

BEE HEALTHY ROADMAP

IMPROVING HONEY BEE HEALTH

HEALTHY BEES • HEALTHY ENVIRONMENT • HEALTHY PEOPLE



**HONEY BEE
HEALTH
COALITION**

Global food production and North American agriculture depend on honey bees. More than 30 organizations and agencies from across food, agriculture, government and conservation have formed the Honey Bee Health Coalition with the goal of reversing recent declines in honey bee health and ensuring the long-term health of honey bees and other pollinators. The Coalition has issued a **Bee Healthy Roadmap** outlining shared priorities for improving honey bee health through collective action that will accomplish more than any one group can achieve on its own.

What's at Stake:

ONE-THIRD OF GLOBAL FOOD PRODUCTION AND BILLIONS IN AMERICAN AND CANADIAN AGRICULTURE

One-third of global food production volume relies on pollinators to some degree as does \$18 billion in American agriculture. Honey bees and other insects pollinate 80% of flowering plants worldwide. In 2009 alone, honey bees directly supported \$11.7 billion of crops in the U.S. In Canada, the value of honey bee pollination for crop production is estimated at \$1.3 to \$1.7 billion annually. On average, 30% of America's honey bees die each winter. Reduction in this 'overwintering loss' is one benchmark by which to track overall progress in improving honey bee health.

1/3

of global food production volume relies on pollinators to some degree



80%

of flowering plants are pollinated by honey bees and other insects



Almonds Apples Broccoli Strawberries Alfalfa

What we're working toward:

HEALTHY BEES, HEALTHY ENVIRONMENT, HEALTHY PEOPLE.

"The future security of America's food supply depends on healthy honey bees"

Tom Vilsack
U.S. Agriculture Secretary

What needs to be done:

COLLECTIVE, SCIENCE-BASED ACTION IN FOUR PRIORITY AREAS

The Honey Bee Health Coalition has set four priority areas that need immediate action where it and its members can have direct impact:

- » Put the best available tools, techniques, and technologies in the hands of beekeepers so they can best manage their hives
- » Ensure honey bees – especially in and around production agriculture – have access to a varied and nutritious diet throughout their lives
- » Control crop pests while safeguarding pollinator health

- » Work together to improve honey bee health

By collaboratively implementing solutions among food, agriculture, government, and conservation partners, the Coalition can help to achieve a healthy population of honey bees and healthy populations of native and managed pollinators, ensure productive agriculture, and promote thriving ecosystems. Knowing that the Coalition can't improve honey bee health on its own, this Roadmap lays out specific priorities and actions the Coalition, its members, and other stakeholders can take to improve honey bee health.

COALITION MISSION AND STRATEGIC GOALS

A platform for cross-industry coordination on four priority areas

ROLE OF THE COALITION:

The Coalition provides a vehicle for collaboration, implementation of new partner initiatives, and developing coordinated and holistic strategies to improve honey bee health. The Coalition is committed to developing explicit goals, milestones and metrics to measure improvements in honey bee health.

THE MISSION of the Honey Bee Health Coalition is to collaboratively implement solutions that will help 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.



STRATEGIC GOALS (across all priorities):

- » Improve and sustain honey bee health at all levels of beekeeping
- » Identify and implement novel and proven solutions to major honey bee health challenges
- » Enhance effective communications and collaboration among private sector, public sector, academic, and NGO stakeholders with vested interests in beekeeping, pollination, and agriculture production
- » Institute sound science and evidence for making decisions

HIVE MANAGEMENT

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

Coalition Actions:

Promote investment in “technology transfer” – teams of in-field experts that gather data, provide expertise in hive monitoring, and provide information to beekeepers to better control varroa mites and others pests

and pathogens. Identify and address research gaps and promote research and innovation related to hive management, including development and registration of new products, varroacide resistance, efficacy and thresholds. Promote identification and dissemination of best management practices for beekeepers including for control of varroa.

