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# History of Activities Addressing Pollinator Protection

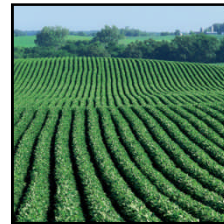
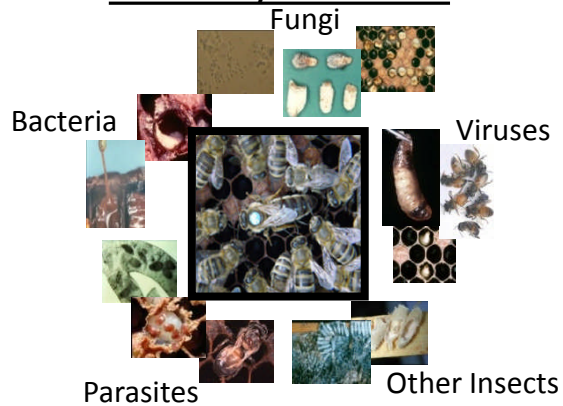
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Cary Giguere  
Agrichemical Program Manager  
Vermont Agency of Agriculture  
SFIREG-Chair

# Factors Associated with Bee Declines

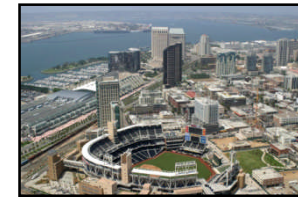
- USDA has identified multiple factors; no single factor identified as “cause”.

## Disease/Parasites



## Agricultural Practices

## Urbanization



## Bee Management Practices



Source: USDA Agricultural Research Service

## Pesticides



## Nutrition



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## EPA's Historical Experience Protecting Bees – Labeling

- Part 158.630 Data Requirements, up to Jan. 2013:
  - Honeybee acute contact toxicity
  - Honeybee toxicity of residues on foliage
  - Field testing for Pollinators.
  
- 1968 PRN from USDA
  - appears to be the first place where a distinction is made between compounds where the concern was to “exposure to direct treatment or residues on the crops” versus direct contact “when bees are actively visiting the area”

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## EPA's Historical Experience Protecting Bees – Labeling

- Labeling, from 1980's:

- Distinguished between “toxic” and “highly toxic”
- Attempted to distinguish between compounds where residual toxicity (RT25 data) may be of concern, i.e., “foraging” and “actively foraging”

“This product is (*highly*) toxic to bees and other pollinating insects exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees or other pollinating insects are (*actively*) visiting the treatment area.”

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## EPA's Historical Experience Protecting Bees-Labeling

EPA's State Labeling Issues Panel (SLIP), early 1990's:

- Stakeholder dialogue:
  - Advisory text favored by states
  - Enforceable text limiting use during bloom favored by beekeepers.
  - Neither recommendation adopted.

1997 AAPCO resolution to adopt advisory approach.  
EPA declined to do this.

### EPA draft PR Notice, 2000-XX

“Guidance for Pesticide Registrants on Bee Precautionary Labeling”

- Proposed to put RT25 data on the label and use it to define application timing, also proposed to use a default of 24 hours where RT25 data was not available.
- Residual toxicity of residues on foliage used to determine prohibited application period
- Encourage pollinator-friendly alternative application methods
- Encourage participation in state-approved bee protection program
- No consensus was found through the comments and PRN never went final.

