



**HONEY BEE
HEALTH
COALITION**

HEALTHY BEES, HEALTHY PEOPLE, HEALTHY PLANET.™

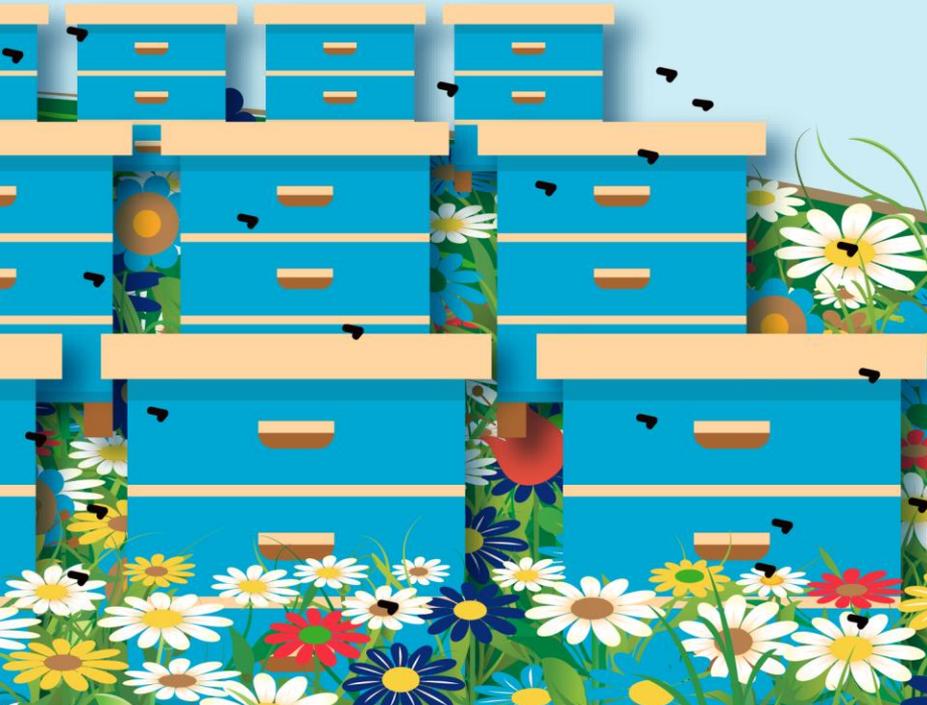


**HONEY BEE
HEALTH
COALITION**

A diverse,
collaborative,
private-public
partnership
addressing the
multiple factors
impacting
honey bees



THE CHALLENGE



WE ALL RELY ON HONEY BEES

Honey bees are a key component to sustainable agriculture, healthy diets, the global food supply, and the economy.

“Most farmers and consumers have no better friends and few harder workers than the honey bee.”

- SONNY PERDUE, USDA SECRETARY

“The future security of America’s food supply “ depends on healthy honey bees.

TOM VILSACK, FORMER USDA SECRETARY



APPROXIMATELY

1/3

OF GLOBAL FOOD PRODUCTION RELIES ON HONEY BEES AND OTHER POLLINATORS.

Source: Klein 2007

WE ALL RELY ON HONEY BEES

Honey bees support billions of dollars in North American agriculture.



