



MONARCH JOINT VENTURE

Partnering across the U.S. to conserve the monarch migration

www.monarchjointventure.org

Monarch Joint Venture

The Monarch Joint Venture (MJV) is a partnership of federal and state agencies, non-governmental organizations, businesses, and academic programs working together to protect the monarch migration across the United States.

Our mission is to protect monarchs and their migration by collaborating with partners to deliver habitat conservation, education, and science across the United States.

Our vision is thriving monarch populations that sustain the monarch migration into perpetuity and serve as a flagship for the conservation of other plants and animals.

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Photo credits: Pete Berthelsen, Wendy Caldwell, Ella Phillips

How to Create Healthy Pollinator Habitat

Planting Habitat in Pocket Prairies and Large-scale Areas in the Midwest

Habitat Makes a Difference

Restoring and connecting native plant habitat is one of the most important actions you can take to advance conservation efforts. In addition to providing habitat for monarchs and other pollinators, these habitats offer water quality benefits and protect against erosion while supporting many wildlife species. However, millions of acres of habitat have been lost or severely fragmented, so immediate action must be taken to reverse these trends and restore the health of our natural ecosystems.

This handout outlines the process for restoring diverse grassland habitat in the Midwestern U.S.



Step 1: Identify a Site

Pollinator-friendly habitat can be established in a variety of areas. Use the following criteria to guide your non-garden site selection process:

Select a sunny or mostly sunny location. Many pollinators and pollinator plants thrive in open, sunny areas.

Avoid areas that have a high likelihood of being impacted by overspray. Incidental spray drift is harmful to monarchs and plants.

Prioritize marginal areas to reduce maintenance needs. Drainage ditches, fence rows, areas between structures, or lawns can all be great pollinator habitats.

Pick a site you can show off! Pollinator plots have beautiful blooming plants that you and your neighbors will want to admire in a highly visible area.

Step 2: Prepare your Site

Weeds are the biggest issue for new plantings so it is very important to control for them before the habitat installation. This process may require a full growing season.

First, the vegetation and planting area should be cleared by burning or mowing to remove excess plant material. If the site is primarily unwanted plants, proceed by using one of the following methods to eradicate weeds.

Try solarization. By covering the site with plastic, increased soil temperatures will limit

plant growth. This process can take two to three months. It can be costly and is most effective on small sites. This may serve as a good option for chemical-free site preparation and the plastic can be reused.

Apply herbicide. You can use an herbicide to eliminate vegetation. Select an herbicide that leaves little residue in the soil, like glyphosate. You may need multiple applications to reduce the grass and weed pressure on new seedlings.

Conventional agricultural production. Cultivate the area using conventional methods for one year to suppress weed growth. Spray and disk the site as needed, then clear, crimp, or chop vegetation before planting the seed mix.

Pollinator Habitat Help Desk for Midwest Farmers

The MJV maintains the Pollinator Habitat Help Desk to answer your questions and connect you with financial and technical assistance programs. Let us help with your next pollinator project!

Email: habitat@monarchjointventure.org

Phone: 337-HABITAT or 337-422-4828

Step 3: Select and Buy Seeds

When buying a seed mix, select a vendor that offers native, locally-sourced grasses and wildflowers. Some mixes incorporate introduced legumes, which also have pollinator benefit. Many will have a variety of seed mixes to choose from depending on your objectives and cost considerations. A pollinator seed mix may cost between \$100 and \$1,000 per acre. Many programs exist to reduce the cost to the landowner. Farm Bill programs (like CRP, CSP, EQIP), state agencies, and county conservation districts can be helpful in funding habitat projects. There are also programs that offer free seed to qualifying applicants. Check out the MJV website at plantmilkweed.org for more information.

Step 4: Plant

Seeds can be planted in the fall, spring, or winter. There are advantages and disadvantages to each planting time. Seeds can be sown by hand or by machine.

