

# Controlled Environment (CE) Crop Insurance

An introduction to the design, concepts,  
and terminology of CE crop insurance

Last Updated: **10/13/2023**



# Agenda

- **Background and Context: What is CE**
- **Challenges and Benefits**
- **Application Process**
- **Loss Adjustment Process**
- **How CE works**
- **The 2024 Pilot Area**
- **Examples**

# Background and Context: What is CE?

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# Background: A Farm Bill Requirement

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The Agricultural Improvement Act of 2018 directed RMA to research the feasibility of a policy to insure a controlled environment such as a greenhouse:

- The production of floriculture, nursery, and bedding plants;
- the establishment of cuttings or tissue culture in a growing medium; or
- other similar production, as determined by the Secretary.

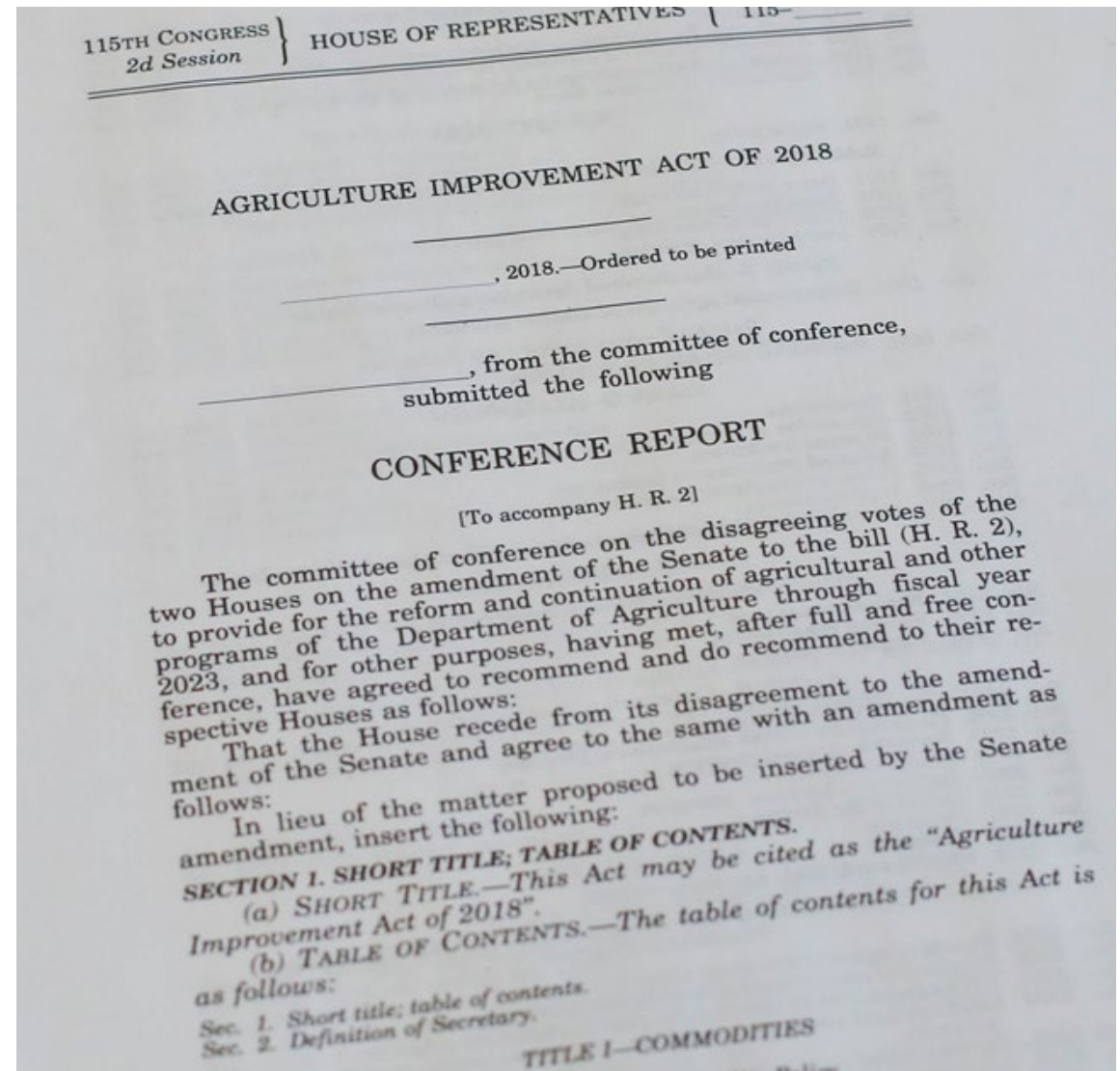




# Background: A Farm Bill Requirement

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- RMA to study the effectiveness of policies based on the risk of:
  - plant diseases introduced from the environment;
  - contaminated cuttings, seedlings, or tissue culture; or
  - Federal or State destruction orders associated the contamination



# An Overview of the CE Crop Insurance Program

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A crop insurance plan designed to insure **Controlled Environments**.