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## Labeling to Protect Pollinators

When appropriate, EPA has increased the specificity of the protective label language

- depending on available data, open literature, and incident reports.
- Risk management to protect pollinators is evolving as the science evolves

Ex. Sevin (Carbaryl)

**“BEE CAUTION: MAY KILL HONEYBEES AND OTHER BEES IN SUBSTANTIAL NUMBERS”**

**“This product may show residual toxicity to honeybees, especially in humid climates and under slow drying conditions”**

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# Evolution of Pollinator Labeling for Neonicotinoids

(nitroguanidines: Imidacloprid, Thiamethoxam, Clothianidin, Dinotefuran)

## Imidacloprid, Provado®

- Registered 4/4/95; Environmental Hazards text:
  - “This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds when bees are visiting the treatment area. “
- Amended 10/1/04:
  - Added the following to general Application Directions:
    - “As with any insecticide, care should be taken to minimize exposure of PROVADO® to honey bees and other pollinators. Use of PROVADO® on crops requiring bee pollination should be avoided during bloom and a minimum of 10 days prior to bloom. Additional information on PROVADO® uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Bayer CropScience representatives.”
  - Added the following to strawberry, and citrus:
    - “Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging”
  - Added the following to bushberry, pome, tropical, poplar, and stone fruit:
    - “Do not apply pre-bloom or during bloom or when bees are actively foraging.”

In general, imidacloprid foliar crop labels were typically registered with the bee Environmental Hazard language and by the mid-2000s, more specific pollinator language was added as new uses were approved.

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## Evolution of Pollinator Labeling for Neonicotinoids

### Thiamethoxam, Actara 25 WG

- Registered 5/17/01; with crop specific language:
  - fruiting veg/cucurbits : “Actara® 25WG is toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply Actara® 25WG or allow it to drift onto blooming plants if bees are foraging in the treated area.
  - + additional language for pome: If bees are foraging in ground cover, mow or mulch ground cover before making application.”
- Amended 2/28/03:
  - Fruiting/tuberous/corm: “After an Actara® application, wait at least 3 days before placing beehives in the treated field”
  - Pome: “...wait at least 5 days before placing beehives...”
  - For apples, do not apply Actara® after pre-bloom (early pink growth stage) or before post bloom (petal fall growth stage). For pears, do not apply Actara® after pre-bloom (green duster stage) or before post bloom (petal fall growth stage).
  - If bees are foraging in the orchard ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide.
- Amended 9/3/08: changed “visiting” to “foraging”
- Amended 3/31/09: Expanded “Pollinator Precautions” in the Directions for Use, added:
  - For citrus, do not apply during pre-bloom or during bloom when bees are actively foraging”



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## Evolution of Pollinator Labeling for Neonics

### Clothianidin, Arena 50 WG

- Registered 11/30/04:
  - “This product is toxic to bees exposed to direct treatment or residues on blooming crops. Do not apply during bloom or when bees are present.”
- Amended 2/28/07:
  - This product is toxic to bees exposed to treatment and for more than 5 days following treatment. Do not apply this product to blooming, pollen-shedding, or nectar-producing parts of plants if bees may forage on plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

### Dinotefuran, 20 SG product

- Registered 9/17/04:
  - “This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment areas.”
- Amended 3/25/05:
  - “This product is toxic to bees exposed to treatment for more than 38 hours following treatment. Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.”

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# Pollinator Protective Labeling

## Summer, 2013 Initiative

August 15, 2013

- ❑ Foliar-applied products containing 4 neonicotinoid compounds: clothianidin, dinotefuran, imidacloprid, thiamethoxam
- ❑ Bee Icon\*



\*thanks to Charlie Clark!

- ❑ “Pollinator Protection Box”
- ❑ Restrictions for application at bloom in the Directions for Use
- ❑ Does not replace more restrictive labeling
- ❑ Registrants were required to submit amended labels by Sept. 30, 2013
- ❑ Products released for shipment after Feb. 28, 2014 must have the new labeling

# THE NEW EPA BEE ADVISORY BOX

On EPA's new and strengthened pesticide label to protect pollinators

**PROTECTION OF POLLINATORS**



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**  
Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:  
<http://pesticidestewardship.org/pollinatorprotection/Pages/default.aspx>

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state/tribe, go to: [www.aapco.org](http://www.aapco.org). Pesticide incidents can also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

Alerts users to separate restrictions on the label. These prohibit certain pesticide use when bees are present.



