

Operation Pollinator in Agricultural Landscapes

A Quick Guide



Operation Pollinator, a global Syngenta program, supports the development of pollinator habitats in a variety of landscapes, including farmland. By devoting non-crop portions of the farm—such as field borders, hedgerows, buffer strips and marginal cropland—to pollinator habitat, farmers and landowners can help provide forage and food for native pollinators and managed honey bees, while augmenting biodiversity and environmental benefits. This quick, four-step guide provides basic information on how to establish and maintain a pollinator habitat on your farm. A more detailed guide is available upon request.



SITE SELECTION



SEED MIXTURE SELECTION



SITE ESTABLISHMENT



SITE MAINTENANCE

SITE SELECTION

Select an area for your pollinator habitat.

- Locations beside or within natural areas are best for bees and butterflies.
- A site that experiences the upside of prevailing winds will help protect against potential pesticide drift.
- Locations with full sun are the best environments for wildflowers and grasses to thrive.
 - If selecting a site with partial sun, take this into consideration when selecting seeds.

Start with a planting area of manageable size.

- More area can be added in the future, after you develop some expertise.
- Some farmers use the seed produced by the initial planting to expand the plot into adjoining areas.

Questions to consider and address during the site selection process:

- Are plants able to grow on the site now?
- Are there problem weeds growing on the site or nearby?
- What is the soil like? Is it compacted? Is it wet or dry—or somewhere in between?
- Is the site sloping?
- Is a water source available if needed?

SEED MIXTURE SELECTION

Seed choice considerations:

- Seeds are available as both individual species and specialty mixtures.
- Seed mixtures should include plants that flower from spring through fall in order to provide a long season of pollen and nectar for pollinators.
- Use native seeds when possible.
 - If native seeds are too costly or not available, select non-native, adapted species that are non-invasive and rich in nectar and pollen.
- Quality seed of many species can be ordered online from seed retailers.
- You can also purchase pollinator seed mixtures or wildflower seeds from garden centers, hardware stores or home improvement centers.

A note about Palmer amaranth seed in wildflower seed mixtures:

- Palmer amaranth has been identified as a very problematic weed by the Weed Science Society of America.
- The American Seed Trade Association is taking steps to prevent Palmer amaranth seeds from entering the native seed supply. (Learn more here: www.agrimarketing.com/s/108063).
- Farmers who have identified Palmer amaranth in fields or conservation plantings are urged to contact their seed supplier and/or Extension personnel for control recommendations.

SITE ESTABLISHMENT

Site preparation: Proper site preparation, which entails minimizing the presence of weeds and other plants, is critical for good results. Cleared ground is optimal for establishment.

Considerations for previously cropped sites or sites with other vegetation (pastures & hayfields):

The extent of preparation needed prior to seeding depends on the amount of crop residue left on the field and the type of seeding equipment that will be used.

- Follow the herbicide label's rotational crop guidelines.
- Clear ground by employing various methods, such as pulling out plants; spraying with a non-selective, non-residual herbicide; or tilling plants under.
- In some situations, and where permitted by law, dormant vegetation can be burned.
- Soil can then be loosened by scraping or tilling. Avoid deep tillage, which can bring buried weed seeds to the surface.
- Prepare a fine, firm seedbed before seeding. Nurse crops such as wheat or oats may be added at planting to help establish good coverage of the ground.

Seeding: Many native, non-grass species have high levels of dormancy and will not germinate until dormancy is broken by exposure to cold and wet conditions.

- Fall seeding is optimal for a seed mixture with a high percentage of dormant seeds.
- Small areas can be seeded by hand or with the use of a drop or cyclone spreader.
- Large areas can be effectively seeded with special drills and then firmed.
- Seeds should be raked in lightly or dragged before firming with a cultipacker to maximize seed-to-soil contact.
- DO NOT BURY SEED! If seeds are planted too deeply, the plants will emerge poorly.

SITE MAINTENANCE

Watering

- Under dry conditions, supply additional water to your pollinator plot.

Weed control – Weed control needs to be a high priority, especially in a new planting.

- When the use of herbicides is needed, check with your Extension service or local Syngenta representative for recommendations.
- Frequent mowing at a height of at least 4 inches, whenever the weeds reach 12-18 inches, will effectively control weeds in the first growing season.
- In the second growing season, mowing should be limited and used only when there are a lot of persistent perennial and biennial weeds. Mowing height should be above 12 inches.
- After emergence of desired plants, weeds can also be pulled by hand, spot-sprayed with a non-selective, non-residual herbicide or cut off with a weed eater.
- If no native grasses have been seeded, a selective grass herbicide may be used.
- Patience is needed; it will take 2-3 years for the root systems of new perennial plants to crowd out other plants that have grown within the area in the past.
- Over time, the pollinator habitat will require less maintenance than your crops.