- CE is designed to insure plant disease or contamination losses due to destruction orders:
  - Federal or State destruction orders associated with plant disease or contamination.
  - Losses are compensated based on the value of the infected plants.
- The CE pilot program will be available in selected states and counties



## **What is a Controlled Environment?**

- Fully-enclosed (Ventilation allowed)
- Permanent/Non-Seasonal Structure
- Elements needed to support plant growth are provided artificially



# Challenges and Benefits of CE Crop Insurance

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# Challenges of Insuring Controlled Environments

- Insuring thousands of plants under one policy
- Constantly fluctuating inventory
- No established framework for what a “typical” operation would be, all greenhouses production systems are different:
  - **Type of protection** - Greenhouses, brick and mortar, fiberglass, etc.
  - **Time to market** - Annuals vs Perennials, Lettuce vs Tomato
  - **Production Practices** - Soil, hydroculture or other growing media
  - **Propagation** - Grafting, seeding, cuttings, etc.
  - **Measurement** - Plant count, square feet, pounds, historic production



# Benefits of CE Insurance

- Simple application and policy renewal process
- Inventory is not required with application
- Producer-selected plant categories that are specific to CE
- Producer selects the amount of coverage
- Prices are determined based on producer's sales history
- Disease and contamination are the only insured cause of loss
- May insure same specific plant under CE and a Nursery Value Select (NVS) or Nursery (FG&C) policy

# Application Process

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# Who is Eligible to Buy CE?

## **A producer is eligible for CE insurance if:**

- At least 40% of the dollar value of plant sales are into the wholesale market.
  - Wholesale clients include:
    - Retailers who resell to end users
    - Landscape contractors
    - Government entities or organizations; and/or
    - Commercial fruit and vegetable plants and plant products



# Who is Eligible to Buy CE? (cont'd)

## **The production is eligible for CE insurance if:**

- Plants or plant products such as tomatoes, etc. (specific plants) are grown using a plant production practice (e.g., soil, hydroculture, all other growing medium) identified in the policy and Special Provisions.
- Subsidy is available if the producer meets conservation compliance requirements (as verified by FSA/NRCS)

# Application and Renewal Process

- All application documents are collected in the Controlled Environment Value Report (CEVR) at the time of submission and updated with renewal, if there are changes.



# How To Apply?

## *For new insureds and first-year applicants*

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*Complete and submit the following documents:*

- Application for crop insurance
- CEVR for each basic unit
- MUVP for each plant category
- Recent catalog
- Biosecurity self-certification
- \*Inspection required the first year.





# Application and Renewal Process (cont'd)

The CEVR includes:

- Monthly unit value plan (MUVP)
- Selected Value (SV)
- Coverage percentage
- Most recent catalog
- Biosecurity self-certification
- Supporting documentation



# How To Apply?

## *An example for 2024 Dec 1 Sales*

### *Closing Date (SCD):*

Sales Closing Date is the last day to enroll for a product for a given full insurance year. CE coverage has continuous enrollment, and all policies renew annually based on SCD

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- First year CE is offered SCD is December 1, 2023 - For all states and counties.
- Insurance coverage begins January 1, 2024
- Next SCD is May 1 or September 1, depends on state and county





# How To Apply?

*For new insureds and first-year applicants-after the SCD*

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Applying after the SCD:

- Applications sent after the sales closing date:
- Attaches on 31st day (30-day waiting period)
- Premium is owed from the first day of the month insurance attaches through the end of the insurance period



# How To Apply?

*An example for 2025 of applying for coverage after the SCD:*

- First year application with May 1 SCD
- You apply on July 1 (you miss the SCD)
- Coverage starts August 1
- Premium owed from August 1 through May 31



# How To Apply?

*For carryover insureds:*

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If CE has no changes, then submit:

- CEVR for each insured practice and basic unit
- Current catalog
- Biosecurity self-certification
- Failure to submit documents by the SCD by the can result in a lapse in coverage.





# The Loss Adjustment Process

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# Loss Adjustment: Terminology

- **Pre-loss actual unit value** -Total dollar value of all specific plants in a basic unit, immediately prior loss event
  - Determined by multiplying, in each basic unit, approved sales value by number of plants and summing the results.
- **Post-loss damage value** -Total dollar value of dead/ZMV plants in basic unit lost due to an insured cause of loss determined using FCIC approved procedures and the damage factors contained in the Special Provisions.
- **Damage factor** -0.00 for undamaged specific plants or 1.00 dead/ZMV (Zero Market Value) plants.
- **Undamaged plant** - A specific plant that is not a dead/ZMV plant and not required to be destroyed
- **Dead/ZMV plant** - A specific plant that, due to an insured cause of loss, must be destroyed pursuant to a destruction order.