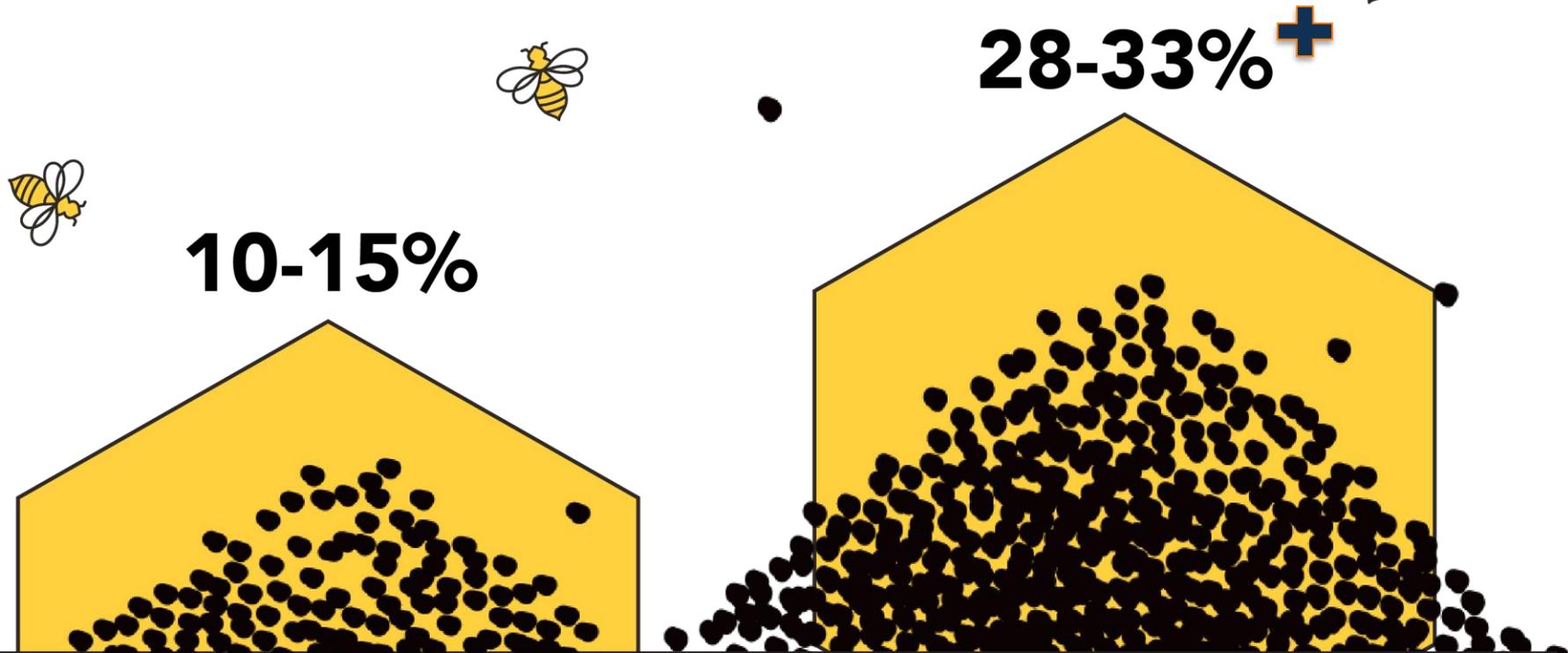
\$20
BILLION PER YEAR

**AMOUNT OF U.S AGRICULTURAL PRODUCTION
SUPPORTED BY HONEY BEE POLLINATION**

Source: USDA

THE CURRENT CHALLENGE

Compared to historical rates, **more honey bee colonies die and must be replaced each winter and each year.** Bee health is affected by pests and disease, poor nutrition and forage, and pesticide exposure.



PAST WINTER MORTALITY RATE

Source: USDA

PRESENT WINTER MORTALITY RATE

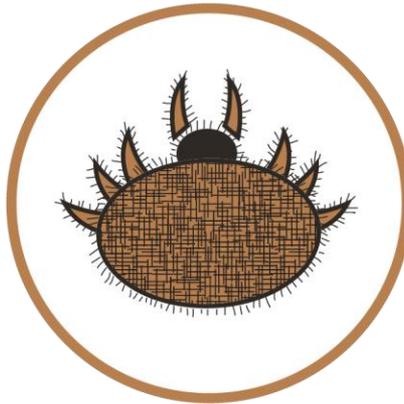
Source: Lee et al, 2015

STRESS FACTORS

Impacts on bee health have been linked to a variety of factors, including those influenced by the activities associated with both **beekeeping** and **crop production**.



Crop Pesticide
Exposure



Honey Bee Pests
& Disease



Poor Nutrition
& Forage



A SHARED FOOD CHAIN

Honey Bees play a foundational role in our food value chain.

Producers

- Farming
- Beekeepers, honey producers, and honey bees

Agribusinesses

- Inputs (seeds, fertilizers, crop chemicals, and equipment)
 - Trading
 - Processing



Consumers

- Shopping
- Consumption

Manufacturers & Brands

- Restaurants
- Consumer brands
 - Retail

Researchers, Government Agencies, & Academia

- Research, Education, Extension, Regulation

MANY STAKEHOLDERS, ONE AGRICULTURE

WHAT'S AT STAKE?