The new bee icon helps signal the pesticide's potential hazard to bees.

Makes clear that pesticide products can kill bees and pollinators.

Bees are often present and foraging when plants and trees flower. EPA's new label makes it clear that pesticides cannot be applied until all petals have fallen.

Warns users that direct contact and ingestion could harm pollinators. EPA is working with beekeepers, growers, pesticide companies, and others to advance pesticide management practices.

Highlights the importance of avoiding drift. Sometimes, wind can cause pesticides to drift to new areas and can cause bee kills.

The science says that there are many causes for a decline in pollinator health, including pesticide exposure. EPA's new label will help protect pollinators.



Read EPA's new and strengthened label requirements: <http://go.usa.gov/jHH4>

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# Pollinator Protection Box

## PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

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# Pollinator Protection Box, cont.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- ❑ Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- ❑ Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- ❑ Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- ❑ Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

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# Pollinator Protection Box, cont.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

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# Directions for Use



1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met.

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

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# Directions for Use

## 2. FOR FOOD CROPS AND COMMERICALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following condition has been met.

- ❑ The application is made to the target site after sunset
- ❑ The application is made to the target site when temperatures are below 55°F
- ❑ The application is made in accordance with a government-initiated public health response
- ❑ The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- ❑ The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



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# Directions for Use, etc



## 3. Non-Agricultural Products:

Do not apply while bees are foraging. Do not apply to plants that are flowering. Only apply after all flower petals have fallen off.

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Additionally, replace “visiting,” “actively visiting,” and “actively foraging” with “foraging” (Environmental Hazards section)

# Proposed Data Requirements

**Table 2. 40 CFR Part 158, Subpart G (Ecological Effects §158.630) Terrestrial and Aquatic Non-Target Organisms Data Requirements**

Number	Data Requirement	Use Pattern						Test substance	Test Note No.
		Terrestrial	Aquatic	Forestry	Residential Outdoor †	Greenhouse	Indoor		
Insect Pollinator Testing									
850.3020	Honey bee adult acute contact toxicity	R	R	R	R	R	NR	TGAI	1, 26
	Honey bee adult acute oral toxicity	R	R	R	R	R	NR	TGAI	1, 26
	Honey bee larvae acute oral toxicity	R	CR	R	R	CR	NR	TGAI	1, 25
	Honey bee adult chronic oral toxicity	R	CR	R	R	CR	NR	TGAI	1, 25
	Honey bee larvae chronic oral toxicity	R	CR	R	R	CR	NR	TGAI	1, 25
850.3030	Honey bee toxicity of residues on foliage	CR	CR	CR	CR	NR	NR	TEP	24
	Semi-field testing for pollinators	CR	CR	CR	CR	CR	NR	TEP	25
850.3040	Field testing for pollinators	CR	CR	CR	CR	NR	NR	TEP	25

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# Registration of Sulfoxaflor, May, 2013

## Transform, Closer

- Global Joint Review
- Data Available Include:
  - Acute Oral Toxicity
  - Acute Contact Toxicity
  - Larval Toxicity
  - 6 Semi-field Studies (“tunnel” studies)
  - Residue Studies (cotton, pumpkin)
- Test Case for Pollinator SAP
- First compound with a Risk Quotient generated for bees

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# Registration of Sulfoxaflor, May, 2013

## Transform, Closer

### Rate Reductions and changes:

- Maximum single application rate reduced from 0.133 lbs ai/acre to 0.09 lbs ai/acre: citrus, ornamentals, pistachio, pome fruit, stone fruit, tree nuts, turf
- Maximum single application rate reduced from 0.09 to 0.069 lbs ai/acre: cotton, cucurbits, fruiting vegs, okra, potatoes, strawberry, soybean, succulent&dry beans
- Minimum treatment interval increased from 7 to 14 days: citrus, ornamentals, potatoes. Soybean, beans