# Loss Adjustment

- Pre-loss actual unit value prior to the insurable loss event
- Post-loss damage value by specific plants that are:
  - Dead/ZMV - Damaged (or considered to be damaged) by disease or contamination and destroyed
  - Undamaged and not destroyed

# Loss Adjustment (cont'd)

- Loss determination:
  - Percent of loss = (Post-loss damage value) / (Pre-loss actual unit value)
- Indemnity determination:
  - Percent of loss x Coverage percentage x:
  - Lesser of (pre-loss actual unit value) or (SV - previous indemnities)

# Loss Adjustment: Basic Process

**When you have a loss, notify agent as directed in the Common Crop Insurance Policy Basic Provisions.**

The Loss Adjuster will:

- Examine the plants in the basic unit from which the reported loss occurred.
- Assign a damage category to the plants:
  - *Undamaged or Dead/ZMV*

# Loss Adjustment: Damage Factors

	<b>Undamaged (Adjuster Determined)</b>	<b>Dead/ZMV (Adjuster Determined)</b>
<b>Description</b>	Not required to be destroyed per the Destruction Order	Required to be destroyed pursuant to the Destruction Order
<b>Damage Factor</b>	0%	100%

Prior to receiving an indemnity, the AIP must verify the insured destroyed or disposed of the dead / ZMV plants by a method approved by the AIP.

# Determining the value of the loss

## **Pre Loss-Actual Unit Value:**

- The loss adjuster determines the value of all plants in the basic unit that existed before the loss event occurred.

## **Post Loss Damage Value:**

- The loss adjuster determines the value of the Dead/ZMV plants in the basic unit.

## **The Percent of Loss is:**

- $\text{Post-loss Damage Value} / \text{Pre-loss Actual Unit Value}$



# How it works

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# How Does CE Work?

- The producer determined variables:
  - Dollar Value of each basic unit by month for coverage year
  - Dollar Value the producer elects to insure for the basic unit - Selected Value (SV)
  - Coverage Percentage
- Value determination process
  - Use producer records to establish both pre and post loss values
- Producers can adapt and change inventory during the year

# How Does CE Work? (cont.)

The amount of insurance for a basic unit is:

- Designated by the producer
- Limited by the highest declared monthly inventory value for that basic unit
- CAT coverage establishes a unit that contains all plant categories in the practice.
- Value for loss is (in order of precedence) based on availability:
  - Sales receipts
    - Previous 60 days, then
    - Previous 12 months, then, if no sales receipts,
  - Contract prices for future delivery\*, or
  - Patent designated price, then
  - Catalog price, less the greatest discount offered to any customer

# How Does CE Work?(cont.)

- Three practices:
  - Soil
  - Hydroculture
  - All other growing media
- Ten plant categories:
  - Premium rates by category
  - Descriptions are intended to be broad
  - *Genera* typical to each plant category are available from agent, Special Provisions, and CE Insurance Standards Handbook (ISH)
  - Some *Genera* may be included in multiple plant categories, for example potatoes can be for food or seed.

# CE Plant Categories

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- Cut Flowers and Greenery
- Vegetable and Food Crops
- Food and Flower Seed Plants
- Annual Bedding and Garden Plants
- Perennial Bedding and Garden Plants
- Bulbs, Rhizomes, Corms, and Tubers
- Foliage and Tropical Plants
- Trees and Shrubs Seedlings and Grafts
- Propagative Horticultural Materials
- Cuttings and Tissue Cultured Plantlets
- All other plant groupings included in actuarial documents



# What Risks Does CE Cover?

- Insures plants affected by plant disease or contamination that have been destroyed under a destruction order (value of the destroyed plants).
- To be an insurable loss, the plant disease or contamination must have been unknowingly introduced into the CE operation at no fault of the operation resulting in a destruction order that requires destruction of the plants.
- Grower must have appropriately executed the self-certified biosecurity plan.



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# What Risks Does CE Cover? (cont'd)

