, and may not exceed 1.5 times the organic price election.
11. The Consolidated Appropriations Act of 2014 said,

    "There is concern about the pace of progress in implementing an organic price election for all organic crops as required in the Food, Conservation, and Energy Act of 2008. USDA is urged to make every effort to implement this requirement as quickly as possible. The Department is requested to provide a report to the Committees with its strategic plan and timetable to implement organic price elections for all organic crops produced in compliance with the National Organic Program regulations under the Organic Foods Production Act of 1990 (7 U.S.C. 6501 et seq.)." (USDA-RMA, 2014).
12. The RMA is not consistent in its terminology. In various places on the RMA website these are called "organic price elections," "organic premium price elections," and "premium organic price elections."
13. In effect, this announcement in the summer of 2015 meant that WFRP coverage became available in every county in the 2016 crop year.

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Chapter 2:
How do organic farms use crop insurance?

As we saw in Chapter 1, winning access to high quality crop insurance has been a major goal in the campaign to win full USDA recognition and support for organic farming. Organic farming advocates sometimes point to low participation rates by organic growers as evidence of continuing unfairness in the crop insurance system, a problem that needs to be addressed through education, rule changes, or some other means.[1]

But do organic growers actually use crop insurance less than non-organic growers? In this chapter we review published USDA statistics. As we shall see, the answer is not simple. Organic experience with crop insurance varies widely by crop and market. Participation rates are extremely high for some regions and crops and low for others. The story of how organic producers got involved in crop insurance is one of steady increase as policies and price selections have become more available, but it is also a story of stark remaining gaps in usage. These gaps represent both barriers to growth of the organic sector and market opportunities for the crop insurance industry.

Do organic growers actually use crop insurance less than non-organic growers?

Data sources

One reason why it's not easy to make definitive comparisons between organic and non-organic farms is because various USDA agencies track and report numbers on crop insurance and organic farming. These agencies use different methodologies that create many apparent discrepancies.[2] In this chapter we use numbers from two main sources:

- Numbers of policies sold, acres covered by crop insurance, and the dollar value of liability all come from the *Federal Crop Insurance Summary of Business for Organic Production* reports of the USDA Risk Management Agency (RMA). These reports were released in 2016 (covering the 2015 growing season), 2017 (covering the 2016 growing season), and 2019 (covering the 2018 growing season).
- Statistics on the number of organic farms and crop values (organic or otherwise) come from the 2007, 2012, and 2017 *Census of Agriculture* conducted by the National Agricultural Statistics Service (NASS) and the special *Certified Organic Surveys* conducted by NASS in 2008, 2011, 2014, 2015, and 2016.

Crop insurance 101

The USDA Risk Management Agency (RMA) manages and administers all federally-subsidized crop and livestock insurance products in the United States. The RMA, in turn, is governed by the Federal Crop Insurance Corporation (FCIC), which approves new insurance products and changes to existing ones. The federal government does not sell or service crop insurance, but hires private companies to do so.

"Federally subsidized" means that part of the premium cost is paid by the federal government. Premium subsidies vary from 35% to 80%, depending on the policy, coverage level, and other options chosen by the producer. In 2018 subsidies averaged 63% across all crops and policies (USDA-RMA, 2018).

Five crops represent the bulk of crop insurance coverage in the United States: In 2018 corn, soybeans, wheat, rice, and cotton accounted for 76% of the total liability coverage (USDA-RMA, 2018). Most remaining coverage is devoted to "specialty crops," which the USDA defines as including fruits and vegetables, tree nuts, dried fruits, and horticultural and nursery crops (including flowers).[3]

Some gross (and misleading) comparisons

In the 2014 NASS Organic Survey—the most recent one to ask questions about crop insurance—29% of certified organic respondents reported buying crop insurance (USDA-NASS, 2015).[4] By comparison, just 19% of all farms reported buying crop insurance in the 2017 NASS Census of Agriculture (USDA-NASS, 2019). But this gross comparison is probably meaningless since (among other reasons) 58% of farms that took the 2017 NASS Census of Agriculture were very small, with annual sales of less than $10,000 per year.

Much of the difference in crop insurance participation between organic and non-organic farms is simply a reflection of the crops they are growing.

Comparisons based on the number of insurance policies purchased per farm, percentage of acreage insured, or total liability all create the impression that organic farms use crop insurance far less than non-organic farms:

In 2016 (the most recent year with a NASS Certified Organic Survey), the total U.S. farming population purchased about twice as many crop insurance policies per farm, on average, as organic producers. In that year, the 14,217 organic farms (USDA-NASS, 2017) purchased 7,936 insurance policies (USDA-RMA, 2017), or an average of 0.56 policies per farm. By comparison, the roughly 2 million total farms purchased 2,206,823 policies in that same year, or an average of 1.1 policies per farm.[5]

In recent years, non-organic farms, on average, have also insured roughly twice as much of their acreage (on a percentage basis) as organic farms. In 2018, crop insurance covered 1,342,745 acres of certified organic production (USDA-RMA, 2018), or 15.9% of the 8,446,627 total acres in organic production in that year. By comparison, in 2018 all crop insurance policies covered a total of 331,294,000 acres, or 37% of 899,500,000 total acres in farms (USDA RMA, 2017; USDA NASS, 2019).

Finally, non-organic farms insure, on average, more than twice as much of their crop value as non-organic farms. In 2016, the 14,217 certified organic farms in the United States had $852.8 million in total organic crop insurance liability (USDA-RMA, 2017), which was 11.2% of the $7.6 billion worth of commodities that they produced (USDA-NASS, 2019). By comparison, in 2017 agriculture as a whole had $106.1 billion in crop insurance liability, which was 27.2% of the $388.5 billion total value (USDA-NASS, 2019) of all of their crops.[6]

Participation by commodity

One reason why these gross comparisons need to be treated with caution is because crop insurance participation rates vary widely by commodity. When we look at participation rates by commodity, we find that organic participation rates generally mirror those by similar non-organic producers.

As shown in Table 2.1 (next page), field crops comprise around three quarters of the total value of agricultural crop production, with fruits and nuts (16%) and vegetables (7%) making up much smaller percentages (USDA-NASS, 2019b). In organic production, the distribution of commodities is strikingly different: Field crops comprise less than a quarter of the value of organic crop production, fruits and nuts are about a third, and vegetables are almost half.[8]

Table 2.1. Value of organic crop production compared to agriculture as a whole, 2016[7]

	Organic ($)	% of total, organic	All agriculture ($)	% of total, all agriculture
Field Crops	$762,613,158	21.6%	$142,622,346,000	76.7%
Fruits & nuts	$1,128,624,665	31.9%	$29,698,085,000	16.0%
Vegetables	$1,644,431,203	46.5%	$13,624,978,000	7.3%
TOTALS	$3,535,669,026	100%	$185,945,409,000	100%

Sources: USDA-NASS, 2017 and USDA-NASS, 2019a

Rates of crop insurance participation are highest in programs for field crops, which have well-established and widely available policies. Participation is generally much lower for vegetables, fruits, berries and tree crops, which have limited crop insurance access. Coverage is especially limited for vegetables. RMA estimates that insurance covered 74% of the market potential of U.S. fruit and nut crops in 2015, but only 34% of the U.S. vegetable market (USDA-RMA, 2019a). And livestock, poultry, and livestock or poultry products generally have no crop insurance.[8] We can therefore see that much of the difference in crop insurance participation between organic and non-organic farms is simply a reflection of the crops they are growing.

Table 2.2 shows crop values, crop insurance liability, and indemnities for the top 26 commodities, by value, in 2016.

Table 2.2. Top 26 organic commodities by value, 2016[9]

	Value (USDA-NASS, 2017)	Crop insurance liability (USDA-RMA, 2017)	% Coverage	Indemnity (USDA-RMA, 2017)	Crop policy available? (USDA-RMA, 2016)	Organic premium price election available? (USDA-RMA, 2018a)
Milk from Cows	$1,385,789,843	$-	0		No	N/A
Chickens, Eggs	$815,881,254	$-	0		No	N/A
Chickens, Broilers	$749,929,661	$-	0		No	N/A
Apples	$327,422,541	$93,847,854	28.5%	$1,535,366	Yes	Yes (Fresh Mkt Only)
Lettuce	$277,344,707	$-	0		No	N/A
Strawberries	$241,620,880	N/A	0	N/A	Yes	No
Grapes	$218,400,863	$38,096,156	14.9%	$38,096,156	Yes (Table Only)	Yes (Table Only)
Tomatoes	$214,509,847	$43,349,777	20.1%	$1,577,663	Yes	Yes (Processing Only)
Corn	$163,877,756	$155,506,266	94.9%		Yes	Yes
Potatoes	$150,578,562	$10,045,942	6.7%		Yes	Yes
Hay	$129,922,384	$-	0		No	N/A
Spinach	$118,162,182	$-	0		No	N/A
Mushrooms	$110,974,221	$-	0		No	N/A
Wheat	$107,130,044	$64,288,231	60.0%		Yes	Yes
Sweet Potatoes	$100,992,908	N/A	0	N/A	Yes	No
Blueberries	$100,482,177	$32,790,662	32.4%	$606,504	Yes	Yes
Carrots	$88,348,639	$-	0		No	N/A
Turkeys	$83,129,395	$-	0		No	N/A
Soybeans	$78,490,532	$48,494,707	57.8%	$5,436,031	Yes	Yes
Broccoli	$70,651,439	$-	0		No	N/A
Tobacco	$62,395,202	$52,891,478	74.6%	$8,467,544	Yes	Yes
Dates	$60,736,471	$-	0		No	N/A
Lemons	$56,955,895	N/A	0	N/A	Yes	Yes
Propagative Materials	$53,320,374	$-	0		No	N/A
Squash	$48,279,859	$-	0		No	N/A
Rice	$42,736,518	$44,125,439	103.2%	$13,590,866	Yes	Yes

Again, participation rates for organic row crops mirrors the similarly high rates for all farms. For example, in 2016 organic corn crop insurance liabilities were 94.9% of the total value of production. Organic soybeans and wheat were around 60%. And organic tobacco was 75%.

Table 2.2 also reveals a number of coverage gaps. Out of the top 26 organic commodities, 13 have no crop-specific insurance policy, two have no organic price election, and for two that have organic price elections, these are limited to either fresh or processing markets. While data on organic crop liability and indemnity is not available for strawberries or sweet potatoes, both offer organic premium price elections and yet crop insurance liability is less than 1% of production value (USDA-RMA, 2016, USDA-NASS, 2019b).

Table 2.3 below compares the percentage of crop value insured between organic farms and all farms, for the top 10 crops in terms of liability. Again, organic participation rates track those of agriculture as a whole. Organic farms insured a greater percentage of their crop value for six of these crops, and a lower percentage for four crops.

Table 2.3. Top 10 organic crops by crop insurance liability, 2016[10]

	production (USDA-NASS, 2017)	liability (USDA-RMA, 2017)	Percentage of organic value insured	Uninsured organic value	Percentage of value insured, organic and non-organic combined (USDA-RMA, 2016)
Corn	163,877,756	$155,506,266	94.9%	$14,230,080	75.8%
Apples	327,422,541	$93,847,854	28.7%	$233,574,687	32.6%
Wheat	107,130,044	$64,288,231	60.0%	$42,841,813	102.4%
Tobacco	62,395,202	$52,891,478	84.8%	$9,503,724	63.0%
Soybeans	78,490,532	$48,494,707	61.8%	$29,995,825	54.0%
Rice	42,736,518	$44,125,439	103.2%	$(1,388,921)	68.2%
Tomatoes	174,973,246	$43,349,777	24.8%	$131,623,469	29.6%
Almonds	32,014,247	$40,582,319	126.8%	$(8,568,072)	68.8%
Grapes	218,400,863	$38,096,156	17.4%	$180,304,707	23.1%
Blueberries	100,482,177	$32,790,662	32.6%	$67,691,515	30.7%

In Tables 2.2 and 2.3, high-value crops with a low coverage percentage represent opportunities for policy development or reform. For example, organic strawberries and lettuce both have high values of uninsured production. Lettuce, strawberries, spinach, mushrooms, and sweet potatoes all have organic production valued in excess of $100 million (USDA-NASS, 2017). In addition, the sale of hay as feed for organic livestock is covered only by WFRP, the Pasture, Rangeland and Forage Pilot Insurance Program,[11] and the Non-Insured Crop Disaster Assistance Program (NAP) offered by the USDA Farm Service Administration.

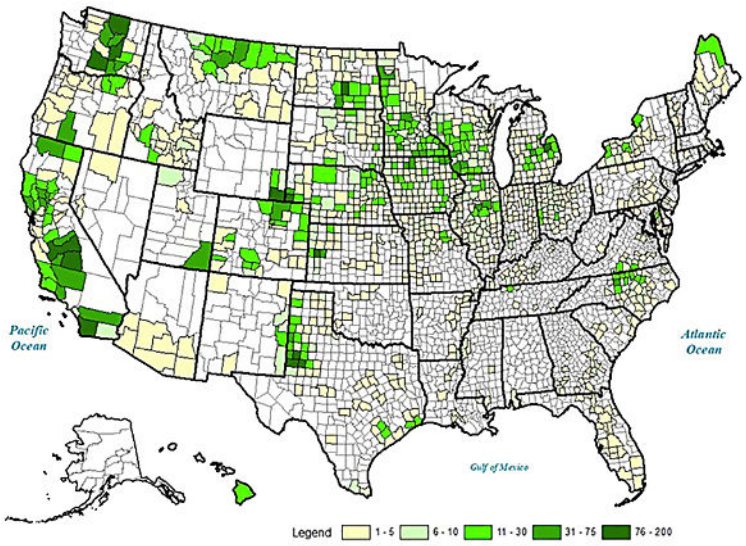
Geographic differences

Figure 2.1 (right) shows that organic crop insurance is concentrated in a small number of counties nationally.

Figure 2.2 and Table 2.4 (below) show the top 10 states nationally in organic sales and organic crop insurance liability for 2016.

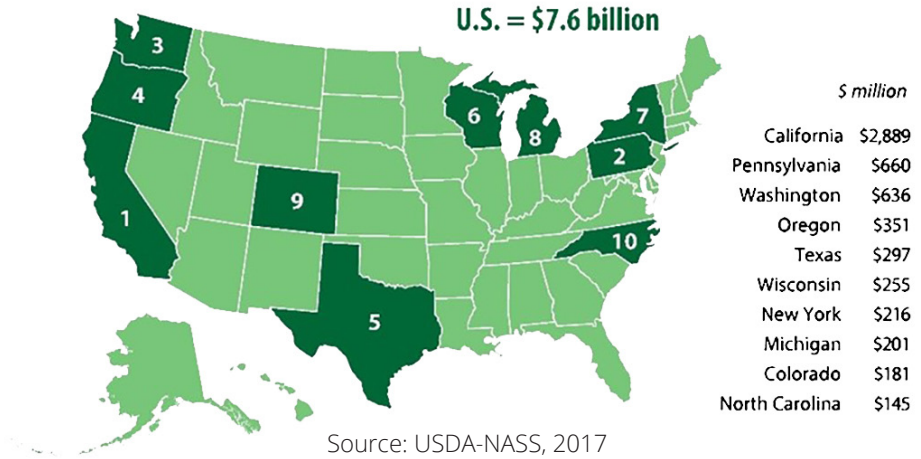
Geographically, participation in organic crop insurance varies widely, largely reflecting distribution between commodities. For example, in Pennsylvania—second in organic production value, but not in the top 10 in organic crop insurance liability—83% of the value of production is in organic broilers, turkeys, and eggs, which have no crop insurance. By comparison, in North Carolina—ranked fourth in organic crop insurance liability—approximately 50% of the value was in field crops (readily insurable) and vegetables (offering some, albeit limited, access).

Figure 2.1. Organic crop insurance policies sold, 2018



Source: USDA-RMA, 2018

Figure 2.2. Top 10 states in organic sales, 2016



Source: USDA-NASS, 2017

Table 2.4. Top 10 states by organic crop insurance liability

	crop insurance liabilities (USDA-RMA, 2017)	Value of organic production (USDA-NASS, 2017)	Percentage of organic value insured
California	$239,939,686	$2,889,156,000	8.3%
Washington	$144,789,336	$636,245,000	22.8%
Texas	$85,851,771	$297,484,000	28.9%
North Carolina	$38,517,413	$144,917,000	26.6%
Minnesota	$34,457,870	$106,482,911	32.4%
Iowa	$32,269,758	$131,177,878	24.6%
Nebraska	$27,169,955	$95,972,995	28.3%
Colorado	$25,690,181	$181,297,000	14.2%
Oregon	$23,824,634	$350,878,262	6.8%
Michigan	$22,359,483	$201,067,000	11.1%

Source: USDA-NASS, 2017

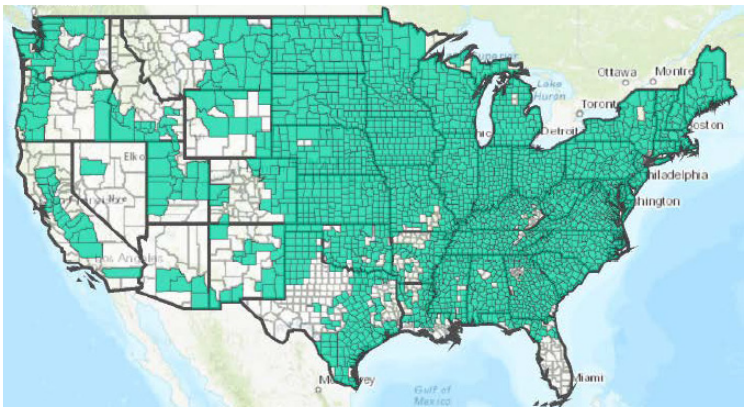
Limited availability of single-crop policies

As of 2019, over 80 crops have organic price elections. However, the availability of policies for many horticultural crops—organic or otherwise—is limited. Individual coverage is only available for about half of all fruits and tree nuts, and only about a third of vegetable crops. To mention a few examples, individual coverage is not available for blackberries, asparagus, beets, broccoli, carrots, cauliflower, eggplants, garlic, lettuce, melons, mushrooms, radishes, spinach, or squash. The only way to insure any of these crops is with a special written agreement from RMA or with Whole-Farm Revenue Protection.

Availability of policies for many specialty crops—organic or otherwise—is quite limited.

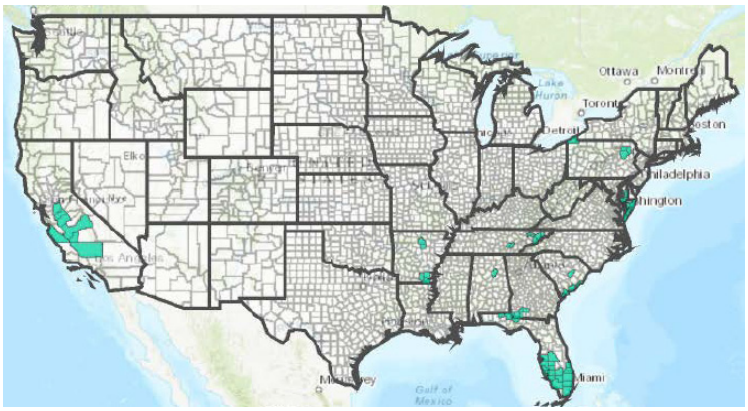
Even if a policy exists for a crop, its availability may be extremely limited geographically. For example, Figures 2.3 and 2.4 below show the counties in the lower 48 states where corn and fresh tomato insurance were available in 2017. Corn was available in every state and most counties. By contrast, even though fresh market tomatoes can be grown and sold in most parts of the country, individual coverage for tomatoes is only available in a few counties.

Figure 2.3. Counties where corn policies were available in 2017



Source: USDA-RMA, 2018b

Figure 2.4. Counties where fresh market tomato policies were available in 2017



Source: USDA-RMA, 2018b

As we saw in Table 2.1, specialty crops account for roughly three quarters of the value of all organic crops, versus only about one quarter of the total value of all U.S. crops. Because such a high percentage of organic farms grow specialty crops, the limited availability of single-crop policies for these crops impacts them disproportionately. For example, over two thirds of the organic farmers who took our survey (described in Chapter 3) reported growing at least one crop for which there is no single-crop policy. Individual coverage does not exist for any of the five crops most commonly grown by these producers, and does not exist for 10 of the 20 most commonly grown crops.[12]

Growth in participation by organic farms

As mentioned earlier, somewhere around a third (or less) of certified organic farms buy crop insurance. But as shown in Figures 2.5, 2.6, and 2.7 below, usage is increasing rapidly. Between 2006 and 2018, usage grew from just 2,482 policies sold in 2006 to 9,142 policies in 2018. During this period, the number of U.S. organic farms grew by about a quarter—from 14,540 in 2008 to 18,166 in 2017 (USDA-NASS, 2010, USDA-NASS, 2019)—but the number of crop insurance policies per organic farm more than doubled, from 0.24 in 2008 to 0.56 in 2016. Likewise, between 2006 and 2018, total organic crop insurance liability grew by a factor of 15: from $79,927,394 to $1,203,447,396.

These growth rates far exceeded crop insurance growth rates in the farming population as a whole. While the total number of organic policies sold was almost quadrupling during this 12-year period, the total number of crop insurance policies sold to all farms grew by only about 12%. And while total crop insurance liability for organic crops multiplied by a factor of 15, crop insurance liability for all crops multiplied by a factor of only about 2.5.[13]

Figure 2.5. Number of policies sold for organic crops

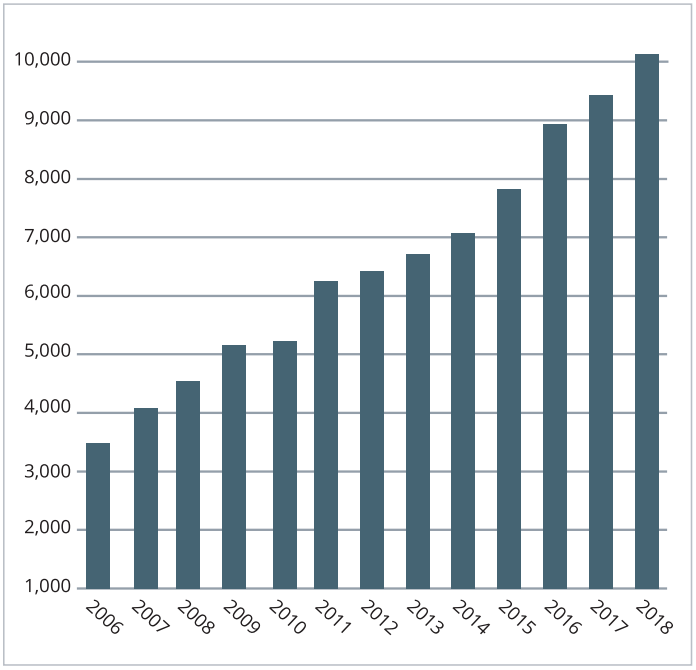
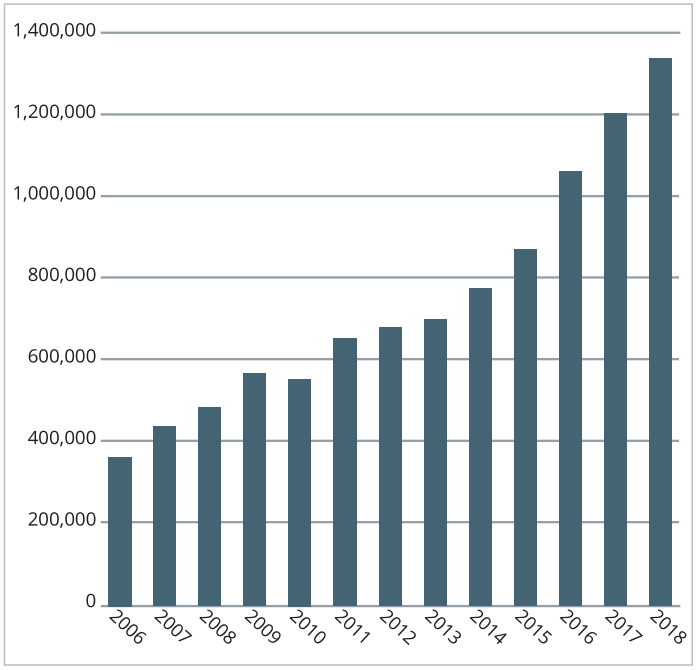
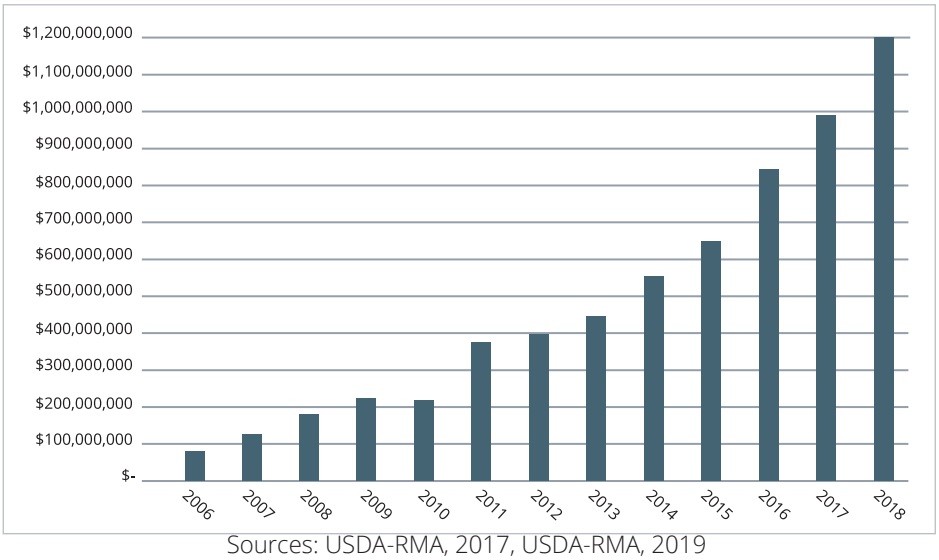


Figure 2.6. Organic acreage insured



Sources: USDA-RMA, 2017, USDA-RMA, 2019

Figure 2.7. Organic crop insurance liability



Sources: USDA-RMA, 2017, USDA-RMA, 2019

Discussion

Gross comparisons between organic and non-organic crop insurance usage tend to suggest, misleadingly, that organic farms use crop insurance far less than non-organic farms. But for most major commodities that we investigated, the percentage of crop value covered by crop insurance did not vary much between organic and non-organic growers. In fact, for many commodities organic usage of crop insurance was higher than among conventional farms.

The overall lower average level of participation by organic growers can largely be explained by the high percentage of organic growers who are growing horticultural crops, which offer limited crop insurance options. With the exception of a few crops (such as almonds), coverage levels for most specialty crops (whether organic or conventional) are in the range of 20 to 35%. By contrast, coverage levels for field crops are almost always above 50% and sometimes much higher.

For several major commodities that we investigated, the percentage of crop value covered by crop insurance did not vary much between organic and non-organic growers.

When crop insurance is available for the crops they are growing, and especially if organic premium price elections are available, organic producers seem to buy these policies at roughly the same rates as their non-organic counterparts. However, individual coverage for many specialty crops is either nonexistent or extremely limited geographically.

We also saw that participation in crop insurance by organic farms (whether measured by the number of policies, acreage, or total liability) has been growing at a rapid pace since 2006. While organic farms remain a small segment of the total crop insurance population, they are a rapidly growing segment.

In general, this chapter has challenged the stereotype that participation in crop insurance by organic growers is far lower than that of conventional growers. At the same time, there are clearly issues limiting participation for certain commodities and regions. There are many high-value crops with low participation by organic growers, indicating opportunities for policy development or reform.

While these are significant findings, with real implications for education and outreach, we are still at the "30,000-foot level," too far above the ground to see important distinctions and differences. Organic farms are sometimes spoken of as if they were a single monolithic thing, but as we have seen, nothing could be further from the truth. In order to get a more complete and nuanced picture, our project team conducted a large national survey, looking closely at attitudes among growers and how these vary based on farm size and type, income, experience, and a host of other factors. In the next chapter we report the results of that survey.

NOTES

1. Examples are Johnson, 2016; NSAC, 2016; and Urry, 2015.
2. Especially confusing are the differences between NASS *Census of Agriculture* and the *Organic Integrity Database* of the USDA Agricultural Marketing Service (AMS). NASS conducts mail-out surveys of farms, then uses complicated statistical methods to correct for various errors, low participation rates, and data gaps. On the other hand, the *Organic Integrity Database* is a listing of certified organic operations, maintained and edited directly by the certifying agencies. There are some reporting discrepancies between certifying agencies, and the database includes certified organic handling operations as well as crop or livestock operations.
3. In this report we often use the terms "horticultural crop" and "specialty crop" interchangeably. Horticulture is defined as "that branch of agriculture concerned with growing plants that are used by people for food, for medicinal purposes, and for aesthetic gratification" (USDA-AMS, undated). For an excellent explanation of the federally crop insurance system, highlighting options for organic and sustainable farmers, see Schahczenski, 2017. Federally-subsidized livestock insurance is also available for beef cattle, lamb, swine, clams, bees, and milk. Recently, products have been introduced allowing livestock producers to insure forage production, using national vegetation and rainfall indexes.
4. See USDA-NASS, 2015, Table 44, pp. 394-395. Unfortunately, NASS did not ask questions about crop insurance in more recent Organic Surveys. In our grower survey (discussed in Chapter 3), a somewhat higher percentage of organic farmers (45%) had bought crop insurance in the past. However, the survey might have attracted a disproportionate number of farmers who had experience with crop insurance. And many who had bought crop insurance in the past had not bought it in recent years. On the whole, we see the results of our survey as confirming the NASS finding that somewhere around a third of organic growers are buying and using crop insurance.
5. Most of the comparisons in this chapter are between certified organic crops and all crops grown by the total farm population (of which organic is a subset). Comparing organic to non-organic crops or farms, while more accurate, would have a minimal effect on these numbers, since organic farms make up less than one percent of all U.S. farms.
6. The comparisons in this paragraph should only be taken as rough and approximate. For one thing, we were unable to compare percentages in the same year, because RMA did not release a *Summary of Business for Organic Production* for the 2017 crop year. Also note that commodity values reported by NASS are estimates of sales, whereas we would ideally like to know the full anticipated value of the crop, at the beginning of the growing season.
7. For simplicity, we have omitted greenhouse, nursery, floriculture, mushrooms, livestock, poultry, and products. The purpose of this table is merely to show the dominance of field crops in nonorganic production, and the far greater role of fruits, nuts, and vegetables in organic production.
8. The exception to this generalization is Whole-Farm Revenue Protection, which does allow coverage of poultry and livestock and is available nationwide.
9. Note that liability for organic rice, as reported by RMA, exceeded the total value of the organic rice crop, as estimated by NASS for 2016. This anomaly is presumably just a reflection of the different methodologies used by RMA and NASS. All comparisons in this table between RMA and NASS numbers should be treated as approximations and with caution.
10. Crop insurance liability for all U.S. wheat, as reported by RMA, slightly exceeded the value of U.S. wheat, as reported by NASS for 2016. Likewise, crop insurance liability for organic rice and almonds came out higher than the value of these crops. These anomalies probably just reflect differences in the methodologies used by RMA and NASS. All comparisons in this table between RMA and NASS numbers should be treated as approximations and with caution.
11. The Forage Pilot Insurance Program provides coverage based on rainfall index rather than actual production itself, and does not recognize the added value of organic hay.
12. Individual coverage does not exist for any of the top five crops most commonly grown by organic survey respondents: squashes, brassicas and leafy greens, lettuce, root vegetables other than potatoes, and culinary herbs. Individual coverage is likewise unavailable for most berries (such as blackberries), flowers, watermelons, and other melons—all among the 20 most popular crops grown by organic survey respondents.
13. Total number of crop insurance policies sold grew from 1,969,461 in the 2005 crop year to 2,162,018 in the 2018 crop year. Total crop insurance liability grew from $44,258,915,365 in the 2005 crop year to $110,151,236,097 in the 2018 crop year (USDA-RMA, 2005, 2018a).

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Chapter 3:
A survey of grower attitudes about crop insurance

In late 2017, NCAT and its partners conducted a national survey of farmers and ranchers, to learn about their familiarity with crop insurance, their attitudes towards it, and their interest in buying it.

As we saw in Chapter 2, statistics from RMA and the National Agricultural Statistics Service (NASS) paint an accurate picture of the crops being insured by organic growers but don't tell us much about the people behind the numbers. Moreover, crop insurance statistics alone can create a distorted picture of organic farmers since only somewhere around a third of all organic farmers buy crop insurance.

We wanted to learn a lot more about grower attitudes and interest: Which organic farmers are most interested in buying crop insurance and why do others choose not to participate? Through a better understanding of attitudes and perceptions, we hoped to make recommendations for improving educational efforts. The most effective educational efforts would target growers who not only need crop insurance, but are also receptive: meaning that they are at least slightly interested, want to learn more, have no rigid opposition for personal or ideological reasons, and see crop insurance as important and worthwhile for their situation.

Which organic farmers are most interested in buying crop insurance, and why do other choose not to participate?

Survey design and execution

A complete list of survey questions and results is included at the end of this chapter.

Survey design

To serve its intended purpose, the survey needed to ask detailed questions and cover sensitive financial topics, but could not be so long or intrusive that it discouraged people from completing it. We wanted a large response from all parts of the country.

We opted for a web-based survey, conducted via Survey Monkey. The survey was extensively tested by growers and educators, and went through dozens of revisions. The final version included 47 multiple-choice questions, offered many opportunities to provide written comments, and took test audiences an average of about 20 minutes to complete.

Respondents were not allowed to skip questions, with just three exceptions: They were allowed to skip Questions 6-8 (aimed at those who rarely or never buy crop insurance) if they had bought crop insurance at least occasionally in the past. They were allowed to skip the request for their zip code (Question 14). And they were allowed to skip Questions 21-25 (about organic farming methods) if they used no organic farming methods whatsoever.

HONORARIUM AND CONFIDENTIALITY

As an incentive to complete such a long survey, we offered an optional $20 honorarium to those who completed the entire survey. Test audiences told us that, even though $20 was a small amount, it made them feel that their time was appreciated. Applicants had the option of taking the entire survey anonymously, although those requesting the honorarium needed to provide a mailing address. Of the 1,042 people who completed the whole survey, 868 (83%) requested the honorarium and 174 (17%) declined it.

DON'T NEED IT (COMMENTS FROM THE SURVEY)

- A sustainable farm is diversified and able to "sustain" itself through a few tough years, otherwise it's not a sustainable farm. Therefore, sustainable farms don't need crop insurance. Crop insurance funds unsustainability.
  —*Ohio farmer with diversified operation including fruit*
- I do not need insurance for something that only God controls.
  —*New Hampshire livestock producer*
- I farm ecologically, in ways that do get cross-wise with freezing and drought and other "disasters" that are just really ways of saying that we are not flexible enough as farmers to roll with the punches we should expect.
  —*Wisconsin 0rganic cattle and specialty crop producer*
- Lack of economic need. I have grown grapes for 43 years & never had an insurable loss. On Italian Blue Plums I had so many losses I had no basis to insure.
  —*Oregon organic grape farmer*
- View crop insurance as betting against yourself.
  —*Nebraska organic grain and pasture farmer*
- My farm is diversified. I don't feel that crop insurance is necessary or a worthwhile expense.
  —*North Carolina diversified fruit and vegetable farmer*
- The problems I encounter with the crops I grow are usually weather damage not yield related. I don't grow program crops so large price swings from year to year are a great challenge especially since the IRS changed the rules for income averaging.
  —*Washington grain farmer*
- I think the cost and hassle of doing insurance is not worth while. We do lose crops but are so diversified that we are alright.
  —*Colorado diversified organic farmer*

HOW WE MEASURED INTEREST IN CROP INSURANCE

The survey was designed to find strong or meaningful indicators of interest in crop insurance. We began by defining four measures of "interest":

1. A past history of buying crop insurance.
2. Self-reported likelihood of buying crop insurance in the coming year.
3. Self-reported importance of crop insurance to the respondent for the long-term success and survival of their farm or ranch.
4. Self-described motivation to study and learn about new crop insurance options.

We then created a list of 20 plausible indicators of interest, and wrote survey questions to test the strength of each of these. In calling something an *indicator* of interest in crop insurance, we are not saying that it is an infallible indicator, or a cause of higher interest, and we are not claiming to know why this association or correlation exists.

The 20 potential indicators of interest that we investigated were:

1. Farming full-time, as opposed to part-time.
2. Having a low degree of diversification, in the number and variety of commodities grown.
3. Large farm size, measured by average gross revenue.
4. Large farm size, measured by acreage.
5. Owning farmland (as opposed to leasing).
6. Growing grains and legumes.
7. Growing other field crops.
8. Not growing specialty crops.
9. Using just a few organic methods—as opposed to multiple methods.
10. Having some conventional and some organic acreage.
11. Selling through wholesale channels (as opposed to direct marketing).
12. Taking out operating loans.
13. Being a less-experienced operator (in years of farming experience).
14. Having limited experience (in years) with organic farming methods.
15. Having started out conventional and converted later to organic practices.
16. Having many peers who use crop insurance.
17. Having frequent insurable losses, caused by weather or other "Acts of God."
18. Believing (for whatever reason) that they are at high risk of crop loss.
19. Having little or no opposition to accepting government subsidies
20. Motivated more by economics and profit than by ethics or ideology.

We checked each of these 20 potential indicators against all four measures of interest (past purchases, likely future purchases, self-described importance, and motivation to learn more), resulting in a total of 80 comparisons.

These 20 indicators are causally related to each other in various ways. For example, the underlying reason *why* large farms and those that sell wholesale are interested in crop insurance could be that they both tend to take out operating loans. Or the underlying reason why farms tend to take out operating loans could be that they have high average gross revenue.

Survey execution

We promoted the survey over a period of several months, making a special effort to reach USDA-certified organic farms and ranches.

- We built a list of all registered USDA-certified organic operations in the United States that showed an e-mail address in the comprehensive USDA Organic Integrity Database, and invited each of these operations to take the survey. An e-mail invitation went out to over 5,000 addresses. We included organic handling operations as well as crop and livestock operations. Every certified organic operation in the United States that was reachable by e-mail received an invitation to take the survey.
- Each of NCAT's six regional offices (in Montana, California, Texas, New Hampshire, Mississippi, and Arkansas) promoted the survey in its region.
- We ran stories and announcements about the survey in NCAT's *Weekly Harvest* newsletter, which reaches about 15,000 readers nationally. We also sent several direct e-mail blasts to all subscribers.
- Our project advisory committee promoted the survey through their organizations, which collectively have thousands of members and followers. There are about 20,000 recipients of the MOSES newsletter list alone.
- We handed out postcards and flyers at numerous conferences and workshops around the country.
- Our social media campaign included various blogs and Facebook groups. We also sent a social media toolkit (with sample articles and blog entries) to dozens of agricultural organizations around the country.

WHY NON-ORGANIC FARMS WERE ALLOWED TO TAKE THE SURVEY

While we prioritized certified organic operations in our promotional efforts, all commercial farming and ranching operations in the United States were eligible to take the survey. We decided not to limit the survey to USDA-certified organic operations for the following reasons:

- We wanted to compare farms that choose to participate in the USDA National Organic Program with those that do not. The great majority of farms that use organic farming methods choose not to become certified as organic by the USDA.
- We wanted to learn more about farms that move acreage in or out of certification or run "split operations," where some but not all of their acreage is certified. Understanding these operations, and facilitating the transition to organic certification, is important to the viability and success of the organic industry.
- Including non-organic farms in our survey population allowed a finer-grained analysis of the factors that influence attitudes towards crop insurance. Some factors important to organic growers have little to do with their certification status, and are more closely related to marketing methods, geographical location, the crops being grown, or other factors.

SURVEY RESPONSE

The survey went "live" on August 7, 2017 and remained open 15 weeks, until November 22. A total of 1,577 people started the survey, but 258 (16%) answered "no" to the first question ("Are you farming or ranching commercially in the United States?") and were disqualified—not allowed to proceed further.

NOT WORTH THE MONEY (COMMENTS FROM THE SURVEY)

- When I purchased crop insurance I paid $750 and got $590 on a $14,000 loss.
  —Texas farmer with diverse operation
- I'd rather spend the money on a wind machine (frost protection).
  —Michigan fruit tree farmer
- Unless I grow a large enough mono-culture acre-wise, it does not make sense to apply or is too expensive for my diversified organic operation, but I still check and occasionally purchase based on current year strategy.
  —Texas farmer with diversified animal and crop operations
- I'm organic and don't think my crops would be valued at what they are worth.
  —New York organic farmer with diverse livestock and crops
- For diversified farms the insurance that exists is too expensive and would not cover the loss.
  —Minnesota diversified specialty crop farmer
- We are a small organic farm and from what I understand it would be cost prohibitive if not impossible to insure our crops.
  —California organic tree fruit grower
- A total rip off with a minimum paid out after paying premiums that are sky high. Just another racket drain on those of us that actually work to raise the foods everyone has to have.
  —Missouri grain farmer
- It is expensive and on the razor thin margins we just can't afford it.
  —California wine grape grower
- For me spending money on something I do not have the extra cash for is not an option when the money needs to used for more important things.
  —Kansas organic grain farmer
- I just wrote out the check for our crop insurance and it was very expensive.
  —Washington vegetable and mushroom farmer

Of 1,319 eligible respondents, 1,042 (79%) completed the entire survey. We threw out 12 responses that we suspected of being duplicates, ending up with 1,030 valid and complete surveys.