### Application Timing Restrictions

- “Do Not Apply During Bloom” added to grains, brassica, bulb vegs, leafy vegs, root & tuber, turf, watercress
- “Do not apply xxx 3 days prior to bloom, during bloom, or until petal fall” added to canola, small fruit vine climbing, low growing berry (except strawberry), pistachios, pome fruit, stone fruit, tree nuts
- “Do not make more than one application of 5.75 fl oz (0.09 lb ai/acre) 3 days prior to bloom, during bloom, or until petal fall” added to citrus

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# Registration of Cyantraniliprole, Jan, 2014

## Cyazapyr

- Data Available Include:
  - Acute Oral Toxicity Studies (incl. degradates)
  - Acute Contact Toxicity Studies (incl. degradates)
  - Bumble bee Toxicity
  - Pollen, Nectar Residue Studies
  - 14 Semi-field Studies (“tunnel” studies)
  - 5 Field Studies

Labeled with the “Neonic” labeling:

- “Pollinator Protection Box”.
- “Bee Icon”
- Prohibition of applications to crops during bloom, except under certain specific conditions
- Restrictions for ornamentals that prohibit application during bloom.

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# Registration of Flupyradifurone, Jan, 2015

## Sivanto

- 33 Bee Studies, including:
  - Acute Oral Toxicity Studies (incl. degradates)
  - Acute Contact Toxicity Studies (incl. degradates)
  - Larval Toxicity
  - Colony Feeding Study
  - Pollen, Nectar Residue Studies
  - 6 Semi-field Studies (“tunnel” studies)
  - 2 Field Studies

Environmental Hazard Statement:

“Toxic to adult bees in laboratory studies via oral exposure, however, not toxic to bees through contact exposure, and field studies conducted with this product have shown no effects on honeybee colony development.”

No other mitigation imposed.

# First of the New Generation



The image is a screenshot of a news article from the Environmental Protection Agency (EPA) website. The article is titled "Court rejects US approval of sulfoxaflor pesticide" and is dated 16 September 2015, written by Rebecca Trager. The article text states that a US federal appeals court has overturned the EPA's approval of sulfoxaflor, an insecticide that acts on the same insect receptors as neonicotinoids, which have been implicated in the decline of honeybees and other pollinators. The ruling states that the studies the EPA relied upon for sulfoxaflor's approval in May 2013 are inconclusive regarding the pesticide's actual risks to bees. The article also includes a quote from Judge Mary Schroeder and Judge N R Smith.

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## Court rejects US approval of sulfoxaflor pesticide

16 September 2015 Rebecca Trager

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A US federal appeals court [has overturned the Environmental Protection Agency's \(EPA\) approval of sulfoxaflor](#), an insecticide that acts on the same insect receptors as neonicotinoids, which [have been implicated in the decline of honeybees and other pollinators](#). In the ruling, a trio of judges said that the studies the EPA relied upon for [sulfoxaflor's approval in May 2013](#) are inconclusive regarding the pesticide's actual risks to bees.

'In this case, given the precariousness of bee populations, leaving the EPA's registration of sulfoxaflor in place risks more potential environmental harm than vacating it,' wrote Judge Mary Schroeder. 'I am inclined to believe the EPA ... decided to register sulfoxaflor unconditionally in response to public pressure for the product and attempted to support its decision retroactively with studies it had previously found inadequate,' wrote Judge N R Smith.