If a diversity of stakeholders do not effectively collaborate on this issue to identify solutions that work, **we risk**:

**What's
at
Stake
?**

- **A decline** in the health of honey bees and other managed and native pollinators
- **Economic impacts** on the beekeeping industry, growers and producers whose crops are pollinated by bees, rural economies, and North American agriculture
- Impacts to **our global food supply, biodiversity and healthy ecosystems**

THE COALITION



THE HONEY BEE HEALTH COALITION



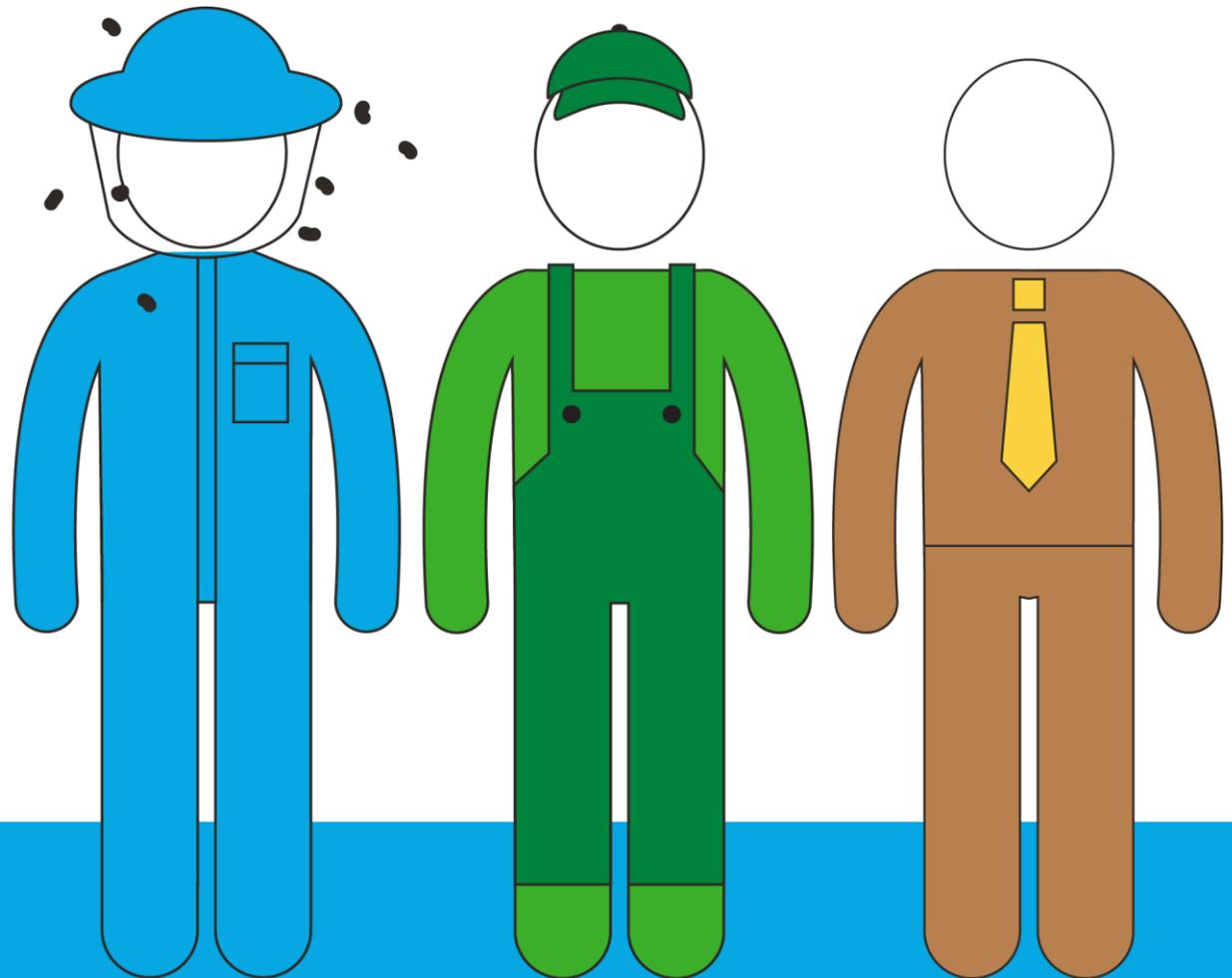
MISSION:

To collaboratively implement solutions that will help to achieve a **healthy population of honey bees** while also supporting healthy populations of native and managed pollinators in the context of **productive agricultural systems and thriving ecosystems.**

HBHC MEMBERSHIP

Coalition members work across the full food value chain.