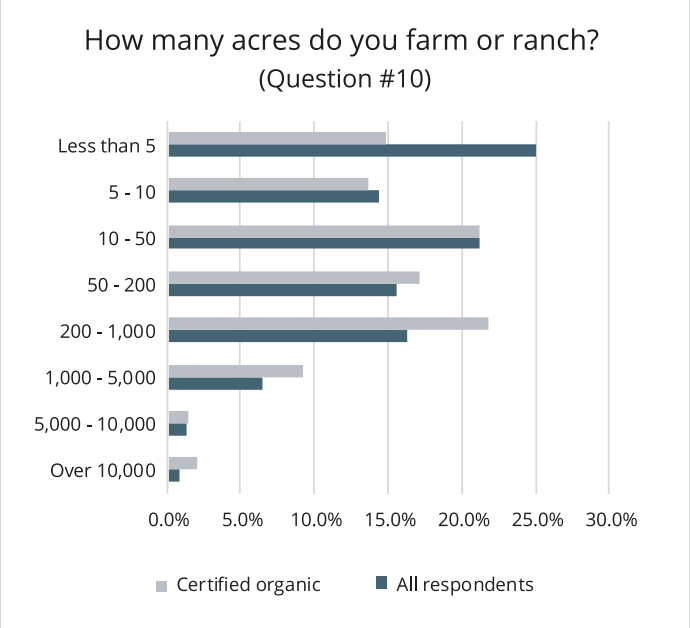
WHO TOOK THE SURVEY?

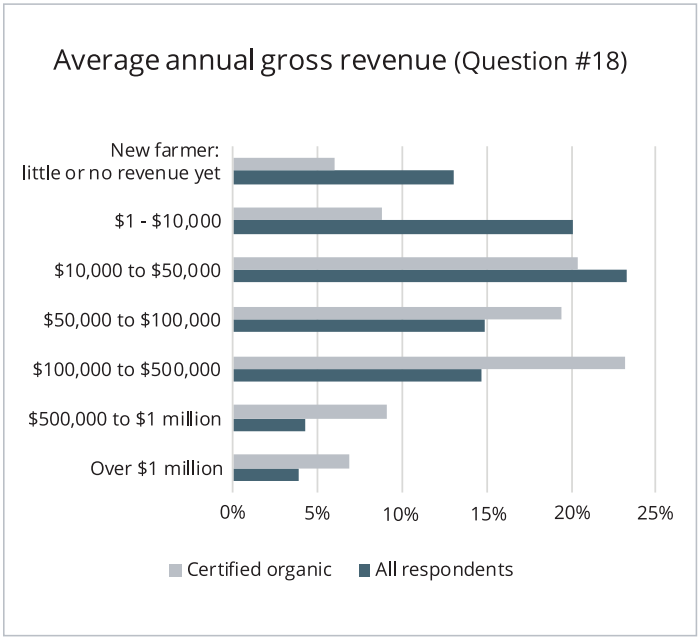
For complete information about who took the survey, please see the summary at the end of this chapter. An overview is given below:

Geographical distribution: We got responses from all 50 states and Puerto Rico, with the highest numbers coming from Texas (104), California and Montana (80), Wisconsin (64), North Carolina (62), Kansas (54), Arkansas (50), Washington (48), and Michigan (45).

Farm type: Farm types varied widely, but two-thirds of respondents (66%) said they grew "high-value or specialty crops." Although ranchers were eligible to take the survey, only 91 respondents (9%) were livestock-only operations.

Farm size (acreage and revenue): 60% farmed less than 50 acres, with 39% of total respondents farming less than 10 acres. Certified organic farms averaged somewhat larger in both acreage and average gross revenue.





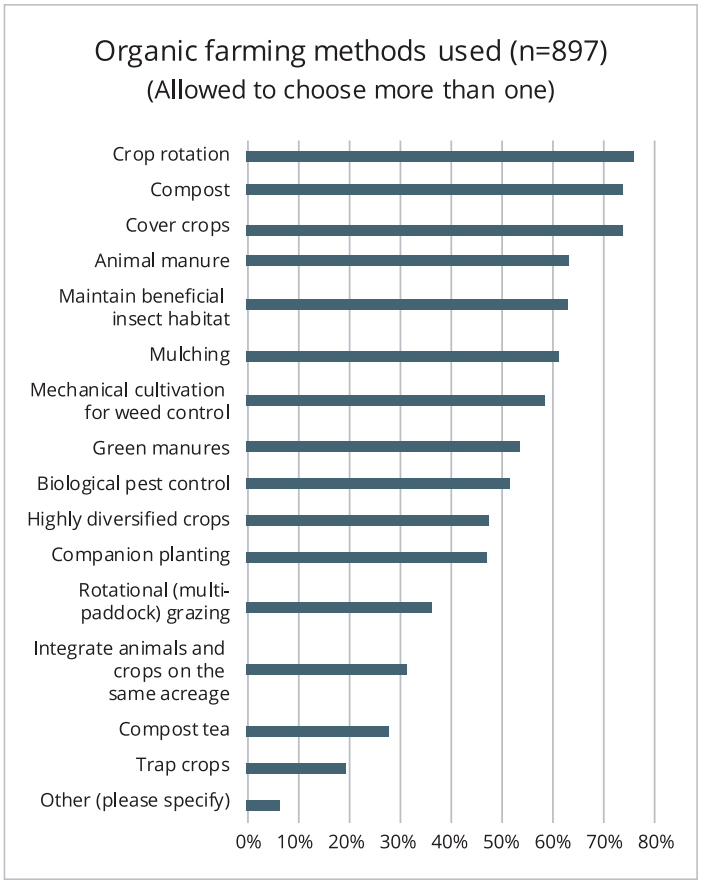
Organic certification: Just 31% of respondents reported having USDA certified organic acreage. Most who did not have any certified organic acreage (62%) were interested in getting some, and two-thirds of those who had certified organic acreage (67%) were interested in getting more.

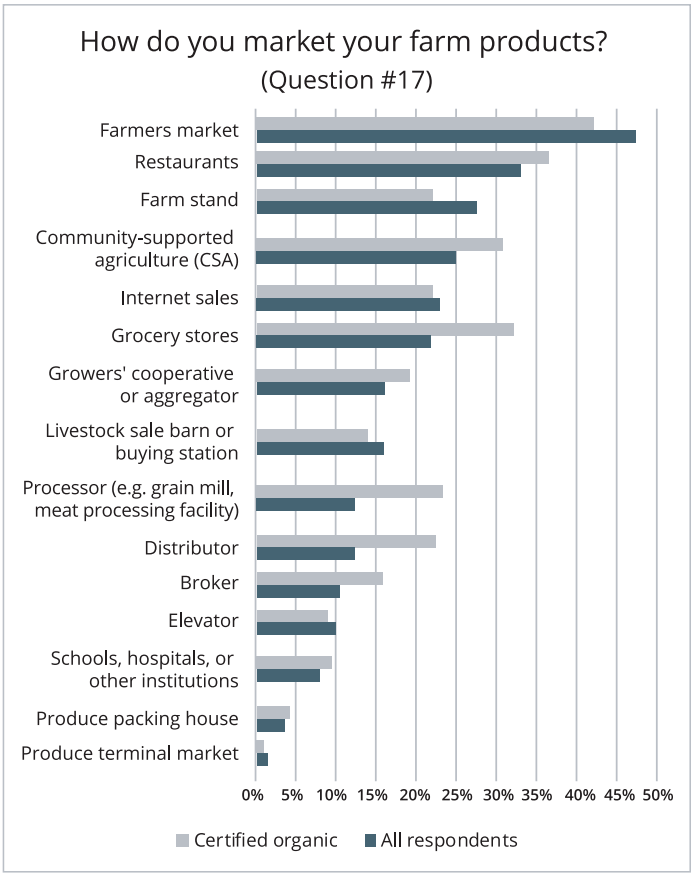
Use of organic farming methods: 84% of respondents used organic farming methods, defined broadly to include "alternatives to chemical fertilizers and pesticides--methods such as biological pest control, reduced-tillage, cover crops, and green or animal manure." The chart below shows how often each method was selected from the list options.

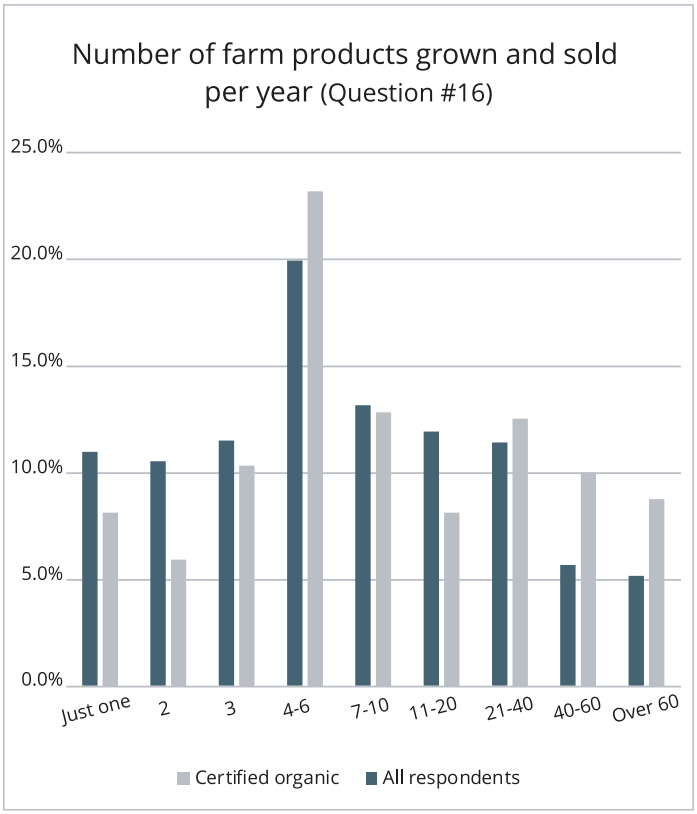
Marketing methods: Direct marketing predominated, although certified organic farms were more likely to sell through wholesale channels.

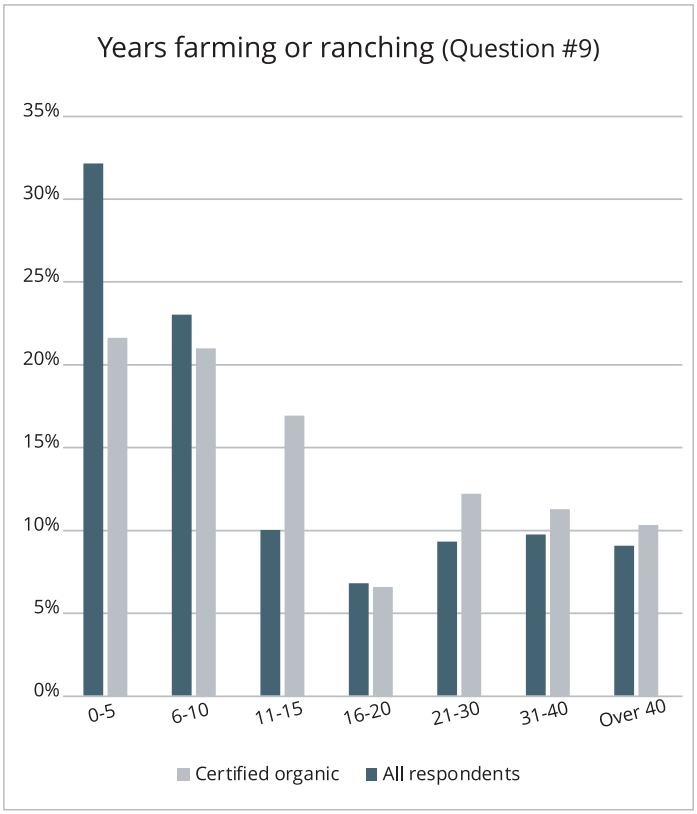
Crop diversification: Survey respondents were, for the most part, highly diversified farms. The median number of products grown and sold was about six.

Farming experience: 55% of all respondents met the USDA definition of "beginning farmer," having less than 10 years of farming experience. Certified organic farms tended to have slightly more years of experience.


Organic farming methods used (n=897)
(Allowed to choose more than one)
Crop rotation
Compost
Cover crops
Animal manure
Maintain beneficial insect habitat
Mulching
Mechanical cultivation for weed control
Green manures
Biological pest control
Highly diversified crops
Companion planting
Rotational (multi-paddock) grazing
Integrate animals and crops on the same acreage
Compost tea
Trap crops
Other (please specify)
0% 10% 20% 30% 40% 50% 60% 70% 80%


How do you market your farm products?
(Question #17)
Farmers market
Restaurants
Farm stand
Community-supported agriculture (CSA)
Internet sales
Grocery stores
Growers' cooperative or aggregator
Livestock sale barn or buying station
Processor (e.g. grain mill, meat processing facility)
Distributor
Broker
Elevator
Schools, hospitals, or other institutions
Produce packing house
Produce terminal market
0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%
Certified organic
All respondents


Number of farm products grown and sold per year (Question #16)
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Just one
2
3
4-6
7-10
11-20
21-40
40-60
Over 60
Certified organic
All respondents


Years farming or ranching (Question #9)
35%
30%
25%
20%
15%
10%
5%
0%
0-5
6-10
11-15
16-20
21-30
31-40
Over 40
Certified organic
All respondents

Survey findings

In addition to the statistical results summarized below, we received hundreds of written comments. We have included some representative comments in sidebars, allowing survey respondents to speak in their own words and voices.

General findings

Understanding and experience with crop insurance were generally low.

Most respondents had limited experience with crop insurance. Two-thirds (65%) had never bought it, and three quarters (76%) said they knew little or nothing about the crop insurance products available to them. Likewise, 70% knew little or nothing about Whole-Farm Revenue Protection, and 85% knew little or nothing about insurance products designed specifically for organic crops, using premium prices.

Most respondents had limited experience with crop insurance. Two-thirds (65%) had never bought it, and three quarters (76%) said they knew little or nothing about the crop insurance products available to them.

Certified organic farms had somewhat more experience with crop insurance than the average respondent, and 45% of certified organic farms had bought crop insurance in the past. Nonetheless, certified organic producers rated their understanding of crop insurance as poor. For example, 69% said they knew little or nothing about the crop insurance products available to them, 77% knew little or nothing about Whole-Farm Revenue Protection, and 81% knew little or nothing about insurance products designed specifically for organic crops, using premium prices.

There was high interest in crop insurance, especially among organic producers.

A third of all respondents (33%) were likely or definitely buying crop insurance in the coming year, 46% considered it moderately or extremely important for the long-term success and survival of their farm or ranch, and 60% said they were moderately or extremely motivated to study and learn about new crop insurance options that might apply to their situation.

Among certified organic producers, these numbers were significantly higher: 42% were either likely or definitely buying crop insurance in the coming year, 55% considered crop insurance moderately or extremely important (or essential) for the long-term success and survival of their farm or ranch, and 62% were moderately or extremely motivated to study and learn about new crop insurance options that might apply to their situation.

Even among those who had never previously bought crop insurance, 50% saw at least a slight chance that they would buy it in the coming year, 33% saw it as moderately or extremely important for their long-term success and survival, and 49% were moderately or extremely motivated to study and learn more about options that might apply to their situation.

There was hardly any reluctance to buy crop insurance based on concerns about accepting federal subsidies (3%), keeping financial records confidential (2%), or harm to the farm's image with customers (0%).

Experience with crop insurance varied greatly by crop.

In general, farms growing grains, legumes, and other field crops had more experience with crop insurance than those growing specialty crops, although there were exceptions to this rule. Some frequently-insured crops were soybeans (70.2% of organic and 66.9% of all respondents), almonds (70.0% of organic and 53.8% of all), wheat (53.3% of organic and 66.5% of all), corn (48.6% of organic and 39.8% of all), barley (44.7% of organic and 38.8% of all), and cotton (41.7% of organic and 46.7% of all).

The farms least interested in buying crop insurance were small, highly diversified, had a limited understanding of crop insurance, thought it was too expensive, or did not believe policies were available for the crops they were growing.

The top five reasons given for not buying crop insurance (by both certified organic producers and the entire survey population) were:

- My farm is too small. Not worth the trouble.
- My farm is too diversified; not feasible to insure all these crops.
- I don't know anything about it.
- Too expensive.
- Few if any policies are available for the crops that I grow.

What factors or traits are indicators of interest in crop insurance?

The tables on the following pages summarize our findings about the strength of potential indicators of interest in crop insurance. Table 3.1 shows the results for all survey respondents, and Table 3.2 shows results for certified organic respondents only. The two tables include the same indicators, except that the first table (showing all survey respondents) adds "certified organic" as a potential indicator of interest.

In Tables 3.1 and 3.2, indicators are listed in approximate descending order, from strongest to weakest. These rankings should be taken with a fairly large grain of salt, and the exact order is not really important for our purpose: identifying strong indicators of interest in crop insurance that can be used for targeting educational and marketing efforts.

HOW INDICATORS OF INTEREST WERE RANKED

We evaluated the strength of the indicators in two main ways: For some indicators we compared two average numbers and for others we looked at the correlation between two series of numbers.

Where strength of an indicator was based on comparing two average numbers, we defined the following somewhat arbitrary scale:

Very strong = More than 1.5x difference
Strong = 1.3 - 1.5x
Moderate = 1.2 - 1.35x
Slight = 1.05 - 1.2x
Similar = 0.95 to 1.05x

Where strength of an indicator was based on the correlation between two series of numbers, we assigned numerical values to answers. For example:

"Not at all" = 0	0 - 5 crops = 1	Little or no income = 1
"Slightly" = 1	6 - 10 crops = 2	$1 - $10,000 = 2
"Moderately"= 2	11 - 15 crops = 3	$10,000 to $50,000 = 3
"Extremely" = 3	16 - 20 crops = 4	$50,000 to $100,000 = 4
	21 - 30 crops = 5	$100,000 to $500,000 = 5
	31 - 40 crops = 6	$500,000 to $1 million = 6
	Over 40 crops = 7	Over $1 million = 7

We then defined correlation strength according to the following somewhat arbitrary scale:

Very strong = correlation above 0.75
Strong = correlation above 0.5
Moderate = correlation 0.25 - 0.5
Slight = correlation 0.1 - 0.25
None = correlation less than 0.1

ETHICAL ISSUES (COMMENTS FROM THE SURVEY)

- As a taxpayer I think that crop insurance is a complete waste of my money. Farming is the only business that I know of that the Government subsidies insurance to protect yield (volume) and price (gross/net) of a business. If farms were to diversify they would rarely if ever need crop insurance, which is what we do.
  —Ohio diversified organic farmer
- Encourages over production, distorts markets and encourages risk taking behavior, abusing soil.
  —Wisconsin forage farmer
- Distorts producer's ability to make an economic decision and to "farm the taxpayer". Encourages monoculture, risk taking and benefits multinational corporations that benefit from over production and low commodity prices.
  —Diversified Wisconsin farmer
- The crop insurance policies have been severely biased toward GMO and industrial farming. Farmers have therefore become less stewards of the land and more or less junkies for the money. They are sometimes better off when their crop fails.
  —Tennessee herb farmer
- Why should I burden taxpayers even more for investing in what I see as biologically risky practices? Just pay the farmer a sustainable price that goes directly to the farmer and not the grocer, broker, etc. that has no sweat equity in the commodity at all.
  —Wisconsin livestock producer
- Crop insurance caters to making unsustainable farms and thereby undermines those with sustainability in mind. It's the parent who never lets the kid fail so they never learn about what real life is like.
  —Ohio vegetable farmer
- Too much claim abuse is allowed by unethical farmers in the counties where we farm. This has driven up the price of crop Insurance to where we are unlikely to purchase it in the future.
  —Wisconsin farmer

— All respondents —

Table 3.1. Indicators of interest in crop insurance by all survey respondents (N=1030) in approximate order by strength

	Likely to purchase in the coming year (Question 2) 0 = Zero likelihood, 1 = Slight likelihood, 2 = Likely, 3 = Definitely buying	**Importance attached (Question 3)** 0 = Not at all important 1 = Slightly important 2 = Moderately important 3 = Extremely important/ essential	**Motivation to learn more (Question 4)** 0 = Not at all motivated 1 = Slightly motivated 2 = Moderately motivated 3 = Extremely motivated	**Frequency or past purchases (Question 5)** 0 = Have never bought 1 = Have occasionally bought 2 = Have often bought 3 = Buy every year	**Explanation of comparison/correlation**
Started conventional	Very Strong indicator (Avg 1.78 vs. 1.12)	Strong indicator (Avg 1.99 vs. 1.42)	Strong indicator (Avg 2.17 vs. 1.64)	Very Strong indicator (Avg 1.74 vs. 0.68)	"Started conventional" defined as those whose farming history (Question #9) was longer than their history of being certified organic (Question #22).
Grain & legume operation	Very Strong indicator (Avg 1.91 vs. 0.88)	Strong indicator (Avg 2.0 vs. 1.30)	Moderate indicator (Avg 2.09 vs. 1.62)	Very Strong indicator (Avg 1.84 vs. 0.4)	Compared "Grain & legume" operations (Question 15) to all others. Note that more than one operation type could be chosen.
Not growing specialty crops	Very Strong indicator (Avg 1.47 vs. 0.94)	Non-indicator (Avg 1.54 vs. 1.43)	Non-indicator (Avg 1.54 vs. 1.43)	Very Strong indicator (Avg 1.29 vs. 0.45)	Compared operations not growing "High value & specialty crops" (Question 15) to those that DID identify themselves this way. Note that more than one operation type could be chosen.
Many peers use crop insurance	Strong indicator (correlation 0.53)	Moderate indicator (correlation 0.39)	Moderate indicator (correlation 0.31)	Strong indicator (correlation 0.63)	Question 34: "None of them" = 0, "A few" = 1, "Quite a few" = 2, "Nearly all of them" = 3. Those answering "Don't know" were omitted.
Motivated more by economics than ethics or ideology	Very Strong indicator (Avg 1.88 vs. 1.06)	Strong indicator (Avg 2.07 vs. 1.41)	Moderate indicator (Avg 2.07 vs. 1.63)	Weak indicator (Avg 0.42 vs. 0.37)	"Motivated by economics" defined as ranking one of the following three factors highest in Question 25: "To get higher prices for my products," "To tap into growing consumer demand for organic products," or "To reduce input costs." 179 respondents who used no organic methods did not answer this question.
Selling wholesale	Strong indicator	Moderate indicator	Weak indicator	Strong indicator	Question 17: Multiple marketing methods could not be aggregated into a single correlation or comparison. See tables and charts on individual marketing methods, which are the basis for these assessments.
Some organic acreage vs. no certified acreage	Very Strong indicator (1.04 vs. 0.59)	Moderate indicator (1.37 vs. 1.00)	Moderate indicator (1.68 vs. 1.38)	Weak indicator (1.85 vs. 1.69)	Question 26: Compared operations indicating at least some percentage of their acreage is organic to those who answered "None of it."
Frequency of operating loans	Moderate indicator (correlation 0.38)	Moderate indicator (correlation 0.30)	Weak indicator (correlation 0.22)	Strong indicator (correlation 0.55)	Question 19: "Never" = 0, "Some years" = 1, "Most years" = 2, "Every year" = 3.
Growing field crops other than grains or legumes	Moderate indicator (Avg 1.35 vs. 1.07)	Non-indicator (Avg 1.57 vs. 1.44)	Non-indicator (Avg 1.57 vs. 1.44)	Very Strong indicator (Avg 1.14 vs. 0.66)	Question 15: Compared "Other field crop" operations to all others. Note that more than one operation type could be chosen
Greater acreage	Moderate indicator (correlation 0.39)	Weak indicator (correlation 0.20)	Weak indicator (correlation 0.17)	Strong indicator (correlation 0.56)	Question 10: "Less than 5" = 1, "5-10" = 2, "10-50" = 3, "50-200" = 4, "200-1,000" = 5, "1,000-5,000" = 6, "5,000-$10,000" = 7, "Over 10,000" = 8.
Farming full-time vs. part-time	Strong indicator (Avg 0.91 vs. 0.51)	Moderate indicator (Avg 1.23 vs. 0.98)	Weak indicator (Avg 1.58 vs. 1.33)	Non-indicator (Avg 1.82 vs. 1.62)	Question 11: Compared "Full-time" to "Part-time."
Average annual gross revenue	Moderate indicator (correlation 0.30)	Weak indicator (correlation 0.18)	Weak indicator (correlation 0.17)	Moderate indicator (correlation 0.45)	Question 18: "New farmer, little or no revenue yet" = 1, "$1-$10,000" = 2, "10,000 to $50,000" = 3, "$50,000 to $100,000" = 4, "$100,000 to $500,000" = 5, "$500,000 to $1 million" = 6, "Over $1 million" = 7.
Percentage non-organic acreage	Weak indicator (correlation -0.20)	Weak indicator (correlation -0.16)	Non-indicator (correlation -0.09)	Moderate indicator (correlation -0.26)	Question 26: "1-25%" = 1, "26-50%" = 2, "50-75%" = 3, "75-99%" = 4, "All of it" = 5. Farms with NO organic acreage were omitted. Those who said "I'd rather not provide this information" were omitted.
Frequent income drop below 75% of average	Weak indicator (correlation 0.19)	Weak indicator (correlation 0.19)	Weak indicator (correlation 0.15)	Weak indicator (correlation 0.20)	Question 41: "1 year in 10 or less" = 1, "1-2 years out of 10" = 2, "2-3 years out of 10" = 3, "3-4 years out of 10" = 4, "4-5 years out of 10" = 5, "More than 5 years out of 10" = 6. Those answering "Don't know" were omitted. Correlations are negative, meaning that higher percentage of organic acreage indicated lower interest in crop insurance.
Few organic methods used	Weak indicator (correlation -0.21)	Weak indicator (correlation -0.13)	Non-indicator (correlation -0.08)	Weak indicator (correlation -0.16)	Question 21: Number of organic methods selected, out of 16 possible methods. 179 respondents who used no organic methods were omitted. Interest and participation were highest at 4-7 organic methods, decreasing steadily with use of more methods.
Few products grown, i.e. lower diversification	Weak indicator (correlation -0.22)	Weak indicator (correlation -0.10)	Non-indicator (correlation -0.08)	Weak indicator (correlation -0.21)	Question 16: "Just one" = 1, "2" = 2, "3" = 3, "4-6" = 4, "7-10" = 5, "11-20" = 6, "21-40" = 7, "40-60" = 8, "Over 60" = 9. Correlations are negative, meaning that higher number of products indicated lower interest in crop insurance. Interest and participation were highest between 2 and 6 crops, decreasing steadily with greater diversification.
Years farming experience	Weak indicator (correlation 0.16)	Non-indicator (correlation 0.08)	Non-indicator (correlation 0.08)	Moderate indicator (correlation 0.37)	Question 9: "0-5" = 1, "6-10" = 2, "11-15" = 3, "16-20" = 4, "21-30" = 5, "31-40" = 6, "Over 40" = 7.
Years organic experience	Non-indicator (correlation -0.03)	Non-indicator (correlation -0.09)	Non-indicator (correlation -0.03)	Weak indicator (correlation 0.12)	Question 22: "0-5" = 1, "6-10" = 2, "11-15" = 3, "16-20" = 4, "21-30" = 5, "31-40" = 6, "Over 40" = 7. 179 respondents who used no organic methods were omitted.
Own farmland vs. lease	Non-indicator (Avg 0.52 vs. 0.52)	Non-indicator (Avg 1.0 vs. 0.98)	Non-indicator (Avg 1.40 vs. 1.49)	Non-indicator (Avg 1.69 vs. 1.71)	Question 12. Note that interest and participation were highest for "own some lease some."
Frequent insurable losses	No result	No result	No result	No result	Question 37: However, no meaningful comparison could be made because multiple causes of loss could not be aggregated.
OK with accepting government subsidies	No result	No result	No result	No result	Question 6: Why do you rarely or never buy crop insurance? No meaningful comparison could be made because a low percentage of respondents indicated discomfort with subsidies. Only those who said that they had rarely or never bought crop insurance answered this question.

Explanation of numerical scoring

Where two average numbers are compared:

Very Strong = More than 1.5× greater
Strong = 1.3 - 1.5×
Moderate = 1.2 - 1.35×
Weak = 1.05 - 1.2×
Non-indicator = Less than 1.05×

Where two series of numbers are correlated:

Very Strong = correlation above 0.75
Strong = correlation 0.5 - 0.75
Moderate = 0.25 - 0.5
Weak = correlation 0.1 to 0.25
Non-indicator = correlation less than 0.1

— Certified organic respondents only —

Table 3.2. Indicators of interest in crop insurance by organic farms (N=319) in approximate order by strength

	Likely to purchase in the coming year (Question 2) 0 = Zero likelihood, 1 = Slight likelihood, 2 = Likely, 3 = Definitely buying	Importance attached (Question 3) 0 = Not at all important 1 = Slightly important 2 = Moderately important 3 = Extremely important/ essential	Motivation to learn more (Question 4) 0 = Not at all motivated 1 = Slightly motivated 2 = Moderately motivated 3 = Extremely motivated	Frequency or past purchases (Question 5) 0 = Have never bought 1 = Have occasionally bought 2 = Have often bought 3 = Buy every year	Explanation of comparison/correlation
Grain & legume operation	Very Strong indicator (Avg 2.13 vs. 0.99)	Very Strong indicator (Avg 2.20 vs. 1.37)	Strong indicator (Avg 2.24 vs. 1.61)	Very Strong indicator (Avg 2.01 vs. 0.57)	Compared "Grain & legume" operations (Question 15) to all others. Note that more than one operation type could be chosen.
Many peers use crop insurance	Strong indicator (correlation 0.56)	Moderate indicator (correlation 0.39)	Moderate indicator (correlation 0.34)	Strong indicator (correlation 0.63)	Question 34: "None of them" = 0, "A few" = 1, "Quite a few" = 2, "Nearly all of them" = 3. Those answering "Don't know" were omitted.
Started conventional	Very Strong indicator (Avg 1.78 vs. 1.16)	Strong indicator (Avg 2.13 vs. 1.46)	Moderate indicator (Avg 2.16 vs. 1.70)	Moderate indicator (Avg 0.58 vs. 0.46)	"Started conventional" defined as those whose farming history (Question #9) was longer than their history of being certified organic (Question #22).
Not growing specialty crops	Very Strong indicator (Avg 1.91 vs. 1.07)	Moderate indicator (Avg 1.91 vs. 1.50)	Weak indicator (Avg 2.00 vs. 1.71)	Very Strong indicator (Avg 1.81 vs. 0.62)	Compared operations not growing "High value & specialty crops" (Question 15) to those that DID identify themselves this way. Note that more than one operation type could be chosen.
Motivated more by economics than ethics or ideology	Very Strong indicator (Avg 1.88 vs. 1.06)	Strong indicator (Avg 2.07 vs. 1.41)	Moderate indicator (Avg 2.07 vs. 1.63)	Weak indicator (Avg 0.42 vs. 0.37)	"Motivated by economics" defined as ranking one of the following three factors highest in Question 25: "To get higher prices for my products," "To tap into growing consumer demand for organic products," or "To reduce input costs."
Frequency of operating loans	Moderate indicator (correlation 0.43)	Moderate indicator (correlation 0.38)	Moderate indicator (correlation 0.28)	Strong indicator (correlation 0.58)	Question 19: "Never" = 0, "Some years" = 1, "Most years" = 2, "Every year" = 3.
Selling wholesale	Strong indicator	Moderate indicator	Weak indicator	Strong indicator	Question 17: Multiple marketing methods could not be aggregated into a single correlation or comparison. See tables and charts on individual marketing methods, which are the basis for these assessments.
Greater acreage	Moderate indicator (correlation 0.43)	Moderate indicator (correlation 0.25)	Weak indicator (correlation 0.21)	Strong indicator (correlation 0.56)	Question 10: "Less than 5" = 1, "5-10" = 2, "10-50" = 3, "50-200" = 4, "200-1,000" = 5, "1,000-5,000" = 6, "5,000-$10,000" = 7, "Over 10,000" = 8.
Growing field crops other than grains or legumes	Moderate indicator (Avg 1.67 vs. 1.29)	Weak indicator (Avg 1.83 vs. 1.60)	Weak indicator (Avg 2.00 vs. 1.77)	Very Strong indicator (Avg 1.44 vs. 0.94)	Question 15: Compared "Other field crop" operations to all others. Note that more than one operation type could be chosen
Average annual gross revenue	Weak indicator (correlation 0.19)	Weak indicator (correlation 0.17)	Moderate indicator (correlation 0.28)	Moderate indicator (correlation 0.42)	Question 18: "New farmer, little or no revenue yet" = 1, "$1-$10,000" = 2, "10,000 to $50,000" = 3, "$50,000 to $100,000" = 4, "$100,000 to $500,000" = 5, "$500,000 to $1 million" = 6, "Over $1 million" = 7.
Few products grown, i.e. lower diversification	Moderate indicator (correlation -0.30)	Weak indicator (correlation -0.12)	Weak indicator (correlation -0.14)	Moderate indicator (correlation -0.29)	Question 16: "Just one" = 1, "2" = 2, "3" = 3, "4-6" = 4, "7-10" = 5, "11-20" = 6, "21-40" = 7, "40-60" = 8, "Over 60" = 9. Correlations are negative, meaning that higher number of products indicated lower interest in crop insurance. Interest and participation were highest between 2 and 6 crops, decreasing steadily with greater diversification.
Percentage non-organic acreage	Weak indicator (correlation -0.20)	Weak indicator (correlation -0.16)	Non-indicator (correlation -0.09)	Moderate indicator (correlation -0.26)	Question 26: "1-25%" = 1, "26-50%" = 2, "50-75%" = 3, "75-99%" = 4, "All of it" = 5. Those who said "I'd rather not provide this information" were omitted.
Farming full-time vs. part-time	Non-indicator (Avg 1.39 vs. 1.30)	Weak indicator (Avg 1.69 vs. 1.53)	Non-indicator (1.83 vs. 1.78)	Very Strong indicator (Avg 0.86 vs 0.18)	Question 11: Compared "Full-time" to "Part-time."
Few organic methods used	Moderate indicator (correlation -0.26)	Weak indicator (correlation -0.17)	Weak indicator (correlation -0.14)	Weak indicator (correlation -0.24)	Question 21: Number of organic methods selected, out of 16 possible methods. Interest and participation were highest at 4-7 organic methods, decreasing steadily with use of more methods.
Own farmland vs. lease	Non-indicator (Avg 1.16 vs. 1.15)	Non-indicator (Avg 1.54 vs. 1.53)	Weak indicator negat ve (Avg 1.54 vs. 1.75)	Very Strong indicator (Avg 0.39 vs. 0.11)	Question 12. Note that interest and participation were highest for "own some lease some."
Years farming experience	Weak indicator (correlation 0.16)	Weak indicator (correlation 0.13)	Weak indicator (correlation 0.14)	Moderate indicator (correlation 0.34)	Question 9: "0-5" = 1, "6-10" = 2, "11-15" = 3, "16-20" = 4, "21-30" = 5, "31-40" = 6, "Over 40" = 7.
Years organic experience	Non-indicator (correlation 0.01)	Non-indicator (correlation 0.04)	Non-indicator (correlation 0.05)	Non-indicator (correlation 0.09)	Question 22: "0-5" = 1, "6-10" = 2, "11-15" = 3, "16-20" = 4, "21-30" = 5, "31-40" = 6, "Over 40" = 7. 179 respondents who used no organic methods were omitted.
Frequent income drop below 75% of average	Non-indicator (correlation -0.02)	Non-indicator (correlation 0.02)	Non-indicator (correlation -0.02)	Non-indicator (correlation 0.05)	Question 41: "1 year in 10 or less" = 1, "1-2 years out of 10" = 2, "2-3 years out of 10" = 3, "3-4 years out of 10" = 4, "4-5 years out of 10" = 5, "More than 5 years out of 10" = 6. Those answering "Don't know" were omitted. Correlations are negative, meaning that higher percentage of organic acreage indicated lower interest in crop insurance.
Frequent insurable losses	No result	No result	No result	No result	Question 37: However, no meaningful comparison could be made because multiple causes of loss could not be aggregated.
OK with accepting government subsidies	No result	No result	No result	No result	Question 6: Why do you rarely or never buy crop insurance? No meaningful comparison could be made because a low percentage of respondents indicated discomfort with subsidies. Only those who said that they had rarely or never bought crop insurance answered this question.

Explanation of numerical scoring

Where two average numbers are compared:

Very Strong = More than 1.5× greater
Strong = 1.3 - 1.5×
Moderate = 1.2 - 1.35×
Weak = 1.05 - 1.2×
Non-indicator = Less than 1.05×

Where two series of numbers are correlated:

Very Strong = correlation above 0.75
Strong = correlation 0.5 - 0.75
Moderate = 0.25 - 0.5
Weak = correlation 0.1 to 0.25
Non-indicator = correlation less than 0.1

CAN'T GET THE COVERAGE I NEED (COMMENTS FROM THE SURVEY)

- As a diverse vegetable operation, it is hard to get coverage. I have tried talking to our county USDA office but they seem unable or unwilling to help us and/or lack the understanding/ motivation to help us.
  —*Wisconsin organic vegetable grower*
- Have heard that organic crops are not covered.
  —*North Carolina organic farmer with diversified operation*
- I don't know that crop insurance is available for a small diversified farm.
  —*Florida farmer with vegetable garden CSA*
- I don't think my crops are covered by insurance.
  —*Ohio Certified Organic pasture and forage farmer*
- I grow organic crops for retail and some wholesale. I don't think crop insurance would cover my crops for the prices I get.
  —*Maine organic blueberry farmer*
- Organic methods, hard to make it work with a system designed for commoditycrops.
  —*Tennessee specialty crop farmer*
- Each time I have checked on products, the few available did not seem appropriate to us. That could be changing, I don't know?
  —*California organic farmer with diverse operation*
- For small scale and diversified growers who are marketing primarily direct-to-consumer, even Whole-Farm Revenue is not a great option, despite the best efforts by the USDA to create a different type of insurance for small and diversified farms.
  —*Connecticut farmer with diverse operation*
- The crops that I need to insure are not insurable in my county/ state.
  —*Iowa farmer with diverse operation*

INTEREST IN CROP INSURANCE BASED ON MARKETING METHOD

Two indicators are not shown in Tables 3.1 or 3.2 because they could not be evaluated by comparing average numbers or calculating a correlation. These indicators were "Selling through wholesale channels" and "Having frequent insurable losses." The multiple marketing methods in Question #17 could not without distortion be aggregated into a single correlation or comparison, especially since many farms used multiple marketing methods and not all marketing methods fit unambiguously into the "wholesale" or "direct" category. We encountered similar difficulties aggregating the multiple causes of loss listed in Question #37.

Nonetheless, marketing methods had a strong and obvious connection to interest in crop insurance. For example, 89.2% of respondents who sold to grain elevators had bought crop insurance, and 75.5% said they bought it every year. At the other extreme, less than 20% of those who sold through farm stands, farmers markets, or to restaurants had ever bought crop insurance. The charts on the following two pages show the importance of marketing method as an indicator of interest in crop insurance.

Further discussion of indicators

GROWING GRAINS & LEGUMES

Grain and legume farms are keenly interested in crop insurance and use it extensively. Among 105 certified organic growers (33%) who classified themselves as grain and legume farms, 78.1% had bought crop insurance at least occasionally in the past, 54% buy it every year, and over half (53%) considered crop insurance extremely important or essential to their long-term success and survival. Likewise, of the 270 survey respondents (23.5%) who classified themselves as grain and legume farms, about three quarters (73%) had bought crop insurance at least occasionally in the past, and about half (49%) said they buy it every year.