Programs underway include:

- » **Endorse and increase support for tech transfer teams.**
 - Raise awareness among Coalition members and outside stakeholders and funders regarding the value and positive impacts of tech transfer teams and the need to scale and fund them. Provide Coalition endorsement for tech transfer and leverage Coalition membership and networks to increase funding.

» **Best practices guide for beekeepers.**

- **Convene** experts to review existing literature and knowledge on hive best management practices and provide guidance and recommendations on regionally-relevant best practices for varroa mite control; disseminate results to beekeepers.

» **Varroacide product registration.**

- Foster partner initiatives to promote the registration of new varroacide products.

FORAGE AND NUTRITION

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

Coalition Actions:

Promote improved nutrition for honey bees and other pollinators by developing bee-friendly, high-quality, spatially- and temporally-relevant landscapes as well as supplemental honey bee nutrition.

Programs underway include:

» **Honey bee forage and agricultural lands strategy.**

- Identify, communicate, and promote strategies for meeting honey bee forage needs on

agricultural lands in the Upper Midwest of the United States and other regions. Identify priority areas for forage on agricultural lands: where it is, where it's needed, what plants are needed, and when.

» **Transportation corridors and rights of way strategy.**

- Promote development of honey bee forage along transportation corridors and rights-of-way.

» **Partner initiatives to explore incentives and innovations for providing forage and nutrition.**

- Foster and incubate partner initiatives to understand, incentivize, and innovate for honey bee forage and nutrition solutions. These include areas such as:
 - Gaining a better understanding of the yield benefits honey bees have on crops that have not traditionally utilized pollinators;
 - Gaining a better understanding of how cover crops that are planted between other crop plantings can have benefits for healthy soils and pollinators; and
 - Developing nutritional supplements for bees in transit or otherwise without access to forage.

CROP PEST MANAGEMENT

GOAL: Control crop pests and safeguard pollinator health

Coalition Actions:

Work to develop crop- and product-specific Integrated Pest Management (IPM) practices and messaging to improve bee and pollinator safety. Promote communication and understanding among stakeholders to raise awareness of crop pest management issues for bee health, disseminate existing information, create a network to address emerging issues in a collaborative environment; and support region- and crop-specific best management practices (BMPs).

Programs underway include:

» **Promote BMP programs for crop pest management and pollinator health.**

- Understand current crop pest management best management programs for pollinators; identify and implement opportunities for the Coalition to support, promote, and improve BMP programs for pollinators.

» **Promote and improve incident reporting.**

- Identify and implement Coalition actions to promote and improve beekeeper incident reporting regarding crop pest management-related bee health incidents.

OUTREACH, EDUCATION AND COMMUNICATION

GOAL: Work together to improve honey bee health.

Coalition Actions:

Create tools, resources, and hands-on experiences that accelerate understanding and the adoption of proven practices and new innovations that directly improve honey bee health. Develop a website, briefings, and other supporting communications materials. Develop and execute an outreach strategy to raise awareness and increase cooperation among critical players in the food chain and the public at large. Design programs that accelerate understanding and collaboration among the critical players in the food chain to create positive impacts on honey bees and other pollinators and improve their health.

Programs underway include:

» **Outreach tools.**

- Create the tools for effective Coalition outreach and communications.

» **Outreach messages.**

- Create the messages for outreach and communications, including messaging related to the Coalition as a whole and to specific strategic priorities and initiatives.

» **Outreach implementation.**

- Implement outreach and communications objectives to reach key audiences and stakeholders with information about honey bee health, the Coalition, and actions that can be taken to improve honey bee health.

Join us as we work to achieve a healthy population of honey bees to support productive agricultural systems and thriving ecosystems.

LEARN

the facts & science about honey bee health decline.

SHARE

what you are already doing and what you know about the role honey bees play in our food supply.

PARTICIPATE

in Coalition efforts to accelerate improvements for bee health.

SUPPORT

the Coalition's efforts by sharing your time, resources, and funding.

To find out more about the Coalition and how you can help improve honey bee health, please contact Julie Shapiro at jshapiro@keystone.org.