- Beekeepers and Honey Producers
- Crop Producers
- Agribusinesses
- Manufacturers and Brands
- Agencies and Universities
- Conservation Groups and Bee-Focused NGOs



asta
first—the seed®

BASF
The Chemical Company



Bayer CropScience



American Beekeeping Federation



Project Apis m.



DUCKS UNLIMITED



canola council OF CANADA

Heartland Apicultural Society



AGRICULTURAL RETAILERS ASSOCIATION



The Bee & Butterfly Habitat Fund



NOD NATURE'S OWN DESIGN APIARY PRODUCTS



AHPA American Honey Producers Association



Our soybean checkoff. Effective. Efficient. Farmer-Driven.



PHEASANTS forever



california almonds Almond Board of California

LEVIN FAMILY FOUNDATION

syngenta



Canadian Honey Council

FieldWatch Communication. Cooperation. Collaboration.

LAND O'LAKES, INC.



VALENT®

Saint Louis Zoo Animals Always®

california almonds Almond Board of California

MONSANTO imagine®

CropLife AMERICA



U.S. CANOLA ASSOCIATION

CropLife CANADA NASDA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



OREGON STATE BEEKEEPERS ASSOCIATION

United States Department of Agriculture OPMP Office of Pest Management Policy

UNIVERSITY OF MARYLAND

The Foundation for the Preservation of Honey Bees, Inc.



PIONEER.



HiveTracks KNOW YOUR BEES

Kellogg's®



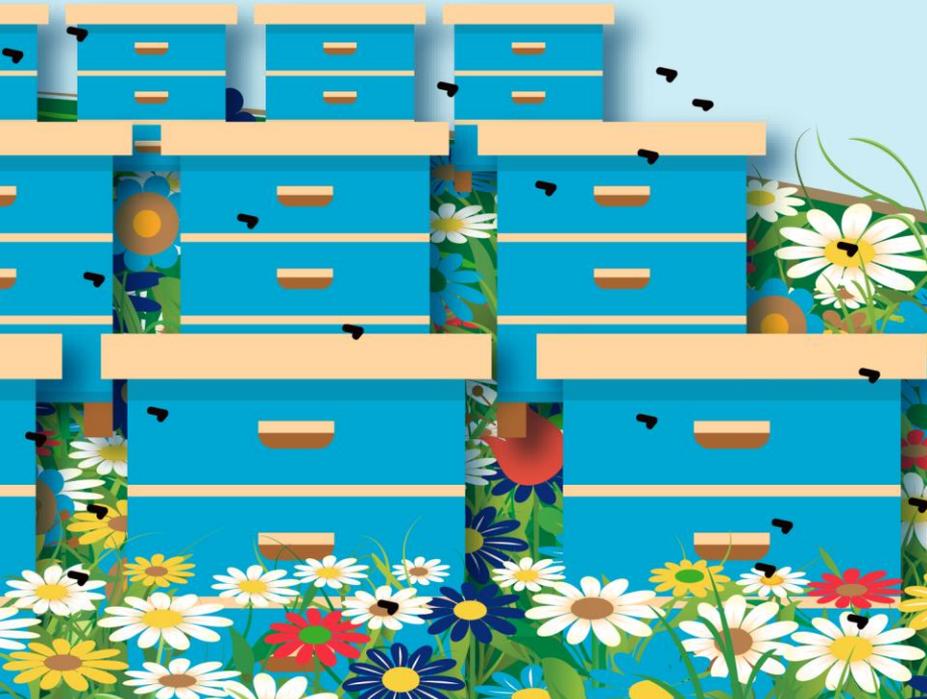
National Association of Wheat Growers

MANY STAKEHOLDERS, ONE AGRICULTURE

HOW THE COALITION OPERATES

How does the Coalition operate?

- Launched during Pollinator Week in June of 2014
- Governed by a charter and ground rules
- Every member organization has an equal voice in the Coalition's consensus-based decision-making process.
- Member funded; level of financial support does not influence an organization's role in decision making
- Third party, independent facilitation by Keystone Policy Center, a nationally recognized nonprofit



THE APPROACH



BEE HEALTHY ROADMAP

The **Bee Healthy Roadmap** shares the Coalition's mission, vision, and strategic goals.

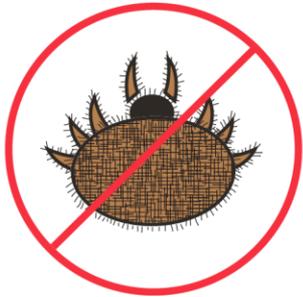


Identifies **4 top priorities** that need collective action and collaboration

www.honeybeehealthcoalition.org

THE COALITION PRIORITIES

The **Coalition is focusing** on accelerating collective impact to improve honey bee health in three key areas.