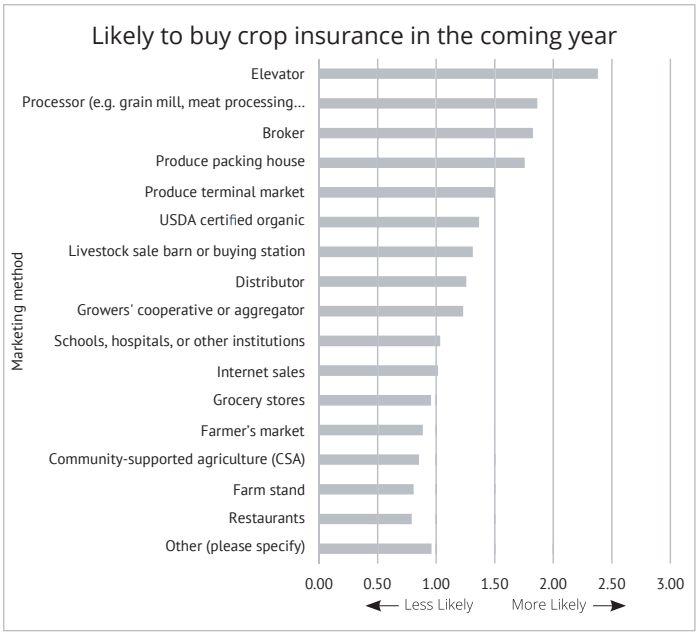
GROWING FIELD CROPS OTHER THAN GRAINS OR LEGUMES

Similar to grain and legume farmers, those who grow other field crops (such as cotton, peanuts, potatoes, sunflowers, sugar beets, seed crops, hay, silage, forage, and tobacco) use crop insurance heavily. Among all 1,030 survey respondents, 74.8% of field crop farmers had bought crop insurance in the past, 56.1% said they bought it every year, and 71.0% said they considered crop insurance either moderately (18.7%) or extremely (52.3%) important for their success and survival. These numbers were similar for the certified organic farms in the survey population: 71.9% had bought crop insurance in the past, 59.4% said they bought it every year, and 82.8% said they considered crop insurance either moderately (25.0%) or extremely (57.8%) important for their success and survival.

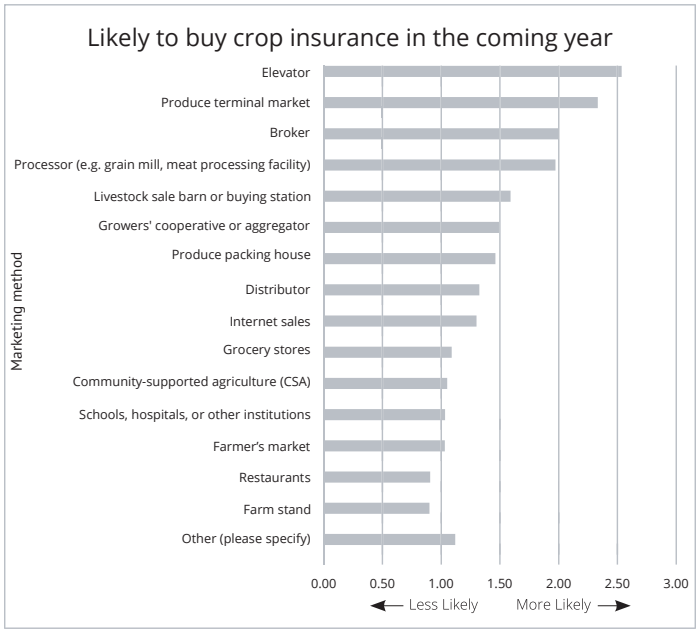
NOT GROWING SPECIALTY CROPS

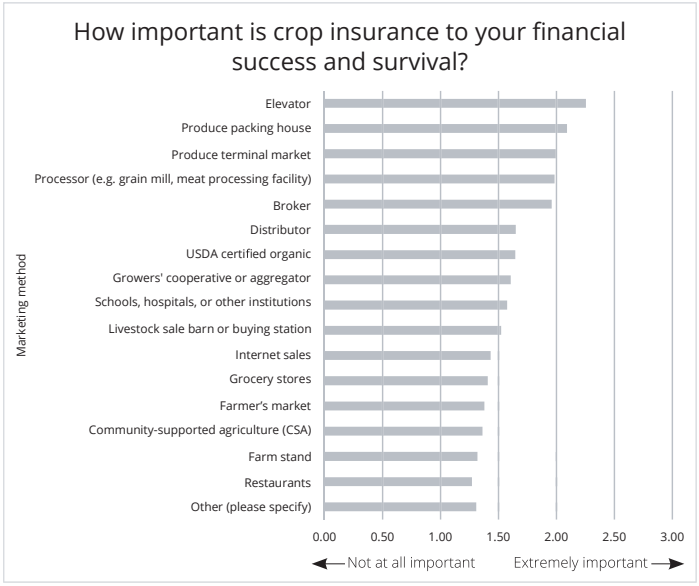
The experience of specialty crop growers was starkly different from that of grain, legume, and other field crop farmerss. Among 206 certified organic growers of high-value or specialty crops, just 61 (29.6%) had ever bought crop insurance in the past and 28.2% were either likely or definitely buying it in the coming year. Likewise, of the 679 specialty crop growers in the entire survey population, only 29.1% had ever bought crop insurance and 39.0% were either likely or definitely buying it in the coming year.

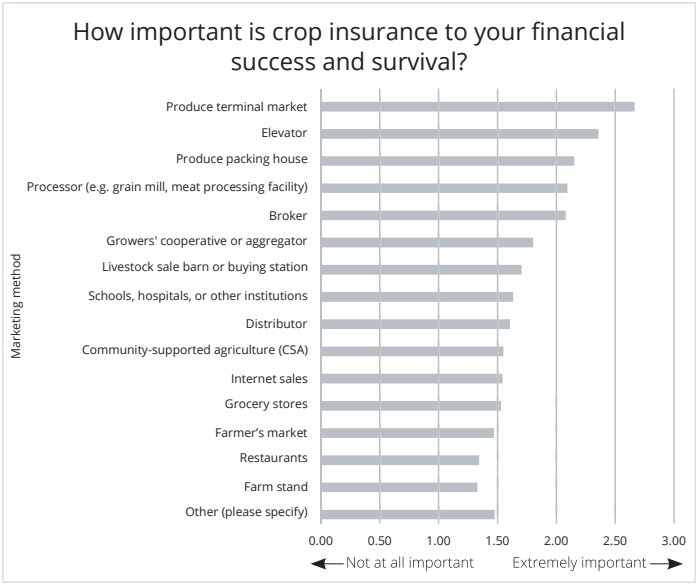
— All respondents —

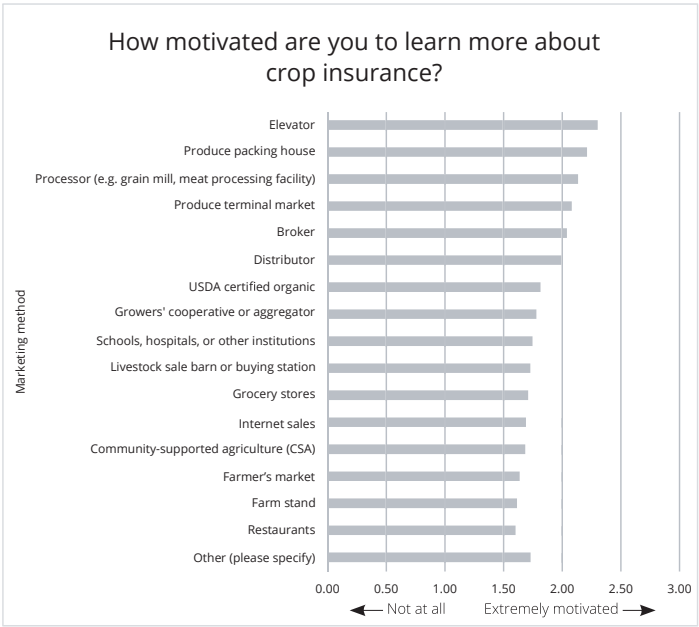


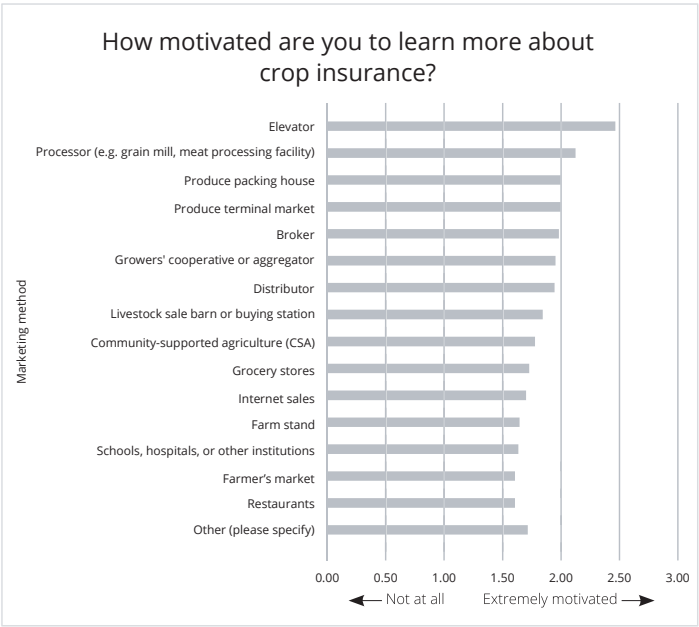
— Certified organic —



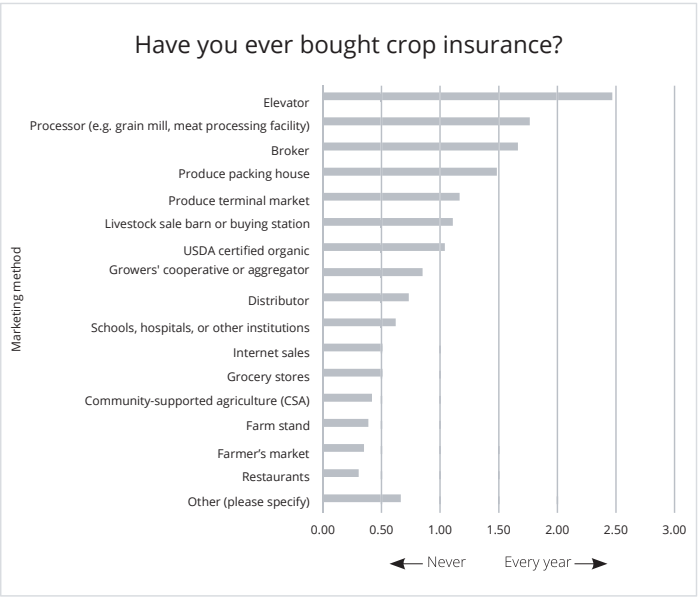








— All respondents —



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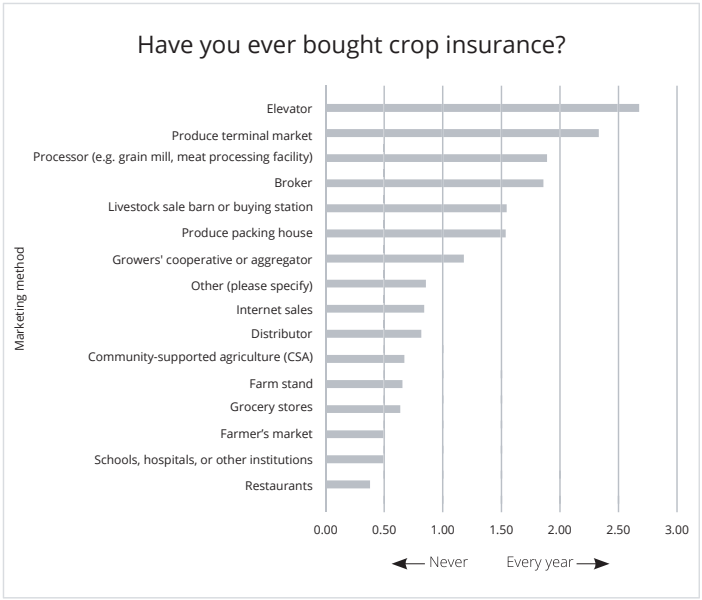


Nonetheless, specialty crop growers attached considerable importance to crop insurance for their economic success and survival. Among the 206 certified organic specialty crop growers, 26.2% called crop insurance moderately important and 18.4% called it extremely important or essential. A solid majority (55.8%) were either moderately (29.1%) or strongly motivated (26.7%) to learn more about crop insurance. With their low past participation and strong motivation to learn more, specialty crop farms stood out as an obvious and important target for educational efforts.

Having many peers who use crop insurance was one of the strongest indicators of interest in buying it.

PEERS USE CROP INSURANCE

Having many peers who use crop insurance was one of the strongest indicators of interest in crop insurance, for both certified organic farms and the entire survey population. This may be an important clue for designing effective educational campaigns.

STARTED CONVENTIONAL AND LATER CONVERTED TO ORGANIC

Among 107 certified organic farms (approximately one third of certified organic respondents) who reported more years of farming experience than years of being certified organic, interest in crop insurance was considerably higher (according to all 4 indicators) than for growers who had always been certified organic. There are many plausible explanations for this. Many farms that start out as conventional operations have some experience with crop insurance. And many farms that certify some of their acreage as organic are split operations that continue to manage other acreage as non-certified.

MOTIVATED MORE BY ECONOMICS THAN ETHICS OR IDEOLOGY

We looked at this in two different ways: First, we compared participants by the motive they ranked highest in answering survey question #25: "WHY DO YOU CHOOSE to use organic methods? RANK each item in the following list, with 1 being most important to you and 6 being least important."

Those whose highest-ranked motive was "To get higher prices for my products" scored highest on all four measures of interest in crop insurance: They had bought it most often in the past, were most likely to buy it in the coming year, viewed it as most important to their financial success, and were most motivated to learn more about it.

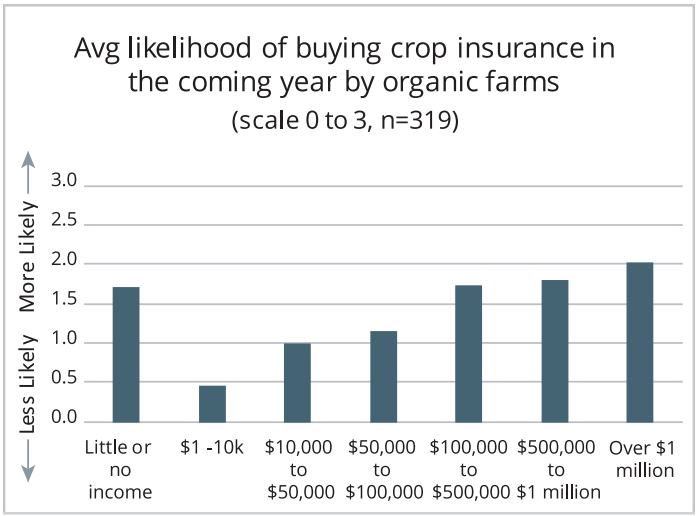
To check this result, we ran a second test. We added together the rankings given to the three options that were most related to economic motivation: "To tap into growing consumer demand for organic products," "To get higher prices for my products," and "To reduce input costs." Ranking these options high (1 being the highest score) resulted in a low number, with the lowest possible number being 6. We then grouped the scores into three categories: low (13-15), medium (10-12), and high (6-9). Based on these scores, people in the "high" group came out highest on three of our four measures of interest in crop insurance (all except "motivated to learn more").

FREQUENCY OF OPERATING LOANS

Farms that routinely take out operating loans scored far higher on all four measures of interest, compared to farms that never do. For example, 89% of the farms that take out operating loans every year have bought crop insurance in the past, compared to just 18% of farms that never take out operating loans.

LARGE FARMS, MEASURED BY ACREAGE OR AVERAGE ANNUAL GROSS REVENUE

All four measures of interest increased with gross revenue and acreage.

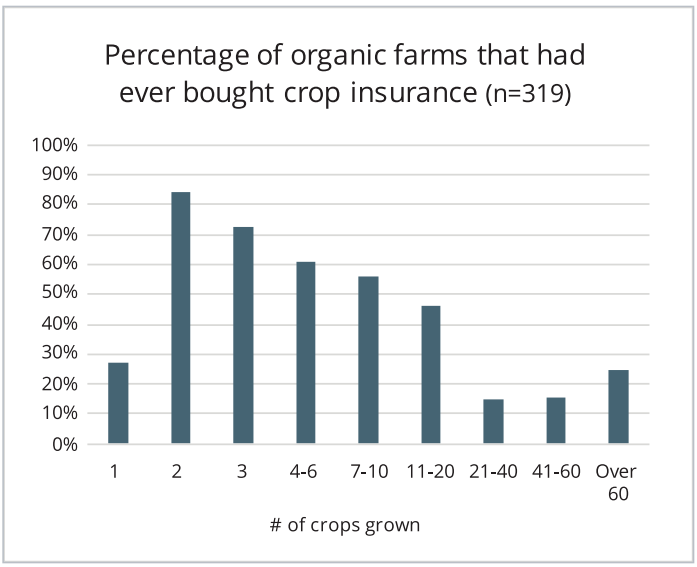


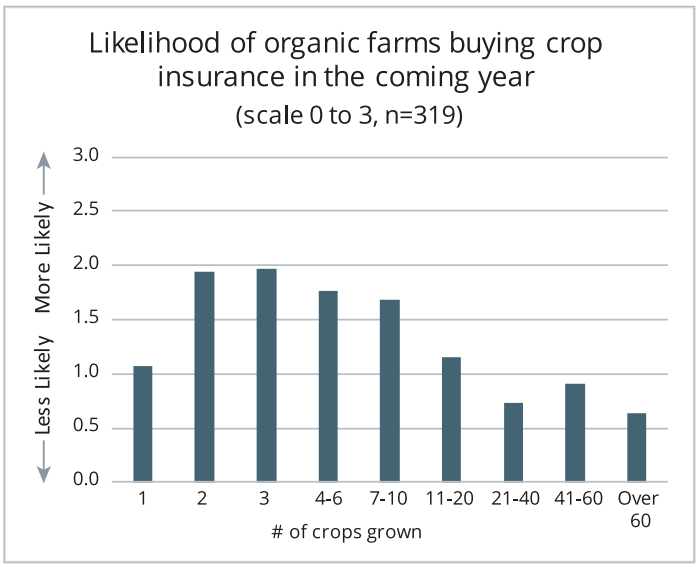
FEWER PRODUCTS GROWN, I.E., LOWER DIVERSIFICATION

Farms growing between two and six crops were the most likely to have bought crop insurance in the past and plan on buying it in the future. They considered crop insurance the most important for their financial success and were the most motivated to learn more about it.

PAPERWORK ISSUES (COMMENTS FROM THE SURVEY)

- We started the process this year, but it became too cumbersome to submit records for all of our different crops and we never ended up completing the process.
  —Ohio diversified vegetable farmer
- Whole Farm is the only policy that will work and it requires 3 years of harvest totals. Just waiting to have that data.
  —Texas farmer growing diverse crops
- I would not collect a penny unless I lie about the harvest amounts. I am supposed to keep all product from each unit separate. I can't do that.
  — New York farmer with diversified operation
- I am required to purchase crop insurance in order qualify for government programs. But crop insurance does nothing to help me manage risk. The lag time between the crop year and the payment (18 months usually) means that a farmer receives benefits far after the loss. You can't take a potential crop insurance payment to the bank when seeking financing...Plus another huge bureaucracy was created to siphon off money that needs to go to the producer to do any good. This was a political construct that has provided great profits for the insurance industry and NOTHING for the producer.
  — Louisiana vegetable farmer

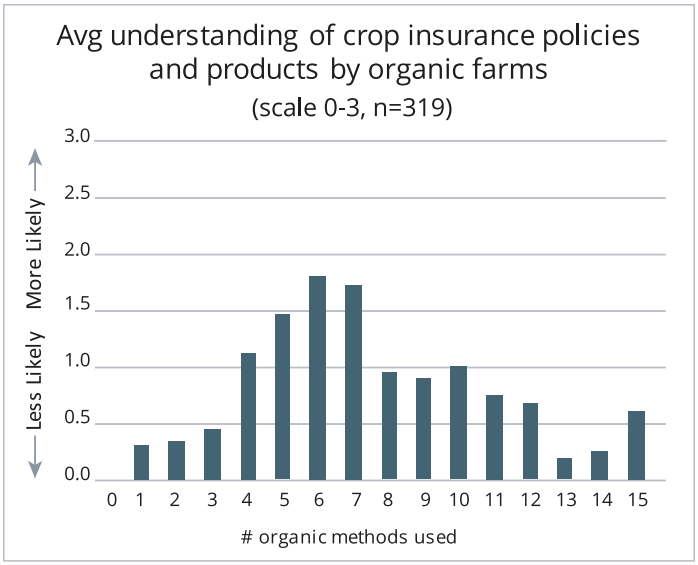


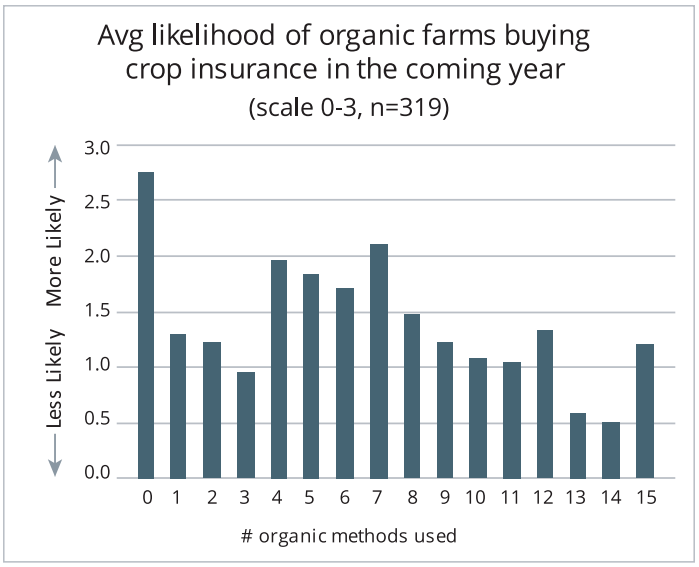


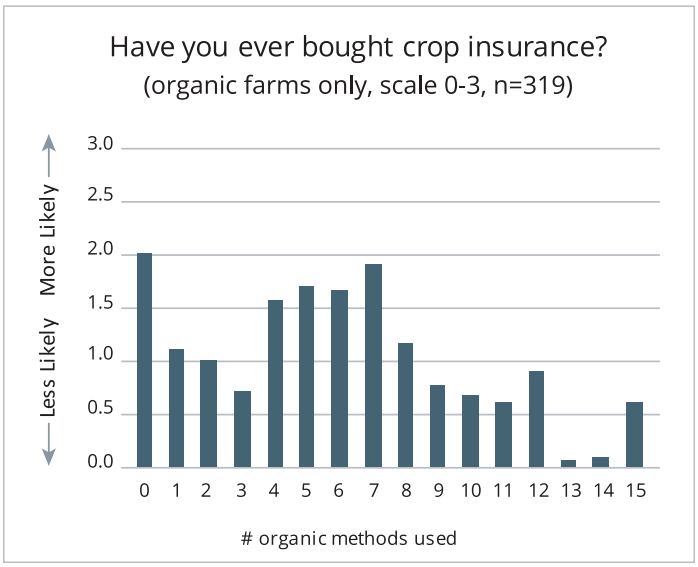
USE JUST A FEW ORGANIC METHODS

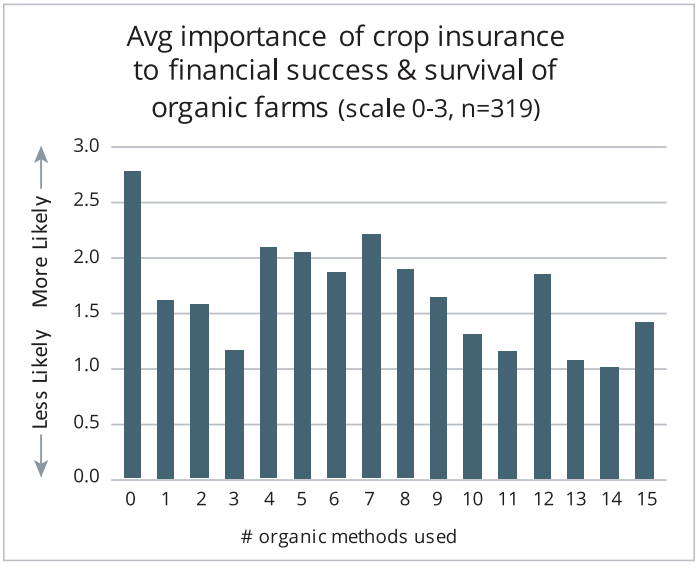
We saw greater interest in crop insurance among farms using only a few organic methods, as opposed to those using more organic methods. Interest in crop insurance peaked at between 4 and 7 organic methods, and was lower for farms using either fewer or more organic methods.

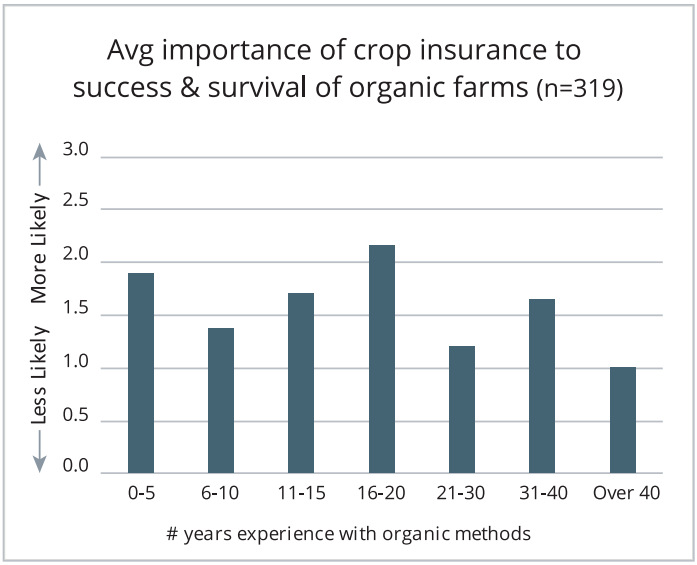
We saw this same "sweet spot" of 4-7 organic methods in the answers to several survey questions. These farms (about one third of all organic farms surveyed) were the most likely to buy crop insurance, considered it most important to their financial success, understood it the best, and were the most motivated to learn more about it. In other words, as certified organic farms used more organic methods (8-15) they were less frequent purchasers of crop insurance, considered it less important, and were less motivated to learn about it.











SPLIT OPERATIONS, WITH BOTH CONVENTIONAL AND ORGANIC ACREAGE

Out of 319 certified organic farms that took the survey, 119 (37%) were "split operation," with some but not all of their acreage certified. Among certified organic farms, interest in crop insurance (by all four measures of interest) was highest among those with less than 25% of their acreage certified, and lowest among farms with all their acreage certified.

YEARS OF EXPERIENCE FARMING AND USING ORGANIC METHODS

There was little relationship between years of farming experience and interest in crop insurance, except that (not surprisingly) operations with more years of farming experience were somewhat more likely to have purchased crop insurance at some point in the past.

Years of experience farming with organic methods was likewise not a very significant factor, although (among all respondents and in the certified organic sub-group) both the likelihood of buying crop insurance in the coming year and the importance attached to it declined slightly for farms with more than 10-20 years of experience.

OTHER INDICATORS

There was not much difference (based on any of our four measures of interest) between those who own farmland and those who are leasing.

Experience with major losses due to pests, diseases, freezes, drought, and flooding was also fairly similar throughout the survey group. Likewise, there wasn't much difference among farms in the frequency with which gross revenue drops below 75% of its average level.

Opposition to accepting government subsidies was uncommon, as only 8.8% of respondents ranked this among their top four reasons for not buying crop insurance. And among the 22 organic farmers who registered their opposition to accepting subsidies, eight nonetheless rated crop insurance as moderately or extremely important to their financial success, and 10 were at least slightly likely to buy it in the coming year.

Concern about potential harm to a farm's image because of buying crop insurance was even less of an issue. Only six respondents--and just one certified organic farm—listed this among their top four reasons for not buying crop insurance.

CAN'T FIGURE OUT MY OPTIONS (COMMENTS FROM THE SURVEY)

- Contacted the designated expert on crop insurance in the Colorado Department of Ag. They were surprised they had that role and knew nothing helpful. Found nothing but gibberish online. Too busy to keep chasing my tail.
  —Colorado organic farmer with diversified operation and plant nursery
- I can't get an answer. If we have a loss will they ask for fertilize and spray records like when we were chemical farmers and turn us down for not using "acceptable rates"?
  —Ohio organic farmer with diversified operations
- I did not know it was available until a few months ago. IT IS NOT ADVERTISED anywhere. I have been with the FSA for 3 years now and am just learning about it.
  —Arkansas farmer with diversified operations
- I do not know where or how to get crop insurance.
  —New York organic soybean farmer
- I'm skeptical of what it covers and need to better educate myself on the program.
  —Arkansas farmer with diversified operation
- The availability seems frustratingly variable. All different products available, then unavailable, at different times, it's hard to keep track of it all. I wish the program could be stable and consistent.
  —Washington farmer with livestock and diversified crop operation

Are expert organic farmers less interested in crop insurance?

Among certified organic respondents, 14.1% said they rarely experienced major crop losses. And in their survey comments, a number of organic farmers told us they felt little need for crop insurance because they were highly successful at managing their production and financial risks without it. We also often encountered the widely-held belief (among both organic farmers and advocates) that organic farming systems, once fully established, are highly resistant to damage from pests, diseases, flooding, drought, and other natural causes. We were curious to see if our survey results supported the idea that expertise in organic farming reduces the need for crop insurance.

BAD EXPERIENCES (COMMENTS FROM THE SURVEY)

- Bought it, did not pay off. Appealed, won, still did not pay.
  —*Oregon grape farmer*
- Have bought insurance when we were conventional and there were strict rules and gimmicks that prevented actually filing a claim and it cost way too much.
  —*Georgia grain farmer*
- I can't stand the salespeople. They are rude and pushy.
  —*Michigan farmer*
- I'm certified organic and loss adjusters have no understanding of NOP management systems or the regulation.
  —*Ohio organic farmer*
- My crop lavender has not been considered a viable Montana crop until this year but now only in certain counties. I've grown only small amounts 500-1,500. Lost the 1,500 to one weather event 7 years ago and just this year I've crawled out of the hole that put me in. It was my everything.
  —*Montana lavender and hay farmer*

To investigate this question, we looked at a sub-group of expert organic farmers, which we defined as meeting all five of the following criteria:

1. Use organic farming methods on all acreage (Question #20).
2. Use at least 5 organic farming methods (Question #21).
3. Have more than 5 years of experience using organic methods (Question #22).
4. Have average soil organic matter level, if known, greater than 2% (Question #23). (But we also allowed "Don't know.")
5. Have beneficial insect populations, if known, that are Good or Outstanding (Question #24). (But we also allowed "Don't know.")

238 respondents met all five of these criteria, of which only about half (48%) were certified organic. Compared to either certified organic farms or the entire survey population, these expert organic farmers were strikingly less interested in crop insurance. As shown in Table 3.3 below:

- Expert organic farmers were far less likely to buy crop insurance in the coming year, with over half (52.5%) reporting a "Zero chance."
- Expert organic farmers considered crop insurance far less important to their economic success and survival, with over a third (34.5%) saying crop insurance was not at all important to them.
- Expert organic farmers were far less motivated to study and learn about crop insurance options that might apply to their situation, with almost half (47.1%) having either slight or no motivation.
- Expert organic farmers were far less likely to have bought crop insurance in the past, with over three quarters (76.1%) never having bought it.

Table 3.3. Interest in crop insurance by expert organic farmers

How LIKELY are you to buy crop insurance in the COMING YEAR?

	All respondents (n=1,247)	**Certified organic** (n=319)	**Expert organic** (n=238)
Zero chance	36.8%	29.8%	52.5%
Slight chance	30.3%	28.2%	30.3%
Likely	15.1%	17.6%	6.7%
Definitely buying	17.8%	24.5%	10.5%

Table 3.3. Interest in crop insurance by expert organic farmers (cont'd)

For the long-term success & survival of your farm or ranch, how IMPORTANT is it for you to have crop insurance?

	All respondents (n=1,247)	Certified organic (n=319)	Expert organic (n=238)
Not at all important	20.7%	21.9%	34.5%
Slightly important	32.3%	21.9%	27.3%
Moderately important	24.4%	25.7%	23.9%
Extremely important	22.6%	30.4%	14.3%

How MOTIVATED are you to study & learn about new crop insurance options that might apply to your situation?

	All respondents (n=1,247)	Certified organic (n=319)	Expert organic (n=238)
Not at all motivated	10.5%	10.7%	14.3%
Slightly motivated	29.6%	27.6%	32.8%
Moderately motivated	34.5%	31.3%	34.0%
Extremely motivated	25.4%	30.4%	18.9%

Have you EVER bought crop insurance?

	All respondents (n=1,247)	Certified organic (n=319)	Expert organic (n=238)
Never	64.9%	54.5%	76.1%
Occasionally	10.3%	11.3%	9.7%
Often	7.3%	9.7%	2.5%
Every year	17.5%	24.5%	11.8%

Discussion

Putting together these results, we arrive at the following—albeit simplified—picture of a certified organic farm most likely to be interested in crop insurance:

- Operating a large farm, with high average gross revenue and/or acreage, and routinely taking out operating loans;
- Growing just a few crops (between two and six)—likely including grains, legumes, or other field crops--and selling them wholesale;
- Using a few organic methods, but not fully committed to an integrated organic system that incorporates multiple methods and a high level of crop diversity;
- May have started out conventional, and may have mixed organic and conventional acreage;
- Selling through wholesale channels, such as grain elevators, produce terminal markets, processors, brokers, or aggregators;
- Quite familiar with crop insurance, has used it in the past, and many peers use it; and
- Motivated to farm organically more by the desire for profit and economic success than by ethics or ideology.

Summarizing and simplifying even further, the survey results suggest that the certified organic farmers most interested in crop insurance tend to have a somewhat "conventional" orientation. They may not fully embrace or embody

ideals of the organic movement such as an integrated approach, a high degree of crop diversification, and a deep personal commitment to ecology and "farming with nature."

This finding is relevant to Guthman's thesis (discussed briefly in Chapter 1) about the "bifurcation" of the organic sector: "the phenomenon where some organic growers became much more like, or stayed the same as, conventional growers, while other growers remained dedicated to agro-ecological techniques and smaller farm models" (Guthman, 2014).

The growers in our survey who were most interested in crop insurance tended towards the conventional end of the spectrum. In fact, many began as conventional growers and now maintain "split operations" with both conventional and organic acreage. We hasten to add that there were many exceptions to this generalization: large organic farms that were highly diversified and strongly committed to agroecological ideals.

Our survey suggests that farms most interested in crop insurance skew somewhat towards the "input substitution" end of the scale.

The term "input substitution" is often used to describe USDA-certified organic farms that meet the letter but not the spirit of the law. These farms merely substitute organically approved fertilizers, pesticides, and so on for prohibited inputs. Otherwise, they continue farming in essentially conventional ways, without adopting a fully integrated or agroecological approach. (See Rosset and Altieri, 1996 and Darnhofer et al., 2010.) There is no clear line between "input substitution" and "agroecological" farming, and more of a sliding scale. Our survey suggests, however, that the farms most interested in crop insurance skew somewhat towards the "input substitution" end of the scale.

Experienced and ideologically committed organic farmers, growing diversified crops and using a wide repertoire of organic methods, were less interested in crop insurance than either the certified organic farmers who took our survey or the survey population as a whole. We need to be cautious about reading too much into these results, but they do drive home the point that we can't assume that the organic producers who are buying crop insurance are typical of the organic sector as a whole. While often lumped together and treated as a monolithic group, organic farms are diverse in their crops and methods, and there are major regional differences. Every organic farm is site-specific, adapted to local circumstances, and reflects the values of its owners and operators.

Why "more education" isn't the answer

We undertook this survey partly in order to improve crop insurance education for organic farms. Some recommendations do emerge, although they are not as simple or straightforward as one might expect.

Certainly, it makes sense to target education and promotional efforts to growers who are receptive and interested in crop insurance, and our survey shows that these tend to be larger, growing field crops, selling wholesale, and motivated strongly by a desire for profit. On the other hand, these growers also have considerable previous experience with crop insurance. So the farms that are most interested in crop insurance often have the lowest need for education.

We think the best educational campaign would combine broad generic information, for those who are at "square one," with targeted campaigns aimed at growers with high need and low crop insurance participation. As we saw in Chapter 2, there are many specialty crops and regions fitting this picture. We will offer some other suggestions in Chapter 8.

The results reported in Chapters 2 and 3 also make it very clear that education alone is not going to solve the main problems that organic farmers encounter when they try to use crop insurance. In the case of very small and highly diversified specialty crop growers, education alone (while always welcome) seems unlikely to increase rates of usage because these farms are, in general, poor candidates for crop insurance.

Mid- to large-scale organic specialty crop growers are a promising and logical target for education. These farmers expressed keen interest in crop insurance in our survey, and they need crop insurance because they have so much at stake financially. But their main problem does not seem to be a lack of information or education. Instead, the problems they expressed had more to do with:

- the lack of single-crop policies in their county for the specialty crops they are growing;
- difficulties they encountered in trying to use Whole-Farm Revenue Protection;
- uncertainties about whether crop insurance would cover the full value of their organic crops;
- uncertainties about how they would be viewed and treated by adjusters, if they filed a claim; and
- legitimate doubts—because of the uncertainties above and despite the high degree of federal subsidization—that crop insurance would actually be worth the money.

The biggest problems with organic crop insurance are occurring among specialty crop growers—and not because they lack education or sophistication.

As we will see in the next chapter, there are also challenges that crop insurance agents face in their efforts to sell insurance policies to organic growers. We will offer some solutions to all of these problems in Chapters 8 and 9.

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Representative comments

How would you describe your past experience with the performance of crop insurance companies?

- The agent is good except they don't seem to be able to move the claim along and I am losing my ability to farm because of the stalling by the insurance company. *—Certified Organic grain and cattle farmer from Montana*
- I have a problem with them lying saying RMA refuses to let them pay me but when I confront RMA they say the company can pay. In addition the company approves expenses and methods on the WFRP and then later denies them for no reason except what appears to stall payment. The company is horrible and has cost me my credit standing and creditability with supplies because all my causes of claim have been verified and the company is slow to respond and even refuses to communicate with me by mail, email, phone or person meeting. (Not one of the field adjusters has ever told me that I did not do as I should or that I did not report timely.) The company that handles the claims are unprofessional. I could go on with lots of examples. *—Specialty crop farmer from Washington*
- Crop insurance is not equitable for diverse crops, organic production or conservation practices. *—Grain farmer from Montana*
- Generally have little trust in insurance companies. *—High-value fruit and vegetable farmer from West Virginia*

• Most agents are not knowledgeable and do not go out of their way to assist producers.
—Cattle farmer from California and Nebraska

• The NAP program thru USDA is only program available to us. It is a very good program, but the state office and their county offices make a mess of the whole program. It is impossible for the grower to feel that we have insurance at all.
—Diverse operation farmer from Kansas

• The whole thing is BS. When I have an event, the estimator always estimates that there is just enough wheat in the field that they don't have to pay anything but there's not enough to cover the cost of cutting & hauling it. For me, 12 bushel wheat is a total loss because I can't afford to cut and haul but it's even worse if I have to pay an insurance premium on top of the loss because they won't pay unless there is no wheat in the field. So the wheat just rots and I go broke. *—Grain farmer from Utah*

• Uninformed on how the policy works, misinformation, appears like they changed the rules as they go, so it works for the company not the producer. *—Grain farmer from Montana•*

• USDA NAP policy is poorly administered, overly complex and even with the max buy-up 65/100 pays extremely poor!
—Field crop farmer from Wisconsin

• We have an FSA loan and are required to carry farm insurance. I think this includes crop insurance? But I always just assumed it didn't cover specialty crops like ours. *—Specialty crop farmer from Washington*

How would you describe your past experience with the performance of crop insurance agents?

• Agents are generally interested in only selling you the policy with little to no concern of your bottom line.
—Montana organic grain farmer

• Current agent is very good, but previous one should be disbarred. *—Ohio Organic farmer with diverse operation*

• FSA did not want to work with us when we started our farm 10 years ago. Have not gone back. *—Texas lavender farmer*

• I feel like the agents' hands are tied. *—Ohio cattle rancher*

• Some are very good. Some lie just to make the sale. *—Farmer with diverse operation from Texas*

• Most agents are not knowledgeable and do not go out of their way to assist producers. In addition, the rules for hail damage, wind damage, etc. are largely determined by the % of the crop that is left on the ground vs. the % of the crop standing whereby it is next to impossible to collect insurance. I am at the point that I would do most anything NOT to have crop insurance unless the rules and process and $ are changed tremendously. It is not sustainable.
—Arkansas cattle and hog farmer

• NAP agents were extremely cooperative and professional. The only concern is their lack of knowledge of NAP due to very few processed in the county. *—Oregon organic fruit and tree nut farmer*

• Our local FSA office continually tells me that in order to receive payments for crop damage we have to have very high percentage of tree LOSS, not tree damage, to receive payments. The threshold for being paid for damage to our orchard is not worth the hassle of getting crop insurance. *—Wisconsin grain and potato farmer*

• The agent I worked with had no knowledge of diversified vegetable production.*—Washington organic vegetable farmer*

• They are not educated enough on the policy and the rules. *—Iowa organic sheep and poultry producer*

• They are stuck in the corn/soybean rotation and know little to nothing about anything else diverse.
—Arkansas sheep and poultry producer

• They can't answer my questions. *—California wine grape grower*

• They take the check never to be seen again. *—Maine organic fruit and berry farmer*

• Uneducated about their product. *—New Mexico organic tree nut farmer*

• We have had a good agent for many years. *—Texas organic onion farmer*

How satisfied are you with the crop insurance products & policies currently available to you, as well as the cost of these policies & products?

