

# SEED A LEGACY



The Bee & Butterfly  
Habitat Fund

## Pollinator Habitat Program

## SEED MIXTURE DESIGN GUIDELINES

### High quality pollinator seed mixtures are created and designed to:

1. Provide the best possible pollinator habitat values from habitat projects.
2. Demonstrate how cost-effective seed mixtures designed with new technology and innovation can offer increased pollinator values, establish quicker, provide increased weed competition support, and work with agriculture.

### To hit core objectives, BBHF seed mixtures are designed with several key factors:

**1. Pollinator Value:** Not all forbs provide high pollinator values. Building seed mixtures using the species with a high documented pollinator value should be a priority. The use of a seed calculator that provides a 'Pollinator Score' for the entire mixture is a great tool to use.

**2. Value to Honey Bees:** Considering the current science that has documented the most important plants for honey bee nutrition, forage and health, those plant species should be strongly considered for use in seed mixtures to benefit honey bees.



**3. Cost-effective:** One of the reasons the BBHF was formed was a frustration associated with the high cost of pollinator mixes being required in some conservation programs. When constructed correctly, and with this set of guidelines in mind, overall price should be an important consideration in the final design. The use of a seed calculator that provides individual and overall mixture pricing information is a great tool to have.

**4. Using Available New Technology:** Designing seed mixtures with a seed calculator that provides detailed information about the number of seeds/ft<sup>2</sup>, species pricing, pollinator values, updated bloom periods, and other information is an important tool. Seed mixtures based off traditional PLS pounds per acre will typically inflate costs and restrict options when designing mixtures.

**5. Total Seeds/Ft<sup>2</sup> in the Mixture:** In most habitat projects, it's important to build mixtures with a seed count that will establish and provide pollinator values quickly. Most seeding mixtures should be designed with a goal of 35 to 40 seeds/ft<sup>2</sup> in the overall mixture (Minimum of 30 seeds/ft<sup>2</sup> of forbs).

**6. Designing for the Entire Bloom Period:** Seed mixtures should be thoughtfully designed to consider bloom periods 1 and 3. These are the most challenging bloom periods to create seed mixtures for. Bloom period considerations need to follow the more appropriate ranges of: 1 = April and May; 2 = June and July, 3 = August to October.

**7. Early Establishment:** Designing seed mixtures that contain a balance of annual and perennial species will help to create mixtures that can better handle early weed competition. Since noxious weed competition is such an important consideration, designing mixtures that establish quickly will help to reduce overall weed competition. This is also an important reason that the appropriate balance and composition of introduced legume and forb species are included in BBHF program seed mixtures.

**8. The Balance of Grasses vs. Forbs:** When designing pollinator seed mixtures, a general rule of thumb is that grasses should comprise no more than 25% of the seeding rate. In some cases, this rate can be reduced to 10% of the seeding mixture.

**9. Adaptability to the Site:** Mixtures should be designed to use appropriate species in the mixture based on considerations such as: sandy vs. loamy sites; dry vs. wet sites; geographic distribution; etc.

**10. Always Consider the Three D's:** Where high quality pollinator habitat is concerned, it is always important to consider the factors of Density, Diversity and Duration (The Three D's) when designing habitat. Collectively, they represent important factors that will strongly influence the pollinator health and habitat outcomes from projects.

**11. Following the High Quality Habitat Standard:** The High Quality Habitat Standard is a guide that BBHF applies to all monarch butterfly seed mixtures. The use of milkweed in a monarch mixture is an example of a standard that should be applied without variance, regardless of the state or region.

**12. Consideration of Local Beekeeper Needs:** The BBHF partnership is built with beekeeping and beekeepers as one of its foundations. As such, the financial and organizational support from partners, corporations and individuals requires that the forage and health needs of pollinators remain the primary focus when designing seed mixtures.

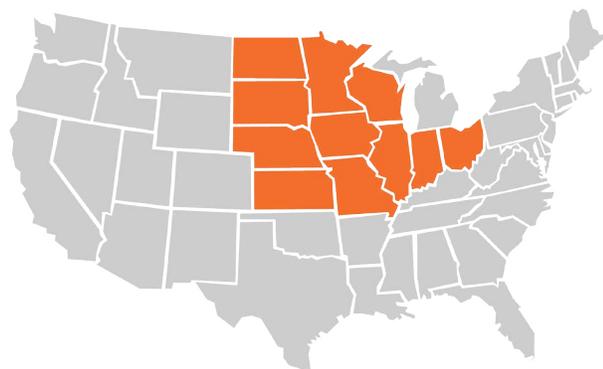
SEED MIXTURES ARE FORMULATED TO PROVIDE HIGH POLLINATOR VALUE



HABITAT IS DESIGNED TO ESTABLISH QUICKLY WITH LESS WEED COMPETITION



HONEY BEE AND MONARCH SEED MIXTURES AVAILABLE FOR 11 STATES



Learn more and speak to a biologist at 800-407-5337.

Or visit our website at [BeeAndButterflyFund.org](http://BeeAndButterflyFund.org).