

# MANAGING NURSERY PRODUCTION RISKS

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## **RISK MANAGEMENT**

*Protecting Nursery Investments  
By Planning Now for Protection Later ---  
Today and Always...*

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## INTRODUCTION

***‘Risk has always been part of agriculture, and protecting nursery crop investments through risk management is a bigger factor today than ever before.’***

Representing an economic entity, as well as way of life, the nursery producer has one of the most complex businesses to manage. Reevaluating goals is not only viable to the continuation of a family nursery business, but sentimentally important as well. Current year objectives, crop year strategies, and long term goals are vital for the preservation and financial stability of a nursery establishments.

*Weather patterns and nursery markets* may not always be cooperative, but the blessings of fresh air, warm sun, cool rain, fertile soil and clean water are some of nature’s most precious gifts. Just as conservation of the land is important for future generations, developing a risk management plan can be just as significant. Possibly one of the best gifts we can give future generations is establishing the value of sound nursery management plan, through ***risk management strategies***.

**Risk** is the possibility of adversity or loss and refers to “uncertainty that matters.” Understanding risk is a starting point to help producers make good management choices in situations where adversity and loss are possibilities.

**Risk Management** involves choosing among alternatives that have uncertain outcomes and varying levels of expected return. For an individual nurseryman, risk management involves finding the preferred combination of activities with uncertain outcomes and varying levels of expected return. Risk Management involves choosing among alternatives for reducing the effects of risk, and in so doing, affecting the nursery’s welfare position. Because nursery producers vary in their attitudes toward risk and their ability to address risky situations, risk management cannot be viewed with a “one size fits all” approach.

In nursery farming, production risk comes with the business and protecting your nursery business investments by making an informed risk management decision is a bigger factor today than ever before. Fortunately though, nurserymen today have more and better tools to help them manage risks or, at least, to manage certain kinds of production risks. Crop insurance cannot guarantee that unfavorable weather will not damage or destroy a nursery producers crop, but it can guarantee if they lose a crop, he/she will not stand to lose the money invested in the crop. Conservation, new technology practices, varied farm production methods (organic, sustainable) and chemicals to combat crop-eating insects are other examples of some of the present-day tools to manage risks.

Successful nursery management depends on taking risks consistent with the goals and financial position of the business. Nursery growers are aware that agriculture is a business where they stand to lose more money in a bad year than they stand to make in a

good year. Accordingly, producers recognize that in order to manage production risks, they must increasingly use all the different management tools available to them.

The objectives of this module are:

- various sources of production risk associated throughout the nursery industry;
- sources of production risk that affect the nursery business when alternative actions or plans may be implemented; and
- various production risk management strategies (including crop insurance) that might be adopted to control or counteract production risk.

Appendices to this section are curriculum fact sheets, data sheets, and USDA program materials. They are efficient and easy-to-use references for nursery growers. They also can serve as the primary teaching aid for a specific topic or as a follow-up/handout for a nurseryman to use when covering a topic during a discussion, meeting, training or workshop with fellow employees.

New, additional, and updated fact sheets continue to be developed and are available, upon request from USDA/Risk Management Agency/Spokane Regional Office, Jo Lynne Seufer, at telephone number 1-509-353-2147.

## **SOURCES OF PRODUCTION RISK**

### **Technology and Crop Production Practices**

Some amazing things are going on in field technology and most horticulturists are excited about the introduction of cutting edge strategies and technologies. For any new technology, nursery growers need to estimate the expected costs and benefits for their operation and have a set of criteria they use for their decision as to use it or not. Risks may be reduced with new technology, but a higher level of management and individual analysis for each operation may also be necessary.

There is a lot of technology nursery growers now use every day without so much as a second thought – personal computers, cell phones, palm pilots, and answering machines. The Internet has been one of the highest-profile technological developments, providing an instantaneous link to just about anyone or anything, including nursery producers and suppliers who have established web sites to market their products. E-commerce, which allows buyers and sellers to complete transactions online, also allows growers to ask questions and share important information through e-mail and Internet discussion groups. Grower adoption of the Internet as a marketing, educational, and communication tool continues to grow faster every day.

As a tool for PRODUCTION RISKS, the Internet can provide a grower with direct links to Research Centers and Land Grant University personnel. Simple online programs that assist with the identification of diseases, insects, chemical injury, and physiological disorders are continuing to be developed to find out what is causing symptoms in a nursery crop. In this process, the grower answers a set of questions, such as the leaf color, then if it is yellowing and the location of the yellowing. The ending result can lead to photos and any possible solution for the grower.

Growers with Internet access may also want to consider visiting the AG Weather service's Strategic Weather Services web site that offers specialized weather products for the energy and agricultural industries worldwide. For 800 unique weather graphics, text reports and data products, go to [www.weathermarkets.com](http://www.weathermarkets.com).

Computer software is also making life easier for growers. Predictive models use information (degree days or leaf wetness) collected in the field by data-logging devices to indicate when insect or disease outbreaks are likely. Business software handles everything from production inventory to credit reports to payroll. Harvested production can now be recorded through portable data collection tools (a hand-held computer which tracks almost every labor related activity in the field, from pieces harvested to productivity by the employee). Earlier systems used button probes to record information, but an emerging new technology is the bar code system.

Digital cameras are also a useful new technology tool. A picture of a plant sample can be taken and then transmitted by a cellular modem to a research site, which can download the transmission and provide answers to a grower the same day. Horticulturists can also take pictures of their current nursery crop and place it on their web site as a selling tool 'available to pick tomorrow.'

### **USDA CD Rom – Eligible Plant Listing; Plant Price Schedule (EPL/PPS):**

Production techniques and crops are rapidly evolving and improving. Many of the following production risk strategies are being thoroughly adopted each year. Drip irrigation has become predominately utilized. Even precision agriculture is slowly making its way into nurseries with growers finding it helps ensure a more even plant block with better overall production. It also allows a nursery producer to precisely parcel out water, fertilizer and other materials, resulting in meeting the requirements of Food Quality Protection Act (FQPA).

### **Sustainable Agriculture**

Sustainable agriculture for a nursery grower producing field grown nursery plants is a method of farming that can be carried out for generations to come. This long-term approach to agriculture combines efficient production with the wise stewardship of the earth's resources. The USDA Sustainable Agriculture Research and Education (SARE) program defines sustainable agriculture as an integrated system of plant and animal production practices having a site specific application that will, over a long term:

- Satisfy human food and fiber needs;
- Enhance environmental quality and the natural resource base upon which the agricultural economy depends (protect the natural resource base and prevent the degradation of soil, air and water quality);
- Make the most efficient use of nonrenewable resources and on-farm nursery resources and integrate, where appropriate, natural biological cycles and controls;
- Sustain the economic viability of nursery farm's operation; and

- Enhance the quality of life for all of agriculture and society as a whole.

The most important link between all farming practices (including nursery production) and sustainable agriculture is the health, or quality, of our agricultural soils. If soil becomes degraded, more resources in terms of time, money, energy, and chemicals will be needed to produce less-abundant crops of lower quality, and the goals of sustainable agriculture will not be met. On the other hand, if soil degradation is reversed and soil health is maintained or improved by using appropriate nursery farming methods, sustainable agriculture can be a reality. The approach a nursery grower decides to take as they manage these tough issues has come to be known as sustainable agriculture.

Sustainable agriculture does not refer to a prescribed set of practices. Instead, it challenges nursery producers to think about the long-term implications of their practices and the broad interactions and dynamics of agricultural systems.

Field grown (nursery) farming methods that improve the sustainability of one nursery may not be appropriate to a different nursery or region. Each practice must be evaluated in a given farming system for its ability to achieve a set of economic, environmental and social goals. However, we can look to changes adopted by nursery producers across the country with some demonstrating an increased crop and landscape diversity, better utilization of on-site nursery resources such as crop residue and more effective marketing. These changes and many other alternative approaches are contributing to the goals of lasting nursery production, stewardship of land, water and wildlife, and improved quality of life for nursery growers, their families and rural communities.

Unlike the organic label, product labels that reflect sustainable practices, such as *as natural*, *pesticide-free*, and *free-range*, are currently unregulated and have no defined standards or mechanisms by which to verify compliance to a particular practice.

## Elements of Sustainability

- 1) **Integrated Pest Management (IPM)**: IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks. It is a socially acceptable, environmentally responsible and an economically practical crop protection from pests. A critical factor in the effective use of chemicals for pest management is the timing of application and ensuring the correct herbicide is used for the specific variety being sprayed.
- 2) **Other Chemical Uses to Manage Production Risks**: Agricultural chemicals have continued to improve each year. An increased focus on safety for people and the environment, as well as the continual battle against induced resistance, have led to a new emphasis on narrow-spectrum material with extremely low use rates. New pest and weed control tools are continually becoming more widely used because of the Food Quality Protection Act. Even plant growth regulators are going to be a greater player, affecting size and shape of apples and increasing the firmness at harvest date. These new materials will require some serious dedication to integrated programs. Growers will need greater knowledge about reducing production risks and timing will be critical.

Weed control is one of the first things a nursery grower will want to think about when establishing a line of field grown nursery plants. For most perennial grasses and broadleaves, fall herbicide applications (late September through early November) are more effective than spraying in the spring. Possible ways to avoid new weeds/grasses may include:

- Do not use the same herbicide or application program year after year.
- Watch for new plant species.
- Do not let weeds go to seed.
- Practice weed prevention – do not allow machinery to carry weed seeds.
- When encountering a new weed never seen before, contact the County Extension Agent. This information will then be entered into the Weed Alert System.

- 3) **Pesticides:** Plant pests have the potential to cause significant economic losses in many vegetable crops. Even a slightly damaged vegetable plant will reduce market value. While biological control is important, most pests fruit can be best controlled by monitoring and insecticide spray programs.

What spray materials a grower will be using from year to year to manage production risks is becoming more of a guessing game. No one really knows how the Food Quality Protection Act (FQPA) will shape the future of pest control, or for that matter, where resistance problems will begin to crop up each season. Rather than simply waiting, many producers are taking a proactive step by developing and utilizing a pest management strategic plan.

Local, state and national USDA agencies, along with Land Grant Universities, continue to support and work closely with agricultural groups through test-plot and other pilot programs, evaluating emerging technologies, environmental stewardship, estimation of economic consequences, and various resistance management tools, including information management and dissemination.