- As with most insurance, it is a ripoff way for a few to earn a great living off my hard work. There should be NO PROFIT for insurance companies, it should all be nonprofit companies. *—Missouri producer with diverse operation*
- Cost is high crop returns are awful. *—California grain farmer*
- Diverse crops lower risk, BUT, are much more expensive to insure. *—Montana organic farmer with diverse operation*
- Excellent, well run program...important for the stabilization of rural America. Crop insurance helps maintain a strong tax base among farmers that in turn helps fund services (schools, roads, ambulance, fire protection, 9-1-1, libraries, etc.) in rural communities. *—Missouri grain and cattle producer*
- For what the government pays for subsidizing the policy and the producer premium, someone is making money, just not the producer. *—Montana organic millet and wheat farmer*
- I don't like when they show up in suits and try to tell me what I need instead of listening.

—Grain and soybean farmer from Michigan

- I think I'm more dissatisfied with the implementation of the policies than the polices and products themselves. It is the company that sells them and then the office administrators are the ones that fail at their jobs and ultimately causing me to lose my farm. The field agents approve the claim but the office administrators hold it up and drag it out until it breaks me.

—Washington organic fruit and vegetable farmer

- I wish crop insurance was available to small diversified CSA farmers. Because of the large diversity of crops I grow, even the total loss of a crop or two isn't a crisis but still, if this is a benefit subsidized by the government I should benefit from it too.

—Diversified Oregon farmer

- I'd like to see more single crop policies for some of the crops we grow. Might make for an easier on-ramp before plunging into a WFRP. *—Certified Organic farmer with diverse operation from New Hampshire*
- If the cost is anything like car and home/farm insurance I am not really interested in sinking money into something that will not do me that much good. In addition with animal losses such as premature births or accidents these things are not really covered under most insurances. *—Cattle and livestock producer from Minnesota*
- I'm satisfied in the premium cost of crop insurance policies because of the subsidies that significantly lower them (especially for beginning farmers like me :). *—Wheat and legume farmer from Montana*
- In comparison to what conventional farmers get given to them, I feel entirely ripped off!
—Kansas organic grain and forage farmer
- It's not the cost. The issue is in by providing insurance for land that shouldn't be farmed, specifically Highly Erodible Land and Wetlands an incentive is created to farm land that should either be grazed or not farmed at all. As a grazer this puts me at an economic disadvantage when bidding for pasture.
—Iowa grain and cattle producer
- NAP premium is fine, but they scam out of paying! Other options are way too expensive!
—Wisconsin diversified organic farmer
- We are a small farm with limited resources. Crop insurance is not worth our time or expense to have to pursue on our own. If the USDA wanted to make a universal crop insurance policy that helped farmers when they suffered damage, we would find that useful. But most of what the USDA offers is geared to VERY LARGE farms and not to small farmers with limited time & money. *—Oregon organic vegetable farmer*
- Too much claims abuse is tolerated. *—Wisconsin tree fruit farmer*
- Why are the insurance companies subsidized right off the bat and no claims are even made? If the farmers did not have their premiums so deeply subsidized from the taxpayers I think they would tell the insurance man to take a hike.
—Montana legume and vegetable farmer
- Wish there were better options for specialty crops and highly-diversified farms. *—Ohio diversified farmer*
- Would like to have available policies for those new to production insurance to allow a safety net during first few years of production to allow a track record required to obtain insurance. *—Florida and Ohio organic tree nut farmer*

Complete list of survey questions and summary results

Q1 Are you farming or ranching commercially in the United States?

	All respondents		Certified organic	
Yes	83.6%	1,319	100.0%	319
No	16.4%	258	0%	0
TOTALS	**100.0%**	**1,577**	**100.0%**	**319**

Q2 How LIKELY are you to buy crop insurance in the COMING YEAR?

	All respondents		Certified organic	
Zero chance	36.8%	459	29.8%	95
Slight chance	30.3%	378	28.2%	90
Likely	15.1%	188	17.6%	56
Definitely buying	17.8%	222	24.5%	78
TOTALS	**100.0%**	**1,247**	**100.0%**	**319**

Q3 For the long-term success and survival of your farm or ranch, how IMPORTANT is it for you to have crop insurance?

	All respondents		Certified organic	
Not at all important	20.7%	258	21.9%	70
Slightly important	32.3%	403	21.9%	70
Moderately Important	24.4%	304	25.7%	82
Extremely important or essential	22.6%	282	30.4%	97
TOTALS	**100.0%**	**1,247**	**100.0%**	**319**

Q4 How MOTIVATED are you to study and learn about new crop insurance options that might apply to your situation?

	All respondents		Certified organic	
Not at all motivated	10.5%	131	10.7%	34
Slightly motivated	29.6%	369	27.6%	88
Moderately motivated	34.5%	430	31.3%	100
Extremely motivated	25.4%	317	30.4%	97
TOTALS	**100.0%**	**1,247**	**100.0%**	**319**

Q5 Have you EVER bought crop insurance? Those answering "Never" answer questions #6-8. All others skip ahead to question #9.

	All respondents		Certified organic	
Never	64.9%	809	54.5%	174
Occasionally	10.3%	129	11.3%	36
Often	7.3%	91	9.7%	31
Every year	17.5%	218	24.5%	78
TOTALS	**100.0%**	**1,247**	**100.0%**	**319**

Q6 WHY do you rarely or never buy crop insurance? (Check up to 4 biggest reasons.)

	All respondents		Certified organic	
My farm is too diversified; not feasible to insure all these crops.	38.7%	347	31.3%	100
My farm is too small. Not worth the trouble.	52.7%	472	27.9%	89
Few if any policies are available for the crops that I grow.	25.3%	227	19.4%	62
Too expensive.	27.3%	245	18.5%	59
I don't know anything about it.	31.8%	285	18.2%	58
I rarely experience major crop losses.	20.3%	182	14.1%	45
I've never really looked into it but doubt that it would be worthwhile.	22.9%	205	13.8%	44
Requires too much paperwork.	18.4%	165	13.8%	44
Rules are too complicated. I don't understand how it works.	14.7%	132	9.1%	29
Coverage levels are too low for my situation.	8.0%	72	6.9%	22
I'm not comfortable accepting federal subsidies.	8.8%	79	6.9%	22
I don't trust that claims would be paid.	7.4%	66	5.3%	17
I've never bought crop insurance and see no reason to start now.	7.5%	67	4.4%	14
I want to keep my financial records confidential.	4.7%	42	3.8%	12
People that I trust have told me not to bother with it.	5.6%	50	2.5%	8
Would harm my image with customers.	0.7%	6	0.3%	1
Other (please specify)	11.6%	104	10.3%	33
# Respondents		**896**		**210**

Q7 Do you feel that a lack of crop insurance has limited your ACCESS TO LOANS?

	All respondents		Certified organic	
Never	50.3%	451	52.9%	111
Occasionally (every 5 years or more)	6.6%	59	6.2%	13
Often (every 1-4 years)	2.3%	21	2.4%	5
Constantly (all the time)	1.7%	15	3.8%	8
Don't know	39.1%	350	34.8%	73
TOTALS	**100.0%**	**896**	**100.0%**	**210**

Q8 Do you feel that a lack of crop insurance has limited your ABILITY TO EXPAND your operation?

	All respondents		Certified organic	
Never	50.1%	449	50.5%	106
Occasionally (every 5 years or more)	13.2%	118	14.8%	31
Often (every 1-4 years)	4.9%	44	7.6%	16
Constantly (all the time)	2.6%	23	4.8%	10
Don't know	29.2%	262	22.4%	47
TOTALS	**100.0%**	**896**	**100.0%**	**210**

Q9 How many YEARS have you been farming or ranching?

	All respondents		Certified organic	
0 - 5	32.2%	370	21.6%	69
6 - 10	23.0%	265	21.0%	67
11 - 15	10.0%	115	16.9%	54
16 - 20	6.8%	78	6.6%	21
21 - 30	9.3%	107	12.2%	39
31 - 40	9.7%	112	11.3%	36
Over 40	9.0%	104	10.3%	33
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q10 How many ACRES do you farm or ranch?

	All respondents		Certified organic	
Less than 5	24.9%	286	14.7%	47
5 - 10	14.3%	164	13.5%	43
10 - 50	21.0%	242	21.0%	67
50 - 200	15.5%	178	16.9%	54
200 - 1,000	16.2%	186	21.6%	69
1,000 - 5,000	6.3%	73	9.1%	29
5,000 - 10,000	1.2%	14	1.3%	4
Over 10,000	0.7%	8	1.9%	6
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q11 Do you farm FULL-TIME or PART-TIME?

	All respondents		Certified organic	
Full-time	55.9%	643	74.9%	239
Part-time	44.1%	508	25.1%	80
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q12 Do you OWN or LEASE the land that you farm or ranch?

	All respondents		Certified organic	
Own	58.1%	669	52.0%	166
Lease/rent	17.7%	204	17.9%	57
Own some & lease/rent some	24.2%	278	30.1%	96
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q13 In what STATE(S) are you currently farming or ranching? (Check all that apply.)

	All respondents		Certified organic	
Alabama	0.7%	8	1.3%	4
Alaska	0.5%	6	0.6%	2
Arizona	0.4%	5	0.3%	1
Arkansas	4.3%	50	1.3%	4
California	7.0%	80	7.5%	24
Colorado	1.7%	19	2.5%	8
Connecticut	0.4%	4	0.3%	1
Delaware	0.2%	2	0.0%	0
Florida	3.3%	38	5.0%	16
Georgia	2.0%	23	1.9%	6
Hawaii	1.0%	11	0.9%	3
Idaho	0.5%	6	0.6%	2
Illinois	2.9%	33	4.4%	14
Indiana	2.5%	29	2.8%	9
Iowa	3.2%	37	3.4%	11
Kansas	4.8%	55	2.5%	8
Kentucky	1.5%	17	1.3%	4
Louisiana	0.9%	10	0.3%	1
Maine	0.8%	9	1.6%	5
Maryland	0.7%	8	1.6%	5
Massachusetts	1.0%	12	1.3%	4
Michigan	3.9%	45	3.1%	10
Minnesota	2.7%	31	3.8%	12
Mississippi	1.0%	11	0.0%	0
Missouri	1.5%	17	1.9%	6
Montana	7.2%	83	9.4%	30
Nebraska	2.0%	23	2.2%	7
Nevada	0.2%	2	0.0%	0
New Hampshire	1.5%	17	1.9%	6
New Jersey	0.4%	4	0.9%	3
New Mexico	0.7%	8	0.9%	3

(Q13 Continued)

	All respondents		Certified organic	
New York	3.0%	35	4.4%	14
North Carolina	5.5%	63	4.4%	14
North Dakota	0.4%	5	0.3%	1
Ohio	1.9%	22	3.8%	12
Oklahoma	1.0%	12	0.3%	1
Oregon	2.7%	31	5.3%	17
Pennsylvania	1.1%	13	0.9%	3
Puerto Rico	0.1%	1	0.3%	1
Rhode Island	0.1%	1	0.0%	0
South Carolina	0.9%	10	0.3%	1
South Dakota	1.2%	14	0.3%	1
Tennessee	1.7%	20	1.3%	4
Texas	9.3%	107	6.6%	21
Utah	0.2%	2	0.3%	1
Vermont	0.8%	9	0.6%	2
Virginia	1.8%	21	2.2%	7
Washington	4.2%	48	4.1%	13
West Virginia	0.9%	10	0.0%	0
Wisconsin	5.7%	65	6.0%	19
Wyoming	0.2%	2	0.3%	1
# Respondents		**1,151**		**319**

Q14 What's the 5-DIGIT ZIP CODE of your primary farming or ranching operation? _____

Q15 What DESCRIPTION best fits your operation? (OK to choose more than one.)

	All respondents		Certified organic	
High-value or specialty crops (e.g. fruits, vegetables, melons, tree nuts, greenhouse, nursery crops, horticultural specialties)	65.5%	754	64.6%	206
Grains & legumes (e.g. corn, soybeans, wheat, oats, barley, sorghum, dry edible beans, rice)	23.5%	270	32.9%	105
Other field crops (e.g. cotton, peanuts, potatoes, sunflowers, sugar beets, seed crops, hay, silage, forage, tobacco)	15.3%	176	20.1%	64
Cattle	22.4%	258	23.2%	74
Poultry & eggs	23.0%	265	17.6%	56
Sheep	10.6%	122	9.7%	31
Hogs	11.0%	127	9.4%	30
Dairy	4.5%	52	8.5%	27
Other (please specify)	14.5%	167	10.0%	32
# Respondents		**1,151**		**319**

Q16 How many DIFFERENT PRODUCTS (crops and/or livestock) do you typically grow and sell per year?

	All respondents		Certified organic	
Just one	11.0%	126	8.2%	26
2	10.5%	121	6.0%	19
3	11.5%	132	10.3%	33
4 - 6	19.9%	229	23.2%	74
7 - 10	13.1%	151	12.9%	41
11 - 20	11.9%	137	8.2%	26
21 - 40	11.4%	131	12.5%	40
40 - 60	5.7%	65	10.0%	32
Over 60	5.1%	59	8.8%	28
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q17 How do you MARKET your farm products? (Check all that apply.)

	All respondents		Certified organic	
Farmer's market	47.2%	543	42.0%	134
Restaurants	32.8%	378	36.4%	116
Grocery stores	21.7%	250	32.0%	102
Community-supported agriculture (CSA)	24.9%	286	30.7%	98
Processor (e.g. meat processing facility)	12.3%	141	23.2%	74
Distributor	12.2%	140	22.3%	71
Farm stand	27.4%	315	21.9%	70
Internet sales	22.9%	263	21.9%	70
Growers' cooperative or aggregator	15.9%	183	19.1%	61
Broker	10.3%	119	15.7%	50
Livestock sale barn or buying station	15.8%	182	13.8%	44
Schools, hospitals, or other institutions	7.8%	90	9.4%	30
Elevator	9.8%	113	8.8%	28
Produce packing house	3.5%	40	4.1%	13
Produce terminal market	1.4%	16	0.9%	3
Other (please specify)	15.0%	173	13.2%	42
# Respondents		**1,151**		**319**

Q18 What's your average ANNUAL GROSS REVENUE from sales of agricultural products?

	All respondents		Certified organic	
New farmer: little or no revenue yet	13.0%	150	6.0%	19
$1 - $10,000	20.1%	231	8.8%	28
$10,000 to $50,000	23.3%	268	20.4%	65
$50,000 to $100,000	14.9%	171	19.4%	62
$100,000 to $500,000	14.7%	169	23.2%	74
$500,000 to $1 million	4.3%	49	9.1%	29
Over $1 million	3.8%	44	6.9%	22
I'd rather not provide this information	6.0%	69	6.3%	20
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q19 Have you ever had an OPERATING LOAN for your farm or ranch?

	All respondents		Certified organic	
Never	64.4%	741	51.4%	164
Some years	18.5%	213	23.5%	75
Most years	5.9%	68	8.5%	27
Every year	11.2%	129	16.6%	53
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q20 Do you use ORGANIC FARMING METHODS? (By this we mean alternatives to chemical fertilizers and pesticides—methods such as biological pest control, reduced-tillage, cover crops, and green or animal manure.) Those answering "No, I don't use organic farming methods" skip ahead to question #26. All others complete questions #21-25.

	All respondents		Certified organic	
No, I don't use organic farming methods.	17.5%	201	1.3%	4
Yes, on 1 - 25% of acreage.	8.4%	97	8.5%	27
Yes, on 26 - 50% of acreage.	5.1%	59	4.7%	15
Yes, on 50 - 75% of acreage.	4.6%	53	6.6%	21
Yes, on 75 - 99% of acreage.	7.6%	87	7.8%	25
Yes, on all acreage.	56.8%	654	71.2%	227
TOTALS	**100.0%**	**1,151**	**100.0%**	**319**

Q21 Which of the following ORGANIC FARMING METHODS have you used? (Check all that apply.)

	All respondents		Certified organic	
Crop rotation	75.1%	674	80.9%	258
Cover crops	72.8%	653	79.0%	252
Mechanical cultivation for weed control	57.9%	519	74.9%	239
Maintain beneficial insect habitat	62.4%	560	63.0%	201
Compost	72.8%	653	62.7%	200
Green manures	53.1%	476	60.5%	193
Animal manure	62.5%	561	58.9%	188
Biological pest control	51.2%	459	52.4%	167
Highly diversified crops	47.1%	422	51.1%	163
Mulching	60.7%	544	50.8%	162
Companion planting	46.6%	418	38.2%	122
Rotational (multi-paddock) grazing	36.0%	323	30.7%	98
Integrate animals and crops on the same acreage	31.2%	280	30.1%	96
Compost tea	27.8%	249	21.9%	70
Trap crops	19.3%	173	19.4%	62
Other (please specify)	6.5%	58	4.4%	14
# Respondents		**897**		**319**

Q22 HOW MANY YEARS have you been farming with organic methods?

	All respondents		Certified organic	
0 to 5	39.4%	353	30.2%	95
6 - 10	24.9%	223	20.6%	65
11 - 15	13.4%	120	20.6%	65
16 - 20	7.1%	64	9.2%	29
21 - 30	8.1%	73	11.1%	35
31 - 40	4.4%	39	6.3%	20
Over 40	2.8%	25	1.9%	6
TOTALS	**100.0%**	**897**	**100.0%**	**315**

Q23 What's the average SOIL ORGANIC MATTER level on your farm or ranch? (OK to estimate.)

	All respondents		Certified organic	
Less than 2%	9.5%	85	10.8%	34
About 3%	24.4%	219	29.5%	93
About 4%	15.7%	141	21.0%	66
5% or more	21.1%	189	21.9%	69
Don't know	29.3%	263	16.8%	53
TOTALS	**100.0%**	**897**	**100.0%**	**315**

Q24 How would you rate the BENEFICIAL INSECT POPULATIONS on your farm or ranch?

	All respondents		Certified organic	
Poor	2.5%	22	1.6%	5
Fair	22.2%	199	20.0%	63
Good	47.6%	427	50.2%	158
Outstanding	17.8%	160	20.6%	65
Don't know	9.9%	89	7.6%	24
TOTALS	**100.0%**	**897**	**100.0%**	**315**

Q25 WHY DO YOU CHOOSE to use organic methods? RANK each item in the following list, with 1 being most important to you and 6 being least important.

	All respondents							Certified organic						
	1	2	3	4	5	6	Score	1	2	3	4	5	6	Score
For reasons of land stewardship and ecological sustainability	350	203	141	68	85	50	2.4	112	63	45	27	49	19	2.7
To produce higher quality and more nutritious products	181	213	261	112	84	46	2.8	48	73	97	44	37	16	3.0
To reduce pesticide exposure for health and safety of family and workers	149	259	200	112	93	84	3.0	48	88	70	46	35	28	3.1
To get higher prices for my products	98	69	93	156	217	264	4.2	60	26	43	57	74	55	3.7
To tap into growing consumer demand for organic products	60	92	112	244	268	121	4.0	29	42	41	86	76	41	3.8
To reduce input costs	59	61	90	205	150	332	4.5	18	23	19	55	44	156	4.8
						# Respondents	**897**						**# Respondents**	**315**

Q26 What percentage of the acreage that you currently farm is USDA CERTIFIED ORGANIC?

	All respondents		Certified organic	
None of it	68.6%	746	0.0%	0
1 - 25%	3.4%	37	11.3%	36
26 - 50%	3.5%	38	10.7%	34
50 - 75%	2.1%	23	6.0%	19
75 - 99%	3.1%	34	9.4%	30
All of it	19.2%	209	62.7%	200
TOTALS	**100.0%**	**1,087**	**100.0%**	**319**

Q27 HOW MANY YEARS have you had USDA certified organic acreage?

	All respondents		Certified organic	
1 - 5	14.4%	156	41.4%	132
6 - 10	8.0%	87	23.5%	75
11 - 15	5.2%	57	15.4%	49
16 - 20	5.8%	63	18.2%	58
I don't have any certified organic acreage.	66.6%	724	1.6%	5
TOTALS	**100.0%**	**1087**	**100.0%**	**319**

Q28 What best describes your STATUS with USDA ORGANIC CERTIFICATION? (Choose one.)

	All respondents		Certified organic	
I've NEVER had USDA certified organic land and am NOT INTERESTED in getting any.	25.6%	278	0.9%	3
I've NEVER had USDA certified organic land and am SOMEWHAT INTERESTED in getting some.	27.0%	293	1.3%	4
I've NEVER had USDA certified organic land and am EXTREMELY INTERESTED in getting some.	11.7%	127	2.5%	8
I've NEVER had USDA certified organic land and am CURRENTLY GETTING some land certified.	2.3%	25	1.3%	4
I ONCE HAD USDA certified organic land but NO LONGER DO.	4.6%	50	1.6%	5
I HAVE USDA certified organic land and am NOT INTERESTED in getting more.	7.7%	84	23.8%	76
I HAVE USDA certified organic land and am SOMEWHAT INTERESTED in getting more.	8.6%	93	28.2%	90
I HAVE USDA certified organic land and am EXTREMELY INTERESTED in getting more.	11.2%	122	35.7%	114
I HAVE USDA certified organic land but I'm THINKING ABOUT DROPPING my certification.	1.4%	15	4.7%	15
TOTALS	**100.0%**	**1087**	**100.0%**	**319**

Q29 Would you be MORE INTERESTED in getting land certified organic—or increasing your organic acreage—if you knew that there was AFFORDABLE CROP INSURANCE that would cover your losses and reduce your risks during the transition period?

	All respondents		Certified organic	
Would make no difference	29.3%	318	29.2%	93
I'd be SLIGHTLY more interested	27.8%	302	21.6%	69
I'd be QUITE A BIT more interested	15.4%	167	16.6%	53
I'd be A LOT more interested	12.9%	140	20.7%	66
Don't know	9.0%	98	5.0%	16
Comment	5.7%	62	6.9%	22
TOTALS	**100.0%**	**1087**	**100.0%**	**319**

Q30 How would you rate YOUR UNDERSTANDING of the following?

	All respondents					Certified organic				
	I know nothing. (=0)	I know a little. (=1)	I know a fair amount. (=2)	I know a lot. (=3)	Weighted Average	I know nothing. (=0)	I know a little. (=1)	I know a fair amount. (=2)	I know a lot. (=3)	Weighted Average
The crop insurance POLICIES or PRODUCTS available to you	403	424	184	67	0.9	97	124	73	25	1.1
The CROPS for which insurance is available in your county	429	382	188	79	0.9	103	100	88	28	1.1
WHOLE-FARM REVENUE PROTECTION insurance	652	263	107	56	0.6	161	87	45	26	0.8
The NONINSURED CROP DISASTER ASSISTANCE PROGRAM (NAP) of the Farm Service Agency	634	291	106	47	0.6	160	103	39	17	0.7
Insurance products designed specifically for ORGANIC CROPS, using premium prices	783	203	64	28	0.4	171	88	38	22	0.7
The USDA RISK MANAGEMENT AGENCY and what it does	613	315	111	39	0.6	156	114	39	10	0.7
The option of using a SALES CONTRACT to establish the covered price in crop insurance	807	174	68	29	0.4	202	68	34	15	0.6
			# Respondents		**1,157**			**# Respondents**		**319**

Q31 What type(s) of crop insurance have you BOUGHT within the PAST FIVE YEARS? (Check all that apply.)

	All respondents		Certified organic	
Actual Production History (APH)	10.7%	115	15.7%	50
Revenue Protection	7.0%	76	11.9%	38
Yield Protection	5.8%	63	10.3%	33
Noninsured Crop Disaster Assistance Program (NAP)	7.2%	78	9.1%	29
Whole-Farm Revenue Protection (WFRP)	4.2%	45	8.5%	27
Actual Revenue History (ARH)	3.1%	33	6.3%	20
Contract Price Addendum (CPA)	1.6%	17	4.4%	14
Livestock Policy	3.5%	38	3.8%	12
Area Risk Protection Insurance (ARPI)	2.0%	22	2.8%	9
Rainfall Index (RI)	1.7%	18	1.9%	6
Group Risk Income Protection (GRIP)	0.7%	7	1.6%	5
Commodity Exchange Price Provisions (CEPP)	0.6%	6	1.3%	4
Group Risk Plan (GRP)	1.0%	11	1.3%	4
Vegetation Index (VI)	0.5%	5	0.6%	2
Dollar Plan	0.1%	1	0.0%	0
I'm not sure what it's called.	6.8%	73	9.7%	31
I have not bought crop insurance in the past 5 years.	70.4%	759	58.3%	186
# Respondents		**1,078**		**319**

Q32 HOW OFTEN have you filed a SUCCESSFUL crop insurance claim?

	All respondents		Certified organic	
Never	77.6%	836	67.4%	215
Occasionally	17.2%	185	24.8%	79
Fairly often	3.8%	41	5.0%	16
Frequently	1.5%	16	2.8%	9
TOTALS	**100.0%**	**1,078**	**100.0%**	**319**

Q33 HOW OFTEN have you had a crop insurance claim DENIED?

	All respondents		Certified organic	
Never	89.8%	968	86.5%	276
Occasionally	5.0%	54	6.9%	22
Fairly often	1.0%	11	2.2%	7
Frequently	0.6%	6	0.9%	3
Optional: Why was/were your claim(s) denied?	3.6%	39	3.4%	11
TOTALS	**100.0%**	**1,078**	**100.0%**	**319**

Q34 Among the FARMING PEERS that you talk to regularly, how many buy crop insurance?

	All respondents		Certified organic	
None of them	22.3%	240	19.1%	61
A few	25.6%	276	27.0%	86
Quite a few	12.1%	130	13.5%	43
Nearly all of them	13.0%	140	18.5%	59
Don't know	27.1%	292	21.9%	70
TOTALS	**100.0%**	**1,078**	**100.0%**	**319**

Q35 What commodities have you GROWN and/or INSURED within the PAST 5 YEARS? Check all that apply.
(List order is based on the number of certified organic survey respondents growing each crop.)

	All respondents				Certified organic			
	Grew & insured	Grew & not insured	Total	% insured	Grew & insured	Grew & not insured	Total	% insured
Corn	105	159	264	39.8%	52	55	107	48.6%
Cucumbers	19	319	338	5.6%	10	91	101	9.9%
Peppers	20	303	323	6.2%	8	87	95	8.4%
Onions	16	284	300	5.3%	11	83	94	11.7%
Cabbage	17	258	275	6.2%	10	78	88	11.4%
Tomatoes - Fresh Market	21	285	306	6.9%	9	77	86	10.5%
Potatoes	19	249	268	7.1%	11	66	77	14.3%
Tomatoes	24	244	268	9.0%	13	62	75	17.3%
Pumpkins	19	209	228	8.3%	10	64	74	13.5%
Beans - Fresh market	11	239	250	4.4%	6	60	66	9.1%
Peas - Green	11	207	218	5.0%	5	55	60	8.3%
Peppers - Chile	5	186	191	2.6%	3	57	60	5.0%
Wheat	74	57	131	56.5%	32	28	60	53.3%
Forage Production	29	124	153	19.0%	15	42	57	26.3%
Soybeans	83	41	124	66.9%	40	17	57	70.2%
Sweet Potatoes	10	163	173	5.8%	7	49	56	12.5%
Oats	23	91	114	20.2%	15	40	55	27.3%
Pasture, Rangeland, Forage	19	154	173	11.0%	6	49	55	10.9%
Cattle	29	163	192	15.1%	10	44	54	18.5%
Sweet Corn	13	128	141	9.2%	7	46	53	13.2%
Annual Forage	12	135	147	8.2%	3	46	49	6.1%
Apples	17	152	169	10.1%	6	43	49	12.2%
Beans - Dry	22	97	119	18.5%	13	35	48	27.1%
Strawberries	19	154	173	11.0%	11	36	47	23.4%

(Q35 Continued)

	All respondents				Certified organic			
	Grew & insured	Grew & not insured	Total	% insured	Grew & insured	Grew & not insured	Total	% insured
Apiculture (Beekeeping)	4	144	148	2.7%	2	42	44	4.5%
Sunflowers	4	133	137	2.9%	4	39	43	9.3%
Sweet Corn - Fresh Market	14	128	142	9.9%	7	35	42	16.7%
Blueberries	15	113	128	11.7%	8	31	39	20.5%
Buckwheat	6	74	80	7.5%	6	33	39	15.4%
Barley	26	41	67	38.8%	17	21	38	44.7%
Mint	2	143	145	1.4%	2	33	35	5.7%
Nursery: Field Grown & Container	6	76	82	7.3%	3	29	32	9.4%
Cattle: Dairy	11	39	50	22.0%	10	20	30	33.3%
Rye	4	63	67	6.0%	4	26	30	13.3%
Swine	8	91	99	8.1%	3	26	29	10.3%
Alfalfa Seed	9	46	55	16.4%	2	24	26	7.7%
Grapes	11	73	84	13.1%	7	19	26	26.9%
Lamb	1	90	91	1.1%	0	26	26	0.0%
Mustard	5	94	99	5.1%	3	23	26	11.5%
Pears	4	97	101	4.0%	2	23	25	8.0%
Cherries	9	62	71	12.7%	3	21	24	12.5%
Figs	1	86	87	1.1%	1	22	23	4.3%
Millet	8	33	41	19.5%	6	17	23	26.1%
Peaches	11	87	98	11.2%	4	19	23	17.4%
Popcorn	5	50	55	9.1%	5	18	23	21.7%
Peas: Dry	15	42	57	26.3%	8	14	22	36.4%
Plums	3	65	68	4.4%	1	20	21	4.8%
Sorghum: Silage	2	27	29	6.9%	2	17	19	10.5%
Apricots: Fresh	6	34	40	15.0%	4	14	18	22.2%
Avocados	12	26	38	31.6%	5	13	18	27.8%
Forage Seeding	2	36	38	5.3%	1	17	18	5.6%
Sorghum: Grain	11	24	35	31.4%	5	13	18	27.8%
Lemons	4	29	33	12.1%	3	12	15	20.0%
Table Grapes	2	31	33	6.1%	1	12	13	7.7%
Canola	8	14	22	36.4%	3	9	12	25.0%
Cotton	8	10	18	44.4%	5	7	12	41.7%
Oranges	5	23	28	17.9%	4	8	12	33.3%
Pecans	2	34	36	5.6%	1	11	12	8.3%
Avocado Trees	3	22	25	12.0%	3	8	11	27.3%
Banana	3	17	20	15.0%	3	8	11	27.3%
Camelina	4	8	12	33.3%	4	7	11	36.4%
Papaya	1	22	23	4.3%	1	10	11	9.1%
Peaches: Freestone, Fresh	4	35	39	10.3%	2	9	11	18.2%
Tobacco	5	13	18	27.8%	4	7	11	36.4%
Almonds	7	6	13	53.8%	7	3	10	70.0%
Banana Trees	2	23	25	8.0%	2	8	10	20.0%
Carambola Trees	2	11	13	15.4%	2	8	10	20.0%
Grapefruit	4	15	19	21.1%	4	6	10	40.0%
Lime Trees	2	23	25	8.0%	2	8	10	20.0%
Mango Trees	4	13	17	23.5%	4	6	10	40.0%

(Q35 Continued)

	All respondents				Certified organic			
	Grew & insured	Grew & not insured	Total	% insured	Grew & insured	Grew & not insured	Total	% insured
Walnuts	5	25	30	16.7%	3	7	10	30.0%
Apricots - Processing	4	8	12	33.3%	4	5	9	44.4%
Beans - Processing	8	11	19	42.1%	4	5	9	44.4%
Clary Sage	2	29	31	6.5%	2	7	9	22.2%
Cranberries	4	10	14	28.6%	3	6	9	33.3%
Mandarins/Tangerines	1	16	17	5.9%	0	9	9	0.0%
Sugar Beets	0	29	29	0.0%	0	9	9	0.0%
Flax	5	9	14	35.7%	4	4	8	50.0%
Macadamia Nuts	0	10	10	0.0%	0	8	8	0.0%
Olives	2	16	18	11.1%	2	6	8	25.0%
Coffee	1	12	13	7.7%	1	6	7	14.3%
Corn Seed: Hybrid	7	8	15	46.7%	4	3	7	57.1%
Grass Seed	3	14	17	17.6%	3	4	7	42.9%
Nectarines	7	12	19	36.8%	3	4	7	42.9%
Orange Trees	5	13	18	27.8%	5	2	7	71.4%
Papaya Trees	1	10	11	9.1%	1	6	7	14.3%
Safflower	5	6	11	45.5%	3	4	7	42.9%
Grapefruit Trees	3	15	18	16.7%	3	3	6	50.0%
Peanuts	2	23	25	8.0%	2	4	6	33.3%
Rice	2	6	8	25.0%	1	5	6	16.7%
Sorghum Seed: Hybrid	1	7	8	12.5%	0	6	6	0.0%
Sugarcane	1	11	12	8.3%	1	5	6	16.7%
Clams	0	5	5	0.0%	0	5	5	0.0%
Coffee Trees	2	5	7	28.6%	2	3	5	40.0%
Peaches: Cling, Processing	4	8	12	33.3%	3	2	5	60.0%
Prunes	3	5	8	37.5%	1	4	5	20.0%
Macadamia Trees	2	3	5	40.0%	2	2	4	50.0%
Oysters	1	3	4	25.0%	1	3	4	25.0%
Peaches: Freestone, Processing	3	7	10	30.0%	3	1	4	75.0%
Sesame	1	6	7	14.3%	1	3	4	25.0%
Sweet Corn Seed: Hybrid	2	8	10	20.0%	1	3	4	25.0%
Tangelos	0	7	7	0.0%	0	4	4	0.0%
Pistachios	2	1	3	66.7%	2	1	3	66.7%
Raisins	2	3	5	40.0%	2	1	3	66.7%
Rice Seed: Hybrid	2	2	4	50.0%	1	2	3	33.3%
Tangerine Trees	1	4	5	20.0%	1	2	3	33.3%
Tangors	0	3	3	0.0%	0	3	3	0.0%
Wild Rice: Cultivated	0	4	4	0.0%	0	3	3	0.0%
None of the above	8	169	177	4.5%	4	46	50	8.0%

Q36 What OTHER PRODUCTS (not on the list above) **have you raised in the past 5 years?** Check all that apply.(Specific crop insurance policies are generally NOT available for these products.)

	All respondents		Certified organic	
Squashes (any kind)	41.5%	438	41.4%	132
Brassicas/leafy greens (e.g. broccoli, collards, kale...)	38.7%	409	37.0%	118
Lettuce (any kind)	40.3%	425	37.0%	118
Other root vegetables (e.g. beets, parsnips, turnips...)	36.7%	387	36.1%	115
Culinary herbs & spices (e.g. basil, dill, sage, fennel...)	37.7%	398	35.1%	112
Chickens (for eggs)	30.4%	321	26.0%	83
Berries not listed above (e.g. blackberries, raspberries...)	27.1%	286	25.7%	82
Flowers	27.2%	287	25.1%	80
Other melons (e.g. canteloupes, honeydews)	24.9%	263	24.1%	77
Watermelons	27.8%	294	24.1%	77
Asparagus	20.4%	215	18.2%	58
Chickens (for meat)	17.2%	182	17.2%	55
Medicinal plants (e.g. echinacea, ginseng, nettle...)	15.3%	161	14.4%	46
Sheep	11.9%	126	12.2%	39
Other poultry (e.g. ducks, turkeys...)	12.6%	133	10.7%	34
Other tree fruits (e.g. pomegranates, persimmons...)	10.4%	110	10.3%	33
Mushrooms	8.4%	89	9.7%	31
Goats	11.0%	116	9.4%	30
Other tree nuts (e.g. chestnuts, hazelnuts...)	6.1%	64	7.2%	23
Rabbits	5.5%	58	4.7%	15
Fish or shellfish (e.g. tilapia, catfish, crawfish, shrimp...)	1.1%	12	1.6%	5
Bison	0.3%	3	0.3%	1
None of the above	23.6%	249	25.1%	80
Other	10.3%	109	11.9%	38
# Respondents		**1,056**		**319**

Q37 HOW OFTEN do the following cause SERIOUS FINANCIAL LOSS on your farm?

	All respondents					Certified organic				
	Never (=0)	Occa-sionally (=1)	Fairly often (=2)	Fre-quently (=3)	Weighted Average	Never (=0)	Occa-sionally (=1)	Fairly often (=2)	Fre-quently (=3)	Weighted Average
Insects, rodents, or other pests	305	542	149	48	0.9	78	172	49	20	1.0
Drought or insufficient rain	320	518	156	50	0.9	99	154	49	17	0.9
Excessive rain and flooding	359	544	105	36	0.8	90	172	42	15	0.9
Diseases	356	576	85	27	0.8	94	177	35	13	0.9
Unexpected decline in market prices	512	354	133	45	0.7	133	112	57	17	0.9
Freezes or frost	346	571	107	20	0.8	95	186	31	7	0.8
Wind damage	393	569	65	17	0.7	106	188	18	7	0.8
Hail	559	436	41	8	0.5	155	144	17	3	0.6
			# Respondents		**1,044**			**# Respondents**		**319**

Q38 How would you describe your PAST EXPERIENCE with the performance of crop insurance COMPANIES?

	All respondents		Certified organic	
Excellent	4.1%	43	6.3%	20
Good	11.7%	122	17.2%	55
Fair	8.0%	83	10.7%	34
Poor	5.4%	56	5.6%	18
I have little or no experience.	70.9%	740	60.2%	192
TOTAL	**100.0%**	**1,044**	**100.0%**	**319**

Q39 How would you describe your PAST EXPERIENCE with the performance of crop insurance AGENTS?

	All respondents		Certified organic	
Excellent	6.7%	70	10.3%	33
Good	13.0%	136	19.4%	62
Fair	6.7%	70	8.2%	26
Poor	4.6%	48	5.3%	17
I have little or no experience.	69.0%	720	56.7%	181
TOTAL	**100.0%**	**1,044**	**100.0%**	**319**

Q40 HOW SATISFIED are you with the following?

All respondents

	Very Dissatisfied		Somewhat Dissatisfied		Somewhat Satisfied		Very Satisfied		Don't Know	
The crop insurance PRODUCTS & POLICIES currently available to you	10.3%	108	7.8%	81	13.4%	140	6.0%	63	62.5%	652
The PREMIUM COST of crop insurance policies and products currently available to you	9.8%	102	10.2%	107	13.1%	137	3.9%	41	62.9%	657
TOTALS										**1,044**

Certified organic

	Very Dissatisfied		Somewhat Dissatisfied		Somewhat Satisfied		Very Satisfied		Don't Know	
The crop insurance PRODUCTS & POLICIES currently available to you	13.8%	44	10.0%	32	19.7%	63	8.5%	27	48.0%	153
The PREMIUM COST of crop insurance policies and products currently available to you	11.3%	36	12.2%	39	20.1%	64	6.9%	22	49.5%	158
TOTALS										**319**

Q41 About how often does your gross income fall below 75% of its average level? (OK to estimate.)

	All respondents		Certified organic	
1 year in 10 or less	21.6%	225	23.2%	74
1-2 years out of 10	15.5%	162	20.1%	64
2-3 years out of 10	11.5%	120	16.6%	53
3-4 years out of 10	7.9%	82	8.8%	28
4-5 years out of 10	4.5%	47	4.7%	15
More than 5 years out of 10	3.0%	31	3.1%	10
Don't know	36.1%	377	23.5%	75
TOTALS	**100.0%**	**1,044**	**100.0%**	**319**

Q42 What's the most you'd be WILLING TO PAY (in ANNUAL PREMIUM COST) for an insurance policy that protected your gross income from falling below 75% of its average level? [Example: Your average gross income is $100,000 and falls to $60,000 in a given year. Insurance pays $15,000, giving you $75,000 or 75% of your average gross income.]

	All respondents		Certified organic	
$0 - Not interested	14.2%	148	14.0%	44
$1 - $100	14.8%	154	9.8%	31
$100 - $500	21.8%	228	19.4%	61
$500 - $1,000	10.3%	107	11.4%	36
$1,000 - $2,500	7.1%	74	9.8%	31
$2,500 - $5,000	3.2%	33	5.1%	16
$5,000 - $10,000	1.5%	16	3.2%	10
$10,000 - $25,000	1.4%	15	2.5%	8
$25,000 - $50,000	0.9%	9	1.9%	6
$50,000 - $100,000	0.3%	3	1.0%	3
More than $100,000	0.6%	6	0.0%	0
Don't know	24.0%	251	21.9%	69
TOTALS	**100.0%**	**1,044**	**100.0%**	**315**

Q43 How do you DESCRIBE yourself?
(OK to check more than one.)