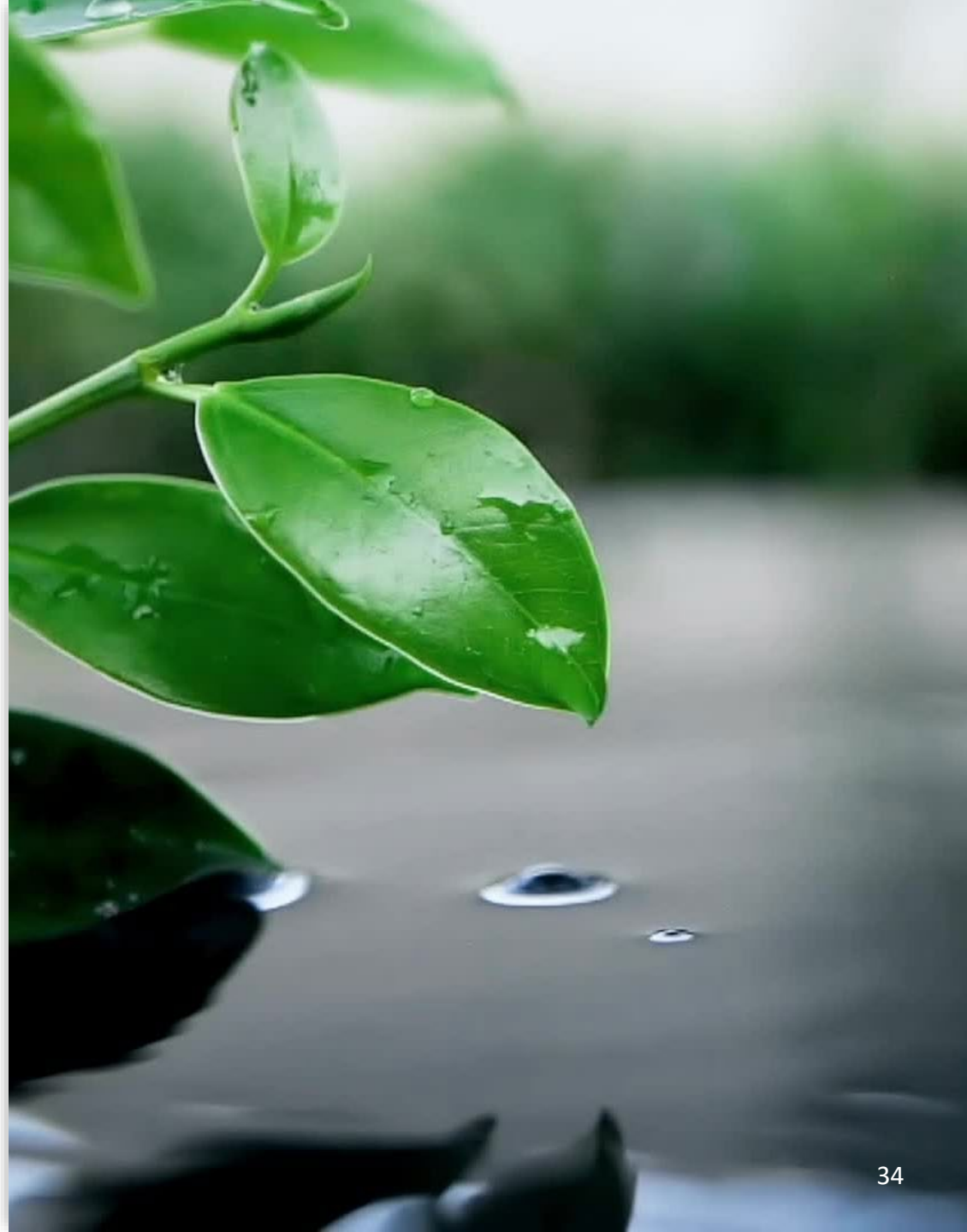
- Destruction Order must be in place and turned in for loss adjustment.
- Destruction Order includes:
  - Name of disease or cause of contamination
  - Action to be taken
  - How to destroy plants
  - Date and deadlines for destruction
  - Name of plants
- They are considered Dead/ZMV plants.
- "Buffer plants" that are ordered to be destroyed are considered to be damaged due to an insurable cause.





# What Risks Does CE Cover? (cont'd)

- Coverage is only for plant disease or contamination that results in a destruction order
- Coverage is NOT provided for:
  - Inability to market the specific plants due solely to refusal of a buyer to accept production; boycott; or a quarantine
  - Failure of the plants to grow to an expected size
  - Failure to follow good production practices
  - Failure of irrigation water supply
  - Lack of electricity
  - Destruction of CE structure



# How are Basic Units and Fees Designated?

	<b>CAT</b>	<b>Buy-Up</b>
<b>Units</b>	Basic unit for each plant production practice; No other units allowed	Basic unit by plant production practice and plant category
<b>Fees</b>	Admin fee per basic unit is \$655	Admin fee per each plant category within each basic unit is \$30
<b>Example</b>	Soil practice at CAT	Hydroculture practice six plant categories at Buy-Up
<b>Fees by Practice</b>	Pays \$655 per CAT policy $\$655 \times 1 \text{ basic unit} = \$655$	Pays \$30 for basic Unit $\$30 \times 6 \text{ basic units} = \$180$

# CE Units: Explained

CAT (Catastrophic Coverage) is Basic units by practice

For CAT, no further unit division allowed

For buy-up coverage, (anything other than CAT), basic units are by plant production practice and plant category

# What coverage percentages are available?

- Available Producer Selected Coverage Percentages:
  - CAT
  - 50% - 75% in 5% intervals
- For Additional Coverage policies
  - Separate coverage percentages may be chosen by basic unit (which is by plant practice and plant category).

