Michigan Managed Pollinator Protection Plan

Stakeholder Update and Listening Session

Michigan Department of Agriculture & Rural Development

Michigan Farm Bureau

Michigan State University

Michigan Pollinator Initiative

We all have an interest in the long-term health of pollinators

- Beekeepers: honey production and crop pollination.
- Growers: availability of bees for crop pollination.
- Resource managers: health of natural habitats.
- People who eat food: availability and price of food.

Bees are necessary to produce many of our food crops

Photo: Rufus Isaacs

Flowers of the left cluster were exposed to bees, the right one had bees excluded.

Most pollination of food crops is done by honey bees brought in by commercial beekeepers

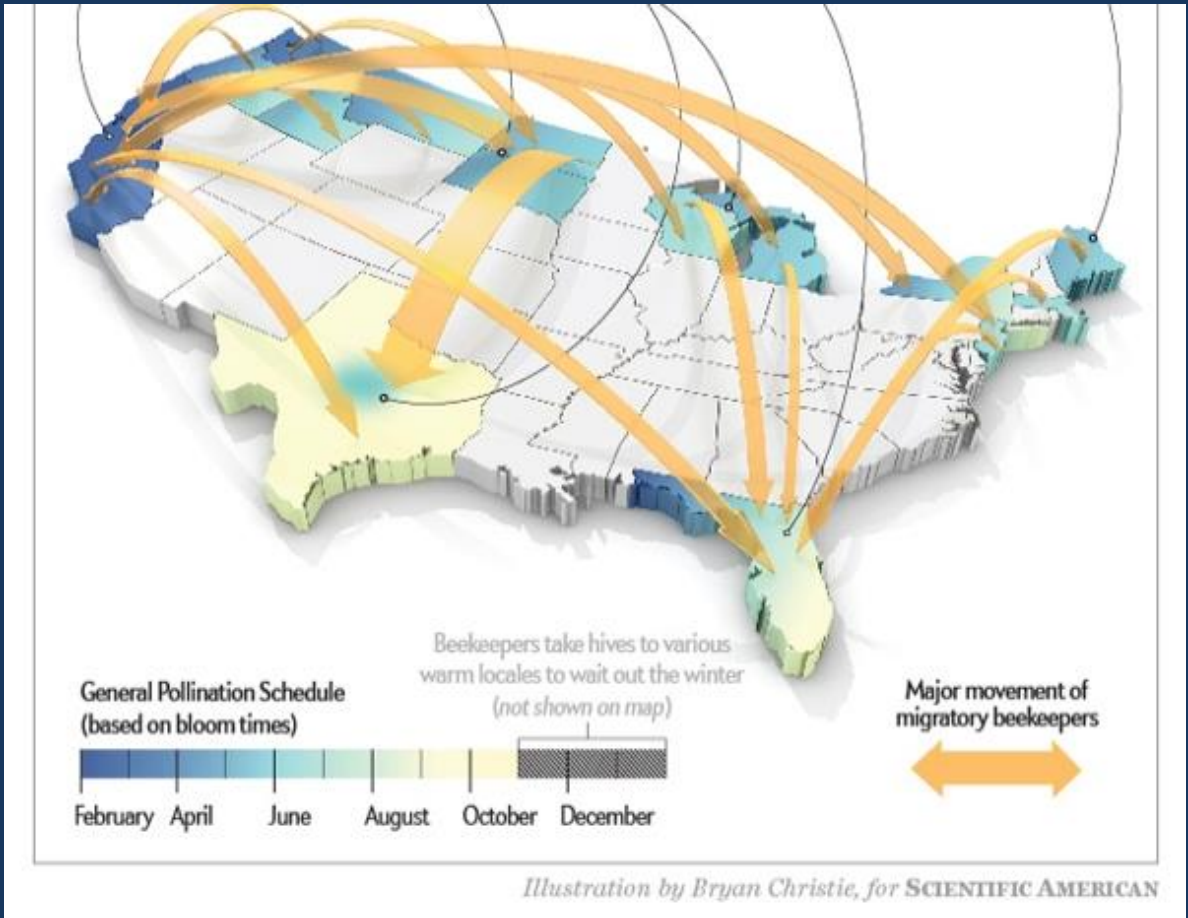
Photo: MDARD

Bees are brought in when the crops are blooming, then removed to a holding yard, honey yard or to another pollination contract.