Hive Management (Pests & Diseases)

To ensure honey bees, especially those in and around production agriculture, have access to a varied and nutritious diet.



Forage and Nutrition

To put the best available tools, techniques, and technologies in the hands of beekeepers so they can better manage their hives.



Crop Pest Control and Management

To control crop pests while safeguarding pollinator health.



Outreach, Education, and Collaboration

To enhance awareness, outreach and partnerships to improve honey bee health.

FORAGE AND NUTRITION

ACTIVITIES:

- Provided recommendation on the upcoming Farm Bill and to USDA regarding improving forage in USDA conservation programs
- Conducting supply chain outreach to integrate pollinator practices into sustainability programs supporting habitat, pesticide stewardship, water quality, soil health, etc.
- Conducted beekeeper interviews to identify recommendations for nutrition supplement research and development
- Developed the *Bee Nutrition Challenge* to seek creative, practical solutions to accelerate and pioneer the field of honey bee nutrition (selected 4 proposals to fund in 2018)



GOAL: To ensure honey bees, especially in and around production agriculture, have access to a varied and nutritious diet throughout their lives.

CROP PEST CONTROL & MANAGEMENT

ACTIVITIES:

- Developed BMPs for pollinator protection for soybean growers
- Developed pollinator-focused continuing education module for crop pest consultants and advisors (piloting winter 2018)
- Developed an incident reporting guide for incidental pesticide exposure
- Supported State MP3 conversations by convening a national symposium



GOAL: To control crop pests and safeguard pollinator health.

SOYBEAN BEST MANAGEMENT PRACTICES FOR PROTECTING POLLINATORS

The recommendations identify potentially negative impacts of soybean agricultural practices on bees at each stage of soybean production and suggest strategies to mitigate these impacts.

BEST MANAGEMENT PRACTICES (BMPS) TO PROTECT HONEY BEES AND OTHER POLLINATORS IN SOYBEAN FIELDS

AUTHORED BY:
ADAM G. DOLEZAL; HONEY BEE HEALTH COALITION SOYBEAN BMP TECHNICAL COMMITTEE



**HONEY BEE
HEALTH
COALITION™**

November 22, 2017

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CROP PEST ADVISOR EDUCATION

This CEU module is for pesticide applicators and consultants to gain a better understanding of:

1. The importance of beekeeping in agriculture and the challenges beekeepers face
2. The relationship between pesticide exposure and bee health
3. How they can help positively impact bees, beekeepers, and the agricultural landscapes that rely on them

National Alliance of Independent Crop Consultants



MEMBER LOGIN

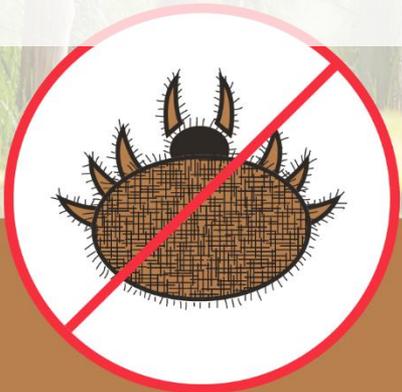


A professional society representing the nation's crop production and research consultants

HIVE MANAGEMENT

ACTIVITIES:

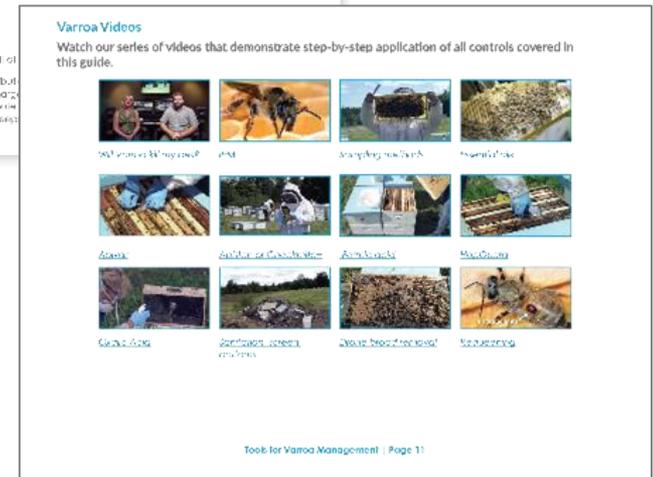
- Developed a set of Varroa resources for beekeepers, including:
 - The Tools for Varroa Management Guide
 - Varroa monitoring and control videos
 - Bee club presentation on the importance of Varroa monitoring and control
- Research and testing into new varroacides
- Developed a clearinghouse of vetted high quality hive management resources
- Developing a Hive Management Best Practices Guide in 2018