	All respondents		Certified organic	
Native American	3.1%	32	2.8%	9
Asian/Pacific Islander	1.2%	12	1.3%	4
African American	3.9%	41	1.6%	5
Hispanic/Latino	4.3%	45	4.4%	14
White/Caucasian	86.4%	900	88.7%	283
Multiracial	4.9%	51	4.1%	13
Other (specify)	2.3%	24	2.2%	7
# Respondents		**1,042**		**319**

Q44 What's your GENDER?

	All respondents		Certified organic	
Male	58.4%	608	63.0%	201
Female	41.7%	434	37.0%	118
TOTALS	**100.0%**	**1,042**	**100.0%**	**319**

Q45 What's your AGE?

	All respondents		Certified organic	
Under 20	0.5%	5	0.0%	0
21 - 30	8.0%	83	10.3%	33
31 - 40	23.8%	248	25.1%	80
41 - 50	17.6%	183	16.6%	53
51 - 60	24.9%	259	20.1%	64
61 - 70	19.9%	207	21.0%	67
Over 70	5.5%	57	6.9%	22
TOTALS	**100.0%**	**1,042**	**100.0%**	**319**

Q46 What's your highest level of EDUCATION?

	All respondents		Certified organic	
No high school	0.4%	4	0.3%	1
Some high school	0.6%	6	0.9%	3
Completed high school	4.3%	45	4.4%	14
Some college or technical school	16.9%	176	15.7%	50
Completed junior college or technical school	8.4%	87	8.2%	26
Completed bachelor's degree	31.4%	327	32.9%	105
Some graduate work	10.3%	107	9.4%	30
Completed graduate degree	27.8%	290	28.2%	90
TOTALS	**100.0%**	**1,042**	**100.0%**	**319**

Q47 Do you want to receive an honorarium of $20 by mail, for completing this survey?

	All respondents		Certified organic	
Yes please.	83.7%	868	83.2%	263
No thank you.	16.3%	169	16.8%	53
TOTALS	**100.0%**	**1037**	**100.0%**	**316**

Chapter 4:

A survey of crop insurance agents

In early 2019, NCAT and its partners conducted a national survey of crop insurance agents: to learn about their experiences working with organic growers, hear about problems they had encountered, and get their suggestions for improving products and services. We had a special interest in how agents were viewing Whole-Farm Revenue Protection (WFRP) insurance, which was introduced in 2015 and is important to many certified organic growers.

Some questions we hoped to answer through the survey:

- How much do agents know about organic farming? Do they feel comfortable and well-prepared to work with organic growers?
- How common are biases and negative stereotypes about organic farming among agents?
- Does it take agents more time, or an unreasonable amount of time, to work with organic growers?
- How much do agents know about WFRP? Do they feel comfortable and well-prepared to sell and service WFRP policies?
- Does it take agents more time, or an unreasonable amount of time, to sell and service WFRP policies?
- What do agents like and dislike about WFRP?
- What sort of training would agents like, to help them work with organic growers or sell and service WFRP policies?

We wanted to hear about agents' experience working with organic growers and learn how they were viewing Whole-Farm Revenue Protection.

The crop insurance agent's role

Crop insurance agents are normally independent contractors who sign annual contracts with one or more of the 14 companies (also known as Approved Insurance Providers or AIPs) currently offering crop insurance in the United States. Agents are paid on a commission basis, and they must be licensed in each state where they practice. They commonly practice in more than one state and work for more than one company.

Besides selling policies, agents also collect information and file reports for the policies that they sell. They receive reports of crop losses from their clients, and notify the insurance company, but are otherwise not allowed to be involved in the claims process itself, which is handled by adjusters.

Companies and their agents are required to sell all of the products offered by the Federal Crop Insurance Corporation (FCIC), at prices set by the USDA Risk Management Agency (RMA). So, all crop insurance companies offer the same products at the same prices. Rules and rates vary by crop, state, and county, and they change frequently. An important aspect of the agent's job is staying abreast of insurance plans and rules, especially ones that are common in the areas where they practice.

Any agent could theoretically get a call from a certified organic grower, but organic farming is far more common in some parts of the country than others. Likewise, because WFRP is available in every county in the United States, all agents need to be somewhat familiar with it and ready to work with clients who want to buy it, although usage is still limited in most places.

Survey design and execution

A complete list of survey questions and summary results is included at the end of this chapter.

Survey design

We opted for a web-based survey, conducted via Survey Monkey. The survey needed to be quite short, to encourage busy crop insurance agents to take it. Three agents tested a draft survey, and we made some revisions based on their comments.

Every insurance agent in the United States reachable by e-mail was invited to participate.

The survey contained 24 questions, of which 12 were multiple choice, five asked for a simple "yes" or "no," and seven were open-ended questions allowing respondents to write comments. An agent who had never worked with organic growers or sold WFRP might answer as few as 10 questions. The survey took most people only 10-15 minutes to complete, although some wrote fairly lengthy answers (up to several sentences) to the open-ended questions. We have included all of these comments at the end of this chapter, allowing the agents to speak in their own words.

In the first part of the survey we asked if the agent had any experience selling to organic producers or selling WFRP. Those who answered “yes” to either question were invited to answer follow-up questions about their experience. Those who answered “no” to either question were asked why they had not worked with organic producers or sold WFRP, and whether they were interested in doing these things in the future.

The survey then asked six questions about the size and location of the agent’s practice, training they had received on organic production and WFRP, and whether they were willing to be contacted for a follow-up phone interview. The survey was anonymous unless respondents agreed to a follow-up call and provided their contact information.

Survey execution

We began by downloading the comprehensive list of crop insurance agents from the USDA Risk Management Agency’s (RMA) agent locator website in early November 2018. The list yielded 1,089 unique agents, 681 of whom included an e-mail address with their listing.

After removing duplicate e-mail addresses, and not counting e-mails that bounced, we sent invitations to 592 agents, giving them a link to the survey. Every insurance agent in the United States reachable by e-mail was invited.

To encourage participation, the invitation emphasized that survey results would be reported to the USDA, letting participants know that they had a chance to make an impact through their answers and comments. In general, RMA communicates to agents through the AIPs (as an intermediary) and does not ask agents directly for their input.

SURVEY RESPONSE AND ANALYSIS

The survey was open for one month: from mid-December 2018 until mid-January 2019. We received 96 responses, a response rate of 16%.

We analyzed all survey data using basic descriptive statistics. Because the sample size was fairly small, results are usually presented in this report as both percentages (in the text) and counts (in the figures). In addition, we used chi-square tests to look for bivariate relationships between a respondent’s

RMA region and the likelihood that they had sold to USDA-certified organic producers or had sold WFRP policies. When a respondent was licensed in more than one region, we assigned them to the region with the most states in which they were licensed. If their licenses fell equally across multiple regions, we excluded them from the regional analysis.

FOLLOW-UP INTERVIEWS

About half of respondents (46) answered "yes" to the final question, making themselves available for a follow-up interview. Of these, we chose 21 for follow-up interviews, seeking: 1) agents who both had and had not sold policies to certified organic producers, 2) agents who both had and had not sold WFRP; 3) agents from diverse geographic locations; and 4) agents who had provided interesting responses to the open-ended survey questions.

From the list of 21 agents selected for initial contact, we were eventually successful in interviewing just nine. As it turned out, all nine had sold policies to certified organic producers, and all but one had sold WFRP policies.

The phone interviews were semi-structured, with basic questions about the agent's experience selling crop insurance to certified organic producers and selling WFRP. Agents were asked about the strengths of each program as well as ways that all crop insurance for organic producers and WFRP could be improved. Interviewers asked follow-up questions to add detail and nuance to initial responses. All interviews were audio recorded so the interviewer could transcribe verbatim quotes after the interview was complete. All data was entered into a Google form to allow for comparison across answers.

The survey was open for one month: from mid-December 2018 until mid-January 2019. We received 96 responses, a response rate of 16%.

Who took the survey?

Respondents were, on average, very experienced, with almost half (49%) having sold insurance for more than 15 years. Only 15% had been selling insurance for five years or less.

The size of respondents' client bases varied widely, with 40% reporting that they had served 51-100 clients in the past year, and 40% reporting that they had served 101-500 clients. Only a few respondents (17%) reported serving 50 or fewer clients.

Figure 4.1. Years of selling crop insurance

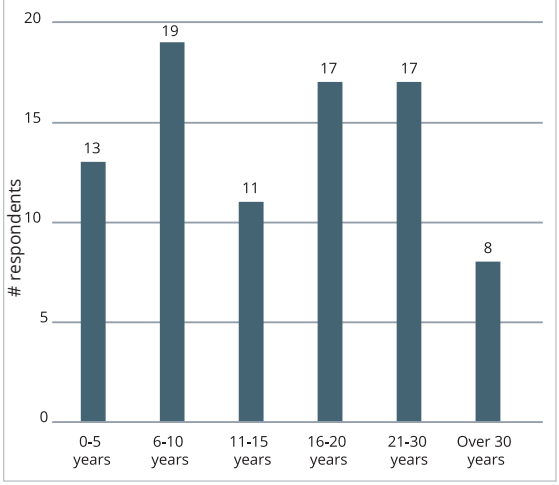
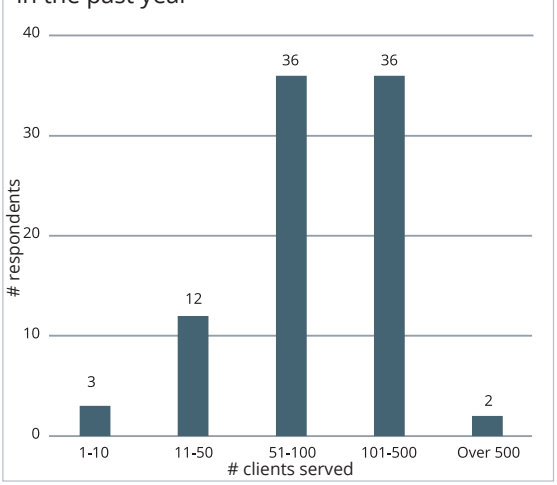


Figure 4.2. Number of clients personally served in the past year



Agents licensed in almost all states took the survey. Figure 4.3 below shows the geographic distribution of survey respondents, which is generally consistent with the distribution of all licensed crop insurance agents nationally.

Figure 4.3. Number of survey respondents by state of license

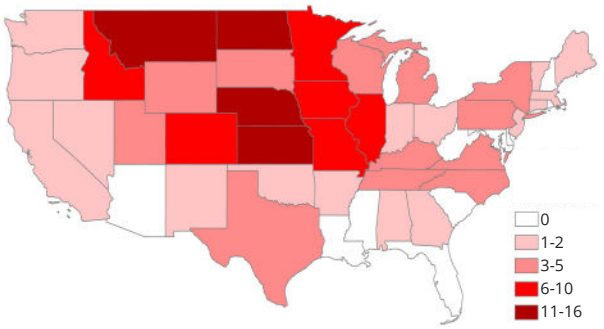
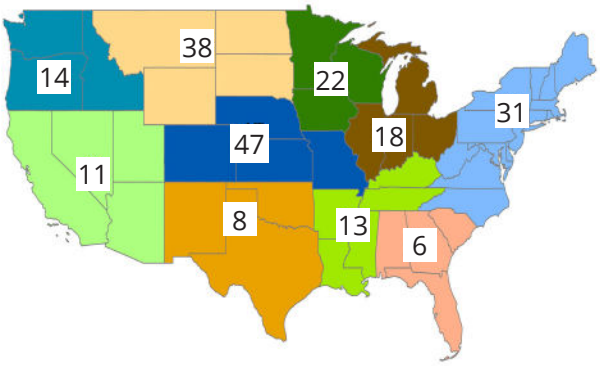


Figure 4.4 below shows the number of survey respondents licensed in each of the 10 USDA Risk Management Agency (RMA) regions.

Figure 4.4. Survey respondents by RMA region



Although survey respondents were well-distributed around the country, it should not be assumed that they were a typical or representative sample of crop insurance agents. Since the survey invitation indicated a focus on organic farms, participation is likely to be skewed towards agents who had experience working with organic farmers or at least strong opinions on the subject that they wanted to express to the USDA.

The majority (62%) reported having sold crop insurance to USDA-certified organic producers, while only 40% had sold WFRP policies.

Survey findings

Agent experience working with organic producers and selling WFRP

The majority of respondents (62%) reported having sold crop insurance to USDA-certified organic producers, while only 40% had sold WFRP policies. The great majority (82%) of those who had sold WFRP policies had also sold crop insurance to USDA-certified organic producers.

Tables 4.1 and 4.2 on the following page show regional differences. Note that some of the results in these tables are misleading. For example, California has more organic farmers than any other state but no agents from the RMA Davis Region reported having organic clients. Likewise, agents in the RMA Spokane Region sold more WFRP policies than any other region, yet only one agent from this region reported having sold WFRP.

Table 4.1. Do you have organic producers as clients?

RMA Region	States covered	Yes	No
Billings, MT	MT, ND, SD, WY	8	10
Davis, CA	AZ, CA, HI, NV, UT	0	2
Jackson, MS	AR, KY, LA, MS, TN	3	1
Oklahoma City, OK	NM, OK, TX	2	0
Raleigh, NC	CT, DE, ME, MD, MA, NH, NJ, NY, NC, PA, RI, VT, VA, WV	1	6
Spokane, WA	AK, ID, OR, WA	0	5
Springfield, IL	IL, IN, MI, OH	4	6
St Paul, MN	IA, MN, WI	0	6
Topeka, KS	CO, KS, MO, NE	13	7
Valdosta, GA	AL, FL, GA, SC	1	2

Table 4.2. Have you sold any WFRP policies?

RMA Region	States covered	Yes	No
Billings, MT	MT, ND, SD, WY	13	5
Davis, CA	AZ, CA, HI, NV, UT	0	2
Jackson, MS	AR, KY, LA, MS, TN	4	0
Oklahoma City, OK	NM, OK, TX	1	1
Raleigh, NC	CT, DE, ME, MD, MA, NH, NJ, NY, NC, PA, RI, VT, VA, WV	0	7
Spokane, WA	AK, ID, OR, WA	1	4
Springfield, IL	IL, IN, MI, OH	6	4
St Paul, MN	IA, MN, WI	6	0
Topeka, KS	CO, KS, MO, NE	19	1
Valdosta, GA	AL, FL, GA, SC	2	1

Figure 4.5. Years selling crop insurance by agents who had sold to organic producers

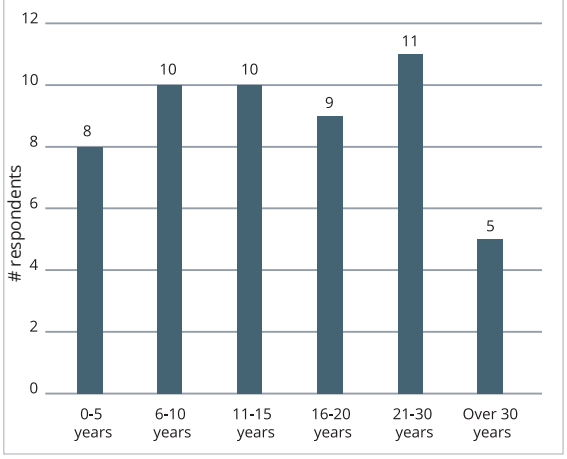
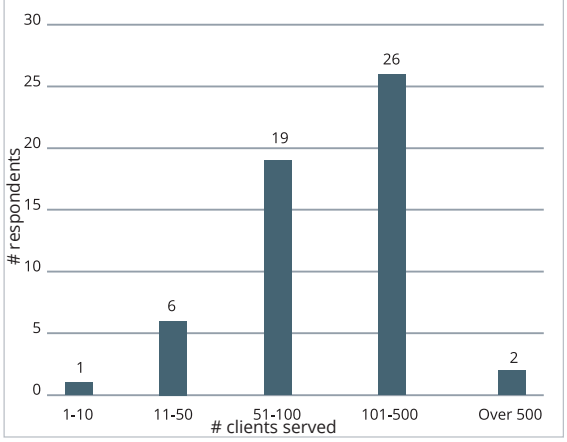


Figure 4.6. Number of clients served in the past year by agents who had sold to organic growers.



Why agents had not sold to USDA-certified organic producers

The vast majority of respondents who had not sold to organic producers simply didn't have any clients who were organic producers. For the vast majority (87%) of the agents who had sold crop insurance to organic producers, these producers made up less than 10% of their client base.

When asked to name the most common crop insurance products that they sold to organic producers, there was overwhelming agreement on these as the top three: Revenue Protection (62%), Actual Production History (42%), and Yield Protection (35%). No other option received a mention from more than 20% of respondents.

As explained in Chapter 1, since 2014 RMA has allowed organic and transitional growers (with some limits and exclusions) to use a Contract Price Addendum, insuring their crops at almost the full contract price if they have a written contract from a buyer. Among respondents who had sold crop insurance products to organic producers, 82% answered "yes" to the question "Have you ever explained the Contract Price Addendum to a USDA-certified organic producer?"

Does it take longer to work with organic producers?

In general, respondents reported that it took more time to work with organic producers, although the difference depended on the task or service provided.

- Explaining crop insurance products to organic producers: 22% said it took the same amount of time, 48% reported that it took a little more time, and 30% said that it took much more time.
- Selling or writing policies for organic producers: 33% reported that it took the same amount of time, 32% said it took a little more time, and 35% said that it took much more time.
- Renewing policies for organic producers: 45% reported that took the same amount of time, 27% felt that it took a little more time, and 28% said it took much more time.
- Processing claims for organic producers: 43% said that it took the same amount of time, 32% felt that it took a little more time, and 25% said that it took a lot more time.

In general, respondents reported that it took more time to work with organic producers.

Suggestions from agents about working with organic producers

Respondents who had sold crop insurance to organic producers had several suggestions for improving products and services. Sample comments are below:

TIMING

- Contracts are sometimes not available by the acreage reporting date.
- Timing of getting certified to organic transitional is a challenge for fall planted crops.
- I want to give the farmer the most accurate quote I can and there's a bit of discomfort about finding this number in February and March with the farmer—we're doing a lot of guessing with the numbers and it's hard for the farmer to have us asking all these detailed questions too early in the season. Their premium and coverage can change really fast.

COST AND COVERAGE

- The USDA prices that are set are still too low. The good producers cannot protect what they actually grow.
- Need organic pricing for pasture, rangeland, and forage policy.
- Organic producers normally do not only produce the normal crops grown in the area. More specialty crops are raised that may not be insured without a written agreement, or at the price they are able to get for the commodity.
- Conventional crop policies available should have organic pricing...have more small grain crops such as buckwheat, etc. It would also be helpful to have recognition of sources of pricing - wholesale, retail, etc.

GOOD FARMING PRACTICES

- I find quite often there is a disconnect between practices organic producers use for weed control and crop insurance rules. Many of their practices that are viewed as good farming for organic, make them uninsurable because of rotation.

What agents liked about WFRP

Among respondents who had never sold a WFRP policy, the vast majority nonetheless reported feeling somewhat (70%) or very (29%) familiar with the product, 65% were somewhat interested in selling the product in the future, and 12% were very interested.

Among the 34 respondents who had sold WFRP in the past, 14 (41%) were very interested in selling it in the future, 13 (38%) were somewhat interested, and 7 (21%) were not at all interested.

Agents liked the fact that WFRP provides revenue coverage for the whole farm and can cover a wide range of crops, including many for which there are no other insurance options. Sample comments:

- Producers really appreciate having a revenue floor.
- WFRP fills gaps not covered well under MPCI (like quality in wheat), where producers may see significant reduction in revenue but the existing policies won't pay since there's usually too many bushels.
- Pricing has always been the issue! WFRP seemed to be the solution for folks with organic production…We could give them a reasonable price and a contract yield that was better than before.
- It took a while to educate organic producers, who are not inclined to support crop insurance [because it didn't work well for them]…generally speaking I think WFRP has the right concept [for organic producers].
- Overall I think WFRP product is a really, really good one but the devil's in the details—it's a pretty detailed product. It's not that simple, there's a lot of paperwork for the agent and the producer—we need to educate the producers and the agents on how it works, so they see it's not the same as other products.

Agents liked the fact that WFRP provides revenue coverage for the whole farm and can cover crops for which no other insurance is available.

What agents disliked about WFRP

COMPLEXITY AND PAPERWORK

- The amount of information you make them provide is ridiculous—streamline the application process and you've got a vehicle with wheels!!!
- Too complex, it is an underwriting nightmare, no consistency on allowable documents (federal docs on one crop are fine but not another).
- Insureds do not want to turn over tax returns. The application is 23 pages long and no one wants to take the time and effort.
- If growers are going through the process of getting an organic plan and certified as a grower they should not need to go through the work to get their crops insured.

IT TAKES LONGER TO SELL AND SERVICE WFRP

Overwhelmingly, those who had sold WFRP policies reported that these policies took a lot of time, in comparison to other products:

- 25 of 34 (74%) said that it took much more time to explain a WFRP policy;
- 31 of 34 (91%) said that it took much more time write a WFRP policy;
- 25 of 33 (74%) said that it took much more time to renew a WFRP policy; and
- 22 of 33 (67%) reported that it took much more time to process claims for WFRP policies.

Sample comment:

- Too hard to understand completely, takes too long to write a policy, too many exclusions, records to back up WFRP are hard to maintain for insured and too many loop holes at claim time to not get paid and then unhappy clients. Huge E&O exposure to agent/agency.

"The paperwork and record keeping that the farmer has to supply is WAY too extensive."

"The way price estimates change as the year goes on makes the agent, producer, and adjuster uncomfortable."

PROBLEMS WITH COVERAGE AND COST

- Deductibles are too high. Either cost of coverage needs to be drastically reduced or ability to purchase higher coverage levels needs to exist.
- The way the price estimates change as the year goes on makes the agent, producer, and adjuster uncomfortable. Trying to put a value on organic crops, if they don't have a contract, is very difficult. The changing of the value is an uncomfortable place for me as an agent. You can't give the producer a solid price estimate with the whole-farm policy.
- I do not feel confident that WFRP will give the client a payout. As a person who cares about their clients, I don't want them to suffer from the failure of the policy and also don't want to be blamed by the client for selling them this policy.

PROBLEMS WITH THE 5-YEAR AVERAGE HISTORIC REVENUE

- Five-year average is not always good for small or organic or organic transitioning farms. Growers will drop out because of this, because of having a low couple of years which bring the 5-year average down.
- I've had [organic farmers] get out of crop insurance because their revenue is so much bigger than the five-year average—They got out because the five-year average held them down. Coverage was so low compared to the farmer's potential revenue.
- Multi-peril indemnities being Revenue to Count in a loss, but not counted in the average…Producers hate this [perceived discrepancy]. It is not accepted by the main purchaser of the product, the farmer, and they want it gone.
- Transition period and moving from conventional to organic is rough for the five-year average aspect of WFRP. We need to make sure the policy accounts for the transition years and also [the change in market price] from selling conventional to organic.

Sample suggestions from agents for improving WFRP

- It would be very helpful to have these due 15 days after the sales closing. Even if an app was due by sales closing and the additional forms due in 15 days, it would be very helpful.
- Move SCD [Sales Closing Date] closer to January 1st because prices and inventory are based on this day.
- Make it simpler to do and understand, with just using the Schedule F tax return and nothing else.
- Need to include indemnity payments in revenue history.
- Need to remove the $1 million liability limit for animal/animal by-products and nursery.
- Our request is for an operation, a direct-market u-pick operation, that has a million dollars or less of sales, have a reduced record-keeping requirement, and need only a two year production history [instead of a five year].
- If you guys actually seriously want to make WFRP successful, something needs to be done at an FSA level…If we could further integrate crop insurance agencies and FSA, we could alleviate some of those pains [for farmers] and support more sales of WFRP. Farmers don't get wild about releasing so much information to the government.
- Need to keep the guaranteed price for the crop that was put in the schedule that was brought to the banker, rather than changing based on how market sales go. The whole reason they got WFRP was so they could guarantee their money if they see a loss.

- Using rating codes instead of commodity codes is a good idea—irrigated and non-irrigated was always a breakout but something like, for example, winter and spring wheat are very different commodities.
- My livestock producers want into this program but have trouble making it work in terms of quantifying revenue and determining how inventory control works for held-back livestock, specifically.
- I've heard that the commissions to the agent are going to be much higher for selling a WFRP than a regular multi-peril because of the added time and paperwork...That would help compensate for the extra time and work the agent goes through.

Training needs

A solid majority of respondents (57%) said they had received training on working with USDA-certified organic producers, and almost all (98%) had received training on WFRP.

Overwhelmingly, respondents wanted basic training on organic production, certification, and insurance options.

Overwhelmingly, respondents expressed interest in basic training on organic production and the insurance products available to organic producers. Sample comments:

- I would love a 101 class on organic.
- Continued education on their practices and how we can use them with the policies we have at our disposal.
- More education for the producers on how WFRP works is needed. If [the producer] purchases WFRP because their organic operating company is pushing it, but they don't know how to use it, it's just a useless tool for the producer.
- Most of my WFRP customers are not organic, and they are not used to the paperwork that goes into a product like this. Educating producers of one or two crops on the mechanics of this product—there's a lot more work to it—would help ease some frustration of producers who think this is going to be a simple product to use.

Discussion

Many agents do not know as much as they would like about organic production, do not feel comfortable or well-prepared to work with organic growers, and would welcome more training on organic farming and certification. Most agents felt that it took them somewhat more time to work with organic producers, but did not especially object to this. The great majority remained very interested in working with organic growers.

Negative attitudes and stereotypes about organic farming were expressed by a few respondents. Examples:

- To promote organic food or crop insurance for organic farmers is anti-science and fuels marketing ploys by food companies or false ideologies from health quacks and anti-livestock/hunting idiots.
- The emphasis and resource for organic crop insurance is excessive. Much of the experience I have seen has been to abuse the system to get the higher prices when the crops are in loss situations as the yields have been significantly lower.
- The USDA should not have certified organic producers.

Reviews of WFRP were mixed. Virtually all agents had received some training on it. Many liked the whole-farm approach, appreciated the unique features of WFRP, and saw it has having great potential. On the other hand,

agents expressed frustration related to complexity, cost, coverage, and timing issues. Most agents felt that it took them far more time to work with WFRP, compared to other products. And many strongly objected to the paperwork burden, describing it as unreasonable (for themselves and growers).

The agents offered dozens of suggestions for improving WFRP and other products and services for their organic clients. There is no easy way to summarize these, and we strongly urge those who are interested to read the complete list of comments at the end of this chapter.

Five comments stood out because of the forceful way they were expressed or the large number of agents who expressed them:

Some agents noted concerns about the claim and adjustment process, the vagueness of "good farming practices," and the jeopardy this creates for their organic clients.

1. Many agents complained about the excessive paperwork required for a WFRP application. A couple suggested simplifying the application so that average historic revenue could be calculated using only Schedule F tax return information.
2. Some agents registered concerns about claim process, the vagueness of "good farming practices" (as applied to organic or transitioning farms), and the jeopardy this creates for organic clients—legitimate doubts about whether their claims would be paid.
3. Several noted grower unhappiness that Multi-Peril indemnities are Revenue to Count in a loss, but not counted as part of a farm's historic average revenue, and suggested that this be changed.
4. Several agents noted problems with the timing of the WFRP application cycle, focusing on the difficulty of calculating premiums in February or March and the potential for price estimates to change as the year goes on or at "claim time." Some suggested that, as a matter of fairness, companies should not be allowed to change prices or coverage after the policy is sold.
5. A few felt that, in WFRP calculations, organic crop prices are set too low or deductibles end up being too high. Because of these problems—along with uncertainties about coverage terms, concerns about exclusions and loopholes, and doubts about whether claims would be successful—many agents felt that the cost of the WFRP premium is simply too high for the protection it actually provides.

Complete list of agent comments

About working with organic producers

- It can require a lot of written agreements which take a lot of time for same or less pay. When an insured moves from a transitional practice to an organic practice the insured has to take the county average, which is much lower than his actual yields. Insureds would like to be able to have better county averages when it comes to organic.
- Most of my organic producers don't have contracts to make use of the CPA. To get true organic is quite hard—takes three years of non-almost-anything to qualify and then lots of records etc.
- Contracts are sometimes not available by the acreage reporting date.
- Timing of getting certified to organic transitional is a challenge for fall planted crops.
- The USDA prices that are set are still too low: The good producers cannot protect what they actually grow. Whole-farm is too much and too confusing for Organic growers. Also the written agreement process should be better as

well there is too much paperwork. If growers are going through the process of getting an Organics plan and certified as a grower, they should not need to go through the work to get their crops insured.

- The emphasis and resource for organic crop insurance is excessive. Much of the experience I have seen has been to abuse the system to get the higher prices when the crops are in loss situations as the yields have been significantly lower.
- I have only had one producer that was certified the first year, since then there have been other issues that he has not insured it as organic. I find quite often there is a disconnect between practices organic producers use for weed control and crop insurance rules. Many of their practices that are viewed as good farming for organic, make them uninsurable because of rotation.
- Need organic pricing for Pasture, Rangeland, Forage policy.
- Organic insureds use a good farming practice of seeding spring wheat at 75 #s with 4 #s of bi-annual clover for green manure on a summer fallowed field and the seeded wheat is not insurable??!! This practice should be an insurable practice!!
- Hassle first 2 years then OK.
- Would like personal T-yield available on buckwheat. All buckwheat is contracted and figured in pounds. Their yields are quite a bit higher than county average. Only crop in state where PTY isn't available for small grains. A lot of good things have progressed with organic over the last couple years, but is much more time consuming for agent and need to be well educated to provide service to producer.
- I only have one producer. Several producers elect not to purchase MPCI coverage as deductible makes policy worthless.
- Agents, lenders, and farmers all need to be better educated on coverages and products available.
- Local FSA offices not knowing the correct way to report organic crops on a 578 Producer Print is half the battle.
- I have one organic producer and he has had a CAT for many years and not interested in changing.
- Organic producers normally do not only produce the normal crops grown in the area. More specialty crops are raised that may not be insured without a written agreement, or at the price they are able to get for the commodity.
- I don't think I would feel comfortable with selling it without some specific training.
- Only one or two in my area and I have talked with them and they have contacted me back.
- The USDA should not have certified organic producers. Organic food is no worse than non-organic food. It is also no better in any way.
- Conventional crop policies available should have organic pricing...have more small grain crops such as buckwheat, etc. It would also be helpful to have recognition of sources of pricing - wholesale, retail, etc.
- I'd love to work with organic producers but I only know of 2 producers in this area.

What do you LIKE about Whole-Farm Revenue Protection?

- Inclusive of commodities not insurable in certain counties.
- The idea or concept of covering the whole-farm for a risk management plan.
- Option to cover non program crops.
- Its overall protection.
- Not much. (2 people)
- *Producers really appreciate having a revenue floor. *It is helpful for lenders to have a specific "worst case scenario" revenue number. * Being able to tailor yields/prices to the customer's actual operation/local area is great. *WFRP fills gaps not covered well under MPCI (like quality in wheat), where producers may see significant reduction in revenue but the existing policies won't pay since there's usually too many bushels.
- Cover crops that do not have coverage available. (2 people)
- I like the guaranteed revenue aspect.
- Includes all commodities. (2 people)
- The concept is great, but the mechanics are often difficult to get beyond, especially for some producers, since some crops work better than others.
- It allows protection for producers that are sometimes not able to insure their operations under the "usual" policies.

- I like it but the numbers are getting really tight and most guys are starting to go back to the MPCI program or not buying.
- It offers coverage for specialty crops that previously only had NAP coverage available to them through the FSA office.
- Covers all commodities.
- Encompassing of the whole operation's revenue.
- I like the idea of a whole-farm revenue because that is the whole reason to farm.
- Good for grower.
- It sounds great in theory and I like the concept.
- The concept is attractive as markets have been volatile and the quality of grains has been compromised due to weather.
- It protects the insured's bottom line.
- Pricing has always been the issue! WFRP seemed to be the solution for folks with organic production...We could give them a reasonable price and a contract yield that was better than before.
- Gives you options for specialty crops or insured commodities without an actuarial rate.

What do you DISLIKE about Whole-Farm Revenue Protection?

PAPERWORK AND COMPLEXITY

- Whole-Farm is too difficult to write for most agents. If agents do not understand how policies work they cannot possibly be trusted to offer or encourage clients to purchase a product that can be crucial to the continuation of a farming operation.
- Source documentation.
- Lots of paper work to get and explain a quote.
- Too hard to understand completely, takes too long to write a policy, too many exclusions, records to back up WFRP are hard to maintain for insured and too many loop holes at claim time to not get paid and then unhappy clients. Huge E&O exposure to agent/agency.
- Timing. Have a client who has an April 30 fiscal year end and lots of the paperwork is required to be filed (ending inventory as an example) on March 15.
- Too complex, it is a underwriting nightmare, no consistency on allowable documents (federal docs on one crop are fine but no another) TOO MUCH EXPOSURE FOR AGENT E&O, puts a lot more paperwork on growers.
- Paperwork hassle - verification hassle - don't think all AIP's are on same page as to what is insured - when is liability (schedule of insurance) real.
- The paperwork and record keeping that the farmer has to supply is WAY too extensive. We have a hard enough time getting production reports if there is no claim.
- The amount of time and details to have a policy written correctly, and the fact the government can change it whenever they choose.
- Too much time and work.
- The amount of time it takes to put a policy together. It is difficult to have this at sales closing for all the other policies.
- The difficulty in writing a policy. The checks and balances that are necessary to ensure less fraudulent activities; however, these checks and balances are the main hurdles when writing a policy.
- Insureds do not want to turn over tax returns. The application is 23 pages long and no one wants to take the time and effort.
- The amount of information you make them provide is ridiculous - streamline the application process and you've got a vehicle with wheels!!!
- Most of my WFRP customers are not organic, and they are not used to the paperwork that goes into a product like this. Educating producers of one or two crops on the mechanics of this product—there's a lot more work to it—would help ease some frustration of producers who think this is going to be a simple product to use.
- WFRP has become too cumbersome and has too many steps, too much verification for producers. This is difficult for a producer to accept. As we are verifying previous production history - every year when we do production the grower gives us the yield per acre and signs the form but on the WFRP they ask for verification and that means...turning in settlement sheets, measuring bins...This last year has become much more cumbersome than regular multi-peril.

- There is so much work to a WFRP policy that it is highly unappealing to agents and farmers alike. The idea makes sense to help farmers who raise crops or livestock that don't have better policies to use but it is too involved and requires too much tax knowledge.
- Overall concept is fine, details of actually writing a policy that covers what it says takes an inordinate amount of time.
- WFRP needs to be simplified to be viable.
- Too complicated for growers to understand; too much documentation and time required.

RECORDKEEPING

- One of the biggest issues is record keeping: establishing a high price proves difficult for many farmers because of the way WFRP looks at production history.
- Record keeping: Look at a person's APH and production history from this year and we can pay a percentage or amount based on those record administered in conjunction with crop insurance policies that are already in effect.
- Record-keeping requirements.
- Establishing quality records with the grower in order to qualify for the price and yield used. If we don't establish quality records prior to writing the policy, we may be offering an empty promise.

THE FIVE-YEAR HISTORIC AVERAGE REVENUE CALCULATION

- Five-year average is not always good for small or organic or organic transitioning farms. Growers will drop out because of this, because of having a low couple of years which bring the 5-year average down.
- I've had [organic farmers] get out of crop insurance because their revenue is so much bigger than the five-year average. They got out because the five-year average held them down. Coverage was so low compared to the farmer's potential revenue.
- MPCI proceeds are not factored into historical average but is factored in the actual current year revenue. The claim payment timing makes it difficult for farmers.
- Regarding the "Five Year Average" needed for a producer: You can go up 35% but that's physical growth, not price growth. 35% should be more like 50% when it comes to growth.
- Transition period and moving from conventional to organic is rough for the five-year average aspect of WFRP. We need to make sure the policy accounts for the transition years and also [the change in market price] from selling conventional to organic.

COST AND VALUE

- Deductibles are too high. Either cost of coverage needs to be drastically reduced or ability to purchase higher coverage levels needs to exist.
- It doesn't provide sensible coverage to insureds that only plant 1 or 2 crops.
- If they only raise wheat and only have one or two commodity codes, it's not worth their while and in this area, there are these one and two commodity organic farms which cannot use WFRP because it's not financially viable.
- [WFRP] is advantageous to some degree, but some 2 crop producers don't get access as they should. To improve this issue, WFRP should allow for more commodities, especially for example different varieties of wheat.

VAGUENESS AND DOUBTS ABOUT CLAIMS BEING PAID

- Parts are vague, like the expected value on the Farm Operation Report. All agents aren't using the same process to determine.
- Time consuming and doesn't pay at initial loss.
- I do not feel confident that WFRP will give the client a payout. As a person who cares about their clients, I don't want them to suffer from the failure of the policy and also don't want to be blamed by the client for selling them this policy.
- Very discretionary by AIP.
- It is time-consuming and not black and white. I could see if not underwritten closely, it could be a recipe for disaster come claim time.
- It needs to be simplified, to make it easier for the producer to understand and the agent to present. Too many variables that can change.

TIMING ISSUES

- Timing. Have a client who has an April 30 fiscal year end and lots of the paperwork is required to be filed (ending inventory as an example) on March 15.
- Whole farm will never work in Florida because of the year-long growing season. You can have one bad season and then two good ones and not get a penny from crop insurance because you're insuring the year of revenue instead of each crop.
- It would be very helpful to have these due 15 days after the sales closing. Even if an app was due by sales closing and the additional forms due in 15 days, it would be very helpful.

UNPREDICTABLE COVERAGE CHANGES IN MID-SEASON

- WFRP is about expected revenue so we turn in an operations report on the income [the farmer] plans on getting this year… they're guessing what sort of income they will have for this year. And these guys don't try to cheat. They really don't. They're very honest about this stuff. They get their schedule of insurance after we submit the tons of paperwork and it's our best guess, then they take that schedule to the banker and say 'look I'm either gonna' make 1.4 million dollars this year, or if I don't make it, my insurance company is guaranteeing I'll make 1.2 million,' then the banker loans them money. Then in the middle of the year, the insurance comes in and says, 'just kidding, you're only insured for $800,000!'"
- The way the price estimates change as the year goes on makes the agent, producer, and adjuster uncomfortable. Trying to put a value on organic crops, if they don't have a contract, is very difficult. The changing of the value is an uncomfortable place for me as an agent. You can't give the producer a solid price estimate with the whole-farm policy.
- "If you knew you had a window or at least a percentage of how [the crop value] can change over the year, some kind of top and bottom so you know [the value of the crops] with more stability and can give the producers a fair deal."
- Need to keep the guaranteed price for the crop that was put in the schedule that was brought to the banker, rather than changing based on how market sales go. The whole reason they got WFRP was so they could guarantee their money if they see a loss.
- The point I'm making is the grower receives a schedule then gets the loan and then when it comes time for harvest, if the price of the product goes down, then the value of the insurance changes - [the farmer] bought WFRP because [they're] betting on getting a certain price on the product, but if the market drops then the insurance company says you over-priced the product and won't give you the payout you initially were guaranteed.
- I want to give the farmer the most accurate quote I can and there's a bit of discomfort about finding this number in February and March with the farmer - we're doing a lot of guessing with the numbers and it's hard for the farmer to have us asking all these detailed questions too early in the season and their premium and coverage can change really fast.

OTHER

- That there is an 8.5 million limit. I wish it was 23.million. I think the application process is drawn out and overbearing.
- Not allowing underlying policies to have a CAT policy, not allowing single commodities that have revenue protection to have WFR (like cherries with the ARH policy), not providing streamlined guidelines for price determination yet providing excessive scrutiny when submitted, large amount of time to prepare and process policies.
- Requiring the use of current local market basis for fall futures contracts. Often when we are writing WFRP, basis is much higher than when producers are actually selling. It would be nice to be able to use a historical average basis. * Easier claims worksheets for adjusters.
- New farmers cannot buy policy. Companies should not be able to go in after the policy liability is set and make changes at claim time.
- 1. MPCI Indemnities as Revenue to Count in a loss, but not counted in the average. Producers hate this. 2. The upcoming collapsing of commodity codes for breakouts. In Montana for instance, wheat might become irrigated or non-irrigated, but winter and spring are very different commodities. Also dry pea types, i.e. green or yellow peas vs. chickpeas/garbanzos should be broken out as well. Montana is now the largest grower of pulse crops in the U.S. and producers are growing large acreages with significant revenue needs. 3. Inventory valuations on livestock are very difficult to determine especially on held-back production.
- The option to have Whole-farm is not available to everyone because Revenue Policy and Livestock and Nursery have a Cap.
- The verification of previous yields on the Farm Operation Report, the verification of prices, is hard - we have to send in verification and if we are starting a new policy they want us to…pull settlement sheets [for the producer]…which doesn't need to be done with regular multi-peril insurance except at claim time.
- WFRP has been difficult because our clients are corn and soybean in rotation and don't need to grow other crop varieties or take risks or try something brand new.