Hand seeding: For small sites, hand seeding is most cost effective. Mix a filler into the seed mix like moistened sawdust, compost, or peat moss to broadcast the seeds more evenly. Hand seeding on larger sites may result in uneven distribution of the seed mix.

Mechanical seeders: For larger areas or when equipment is readily available, use mechanical seeding. Drop seeders work best on freshly cultivated soil to maximize seed-to-soil contact. Drill seeders are effective when planting sites that have existing vegetation or indirect soil contact.

Step 5: Conduct Early Maintenance

Weed control is an important component of management in the first few years to prevent fast-growing weeds from crowding out new seedlings. In the first growing season, the site should be mowed when the average plant height reaches 12-18 inches (about knee-high). Mow to a height of 6-10 inches. If weeds persist, you may mow in the second growing season, but raise the cutting height to 12 inches.

In some cases, targeted use of herbicide may help control problem areas and grasses. Be careful only to spot treat unwanted species and apply on windless days so chemicals are not unintentionally blown onto desirable plants.

Step 6: Conduct Long-term Maintenance

Once established, a site should be managed every 2-5 years. This management can include prescribed fire, grazing, or haying/mowing. In order to preserve intact habitat for organisms at any given time, split management areas into different sections and conduct management activities on a rotation. For example, mow one half in Year 1 and the other half in Year 2. In Year 3, you don't mow at all, and then in Year 4, mow the first half again. The techniques and timing of activities should be customized to best fit your situation. This ongoing management helps to remove old growth, reduce woody encroachment, and promote the health of plant communities. When possible, management should occur during early spring or late fall windows to minimize impact on pollinator and wildlife communities.

Enhance an Existing Site

Many existing habitat areas provide some benefit, but could be improved to increase their pollinator value. Enhance a site by:

Adding species: Aim to fill in gaps in the blooming periods so that pollinators have food sources available all season long. Add milkweed where possible. When adding new species, plugs or plants generally establish best in existing vegetation. If

adding seeds, start with a full-site burn or mow to decrease competition and increase seed-to-soil contact. Keep track of species present throughout the season and strive for high-diversity systems.

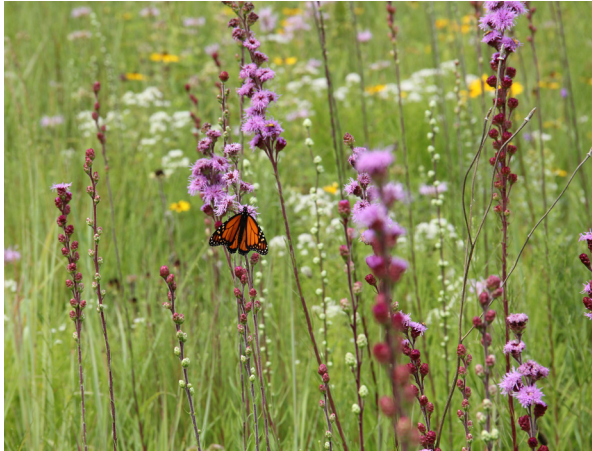
Spot-treating weedy areas: Identify problem areas and spot-treat unwanted species using targeted mowing, mechanical removal, or herbicide application.

Planning scheduled management: Get the habitat on a rotational plan to mow or burn subsections every few years.

Creating shelter for monarchs and other pollinators: Insects need areas to shelter them from natural enemies and the elements. Many insects use stems, wood piles, or dead vegetation to nest and overwinter.

Additional Resources

There are many resources about planting pollinator habitat that detail the techniques introduced here. A growing list of resources by the MJV and partners can be found at plantmilkweed.org.



Register Your Habitat and Add a Sign

You can register your habitat through a habitat certification program! Educational signage can increase your site's conservation impact by interpreting its purpose and benefits to passersby.

The MJV has five habitat signs available for purchase in our store: <https://store.monarchjointventure.org/>.