Photo: Rufus Isaacs

Photo: MDARD

Typical commercial beekeeper routes



Michigan beekeepers

October–December:
FL and GA (build up)

February: California (almonds)

March: FL and GA
(re-build)

May: Michigan (fruit crops)

June–September: Michigan
(Honey and more pollination)

As many as 70,000 colonies return to Michigan each spring

Photo: Rufus Isaacs

Michigan's Beekeeping Industry*

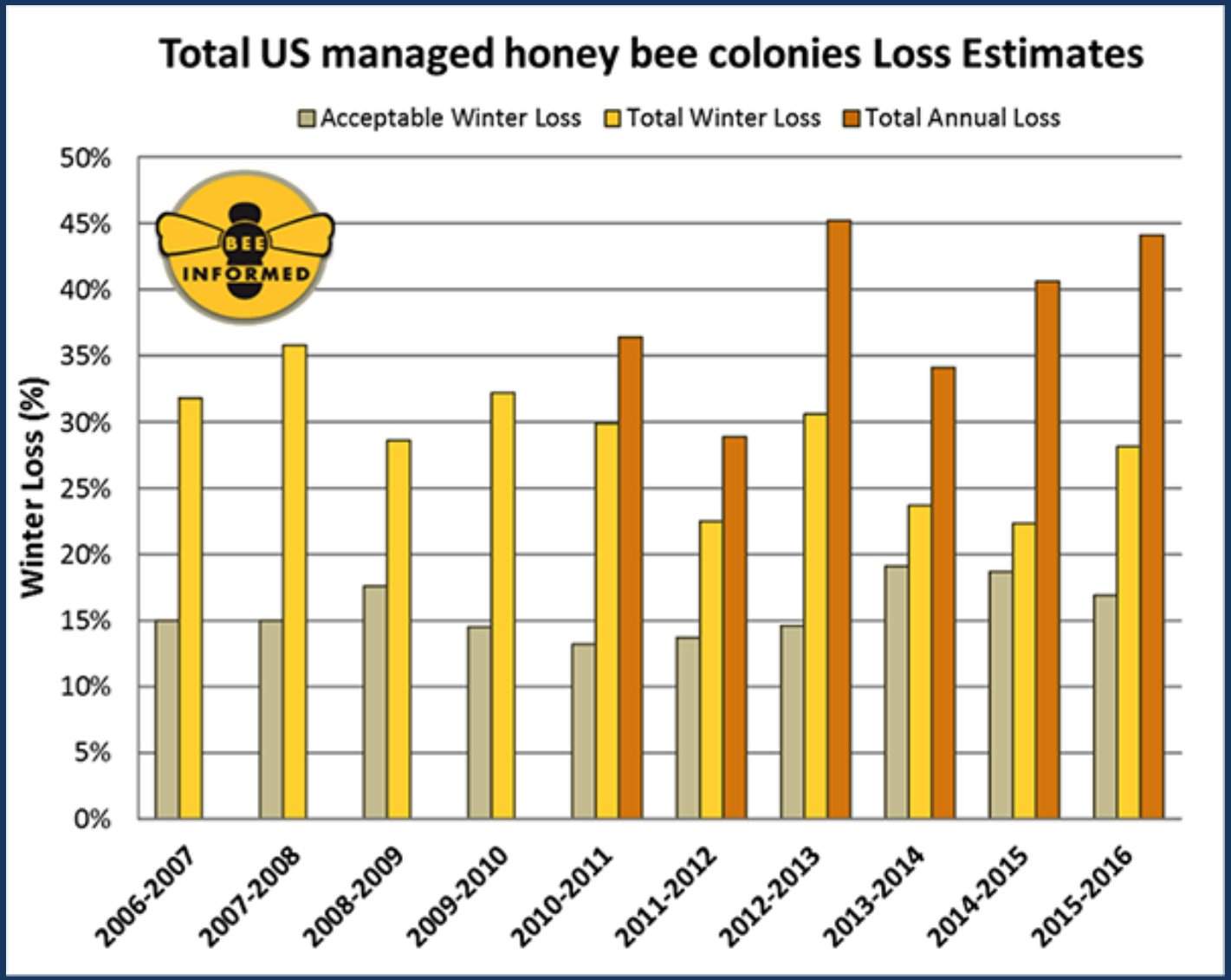
- 2500 to 3000 beekeepers - many provide some level of pollination services.
- 50-75 full time commercial beekeepers. Operations range from 500 to over 5000 colonies.
- Michigan bees are also pollinating almonds in California, blueberries in Maine, and cranberries in Wisconsin.