- 4) **Soil and Water Conservation:** Many soil conservation methods help prevent loss of soil due to wind and water erosion. Incorporating soil conservation practices within a farm operation may lower a grower's production costs. Reduced tillage within an orchard can be considered a long-run risk management strategy because it will save soil, allowing a producer to remain ahead or at least competitive from a soil productivity standpoint.

Water conservation and protection are an important part of agricultural stewardship and risk management. Many practices have been developed to improve quality of drinking and surface water, as well as to protect wetlands. Wetlands play a key role in filtering nutrients and pesticides, in addition to providing wildlife habitat.

Proper management of nutrients, including nitrogen and other plant nutrients, can improve the soil and protect the environment. Increased use of on-farm nutrient sources, such as manure and leguminous cover crops, also reduces purchased fertilizer costs. Trees and other woody perennials are often underutilized on farms and ranches. Agro-forestry covers a range of tree uses on farms, including inter-

planting trees (such as walnuts) with crops or pasture, better managing woodlots, and using trees and shrubs along streams as riparian buffer strips.

Horticulturists with questions about sustainable agriculture, may contact the following Land Grant Universities: **University of Idaho** at (208) 885-6639; **Oregon State University**, contact Extension Service's central number at (541) 737-2713; **Washington State University**, Center for Sustaining Agriculture and Natural Resources at (509) 335-2885.

## **ORGANICALLY GROWN PLANTS**

Current statistics show throughout all of agriculture, farm producers are looking more and more to the organic niche. While our first thought would not include organic nurseries, there is an opportunity for greenhouse horticulturists (who grow tomato/pepper plants, onion/garlic or other small vegetable crop plants for resale) to consider the transition to organic production.

Issues such as standardization of organic rules, methods for certifying organic products, procedures for "certifying the certifiers," and definitions of organic food and organic food production continue to be reviewed at the federal and state levels. Nursery growers considering the option of organic food production should be aware of these issues and their ramifications. In 1990, as part of the Farm Bill, the Organic Foods Production Act (OFPA) of 1990 was passed which included establishing methods to certify organic products as well as methods to certify the people and organizations who would be certifying organic products. The federal law does not require states to have an organic agriculture policy. However, if a state does pass legislation pertaining to organic production, the federal requirements have to be satisfied.

### **Horticulturists should consider the following when deciding whether or not to begin growing organic nursery crops:**

1. ***What Is Organic?*** The National Organic Standards Board (NOSB 1996) defines Organic Agriculture as: an ecological production management system that promotes and enhances bio-diversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony. 'Organic' is a labeling term that denotes products produced under the authority of the Organic Foods Production Act of 1990. Note: Organic standards for greenhouse nursery production are currently being developed at the National Level of USDA.

Organic farming is often described as synthetic chemical free, but as with most rules, sometimes there are exceptions. A question a nursery producer who is considering organic production should ask is: "Does the law expect us to convert quickly and completely to organic production?" The answer is described in the National Organic Standards Board's Final Recommendations (p.16): "In a farming operation where both organic and non-organic fields, crops, or livestock are managed, the time table and level of transition to organic production is at the discretion of the producer.... Organic



certification should be determined solely on the basis of the farm's compliance with the OFPA." The interpretation is that as long as what is grown organic stays within the rules, no pressure will be given by the law to quickly convert the producer's entire operation to organic."

**2. *Where can I market/sell the organic crop(s)?*** The law dictates that organic crops need to be handled, processed, and stored in facilities separate from conventionally grown and handled crops. Markets do exist for organic products. While farm gate sales and U-picks may seem to be the obvious markets, they may not be the best choices, particularly for products that are not marketable to the public unprocessed. Niche markets do exist for organic products, but it is up to growers to find the buyer. Suggestions/steps to becoming a certified organic producer may include: 1. Locate a market for your plant production; 2. Determine if acres that you are considering for organic production have been synthetic chemical free for at least three years, and have records to prove the acres meet this requirement; 3. Learn about the current status of organic agriculture regulations within the state where your land is located; or 4. Work with a certifying agent to complete and submit the paperwork for becoming certified.

**3. *State Laws:*** In the United States, thirty-two states currently have legislation that regulates the production and processing of organic food products. The rules and regulations for these laws vary from state to state. In the Pacific Northwest, Idaho, Oregon and Washington states have set specific guidelines and laws.

**4. *State Agencies:*** Of the states having organic laws, only Idaho and Washington operate organic certification programs through state agencies. These certification programs are housed in the state department of agriculture, which serves as both the government regulator and organic certification agency according to the state legislative rules. State certification agencies have the ability to enforce organic rules and impose penalties and fines for violations in the production, processing and marketing of organic food products.

**5. *Private Organic Certification Agencies:*** Oregon is served by the Tilth Certified Organic Certification Association. This organization has its own set of organic standards and requires annual inspections of farms, processors, and handlers in order to be certified. Private certification agencies will often certify producers in states other than the one in which they are located, including states that do not have organic laws.

**6. *Registration and Certification Requirements:*** Idaho and Washington state laws require annual certification for organic producers, processors and handlers. In order to be certified, applicants must be inspected every year to verify they are following organic standards. Oregon law requires producers, processors, and handlers making organic claims, be registered with the state. Certification is voluntary as organic registration does not require annual inspection or application process.

## **Organic Insect and Disease Pest Management**

When insect pest outbreaks occur, organic growers have three control strategies to choose from: mechanical, biological control, and organically approved insecticide materials. All of these methods should be considered as last resorts. If little or no effort is made to create an ecologically diverse farm environment, economically damaging pest infestations will be a recurring phenomenon.

### **Insect Control Methods**

1. Bug vacuums physically remove insect pests. They are non-selective and may remove beneficial insects as well. Bug vacuums are extremely effective when used in combination with a trap crop. For example flea beetles vacuumed off an early radish trap crop reduces flea beetle populations for following brassica crops.
2. The use of floating row covers excludes flying insects. Floating row covers are affordable and available in large enough sizes to allow use on large acreage.
3. In some cases hand removal of insect pests may be the most affordable option. If done in a timely fashion, insect pest populations may be held in check.
4. Sticky traps in combination with insect attractants are sometimes effective.

### **Biological Insect Control Methods**

Biological insect control is an essential component of an organic pest control strategy. Biological control uses insect pest predators, parasites or pathogens to control insect pest infestations. Organic growers may augment beneficial insect populations present in the field, import entire populations or enhance plant diversity in the field and along field edges to provide habitat for beneficial insects.

### **Insecticide and Disease Control Materials for Organic Production**

Broad spectrum botanical insecticides affect a wide array of insects pests, while the narrow spectrum horticultural oils and dusts and insecticidal soaps are somewhat more selective and of lower toxicity. Organically approved fungicidal materials are preventive and usually applied before disease problems are manifested in the field. All of these materials are used only when the non-chemical crop husbandry practices have proven ineffective and pest damage is reaching economically damaging levels. Please contact organic certification agencies for a list of approved materials before applying any insecticide.

### **QUESTIONS TO CONSIDER:**

1. Which benefits will new practices provide?
2. What flexibility will I give up?
3. What are the economic tradeoffs between more aggressive pest control and minimal control?
4. Are my pest management strategies consistent with my management philosophy about environmental quality?
5. Will more intensive monitoring of pests be an economical strategy?
6. Do I have adequate access to certifiable acres for my field grown nursery stock?

7. Do I have the skills for producing nursery crops (tomato/pepper plants, onion/garlic sets, etc.) without many of the nutrients and pesticides I may have become accustomed to?
8. Do I have the ability and opportunity to market the nursery crop at a premium sufficient to compensate for the additional costs, higher losses, and the paperwork complications?

Individuals with questions about specific state organic laws may contact:

**Idaho** Department of Agriculture at (208)332-8661;  
**Oregon** Department of Agriculture at (503)986-4720; and  
**Washington** Department of Agriculture at (360)902-1877.

Nursery growers with questions about the organic certification process applicable to their area, may contact:

Idaho Department of Agriculture at (208) 332-8661 - **ID**  
Quality Assurance International at (619) 792- 3531 – **ID, OR & WA**  
Washington State Department of Agriculture at (360) 902- 1877 - **WA**  
Oregon Tilth Association at (503) 378- 0690 – **OR & WA**  
Organic Crop Improvement Association at (402) 477- 2323 – **OR & WA**  
Farm Verified Organic at (701) 486- 3578 - **OR & WA**

## **Enterprise Diversification**

Diversification is an effective way of reducing income variability. It is the combining of different production processes. Effective diversification occurs when low income from one enterprise is simultaneously offset by satisfactory or high incomes from other enterprises. It typically reduces large year-to-year variations in income and may ensure adequate cash flow for meeting production costs, debt obligations, and family living needs. However, diversification may become increasingly costly, acquiring an overall knowledge of the alternative business, such as ensuring adequate liability insurance is obtained if customers will be visitors on your nursery **plot/farm** or new nursery crop production expertise and having the necessary equipment for new plants.

Expanding into new areas (that may utilize the equipment or land you own or rent) or will increase capital investment requirements. For instance, diversification for a nursery grower can include opening up an on-site nursery outlet or experimenting with new or additional nursery crops. This could also include growing a combination of different varieties of a particular plant, creating the opportunity to have plants ready for shipment, market or for sale at different times.

Through plant diversification as a production risk management tool, growers may acquire another marketing tool, essentially providing another key as a way to enhance profitability. Direct marketing of the diversified plant/crop to consumers is becoming much more common, some may include farmers markets, roadside stands and community-supported agriculture events.

The incentives for diversifying income sources depend on the variability of returns faced by a producer. Diversification can also be achieved through different income sources, such as on-farm/nursery businesses (bed-and-breakfast businesses, guided tour and educational groups from local areas or schools, colleges, etc.); off-farm income (savings interest and dividends, employment) to help counter negative fluctuations in farm income.