# Coverage is based on the Nursery Value Select (NVS) insurance program:

- **The producer identifies the expected value of the plants** they expect to have in their operation for each month of the covered year.
  - No requirement to provide estimate of plants by name and size - simply the expected value of the plants in the CE.
- Insurance uses the CE's **information from inventories and verifiable sales records to establish pre-loss and post-loss values.**
- The **producer selects the CE value they desire to insure.**
  - Cannot exceed the maximum monthly value they declare for the plant production practice and plant category in the basic unit for the covered year.
- The amount of insurance is calculated as:
  - **(producer's selected value) × (the producer's elected coverage percentage) × (the price election percentage) × (the producer's share)**

# How is the Premium Determined?

- Total premium for a basic unit is the sum of:
  - The SV(s) you declared on your CEVR for the basic unit, times
  - The appropriate coverage percentage for the basic unit, times
  - The appropriate premium rate for the plant practice/plant category, times
  - Your share
- Your premium is the total premium minus the amount of subsidy that applies to each basic unit.





# What is a CEVR?

- CEVR is a document in which the producer declare:
  - The monthly value of the plants you expect to have in each insured basic unit (MUVP)
  - The value you elect to insure (the SV) for each insured basic unit (which may not be greater than the greatest value you declare for any month in the MUVP for that basic unit)
  - The coverage percentage you elect for each basic unit
- CEVR also includes
  - Two printed or one electronic copy of all catalogs or price lists you will use during the insurance year
  - Biosecurity self-certification document
  - Required for each basic unit
  - Displays the Amount of Insurance for the policy
  - $SV \times \text{Coverage Percentage} \times \text{Price Level (1.0 for buy-up and 0.55 for CAT)} \times \text{Share}$



# Monthly Unit Value Plan Example Form

**All Other Growing Media (Amount of Insurance and Total Premium):**

<b>Basic Unit</b>	<b>Plant Category Name</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>
0001	Propagative Horticultural Materials	\$500,000	\$750,000	\$1,200,000	\$300,000	\$150,000	\$200,000

<b>MUVP (Continued)</b>	<b>December</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>Selected Value</b>
Propagative Horticultural Materials	\$250,000	\$500,000	\$750,000	\$900,000	\$1,000,000	\$800,000	\$900,000

# How is the premium determined?

## All Other Growing Media (Amount of Insurance and Total Premium):

Basic Unit No.	Plant Category	Selected Value	Coverage Percentage	Price Level (Additional Level of Coverage - 1.0; CAT - 0.55)	Insured Share	Amount of Insurance
0001	Propagative Horticultural Materials	\$900,000	0.75	1.0	1.0000	\$675,000

Basic Unit No.	Plant Category	Amount of Insurance	Plant Category Rate	Total Premium
0001	Propagative Horticultural Materials	\$675,000	.0107	<b>\$7,223</b>