**There is no apiary registration program in Michigan; beekeeping statistics are estimates.*

Meeting Michigan Pollination Needs

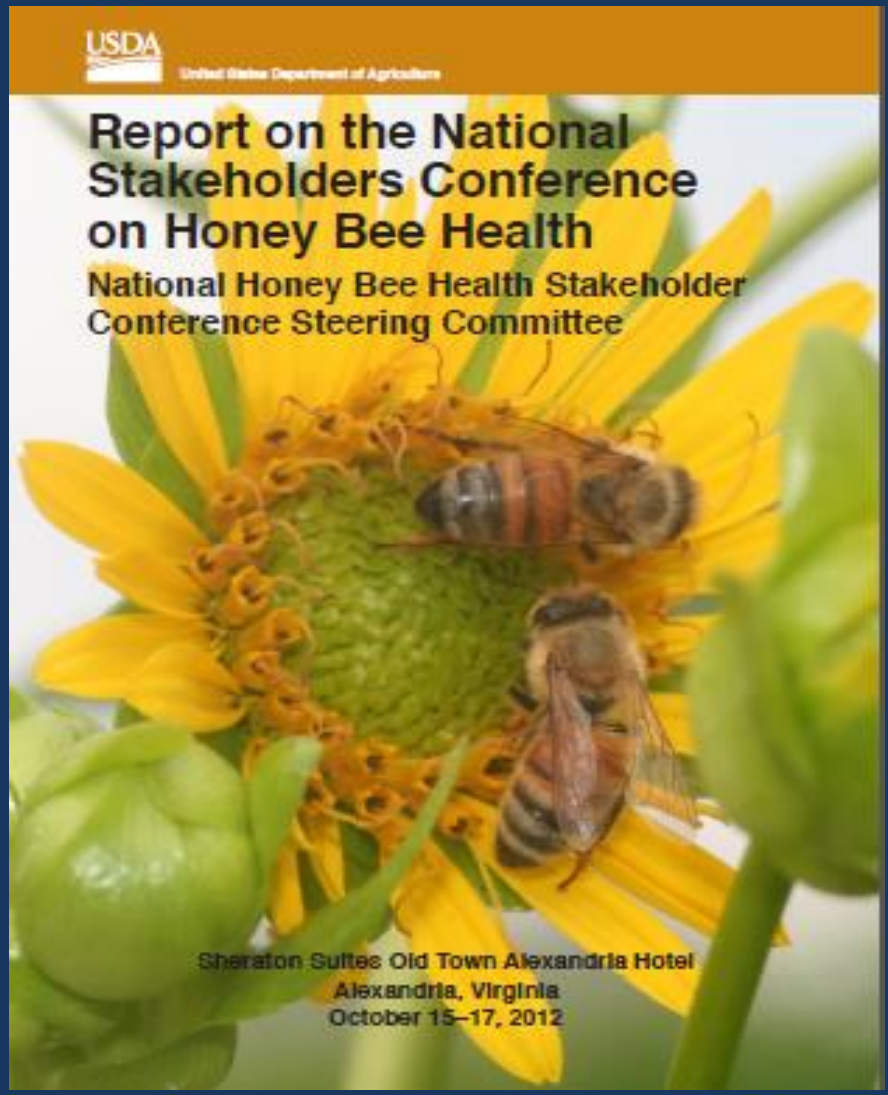
- Migratory honey bees are generally ready to take up pollination duties when they get to Michigan.
- Over-wintering in Michigan has issues.
  - Colony losses occur throughout the winter.
  - Losses cannot be replaced until spring, so bees will not be ready for early pollination work.
- Migratory beekeepers are very aware of and interested in protecting pollination contracts.
- Michigan beekeepers have historically met Michigan's pollination needs.