### **QUESTIONS TO CONSIDER:**

1. What knowledge and management capabilities do I need for an additional enterprise?
2. Are they readily available?
3. Is this a product or service that is in demand or has a current long-lasting marketing niche?
4. Do I have a serious commitment to a new enterprise?
5. Will my current cash flow situation and future plans be able to include a diversification expansion?
6. Which additional capital investments would I need to diversify?
7. What or are there added labor needs of a new enterprise?
8. Are the new markets close in proximity for delivery?
9. What is the income relationship between a prospective new enterprise and my existing enterprise(s)?
10. Will the new enterprise provide effective diversification?

### **Capital Investments**

**1) Irrigation.** An effective irrigation system can certainly secure a crop and/or lower the risk of crop failure. However, producers must research the total investment cost for an irrigation system which may include: additional labor; land preparation; machinery; sprinkler/irrigation system; ditch/flood irrigation preparation; and possibly a year's income of crop production while the system is being installed or incorporated.

When making irrigation decisions, information is money. Vast improvements have been made with the availability of precise equipment to help nursery growers monitor their water outputs. Container and pot measuring devices have almost become commonplace in progressive growers' nurseries. Irrigation systems can tell horticulturists precisely how much water their plants need with some new monitoring techniques that continuously records a plant's water status.

**2) Fertigation** is the application of fertilizers through irrigation water and is more widely used throughout agriculture today than ever before. A nursery producer's knowledge of the soil fertility within their containers and fields, including the irrigation system itself are important factors.

**3) Drainage** In some areas where spring water runoff or excessive rainfall occurs, drainage systems are set up and used extensively to reduce the risk of crop failure, but the costs can be substantial. Conservation diversions and terracing are also successful.

4) **Machinery** capacity in excess of what is needed in a normal year allows the work to be completed in a timely manner if there are delays due to weather, breakdown or other unforeseen events. For any capital investment, producers may compare the expected returns with the alternative uses of the capital including other risk management strategies such as a savings account. Since these investment costs are usually high, nursery producers must also consider options that do not require a direct expenditure to reduce risk such as diversification.

#### **QUESTIONS TO CONSIDER:**

1. Is my nursery operation in a good financial position to make these investments for improvement?
2. Will the investment of purchasing new equipment payoff in the long-run?

#### **Landlord/Tenant Relationship**

When additional land is needed for an expanding nursery business, land rental (when purchase of land is not available or viable) terms can increase risk consideration. The first step when proceeding to enter into a rental agreement is to add this strategy to your nursery management plan. If the rental or purchase cost is too high for an individual operation, nursery producers must be willing to pass up the opportunity and select only the situation that will enhance their financial position. Also, utilizing good conservation practices to minimize soil erosion should be maintained consistently with a landowner's philosophies. Nursery producers must also plan their operation so their labor availability, machinery capacity, management structure and land base are not only balanced, but the landlord is fully aware of how the land will be used. All this information should be included in the rental agreement.

#### **QUESTIONS TO CONSIDER:**

1. Which benefits will renting land provide/add to my nursery operation?
2. What flexibility will I give up?
3. Do I understand the conditions of the contract between my nursery business and the landowner?
4. Do I need legal advice?

#### **Contract Production**

Contract Production may provide a nursery producer (growing nursery stock) an opportunity for a potentially higher plant selling price, as well as an assured market. Contract production may also give the contractor considerable control over the production process. Through production contracts, an agribusiness firm or other nursery commits the field grown nursery stock producer to deliver a specific quality and quantity of final plant product. Contractors may specify in detail the production inputs supplied by the contractor and the compensation to be paid to the nursery grower. The producer must comply with the processor's quality specifications and may elect to manage production risk with sound management practices, including working closely with Extension agents specializing in nursery stock production.

Before agreeing to a production contract, growers need to consider the risk/reward tradeoffs. A major advantage for the grower is the market guarantee, and sometimes a more favorable price. A disadvantage is a nursery producer may lose the opportunity of benefiting from upside price potential, since the sale of the product may be fixed by conditions of the contract. The loss of flexibility and profit opportunities is the cost of receiving a predictable cash flow. The challenge associated with contract production is to find contracts that are consistent with the grower's goals and risk tolerance.

#### **QUESTIONS TO CONSIDER:**

1. What benefits will a production contract provide?
  2. What flexibility will I give up?
  3. Do I understand the conditions of the contract?
  4. Do I need legal advice?
- 

#### **QUESTIONS WITH ANSWERS TO CONSIDER**

Nursery production today is the job of putting science into practice. Chemistry, physics and mechanical engineering are pre-requisites. And there is one more necessary element: the willingness to try new ideas. In the competitive business of nursery production, ideas are gold. They give a horticulturist an edge. The following are a few question examples to consider when guiding your farm's production risks through a global economy:

***What role will you play in the production-to-market process?*** Boosting a nursery's production efficiencies can be as easy as picking the right plant(s) or tree(s) varieties. To remain profitable in the new millennium, growers may need to diversify their market niche opportunities. The more functions a producer fulfills in the chain and the more contact a grower has with the end market, the greater the real risk as well as the potential rewards. Some in the process include:

GROWER of products, ingredients, components or raw materials;  
PROCESSOR of finished goods in marketable condition;  
DISTRIBUTOR to wholesalers or retailers;  
RETAILER of nursery-grown plants and products;  
DIRECT MARKETER using farmer's markets, road-side stands, mail order/Internet;  
ORGANIZER of fellow nursery producers for bulk marketing purposes.

These roles identify how much a nursery grower wants or plans to participate in the marketability of his/her plant production. Choices made to produce organic starter plants, or to diversify with different plant varieties involves production risk decisions that stretch into the delivery and marketing of the production.

***Are you producing plant varieties popular with current and emerging markets?*** Select nursery crop plants for the highest margin and those that fit local growing conditions, facilities and technology, including equipment. While consumer preferences are continually shifting, an informed nursery producer keeps up with them rather than failing to understand the demands of the U.S. consumer.

***How do you produce to gain the greatest production efficiencies and capitalize on various strengths of your nursery's business?*** This is where control of frost (nursery heaters, adequate storage), irrigation (drip, flood, pivot) and fertilization (dry, through irrigation, not at all), even organic versus conventional decisions have strong effects on your willingness to accept risk. Today, even to the buyer, how a plant product is produced has become equally important to what the variety is. Production preferences are a luxury of this high-yield era of abundance in global agriculture.

***Who do you sell to based-on greatest short-term and long-term opportunities?*** For certain nursery plants, a long-term contract for a chosen percentage of a year's production might be a good concept. This would ensure that one buyer did not have control over the farm's livelihood. Reserving a remaining percentage for more speculative cash markets may leave room for upside opportunities. Also, committing a portion to a nursery-owned cooperative could balance the enterprise portfolio among a number of buyer categories, each of which might pay differently.

Production decisions, marketing choices and staying well informed are precious things to the success of all businesses.

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## **CROP INSURANCE**

One of the most common strategies used to reduce income variability associated with production risk is crop insurance. The two most common types are private crop hail and Multi-Peril Crop Insurance (MPCI). A listing of crop insurance definitions and terms are provided in Exhibits 1.0 and 2.0.

The first decision a nursery grower must make concerning crop insurance is whether enough financial reserves exist to cover a disastrous crop production or marketing year. If the answer is no, then crop insurance may be an option to consider in an overall risk management plan.

Management of production risk through the purchase of crop insurance transfers risk from the nursery business to the insurer in exchange for a price stated as an insurance premium. If a producer can insure some part of their expected production, that level of production may be contracted with a buyer for a greater certainty, creating a more predictable level of revenue.

Crop insurance is a risk management tool that not only protects against losses but also offers the opportunity for more consistent gains. When used with a sound marketing program, crop insurance can stabilize revenues and potentially increase average annual profits.

Nursery crop insurance provides many important benefits:

1. Ensures a reliable level of cash flow;
2. Is an honorable and sometimes recommended loan collateral tool;
3. Allows more flexibility in a producer's marketing plan;
4. Adds confidence when following those planned strategies;
5. Provides stability for long-term business plans and family security;
6. USDA shares in the premium costs, and more (MPCI).

Some of the major sources of production risks include weather, pests and crop diseases. USDA's Risk Management Agency (RMA) is placing a special emphasis on strengthening the safety net for U.S. nursery growers. Together, RMA and private crop insurance companies have developed a set of insurance programs to help protect nursery business' risks at a reasonable cost.

Nursery growers should consult a private crop insurance agent to obtain specific information and details (e.g., practices, options, and appropriate deadlines) to help decide what insurance program may best fit the needs of their nursery business. A list of crop insurance agents is available at all local USDA Service Centers throughout the U.S. or at the website address: [www.rma.usda.gov/tools/agents/](http://www.rma.usda.gov/tools/agents/). Pacific Northwest nursery growers can also contact RMA's Spokane Regional Office at (509)353-2147.

The information in this section includes specific nursery crop insurance information to help nursery growers learn more about various methods to lower production risks and revenue (Adjusted Gross Revenue insurance program).

### **Multiple Peril Crop Insurance Protection Program**

Multiple Peril Crop Insurance (MPCI) is often used by nursery growers to reduce production risk. MPCI is a broad-based crop insurance program regulated by the U.S. Department of Agriculture and subsidized by the Federal Crop Insurance Corporation (FCIC).

### **Insurance Policy Availability**

Nursery crop insurance protection is available to all persons operating a wholesale nursery that produces and markets nursery plants grown in standard nursery containers or the field according to Federal Crop Insurance Corporation's (FCIC) insurance provisions.



A nursery is considered a business enterprise that has wholesale sales of nursery plants equal to or greater than 50% of the nursery's gross income. A nursery that receives more than 50% of its gross income from retail plant sales is not eligible for coverage under the Nursery Crop Insurance Provisions. The percentage of wholesale plant sales is determined by dividing the dollar amount of wholesale plant sales by the total dollar amount of combined retail and wholesale plant sales. Income from other operations including landscaping, chemical sales, other nursery related products, production of other crops or livestock or any other business enterprise not related to the nursery inventory are not to be included in this calculation.

### **Causes of Loss**

The insurance provided is against damage resulting from an insurable cause of loss occurring during the insurance period, including:

- adverse weather conditions;
- fire;
- wildlife;
- earthquake;
- volcanic eruption;
- failure of irrigation water supply;
- delay in marketability of the plants, if such delay results in a reduction in the value of the plants, due to an insurable cause of loss.