Other comments about Whole-Farm Revenue Protection

- We need something similar to YA in the historical numbers, or else we need to be able to include crop insurance proceeds. If you have a loss year or two, often it means you don't have enough revenue to index and often reduces the coverage enough it's not effective—right when producers are needing a floor the most. * The Expense Reduction Factor at claims. It would be more fair to reduce the indemnity by the percentage of expense they didn't spend rather than the approved revenue. Or to have a provision the ERF could be waived if it was substantiated there was not a need to have the extra expenditures. CASE: In 2017, we had one of the worst droughts in recorded history for the area. As such, there was no need for extra fertilizer/chemical, harvest expenses were reduced, etc. since we had germination issues and reduced yields. I had a producer who was about 23% short of their expenses, and their indemnity was about half of what it would have been if they'd hit their expense number. If you are 23% short, you should lose 23% of the indemnity, not 50%.
- Make it simpler to do and understand, with just using the Schedule F tax return and nothing else.
- This is a good risk management program for producers, but there are several major issues that make it difficult to write or service on a long-term basis.
- Using rating codes instead of commodity codes is a good idea—irrigated and non-irrigated was always a breakout but something like, for example, winter and spring wheat are very different commodities.
- More education for the producers on how WFRP works is needed. If [the producer] purchases WFRP because their organic operating company is pushing it, but they don't know how to use it, it's just a useless tool for the producer.
- Allow for more commodities that have different types in current policies - i.e. winter SF wheat, spring SF wheat or fresh cherries & processing cherries or varietal groups by pears or apples.
- We should be able to get revenue numbers from their accountant and add a copy of the taxes in a file if they need audited.
- Can be simplified by using the schedule F year over year.
- Our request is for an operation, a direct-market u-pick operation, that has a million dollars or less of sales, have a reduced record-keeping requirement, and need only a two year production history [instead of a five year].
- This program is amazing! I hope it does not go anywhere!
- Move SCD [Sales Closing Date] closer to January 1st because prices and inventory are based on this day.
- We have only had a couple of producers even inquire about Whole-Farm. They like the idea of livestock being insured but will not accept the crops not standing on their own. If the pulse crops fail and the wheat does not and they have cattle, they still want to be paid on the pulse crops. Protection of the total income isn't interesting. They want protection for the individual aspects of their operation.
- Overall I think WFRP product is a really, really good one but the devil's in the details - it's a pretty detailed product. It's not that simple, there's a lot of paperwork for the agent and the producer - we need to educate the producers and the agents on how it works, so they see it's not the same as other products.
- Requests: - Need to include indemnity payments in revenue history - Need to remove the $1 million liability limit for animal/animal by-products and nursery - Need to simplify the record-keeping requirements - Need to expand the eligible commodities to include more aquaculture.
- I've heard that the commissions to the agent are going to be much higher for selling a WFRP than a regular multi-peril because of the added time and paperwork…that would help compensate for the extra time and work the agent goes through.
- Since WFRP is promoted by RMA and it is more labor-intensive…It does seem to me it would be worth more compensation. They would have to do it in terms of a fee…I see what my adjusters have to go through - the carriers probably deserve something too because of the training and the time and paperwork that goes into a loss.
- Whole-Farm Revenue Protection can be a very effective policy to offer to clients, however in its current state there are better alternatives that agents and farmers are more familiar with.
- I just talked to someone recently working on a large-scale grain and livestock operation WFRP loss, collecting all the information for this led to months of work for this adjuster who was getting no extra compensation for this work. It does seem to me this particular product does deserve extra compensation.
- Fine tune this so the agency force truly understands it and wants to sell it to the prospect base.
- Piece of S---
- Needs to be explained better in renewal crop classes and the public needs to be more informed.

- Like I said above, I see WFRP has a policy worth taking, if it fits the farmer's need and premium is not so expensive. Mine and my customers' location does not fit WFRP because of the cost. But I know other farmers that do not have appropriate MPCI coverage for their crops where WFRP has been something that works for them.
- It's a valuable tool in the risk management portfolio, however it needs several tweaks to make it work in a more cost effective manner.
- It took a while to educate organic producers, who are not inclined to support crop insurance [because it didn't work well for them]...generally speaking I think WFRP has the right concept [for organic producers].
- Whole-farm can be a useful risk management tool but it is not for every producer.
- It appears that it benefits the person that has many products. Which in most cases the reason they diversify is if one fails they have another crop to lean on. From what I have seen that could take them out of a whole-farm revenue payment if one crop does well, while another doesn't.
- I will say that one thing that might be beneficial. If you guys actually seriously want to make WFRP successful, something needs to be done at an FSA level...If we could further integrate crop insurance agencies and FSA, we could alleviate some of those pains [for farmers] and support more sales of WFRP. Farmers don't get wild about releasing so much information to the government.
- My livestock producers want into this program but have trouble making it work in terms of quantifying revenue and determining how inventory control works for held-back livestock, specifically.
- Would like to provide the service; going to meeting in January to learn more. From American Farm Bureau.
- I see it as mainly a way to insure specialty crops which is great but we don't have a huge market of that in my region.
- Major changes required for WFRP to fit diversified ag operations.
- Improve yields and coverages on Revenue Protection in some states, and discontinue Whole-farm in the future.
- Pretty complicated and detailed to not give protection for each portion of the operation.

What kind of training would you like to help you better work with organic producers?

- None or "I don't want to learn how." (4 respondents)
- Few or no organic producers in my area so I'm not interested. (5 respondents)
- Organic is more complicated please increase my E&O Insurance I wrote a policy for one organic farmer and later found out that his father sold crop insurance that should tell you something if agents are going to sell organic we need more training / information.
- Webinar Training.
- Something within the FCIC portion because I feel that most of them have never been on a farm or have a clue as to what is going on. We have to many people making rules writing policy and don't have any clue as to what they are doing. I worked for Federal crop before it became private back in the 70's as a adjuster a agent and as a trainer. Back at that time we had a number of people to work with that had farm background and understood Ag. It appears those days are gone and now anyone that has enough ambition to do anything can get a job and seem to become an expert overnight.
- Rain and Hail Update classes.
- More training on how the policies work.
- Crop annual classes.
- Perhaps training on how to better serve their needs, and what they need from us as agents.
- Training on where they are located....
- Cost of production training. Fruit organic training.
- Just from our crop ins company.
- Nothing specific. Rain & Hail does a decent job with this.
- I received limited training for the whole-farm insurance. After that i had to do my own research and self study. It would be nice to have some more formal training.
- Better understanding on the process to stay organic and what all goes into a plan. What other options may be out there for vertically integrated growers. Can we get contract pricing on all crops?
- It would be helpful to be informed about the organic companies that producers can go through for their organic plan.
- The more the better as their needs are more unique than the conventional producers.

- Continued education on their practices and how we can use them with the policies we have at our disposal.
- I have received all my training through Rain & Hail.
- I don't think working with organic producers is much different that anyone else.
- I review the organic parts of the crop insurance policies but it would be nice to have a 2 hour class dedicated to organic practices.
- A program that explains the basic fundamentals to understand how to become a certified producer to then what is different in the coverage from the MPCI program.
- I understand both programs all AIP's handle different as to when becomes organic as to what is liability of whole-farm.
- I would love a 101 class on organic
- N/A. Coverage offered by products is so bad that we only buy what the bank requires.
- We have covered organic farming in update meetings, but I have never attended a class specifically on that like I have for WFRP.
- In person or webinar training on all options for organic farmers.
- I'm interested in ANY type of training that make me better at what I do and better equipped to help my clients.
- Very few organic producers in our area and generally farmers stay with the same agent year after year.
- We have limited number of organic producers, but they definitely have different situations than the conventional farmer and take more of our time than a conventional farmer. We use contract pricing with them and that has been a help. As commodity prices struggle and the demand from the consumers to have organic food, I can see producers changing their operation to find a specialty crop that can be grown organically for a profit. If that happens more training will be needed on the process of converting conventional land to organic land with transitional yields and such.

Complete list of survey questions and summary results

Q1 Have you sold crop insurance policies to USDA-certified organic producers?

Yes	62.5%	65
No	37.5%	39
TOTALS	**100.0%**	**104**

Q2 What proportion of your clients are USDA-certified organic producers?

Under 10%	86.7%	52
10-25%	8.3%	5
26-50%	3.3%	2
Over 50%	1.7%	1
TOTALS	**100.0%**	**60**

Q3 How much time does each of the following take you for your USDA-certified organic clients, compared to your non-organic clients?

	Much less time (-2)	A little less time (-1)	The same amount of time (0)	A little more time (+1)	Much more time (+2)	Weighted Average (-2 to +2)
Explaining crop insurance products	0	0	13	29	18	1.1
Selling/writing policies	0	0	20	19	21	1.0
Renewing policies	0	0	27	16	17	0.8
Processing claims	0	0	26	19	14	0.8
				# Responses		**60**

Q4 Which crop insurance products do you most often sell to your USDA-certified organic clients? (Select up to three.)

Revenue Protection	60.7%	37
Actual Production History	41.0%	25
Yield Protection	34.4%	21
Whole-Farm Revenue Protection	19.7%	12
Actual Revenue History	11.5%	7
Pasture, Rangeland, Forage	6.6%	4
Area Risk Protection Insurance	3.3%	2
Margin Protection for Corn, Rice, Soybeans, Wheat	3.3%	2
Annual Forage	1.6%	1
Dollar Plan	1.6%	1
Rainfall Index	1.6%	1
Supplemental Coverage Option	1.6%	1
Group Risk Plan	0.0%	0
Vegetation Index	0.0%	0
# Respondents		**61**

Q5 Have you ever explained the contract price addendum to a USDA-certified organic producer?

Yes	81.7%	49
No	18.3%	11
TOTALS	**100.0%**	**60**

Q6 Other comments about working with USDA-certified organic producers? (optional)

# Respondents	22

Q7 What's the main reason you haven't sold policies to USDA-certified organic producers?

I don't have clients who are organic producers.	91.7%	33
I'm not familiar enough with organic production to feel comfortable serving organic clients.	2.8%	1
I refer organic producers to agents who are more familiar with their needs.	0.0%	0
Writing policies for organic producers is too much work.	0.0%	0
Other reason (please describe below)	5.6%	2
TOTALS	**100.0%**	**36**

Q8 Other comments about working with USDA-certified organic producers? (optional)

# Respondents	4

Q9 Have you sold any Whole-Farm Revenue Protection policies? Those answering "Yes" complete questions #10-14. Those answering "No" skip to question #15 and complete questions #15-18.

Yes	39.2%	38
No	60.8%	59
TOTALS	**100.0%**	**97**

Q10 How much time does each of the following take when working with Whole-Farm Revenue Protection, compared to other crop insurance products?

	Much less time (-2)	A little less time (-1)	The same amount of time (0)	A little more time (+1)	Much more time (+2)	Weighted Average (-2 to +2)
Selling/writing Whole-Farm Revenue Protection policies	0	0	0	3	31	1.9
Explaining Whole-Farm Revenue Protection	0	1	0	8	25	1.7
Renewing Whole-Farm Revenue Protection policies	0	0	2	6	25	1.6
Processing claims on Whole-Farm Revenue Protection policies	0	0	5	6	22	1.5
				# Responses		**34**

Q11 How interested are you in selling Whole-Farm Revenue Protection in the future?

Not at all interested	20.6%	7
Somewhat interested	38.2%	13
Very interested	41.2%	14
TOTALS	**100.0%**	**34**

Q12 What do you like about Whole-Farm Revenue Protection? (optional)

# Respondents	25

Q13 What do you dislike about Whole-Farm Revenue Protection? (optional)

# Respondents	25

Q14 Any other comments about Whole-Farm Revenue Protection? (optional)

# Respondents	15

[Questions 15-18 below are for those who have never sold Whole-Farm Revenue Protection insurance.]

Q15 How familiar are you with Whole-Farm Revenue Protection?

Not at all familiar	1.8%	1
Somewhat familiar	70.2%	40
Very familiar	28.1%	16
TOTALS	**100.0%**	**57**

Q16 What is the main reason you haven't sold Whole-Farm Revenue Protection?

Clients do not express an interest in Whole-Farm Revenue Protection.	33.3%	19
Whole-Farm Revenue Protection is not appropriate for the needs of my clients.	35.1%	20
I don't have enough information to make informed recommendations.	1.8%	1
Whole-Farm Revenue Protection policies take too much time to write.	8.8%	5
The financial benefit to selling Whole-Farm Revenue Protection isn't sufficient.	5.3%	3
Other (please explain below)	15.8%	9
TOTALS	**100.0%**	**57**

Q17 How interested are you in selling Whole-Farm Revenue Protection in the future?

Not at all interested	22.8%	13
Somewhat interested	64.9%	37
Very interested	12.3%	7
TOTALS	**100.0%**	**57**

Q18 Any other comments about Whole-Farm Revenue Protection? (optional)

# Respondents	13

[All invited to answer the remaining questions, #19-25.]

Q19 How many years have you been selling crop insurance?

1	0.0%	0	15	4.7%	4	29	0.0%	0
2	2.4%	2	16	2.4%	2	30	5.9%	5
3	3.5%	3	17	0.0%	0	31	0.0%	0
4	1.2%	1	18	7.1%	6	32	1.2%	1
5	8.2%	7	19	2.4%	2	33	2.4%	2
6	8.2%	7	20	8.2%	7	34	0.0%	0
7	3.5%	3	21	3.5%	3	35	1.2%	1
8	0.0%	0	22	2.4%	2	36	0.0%	0
9	2.4%	2	23	0.0%	0	37	1.2%	1
10	8.2%	7	24	2.4%	2	38	0.0%	0
11	4.7%	4	25	0.0%	0	39	0.0%	0
12	1.2%	1	26	3.5%	3	40+	3.5%	3
13	0.0%	0	27	1.2%	1	**Totals**	**100.0%**	**85**
14	2.4%	2	28	1.2%	1			

Q20 In which states do you sell crop insurance?

AL Alabama	2.2%	2	NC North Carolina	4.4%	4
AK Alaska	1.1%	1	ND North Dakota	16.7%	15
AZ Arizona	1.1%	1	OH Ohio	3.3%	3
AR Arkansas	3.3%	3	OK Oklahoma	2.2%	2
CA California	3.3%	3	OR Oregon	3.3%	3
CO Colorado	8.9%	8	PA Pennsylvania	4.4%	4
CT Connecticut	2.2%	2	RI Rhode Island	1.1%	1
DE Delaware	0.0%	0	SC South Carolina	1.1%	1
District of Columbia	0.0%	0	SD South Dakota	6.7%	6
FL Florida	0.0%	0	TN Tennessee	5.6%	5
GA Georgia	3.3%	3	TX Texas	4.4%	4
HI Hawaii	0.0%	0	UT Utah	5.6%	5
ID Idaho	7.8%	7	VT Vermont	2.2%	2
IL Illinois	8.9%	8	VA Virginia	4.4%	4
IN Indiana	2.2%	2	WA Washington	3.3%	3
IA Iowa	11.1%	10	WV West Virginia	0.0%	0
KS Kansas	17.8%	16	WI Wisconsin	4.4%	4
KY Kentucky	4.4%	4	WY Wyoming	5.6%	5
LA Louisiana	1.1%	1	**# Respondents**		**90**
ME Maine	2.2%	2			
MD Maryland	1.1%	1			
MA Massachusetts	2.2%	2			
MI Michigan	5.6%	5			
MN Minnesota	8.9%	8			
MS Mississippi	0.0%	0			
MO Missouri	8.9%	8			
MT Montana	13.3%	12			
NE Nebraska	16.7%	15			
NV Nevada	2.2%	2			
NH New Hampshire	1.1%	1			
NJ New Jersey	3.3%	3			
NM New Mexico	2.2%	2			
NY New York	5.6%	5			

Q21 How many clients did you personally serve in the past year?

1-10	3.4%	3
11-50	13.5%	12
51-100	40.5%	36
101-500	40.5%	36
500+	2.3%	2
Total	**100.0%**	**89**

Q22 Have you received training on working with USDA-certified organic producers?

Yes	56.7%	51
No	43.3%	39
	Total	**90**

Q23 Have you received training on Whole-Farm Revenue Protection?

Yes	97.8%	88
No	2.2%	2
Totals	**100.0%**	**90**

Q24 What kind of training, if any, would you be interested in receiving to help you better work with organic producers?

# Responses	44

Chapter 5:
Why are organic loss ratios so high?

In this chapter we look closely at adjustments that RMA made to premium calculations for organic crop policies in 2015—changes that remain controversial among organic growers. Rates for organic insurance policies were increased in 2015 based partly on a finding of generally higher loss ratios for insurance policies on organic crops. We will look closely at those loss ratios and consider several possible explanations for why they are so high.

Background

The high loss ratios for organic crops were a real concern, suggesting unfairness in the federal crop insurance program.

As explained in Chapter 1, the Federal Crop Insurance Corporation (FCIC) and RMA have always believed that organic insurance policies need to be rated separately from non-organic policies,[1] but have been unsure how to accomplish this. Describing these challenges, a 2010 report to Congress by the RMA noted the limited evidence about organic farming practices:

> Limited information existed regarding organic farming practices and how they are related to crop insurance. Limited data was available on yield variability and susceptibility to losses for organic agriculture. For example, many insect, disease, and weed perils, mitigated through known conventional farming practices proven on a large scale would now be treated with organic methods only in limited use at the time (Murphy, p. 10).

To cope with these many unknowns, or perhaps simply assuming conservatively that these poorly-understood organic farms would be prone to crop losses, RMA implemented an across-the-board 5% premium surcharge on all crops grown with organic practices. When this surcharge was eventually discontinued in 2015, it was replaced with a T-yield change that, in a different way, was meant to compensate for the extra risks and higher indemnities that were believed by RMA to be associated with organic farming.

The 2013 Office of Inspector General audit

A *loss ratio* is calculated by dividing insurance indemnities (pay-out) by insurance premiums (pay-in). The FCIC is required by law to achieve an overall projected loss ratio of not greater than 1.0 (U.S. Congress, 1980). Crop insurance rates are therefore set with the goal of making them actuarially fair, meaning that indemnities will equal total premiums and result in a loss ratio of 1.0, plus a reasonable reserve (Coble et al., 2010).

There are many good reasons for the federal government to keep crop insurance loss ratios at or below 1.0 and similar across products. No insurance provider can remain financially solvent if loss ratios exceed 1.0 year after year—meaning that indemnities are exceeding premiums. And when loss ratios vary widely, purchasers of crop insurance policies with lower loss ratios are, in effect, subsidizing the cost of insurance for holders of policies with higher loss ratios. Moreover, as we will discuss below, high loss ratios raise concerns about adverse selection,

As discussed in Chapter 1, a 2013 audit by the U.S. Office of the Inspector General (OIG) found that insured producers with organic crops had a loss ratio of 105 percent. In contrast, insureds with conventional crops had a loss ratio of only 67 percent (OIG, 2013, p. 1). A loss ratio of 105 percent for organic crops would mean that crop insurance payments to organic growers exceeded total premiums collected, including the government subsidy portion of the premium.[2]

The high loss ratios for organic crops suggested that organic growers were receiving indemnities at a much higher rate than other producers, in relation to the premiums they were paying. In effect, organic farmers appeared to be collecting indemnities at the expense of other crop insurance purchasers.

Why were loss ratios for organic crops so high? An earlier study of RMA's organic program had noted that In both the aggregate and for the major crops the average of actual organic yields certified by producers is approximately 65 percent of the reference yield (Watts and Associates, 2010). Citing this study, the OIG audit concluded that the organic crop insurance process was overstating actual production capabilities, resulting in excessive insurance coverage and higher indemnity payments (OIG, 2013). To correct these problems, the OIG recommended that RMA accept the recommendation by Watts and Associates that:

> transitional yields be reduced by 35 percent and that no rate differentials between organic and conventional production be implemented until sufficient data under this new approach are available. The effect of this will be to insure organic production at the same premium rate and cost as that charged for non-organic practices for the same yield. These recommendations are based specifically on the role T-yields have played in the experience data collected to date (Watts and Associates, 2010).

The average loss ratio for all certified organic farms has been higher than the average of non-organic farms in nine of the last ten years, sometimes by a wide margin.

RMA response to the 2013 Office of Inspector General audit

Responding to the OIG audit, RMA made a 35% reduction to organic T-yields for all major organic commodity crops. RMA also committed to reviewing and adjusting organic T-yields as more data became available. Since that announcement, RMA has made adjustments for some crops, although T-yields for many crops, including major commodity crops, remain at 35%. Table 5.1 below shows the T-yield adjustments for the top 10 insured organic crops (by liability) in 2018.

Table 5.1. T-yield reduction for top 10 insured organic crops, 2018

Crop	Percent of total organic crop liability	Acreage	T-yield reduction (compared to non-organic)
Corn	20%	308,793	35%
Apples*	18%	19,924	15-35%
Wheat	6%	404,073	35%
Soybeans	5%	147,167	35%
Blueberries**	4%	5,611	15-25%
Tobacco***	4%	8,994	0%
Grapes	3%	12,788	0%
Rice	3%	52,082	35%
Potatoes*	3%	15,557	30-35%
Tomatoes	2%	10,535	15-20%
Totals	68%	985,523	

* Depends on state, county; not available nationwide.

** Depends on state, county; maturity of plant; not available nationwide.

*** No difference between organic and non-organic T-yields; not available nationwide.

Source: USDA-RMA, 2019a

After farms have four consecutive years of yield data, T-yields are no longer used in calculating APH. So the 35% T-yield reduction did not affect all organic growers but was certainly detrimental to new organic farmers, and may have discouraged others from adopting organic farming practices. When

organic T-yields were used in their APH calculations, farms whose yields were actually higher—at or near county averages—found themselves underinsured. They also had to prove greater losses before they could file a successful claim.

More recent data on loss ratios

More recent RMA studies and statistics have continued to show high loss ratios for organic farms. For example, the RMA Summary of Business for Organic Production, 2018 (RMA, 2018a) showed that organic loss ratios were above 1.0 in nine of 10 years from 2009 to 2018, averaging 1.37 over that entire period. By comparison, non-organic loss ratios in the same counties where organic production occurred were above 1.0 in just three of the 10 years, and averaged 0.76 over the entire period. Table 5.2 below shows loss ratios for crop insurance policies sold to organic and non-organic producers from the 2009 to 2018 crop years.

Note that Table 5.2 includes all certified organic crops that were insured, but only includes non-organic crops that were grown in the same county where an equivalent organic crop was insured.

Table 5.2. Loss ratios, organic vs. non-organic: 2009-2018

Certified organic experience

	Acreage	# Policies	Liability	Premium	Indemnity	Loss ratio
2009	3,534	501,966	$184,034,705	$23,753,627	$24,852,106	1.05
2010	3,874	510,147	$197,054,439	$20,785,331	$16,290,126	0.78
2011	4,890	610,254	$356,390,285	$39,770,364	$53,536,264	1.35
2012	5,160	650,753	$382,655,245	$38,560,202	$55,071,530	1.43
2013	5,449	668,023	$429,846,457	$43,027,891	$72,387,984	1.68
2014	5,778	731,038	$527,798,026	$46,809,344	$70,340,709	1.50
2015	6,448	817,822	$619,545,420	$53,402,766	$64,438,758	1.21
2016	7,309	950,695	$798,564,982	$69,887,665	$80,050,934	1.15
2017	7,815	1,103,772	$940,243,564	$85,454,760	$141,072,067	1.65
2018	8,529	1,235,521	$1,138,751,293	$94,353,586	$128,725,834	1.36
Total	58,786	7,779,992	$5,574,884,416	$515,805,536	$706,766,312	1.37

Non-organic experience in counties where organic was insured

	Acreage	# Policies[3]	Liability	Premium	Indemnity	Loss ratio
2009	47,096,024		$18,609,144,740	$1,862,619,843	$818,233,853	0.44
2010	48,813,191		$20,008,852,949	$1,632,728,370	$673,926,889	0.41
2011	68,801,331		$38,215,580,987	$3,575,831,407	$2,520,972,891	0.71
2012	72,757,459		$41,742,269,514	$3,541,910,628	$5,198,470,287	1.47
2013	79,655,865		$47,532,114,597	$3,907,822,755	$4,890,378,718	1.25
2014	83,624,685		$45,514,516,714	$3,505,708,445	$3,998,380,081	1.14
2015	86,934,686		$43,786,940,270	$3,533,491,069	$1,718,041,768	0.49
2016	90,901,525		$44,026,689,888	$3,413,702,381	$1,056,750,414	0.31
2017	94,989,002		$47,499,635,860	$3,879,096,187	$1,841,932,157	0.47
2018	102,256,946		$50,803,048,305	$3,874,437,684	$2,376,383,950	0.61
Total	775,830,714		$397,738,793,824	$32,727,348,769	$25,093,471,008	0.77

Possible explanations for high organic loss ratios

The average loss ratio for all certified organic farms has been higher than the average for non-organic farms in nine of the last ten years, sometimes by a wide margin. Moreover, the overall average loss ratio for organic farms during that period was almost double the overall average for non-organic crops grown in the same county. How can we explain this wide disparity? Below we consider seven possible explanations. They are not mutually exclusive, and it's likely that many of them play a significant role in loss ratio calculations.

Corn and soybeans account for almost half of the difference between organic and conventional loss ratios.

Explanation #1: Higher production or price risk for organic crops

On one straightforward interpretation, these tables provide strong evidence that organic farming simply has higher production and/or price risk—meaning more frequent or severe financial losses caused by poor yields, low prices, or some combination of these.

Explanation #2: Differences between crops

As emphasized already several times in this report, organic farming is not a single monolithic thing. Every farm is to some extent unique, and there are wide differences between crops and regions. Table 5.3 (next page) shows that, out of 70 crops whose loss ratios were compared, 41 crops (59%) showed higher loss ratios on organic farms, 24 crops (34%) showed higher loss ratios on non-organic farms, and 5 crops (7%) showed no difference.

While the overall difference in average loss ratios for the crops in Table 5.3 is large (1.37 for organic vs. 0.76 for non-organic), this comparison gives heaviest weight to crops that are most frequently insured. Over the 10-year period covered in the table, just four crops—corn, apples, wheat and soybeans—represented half (49.6%) of the total liability of organic crops insured and 79.2% of total liability of non-organic crops insured. Just two crops—corn and soybeans—represented 71.2% of the liability for conventional farms in the table above. Both had much lower loss ratios than their organic counterparts (0.84 vs. 1.88 for corn and 0.54 vs. 1.53 for soybeans). If we leave corn and soybeans out, the difference in loss ratios shrinks by almost half: to 1.20 for organic crops and 0.87 for conventional crops.[4]

Explanation #3: Adverse selection

Loss ratios, by definition, only come from growers who buy crop insurance. As we saw in Chapters 2 and 3, only around a third of organic growers buy insurance, and these growers could be riskier, on average, than the organic farming population as a whole. This raises an issue, known as *adverse selection,* that is a serious concern for all types of insurance.

Adverse selection arises when the insured (the buyer) knows more about the level of risk than the insurer (the seller). For instance, if a farmer knows, prior to buying crop insurance, that a disease is likely to impact crop yields, and the insurer does not know this, the farmer might take advantage of the situation by buying more coverage. If many farmers buy insurance because they know about hidden risks, loss ratios will typically increase and the insurance program will not be actuarially sound or fair.

It is an interesting and difficult question to what extent adverse selection may be causing the higher organic loss ratios seen in Tables 5.2 and 5.3. On the basis of an exhaustive review of RMA data, Watts and Associates (2010) concluded that it appears that the organic insurance pool is subject to adverse

Table 5.3. Loss ratios for organic and conventional crops grown in the same county

	— Organic Experience 2009 - 2018 —					— Conventional Experience 2009 - 2018 —				
Crop Name	Acreage	Liability (dollars)	Premium (dollars)	Indemnity (dollars)	Loss Ratio	Acreage	Liability (dollars)	Premium (dollars)	Indemnity (dollars)	Loss Ratio
Alfalfa Seed	653	892,664	79,389	349,247	4.4	41,163	53,795,299	3,044,880	15,818,275	5.2
Almonds	52,973	176,852,936	11,270,146	4,678,063	0.42	6,049,243	16,949,112,197	617,631,248	262,077,435	0.42
Apples	143,487	848,257,836	47,755,238	33,020,047	0.69	1,443,622	6,615,252,971	404,066,258	262,033,305	0.65
Apricots	4,293	11,819,661	1,414,576	1,123,420	0.79	41,944	102,947,641	13,915,355	12,872,059	0.93
Avocado Fruit/Tree	15,484	33,481,106	3,438,377	2,080,609	0.61	308,554	870,146,899	73,368,725	45,653,817	0.62
Barley	260,045	54,638,884	7,805,233	9,420,411	1.21	5,278,529	1,046,583,571	134,673,306	89,754,139	0.67
Blueberries	26,583	218,183,752	12,769,471	12,603,768	0.99	242,827	833,445,193	57,588,324	62,717,864	1.09
Buckwheat	35,784	4,031,221	1,328,174	763,533	0.57	13,683	1,410,759	337,240	249,170	0.74
Cabbage	1,688	1,955,798	75,501	113,133	1.5	18,495	27,891,899	1,408,776	1,393,587	0.99
Canola	29,858	6,177,439	1,131,707	847,444	0.75	3,864,120	985,430,503	167,537,927	163,405,304	0.98
Cherries	17,734	132,732,231	11,029,004	10,460,177	0.95	497,388	3,165,793,675	308,368,850	318,724,060	1.03
Chile Peppers	111	112,291	10,847	0	0	387	143,005	7,824	0	0
Citrus Fruit/Tree	59,636	153,856,867	10,656,516	8,621,895	0.81	2,845,689	9,459,391,444	457,431,518	178,377,805	0.39
Corn	1,682,273	1,197,352,322	114,455,251	215,330,460	1.88	333,123,796	196,775,874,772	15,260,246,852	12,877,441,964	0.84
Cotton	264,906	116,842,036	29,737,976	60,114,789	2.02	27,923,465	8,918,632,513	2,294,219,133	2,865,620,414	1.25
Cranberries	3,010	12,045,091	1,147,278	2,652,497	2.31	160,640	523,662,647	14,981,959	9,113,370	0.61
Cucumbers	25	6,004	117	0	0	3,773	2,298,393	125,484	102,526	0.82
Cultivated Wild Rice	12,999	10,826,437	1,491,494	3,177,423	2.13	66,134	47,206,519	2,061,824	2,114,875	1.03
Dry Beans	166,068	78,624,521	11,230,516	11,789,871	1.05	3,232,089	1,322,654,254	168,700,255	109,687,193	0.65
Dry Peas	131,749	18,729,211	5,482,246	6,667,346	1.22	5,134,347	813,632,747	156,029,412	140,188,731	0.9
Figs	8,478	11,967,217	456,537	109,652	0.24	34,561	38,800,154	1,467,958	340,293	0.23
Flax	117,415	15,401,475	3,927,167	3,905,485	0.99	997,819	131,905,790	19,241,307	16,876,575	0.88
Forage Production	129,746	27,789,864	2,034,991	1,072,659	0.53	4,047,228	646,919,849	70,344,611	38,752,175	0.55
Forage Seeding	26,929	4,683,513	578,643	1,142,967	1.98	355,361	64,657,851	8,059,614	11,906,666	1.48
Grain Sorghum	51,999	8,822,280	2,570,344	3,056,737	1.19	3,581,049	713,985,324	157,571,207	142,566,855	0.9
Grapes	112,281	277,213,664	10,593,252	7,655,685	0.72	4,313,437	9,514,314,452	337,416,702	206,408,982	0.61
Green Peas	67,952	60,272,680	5,679,165	11,084,703	1.95	373,616	154,213,383	14,339,542	18,283,998	1.28
Hybrid Corn Seed	16,364	16,814,008	1,280,887	1,697,434	1.33	289,653	308,912,017	19,918,388	19,731,300	0.99
Hybrid Sorghum Seed	1,080	511,322	85,343	70,857	0.83	13,707	4,845,227	1,000,505	221,739	0.22
Macadamia Nut/Tree	1,307	4,130,847	43,497	30,404	0.7	70,974	237,832,269	2,323,612	703,320	0.3
Millet	85,698	5,863,852	2,181,928	1,368,562	0.63	1,286,039	109,684,253	25,744,139	18,227,176	0.71
Mustard	880	135,857	42,570	61,477	1.44	9,902	957,791	275,369	214,593	0.78
Nectarines	8,372	27,893,231	1,842,172	683,715	0.37	153,981	360,018,940	22,911,850	10,781,631	0.47
Oats	190,077	26,411,451	5,460,828	3,765,934	0.69	1,034,186	110,009,950	17,990,176	13,444,067	0.75
Olives	6,642	4,767,408	340,576	585,209	1.72	70,278	98,115,232	9,759,261	10,662,555	1.09
Onions	21,070	66,920,740	3,930,350	2,903,786	0.74	429,147	831,687,293	158,039,577	152,002,682	0.96
Pasture,Rangeland, Forage	7,382	2,060,198	283,118	198,254	0.7	1,355,668	96,628,144	17,831,994	15,053,955	0.84
Peaches	15,402	52,337,636	6,427,323	5,483,276	0.85	290,213	725,938,059	60,795,445	46,607,906	0.77
Peanuts	103,842	47,471,442	4,082,542	3,516,827	0.86	878,498	500,023,689	40,408,377	71,781,443	1.78
Pears	18,178	92,954,858	2,164,790	2,390,846	1.1	292,076	992,811,298	21,069,874	15,951,245	0.76
Pecan Nut/Tree	12,760	13,362,705	385,023	0	0	79,243	162,897,058	5,529,257	1,513,426	0.27
Peppers	430	1,515,352	230,991	351,467	1.52	12,141	38,978,125	5,252,797	3,415,172	0.65
Pima Cotton	4,443	2,575,644	180,273	176,922	0.98	356,009	309,456,447	23,797,135	56,979,263	2.39
Pistachios	4,475	10,367,903	551,139	1,680,506	3.05	171,126	578,592,326	29,263,119	22,913,732	0.78
Plums	5,650	16,796,615	1,850,936	1,412,368	0.76	137,107	285,111,077	30,956,998	14,983,638	0.48
Popcorn	28,416	18,109,542	1,708,015	3,004,701	1.76	125,684	80,466,583	4,704,098	4,925,054	1.05
Potatoes	79,365	161,036,301	15,483,346	20,248,282	1.31	2,488,500	3,525,960,795	249,278,496	156,738,436	0.63
Processing Beans	13,162	6,428,954	650,993	1,209,019	1.86	138,714	77,167,224	6,016,601	5,157,332	0.86
Prunes	11,235	19,019,944	3,903,534	1,961,228	0.5	404,617	690,450,151	147,516,752	102,966,318	0.7
Pumpkins	999	1,458,838	90,850	93,851	1.03	16,285	11,394,472	714,613	2,653,524	3.71
Raisins	15,119	71,208,517	3,116,990	306,714	0.1	454,981	1,836,624,289	96,370,472	9,974,758	0.1
Rice	370,218	214,621,934	15,527,599	55,792,212	3.59	6,620,389	4,470,191,070	189,007,084	335,990,087	1.78
Rye	14,798	1,778,104	430,311	268,779	0.62	20,870	2,662,894	435,372	427,741	0.98
Safflower	18,357	986,067	280,511	260,067	0.93	108,382	10,255,606	1,942,873	1,043,275	0.54
Sesame	480	93,980	33,060	84,193	2.55	0	0	0	0	0
Silage Sorghum	11,917	4,369,037	580,497	878,523	1.51	106,117	28,488,550	3,318,182	1,136,009	0.34
Soybeans	951,225	416,567,951	46,692,588	71,401,008	1.53	258,790,526	100,246,341,072	7,788,366,880	3,489,648,181	0.45
Strawberries	64	1,172,755	56,764	0	0	432	7,834,804	271,694	110,719	0.41
Sugar Beets	2,884	1,727,114	78,671	11,409	0.15	617,894	449,253,570	16,211,626	7,217,973	0.45
Sugarcane	1,176	248,209	4,336	0	0	255,099	89,476,130	1,444,033	112,885	0.08
Sunflowers	105,199	22,045,890	5,032,356	4,657,579	0.93	1,529,213	356,882,241	66,437,401	46,359,652	0.7
Sweet Corn	71,643	58,652,829	3,351,910	5,930,755	1.77	742,911	387,162,447	17,326,060	11,124,866	0.64
Table Grapes	34,482	103,768,311	2,793,801	1,871,858	0.67	751,464	2,514,182,788	98,236,785	66,105,429	0.67
Tangors	23	43,708	2,102	0	0	3,352	6,488,815	444,978	0	0
Tobacco	49,392	222,258,953	18,823,802	43,172,528	2.29	1,169,025	3,602,312,669	279,589,176	621,851,921	2.22
Tomatoes	78,675	200,424,023	6,028,692	7,249,671	1.2	1,950,306	3,810,068,826	81,239,949	50,088,277	0.62
Triticale	1,979	238,089	47,408	14,111	0.3	2,599	326,346	68,451	0	0
Tropical Fruit/Tree	332	3,327,541	50,520	35,008	0.69	6,119	68,654,650	734,705	2,191,201	2.98
Walnuts	19,463	28,164,611	870,108	414,558	0.48	988,598	1,735,423,590	50,584,115	11,775,360	0.23
Wheat	2,637,812	468,819,189	89,849,755	90,989,782	1.01	126,554,935	24,480,615,225	3,861,498,237	2,775,838,988	0.72
TOTALS	8,446,627	5,903,030,461	545,001,961	748,075,701	1.37	814,769,916	41,402,128,7706	34,198,812,597	26,031,108,266	0.76

selection by a subset of unusually high-risk producers (p. 4). And in Chapter 3 (grower survey results), we saw that many fully committed, skilled, and experienced organic farmers are not interested in buying crop insurance. (See, for example, the analysis of expert organic farmers on pages 40-41.)

Of course, adverse selection can occur in the non-organic population too, and is thought to have existed across the federal crop insurance program when low participation rates were present (Coble et al., 2010). Adverse selection would only cause a difference in loss ratios between organic and non-organic growers if there were a *greater* degree of adverse selection among organic growers.

We are unaware of any evidence that fraud is more common among organic growers than any others.

There are some plausible reasons why this could be true. For example, adverse selection tends to be high in new crop insurance programs and policies, and crop insurance is still a fairly new option for organic growers. Chapter 7 will demonstrate a way of evaluating crop insurance performance that corrects for possible adverse selection: simulating crop insurance performance across a random group of farmers, whether or not they buy insurance.[5]

As the RMA is well aware, understanding adverse selection is essential to setting premium rates. In an insurance pool with little or no adverse selection, increasing premium cost is a straightforward way of reducing loss ratios. But in a pool with a high degree of adverse selection, raising premiums tends to exacerbate the problem, driving loss ratios even higher. As rates increase, lower-risk farmers drop out of the pool, prompting even higher premium rates in an attempt to keep the overall loss ratio near 1.0. This pattern is often called the death spiral of adverse selection.

Explanation #4: Fraud

The topic of fraud by organic farmers has attracted considerable attention in recent years, fueled by the suspicion that lucrative markets might create greater temptation for organic growers to commit fraud. (See, for example, Associated Press, 2018; Bennett, 2016; and Foley, 2018.).

Crop insurance fraud is a federal crime, punishable by fines and prison sentences. There is no question that fraud occurs among organic farmers, as it does among all producers. Fraudulent claims undoubtedly make up a fraction of loss ratios. However, we are unaware of any evidence that fraud is any more common among organic growers than any others.

What we do know is that certified organic farms are among the most highly regulated of all farming operations. USDA-certified organic farms are required to file an approved Organic System Plan and undergo an annual inspection by a licensed organic inspector, who checks for any violation of National Organic Program standards. In order to get away with insurance fraud, an organic farmer would need to fool both their organic inspector and their insurance adjuster. They would actually be committing fraud twice: once against the National Organic Program and once against their insurance company.

Explanation #5: Differences between insurance products

The loss ratios shown in Table 5.2 combine premiums and indemnities from many different insurance products. Every insurance product has its own distinct methodology and actuarial calculations that determine premium levels. These differences could affect average loss ratios in many ways, depending on which insurance products are prevalent among organic growers and how they are using these products.

Explanation #6: Missing non-organic data

Table 5.2 includes all certified organic crops that were insured, but only non-organic crops that were grown in counties that had organic production of that crop. As a result, only about one third of all conventional crop policies were included the analysis, because there was frequently no equivalent organic crop being insured in the same county. (More specifically, just 38% of non-organic liability, 33% of non-organic premiums, and 31% of non-organic crop indemnities are included in Table 5.2.)

Leaving out two thirds of all non-organic crop insurance policies may be reasonable from the standpoint of comparing organic to non-organic experience—effectively limiting attention to counties where both organic and non-organic production occur. This is a pretty severe restriction, however, which leaves out the majority of non-organic crop policies. To see if the results would look different with all crops and counties included, we recalculated the values with all crops and counties included, using data from the RMA Summary of Business (RMA, 2019). The results are shown in Table 5.4 below.