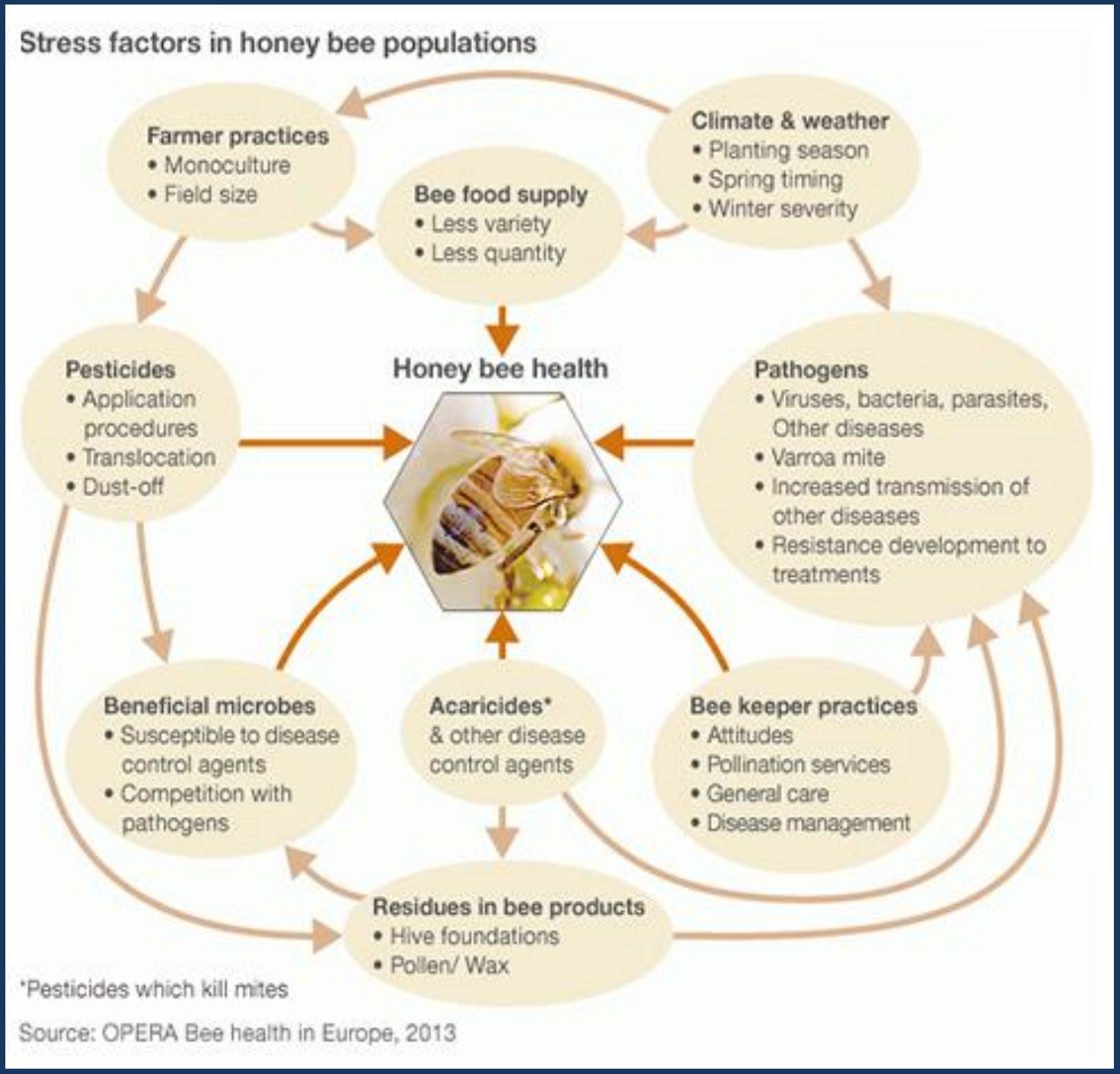
Beekeepers continue to lose unsustainable numbers of honey bees



Honey Bee Health Report

- Parasites
- Diseases
- Genetics: Diversity and Hygienics
- Nutrition: Diversity and Land Management issues
- Pesticide Exposure: Reports and Enforcement
- Best Management Practices




Stress factors in honey bee populations
Farmer practices
• Monoculture
• Field size
Climate & weather
• Planting season
• Spring timing
• Winter severity
Bee food supply
• Less variety
• Less quantity
Honey bee health
Pesticides
• Application procedures
• Translocation
• Dust-off
Pathogens
• Viruses, bacteria, parasites, Other diseases
• Varroa mite
• Increased transmission of other diseases
• Resistance development to treatments
Beneficial microbes
• Susceptible to disease control agents
• Competition with pathogens
Acaricides*
& other disease control agents
Bee keeper practices
• Attitudes
• Pollination services
• General care
• Disease management
Residues in bee products
• Hive foundations
• Pollen/ Wax
*Pesticides which kill mites
Source: OPERA Bee health in Europe, 2013

Colonies are at risk of pesticide exposure

- Pollination can be a stressful period for a honey bee colony.
- Honey bee colonies come off crop pollination very weak if exposed to bee toxic pesticides.
- They may need to be fed and rebuilt before they can go to another crop or make honey.
- They may experience more disease.