**Cause of Loss Limitations** Plant disease and insect damage are not covered unless the disease or insect infestation occurs and no effective control measure exists, or unless otherwise specified on the Special Provisions. If a pesticide or herbicide is not available for control of disease or insects, loss from disease or insects that are not controllable will be covered. Horticulturists, extension agents, or agronomists may be used as experts in determining appropriate control measures. Disease or insect damage resulting from conditions that reduce the effectiveness of control measures is not covered.

Insurable plants grown without required over-winterization cold protection are covered for all named perils except cold temperatures without the need for a special endorsement.

### **Insurance Period - Policy Duration**

First year coverage begins 30 days after the insurance provider receives your signed application. For subsequent crop years, the insurance period begins 12:01 a.m. each October 1. No application for insurance for any current crop year will be accepted after May 31st of the crop year. Insurance ends the date of final adjustment of a loss when the total indemnities due equal the amount of insurance; removal of bare root nursery plant material from the field; removal of all other insured plant material from the nursery; or 11:59 p.m. on September 30.

MPCI policies are continuous contracts and remain in force until: 1) canceled in writing by either the insured or the Insurance Provider on or before the cancellation date for the effective crop year, 2) the policy is terminated by the Insurance Provider because the applicable administrative fee or any other unpaid amount (e.g., overpaid indemnity, premium) was not paid. The cancellation and termination dates are found in the applicable crop provisions.

### **Inventory Reporting**

Nursery insureds must provide an inventory catalog or price listing on an annual basis. If the producer fails to provide a catalog or price list at inventory reporting, the company will reject the report and application. If the carryover insured does not provide the required catalog and/or price list by September 30, the company will cancel the policy for the succeeding crop year. The prices contained in the Eligible Plant Listing; Plant Price Schedule (EPL/PPS) are applicable to coverage bound as a result of any Peak Inventory Value Report and any revision to the Plan Inventory Value Report.

### **Amount of Insurance**

The policy provides protection for up to 75% of the value of nursery inventories. For each basic unit, the insured's practice value, multiplied by the selected coverage level, times the price election, times the insured's share.

### **Catastrophic Insurance Coverage**

A Catastrophic level of insurance coverage providing 50% coverage at a 55% price election is available for a minimal cost.

**Linkage Requirements.** A producer must obtain at least CAT coverage for each crop of economic significance OR sign a "waiver" of any eligibility for emergency crop loss assistance. to be eligible for benefits under the Agricultural Market Transition Act (AMTA); loans or any other USDA-provided farm credit, including guaranteed and direct farm ownership loans, operating loans, and emergency loans under the Consolidated Farm and Rural Development Act provided after October 13, 1994; and benefits under the Conservation Reserve Program provided by any new or amended application or contracts executed after October 13, 1994. Execution of a "waiver" does not affect the producer's ability to participate in any Federal crop insurance program administered under the Federal Crop Insurance Reform Act of 1994.

**Insurance Premium USDA Subsidized Payments** The Agricultural Risk Protection Act of 2000 (2000 Act) made crop insurance more affordable and useful to producers through increased subsidies for buy-up coverage and provides increased Federal backing for insurance that provides both yield and price protection.

Subsidy Levels (Amount of Premium Paid by USDA)			
Policy Coverage Levels	Current APH	Current Crop Revenue (varies by crop differential)	2000 Act New Subsidy Levels APH & Revenue
50/100	55%	42%	67%
55/100	46%	35%	64%
65/100	42%	32%	59%
70/100	32%	25%	59%
75/100	24%	18%	55%

**Administrative Fees.** The 2000 Act included changes to administrative fees paid by eligible producers. For Catastrophic Risk Protection (CAT), a producer must pay \$100 for each eligible crop insurance contract in each county. The administrative fee will be billed on the date contained in the Special Provisions. For coverage at levels in excess of CAT, the administrative fee is \$30 per crop per county. Administrative fees for CAT and additional levels can be waived for Small-Limited Resource Farmers.

Administrative fees are due annually and are paid to the insurance provider. Third parties are prohibited from paying administrative fees on behalf of producers/insureds. Insurance Providers, insurance agents, producer associations, grower groups, farm cooperatives, etc., may NOT pay administrative fees for producers/insureds. Only those persons acting in place of the producer/insured under a power of attorney, landlord/tenant agreement, or a legal guardianship, may pay the administrative fee.

### Coverage Levels

The lower of the Eligible Plant List and Plant Price Schedule (EPL/PPS) price or the lowest wholesale price in the insured's nursery catalog or price list to establish inventory values will be used. Losses will be adjusted on the basis of the "lower of" prices without regard to the prices used by the insured to prepare the report. All plant varieties/cultivars of a genus may not be listed in the EPL/PPS. In these cases, the inventory value of each unlisted variety/cultivar will be compared separately to the listed price for the genus to determine the "lower of" price. See the example below.

Plant prices determined from the nursery catalog, price list, or EPL/PPS remain in effect for that crop year only and must be re-determined for the following crop year, using the nursery catalog or price list and EPL/PPS in effect for that crop year. The applicant or policyholder must submit two copies of the nursery's most recent wholesale catalog or price list at the time the initial Plant Inventory Value Report is submitted each crop year.

If the nursery publishes more than one edition of its wholesale catalog or price list offering different plants (e.g., a fall plant catalog and a spring catalog), two copies must be submitted of the most recent edition of each at the time the Plant Inventory Value Report is submitted for each crop year. The policyholder may revise the Plant Inventory Value Report or elect a Peak Inventory Endorsement during the crop year. The catalog or price list in effect on the inventory reporting date will be used for purposes of the revised report or endorsement.

If both a spring and fall catalog or price list are submitted by a nursery, the prices for plants will be selected from the appropriate catalog. For example, the nurseryman applies for a nursery policy in April and has catalogs published in March of the current year and September of the prior year. If catalog prices are used, the March catalog will be the first reference for the inventory of plants. If certain plants are not contained in the March catalog, the nurseryman may reference the September catalog.

### **Insurable Plants**

Insurable plants include: 1. Container and field grown nursery plants identified on the EPL/PPS meeting the requirements of the Common Crop Insurance Policy and Nursery Crop Insurance Provisions. 2. Eligible plants grown under irrigation. The Special Provisions may allow for a non-irrigated practice for field grown plants.

Nurseries are required to be irrigated on an as-needed basis (unless otherwise allowed in the Special Provisions). Container plants require an ongoing application of water. Field grown plants may require a more or less frequent application of water. There are various methods of irrigating. For the purposes of insurance there must be an adequate supply of water and adequate equipment to deliver the water to the plants. The source of water may be a well, lake, river, or it may be delivered with tanker truck. The method of application also may vary; for example, sprinklers or trickle irrigation. Weather conditions and plant type also affect the required frequency and amount of water application. In the event a water source fails or there is a failure or loss of irrigation equipment due to uninsured causes, coverage will be denied. Examples would include failure of a well or public water shortage as the result of non-insured causes of loss, breakdown of equipment, or inability to use tankers to transport water.

Plants shall meet the following size requirements and guidelines: Container and field grown plant sizes between those listed on the Base Price Table of the EPL/PPS should be rounded to the nearest size to determine the price. (Plants smaller than the smallest listed size are not insurable. Do not round-up. Plants with sizes larger than the largest size listed on the EPL/PPS are insurable, but the price is limited to the lower of the EPL/PPS price for the largest size of the plant listed or the lowest wholesale catalog price for the effected plant sizes.) The plant height determined under the high/wide measurement method will not include the height of the root ball for ball-and-burlapped plants. The high/wide measurement method uses the height of the trunk from the in ground soil line or the width of the bowl (branches and foliage).

Caliper is determined by measuring the tree diameter six inches above the soil line up to and including a caliper of four inches and twelve inches above the soil line for larger sizes.

Insurable plants in over-sized containers will be valued for purposes of reporting inventory as if the plants were in appropriately sized containers in accordance with the standards contained in the American Standard For Nursery Stock (ANSI Z60.1). Each cell in a multiple cell container is considered a separate container. Trays, flats or cell packs with individual cells less than 3 inches in diameter at the widest point of the container interior are not insurable. Additional requirements are provided for in the EPL/PPS.

Container sizes are determined on an actual volume basis for purposes of determining the price of the plant as provided on the EPL/PPS. (A plant may be priced by a nursery by height (high/wide) whereas the EPL/PPS may only list caliper as the method of measurement and pricing. The reverse may also occur. In these instances, a “comparable size” determination must be made before the “lower of” price rule can be applied.)

Plants must meet the over-winterization cold protection and hardiness zone requirements contained in the EPL/PPS to be insurable for losses caused by cold weather.

Plants not included in the EPL/PPS may be established as insurable under a written agreement prepared by RMA (not applicable to CAT).

### **Prior Damaged Plants or Plants with Prior Damage**

Insurable plants damaged prior to the attachment of insurance may be accepted by the insurance company for coverage at a reduced value as determined by the insurance provider until such plants have fully recovered.

### **Conditions of Insurance Coverage Acceptance**

An inspection report must be completed prior to the acceptance of any application for insurance of a nursery crop and at certain other times. The nursery inspection is conducted by the company to determine the acceptability of the nursery operation as an insurance risk. The company’s underwriters will review the inspection reports and determine whether to bind coverage.

Inspection of nursery operations must occur the first year for all policyholders and when a policy is transferred from another company, to determine if: (a) the inventory amounts reported are appropriate for CAT policies and the limits are not exceeded as provided under Section 6 (h) of the crop provisions; (b) the reasonableness of reported values; (c) the risk is acceptable; (d) there is existing damage; and (e) insurability requirements are met. When there is an increase in value shown on the Plant Inventory Value Report of 50% or more of the previous values on a policy basis.

NOTE: This is measured on a policy basis, not by practice. Inspections of a nursery shall also take place when a new site or location is added to the operation or the first year a CAT applicant or insured requests a waiver as a limited resource farmer.

## **UNIT DIVISION**

For Catastrophic Crop Insurance (CAT): Basic units are based on all insurable plants in a county in which the insured has a share. Field and container grown plants produced in the same nursery will be contained in the same basic unit. Optional units are not available.