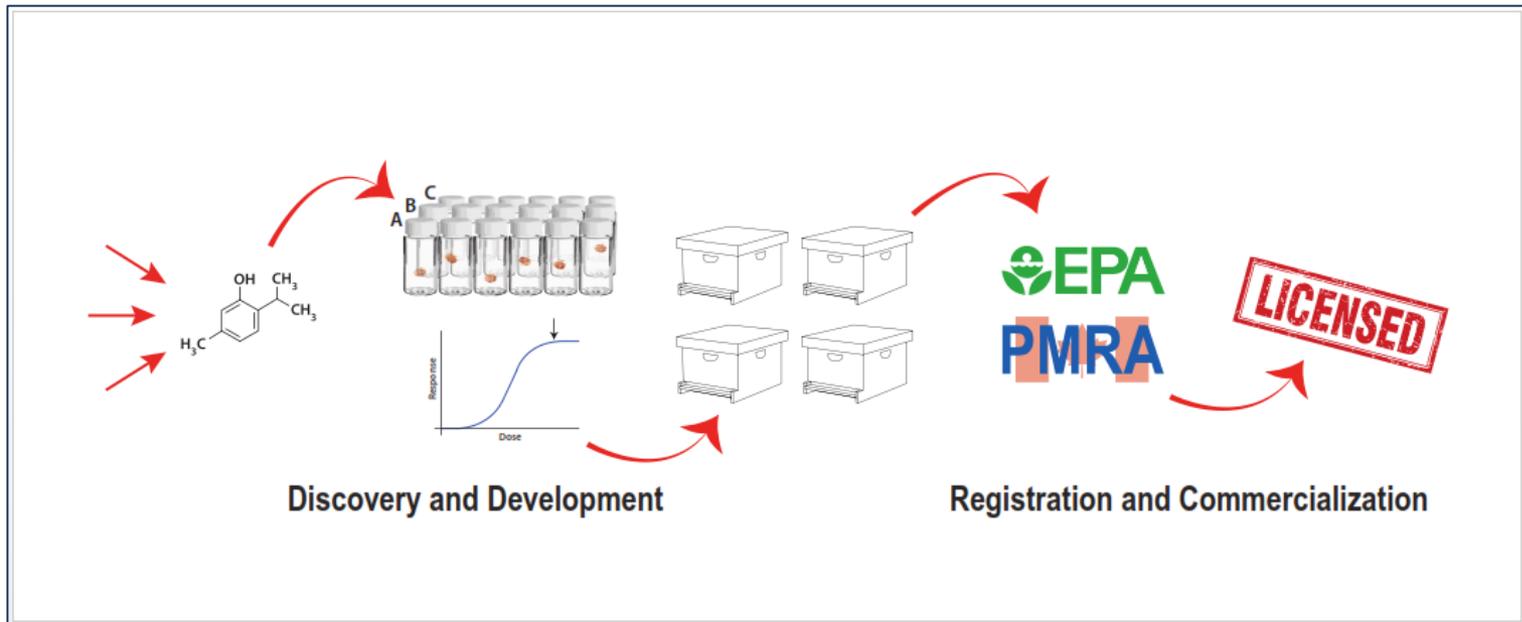
GOAL: To put the best available tools, techniques, and technologies in the hands of beekeepers so they can better manage their hives.

VARROA RESOURCES

- Tools for Varroa Management Guide (downloaded 12,239 times since August 2015; on the 6th Edition)
- 12 videos demonstrating how to test as well as how to treat using chemical, non-chemical and cultural practices
- Bee Club evening presentation on testing and treating for Varroa Control



NEW VARROACIDE DEVELOPMENT

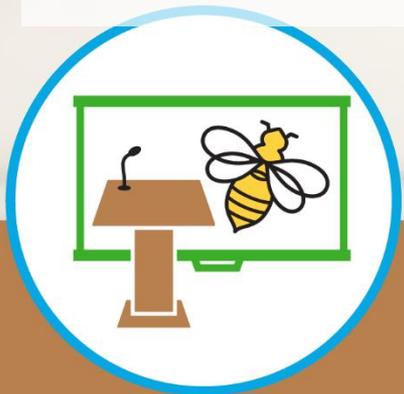


Recently recommended for grant funding to screen and test varroacides through the FFAR Pollinator Health Fund

