

Value of native bees to agriculture

Native bees pollinated approximately \$3 billion of crops in the year 2000

There are approximately 4,000 species of native bees in North America, hundreds of which contribute significantly to the pollination of farm crops

When honeybees are in short supply, native bees can act as an insurance policy when the right habitat is present



Native bees compared to Honeybees

Native bees pollinate apples, cherries, squash, watermelon, blueberries, cranberries, and tomatoes far more effectively than honeybees on a bee-per-bee basis

Many native bee species forage earlier or later in the day than honeybees

Native bees will often visit flowers in wet or cold conditions when honeybees remain in the hive



Sweat Bee



Honey Bees



Honey Bee

Native pollinators and agriculture

Pollinators, mainly bees, play a significant role in the production of more than 150 food crops in the United States — from apples to alfalfa. In NJ and PA, roughly two-thirds of crops require insect pollination for production. Beyond agriculture, pollinators are keystone species in most terrestrial ecosystems. Aside from allowing nearly 70% of all flowering plants to reproduce, fruits and seeds derived from insect pollination are a major part of the diet of approximately 25 percent of all birds and a wide variety of mammals.

D&R Greenway is establishing native pollinator nesting and foraging habitat to benefit adjacent crops on our agricultural preserve in Cranbury Township.



Native pollinators and agriculture

Despite the recognized importance of pollination services, there is increasing evidence that our native pollinators are at risk. Loss of floral diversity and habitat due to increasing urbanization, intensive agriculture, invasive plants, use of pesticides, climate change, disease and parasites have all had a negative impact on pollinator populations. As pressure increases from human activities and other factors, natural areas are increasingly important as long-term refugia for our native bees. By providing nesting sites free of pesticides and soil disturbance and increasing the abundance and diversity of our native bees, farmers may be able to counter rising costs of rented European bee colonies and provide insurance to their crop yields.

D&R Greenway is establishing native pollinator nesting and foraging habitat to benefit adjacent crops on our agricultural preserve in Cranbury Township.



Hayfield management and Grassland bird Conservation

Hayfields of 10 or more acres present an attractive breeding area for grassland birds. Expanses of medium to tall grasses interspersed with forbs provide ideal cover for birds like bobolinks, grassland sparrows and eastern meadowlarks.

Unfortunately, early hay mowing in May and June - meant to increase the hay's nutritional value for livestock - frequently destroys this habitat and contributes to the decline of these birds. Managing fields for livestock nutrition as well as for grassland bird habitat will bring some tradeoffs, but perhaps not as severe as once thought. Farmers who would like to restore grassland bird habitat in their hayfields can adjust the timing of the first cutting, use field rotation, and modify mowing patterns to avoid or reduce mortalities. Additionally, excess hay acres, mulch, bedding hay harvests, and hay intended for mature livestock with good body condition are compatible with grassland bird habitat conservation.

D&R Greenway is managing several preserves as grassland bird habitats – delaying mowing until after young birds fledge. Late season-mowed hay can be used for mulch and in mushroom production.



New Jersey Forest Stewardship Law

Approximately 62% (over 1.3 million acres) of the New Jersey's total forest area is privately-owned. These forests represent a valuable commodity that, if wisely managed, can generate a variety of ecological, economic, and aesthetic values to forest owners and their communities.

The Farmland Assessment Act of 1964 required landowners to show an economic return through harvest and sale of forest products. In many cases, this meant harvesting trees in an unsustainable manner, leading to forest degradation.

The Forest Stewardship Law, enacted in January 2010, promotes a sustainable approach to woodland management.



McBurney Woods



Peason Woods



Cat Tail Brook

New Jersey Forest Stewardship Law

It recognizes the value of forests for the many benefits they provide:

- absorption of CO² and release of oxygen, while providing shade that lowers temperatures and helps alleviate effects of global warming,
- protection of water quality and quantity, filtering dust and particulates, and stabilization of soil,
- sustaining biodiversity and providing habitat for endangered and threatened species.

The new law directs the Department of Environmental Protection (DEP) to establish a forest stewardship program for owners of forested land and also to establish a forest certification and cost share incentive programs known as the New Jersey Forest Stewardship Incentive Program.

Additionally, and most importantly, the Farmland Assessment Act of 1964 is now expanded to provide differential property tax assessment to owners of forested land who implement an approved Forest Stewardship Plan. This eliminates the requirement of landowners to derive an income for the sale of harvest products. This protects and maintains a sustainable forest.