Factoring in crop diversification reduces the yield gap between organic and non-organic farms.

Table 5.4. Loss ratios, organic vs. non-organic: 2009-2018

	Non-organic Liability	Organic Liability	Non-organic Premium	Organic Premium	Non-organic indemnity	Organic indemnity	Non-organic loss ratio	Organic loss ratio
2009	79,364,353,104	184,034,705	8,951,458,244	23,753,627	5,197,488,512	24,852,106	0.58	1.05
2010	77,888,406,827	197,054,439	7,595,293,778	20,785,331	4,238,133,884	16,290,126	0.56	0.78
2011	113,853,496,900	356,390,285	11,972,261,003	39,770,364	10,815,803,354	53,536,264	0.90	1.35
2012	116,777,032,727	382,655,245	11,116,978,988	38,560,202	17,396,087,999	55,071,530	1.56	1.43
2013	123,381,313,485	429,846,457	11,808,017,604	43,027,891	12,012,490,745	72,387,984	1.02	1.68
2014	109,375,803,530	527,798,026	10,073,045,623	46,809,344	9,065,229,931	70,340,709	0.90	1.50
2015	101,914,772,596	619,545,420	9,768,009,186	53,402,766	6,249,978,414	64,438,758	0.64	1.21
2016	99,823,853,151	798,564,982	9,328,171,729	69,887,665	3,831,562,347	80,050,934	0.41	1.15
2017	105,151,440,357	940,243,564	10,072,635,104	85,454,760	5,281,266,709	141,072,067	0.52	1.65
2018	109,012,484,804	1,138,751,293	9,895,733,986	94,353,586	6,856,096,659	128,725,834	0.69	1.36
Total	1,036,542,957,481	5,574,884,416	100,581,605,245	515,805,536	80,944,138,554	706,766,312	0.80	1.37

Source: RMA, 2019

When all crops, insurance policies, and counties were included, the cumulative non-organic loss ratio increased (from 0.77 to 0.80), very slightly shrinking the disparity between organic and non-organic loss ratios. A wide difference between organic and non-organic experience still exists, although it may be worth noting that including all non-organic farms caused loss ratios to increase in 8 of the 10 years studied, by an average of 0.12—compared to the loss ratios reported by RMA in limited counties. So there is reason to suspect that Table 5.1 may overstate (at least slightly) the difference in loss ratios between organic and non-organic crop policies.

Possible explanation #7: Crop diversification

Many organic farms have highly diversified cropping systems, increasing their willingness to grow at least some crops that have a high chance of failure. It has been shown that diversification reduces the yield gap between organic and conventional operations. In a meta-analysis of previous comparisons of organic and conventional crop yields, Ponisio et al. found that there are:

> relatively small, and potentially overestimated, differences in yield between organic and conventional agriculture (i.e. between 15.5 and 22.9%), despite historically low rates of investment in organic cropping systems. These yield differences dropped to 9 ± 4% and 8 ± 5% when diversification techniques (multi-cropping and crop rotations, respectively) were used (Ponisio et al., 2015, p. 5).

If we could look at organic operations in their totality, they might turn out to be less risky than crop-by-crop comparisons would suggest. In the next chapter, we will explore this issue by looking at loss ratios of organic and non-organic farms that used Whole-Farm Revenue Protection insurance.

Organic insurance experience is a patchwork, with wide variations in risk and losses driven by multiple causes.

Discussion

As we have seen, organic farms have had higher loss ratios than non-organic farms over the past decade—on average, and combining all crops and insurance products. While these average differences are real and significant, they prove less than one might think about the risk profile of organic farms or the best way to create insurance products for these farms.

Loss ratios only tell us about the small minority of organic growers (roughly one third) who purchase crop insurance, and perhaps the most striking thing about organic loss ratios is how widely they vary among crops. As we saw in Chapters 2 and 3, the best picture of organic insurance experience seems to be a patchwork, with wide variations in risk and losses driven by multiple causes.[6] This argues against across-the-board rate adjustments, such as the 5% premium penalty that RMA imposed up until 2014. Treating all organic growers the same will inevitably be unfair to some and too generous to others

Watts and Associates noted the lack of any simple, general relationship between organic and non-organic production:

> The results of the underwriting analysis do not provide sufficient statistical evidence that organic and conventional production methods result in significant, consistent, and systemic differences in insurance experience. The data indicate a wide range of relationships between conventional and organic production. (Watts and Associates, 2010, p. 2)

For this reason, Watts and Associates did not simply recommend an across-the-board 35% T-yield reduction for organic crops. Rather, they recommended an initial reduction of 35% followed by a series of adjustments based on county- and crop-specific evidence. To date the RMA has only partially completed the large and complicated task of making these crop-by-crop adjustments. As we saw in Table 5.1, the T-yield reduction remains at 35% for a large number of crops. Collectively, these crops account for the great majority of all organic crop insurance liability.

We would also note that the T-yield adjustments and other changes made by RMA since 2010 have not accomplished their original objective, which was to bring organic loss ratios below 1.0 and closer to the loss ratios of non-organic crops. Since organic loss ratios remain higher than non-organic ones for most crops, and average far above 1.0, it would seem that there still need to be further adjustments in rates, so they better reflect the growing body of experience among organic growers.

Finally, the fact that many organic crops have higher average loss ratios than their conventional counterpart by no means implies that organic farming methods are inferior to non-organic ones. In fact, we would make the opposite argument: In most cases, organic loss ratios are close to those of non-organic crops, and in about a third of all cases organic loss ratios are lower—despite the fact that organic agriculture has been officially recognized by the USDA for less than 20 years and has received just a tiny fraction of the research support given to non-organic farming.

The fact that most organic loss ratios are already in the ballpark of their non-organic counterpart, at this early stage in the history of the USDA organic program and with relatively little support, seems to be a strong vindication of the risk management strategies used by organic farms.

NOTES

1. In crop insurance terminology, "rating" a policy basically means setting premium prices, based on a wide variety of possible factors.
2. This statement could not have been based on the 2009-2010 reports by Watts and Associates, since they never said that the average loss ratio for organic farms was 105%. For the years 2004-2008, Watts and Associates calculated a loss ratio of 1.121 for all organic crops combined. It is possible that the Office of the Inspector General conducted its own study, including loss ratios from 2009 to 2011 or 2012.
3. RMA does not provide the number of non-organic policies sold in counties where organic crops were insured.
4. We are indebted to Paul Wolfe (NSAC, 2016) for calling our attention to the wide variation in crop-by-crop differences between loss ratios.
5. Delbridge and King (2016) argued that the T-yield reductions introduced by RMA in 2014 would likely lead to similar organic and non-organic loss ratios in yield and revenue policies for corn and soybeans. At least so far, this prediction hs not come true. The authors included the caveat that If the changes to the crop insurance program result in increased adverse selection issues among organic crop producers, actual future loss ratios are likely to be higher than those predicted here (p. 26).
6. Similarly, Ponisio et al. have argued that Given that there is such a diversity of management practices used in both organic and conventional farming, a broad-scale comparison of organic and conventional production may not provide the most useful insights for improving management of organic systems (Ponisio et al., 2015).

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Chapter 6:
A study of Whole-Farm Revenue Protection loss ratios

By Jeff Schahczenski

In this chapter, we critically examine the common idea that organic crop production has greater revenue risk than non-organic farming.

"Revenue" here is defined as the mathematical product of crop yield times crop price. After briefly reviewing published research on organic crop yields and prices—including both average differences and variability—we will return to the question (already discussed in Chapter 5) of why crop insurance policies sold to organic growers have (on average) higher loss ratios than those sold to non-organic growers. Here we take a novel approach, looking at loss ratios from Whole-Farm Revenue Protection (WFRP) insurance instead of averaging loss ratios across all insurance products or those for individual crops.

We argue that WFRP loss ratios are a better indicator of revenue risk than single-crop insurance policies, and we demonstrate that in recent years there has been little or no difference between organic and non-organic WFRP loss ratios. We then consider the implications of this surprising result, which runs contrary to the widespread assumption or belief that organic farms have greater revenue risk than non-organic farms.

The question of how to measure revenue risk among organic farms has become more important than ever.

Why revenue risk matters

As noted in the Introduction, risk in agriculture is often described as falling into five main categories:

1. **Production risk** deriving from the uncertain natural growth processes of crops and livestock, affected by weather, disease, pests, and other factors.
2. **Price or market risk** based on uncertainty about market prices and the cost of "inputs" such as fertilizers and pesticides.
3. **Financial risk** arising from borrowing, interest rates, and debt.
4. **Institutional risk** related to taxation and other government actions.
5. **Human or personal risk** related to health, accidents, death, divorce, and strain on personal relationships (USDA-ERS, 2018).

By "revenue risk" we mean risk that is related to either production risk or price/market risk, as these are defined above. From the standpoint of an organic producer, both of these factors are equally important because they directly affect the farm's income. As Woodward et al. (2009) have noted, revenue risk "results from price and yield variability for the crops produced, correlations between prices and yields, as well as interactions among the crops produced" (p. 1).

When crop insurance first became available for organic crops in 2002, almost all organic farmers purchased *yield protection* insurance—which pays an indemnity when crop yields fall below a certain level, regardless of market prices. In recent years, however, *revenue protection* has become the most common type of crop insurance for all farmers, accounting for 58% of organic crop insurance policies in 2018. As the name implies, revenue protection insurance pays an indemnity when revenue falls below a certain level. An indemnity can be triggered by poor yields, low market prices, or a combination of the two.

Because of the predominance of revenue protection insurance in today's world, the question of how to measure revenue risk among organic farms has become more important than ever. Yet developing revenue-based insurance products for organic crops has historically proven difficult because of the lack of both yield and price data.

At times it has simply been assumed that organic farms have inherently greater revenue risk than non-organic farms. But reliable studies on this question are sparse, it's not entirely clear how to conduct such studies, and the assumption itself is questionable. While it's true that organic crop yields are often lower than non-organic crop yields, organic crop prices are also often higher. So, in any given year, the revenue risk of a particular organic crop (yield times price) might come out higher, lower, or about the same as its non-organic counterpart.

Are organic crop yields more variable?

The Rodale Institute has found that organic systems and crops are competitive with conventional yields after an initial 5-year transition period.

The idea that organic crops have higher revenue risk means (roughly) that these crops experience more frequent or extreme yield reductions, price decreases, or some interaction of these two sources of risk. These risks often offset each other because increases in aggregate crop prices are often caused by low aggregate yields.

There is little published research on yield variability in organic systems, and findings have been mixed. Reviewing crop insurance data from RMA, Watts and Associates found that

> "The median of the distributions consistently show conventional production tends to be more variable but the means of the distributions contradict each other. The yield variability analysis did not produce consistent results; in one case implying conventional production is more variable than organic and in the other that organic is more variable than conventional" (Watts and Associates, 2010, p. 118).

A recent meta-analysis found just two current studies supporting greater yield stability in organic production systems and two studies supporting the opposite conclusion (Seufert and Ramankutty, 2017). All four studies were limited to specific crops and regions. As RMA and academic researchers continue to collect actual production histories of organic farms across various commodities and locations, we will certainly learn more about this topic.

The question of whether organic crop yields are lower than non-organic ones has been frequently and intensively studied around the world. Crop yields are affected by numerous factors such as location, weather, farming methods, and the skill and experience of the farmers. So real-world comparisons of crop yields are always open to questions about whether measured differences can be explained by something other than the use of organic practices.

Started in 1981, the Rodale Institute's Farming Systems Trial is the longest-running side-by-side comparison of organic and conventional grain cropping systems in North America. The Rodale Institute has found that the organic systems and crops in their trial are competitive with conventional yields after an initial 5-year transition period, and yields may be up to 40% higher during times of drought, because of the increased infiltration rates and water-holding capacity of healthy soils that are high in organic matter (Rodale, 2019).

Researchers have looked closely at the yields of many organic crops in many locations. A 2019 meta-study reviewed this research and concluded that there is indeed a yield gap between organic and non-organic production systems, but the magnitude of the difference varies from one crop to another (Wilbois and Schmidt, 2019). The authors recommend that the yield-gap debate needs to be reframed in a way that recognizes certified organic production as having multiple objectives beyond maximization of yield alone. As we saw in the survey results reported in Chapter 3, organic farmers are often motivated by many and diverse reasons other than short-term profit.

Are organic prices more variable?

There have been many studies of organic crop prices. The results are mixed and don't support any general conclusion about the greater or lesser stability of organic crop prices, compared to non-organic crops.

On the one hand, the strength and robustness of organic food markets might be expected to reduce price volatility. Between 2010 and 2018, annual growth in organic food sales ranged from 6.3% to 13.8% (Organic Trade Association, 2019). A study of 17 organic food products from 2004 to 2010 found that retail prices were, on average, more than 20% higher than their non-organic equivalents, and only three of the 17 products studied showed a price decline (Carlson and Jaenicke, 2016). There also appears to be plenty of room for additional growth in organic food markets. For example, from 2013 to 2016 the U.S. supply of organic wheat, rice, corn and soybeans did not meet domestic demand (Delbridge et al., 2017).

Previous studies don't support any general conclusion about the greater or lesser stability of organic crop prices, compared to non-organic crop prices.

Another factor that might tend to reduce price volatility for organic growers is that they do not use synthetic pesticides, expensive transgenic seeds, or synthetic fertilizers. Organic prices are not exposed to the price volatility of these inputs.

On the other hand, a factor that might increase the price volatility of organic crop markets—for at least some crops and regions—is that they are "thin" markets, meaning that there are few buyers of organic crops and the volume traded in the market is generally low. In thin markets—where prices and trends are controlled by a few buyers—price transparency is limited, supply and demand do not adjust efficiently, and surpluses and gluts may cause price volatility though current research is limited on this topic.

An illustration of the low price transparency in organic food products is the lack of publicly available market information for most organic grains. One company, Mercaris, has developed an excellent data service for current organic small grain prices. However, the company's information is expensive, not publicly available, and not readily available to organic farmers.

The problem of limited access to organic market information by farmers is widely known. Among many other attempts to alleviate this problem, the non-profit organization OFARM (Organic Farmers' Agency for Relationship Marketing) provides pricing and inventory information to its members—organic farmers and their marketing groups (cooperatives)—to promote "fair, equitable, and profitable farm gate prices for all segments of organic production" (OFARM, 2019).

The upshot of the discussion above is that existing studies of organic crop yields, prices, or price variability do not support any reliable conclusion about the revenue risk of organic crop production in comparison to non-organic production. While organic yields are undoubtedly lower for many crops and locations, higher prices would often seem to more than compensate for any yield difference, and there is no reason to believe that organic prices are (in general or on average) any less stable than the prices for non-organic commodities. If anything, there is some reason to suspect that organic prices may be more stable than those for non-organic products.

Comparing loss ratios between users of Whole-Farm Revenue Protection

As explained in the previous chapter, a *loss ratio* is the mathematical result of dividing insurance indemnities (pay-out) by insurance premiums (pay-in).[1] Loss ratios are used to set insurance premiums, but they can also be used to compare the insurable risk of a farm or group of farms, provided that the farms are similar enough to each other, so that factors such as weather and soil types are held relatively constant. If two farms right next to each other grow the same crop, use the same methods, and buy the same type of crop insurance, the one with a higher loss ratio (in a given year or over time) generally has larger or more frequent losses. Likewise, a loss ratio of one represents a farm that breaks even with its crop insurance.

As an indicator of the revenue risk of organic farms, WFRP loss ratios are clearly superior to crop-specific loss ratios or average loss ratios across all types of insurance.

Below we compare loss ratios from organic and non-organic farms that bought Whole-Farm Revenue Protection (WFRP) insurance during the 2015, 2016, and 2017 crop years. We are grateful to RMA for making previously unavailable farm-level data available to our project (USDA-RMA, 2018).

Why WFRP loss ratios are a superior indicator of revenue risk

Previous research has found high loss ratios for many certified organic crops, but as we saw in Chapter 5, these studies are unreliable as evidence about the actual revenue risk of organic farms. These studies aggregate loss ratios from various insurance products (some yield-based and others revenue-based). There are wide differences in loss ratios among crops. A crop-by-crop approach makes no allowance for the fact that most organic farms derive their revenue from multiple crops. Organic loss ratios might also be distorted by adverse selection: a pattern where predominantly high-risk farmers buy insurance.

In contrast to these earlier studies, we compared WFRP loss ratios between organic and non-organic farms. As an indicator of the revenue risk of organic farms, WFRP loss ratios are superior to crop-specific loss ratios or average loss ratios across all types of insurance**.** For one thing, WFRP protects the whole farm's revenue, so WFRP loss ratios capture volatility in both prices and yields. Moreover, WFRP loss ratios capture effects of crop diversification on a farm's revenue—a major risk-reduction strategy employed by organic farms.

Methodology

Below we examine two questions:

1. Are there statistical differences in the loss ratios of organic and non-organic users of WFRP? and
2. Is the mean Diversity Factor different for organic and non-organic users of WFRP?

We use farm-level data to compare organic and non-organic loss ratios and production diversity. Variables of interest are the number of policies sold, the number and types of crops and livestock products insured, and the expected (estimated) value of the crops and livestock products insured.

Importantly, WFRP provides significant discounts in premium costs depending on the number of products farmed. For instance, a farmer who produces seven or more products can get a 41% discount on the base premium rate of the policy. Besides allowing us to compare loss ratios on organic and non-organic farms, the farm-level data that we received from RMA also allowed us to study whether diversified farms are less risky.

In calculating the premium discount for product diversification, RMA uses something called a "diversity factor" (DF), with values ranging from 0.41 to 1.0. The diversity factor enters into the premium calculation as a multiplier. So, low DF does not mean low diversity, but (on the contrary) high diversity, resulting in large reduction to the premium. A WFRP purchaser with a "commodity count" of seven or higher is assigned the lowest possible DF of 0.41, meaning a substantial diversity discount on their premium. At the other extreme, an applicant growing just one crop would be assigned a DF of 1.0, meaning no diversity discount whatsoever.

Above a commodity count of 7, there is no further premium discount advantage, and all farms have the same DF. There are very few WFRP policies written for farms with a commodity count higher than 7. Between 2015 and 2017, just 22 WFRP policies had a commodity count higher than 7, or 0.4% of all policies sold.

Between 2015 and 2017, just 22 WFRP policies had a commodity count above 7: only 0.4% of all policies sold.

Results

Table 6.1 summarizes WFRP sales to organic and non-organic farms between 2105 and 2017. Clearly, organic farms accounted for just a small percentage of WFRP policies, premiums, and indemnity values, although these numbers were increasing.[2] Organic policies were also increasing both in number and in terms of value of premiums and indemnities paid. And we can see that WFRP is a very small crop insurance program in comparison to the total liability value covered under all federal crop insurance programs.

Table 6.1. Differences between organic and non-organic WFRP policies

	2015	2016	2017
Organic Premium Value as % of Total Premium Value	0.4%	1%	5%
Organic Indemnities Value as % of Total Premium Value	0.1%	0.8%	7%
Number of States with Organic WFRP Policies	3	18	16
Number of States with Non-Organic WFRP Policies	34	42	44
Total WFRP Policies	1,122	2,203	2,740
Total Organic WFRP Policies	7	35	104
Total Number of All Federal Subsidized Crop Policies (millions)	2.2	2.2	2.2
Total Liability Coverage All WFRP Policies ($ billions)	$1.2	$2.3	$2.9
Total Liability of All Federal Subsidized Crop Policies ($ billions)	$102.5	$100.6	$106.1

Source: RMA, 2018a

Table 6.2 shows loss ratios (LR) for organic and non-organic WFRP policyholders in each year and for all three years combined. In two out of three years (2015 and 2016) the overall loss ratio for organic farmers was lower than that of non-organic farmers. Across all three years, the average organic loss ratio was nearly the same as the average for non-organic farmers. Thus, if we take WFRP loss ratios as a reasonable proxy for revenue risk, the organic farms that bought WFRP had no greater revenue risk than non-organic farms that bought WFRP, during the years studied.

Table 6.2. Individual loss ratios for organic vs. non-organic users of WFRP

	2015	2016	2017	2015-2017
Organic	1.11	1.31	1.33	1.32
Non-Organic	1.72	1.47	1.00	1.31
All Policies	1.72	1.47	1.01	1.31

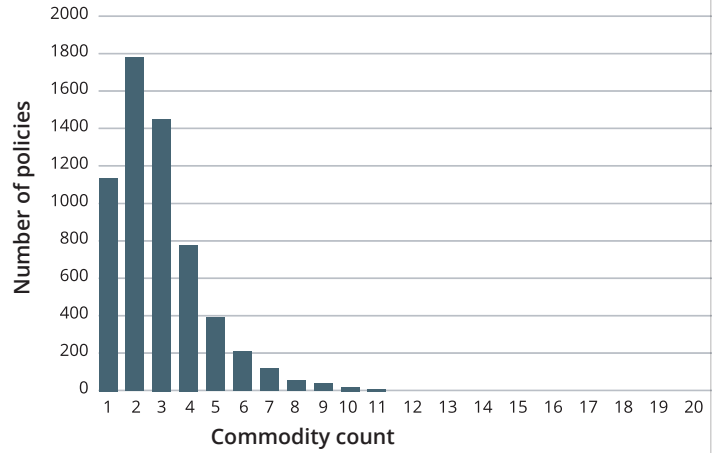
Source: RMA, 2013a as of November 27, 2018

Product diversification and whole-farm revenue risk

The evidence that loss ratios of organic and non-organic users of WFRP are not statistically different calls for an explanation. While there is no simple answer to this question, some data about product diversity may help to explain. Figure 6.1 below shows the commodity count of each of the 6,065 WFRP policies sold from 2015-2017.

WFRP is not, at least to date, attracting highly diverse production systems.

Figure 6.1. Number of products per WFRP policy, 2015-2017



Source: RMA, 2018a

Although the chart above does not separate organic from non-organic policies, clearly the distribution is skewed toward policies with less than four products. To date, WFRP is not attracting very diverse farms, and this may contribute to the high overall average of WFRP loss ratios. This is a surprising result because WFRP was designed to meet the needs of diversified growers, and since the discounts in premium costs for diversity are significant. Why isn't WFRP attracting more farmers with diverse production systems?

If we look at the previously-described Diversity Factor (DF) variable, Table 6.3 shows only slight differences between organic and non-organic users of WFRP. Non-organic policies have a slightly higher DF (0.70), indicating less diversity than the mean organic DF (0.62). However, a z-test of the means shows no significant statistical differences between the mean DF values.

Table 6.3. Organic vs. non-organic diversity factor WFRP, 2015-2017

	Non-organic Diversity Factor	Organic Diversity Factor
Mean	0.70	0.62
Standard error	0.00	0.01
Median	0.67	0.58
Mode	1.00	0.41
Standard deviation	0.18	0.17
Minimum	0.41	0.41
Maximum	1.00	1.00
Sum	4,142.03	91.08
Count	5,919	146

Source: RMA, 2018a

Finally, an examination of the relationship between LRs and DFs shows some positive correlation for both organic and non-organic WFRP policies. The simple correlation statistic between organic LR and organic DF is 0.12, which is very weak. Likewise, the correlation statistic between non-organic LRs and non-organic DF's is 0.17, a bit stronger but still weak.

If we examine the expected value of products (crops & livestock) being insured by WFRP from 2015-2017, Table 6.4 offers some interesting information.[3]

Table 6.4. Expected value of top 20 crops insured by WFRP in 2015-2017

	Expected value	of Total
Apples	$2,315,171,912	25%
Corn	$705,660,312	8%
Potatoes	$533,451,861	6%
Wheat	$509,548,873	6%
Cherries	$505,611,361	5%
Soybeans	$419,763,131	5%
Alfalfa	$378,075,475	4%
Pears	$283,668,026	3%
Almonds	$241,377,445	3%
Onions	$226,257,256	2%
Grapes	$210,524,520	2%
Barley	$173,950,855	2%
Cotton	$171,672,590	2%
Sweet Potatoes	$161,192,391	2%
Watermelons	$136,002,033	1%
Walnuts	$131,662,478	1%
Cattle	$128,124,492	1%
Blueberries	$122,169,889	1%
Sugar Beets	$113,262,253	1%
# Products: 20	$7,467,147,153	80%

Note: Total different number of products insured is 165 (not all shown) and the total expected value is $9.2 billion dollars.

During the years studied, organic and non-organic farms had essentially identical WFRP loss ratios.

First, note the significant value of apples insured under WFRP. This is not totally unexpected, since there are many WFRP policies sold in Washington, where there is significant apple production. In addition, note the significant value of traditional commodity crops like corn, wheat, and soybeans covered by WFRP. This result is unexpected because Revenue Protection policies for these crops generally offer greater revenue risk protection than WFRP. Unless producers have more than three of these crops in their production system, Revenue Protection is likely less expensive and covers greater price risk.

The most likely reason for the prominence of WFRP for insuring apples and other fruit in Washington is because there are no crop-specific Revenue Protection policies for these crops. The only alternative to WFRP for insuring these crops would be Actual Revenue History policies, which are limited to certain states and counties and only provide yield protection, not revenue protection.

Dropping less diverse farms

Since so many WFRP policies are one- and two-product policies, would dropping these farms change the results? Table 6.5 below shows organic and non-organic loss ratios when one- and two-product policies are removed from dataset.

Table 6.5. WFRP loss ratios for policies with commodity count of 3 or higher

	Non-organic Diversity Factor	Organic Diversity Factor
Mean	0.95	1.18
Standard Error	0.04	.24
Median	0	0
Mode	0	0
Standard Deviation	2.26	2.48
Minimum	0	0
Maximum	18.13	15.84
Sum	2,877.08	130.90
Count	3,023	111

Organic WFRP policies represented just 2.4% of WFRP policies sold during the period studied. It is unclear why so few organic farmers are using WFRP.

The mean loss ratio of non-organic policies in this new case is slightly lower than that of organic policies. However, there were a lot more non-organic one- and two-product policies removed than organic one- and two-product policies. A z-test of the mean values of organic and non-organic loss ratios resulted in no statistical significant differences between loss ratios. Finally, there was no statistical difference in diversity factors between organic and non-organic WFRP policies in the table above.

Discussion

The most unexpected and significant result of this research is that, during the years studied, organic farms had essentially identical loss ratios to non-organic farms. If we take loss ratios as a reasonable proxy for revenue risk, this would suggest that these organic farms had no greater revenue risk than non-organic farms. This result contradicts the generally higher average loss ratios for organic farms across all crops and policies that we saw in Chapter 5.

Organic WFRP polices represented only 2.4% of WFRP policies sold during the period studied. A lot more non-organic farmers are using WFRP than organic farmers. This was an unexpected result, considering that WFRP appears to be an excellent fit for diversified organic producers who generally cannot insure all their crops separately, particularly at their full organic values. It is unclear why WFRP is not being used by more organic farmers, given the premium discounts and ability to cover the generally higher value of organic crop and livestock production.

We were surprised to learn that WFRP has almost become a substitute for a single-crop revenue protection policy for apples and other monoculture and two-crop systems. It is debatable whether WFRP has yet been able to meet the needs of farmers who are highly diverse. In part this may be because, as crop and livestock diversity increases, diversity itself becomes a less expensive strategy than buying crop insurance as a way to provide revenue risk protection.

We were also surprised by the large number of traditional commodity crop farmers using WFRP, despite seemingly better single-crop revenue policies available. A possible explanation is that these farmers use WFRP as an umbrella policy while still taking out Revenue Protection on those commodity crops that provide a significant part of their total revenue.

Finally, it would be interesting to learn how many specialty crops are being insured for the first time with WFRP. Many single-crop policies are highly limited geographically, whereas WFRP is available nationwide.

Limitations of this study

Our sample size was small. We looked at loss ratios for 6,065 WFRP policies purchased between 2015 and 2017. Of these, just 146 (2.4%) were purchased by certified organic farms. These 6,065 policies represent less than 0.1% of the roughly 6.6 million crop insurance policies purchased during this period. And as noted above, there is far less organic production value being insured with WFRP than non-organic production value, making comparisons tentative from a statistical perspective.

It is by no means safe to assume that the farmers we studied—purchasers of WFRP—are representative or typical. They are skewed towards certain states, notably the northwestern United States, where the majority of WFRP policies were purchased during the period studied. They are also skewed towards certain crops, especially apples.

Finally, our analysis is plagued by the issue of adverse selection. Like all previous loss ratio studies, our study was limited to persons who buy crop insurance—raising the possibility that adverse selection is skewing our results. How can we know or compare the degree of risk aversion and risk-taking behavior among organic and non-organic farmers who take out WFRP?

In the next chapter, we will take another look at WFRP loss ratios, using a novel approach that corrects for adverse selection.

NOTES

1. Total premium includes both the portion paid by the farmer and the portion paid by taxpayers. Average taxpayer subsidy in 2018 was about 64% of total premium cost.
2. This trend changed in 2018, when WFRP sales declined slightly from the previous year.
3. Expected value is the estimated value of products when they are insured, at the beginning of the growing season. This not the same as the final approved revenue when making a claim.

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Chapter 7:

An empirical analysis of crop insurance performance for diversified organic and conventional production systems

By Eric Belasco, Ph.D.

A notable shortcoming of many past studies of organic crop insurance (e.g., Watts and Associates, 2010), is that they have included only those who participate in crop insurance programs. This introduces potential bias because those who participate in crop insurance may be systematically different from those who do not participate.

For example, past experience has indicated that when insurance participation rates are low, those who participate tend to be riskier than average. Adverse selection occurs when the actual risk of applicants is higher than the risk known by the insurance company. In this situation, high-risk producers will be more likely to participate, and low-risk applicants will tend to avoid participating (Rothchild and Stiglitz, 1976). In the case of crop insurance, Makki and Somwaru (2001) have shown that adverse selection can lead to mispricing the high- and low-risk farmers, such that lower-risk participants are steadily driven out of the insurance pool—a pattern that has been called the "death spiral of adverse selection."

In this chapter we use a unique set of data to evaluate hypothetical crop insurance performance.

In Chapters 5 and 6, we looked at loss ratios for organic farms that bought crop insurance between 2009 and 2018, noting the logical fallacy of assuming that these farms were necessarily typical or representative of organic growers as a whole. In this chapter, we build on that analysis and avoid this fallacy and potential bias by using a unique set of data to evaluate hypothetical crop insurance performance without distinguishing between those who participate and do not participate in crop insurance.

This study uses a panel of farm-level production and financial data to evaluate the effectiveness of utilizing Whole-Farm Revenue Protection (WFRP) insurance in diverse farming operations. Farms were selected in Minnesota that grow two or more products in order to focus on farms that would potentially be good candidates for WFRP. Hypothetical premiums are computed and the performance of WFRP is simulated through actual farm performance figures. Farms are split between those that produce certified organic products and conventional farms in order to compare the riskiness of these different production systems.

This study provides two major contributions: It is the first study to evaluate the effectiveness of WFRP by using farm-level data. It is also the first study to evaluate the relative riskiness of organic and conventional farms, and their comparative performances within crop insurance utilization, by examining all farms and not limiting the analysis to those who buy crop insurance. Empirical evidence is provided to support the claim that organic farms appear to be less risky than conventional farms, as measured by lower loss ratios.

Data and methods

Data were collected from the Farm Financial Management Database (FINBIN).[1] This data is collected from farmers participating in the FINPACK farm management education programs and includes a panel series of production and financial information for farms across participating states and

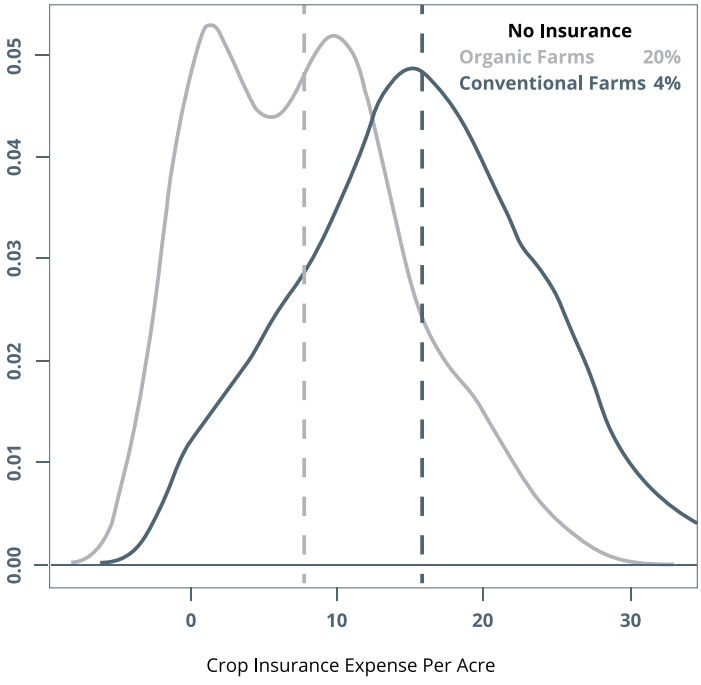
includes information across time. Data are provided for 590 Minnesota farms, which includes 51 farms that produce some amount of certified organic production and 539 conventional farms who have no certified organic production.[2] Each farm provides crop-specific detail that can be tracked from between 5-8 years, which is sufficient to establish a revenue guarantee under most crop insurance programs.

In order to initially examine the relative differences between organic and conventional production systems and their relative performance of crop insurance, it is important to understand the unique differences between the two groups. In Table 7.1 below, a pooled t-test is used to show which variables have a statically different mean. Based on that test, we find that organic farms tended to be smaller, in both acreage and sales, had lower crop sales per acre, and had lower off-farm income. Each of these indicators falls in line with a hypothesis that organic farms demand more labor inputs and therefore tend to take place on a lower scale with less off-farm work opportunities. Crop insurance expenses are also shown to be lower, on a per-acre basis, among organic farms.

Table 7.1. Simulated insurance performance results, by production type

	Average		Pooled t-test	
Variable	Organic	Conventional	Statistic	p-value
Age of operator	49.30	47.48	1.20	0.23
Years of farming experience	26.92	24.59	1.37	0.17
Total crop acres	435.51	1,139.80	-8.97	< 0.01
Total crop sales ($1,000s)	119.36	496.00	-5.29	< 0.01
Crop sales per acre	210.04	381.58	-10.99	< 0.01
Total livestock sales ($1,000s)	157.68	162.13	-0.14	0.89
Other income	57.37	107.89	-3.31	< 0.01
Total crop insurance expenses ($1,000s)	4.17	20.29	-13.03	< 0.01
Crop insurance expense per acre	7.83	15.82	-8.04	< 0.01
Debt to asset ratio	37.00	36.93	0.02	0.98
Rate of return on farm assets	6.89	11.11	-4.86	< 0.01
Operating expense ratio	71.21	67.19	2.10	0.04

Figure 7.1. Empirical histogram of crop insurance expense per acre, by production type



As shown in Figure 7.1, 20% of organic farms did not purchase crop insurance, while only 4% of conventional farms did not purchase crop insurance. It is also clear that the mean of the empirical distribution for conventional farms is significantly higher than that of organic farms. Interestingly, debt-to-asset ratios do not appear to be statistically different from one another, even given the differences in scale. Each of these variables indicates the multivariate differences between organic and conventional farms.

These differences are also demonstrated in Table 7.2, which shows differences in the share of crop acreage, by commodity.

Table 7.2. Percentage of land devoted to each commodity, by production type, average 2006-2013 (n=590)

Crop	Conventional	Organic
Soybeans	37	20
Corn	26	16
Spring wheat	18	13
Hay	2	21
Sugar beets	6	3
Pasture	0	8
CRP	1	5
Barley	1	3
Corn, silage	2	2
Oats	0	3
Other	7	6

For example, conventional farms devote more than 60% of their acreage to corn and soybeans, while another 18% is devoted to wheat. These three main commodities comprise 81% of the total acreage. For organic farms, the share of these same commodities comprises 49% of total acreage. In addition to these commodities, 21% is devoted to hay production, 8% to pasture, while the remainder is spread fairly evenly across other commodities. These differences are likely the result of demands placed on the organic dairy industry for hay and pasture.

This panel series allows for an assessment of hypothetical use of crop insurance and avoids the problem associated with adverse selection that would be inherent if only those who participate in crop insurance programs were included. One notable study that compared the crop insurance performance of organic and non-organic farms (Watts and Associates, 2010) included only farms with crop insurance, which is a pretty small proportion of organic farms. Our study avoids that potential bias in sample selection by simulating the use of crop insurance on existing farm operations. By using this metric, we can compare the use of crop insurance by organic farms to that of their conventional counterparts.

Our study avoids the problem associated with adverse selection that would be inherent if only those who participate in crop insurance were included.

One crop insurance product that is of particular interest is Whole-Farm Revenue Protection (WFRP). In order to simulate hypothetical rates for WFRP, we collect base rate data from the RMA and derive premiums assuming the following:

$$PR_{ick} = \left(\sum_{k=1}^{K} CBR_{ck} * RevShare_{ik}\right) APH_i EF_i CL_i (1 - S_i)$$

where PR_{ick} is the premium for individual *i,* county *c,* and commodity *k.* Additionally, *CBR* is the county base rate, which is unique for each county-commodity combination, *RevShare* is the share of revenue devoted to commodity *k* for each farm, *APH* is the average historical revenue and basis for guarantee, *EF* is the allowable expansion factor, *CL* is the coverage level selected, and *S* is the subsidy rate. The allowable expansion factor allows farm guarantees to increase up to 35% when proof of expansion is provided. This is

particularly notable in this exercise, since Minnesota farms experienced a large amount of expansion in the organic dairy, hay, and corn sectors. Coverage levels are available, as with other crop insurance products, between 50% and 85% in 5% increments. In simulations, we assume a 75% coverage level.

Premiums *(PR)* are computed and indemnities *(I)* are provided when the actual revenue *(REV)* falls below the revenue guarantee *(RG),* written as

$$I = \max(RG - REV, 0)$$

where $RG = APH * EF * CL$. Hypothetical indemnities and premiums are then added to the actual profits, in order to determine the performance of using WFRP on these operations.

313 farms participated in all the prediction years: 26 organic and 287 conventional.

Results

Results from the simulation are provided in Table 7.3 below, and compare the performance for the total sample, organic farms, and conventional farms. Since data from 2002-2010 are used to establish a revenue guarantee with the farms, data from 2011-2013 are used to simulate the use of WFRP. As can be seen in Table 7.3, some farms dropped out of the survey as they stopped participating in the program over that time period. That being said, there were 313 farms that participated in all the prediction years. Of those farms, 26 were organic farms while 287 were conventional farms.

Table 7.3. Simulated insurance performance results, by production type

Variable	2011	2012	2013
Total sample			
Total producer count	480	440	313
Producers receiving indemnity	19	13	14
Total premium paid (in $M)	3.94	3.77	3.13
Premium per acre ($ per acre)	10.23	10.49	12.85
Total indemnities paid (in $M)	1.59	0.94	0.95
Mean crop acres (in 1,000s)	1.21	1.21	1.17
Average growth in acreage (%)	4.52	2.33	1.86
Loss ratio	0.08	0.05	0.06
Organic farms			
Total producer count	28	34	26
Producers receiving indemnity	2	2	2
Premium per acre ($ per acre)	13.97	13.19	15.54
Mean crop acres (in 1,000s)	0.58	0.57	0.64
Average growth in acreage (%)	2.83	5.23	6.88
Loss ratio	0.02	0.10	0.05
Conventional farms			
Total producer count	442	406	287
Producers receiving indemnity	17	11	12
Premium per acre ($ per acre)	9.94	10.29	12.62
Mean crop acres (in 1,000s)	1.27	1.62	1.22
Average growth in acreage (%)	4.73	2.09	1.40
Loss ratio	0.08	0.05	0.06

Premiums per acre were about 30% higher for organic farms, which is consistent with the higher prices organic products receive. While both organic and conventional farms experienced average growth in all years, organic farms experienced an average of 6% growth in 2012-2013. Loss ratios remained

strikingly low throughout this period. The Risk Management Agency has a loss ratio target of 1.0 in an effort to ensure programs are actuarially fair. Loss ratios during this period were substantially low during this period, which is likely due to the growing demand for organic grains throughout Minnesota. For example, in 2013 the loss ratio for all organic farms was 0.05, which is lower than the loss ratio of 0.06 for conventional farms in the same year. In two of the three years, the loss ratio for organic farms was lower than that of conventional.

Table 7.4 below gives indemnity information for all farms receiving indemnities. One notable indicator to determine the amount of losses experienced is the ratio between indemnities and liability. If this indicator is closer to one, it indicates that losses were nearly equal to the full amount of insured liability. If the indicator is closer to zero, it indicates relatively small indemnities paid, relative to the total liability. During times of losses, the amount of losses is found to be quite high for both organic and conventional farms. For the entire sample, the indemnity to liability ratio was never lower than 30% for those experiencing losses. However, for organic farms, the losses were significantly smaller, as the proportion of simulated indemnities in the final two years was below 20%. This may indicate that organic farms are more resilient to deep losses, which can arise from extra attention paid to soil quality and other management tactics used to minimize large losses.