# How is the premium determined?

## Example (Producer Paid Premium):

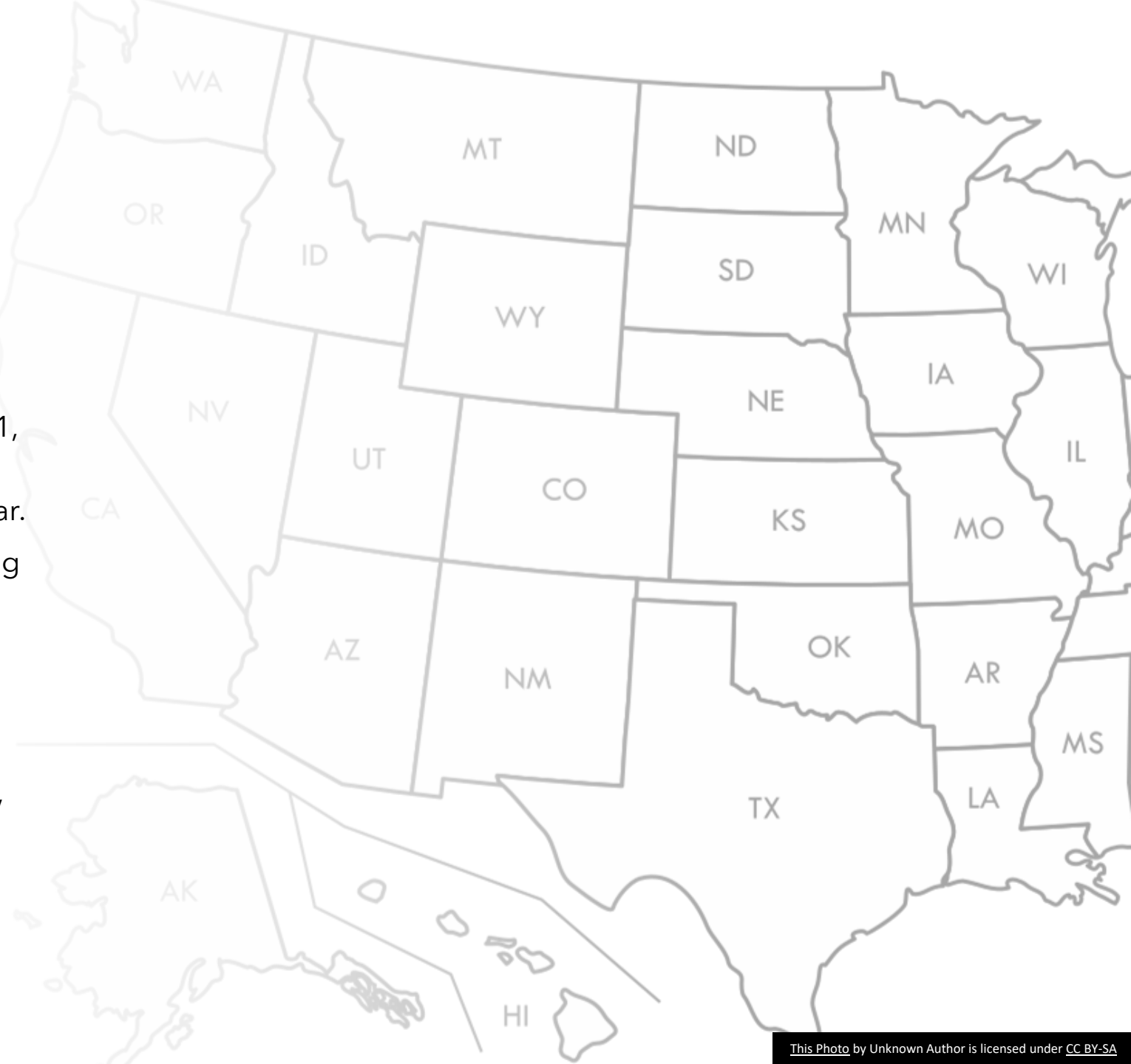
<b>Basic Unit No.</b>	<b>Plant Category</b>	<b>Coverage Percentage</b>	<b>Total Premium</b>	<b>Subsidy Factor</b>	<b>Subsidy</b>	<b>Producer Paid Premium</b>
0001	Propagative Horticultural Materials	0.75	\$7,223	0.650	\$4,696	\$2,527

# 2024 Pilot Area

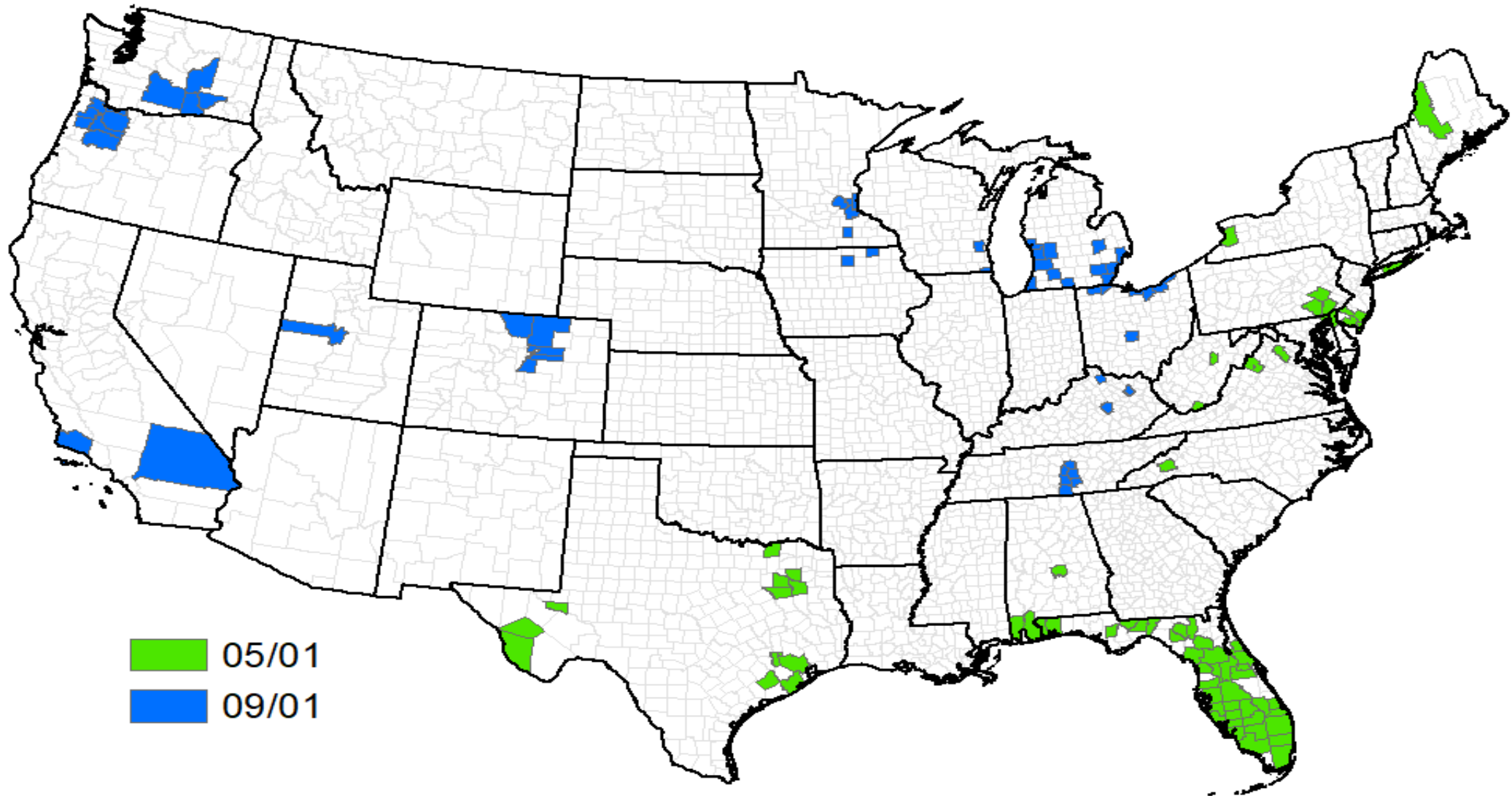
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# Where is CE Offered?