OUTREACH, EDUCATION, AND COLLABORATION

ACTIVITIES:

- Proposed and funded the newly released CAST paper for federal policy makers, “Why Does Bee Health Matter and What We can Do about It”
- Promoted public-private education, communications, outreach, and collaboration across diverse stakeholders, through experiential learning and other platforms
- Provides outreach to federal agency leadership to promote pollinator health
- Interacted with thousands of beekeepers, farmers, and crop consultants and pesticide advisors at conferences and tradeshow and other events



GOAL: To enhance awareness, outreach and partnerships to improve honey bee health.

BEE INTEGRATED DEMONSTRATION PROJECT

The *Bee Integrated Demonstration Project* brings together beekeepers and producers to show how a suite of best practices can be implemented together in agricultural landscapes to support honey bee health. This innovative strategy provides a blueprint for supporting pollinator health across North America.

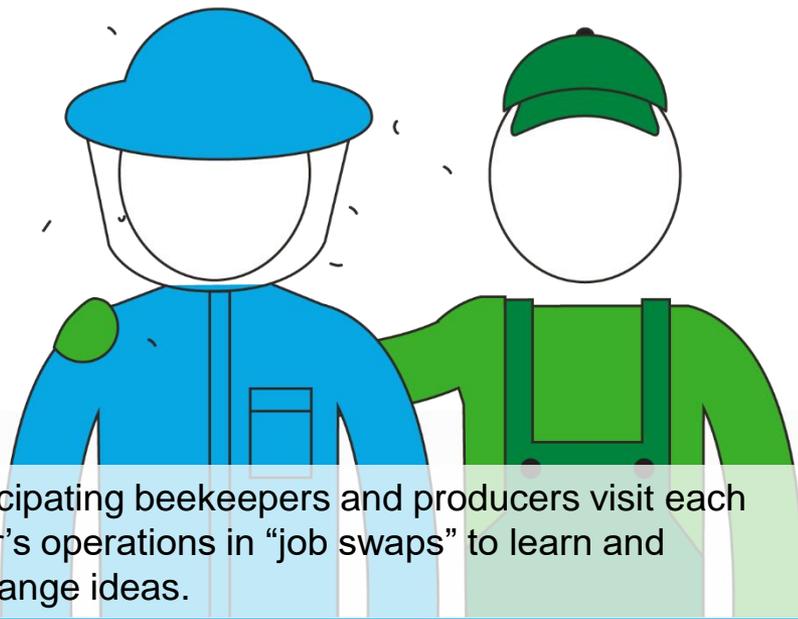


Pair

Support

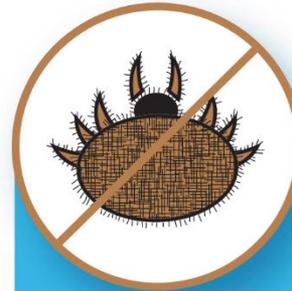
Measure

Share



Participating beekeepers and producers visit each other's operations in "job swaps" to learn and exchange ideas.

Beekeeper-producer pairs partner to address these stress factors contributing to the loss of honey bees and other pollinators:



Honey Bee Pests/Diseases

Tools for Varroa Management guide
[Honey Bee Health Coalition]



Forage & Nutrition

Planting optimal flower mixes for forage areas
[Bee & Butterfly Habitat Fund]



Crop Pest Management

Training on *North Dakota Pollinator Plan*
[North Dakota Department of Agriculture, Syngenta, DuPont Pioneer]

PAIR
beekeepers and producers to apply best management practices

SUPPORT
the pairs with expertise, training and resources

MEASURE
the impact on bee populations for three years

SHARE
the results with beekeeping and agricultural communities

OVERVIEW OF ACHIEVEMENTS



VARROACIDE SCREENING

VARROA VIDEOS

The following videos demonstrate techniques for combating Varroa mites



VARROA MANAGEMENT RESOURCES



Check out our practical tools for combating Varroa mite!

Techniques include:

- ✓ Rigorous monitoring of Varroa mite populations.
- ✓ Practices to deter mite population build-up.
- ✓ Rotation of products that consider mite/bee population dynamics and minimize potential development of mite resistance.



