THE WISCONSIN POLLINATOR PROTECTION PLAN

Beekeepers

Best Management Practices to Protect Pollinators

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

Beekeeping is a rewarding venture, but all the considerations that go into keeping bees can overwhelm a newcomer. Beekeepers need to consider habitat, nutrition, and winter weather while protecting their colonies against parasites, disease, and pesticide exposure. These best management practices, or BMPs, will help keep your bees healthy and productive. You can find more details in the Wisconsin Pollinator Protection Plan, available online.

Habitat and nutrition

Starvation is a common cause of hive loss. Bees need adequate sources of pollen, nectar, and water to thrive.

- Place bee hives where at least three species of flowering plants are blooming from early spring through late fall.
- Use regional planting guides to decide what species to plant for your bees. These are available from the Pollinator Partnership and The Xerces Society.
- Provide a clean water source for your bees.
- Provide protein patties and sugar when there are not enough flowers blooming.
- ***Don't*** plant flower hybrids bred for size, color, or extra petals. They provide little or no nectar and pollen.
- ***Don't*** place too many hives in one location. Food may be inadequate, and diseases and parasites may spread among hives.

Winter preparation and care

Assess hive strength before winter.

- Combine small, healthy colonies, and replace poor queens to increase overwintering success.
- Check for diseases and mites and apply controls if they are present above acceptable threshold levels.
- Insulate the hive, including the top. Add ventilation near the top of the hive to reduce condensation.
- Keep hives behind a windbreak or move them inside a shed or barn for the winter.
- Add an entrance reducer or mouse guard at hive entrances in the fall.
- Add sugar or candy board to any hive that has < 100 pounds of honey stored in late fall.
- ***Don't*** feed honey from a different hive, because it may spread disease.
- ***Don't*** feed high fructose corn syrup that is old, cloudy, or has been heated. It may contain a chemical called HMF that is unsafe for bees.
- ***Don't*** feed starches, because they cause dysentery.

Disease and pest management

Disease-causing pathogens can spread from managed honey bee colonies to wild bees, so it's crucial to catch problems early and avoid unnecessary treatment.

- Check for *Varroa* mites every two to three months, using sticky boards, ether, or powdered sugar rolls. Treat if mite counts exceed four per 100 bees. Find treatment options on our website.
- Monitor for *Nosema* (fungal pathogens) by sampling returning foragers. An infection rate above 40% warrants treatment. Hobbyists can learn about sampling and send samples to the USDA Bee Research Laboratory.
- Look for evidence of European or American foulbrood. Submit samples to the USDA Bee Research Laboratory for confirmation. You may treat for European foulbrood but must burn hives infected with American foulbrood.
- Choose carefully among treatment options. Always read and follow all label directions. The label is the law. Note that administering antibiotics to honey bees may require a prescription from a veterinarian, due to the veterinary feed directive, in effect since January 1, 2017.
- Alternate treatments to decrease the likelihood of developing resistance.
- Remove and replace a portion of old brood comb every year to reduce the buildup of pathogens, pesticides, and antibiotics.
- Call for a free hive inspection May through October to identify common pests and diseases and check for exotic (non-native) pests and diseases (See Resources below).

Migratory hives (commercial beekeepers)

Long-distance transportation, poor diets, and overwork can stress bees.

- When transporting bees, it is critical to provide a consistent temperature, and adequate ventilation and hydration.
- Feed supplemental carbohydrates and/or protein before and after crop bloom.
- ***Immediately*** report suspected pesticide-related bee incidents to DATCP (608-224-4529) or, in other states, to the appropriate authorities there.

Neighbors

Open communication and neighborliness are the best ways to get help protecting your bees.

- Be neighborly. If you are considering keeping hives near property lines, communicate your intentions to neighbors and be sensitive to their concerns about stings.
- Find out what pesticides your neighbors are spraying on their fields or in their yards. They may be willing to avoid treating when bees are foraging, use less harmful chemicals, leave extra buffers, or take other measures.
- Sign up with Beecheck™, an online registry that pesticide applicators can check so they know where bees are kept before they apply chemicals. (See Resources.)

Resources

- **Wisconsin Pollinator Protection Plan:** https://datcp.wi.gov/Documents/PPPComplete.pdf
- **Wisconsin Pollinators, Bees, Butterflies, and Their Conservation:** https://pollinators.wisc.edu
- **DATCP Apiary Program:** https://datcp.wi.gov/Pages/Programs_Services/ApiaryProgram.aspx
- **Wisconsin Honey Producers Association:** https://wihoney.org
- **USDA Bee Lab:** https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/bee-research-laboratory
- **Varroa Mites:** https://honeybeehealthcoalition.org/resources/varroa-management
- **U.S. Bee Data**: https://www.usbeedata.org
- **American Association of Professional Apiculturists:** https://aapa.us.org/abrc
- **American Beekeeping Federation:** https://abfnet.org
- **University of Minnesota Bee Lab:** https://beelab.umn.edu
- **MI Pollinator Initiative:** https://pollinators.msu.edu/resources/beekeepers/index.aspx
- **Register your hives:** https://beecheck.org
- **Pesticide toxicity rankings:** http://www2.ipm.ucanr.edu/beeprecaution