

Managing Habitat for Pollinators

Native bumble bees are up to 250 times more efficient at pollinating important New England crops such as apples, brambles, cranberries and blueberries due to cold (55F) and rainy weather in mid-May when pollination occurs for these species. Landowners interested in regional conservation efforts may also be interested in enhancing habitat on their property.

Fields 5 acres or larger are target areas for pollinator conservation, in addition to collections of smaller fields in close proximity to each other in matrix groups of 10 acres. A rule of thumb is to try to enhance 1 acre of pollinator habitat for every 25 acres of cropland.

327 Conservation Cover (see PollinatorNH327 Planting Guide)

Pollinators Intensive Management- This seed mix is about \$100 per pound or \$1,500 per acre. These are the finest pollinator plants, yet several are slow growing and require careful management, usually on small areas to insure success. These herbaceous plants have especially high pollen protein contents. Typically these areas are established in existing grass areas. In the first year, site pre-treatment is critical. Mow and spray re-growth with Round-up (glyphosphate) in June and August to reduce weed pressure before planting. Dormant seedings in the fall are best as several species may need cold stratification. Operation and Maintenance: Follow-up applications: at least once the following year after planting apply a monocot (grass) selective herbicide is important to reduce weed pressure (standard option). Spray at dusk when bees are less active. Consider planting single species in strips or separate areas if weed management may be a problem. Keep warm season grasses in separate strips from herbaceous plants due to different management during establishment.

Organic Option To establish plantings without herbicide and for organic growers the site prep is as follows. Plow to prepare the seed bed. Broadcast 75lbs/A Buckwheat, 10 lbs Crimson Clover, 2 lbs/A Red Mammoth Clover, 2 lb/A New Zealand clover and the

pollinator mix of choice. Add 50 lbs/A Urea and disc in. Mow after the first hard frost. The buckwheat will re-seed as will the clover but diminish in the stand over the next few years while the perennial pollinator plants are becoming established. Continue to mow each year after the first hard frost.

Pollinators Standard Management- This scenario is more appropriate on larger or where less attention to management is needed and the below mix is designed to not require cold stratification and establishes easily on poor soils. This scenario includes the same site pretreatment as above although it can be modified into a fall and spring burn down with a spring seeding. This scenario is perfect for wildlife enthusiasts or growers who wish to enhance wildlife fields for native bees, especially around apple trees for wildlife. Seed for these scenarios is about \$250 dollars per acre.

Warm Season Grasses Scenario -This practice can be used to establish pollinator nesting sites, especially in non-productive sandy areas where drought tolerance is required. Warm season grasses are especially important for sequestering carbon on non-productive soils. Leaving areas of exposed sandy soils encourages ground nesting. Also, having a landmark such as a large pasture tree, telephone pole etc, helps bees find the site and encourages their return. Warm Season Grasses are not recommended for low bush blueberry barrens where warm season grasses are a “weed”.

612 Tree and Shrub Planting- (*see job sheet tree and shrub planting for pollinators*) almost all the flowering trees and shrubs are of benefit. Some relatives of apple such as Hawthorne and Chokeberries can be vectors for common apple diseases and should not be planted in orchard settings. Practice payment scenarios allow for planting larger container stocks which begin to flower much sooner, tree and shrub plantings should consist of 5-6 foot container trees, 24-36 inch height 2 gallon container plants, or live stakes. Buttonbush and Willow are great for wet sites.

647-Early Successional Habitat Development- (*bronto/chainsaw*) can be used to connect fields with corridors for bees to travel and/or increase valuable forage from flowering trees and shrubs especially, cherries, willows, and dogwoods. Retain snags, blow downs and coarse woody debris to enhance nesting opportunities. Power lines offer great corridors for bees and should be connected to desired areas when possible.

Delayed Mow scenario- mow fields *after the first hard frost* to retain late season pollen forage such as goldenrod. This allows larger workers to gain the body weight needed to develop into queens which then develop additional successful nests and increase populations.

314 Brush management- can be used to maintain areas of brambles, willows, dogwoods and other desirable species for pollinators and other shrub dependent wildlife.

659 Wetland Enhancement –Wetland Plugs

Using wetland plugs to establish pollinator plants will be of some advantage in some areas. These should reach maturity faster and due to less soil disturbance during establishment weed control should be easier. (See attached list of plugs below)