- For 2024 CY the sales closing date is December 1, 2023.
- The premium will be pro-rated the initial crop year.
- For 2025 and succeeding crop years, sales closing dates are May 1 or September 1, depending on your state.
- May 1: Alabama, Delaware, Florida, Maine, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Texas, Virginia, and West Virginia.
- September 1: California, Colorado, Hawaii, Iowa, Kentucky, Michigan, Minnesota, Ohio, Oregon, Tennessee, Utah, Washington, and Wisconsin
- Sales closing dates for specific counties are identified in the actuarial documents.



# CE Pilot Counties Map



# CE Pilot List of States and Counties

## 2024 Crop Year

<b>Alabama</b>	<b>Florida</b>	<b>Florida (cont)</b>	<b>Florida (cont)</b>	<b>Iowa</b>	<b>Michigan (cont)</b>
Autauga	Alachua	Highlands	Palm Beach	Cerro Gordo	Kent
Baldwin	Broward	Hillsborough	Pasco	Howard	Macomb
Mobile	Calhoun	Jefferson	Polk	<b>Kentucky</b>	Monroe
<b>California</b>	Charlotte	Lafayette	Santa Rosa	Madison	Muskegon
San Bernardino	Citrus	Lake	Sarasota	Pulaski	Ottawa
Santa Barbara	Collier	Lee	Seminole	Rowan	Washtenaw
<b>Colorado</b>	Columbia	Leon	St Lucie	<b>Maryland</b>	Wayne
Adams	De Soto	Levy	Sumter	Cecil	<b>Minnesota</b>
Arapahoe	Escambia	Manatee	Suwannee	<b>Michigan</b>	Dakota
Douglas	Flagler	Marion	Volusia	Allegan	Hennepin
Larimer	Gadsden	Martin	<b>Hawaii</b>	Berrien	Ramsey
Weld	Glades	Miami - Dade	Hawaii	Branch	Steele
<b>Delaware</b>	Hardee	Okeechobee	<b>Maine</b>	Genesee	Washington
New Castle	Hendry	Orange	Somerset	Kalamazoo	



# CE Pilot List of States and Counties (cont)

## 2024 Crop Year

2024 Crop Year				
<b>New Jersey</b>	<b>Ohio (cont)</b>	<b>Pennsylvania</b>	<b>Texas (cont)</b>	<b>Washington (cont)</b>
Atlantic	Lake	Berks	Henderson	Grant
Cape May	Lorain	Chester	Jeff Davis	Yakima
Cumberland	Lucas	Lancaster	Presidio	<b>West Virginia</b>
Gloucester	<b>Oregon</b>	<b>Tennessee</b>	Smith	Mercer
<b>New York</b>	Clackamas	Cannon	Van Zandt	Upshur
Erie	Linn	Coffee	Waller	<b>Wisconsin</b>
Suffolk	Marion	De Kalb	Ward	Kenosha
<b>North Carolina</b>	Multnomah	Franklin	Wharton	Washington
Buncombe	Polk	Grundy	Wood	
<b>Ohio</b>	Washington	Warren	<b>Utah</b>	
Cuyahoga	Yamhill	<b>Texas</b>	Juab	
Erie	<b>Virginia</b>	Brazoria	<b>Washington</b>	
Franklin	Fauquier	Fannin	Benton	
Fulton	Rockingham	Harris	Franklin	