For additional coverage: (1) Share units are not available. (2) Basic units are established by practice (container grown and field grown). All insurable plants under each practice in which the insured has a share is a basic unit. A basic unit may be divided into optional units according to the following plant types:

- (a) Deciduous trees (shade and flower)
- (b) Broad-leaf Evergreen trees
- (c) Coniferous Evergreen trees
- (d) Fruit and Nut trees
- (e) Deciduous Shrubs
- (f) Broad-Leaf Evergreen Shrubs
- (g) Coniferous-Evergreen Shrubs
- (h) Small Fruits
- (i) Herbaceous Perennials
- (j) Roses
- (k) Ground Cover and Vines
- (l) Annual
- (m) Foliage
- (n) Other plant types listed in the Special Provisions

Regardless of the existence of optional units, the basic unit will be used to establish:

- (a) The amount of insurance.
- (b) Crop year deductible.
- (c) Under-reporting factor.
- (d) Premium.
- (e) The maximum indemnity payable.

Reporting by Basic Unit When a nursery producer selects to insure a container grown 008 or field grown 007 policy by basic unit, they must report all nursery growing locations, applicable practice values and your share.

## **Plant Inventory Value Report**

A report declaring the value of insurable plants is used to help determine your premium and amount of insurance. Maximum price limits by size and/or packaging form are contained on Eligible Plant List and Plant Price Schedule (EPL/PPS).

The reported inventory value may be estimated using the lower of this price, or the lowest price contained in the Nursery's Wholesale Catalog or Price Listing. Any indemnity will be determined using the lower of the two prices.

The Plant Inventory Value Report must be signed and dated: (1) At the time of application for new insureds; and by September 1 for carryover insureds. If a new report is not filed and the policy is not canceled, the policy will continue using the reported inventory values in effect as of September 1. Coverage will attach for the next crop on October 1, but only if the insured submits the nursery's catalog(s) or price lists. This does not include values reported on a Peak Inventory Endorsement. A revised Plant Inventory Value Report is required to increase the inventory value established.

The report must include: (1) All nursery-growing locations, (2) applicable practice values, and (3) your share. Inventory value is based on the lower of the nursery's 'lowest wholesale price' or the EPL/PPS value. For CAT coverage, the inventory value may not exceed: (a) 150 percent of the prior year's sales for container grown plants. (b) 250 percent of the prior year's sales for field grown plants. (c) Acceptable records include the sales records and/or inventory records for the prior three years. If these records are not available (e.g. a new nursery with no previous sales history), an inspection will be made to determine if adequate and acceptable facilities exist to accommodate the increase in reported inventory value and to justify waiving the limits. (4) The initial Plant Inventory Value Report for the crop year will contain only the inventory value for plants listed on the EPL/PPS or under a written agreement. [Written agreements may be used only to insure plants not listed on the EPL/PPS.] (5) Share. (6) Previous year's plant sales (CAT only).

Eligible Plant List and Plant Price Schedule (EPL/PPS) An EPL/PPS is available on a CD ROM and on the RMA web site at HYPERLINK "<http://www.rma.usda.gov/tools/>". These software programs have become very popular within the nursery industry since being developed by RMA and valued private industry partners. They are used to establish insurability, liability, and indemnities. They also: (a) provide maximum plant prices by type, practice, and size; (b) identify insurable plants by name and type; (c) assign hardiness zones and storage requirements for listed plants; (d) provide storage keys defining over-winterization requirements; (e) designate hardiness zones by county; (f) provide other information for optional units to administer the nursery program; (g) designates plants according to plant types and two production practices (field grown and container grown).

Understanding by the Nursery Insured Inventory values should be reported based on the lower of prices from the EPL/PPS, insured's catalog, or price list (this is how losses are adjusted.)

- Over-reporting of inventory will cause the premium to be overpaid.
- Under-reporting will result in a factor being applied to the indemnity reducing the amount by the percentage under insured.
- Only wholesale nurseries are eligible for coverage. The nursery must derive at least 50 percent of its gross income from wholesale marketing of plants.

This report may be filed on or before May 31 of each year. No more than two

endorsements may be purchased in a crop year unless a loss occurred and the loss was to inventory covered by the Peak Inventory Report. (Damaged plants originally reported under the Plant Inventory Value Report that are replaced, should be reported for coverage under a revised Plant Inventory Value Report) Price percentage, elections, and coverage level remain the same as provided by the underlying policy, only the inventory value changes. The maximum added liability under each Peak Inventory Endorsement is limited to the original practice value reported under the Nursery Crop Insurance Provisions. The insured may have more than one peak season endorsement in effect covering portions or all of the same period of liability increase. The commencement or termination dates of Peak Inventory Endorsements do not have to coincide. Peak Inventory Endorsements are independent of each other. Stacking is allowed.

### **Written Agreements for Unlisted Plants**

For plants not listed in the EPL/PPS, a nursery insured may request to the RMA Regional Office for a written agreement. Written agreements are not available for CAT.

Requesting a written agreement: (1) The request for a written agreement must be submitted by: (a) The date the application is signed for new insureds. (b) September 30 for carryover insureds. (3) A request for a written agreement must include a separate list of only the plants that are not currently insured and for which insurance is requested. This list must include the botanical name, common name and the size of each plant

### **Nursery Catalogs or Price Lists**

The Nursery Special Provisions require a nursery insured to provide two copies of their current wholesale plant catalogs or price list each crop year as a condition of insurance. All catalog or price lists must contain the following minimum requirements:

- (a) Name, address, and phone number of the nursery.
- (b) Each plant's name (scientific or common), sizes and prices.

### **Peak Inventory Endorsement**

The Peak Inventory Endorsement allows growers to cover temporary increases in inventory without paying a full year's premium. Growers declare the amount of the inventory value increase, and the dates the peak coverage begins and ends. The grower pays premium for the whole month for any portion of a month that the endorsement is in effect.

Instructions for Completion of the Peak Inventory Value Report (FCI-543A - Not available for CAT policies.) The format and the sequence of the items on the Peak Inventory Value Report are determined by the format selected by the company. This report must be completed when the insured reports inventory values that will be increased for a particular period of time.

The policy will be endorsed to reflect the time and value increase. Premium will be



charged for each month for which the amount of coverage is increased. A full month's premium is charged for any fraction of a month of increased coverage.

The Peak Inventory Endorsement is used to reflect values during a peak inventory period. Increases in inventory value through this endorsement are in addition to any increases that may have been reported on a revised Plant Inventory Value Report. Guidelines include: (1) The Peak Inventory Value Endorsement is an annual endorsement. (2) The Peak Inventory Value Endorsement is not available for CAT. (3) All coverage factors (e.g., price percentage, elections, coverage level) remain the same as provided by the underlying policy. Only the inventory value changes. (4) No more than two peak endorsements can be purchased for each practice (basic unit) during the crop year, unless an insurable loss has occurred and the lost inventory is restocked). (5) The maximum liability under any one peak endorsement is limited to the practice value reported under the Nursery Crop Insurance Provisions. (6) Premium is charged on a whole month basis for each month for which any coverage is provided. (7) The Peak Inventory Endorsement may not be purchased after May 31 for the crop year, but may be purchased on or before May 31 to cover months that follow May. For example, the insured may use the Peak Inventory Endorsement to insure an anticipated inventory value increase in June and July. (8) "Stacking" is permitted. That is, the insured may have two endorsements in effect at the same time for a basic unit. The commencement and termination dates of stacked peak endorsements do not have to coincide, but can not extend beyond the current crop year.

Reporting requirements include: (1) Submitting a Peak Inventory Value Report on or before May 31. (2) Use the same catalog that was used to complete the Plant Inventory Value Report to determine values for the Peak Inventory Value Report. (3) Specify the coverage commencement and termination dates by month.

### **Minimum and Maximum Plant Sizes by Crop Type**

Two crop types have a high/wide (seedling) range. To qualify for the seedling range the trees must be Coniferous Evergreen (CE) or Deciduous Tree (DT) type and the trees must measure a minimum of 6 inches but less than 18 inches tall. Do not round qualifying measurements. Seedlings that are less than 6 inches tall are not insurable. Eighteen-inch trees will be insured according to the individual plant prices shown on the EPL/PPS. The lower of the EPL/PPS price or the grower's lowest wholesale catalog price will be the price for each tree in the seedling range.

Plants that are larger than maximum size listed below will use the price of the largest size listed on the EPL/PPS for the plant to determine the price election (subject to the "lower of" rule). Plants less than minimum size are not insurable.

### **GENERAL INSURANCE DATES/DEADLINES**

Even the best crop insurance plan is of little use if the right information is not collected and submitted on time. Likewise, if certain actions are not completed by the necessary date, producers may not receive full benefit from the risk protection they have selected. The following are important crop insurance dates to be noted:

**Plant inventory reporting date:** For new insureds it will be at the time of application. For carryover insureds it is September 1.

**Insurance attachment date:** For new insureds it is thirty days after the application is signed (unless otherwise notified). For carryover insureds it is October 1.

**Sales Closing Dates.** To participate, a person must apply for insurance on or before the applicable sales closing date. This is the last date to apply for crop insurance coverage for any FCIC policy, or make changes in coverage from the previous year. Growers need to decide by this date the type of policy and the level of protection they want. For new insureds it is any time between September 30 and May 31; and for carryover insureds it is September 30.

All applicants must be eligible for crop insurance benefits and not be listed on the Ineligible Tracking System. Note that any producer who is ineligible because of debt may subsequently become eligible by paying the debt. Such producers may then apply for nursery crop insurance for the remainder of the crop year if the application is submitted by the May 31 sales closing date.

Private hail insurance can often be purchased throughout the growing season. Sales closing dates falling on Saturdays, Sundays, or legal holidays are extended to the next business day.

**Billing Date:** Although premiums are payable on the day after the sales closing date, the policy holder will not be billed until the **Premium billing date** – July 1. The premium is based on: the Plant Inventory Value Report, or a revised Plant Inventory Value Report, a Peak Inventory Value Report, insured share, and administrative fees. Interest charges begin to accrue 30 days after this date on any premium payments not yet paid, at the rate of 1.25 percent per month. If an indemnity payment is made, any premiums still due will be deducted from these payments.

**End of Insurance Period:** Beyond or following this date, the nursery grower no longer has any production or revenue guarantee on the crop. This date is the earliest date the insured plant material is removed from the nursery, the day the final adjustment on losses is made, or September 30.