EPA: Proposal to Mitigate Acute Risk to Bees (May 2015)

Address acute contact exposure due to foliar pesticide applications

Two Strategies

1. Label restrictions for pesticides applied when bees are under Contracted Pollination Services
2. State and Tribal Managed Pollinator Protection Plans for bee colonies not under Contracted Pollination Services.

http://www.epa.gov/pesticides/epa-takes-strong-steps-better-protect-bees-pesticides

(Presentation from Rick Kiegwin, Deputy Director EPA-Office of Pesticide Programs.

Bees not under a pollination contract

Managed Pollinator Protection Plans

- There is a potential for bees not under contract for pollination services to be exposed to toxic pesticides
- It is harder to identify the source of exposure than when hives are under contract for pollination services
- Wide range of local conditions suggest a flexible approach rather than a regulatory approach
- EPA will continue to encourage state and tribal Managed Pollinator Protection Plans (MP3s)

Managed Pollinator Protection Plans

- MP3s aim to mitigate exposure to managed bees from acutely toxic pesticides when not under contract for pollination services.
- These are State or Tribal plans for local needs.
- Following an MP3 does not negate label requirements.
- States and Tribes have flexibility to:
  - Adopt a regulatory or voluntary approach.
  - Expand to address other pesticide-related issues.
  - Include other factors impacting pollinator health such as access to foraging habitat.
  - Expand scope to address wild bees and other pollinators.

Measuring Success of MP3s

- EPA is working with state and tribal agencies to develop measures to evaluate the success of MP3s.
- Earlier discussion identified potential measures for improved communication, change in behavior, reduction in exposure/risk, and overall pollinator health.
- EPA will monitor the success of these plans in reducing pesticide exposure to bees in deciding whether further label restrictions are needed.

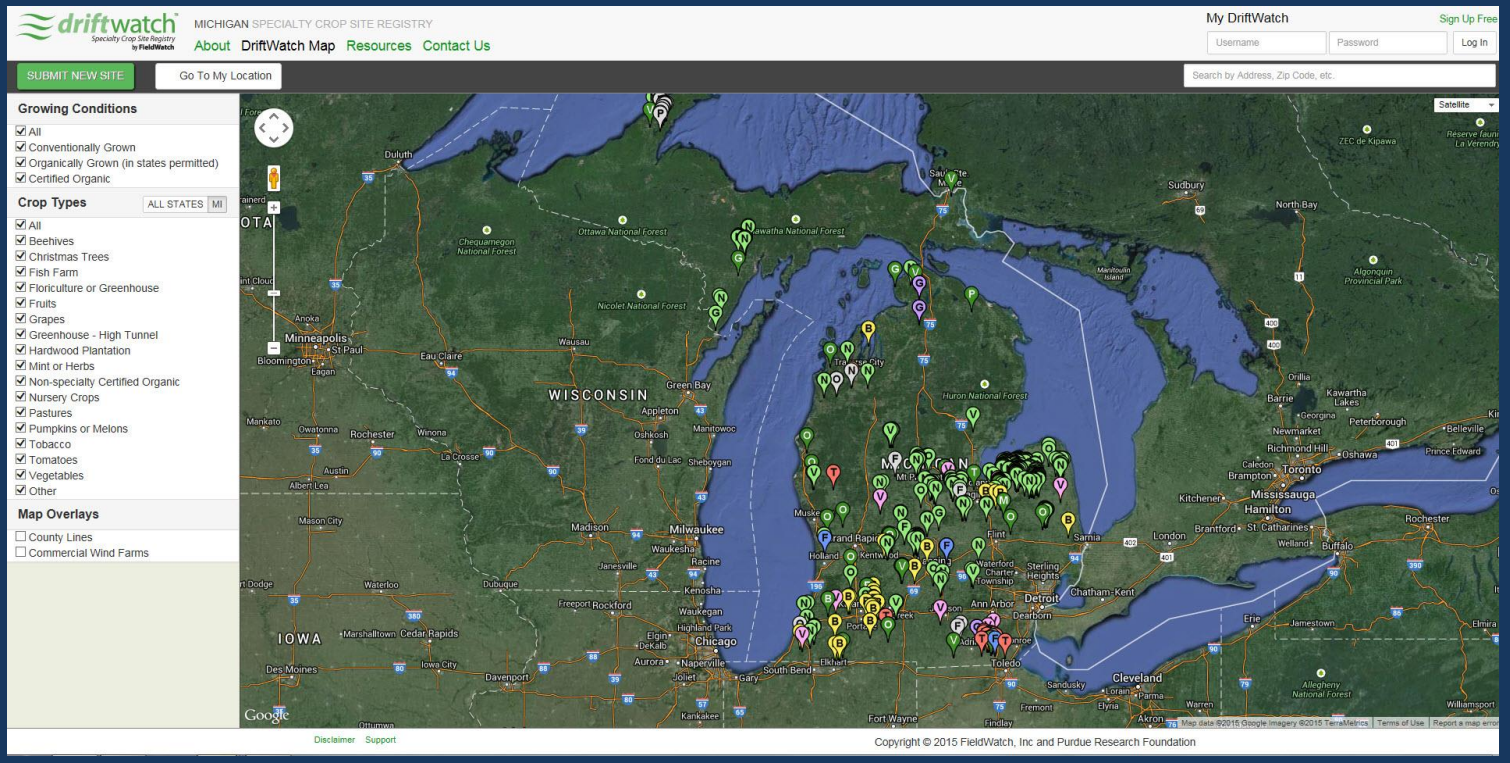
Key Pollinator Plan Components
Why We Need You Here!