In two of the three years studied, the loss ratio for organic farms was lower than that of conventional farms.

Table 7.4. Simulated insurance performance results for those receiving indemnities, by production type

Variable	2011	2012	2013
Total sample			
Average indemnities paid ($)	83,578	7,508	67,534
Average premium paid ($)	5,939	4,062	3,154
Average liability paid ($)	263,395	208,119	165,436
Indemnities to liability ratio	0.32	0.35	0.41
Organic farms			
Average indemnities paid ($)	8,306	36,858	14,215
Average premium paid ($)	543	4,639	1,399
Average liability paid ($)	29,233	233,299	73,944
Indemnities to liability ratio	0.28	0.16	0.19
Conventional farms			
Average indemnities paid ($)	92,433	78,990	76,421
Average premium paid ($)	6,574	3,957	3,447
Average liability paid ($)	290,944	20,541	180,685
Indemnities to liability ratio	0.32	0.39	0.42

Discussion

These results provide some insights into the ability to use Whole-Farm Revenue Protection insurance on diversified operations and compares the usage for organic and conventional production systems. While past studies have used crop insurance participation data to compare the performance of organic and conventional production systems, this analysis avoids the potential contamination of adverse selection and simulates across a set of diverse producers across Minnesota, utilizing actual production and financial histories.

While WFRP continues to grow, this application investigates its viability within real farms. This data also presents a rare opportunity to observe a panel series of farms long enough to establish revenue histories, as well as hypothetical performance under the insurance program. Future research regarding crop

insurance for products with relatively low participation rates would be more accurate by performing analysis in a way that avoids any potential adverse selection biases. For example, while Chapter 5 reviewed studies that have shown loss ratios to be higher under organic production systems, this research refutes that claim.

One caveat to this research is that the sample is relatively small and limited geographically to Minnesota. Future analysis using data in data that are more nationally-representative, such as the Agricultural Resource Management Survey (ARMS) is recommended. A larger dataset would provide the opportunity to evaluate more general trends in organic and non-organic production risk, though finding a data source that provides a nationally-representative production sufficient to establish insurance guarantees is a major challenge.

Using WFRP is likely the most accurate way to examine the revenue risk facing an organic operation, since diversification is a key element of many organic production systems.

A second caveat in this study is that it ignores any potential moral hazard, which may exist. For example, farmers who purchase insurance have been shown to make different decisions regarding production, finance, credit, and chemical use.

With these caveats in mind, this study acknowledges the difficulty in evaluating organic production risk, particularly in a diverse setting. For this reason, it was argued in Chapter 6 that using WFRP is likely the most accurate way to examine the revenue risk facing an organic operation, since diversification is a key element of many organic production systems. This study accounts for this difference and shows that those risks in an organic system are not larger than under a non-organic system.

While the RMA is required by law to rate policies that are actuarially fair and to maintain loss ratios no higher than 1.0, as organic policies expand and more organic farmers participate in crop insurance, these histories are likely to be more accurately reflected through loss ratio analysis. This study cautions against using loss ratio analysis as the only tool for evaluating the accuracy and fairness of rating for crop insurance, particularly in areas of low participation.

NOTES

1. We would like to thank Dale Nordquist and the University of Minnesota Center for Farm Financial Management for providing access to the FINBIN database and for their insights on the topic of this paper.

2. Dr. Timothy Delbridge has also studied and compared organic and conventional farms in the FINBIN database, with funding from USDA-NIFA grant #2010-51300-21401. See Delbridge et al., 2013.

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Chapter 8:
Recommendations for improving crop insurance for organic farms

In previous chapters we have characterized the ways that organic farms currently use crop insurance and the main problems they are encountering. In this chapter, we discuss problems specifically affecting organic growers and offer solutions to these problems. In Chapter 9 we will offer recommendations for improving Whole-Farm Revenue Protection—which is not limited to organic growers but is well-suited to their needs and important to their future.

In this chapter, we discuss problems specifically affecting organic growers and offer recommendations and solutions.

Our research has found six general problems affecting organic growers:

1. Limited availability of single-crop policies for specialty crops;
2. Limited grower understanding of crop insurance options;
3. Actuarial calculations and premium costs that do not accurately reflect the experience of many organic growers;
4. A lack of clarity about "good farming practices";
5. Estimates of insurable revenue that are often too low; and
6. Insufficient understanding of organic farming by agents, adjusters, and other industry professionals.

Problem #1: Limited availability of single-crop policies for specialty crops

As we saw in Chapters 2 and 3, individual coverage does not exist for many common fruits, vegetables, and other specialty crops. Moreover, when policies do exist availability may be extraordinarily limited. For example, cabbage can be grown all over the country, but insurance is available in just 13 states, including only one county in North Carolina and only one county in Texas.

These problems affect organic growers disproportionately because about three-quarters of the value of organic production is in specialty crops, compared to only about one quarter of the value of non-organic production.

When there is no policy in their county for a crop they are growing, producers have three main options:

1. They can petition the RMA to create a policy in their county, for the crop they want to insure.
2. They can request a "written agreement": "a document designed to provide crop insurance for insurable crops when coverage or rates are unavailable." While less complicated than petitioning for creation of a new insurance policy, getting approval for a written agreement requires providing enough data to determine "actuarially sound premium rates and yields" (USDA-RMA, 2019a).
3. They can buy a Whole-Farm Revenue Protection (WFRP) policy.

Creating a new crop-specific policy is a time-consuming process that ordinarily requires collecting a significant amount of county-specific production data. With over 3,000 counties in the United States, and hundreds of crops that can theoretically be grown, it would be extremely difficult and expensive for RMA to create single-crop policies in all the counties where they could be used.

Coverage for specialty crops has steadily improved over the past 15 years, and RMA now needs to prioritize further product development efforts because policies have already been created for a lot of the "easiest" crops: ones with abundant yield and price data. Creating policies for less common crops will be more expensive and, in a sense, less cost-effective because yield and price data is so hard to find. At some point, it becomes difficult to justify a high expenditure of public funds to create a policy that only a few growers want or need. Organic farms poses exactly the same problem: Their relatively low number makes them expensive to insure. WFRP offers a way out of this conundrum: It allows USDA to provide insurance for all crops, even minor and unusual ones, with less effort and less expenditures of public money.

Crop insurance availability is the number one problem for organic farmers who are trying to insure commonly grown horticultural crops.

Recommendation: Improve access to single-crop revenue-based policies with organic price elections in more counties nationwide.

Discussion: As we saw in Chapters 2 and 3, organic field crop producers are generally well-served by the policies available to them, while horticultural crops (except for apples and a few others) are less well-served.

Crop insurance availability is the number one problem for organic farms trying to insure horticultural crops. There are three parts to this problem:

1. There is no individual coverage for many common fruits, vegetables, and other specialty crops.
2. When policies exist, they are geographically limited, sometimes to an extreme degree.
3. Organic price elections are only available in certain counties: not all the counties where the individual coverage is available.

In May 2019, RMA reported that "100 percent of the crops covered by Federal crop insurance for the 2019 crop year have been assessed for organic coverage," and organic price elections had actually been created for 80 of these commodities (USDA-RMA, 2019). While this represents excellent progress, organic farms will still often find that there is no individual policy for the crop they are growing. Or coverage might be unavailable in their county. Or there might be a policy but no organic price election. Or there might be an organic price election that is not available in their county.

We recommendation continued development of single-crop policies with some reservations because, as explained above, high cost and data collection requirements will limit the number of policies that can be created, and also raise fairness concerns. Decisions about which crops to make insurable put RMA in the uncomfortable position of "picking winners and losers." Crops also sometimes remain on the list of insurable commodities even after they have declined in economic importance. For example, the current list of around 100 insurable commodities includes eight types of tobacco.

Whole-Farm Revenue Protection (WFRP) represents a great improvement on the traditional crop-by-crop approach and takes RMA out of the position of picking winners and losers. Given the "pilot project" status of WFRP, and its uncertain future, we urge RMA to continue efforts to expand single-crop coverage. But the WFRP approach ultimately seems more comprehensive, fair, and cost-effective: a wiser expenditure of public funds.

Recommendation: Pilot a type of simple and inexpensive Catastrophic Risk Protection (CAT), possibly within WFRP, aimed at small and diversified fruit and vegetable growers.

Discussion: At present, Catastrophic Risk Protection (CAT) provides a low-cost yield protection for an administrative fee of $300, but is limited to certain crops and locations and depends on having a yield history for the crops being insured. As we learned from our grower survey (Chapter 3), very small organic fruit and vegetable growers who direct market their products often find the paperwork of a crop insurance application daunting. Having some kind of simple and inexpensive catastrophic protection would serve a useful purpose. This kind of coverage could be offered as an option within WFRP, although in that case growers would presumably need to have at least three years of historical farm revenue to apply.[2]

Problem #2: Limited grower understanding of crop insurance options

Crop insurance is still a relatively new topic for many organic farmers, and the survey results in Chapter 3 showed a need for education to help these growers understand their crop insurance options. This need is most acute among horticultural crop growers, who are still using crop insurance at low rates.

Recommendation: Maintain and increase general education aimed at introducing basic concepts of crop insurance, along with new options for organic farms, to wide audiences.

Discussion: In our grower survey (Chapter 3), 69% of organic growers said they knew little or nothing about the crop insurance products available to them. General education should be aimed not just at farmers but at service and support groups such as organic inspectors, Cooperative Extension, seed and input sales persons, and crop consultants, banks and financial institutions, and organic advocacy organizations.

Recommendation: Launch new educational efforts targeted to specific commodities and markets, especially mid- to large-scale horticultural crop growers and others with low historic crop insurance participation rates.

Discussion: Both our review of USDA data (Chapter 2) and our grower survey (Chapter 3) confirmed that organic grain and field crop producers are already heavily using crop insurance. We also saw that there are large underserved markets with a wide gap between crop values and insurance liability. These areas of unmet need are most obvious in horticultural crops. Moreover, our grower survey showed that mid- to large-scale farms are most receptive to new information about crop insurance. Taken together, these results point to mid- to large-scale horticultural crop growers as a high priority audience for education and outreach.

We think previous educational efforts have overemphasized small organic farms that are direct-marketing their crops. This is understandable, because these farms are easy to reach at conferences and make up a large percentage of the membership of many sustainable farming organizations. Reaching larger growers who are selling wholesale is challenging. We have three suggestions:

- First, we recommend working closely with fruit and vegetable trade associations, helping them educate and support their members. Many large fruit and vegetable farms are actively involved in these trade associations.
- Second, North Carolina has created a model that other states could imitate. Realizing that mostly small, direct-marketing farms were attending its

We recommend working closely with fruit and vegetable trade associations, helping them educate and support their members.

annual Sustainable Agriculture Conference, the Carolina Farm Stewardship Association launched a separate annual conference—the Organic Commodities and Livestock Conference—for larger growers who sell predominantly by wholesale.

- Third, we suggest that the Specialty Crop Block Grant Program of the USDA Agricultural Marketing Service (AMS) make a specific effort to encourage research and educational projects related to crop insurance.[3]

Problem #3: Actuarial calculations and premium costs that do not accurately reflect the experience of many organic growers

No farmer should be penalized or lose coverage under any federally subsidized crop insurance policy for using practices that are approved under NRCS guidelines.

Recommendation: Continue to adjust single-crop policy rates so they better reflect the growing body of experience among organic farmers.

Discussion: RMA should follow through on the recommendation from the Office of the Inspector General audit (2013) to adjust T-yields in the light of all available data about actual organic yields on a crop-by-crop and county-by-county basis. As we saw in Chapter 5, the T-yield reduction remains at 35% for crops accounting for the great majority of organic crop insurance liability. This results in arbitrary reductions in expected yield for organic crops, and in certain cases results in lower indemnity payments.

As one example, in Hill County Montana, the organic winter wheat T-yield for the 2020 crop year is 19 bushels per acre. This is 35% less than the non-organic T-yield of 29 bushels per acre. However, the average actual yield of organic winter wheat in Montana in 2016 (latest available data) was 27 bushels per acre. So, at least in 2020, organic farmers (and others whose insurance calculations require T-yields) will likely be underinsured.

As more organic farmers establish actual production histories, organic crop-based T-yields should become possible, replacing the current method which is largely based on multiplying non-organic yields by a coefficient. We agree with Singerman et al. that this method, while it may have been the only feasible approach in the early days of organic crop insurance, is no longer adequate:

> "Linking organic crops to their conventional counterparts creates faulty ratings in their insurance coverage. Yield differences have not adequately been taken into account. Price relationships between organic and conventional crops are not as consistent as current crop insurance rules imply. Organic crop markets have unique characteristics when compared with their conventional counterparts. Such idiosyncrasies need to be taken into consideration by RMA when setting crop insurance policy for organic farmers."
> (Singerman et al., p. 6)

Recommendation: Conduct further research on how adverse selection impacts the use of crop insurance by organic producers.

Discussion: As explained in Chapters 5-7, there is reason to believe that adverse selection is a significant factor in the population of organic farmers who are buying crop insurance. If true, this would create a distorted and negative picture of the production and financial risks of organic farming—leading to various errors in the way products are priced and crops are valued as well as distorting loss ratios. Raising premiums would very possibly aggravate this problem, pushing loss ratios even higher.

Problem #4: A lack of clarity about "good farming practices"

As we saw in both our grower survey (Chapter 3) and agent survey (Chapter 4), a lack of clarity about GFPs puts organic growers at risk when filing claims and erodes their confidence in the reliability and value of crop insurance. There are numerous gray areas. For example, can you file a successful claim if:

- While transitioning to organic production you stop using pesticides and your farm is overwhelmed with aphids?
- You interplant marigolds in your tomatoes, do not spray copper for late blight, and your crop is wiped out?

Despite considerable progress, there are also still inconsistencies between USDA agencies, especially between RMA and NRCS, such that growers following conservation guidelines may be putting themselves at risk for having their crop insurance claims denied.

Recommendation: Establish a policy to the effect that having a current valid organic certification and being in compliance with an approved Organic System Plan suffices as prima facie evidence that an organic grower is using good farming practices.

Discussion: USDA-certified organic growers are among the most regulated and inspected of all producers, and they are held to an extraordinarily high level of performance and care. All certified organic growers are required to follow an Organic System Plan (OSP) that has been reviewed and approved by a USDA-licensed organic inspector. The OSP is essentially a detailed plan for ensuring normal crop growth and maturity while complying with the rules of the National Organic Program.

As we saw in Chapter 1, organic farming has been legally designated as a GFP since 2002, and growers who are following an approved OSP are using methods that their inspector has deemed to be good organic farming practices. More recently, RMA has defined GFPs as

> "the production methods utilized to produce the insured crop and allow it to make normal progress toward maturity and produce at least the yield used to determine the production guarantee or amount of insurance, including any adjustments for late planted acreage, which are: (1) for conventional or sustainable farming practices, those generally recognized by agricultural experts for the area; or (2) for organic farming practices, those generally recognized by organic agricultural experts for the area or contained in the organic plan" (USDA-RMA, 2018, p. 33).

The second part of this definition explicitly recognizes that practices contained in the Organic System Plan are considered GFPs. However, both our survey of crop insurance agents and our conversations with adjusters showed that considerable confusion still exists on this point. At a minimum, it would be helpful for RMA to state and emphasize more clearly that inclusion in the Organic System Plan suffices to make a practice a GFP.

There will always be decisions calling for skill, good professional judgment, and careful observation on the part of adjusters, and there will always be types of negligence that are not explicitly discussed in a grower's Organic System Plan. But these situations should be quite rare,[1] and establishing a stronger connection between GFPs and the OSP would go a long way towards eliminating the guesswork and uncertainty experienced by organic growers and adjusters alike during the claim adjustment process.

Establishing a strong connection between good farming practices and the Organic System Plan would go a long way towards eliminating guesswork and uncertainty during the claim adjustment process.

Recommendation: Establish a policy that any practice approved through NRCS conservation programs meets the standard of a good farming practice.

Discussion: NRCS conservation practices are not always recognized as GFPs by adjusters—meaning that claims can be denied because a farm followed NRCS guidance.

No farmer, organic or non-organic, should be penalized or lose coverage under any federally subsidized crop insurance policy for using practices that are approved under NRCS guidelines. The 2019 Farm Bill made some statutory changes, but it is not clear if these changes will be sufficient to remedy this problem. A clear policy on GFPs and NRCS programs is necessary so farmers are not penalized for attempting good conservation efforts.

Organic production systems are complex and require integration of distinct practices that, together, enhance biodiversity and resilience.

For example, the current NRCS cover crop guidelines are too specific for dryland farming areas of the United States. There needs to be greater leeway in allowing organic farmers flexibility in using sustainable farming practices like cover-cropping and inter-cropping. The RMA should simply state that any practice approved through NRCS conservation programs meets the standard of a good farming practice. Using these practices is not grounds for loss of an otherwise legitimate indemnity payment.

Problem #5: Estimates of insurable revenue that are often too low

Recommendation: Eliminate the cap on contracted prices and allow the use of full, actual contracted prices in the Contract Price Addendum.

Discussion: At present, most crops have a maximum contract price of 1.5 times the organic price election. Yet it is common for organic growers to sell their products for higher prices—even double or triple the organic price. If a grower has an actual contract for a specific crop, that price should be the basis for premium and indemnity payment estimation. Setting a maximum contract amount based on non-organic price data has no logical justification, especially when it is known and documented that the crop will be sold for a higher price.

We acknowledge that eliminating the Contract Price Addendum cap may cause legitimate concerns about fraud and program integrity. However, we do not think the current capping approach goes to the root of those concerns. We think strict documentation requirements can be developed that would prevent fraud better than the current capping approach, allowing growers with bona fide sales contracts to insure their crops at those prices. There should be zero tolerance for fraud in the federal crop insurance system, not a 50% cap on the amount of fraud that is tolerated.

Recommendation: Improve public availability of organic price data, particularly in field crops and livestock products.

Discussion: Ideally, it would be best to have data at the farm level: prices that growers are receiving for their unprocessed products. Currently, just one private firm, Mercaris, provides significant data on organic field crop prices and production. For horticultural crops, the USDA Agricultural Marketing Service (AMS) has a weekly product report that is useful, but only gives prices at terminal markets that are not very helpful to direct marketers selling in a particular state or local area.

Having better price data would help WFRP applicants determine their insurable revenue. While AMS and National Agriculture Statistical Service (NASS) have responsibilities for providing this data, RMA is also a potential

source. As more organic farms insure their crops, they are creating their own important source of data. Finally, if RMA, the National Organic Program, and NASS could share more data across agencies, timely and high quality organic price data could be made available to organic growers.

Problem #6: Insufficient understanding of organic farming by agents, adjusters, and other industry professionals

In our survey of crop insurance agents (Chapter 4), 58% said they had received some training on working with USDA-certified organic producers, but many wanted more basic training on organic production and the insurance products available to organic producers.

Recommendation: Provide more education and outreach to RMA employees, AIPs, insurance agents, and claim adjusters about organic certification and production systems.

Discussion: Our research showed that education for insurance industry professionals is a high priority, and may actually do more good than providing further eduction for organic farmers. A limited understanding of organic production systems by insurance professionals causes a wide variety of problems. For one thing, RMA and the crop insurance industry have a history of thinking in terms of practices rather than systems. Organic production systems are generally complex and require integration of distinctive practices that, taken together, enhance biodiversity and resilience.

Educating insurance industry professionals about organic production should be a high priority, and may do more good than providing further education for organic farmers.

Because of the high interest and need on the part of crop insurance agents, we suggest making agents a high priority for training. We also recommend exploratory efforts to have organic inspectors train insurance professionals. Inspectors are uniquely qualified to play this role because they are intimately familiar with both organic regulations and the realities of organic farming.

NOTES

1. **A USDA Organic System Plan template (USDA-AMS, 2015) shows that organic farms are required to:**
   - **Have detailed plans for managing and preventing pests, weeds, and diseases;**
   - **Match irrigation quantity and timing to crop requirements;**
   - **Manage irrigation applications to prevent nutrient leaching beyond the crop root zone;**
   - **Plant crops and varieties appropriate to the climate and region (considering water demands);**
   - **Use nutrient budgets that consider crop needs to calculate rates of organic fertilizers to be applied; and**
   - **Time & calculate fertilizer applications to meet crop needs.**

   It is very hard to see how a farm that did all these things, following a plan approved by experts, could be negligent or making inadequate efforts to cause normal progress towards crop maturity and yields.
2. **For a discussion of the needs of small-scale specialty crop growers, see Belasco et al., 2013.**
3. **The 2019 Request for Proposals from the Specialty Crop Block Grant (SCBG) Program (USDA-AMS, 2019) makes no mention of crop insurance. The purpose of the SCBG Program is to enhance the competitiveness of specialty crops. There could hardly be a topic more relevant to this than improving crop insurance for specialty crops.**

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Chapter 9:

Recommendations for improving Whole-Farm Revenue Protection

In this chapter we offer recommendations for improving Whole-Farm Revenue Protection (WFRP). While not limited to organic growers, WFRP has great potential to meet their needs and is available in every county in the nation. It allows diversified farms to cover all their crops under a single policy, rewards crop diversification with premium discounts, and insures the full value of a farm's crops, as demonstrated by sales history in recent years.

In this chapter, we will show how some of the major problems with WFRP can be solved.

WFRP is still classified as a pilot project, meaning that RMA has not committed to offering it on a permanent basis. The product has only been available since 2015, and its success so far has been mixed. In Chapter 4, we saw that many crop insurance agents are critical of WFRP, and in Chapter 6 we noted that WFRP has not really caught on with either certified organic or highly diversified growers. Only 104 WFRP policies were sold to organic producers in 2018: 4% of all WFRP policies sold in that year. About half of WFRP purchasers to date have been growing just one or two crops, and over 80% have been growing less than four crops.

As shown in Table 9.1, sales of WFRP declined by about 11% in 2018: a worrisome indication that some growers who tried the product have dropped it. WFRP clearly needs improvement if it is to achieve its full potential.

Table 9.1. Sales of Whole-Farm Revenue Protection

	# policies sold	# policies with indemnities	liabilities ($ million)	premiums ($ million)	indemnity ($ million)	loss ratio
2015	1,128	341	1,146,042	53,017	70,063	1.32
2016	2,268	696	2,333,603	118,725	174,864	1.47
2017	2,836	825	2,834,378	142,524	156,067	1.10
2018	2,537	*	2,674,422	137,583	*	*

* not known at the time of publication

Source: USDA-RMA, 2019a

In this chapter, we will show how some of the major problems with WFRP can be solved.[1] For organic producers, a major problem is that the WFRP rules require extensive documentation of a farm's historic revenue and current plans, largely duplicating paperwork that organic farms are already required to do for their certification. Through better coordination and use of records and plans already required by the National Organic Program, RMA could simplify the application process and make WFRP far more accessible to organic farmers.

How does WFRP work?

As we saw in Chapter 8, actuarial scientists have long struggled with the problem of how to insure fruits, vegetables, tree nuts, and other horticultural and specialty crops. There are hundreds of these crops, and they can be grown in many parts of the country, with widely varying levels of risk. For major crops like corn, there is excellent and abundant data on prices and yields, making it relatively easy to set premiums. But for horticultural crops, there is not enough data from actual farming experience to determine how risky these crops are, or their average yields, in all the counties where they can be grown. The cost of getting this data is high, if it can be gotten at all.

Recall that all insurance policies are designed to provide enough premium income to meet expected indemnities over the medium to long-term. Policies that accomplish this, and have a loss ratio at or below 1.0, are called *actuarially sound*. Without knowing the risk levels and average yields of most horticultural crops in most counties, RMA has historically been unable to set premium levels that would create actuarially sound policies for these crops.

This lack of data, and the difficulty and expense of getting it, explains why individual coverage is not available for many common crops, such as artichokes, asparagus, beets, blackberries, broccoli, carrots, cauliflower, eggplants, garlic, melons, mushrooms, radishes, spinach, and squash. It also explains why common crops like tomatoes and cabbages can only be insured in a few counties in the entire United States.

The creators of WFRP took an ingenious approach, simplifying risk calculations and finding sources other than historic data that could be used to estimate prices, yields, and risk.

Setting premiums for revenue-based policies requires a reliable way to estimate expected prices as well as yields. RMA does not have price data on every crop in every market. Unfortunately, RMA has even less data about the *organic* varieties of most fruits and vegetables, making the challenge of insuring organic crops even more difficult and expensive.

WFRP was designed to solve these problems and be a revenue-based policy that would meet the needs of diversified specialty crop farmers in all 3,000+ counties in the United States. To accomplish this, it needed a way to insure all crops that can feasibly be grown in those counties, even where there is limited risk, yield, and price data. The creators of WFRP took an ingenious approach to this problem. The crux of the solution was to simplify the risk calculations and find sources other than historic data that could be used to approximate prices, yields, and risk. Here's how it works:[1]

For every county, RMA builds a list of all crops that it believes can be feasibly grown. Each of these crops is assigned to one of five risk pools, ranked from high to low. Being placed in higher risk pool increases premium cost. Unusual products are placed into generic "other" categories (other vegetable, other fruit, other livestock, etc.). Because little is known about them, products in these "other" categories are assigned a high risk, increasing premium cost.

Besides being placed into the five risk pools, products are also lumped together in various ways, allowing RMA to use whatever data is available. For example, if RMA has good data on onions in a particular county, but none on garlic, the agency might use its onion data to evaluate garlic, since the crops are similar.

Once each product has been assigned a risk profile, RMA establishes the premium by weighting the expected yields and prices of all products contributing to the farm's expected revenue. As a pilot product, WFRP is testing the hypothesis that it's possible to create actuarially sound premiums for thousands of crop/county combinations with relatively little actual, historic, farm-level data about yields or prices. By necessity, estimates are often conservative, especially for unusual crops. WFRP somewhat compensates for these conservative estimates with high premium subsidies and premium discounts for crop diversification. But still, some purchasers end up with high premiums. As RMA has frequently stated, WFRP doesn't work for everyone, and it's not reasonable to expect it to work for everyone.

As more people buy and use WFRP, premium rates will be adjusted through a sophisticated trial-and-error process. RMA does a great deal of statistical testing, and fine tunes premium rates with yield and price data from various sources. For example, RMA has recently looked at differences in crop yields between weather districts and used these to improve WFRP ratings (RMA, 2018, personal communication).

Because WFRP is a new and innovative product, RMA is understandably concerned about the potential for abuse, fraud, or design flaws that might allow purchasers to "game the system." Likewise, WFRP requires applicants to provide much of their own farm-specific information about historic and expected revenue. For these reasons, RMA has put many safeguards in place, requiring verification and justification of the applicant's estimates.

These efforts are understandable. But in this chapter, we will argue that RMA has gone too far, and especially in the case of organic producers. These safeguards and documentation requirements are generating too much paperwork, low estimates of insurable revenue, and other problems that are discouraging participation and eroding support for WFRP among farmers and crop insurance agents alike.

Although WFRP is still a new product, there is some evidence that already-low usage may be declining. Fortunately, we think this downward spiral can be reversed. From the standpoint of organic agriculture, the stakes are high. It is probably no exaggeration to say that, for most organic farmers, in most parts of the country, and for most of the crops being grown organically, WFRP is the only realistic way of getting crop insurance.

For most organic farmers, in most parts of the country, and for most of the crops being grown organically, WFRP is the probably the only realistic way of getting crop insurance.

What are the problems?

Our research has uncovered five main problems with WFRP:

1. Excessive application paperwork
2. Low awareness of WFRP
3. Unrealistically low estimates of historic revenue
4. Unrealistically low estimates of insurable revenue
5. Reduction of insurable value when claims are filed

Problem #1: Excessive application paperwork

The complex and time-consuming application process discourages many growers from applying for WFRP, and also discourages crop insurance agents from promoting and selling the product.

Recommendation: Eliminate the WFRP requirement to report operating expenses and indemnity penalties related to expenses.

Discussion: All WFRP applicants must provide an accounting of their historical operating expenses, which allows calculation of "approved expenses" for the insurance year. If there is a successful claim, the indemnity is reduced by one percent for each percentage point that the farm's actual expenses fell below 70 percent of its approved expenses. Eliminating this requirement would greatly reduce WFRP paperwork.

Besides causing a great deal of paperwork, this rule also seems unfair. No other revenue policy requires expense information or penalizes insurability based on the amount of operating expenditures.

A possible rationale for this rule might be to prevent fraud. We strongly agree that there should be zero tolerance for fraud in the crop insurance program. However,

- There are many reasons why operating expenses can decrease. We question whether below-average operating expenses are a reliable indication of fraud.
- If there *is* evidence that below-average operating expenses indicate fraud, RMA should require expense reporting for all revenue-based insurance products, not just WFRP.
- If below-average operating expenses are truly a reliable indication of fraud, this should trigger an investigation and potential criminal penalties, not merely a reduction in the indemnity amount.

Safeguards against fraud and record-keeping requirements have gone too far: discouraging participation and eroding support for WFRP among crop insurance agents.

Recommendation: Reduce the burden of proof on growers when estimating insurable revenue and completing the WFRP Intended Farm Operations Report.

Discussion: Under WFRP rules, the amount of revenue a farm can protect is the lower of two numbers: either the revenue expected in the current crop year or the five-year average historic income, with adjustments allowed for growth. One of the central challenges for improving WFRP is to come up with a way of substantiating these two numbers with less paperwork. The solution to this problem is not obvious. What is surprising, however, is that in recent years RMA seems to be going in the opposite direction: increasing paperwork.

For example, average historic revenue is calculated in a generally straightforward way from tax forms (usually Schedule F). Adjustments to these tax forms can become complicated, but are the responsibility of the crop insurance agent, not the applicant. Surprisingly, however, applicants may be required to prove to the Approved Insurance Provider (AIP) that their federal tax forms are accurate:

> The AIP must request verifiable records and/or direct marketing sales records to verify the allowable revenue and allowable expenses on the Whole-Farm History Report when the AIP has reason to believe the farm tax form(s) do not provide adequate documentation of revenue or expenses for WFRP purposes. In such cases, the AIP must not accept any Whole-Farm History Report if the allowable revenue for any year cannot be verified through the requested verifiable records and/or direct marketing sales record (USDA-RMA, 2019, p. 40).

In this paragraph, RMA seems to require AIPs to investigate potential tax fraud on the part of WFRP applicants. A similar requirement is stated for estimates of insurable revenue for the current crop year: "The AIP must not accept any revenue amount or an adjustment to the revenue amount if the amount reported for WFRP purposes cannot be verified using verifiable records or direct marketing sales records" (USDA-RMA, 2019, p. 42).

Providing daily sales records from the past several years can be an enormous burden, especially for diversified direct-market growers who must separately justify the expected revenue from each crop they are planning to grow. And if an applicant is growing a new crop for which he or she has no means of determining price or yield from valid sources, the expected revenue is counted at zero and effectively excluded from the revenue to be protected.

Based on our surveys of growers (Chapter 3) and crop insurance agents (Chapter 4), we believe these verification requirements are the Achilles heel of WFRP, largely explaining why it has failed, so far, in its original purpose of meeting the needs of highly diversified farms. As we saw in Chapter 6, only around half of all WFRP policies in 2015-2017 were sold to farms with a commodity count of one or two, and less than 15% of policies were sold to farms with a commodity count higher than four.

It's not hard to see why so many diversified farms are discouraged by the WFRP documentation requirements, or would feel that they are held to a stricter standard than applicants for other policies and even suspected of tax fraud. This cloud of suspicion is especially hard for certified organic growers to accept, since they take pride in being among the most conscientious and highly regulated farming operations in the world.

Verification requirements are the Achilles heel of WFRP, largely explaining why it is failing to meet the needs of highly diversified farms.

We urge RMA to look for simpler ways to substantiate past revenue and expected yields and prices, for purposes of the Whole-Farm History Report and Intended Farm Operations report. We have five suggestions:

1. Accept federal tax records as sufficient to substantiate historic farm revenue, unless there is some specific reason to doubt the accuracy of these records. Conversely, if RMA is going to encourage and require challenges to federal tax forms for WFRP applicants, the same requirement should be placed on applicants for all revenue-based crop insurance products. Unless there is evidence that WFRP applicants are especially prone to tax fraud, they should not be presumed dishonest or held to a stricter standard than other applicants for crop insurance.
2. Allow organic farms to use their Organic System Plan and related records to confirm historic and expected revenue. Organic farms keep detailed records, undergo annual inspections, and are legally obligated to follow an approved plan. They should get credit for these efforts, and it's frustrating for them when they are required to duplicate much of this same record-keeping when applying for crop insurance. If, for some reason, the Organic System Plan and inspection process do not suffice for WFRP documentation, RMA should work with the National Organic Program to adjust and coordinate the two programs.
3. Create easier application pathways for farms that are not substantially changing their production plans from the previous five years. If a farm is doing substantially the same thing it has done for years, and in the absence of any known change in markets or prices, Schedule F tax records would seem to provide a reliable and sufficient indication of expected revenue.
4. Make documentation of expected revenue easier for highly diversified farms. As one idea, growers could be exempted from providing crop-by -crop breakdowns on crops contributing less than 10 percent of their total gross sales. Through this or some other mechanism, the evidentiary burden could be reduced for minor crops that have only a small impact on the farm's insurable revenue.
5. Allow the use of annual summary profit and loss statement or similar accounting documents that have been verified by an accountant.

We acknowledge the challenges of implementing any of these suggestions, but would emphasize the urgency of doing something to reduce the paperwork associated with estimating historic and expected revenue. Without improvements in this area, we do not see how WFRP can meet the needs of organic or diversified growers.

Recommendation: Develop farmer-friendly tools to ease WFRP paperwork burdens.

Discussion: The Cost Estimator on the RMA website is a useful tool for estimating WFRP premiums, and the group AgAnalytics offers a WFRP calculator on its website (https://analytics.ag). But there is still a need for improved educational materials and farmer-friendly tools: helping growers calculate adjusted revenue from their tax forms, identify indemnity trigger points, estimate deductibles and premium costs, and understand how farm expansion impacts policy costs and coverage. In 2018, AgriLogic, LLC began work on a mobile app to assist with WFRP policy applications and tracking. This should help with the paperwork burden.

Simply explaining the major advantages and "selling points" of WFRP would go a long ways towards increasing sales and usage.

Problem #2: Low awareness of WFRP

Recommendation: Provide more education and outreach to organic farmers about the WFRP alternative, particularly those in locations where no alternative single-crop revenue policies exist.

Discussion: Our grower survey (Chapter 3) found that awareness of WFRP is low, with 77% of certified organic respondents saying they knew little or nothing about WFRP.

WFRP provides a good option where there are no single-crop policies available for the crops a farm is growing, and is a better deal for most of these farms than the Noninsured Crop Disaster Assistance Program (NAP), especially when the number of products is high. The direct premium subsidy (up to 80%) and high level of coverage available (up to 85%) are not well-advertised by RMA or agents. Our research also showed that the premium discount for crop diversification is grossly under-utilized. Simply explaining these major advantages and selling points better would go a long ways towards encouraging participation.

Farmers growing crops for which no individual coverage exists are prime candidates for WFRP education. For example, there is currently no insurance policy for Brussels sprouts. About 90% of Brussels sprouts in the United States is grown in California, with three counties making up over half of all production: San Mateo, Santa Cruz, and Monterey. If education on WFRP was provided in these counties, it seems likely that farmers would see it as a valuable addition to their other risk management tools.

Problem #3: Unrealistically low estimates of historic revenue

Recommendation: Count indemnity payments as historic farm revenue for WFRP claims adjustment purposes.

Discussion: In both our producer survey (Chapter 3) and crop insurance agent survey (Chapter 4), we heard loud and clear that growers and agents alike do not understand why indemnity payments are included in farm revenue when determining premiums yet excluded from farm revenue during claim adjustment. This policy is widely seen as unfair.

The point of WFRP is to insure more stable gross revenue over time. Subtracting indemnities from historic average revenue makes income look more volatile than it actually is, and often means that users of WFRP who have received recent indemnity payments are underinsured.

We understand that there may be legal reasons for excluding insurance payments from historic average gross revenue. If this is the case then, to be fair, RMA ought to stop allowing those payments to be factored into premiums.

Recommendation: In determining a farm's historic average revenue for WFRP purposes, allow lower-than-average years to be replaced or adjusted.

Discussion: Disaster years pull down average historic revenue, causing farms to be underinsured by WFRP or even making the policy useless. The 2018 Farm Bill provided four options to solve this problem:

1. Use an average of the historic AND projected revenue as the basis of premium setting and calculation of indemnities;
2. Count indemnities as part of historic revenue for loss years;
3. Count federal direct payments as part of historic revenue in loss years; or
4. Use a yield floor similar to what is done with individual crop policies.

In an April 2019 meeting with RMA, our project team recommended that the agency use one or more of these methods to smooth revenue variability. The agency subsequently announced that three "smoothing options" will be available in the 2020 crop year.[3]

Subtracting indemnities from historic average revenue makes income look more volatile than it actually is, causing some users of WFRP to be underinsured.

Problem #4: Unrealistically low estimates of insurable revenue

Low and inaccurate estimates of expected or insurable revenue during the WFRP application process result in underinsurance or (effectively) a large deductible before the "trigger point" is reached where claims can be filed.

Recommendation: Raise or eliminate the 35% WFRP limit on expansion.

Discussion: Under WFRP rules, insurable revenue may be adjusted as much as 35% above a farm's 5-year historic average if the applicant can show that physical changes (such as increased acreage) support an expanded operation. However, it's not uncommon for organic farms—especially in their transitioning and maturing years—to expand by more than 35% in a single year. This can result in underinsurance, even to the point where WFRP becomes useless.

We appreciate the danger that raising or eliminating the expansion limit could cause over-insuring or impact program integrity, but we we do not think the current capping approach goes to the root of those concerns. There should be zero tolerance for expansion-related fraud, not a 35% limit on fraud. We think strict documentation requirements can be developed that would prevent fraud better than the current capping approach: allowing growers with bona fide expansion to insure the full value of their crops. For organic growers, the Organic System Plan and inspection process already provide strong and reliable documentation of expansion.

Problem #5: Reduction of insurable value when claims are filed

In our crop insurance agent survey (Chapter 4), we heard many complaints about the apparently common practice of adjusting insurable value at the time of a loss claim, always resulting in a reduction of the indemnity payment. While clearly allowed and even sometimes required by the WFRP rules, these adjustments destroy the farmer's confidence in the coverage they have paid for. We suspect that these incidents are causing farmers to drop WFRP coverage and spread their negative experiences by word-of-mouth, discouraging others from participating.

Recommendation: Lock in expected price and yield upon acceptance of the WFRP Revised Farm Operations Report.

Discussion: WFRP policyholders are required to file three Farm Operation Reports during the insurance year:

1. An Intended Farm Operation Report, due by the Sales Closing Date in January-March;
2. A Revised Farm Operation Report, normally due by July 15 or within 30 days of changes to the commodities grown; and
3. A Final Farm Operation Report, due when a claim is filed or by the Sales Closing Date of the following year.

We heard many complaints about the alarmingly common practice of adjusting expected yield and price at the time of a loss claim, always resulting in reduction of the indemnity.

We appreciate the comment we heard from many crop insurance agents (Chapter 4) that it can be difficult to estimate price and yield accurately at the time of the Sales Closing Date. The purpose of the Revised Farm Operation Report is to allow for corrections and adjustments.

Basic fairness requires that insurance buyers should know up front what sort of coverage they are getting and at what price. Unexpected changes at the time of a claim—after the Revised Farm Operation Report has been filed—strike many farmers and agents as unfair. The policy of allowing these changes also creates an inherent tension between the AIP the growers, since it gives the AIP broad, discretionary, and unilateral power to change insurable revenue in a way that directly affects indemnity payments.

Acceptance of the Revised Farm Operation Report should end the adjustment of price and yield expectations, unless there is a major change in the grower's intentions or capacity, one not associated with an insurable loss.

NOTES

1. While members of our project team created most of the recommendations in this chapter, some were developed collaboratively and presented to RMA at an April 2019 meeting in Kansas City, Missouri organized by the National Sustainable Agriculture Coalition (NSAC). Four members of our project team made presentations at that meeting, along with representatives from NSAC, North Central SARE, World Farmers, the Center for Rural Affairs, the Kansas City Food Hub, and several farmers from around the country. We want to thank and give credit to all of these stakeholders for their input and ideas.
2. To our knowledge, RMA has not yet published its rating methdology for WFRP. The explanation below comes from our conversations with RMA staff.
3. Specifically, RMA allowed the following "revenue smoothing" options:
    - A 60 percent revenue plug based on the simple average or simple indexed average revenue. Years having revenue less than the average may be replaced by 60 percent of the average to calculate the approved revenue.
    - Producers may drop the lowest year revenue from the history and calculate the average revenue based on the four remaining years.
    - The approved revenue may also be cupped at no less than 90 percent of the previous year's approved revenue. (USDA-RMA, 2019a)

    At the time of publication (fall 2019), these new rules have not yet been implemented. For discussion of these changes, see Schahczenski, 2019.

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