**Date to File Notice of Damage:** Verbal notification by phone or in person is required within 72 hours of the discovery of the damage, but not later than 15 days after the end of

the insurance period. We may accept notice of loss provided later than 72 hours after your initial discovery if we still have the opportunity to accurately adjust the loss. Written confirmation of the report must be submitted within 15 days of the verbal report.

Producers shall provide notice of loss damage or probable loss to the Insurance Provider within fifteen days of discovery of damage to determine whether or not an inspection is necessary when the following occurs:

1. During the period before delivery (harvest), the insured crop on any unit is damaged to the extent that the insured does not expect to further care for or harvest any part of the acreage. Such acreage must be left intact until inspected.
2. The insured wishes to put insured acreage to another use. The insured must NOT put acreage to another use before the crop's potential production is appraised and written consent is given for such other use.
3. An indemnity is to be claimed on any unit.

**Policy Termination Date:** For nursery insurance policies, the termination date is September 30. If premiums are not paid by this date, the insurance coverage for the following crop year will be terminated.

**Cancellation Date:** For nursery insurance policies, the cancellation date is September 30. This is the last date to give written notice to the insurance company if the grower does not wish to carry crop insurance the next year. Otherwise the policy will renew automatically for another year.

Program Dates (ID, OR, WA) {Generally for MPCl, unless otherwise noted. Dates falling on a weekend/holiday move/apply to next business day.}			
CROP or Insurance Protection Program	Final Sales Closing Date	Plant Inventory Reporting Date	Contract Change Date
Adjusted Gross Revenue	01/31	n/a	11/30
Nursery (0073 FG & Container)	05/31	New Insureds: At the time of application. Carryover Insureds: 10/1	06/30

## Contract Changes

MPCI is a continuous policy and will remain in effect for each crop following the acceptance of the original application. Producers may cancel the policy, a crop, a county, or a specific crop in a specific county, after the first effective crop year, by providing written notice to the insurance provider on or before the cancellation date shown in the applicable crop provisions. Producers must request policy changes from their insurance provider on or before the sales closing date for a change of price election or coverage level. Contract changes involving a successor interest application and corrections of a producer's name, address, identification number, administrator, etc., may be made at any time. Contract change date for nursery producers is June 30.

## Reporting of Crop Acreage

Each crop year the producer is required to submit an acreage report for each insured crop. The acreage report must be signed and submitted by the producer on or before the acreage reporting date contained in the Special Provisions for the county for the insured crop. Each crop insurance policy provides specific details relating to acreage reporting.

### **Catastrophic (CAT) Crop Insurance**

Catastrophic (CAT) insurance is the minimum level of multi-peril crop insurance coverage at 50 percent of a producer's yield and 55 percent of the price, and meets requirements (without a waiver) for a person to qualify for certain other USDA program benefits. Farmers with limited resources may be eligible for a waiver of the fee for CAT coverage. Any crop insurance agent can assist producers in determining if they are eligible for a fee waiver.

CAT payment rate is 55 percent of the Market Price when the yield falls below 50 percent of the guarantee. There is no replant or prevented planting clause included in CAT coverage. Only basic units apply under CAT coverage. The following is an example of CAT coverage comparison for apples.

### **ADJUSTED GROSS REVENUE (AGR)**

The Adjusted Gross Revenue (AGR) insurance plan is a non-traditional, whole farm risk management tool. The AGR concept uses a producer's historic Schedule F tax form information as a base to provide a level of guaranteed revenue for the insurance period. AGR:

- provides an insurance safety net for multiple agricultural commodities in one insurance product;
- establishes a common denominator for commodity production using cash receipts;
- makes simple and straightforward use of income tax forms; and
- reinforces program creditability by using Internal Revenue Service (IRS) tax forms and regulations.

The AGR product provides the producer with protection against low farm revenue due to unavoidable causes. Covered farm revenue is income from agricultural commodities reported on the Schedule F tax form, including incidental amounts of income from animals and animal products and aquaculture reared in a controlled environment. Incidental livestock income represents the crop production value fed to livestock. AD hoc disaster payments are not considered income for indemnity purposes.

Eligible producers may choose one of three AGR coverage levels:

Coverage Level	Payment Rate	# of Commodities
65 Percent	75 or 90 Percent	1 <sup>1</sup> (2)
75 Percent	75 or 90 Percent	2
80 Percent	75 or 90 Percent	4

The basic coverage is 65/75 and is available to all producers. To qualify for 75/75 or 90 percent coverage, a producer must produce at least two different agricultural commodities

or four different agricultural commodities for 80/75 or 90 percent coverage and each commodity must meet a minimum revenue amount.

AGR protection is calculated by multiplying the approved gross revenue times the percent coverage level and payment rate selected by the producer. The approved gross revenue is the smaller of:

- the average of the producers prior five years of Schedule F tax information filed with the Internal Revenue Service. The average gross revenue may be adjusted for expanding operations; or
- expected revenue for the insurance year. For example, a producer with a \$100,000 approved gross revenue who chooses 80/75 coverage would have \$60,000 protection (\$100,000 X 80 percent coverage level X 75 percent payment rate).

Producer eligibility includes:

- Produces agricultural commodities primarily in pilot counties, and may include income from contiguous non-pilot counties;
- Filed U.S. Income tax forms (Schedule F) for the same tax entity for history purposes and the insurance year (unless at least 90 percent of the farming operation was transferred to the current tax entity); filed five consecutive years of Schedule F tax forms;
- U.S. Citizen or Resident;
- If more than 50 percent of expected income is from insurable crops animals and animal products, Multi-Peril Crop Insurance must be obtained if available. (Note: AGR complements other Federal crop insurance plans by coordinating the insurance protection and benefits with the other plans. When producers purchase both AGR and other crop insurance plans, the AGR premium will be reduced.);
- No more than 35 percent of expected allowable income can be from animals and animal products;
- Other restrictions may apply.

## **AGR TIME-LINE**

**Sales Closing Date:** For producers in the approved piloted areas is: the sales closing date is January 31 (cancellation and termination date also). AGR insurance policies are only available through private insurance agents.

**Beginning of Insurance:** For calendar year filings, January 1 (For the year of application, the beginning of insurance is the later of January 1 or ten days after a properly completed application is received.)

**Contract Change Date:** November 30

**Insurance Year:** Calendar or Fiscal Year (*corresponding with a producer's IRS tax year*)

**Claims:** Claims are settled when taxes are filed for the insurance year and other MPCl claims covering insured crops are finalized.

## **Pacific Northwest**

### **AGR Availability**

**Crop Year 2001:** Idaho State – Canyon, Payette and Washington counties  
Oregon State – Benton, Clackamas, Columbia, Lane, Linn, Malheur, Marion, Multnomah, Polk, Washington and Yamhill counties  
Washington State - Adams, Benton, Chelan, Douglas, Franklin, Grant, Kittitas, Klickitat, Okanogan, Walla Walla and Yakima

### **AGR Loss Payment**

Loss payments are triggered when the adjusted gross income for the insured year is less than the loss inception point. The loss inception point is calculated by multiplying the approved gross revenue by the chosen percent coverage level (65, 75 or 80). Once a loss is triggered, the insured is paid based on the payment rate selected. Loss payment for this example would trigger when the income for the insurance year is below \$80,000 (\$100,000 X 80 percent coverage level).

#### ***Assume AGR Income:***

Year	Dollar Amt.
1995	\$91,500
1996	\$119,000
1997	\$89,000
1998	\$90,000
1999	\$85,000
Total	\$474,500

#### **Average / Approved**

**AGR                \$94,900**

***Assuming*** an approved AGR of **\$94,900** and the insured's revenue to count is **\$21,000** for the insurance year, at the 80 percent coverage level, the insured's indemnity is calculated as follows:

Approved AGR **\$94,900** times 80 percent equals **\$75,920**. **\$75,920** minus **\$21,000** revenue to count equals **\$54,920**. **\$54,920** times 90 percent payment rate equals **\$49,428 indemnity due** the insured. (*Note: If the insured's allowable expenses fall below 70 percent of the approved expenses [\$44,436 in the example], the approved AGR will be reduced.*) In comparison, if **75 percent payment rate was selected**, the indemnity due would be \$41,190 .

Exhibit 5.0 provides an excellent resource example on an Adjusted Gross Revenue Insurance Analysis specifically for Nursery growers.

### **Non-insured Crop Assistance Program (NAP)**

The Non-insured Crop Disaster Assistance Program (NAP) Protection program is available for growers producing crops used for food or fiber for which there is currently NOT a catastrophic risk protection plan of insurance available. At the option of the Secretary of Agriculture, all types or varieties of a crop or commodity may be considered to be a single eligible crop. Producers must annually provide records of crop acreage, acreage yields, and production for each eligible crop to be eligible for NAP. For crop year 2001, NAP assistance is provided to individual producers without any requirement for an area loss.

At the time of application, producers must pay a service fee for the eligible crop in an amount that is equal to the lesser of:

\$100 per crop per county; or  
\$300 per producer per county, but not to exceed a total of \$900 per producer.

Units under NAP are the same as under the Catastrophic (CAT) risk protection program - basic units by separate ownership interests, with 100 percent cash rent included with 100 percent ownership interest. Crop payments are determined on an individual unit basis. Units with qualifying losses in excess of 50 percent of the unit's expected production or prevented planting in excess of 35 percent will be considered for payment. Payments are only paid on losses over 50 percent.

Provisions provide all service fees shall be waived in the case of applications received from limited-resource farmers (please refer to definition section in Exhibit 2.0).

The NAP program is administered by the Farm Service Agency (FSA). Production records may be verified by an independent source, including specific crop information related to the sale of the crop (e.g., sales receipts with crop year, quantity, date of sale); or paid for measurement service from FSA for crops being disposed of or fed without production records.

Nursery growers may contact their local USDA Service Centers or Farm Service Agency county offices for specific details regarding NAP.