Beekeeper Insights on Honey Bee Nutrition Supplement

Summary Report of Beekeeper Interviews April 2017



BEE INTEGRATED DEMONSTRATION PROJECT

Quick Guide to Reporting a Pesticide-Related Bee Kill Incident

1. First contact your state lead pesticide agency to begin investigation and determine when the inspector will come to your site. (A list of state lead agency contact information is provided on the reverse side of this guide.) If you do not you should still collect information and file a report with EPA (see below).

State Lead Pesticide Agency Contact Information
<http://aapco.org>
 Apiary Inspector

THE GROWER'S ROLE ENSURING HONEY BEE HEALTH ON WORKING AGRICULTURAL LANDS



Proactive communication between growers, applicators and beekeepers is essential to protect honey bees from agricultural pesticides.

BEE HEALTHY ROADMAP

IMPROVING HONEY BEE HEALTH

HEALTHY BEES · HEALTHY PEOPLE · HEALTHY PLANET™



HONEY BEE HEALTH COALITION™

March 16, 2015

To: Pollinator Health Task Force
 From: Honey Bee Health Coalition
 Subject: Recommendations regarding management and habitat for honey bees and other pollinators through USDA conservation programs, public-private partnerships, and research

Honey Bee Health Coalition (the Coalition) shared with the Pollinator Health Task Force (Task Force) and US Department of the Interior (DOI) the following recommendations:

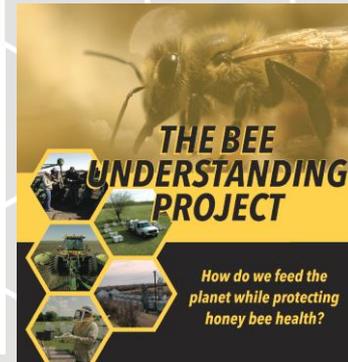


MP3 Symposium Agenda

March 10-11, 2016
 USDA Federal Building "Patriot Plaza III"
 1000 Independence Avenue, SW
 Washington, DC 20250

BEST MANAGEMENT PRACTICES (BMPs) TO PROTECT HONEY BEES AND OTHER POLLINATORS IN SOYBEAN FIELDS

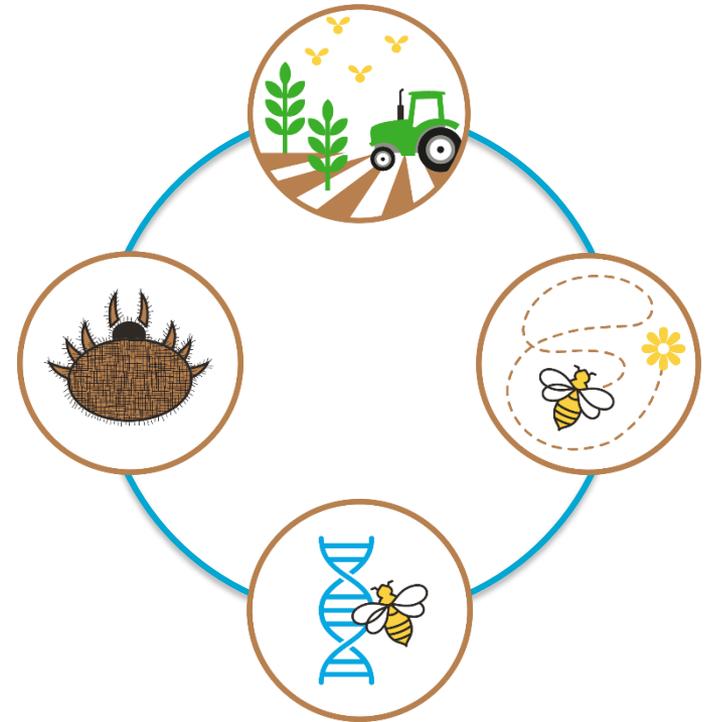
AUTHORED BY:
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How do we feed the planet while protecting honey bee health?

IN SUMMARY

- A Collaborative network of diverse, private and public sector stakeholders to unpack these complex issues and find solutions to honey bee health.
- The Honey Bee Health Coalition is engaging a variety of stakeholders throughout agriculture, research, government, and conservation to promote multi-factor solutions for honey bee health.





**HONEY BEE
HEALTH
COALITION**

**'TO GO FAST, GO ALONE.
TO GO FAR, GO
TOGETHER.'**

- AFRICAN PROVERB

**www.honeybeehealthcoalition.org
jshapiro@keystone.org**