# Acute Toxicity – New Labeling Proposal

## Honeybee acute 96-hr contact LC<sub>50</sub> values

Chemical	LC <sub>50</sub> µg a.i./bee
Bifenthrin	0.015
Zeta-cypermethrin	0.023
Thiamethoxam	0.024
Spinetoram	0.024
Chlorpyrifos	0.059
Imidacloprid	0.078
Sulfoxaflor	0.38
Abamectin	0.54
Acephate	1.2
Acetamiprid	<12.5
<b>Flupyradifurone</b>	122 ←
Pyriproxyfen	>100
Spirotetramat	>100
Fenpropathrin	N/A

76 active ingredients that are toxic to bees including most insecticides and some herbicides



# 76 active ingredients

Appendix A – List of Registered Active Ingredients That Meet the Acute Toxicity Criteria

Abamectin	Acephate	Acetamiprid	Aldicarb	Alpha-cypermethrin	Amitraz
Arsenic acid	Azadirachtin	Bensulide	Beta-cyfluthrin	Bifenazate	Bifenthrin
Carbaryl	Carbofuran	Chlorethoxyfos	Chlorfenapyr	Chlorpyrifos	Chlorpyrifos Methyl
Clothianidin	Cyantranilprole	Cyfluthrin	Cypermethrin	Cyphenothrin	Deltamethrin
Diazinon	Dichlorvos	Diclotophos	Dimethoate	Dinotefuran	Diuron
D-trans-allethrin	Enamectin benzoate	Endosulfan	Esfenvalerate	Ethoprop	Etofenprox
Fenazaquin	Fenitrothion	Fenpropathrin	Fipronil	Fluvalinate	Fosthiazate
Gamma-cyhalothrin	Imidacloprid	Imiprothrin	Indoxacarb	Lambda-cyhalothrin	Melathion
Metaflumizone	Methiocarb	Methomyl	Momfluorothrin	Naled	Oxamyl
Permethrin	Phenothrin	Phorate	Phosmet	Pirimiphos-methyl	Prallethrin
Profenofos	Propoxur	Pyrethrins	Pyridaben	Resmethrin	Rotenone
Sethoxydim	Spinetoram	Spinosad	Sulfoxaflor	Tefluthrin	Tetrachlorvinphos
Tetramethrin	Thiamethoxam	Tolfenpyrad	Zeta-cypermethrin		

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## Proposal to Mitigate Acute Risk to Bees

- Proposal was released for public comment on May 29, 2015
- 30-day comment period closed June 29, 2015, extended to July 29, 2015
- Addresses acute contact exposure to foliar pesticide applications
- Two Mitigation Strategies
  1. Label Restrictions for Contract Pollination Services
  2. State and Tribal Managed Pollinator Protection Plans for Bee Colonies Not under Contract Pollination Services
- Does not supersede existing chemical-specific restrictions
- Chemical-specific risk assessments to address other routes of exposure and effects (seed treatments, chronic, whole hive)

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## Proposal to Mitigate Acute Risk to Bees: Commercial Pollination

- Label restriction prohibiting applications while bees are onsite under contract for pollination services
- All FIFRA Section 3 and 24(c) products that have:
  - Liquid or dust formulations
  - Foliar use directions for crops that utilize commercial pollination
  - Acute contact toxicity  $LD_{50} < 11 \mu\text{g}/\text{bee}$
- Section 18 petitions considered case-by-case



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# Proposed Label Restriction

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**FOR FOLIAR APPLICATIONS OF THIS PRODUCT TO SITES WITH BEES ON-SITE FOR COMMERCIAL POLLINATION SERVICES: Foliar application of this product is prohibited from onset of flowering until flowering is complete when bees are on-site under contract, unless the application is made in association with a government-declared public health response. If site-specific pollinator protection/pre-bloom restrictions exist, then those restrictions must also be followed.**

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# State & Tribal Managed Pollinator Protection Plans (MP3s)

## “Solving at the Local Level”

- Several states have been working through this issue at the state level by engaging stakeholders (growers, applicators and beekeepers) and developing state pollinator protection plans
  - Voluntary: California, Colorado, Florida, North Dakota, Mississippi
  - Regulatory: California, Iowa
  - About 38 other states have begun the stakeholder process (Vermont)
- These plans serve as examples of effective communication and collaboration between stakeholders at the local level
- SFIREG has issued guidance for states on the development of plans

