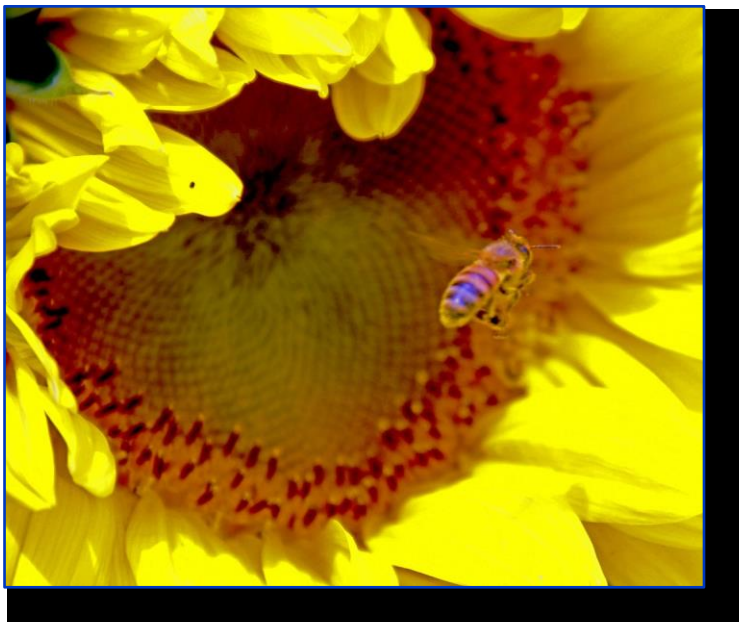
USDA United States Department of Agriculture
Natural Resources Conservation Service

Honey Bee Pollinator Effort



Honey Bees and Beekeeping.

The Honey Bee (Apis mellifera) is widely used in North America for its pollinating services. Although humans have had a long association with honey bees, humans have not "domesticated" the honey bee like typical livestock. Beekeeping requires skill and knowledge of bee and colony biology.

Beekeeping requires an understanding of bee and colony biology. Some important points to understand are:
1) basic bee nest ecology 2) the bee caste system 3) bee anatomy 4) the development of the bee brood 5) worker bee sequence of duties 6) brood rearing and population seasonality 7) colony communication 8) queen and colony reproduction/replacement 9) how to read and understand bee behavior and biology.

Honey Bees in North Dakota

Honey Bees live in colonies also known as hives. Honey Bees are utilized for honey production during the spring, summer and fall. Hives are also moved both in state and throughout the country for pollinator services. Honey Bees can be found in all North Dakota counties.

Where am I most likely to see Honey Bees?

The Honey Bee is closely associated with "bee pastures." A bee pasture is any grassy cover that contains suitable flowering plants for honey bee forage (nectar or pollen). Beekeepers typically place bee hives (stacks of boxes the honey bee uses for a home) in grassy areas within 3 miles of high quality "bee pasture "or conservation areas such as Conservation Reserve Program (CRP) lands.

What are the threats?

- Loss of foraging habitat (bee pastures) to cultivated crops.
- Loss of foraging plants within bee pastures due to poor management (grasses take over and wildflowers cannot compete).
- Honey Bee mortality due to a lack of Integrated Pest Management.

What are the opportunities?

Honey Bee habitat can be created or improved by: 1) establishing preferred wild foraging plants, 2) establishing preferred cultivated foraging plants 3) developing and implementing Integrated Pest Management 4) implementing managed intensive grazing systems that maximize high quality Honey Bee forage, such as white clover.

Specific actions landowners can take:

Maintain and Improve Healthy Grazing Lands

Grass-based grazing sustains Honey Bee forage plants. Practices such as interseeding white clover into grazing lands provides high quality forage for both bees and livestock.

The NRCS can help develop a grazing system that increases plant health and forage production while providing preferred Honey Bee forage.

Wild Forage Establishment/Enhancement
Establishing wild bee forage or enhancing grassy cover in non-cropland areas.

Converting cropland to preferred forbs (wildflowers) provides Honey Bee forage if it is within three miles of the hive.

Inter-seeding preferred forbs and legumes into existing grassy cover provides Honey Bee forage if it is within three miles of a hive.

NRCS can help develop a prairie restoration plan that includes livestock forage and bird habitat, and high quality bee forage.

Cover Cropping
Flowering cover crops may provide Honey Bee forage within three miles of a hive. If possible, allow the cover crop to persist during the entire year and flower during the full bloom period.

Integrated Pest Management (IPM)
Since pesticides may drift onto adjacent habitat, all agricultural producers play an important role in Honey Bee protection and conservation, not just growers of fruits, berries, seeds, and nuts. Managed Honey Bees cannot always be moved out of agricultural areas to protect them from pesticide applications.

IPM uses least hazardous pest management options, and only when there is a demonstrated need. Special precautions can reduce hazards to bees, people, and the environment. Good Pest Management 1) Reduces conditions that favor pests, 2) establishes an economic threshold of how much damage can be tolerated before using pesticide, 3) monitor pest populations, and 4) control pests with the most specific pest control option when the damage threshold is reached.

The NRCS, in collaboration with IPM specialists, can help you identify potential pesticide hazards to Honey Bees, incorporate Honey Bee protection into IPM plans, and help you prevent or mitigate identified hazards to Honey Bees.

NRCS may provide financial assistance to landowners for practices that improve Honey Bee forage including:
The Core Practices
- Conservation Cover
- Field Border
- Riparian Herbaceous Cover
- Forage Harvest Management
- Forage and Biomass Plantings
- Prescribed Grazing
- Range Planting
- Tree/Shrub Establishment
- Upland Wildlife Habitat Management
- Early Successional Habitat Development

The Supporting Practices in North Dakota
- Herbaceous Weed Control
- Conservation Crop Rotation
- Windbreak/Shelterbelt Establishment
- Fence
- Riparian Forest Buffer
- Mulching
- Tree/Shrub Site Preparation
- Livestock Pipeline
- Pumping Plant
- Integrated Pest Management
- Watering Facility
- Water Well
- Forest Stand Improvement

Note: These practices are used only in support of core practices used.

To learn more contact your local NRCS office, or on the web
www.nd.nrcs.usda.gov