- Public stakeholder participation.
- Grower and applicator awareness of managed pollinators near treatment sites.
- Method for growers and applicators to identify and contact beekeepers prior to application.
- Inclusion of Best Management Practices
  - Minimize risk of pesticides to bees by crop
  - Increasing habitat for all pollinators
- A clear defined path for public outreach.
- A mechanism to measure the effectiveness of an MP3.

Communication Tools

BeeCheck/DriftWatch

- A tool that Michigan already uses to identify sensitive crops.
  - Currently being used for communication on neonicotinoid products.
  - BeeCheck: A tool built by Field Watch (DriftWatch) specific to bees.



https://mi.driftwatch.org/map

BeeCheck by FieldWatch

BeeCheck Features

- Beehive placement via GPS locator or manual “point ‘n click”
- Multiple beehives submitted at same time
- “Time stamp” included for indicating active dates
- Posting on public map is optional
- Mobile ap for tablets and phones is available
- For applicators registered in FieldWatch:
  - see all the beehives registered in BeeCheck
  - get automatic email notifications of new beehives approved in their designated area
  - Members can get data live streamed into their application software
- Ideal for pollinator protection plans to facilitate awareness and communication between growers, beekeepers and applicators

Communication Tools

- Verbal: Several Michigan beekeepers meet with local applicators to provide apiary locations.

- Bee flags: Mississippi
- State apiary mapping: North Dakota
- Kelly Registration Systems: Similar to DriftWatch, this program provides a similar registration system.

Key Points About The MP3

- Main goal is to improve health of honey bees.
- Focus is on communication between beekeepers and growers.
- These are voluntary guidelines.
- Always follow the label directions.
- The plan is a working document, and will be updated to meet the needs of Michigan beekeepers and growers.

QUESTIONS?

Photo: Sarah Scott

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MIagriculture

Contracted Pollination
Proposed label restrictions

- Label restriction prohibiting applications while bees are on site and under contract for pollination services.
- All registered pesticides that have:
  - Liquid or dust formulations
  - Foliar use directions for crops that use commercial pollination
  - Acute contact toxicity LD_{50} less that 11 micrograms/bee
  - Applies to at least 70 active ingredients
- Section 18 petitions considered case by case

Contracted Pollination

Proposed label restrictions

- Contracts will be interpreted broadly – written and oral
- The restrictions on application ‘at bloom’ still hold
- Proposed mitigation is not intended to supersede more restrictive product-specific use prohibitions
- EPA will continue to conduct chemical-specific risk assessments for bees to address other routes of exposure and effects (Seed Treatments, Chronic, Whole Hive)
- EPA will consider additional product-specific mitigation as needed in registration and registration-review.