# USDA National Level Approach

## The “5 Pillars” of Honey Bee Health



- Biology
- Nutrition & Habitat
- Pathogens & Pests \*1
- Pesticides \*2
- Genetics & Breeding

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## Reducing Exposure from Seed Dust the “Seed Bag Tag”

- “This compound may be highly toxic to bees exposed directly (contact). Ensure that planting equipment is functioning properly in accordance with manufacturing recommendations to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops and weeds.”
- Symposium on the Development of Managed Pollinator Protection Plans (MP3)
- March 2016 - *hosted by the: U.S. Department of Agriculture (USDA), U.S. Environmental Protection Agency (EPA), National Association of State Departments of Agriculture (NASDA), and Honey Bee Health Coalition (HBHC)*
  - Facilitate and enhance dialogue, information sharing, and lessons-learned with respect to MP3 development.

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## Emergency Exemptions In-Hive Miticides

No other group has received this many Emergency Exemptions (Section 18 of FIFRA)

### ***723 Section 18s issued to Protect Bees, 1999 – 2014***

1999	41 <b>Coumaphos*</b>	2008	5 Fenpyroximate
2000	45 <b>Coumaphos</b>	2009	23 Fenpyroximate
2001	46 <b>Coumaphos</b>	2010	5 Fenpyroximate, 3 Hop Beta Acids
2002	47 <b>Coumaphos</b> , 2 <b>Thymol</b>	2011	5 Fenpyroximate, 19 Hop Beta Acids
2003	45 <b>Coumaphos</b> , 20 <b>Thymol</b>	2012	30 Hop Beta Acids
2004	45 <b>Coumaphos</b> , 31 <b>Thymol</b>	2013	38 Hop Beta Acids, 31 <b>Amitraz</b>
2005	45 <b>Coumaphos</b> , 35 <b>Thymol</b>	2014	37 Hop Beta Acids
2006	40 <b>Coumaphos</b> , 35 <b>Thymol</b>		
2007	39 <b>Coumaphos</b> , 19 Fenpyroximate		

Coumaphos/honey, beeswax = the only Section 18 OP tolerances since FQPA



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## Registration of Oxalic Acid

- PennState: urged to register oxalic acid for Varroa
- Oxalic acid is registered in Canada and Europe
- EPA initiated the registration action
  - Obtained Canadian reviews under the “work share” agreement
  - EPA asked USDA to serve as the Registrant of Record
  - EPA found a distributor, obtained a commitment

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## Registration of Oxalic Acid

- Presidential Memorandum (June 20, 2014):

*“The Environmental Protection Agency shall assess the effect of pesticides, including neonicotinoids, on bee and other pollinator health and take action, as appropriate, to protect pollinators; engage State and tribal environmental, agricultural, and wildlife agencies in the development of State and tribal pollinator protection plans; encourage the incorporation of pollinator protection and habitat planting activities into green infrastructure and Superfund projects; and **expedite review of registration applications for new products targeting pests harmful to pollinators.**”*

Following a 30 day public comment period for the proposed decision, Oxalic Acid was registered in 4 months. (March 10, 2015)

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# Interim Decision on Neonicotinoid New Uses

Imidacloprid, Thiamethoxam, Clothianidin, Dinotefuran

Joint Announcement with Canada April 2, 2015

- A number of new use registration applications for these pesticides.
- EPA has stated that until the data on pollinator health have been received and appropriate risk assessments completed, it is unlikely to be in a position to determine that such uses would avoid “unreasonable adverse effects on the environment”
- During this interim period, EPA is unlikely to grant the following affected actions:
  - New or Modified Uses (including crop group expansion requests)
  - Changes to Existing Use Patterns (ex. adding aerial or soil application or significant formulation changes)
  - Experimental Use Permits
  - New Special Local Needs Registrations