## **INSURANCE QUESTIONS TO CONSIDER**

### **FOR A NURSERY PRODUCER :**

1. How much coverage do I need for adequate cash flow?
2. What are the major sources of crop weather risk in my area?
3. How much coverage can I afford?
4. Which crop insurance product will best complement my marketing plan?
5. What are the implications of a crop loss on my ability to meet my debt obligations?
6. What are the major sources of production risk?
7. Who is a local crop insurance agent so I can obtain specific information (types and levels of coverage, premium costs)
8. What is the minimum cash flow I will need?
9. What collateral will I need for operating loans?
10. What will I need to pay off the operating loan and make term loan payments?
11. What will be the impact of my net worth if I don't have adequate crop insurance coverage?

### **FOR A NURSERY PRODUCER TO REVIEW/SHARE WITH A CROP INSURANCE AGENT:**

1. What insurance products are available in my county, including revenue insurance?
2. How do Income Protection (IP) and Crop Revenue Coverage (CRC) compare to Multi-Peril Crop Insurance (MPCI) traditional insurance plans?
3. How does IP and CRC coverage differ?
4. Do you understand my marketing and financial plans?
5. For my farm operation, what are the best insurance plans and coverages available?
6. Should I consider crop-hail insurance?
7. Should I consider insurance supplementals?
8. What are the advantages of higher coverage levels (vs CAT)?
9. What are the sales closing dates for crops in my operations?
10. How do I prove/certify my yields?
11. What is the final planting date(s)?
12. What are my responsibilities now that I have signed an application for insurance? (e.g.: Acreage reporting dates, production reporting dates, notification of loss damage)

### **CROP INSURANCE PREMIUM CALCULATION & LOSS INDEMNITY SCENARIO / EXAMPLES**



The scenario/example illustrated shows the costs included when obtaining a nursery crop insurance policy (not including possible administrative fees). and the possible indemnity received in the event of a loss. Each type of policy can be customized to best fit a producer's farming situation by selecting different price and yield coverage levels, add-on features, and insurance unit designations. Premium rates vary by crop, county and insurance plan. Please note: Premiums will vary from crop to crop and county to county. Consult your local private crop insurance agent for specific premium costs.

### **Multi-Peril Crop Insurance (MPCI) Premium Calculations**

(Prices are for illustration purposes only – Million-dollar practice value in both cases (field grown/container.)

#### **Field Grown:**

1,000,000 X .75 (coverage) X 1.00 (price election)  
= \$750,000 Dollar Amount of Insurance  
750,000 X .024 (base rate) X .9 (basic unit discount)  
= \$16,200 Total Premium  
16,200 X .55 (subsidy)  
= **\$8,910 producer paid premium**

#### **Container Grown:**

1,000,000 X .75 (coverage) X 1.00 (price election)  
= \$750,000 Dollar Amount of Insurance  
750,000 X .022 (base rate) X .9 (basic unit discount)  
= \$7,277 Total Premium  
7,277 X .55 (subsidy)  
= **\$3,275 producer paid premium**

### **Indemnity Example**

Successive indemnities may be paid on the same basic unit subject to a new occurrence deductible each time. Each indemnity paid reduces the amount of insurance remaining on the basic unit. The maximum indemnity is limited to the amount of insurance for the basic unit. When the amount of indemnities paid equals the amount of insurance, no additional coverage is available for the remainder of the crop year. However coverage can be re-established if the nursery is restocked and a revised inventory value report is approved.

The following is a simple “single unit” example of an indemnity determination. Additional examples are contained in the nursery crop insurance provisions, Section 15.

- A Share 100%
- B Reported inventory value \$100,000
- C Coverage level 75%
- D Price election percentage 75%
- E Amount of Insurance  $B (\$100,000) (C (.75) (D (.75)) = \$56,250$
- F Crop Year Deductible  $B (\$100,000) (.25 (1 - C, (.75))) = \$25,000$
- Values at the time of loss:
- G Field market value A \$125,000
- H Field market value B \$ 80,000
- I Field market value C \$125,000
- J Under-report factor  $B (\$100,000) \div I (\$125,000) = .80$
- K Occurrence deductible  $I (\$125,000) (.25 (1 - C, .75) (J (.80)) = \$25,000$

- Step 1 Determine the under-report factor J (.80)
- Step 2  $G (\$125,000) - H (\$80,000) = \$45,000$
- Step 3  $\$45,000 (.80 \text{ (result of Step 1)}) = \$36,000$
- Step 4  $\$36,000 - K (\$25,000) = \$11,000$
- Step 5  $\$11,000 (D (.75)) = \$8,250$
- Step 6  $\$8,250 (A (1.000)) = \$8,250 \text{ indemnity}$

The amount of the Crop Year Deductible remaining is  $F (\$25,000) - K (\$25,000) = \$0.00$

NOTE: If the nursery restocks and purchases additional coverage the amount of Crop Year Deductible will increase.

The amount of insurance remaining is  $E (\$56,250) - \$8,250 = \$48,000$

NOTE: If the nursery restocks and purchases additional coverage the Amount of Insurance will increase.

## **RISK MANAGEMENT CHECKLIST – Crop Insurance**

*How much crop insurance do you need?*

You can improve your risk management performance simply by conducting an annual risk management checkup. Information included in the following risk management checklist may help in providing a list of questions to respond to regarding your nursery business situation.

Keep in mind also that there are many experts throughout the public and private sector who can visit with you about risk management strategies. These individuals may include commodity brokers, the extension service, nursery organizations, loan officer or an insurance agent.

Many are working hard to master new skills and learning how to identify new opportunities. The following questions and information should assist you toward asking your insurance agent and/or bank lender valuable questions -- and to act on what you learn.

*Do I understand what the major risks are for my nursery crops and the likelihood of them occurring? List Risks:*

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

- ( ) Are the plants I produce on the plant eligibility list?
- ( ) Do they have plants that are outside the required size?
- ( ) Are the plants I produce within the appropriate size containers?
- ( ) Do I have the proper winter storage onsite so I can obtain full coverage?
- ( ) Have I selected an adequate percent of insurance coverage on my portion of exposure? What coverage level do I need? \_\_\_\_\_ percent
- ( ) Have I learned about all of the products that are available, including the Adjusted Gross Revenue insurance?
- ( ) Should I considered a stand-alone crop-hail or fire insurance plan?
- ( ) Have I worked closely with my lender and/or crop insurance agent to ensure they understand my marketing and financial plans?
- ( ) Do I understand the important crop insurance deadlines and what is required of me for each? Crop Insurance Deadlines:

Sales closing date - last day to apply for coverage.  
Cancellation date - give notice if I don't want insurance next year.  
Plant Inventory Reporting date - actual plant inventory must be provided by this date.  
Payment due date - interest charges are due beyond this date.  
Date to file notice of nursery crop damage - damage must be reported by this date.  
End of insurance period - latest date of coverage for my insurance policy.  
Debt termination date - insurance coverage for next year will be canceled if payment is not made by this date.

( ) Have I identified and utilized reliable sources and contacts to obtain helpful management information?

## **SUMMARY ON PRODUCTION RISK**

As can be seen throughout this illustration, **managing production risk** in nursery production does not necessarily involve avoiding risk, but instead, involves finding the best available combination of risk and return given a person's capacity to withstand a wide range of outcomes. Effective risk management involves anticipating outcomes and planning a strategy in advance given the likelihood and consequences of events, not just reacting to those events after they occur. That is, the four main aspects of risk management involve:

1. Identifying potentially risk events,
2. Anticipating the likelihood of possible outcomes and their consequences,
3. Taking actions to obtain a preferred combination of risk protection and expected return, and
4. Restoring (if necessary) the nursery business' capacity to implement future risk planning strategies when distress conditions have passed.

## **ACKNOWLEDGMENTS**

Jo Lynne Seuffer, Risk Management Specialist, of USDA's Risk Management Agency - Spokane Regional Office compiled and authored the Managing Orchard and Vineyard Production Risks section of this curriculum. Dave Paul, Director, Dave Bearden, Deputy Director and Mary Stuart, Risk Management Specialist of Spokane's Regional Office provided valuable insights for this manuscript.

## **MODULE/PUBLICATION/MATERIAL REFERENCES**

USDA, Introduction to Risk Management. Reference to Production Risks, USDA/Risk Management Agency, Risk Management Education (Revised December 1997)

USDA/RMA Product Development Division 2000 Crop Insurance Handbook (CIH), FCIC 18010, June 1999.

USDA/FCIC Crop Insurance Provisions: Nursery Crop (24090)

Agricultural Risk Protection Act of 2000 – Fact Sheet, June 2000, USDA/Farm Service Agency, NAP Information, Page 2.

Organic Resource Manual – Publication of the Washington State Department of Agriculture, funded by USDA's SARE program, Spring 2000.

AGR Case Studies for Crop Year 2001 - Nursery Growers (by Robin Brunfield and Edouard Mafoua, Rutgers, January 9, 2001 - DRAFT). Located in PDF at <http://www.aec.msu.edu/agecon/blackj/Agr.htm>

## **NURSERY CROP INSURANCE COMPANIES/AGENTS**

### Nursery Crop Insurance Agents

All insurance policies are available exclusively from private insurance agents. A listing of local crop insurance agents can be obtained at all local USDA Service Centers or Farm Service Agency county offices, usually listed in telephone directories under U.S. Government, Department of Agriculture or at the website address: [www.rma.usda.gov/tools/agents/](http://www.rma.usda.gov/tools/agents/).

### Nursery Crop Insurance Companies

A list of national crop insurance companies is provided as follows:

Farmers Alliance Insurance Company  
(Blakely Crop Hail, Inc.)  
100 South East 9th Street  
Topeka, Kansas 66601-0918  
Phone: (785) 232-0937 (1-800-336-4359)  
Fax: (785) 232-0042

American Growers Insurance Company  
535 West Broadway  
Council Bluffs, Iowa 51503  
Phone: (712) 328-3918 (1-800-999-7475)  
Fax: (712) 329-5878  
Mr. Richard Gibson, Executive Vice President

Producers Lloyds Insurance Company  
P. O. Box 229  
Amarillo, Texas 79105  
Phone: (806) 372-6785 (1-800-366-2767)  
Fax: (806) 372-3826  
Alliance Insurance Company  
(North Central Crop Ins. Co.)