# CE Program Dates 2024

<b>2024 Crop Year</b>		
	Counties in AL, DE, FL, ME, MD, NC, NJ, NY, PA, TX, VA, and WV	Counties in CA, CO, HA, IA, KY, MI, MN, OH, OR, TN, UT, WA, and WI
<b>Sales Closing Date</b>	12/1/2023	12/1/2023
<b>Premium Billing Date</b>	3/1/2024	7/15/2024
<b>End Of Insurance Date</b>	5/31/2024	9/30/2024
<b>Termination Date</b>	5/31/2024	9/30/2024
<b>Contract Change Date</b>	1/31/2024	4/30/2024

# CE Program Dates 2025 +


<b>2025 and Succeeding Crop Years</b>		
	Counties with May 1 SCD	Counties with September 1 SCD
<b>Sales Closing Date</b>	5/1/202y	9/1/202y
<b>Cancellation Date</b>	5/31/202y	9/30/202y
<b>Premium Billing Date</b>	3/1/202y+1	7/15/202y+1
<b>End Of Insurance Date</b>	5/31/202y+1	9/30/202y+1
<b>Termination Date</b>	5/31/202y+1	9/30/202y+1
<b>Contract Change Date</b>	1/31/202y+1	4/30/202y+1

Let's look at some  
examples...

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# Example 1: Same Pre-Loss Value

Basic Unit	Plant Category Name	Coverage Percentage	Selected Value	Amount of Insurance	Pre-Loss Actual Unit Value	Post-Loss Damage Value
				SV x Coverage Percentage		
0001	Propagative Horticultural Materials	0.75	\$900,000	\$675,000	\$900,000	\$900,000




# Example 1: Same Pre-Loss Value (cont'd)

Percent of Loss	Percent of Loss x Coverage Percentage	Share	Amount of Loss	Price Election %	Indemnity
Post-Loss / Pre-Loss			Percent of Loss x Coverage Percentage % x min(SV, Pre-loss Actual Unit Value)		Amount of Loss x Price Election Percentage (1.0) x Share (1.0)
	0.75	1.0	\$675,000	1.0	\$675,000




# Example 2: High Pre-Loss Value

Basic Unit	Plant Category Name	Coverage Percentage	Selected Value	Amount of Insurance	Pre-Loss Actual Unit Value	Post-Loss Damage Value
				$SV \times$ Coverage Percentage		
0001	Propagative Horticultural Materials	0.75	\$900,000	\$675,000	\$1,200,000	\$1,000,000



## Example 2: Multi-Category, Multi-Coverage Percentage – High Pre-Loss Value (cont'd)

Percent of Loss	Percent of Loss x Coverage Percentage	Share	Amount of Loss	Price Election %	Indemnity
Post-Loss / Pre-Loss			Percent of Loss x Coverage Percentage x min(SV, Pre-loss Actual Unit Value)		Amount of Loss x Price Election Percentage (1.0) x Share (1.0)
~0.83	0.625	1.0	\$562,500	1.0	\$562,500



# Occurrence Loss Option (OLO) Included

- CE Examples for Occurrence Loss Options shown on next slide. OLO is not an option in CE, it is automatically included in the calculations as shown:

Single Unit Example

	NVS	Policy and Loss Information	CE
Coverage Percentage		75%	
Pre-loss actual unit value		\$600,000	
Post-loss damage value		\$300,000	
Percent loss		0.50	
Selected Value		\$500,000	

**Determine the Amount of Loss:**

Lesser of: Pre-loss actual unit value or (SV-previous indemnity)	\$500,000		\$500,000
Percent of loss	0.50	Percent of Loss	0.50
		Coverage %	0.75
		Percent of Loss x Coverage % =	0.375
<i>Amount of Loss</i>	<i>\$250,000</i>		<i>\$187,500</i>

Occurrence Deductible (1- Coverage Percentage)	25%		
Lesser of: Pre-loss actual unit value or (SV-previous indemnity)	\$500,000		
Occurrence Deductible	\$125,000		
Indemnity before Deductible	\$250,000		
<b>Indemnity after Deductible - NVS</b>	<b>\$125,000</b>	<b>Indemnity for CE</b>	<b>\$187,500</b>



# CE – Additional Resources

- CE program materials are available on the RMA website.
- [www.rma.usda.gov](http://www.rma.usda.gov)
- For the initial year, the CE rates and Special Provisions will be available through the Actuarial Information Browser no later than 60 days prior to the Sales Closing Date for each state/county. For subsequent crop years, rates and Special Provisions will be available by the contract change date - January 31 or April 30, as applicable.



# To Conclude

This presentation provides an overview of the new Controlled Environment Pilot Crop Insurance Program that will run alongside the current nursery programs.



# Contact

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