**Table 2. Pollinator-specific proposed Fiscal Year (FY) 2016 budget additions relative to the Enacted FY 2015 budget for DOI, EPA, and USDA (\$ Million).**

Agency	Program	FY 2015 Enacted	FY 2016 Budget	Change from 15 Enacted to 16 Budget
DOI	U.S. Geological Survey (USGS)	0.00	1.56	1.56
	DOI Total	0.00	1.56	1.56
EPA	Office of Pesticide Programs	0.00	1.50	1.50
	State and Tribal Assistance Grants	0.00	0.50	0.50
	EPA Total	0.00	2.00	2.00
USDA	National Agricultural Statistics Service (NASS)	2.40	2.90	0.50
	Agricultural Research Service (ARS)	14.19	21.19	7.00
	National Institute of Food and Agriculture (NIFA)	9.66	31.50	21.84
	Economic Research Service (ERS)	0.28	0.28	0.00
	Land Management Programs			
	Farm Service Agency (FSA) Conservation Reserve Program (CRP)	18.00	18.06	0.06
	Natural Resource Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP)	3.00	4.00	1.00
	Animal and Plant Health Inspection Service (APHIS)	1.00	1.00	0.00
	USDA Total	48.52	78.93	30.41
Agencies Total		48.53	82.49	33.96

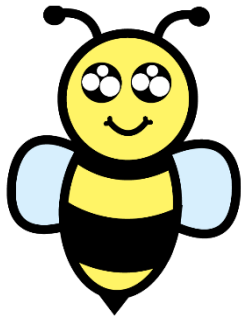
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# National Strategy...

- • U.S. Department of the Interior: Includes \$1.56 million in new funding for the USGS to support research priorities identified through the 2014 Presidential Memorandum on Pollinator Health, including the development of studies, monitoring programs, and decision-support tools for land and resource management agencies, and pollinator habitat models.
- • U.S. Environmental Protection Agency: Includes \$1.5 million to further the study of acute toxicity amongst honey bee populations and explore additional risk management options, and \$500,000 to augment the work of states and tribes to develop pollinator protection plans.
- • U.S. Department of Agriculture: Includes \$56 million in research and associated statistical survey programs, including in-house research through ARS, agreements through APHIS, and grants (mainly through a competitive peer-reviewed process) through NIFA, with much of the funding going to land grant institutions to support local and regional pollinator issues at all levels (national, regional, and local), including organic production.

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# State FIFRA Issues Research and evaluation Group (SFIREG)- Plan Guidance and Measures Template.



**State FIFRA Issues, Research, and Evaluation Group**  
**Final Guidance for State Lead Agencies for the Development and**  
**Implementation of Managed Pollinator Protection Plans**  
**June 2015**

**Introduction**

Pollinator health is a high priority national issue due to significant colony losses experienced by U.S. beekeepers over the past decade. In his memo, “*Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators*” in June of 2014, the President called attention to the issue of pollinator health and directed federal efforts to reverse pollinator losses and help restore populations to healthy levels. In particular, the memo directed the U.S. Environmental Protection Agency (EPA) to engage state agencies in developing state pollinator protection plans as a means of mitigating the risk of pesticides to bees and other managed pollinators.

The primary purpose of a state Managed Pollinator Protection Plan (MP<sup>3</sup>) is to reduce pesticide exposure to bees through timely communication and coordination among key stakeholders, including beekeepers, growers, pesticide applicators, and landowners. Pesticide exposure can be minimized if pesticide applicators and beekeepers communicate prior to pesticide applications to coordinate activities and allow crop protection products to be used without unreasonable adverse effects to managed pollinators. It is the intent that such open communication will lead to practices that both mitigate potential pesticide exposure to bees and allow for the management of pests. This could involve collaboration on the selection of the pesticide product, a change to the application timing, or an opportunity for beekeepers to move or cover their hives prior to a pesticide application, thereby reducing the chance that managed bees are found in the treatment area.