P. O. Box 1088  
Eau Claire, Wisconsin 54702  
Phone: (715) 834-8155 (1-800-826-7090)  
Fax: (715) 834-1899

Farm Bureau Insurance Co. of Nebraska  
5225 South 16th Street  
Lincoln, Nebraska 68501  
Phone: (402) 421-4400 Fax: (402) 421-4432

Farm Bureau Mutual Insurance Company (Iowa)  
5400 University Avenue  
West Des Moines, Iowa 50266  
Phone: (515) 225-5516 Fax: (515) 226-6070

Cigna Insurance Company  
(Rain and Hail L.L.C.)  
1501 50th Street, Suite 200  
West Des Moines, Iowa 50266-5925  
Phone: (515) 224-3070 (1-800-776-4045)  
Fax: (515) 224-3089

Farmers Mutual Hail Insurance Company of Iowa  
2323 Grand Avenue  
Des Moines, Iowa 50312  
Phone: (515) 282-9104 Fax: (515) 282-6303

Country Mutual Insurance Company  
P. O. Box 2100  
Bloomington, Illinois 61702  
Phone: (309) 821-3000 Fax: (309) 821-3538

Great American Insurance Company  
49 East Fourth Street, Suite 408  
Cincinnati, Ohio 45202-3803  
Phone: (513) 763-8400 (1-800-587-1553)  
Fax: (513) 763-8457

IGF Insurance Company  
6000 Grand Avenue  
Des Moines, Iowa 50312  
Phone: (515) 633-1000 (1-800-274-2766)  
Fax: (515) 633-1010

The Hartford  
1125 South 103rd St., Suite 300

Omaha, Nebraska 68124  
Phone: (402) 399-8833 (1-800-295-1815)  
Fax: (402) 393-2879 or (402) 399-8012

Fireman's Fund Insurance Company  
10895 Lowell, Suite # 300  
Overland Park, Kansas 66210  
Phone: (913) 338-7800 Fax: (913) 388-7888

Rural Community Insurance Services  
3501 Thurston Avenue  
Anoka, Minnesota 55303  
Phone: (612) 427-0290 (1-800-451-3836)  
Fax: (612) 427-1591

American Agricultural Insurance Company  
225 Touhy Avenue  
Park Ridge, Illinois 60068-7056  
Phone: (847) 685-8600 Fax: (847) 685-8661

Millers Mutual Fire Insurance Company  
(Keystate Crop Insurance)  
11385 North Trimble Road  
Robinson, Illinois 62454  
Phone: (618) 546-5409 (1-800-654-2767)  
Fax: (618) 546-5650

NAU Country Insurance Companies  
6701 Highway 10, NW  
Ramsey, Minnesota 55303  
Phone: (763) 427-3770 (1-800-942-6557)  
Fax: (763) 427-6473

## SPECIFIC NURSERY CROP DEFINITIONS

**Eligible Plant List:** A list published by RMA in electronic format is available from your agent that includes the botanical and common names of insurable plants, the winter protection requirements for container material and the areas in which they apply, the hardiness zone to which *field grown* material is insurable, the designated hardiness zones for each county, and the unit classification for each plant on the list. A paper copy of the eligible plant list is available from your agent also.

**Field Grown:** Nursery plants planted and grown in the ground without the use of any artificial root containment device. In-ground fabric bags are not considered an artificial root containment device.

**In-Ground Fabric Bag:** Also called a grow bag or a root control bag. A porous fabric bag made of a non-biodegradable material such as polypropylene that typically has a plastic bottom, and is used for growing woody plants in the ground.

**Nursery:** A business enterprise deriving at least 50% of its gross income from the wholesale of marketing plants.

**Plant Price Schedule:** A schedule of insurable plant prices published by RMA in electronic format that established the value of undamaged insurable plants and the maximum amount we will pay for damaged insurable plants. A paper copy is available from your agent also. Growers have an option to use their catalog prices, if lower.

**Practice:** A cultural method of producing plants. Standard nursery container grown and field grown are considered separate insurable practices.

**Under Report Factor:** A factor which adjusts an insured's indemnity for under reporting of inventory values. The factor is always used in determining any indemnity.  
Price Elections and Coverage Levels

## EXHIBIT 2.0



## **Crop Insurance Definitions**

**Additional Coverage** - Plans of crop insurance providing a level of coverage equal to or greater than 65 percent (65%) of the approved yield indemnified at 100 percent (100%) of the expected market price, or comparable coverage as established by RMA.

**Administrative Fee** - The annual fee that the producer must pay in addition to the premium (if any) for additional or catastrophic coverage.

**Appraised Production** - Production determined by the Insurance Provider for unharvested acreage, reflecting the potential production for the crop at the time of the appraisal. Appraisals made for production LOST due to insured or uninsured cause(s) of loss are not considered production for APH purposes. Only potential production remaining in the field at the time of the appraisal is used for APH purposes. (Applies to both APH appraisals or appraisals made to determine a loss.)

**Catastrophic Risk Protection (CAT)** - The minimum level of coverage offered by RMA which meets the requirements for a person to qualify for certain other USDA program benefits. Catastrophic Risk Protection is referred to as “CAT” or “CAT coverage” in this handbook.

**Contract** - The contractual agreement between the insured and the Insurance Provider Consisting of the accepted application, the Basic Provisions, the Crop Provisions, the Special Provisions, other applicable endorsements or options, the Actuarial Table for the insured crop, the Catastrophic Risk Protection Endorsement (if applicable), and the applicable regulations published in 7 Code of Federal Regulations Chapter IV.

**County** - The political subdivision of a state listed in the actuarial table and designated on the accepted application (“county” includes acreage in a field that extends into the adjoining county or state if the county or state boundary is not readily discernable). (For quota tobacco, “county” includes any land identified by an FSA farm serial number for the county but physically located in another county.)

**Crop of Economic Significance** - A crop that has either contributed in the previous crop year, or is expected to contribute in the current crop year, 10 percent (10%) or more of the total expected value of the producer's share of all crops grown in the county. However, a crop will not be considered a crop of economic significance if the expected liability under the CAT Endorsement is equal to or less than the administrative fee (\$100 per crop per county).

**Days** - Calendar days.

**FCIC** - The Federal Crop Insurance Corporation, a wholly owned Government Corporation administered by the Risk Management Agency within USDA.

**FSA** - The Farm Service Agency, an agency of the United States Department of Agriculture, or a successor agency.

**FSA Farm Serial Number (FSN)** - The number assigned to the farm by the FSA county committee.

**Good Farming Practices** - The cultural practices generally in use in the county for the crop to make normal progress toward maturity and produce at least the yield used to determine the production guarantee or amount of insurance, and are those recognized by the Cooperative State Research, Education, and Extension Service as compatible with agronomic and weather conditions in the county.

**Insurance Provider** - A company reinsured by FCIC providing crop insurance coverage to producers participating in any Federal crop insurance program administered under the Federal Crop Insurance Reform Act of 1994.

**Insured** - The named person/entity as shown on the application accepted by the Insurance Provider. This term does not extend to any other person having a share or interest in the crop (for example, a partnership, landlord, or any other person) unless specifically indicated on the accepted application

**Irrigated Practice** - A method of producing a crop by which water is artificially applied during the growing season by appropriate systems and at the proper times, with the intention of providing the quantity of water needed to produce at least the yield used to establish the irrigated production guarantee or amount of insurance on the irrigated acreage planted to the insured crop.

**Limited Resource Farmer** - A producer or operator of a farm with an annual gross income of \$20,000 or less derived from all sources of revenue, including income from a spouse or other members of the household, for each of the prior two years. Notwithstanding the previous sentence, a producer on a farm or farms of less than 25 acres (aggregated for all crops), where a majority of the producer's gross income is derived from such farm or farms but the producer's gross income from farming operations does not exceed \$20,000, will be considered a limited resource farmer. (For example, a producer farming 20 acres with a total gross income of \$39,000, of which \$20,000 is farm income and \$19,000 is off-farm income, is a limited resource farmer.)

**Linkage Requirement** - The legal requirement that a producer must obtain at least CAT coverage for any crop of economic significance as a condition of receiving benefits for such crop from certain other USDA programs, unless the producer executes a waiver of any eligibility for emergency crop loss assistance in connection with the crop.

**New Insured** - A person/entity who was not insured the previous crop year without respect to the carrier (FSA or Insurance Company) or agent. If the insured had an MPCI, Income Protection, Crop Revenue Coverage, or Revenue Assurance crop insurance policy the previous crop year on the same crop/county, that person is not a new insured.

**Person/Entity** - An individual, partnership, association, corporation, estate, trust, or other legal entity, and wherever applicable, a state or a political subdivision or agency of a state. "Person" does not include the United States Government or any agency thereof.

**Planted Acreage** - Land in which seed, plants, or trees have been placed as appropriate for the insured crop and planting method, at the correct depth, into a seedbed that has been properly prepared for the planting method and production practice.

**Policy** - (also see "Contract") The provisions for insuring a specific crop.

**RMA Regional Office (RMA RO)** - The RMA Regional Office for a designated area (states).

**Secretary** - The Secretary of the United States Department of Agriculture.

**Share** - The insured's percentage of interest in the insured crop as an owner, operator, sharecropper, or tenant at the time insurance attaches. Unless the accepted application clearly indicates that insurance is requested for a partnership or joint venture, or is intended to cover the landlord's or tenant's share of the crop, insurance will cover only the share of the crop owned by the person/entity completing the application. The share will not extend to any other person having an interest in the crop except as may otherwise be specifically allowed in the Basic Policy provisions.

**Cash Lease** (100 Percent Share). Acreage rented for cash is considered a cash lease. A lease containing provisions for either a minimum payment or a crop share will be considered a cash lease.

**Crop Share**. Acreage rented for a percentage of the crop will be considered a crop share lease. A lease containing provisions for both a minimum payment (such as a specified amount of cash, bushels, pounds, etc.) and a crop share will be considered a crop share lease.

**USDA** - The United States Department of Agriculture.

**Verifier** - An Insurance Provider authorized by RMA to calculate approved APH yields.

**Waiver (Linkage)** - An FSA document, when signed by a producer, relinquishes that producer's eligibility for emergency crop loss assistance, satisfying linkage requirements.

**Waiver (Administrative Fees)** - A document that, when signed by limited resource farmers, exempts them from paying the administrative fee.

**Written Agreement** - A document that alters designated terms of a limited or additional coverage policy and that is authorized under the basic provisions, the crop provisions, or the Special Provisions for the insured crop.