

WORKING LANDS FOR MONARCH BUTTERFLIES

Good for Butterflies, Good for Your Bottom Line



**NRCS helps
landowners to protect
the full spectrum of
natural resources
necessary for economically
sustainable businesses, including
monarch habitat. Let NRCS
develop a comprehensive, resource
conservation plan for your
operation and the monarch.**

The monarch is one of the most familiar butterflies in North America, known for its annual, multi-generational migration from overwintering sites in central Mexico and coastal California to as far north as Canada. Populations of the black-and-orange butterfly have decreased significantly over the past two decades, in part because of the decrease in native plants like milkweed – the sole source of food for monarch caterpillars.

Because monarch butterflies are always on the move, they need to have the right plants in bloom,

at the right time, along their migration route. NRCS has a list of plants that are known to be used by monarch butterflies.

Assistance Available

America's farmers, ranchers and forest landowners are voluntarily combating the decline of monarchs by adding and maintaining for high-quality monarch habitat on their land. Through the Farm Bill, USDA's Natural Resources Conservation Service (NRCS) provides assistance to agricultural producers to help make conservation improvements that benefit the monarch while also increasing the productivity and resiliency on working lands.

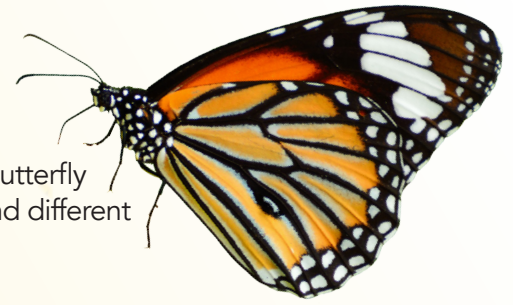
NRCS conservationists and wildlife biologists provide producers with technical assistance to develop a conservation plan as well as select which conservation practices are the best fit for their land. The Environmental Quality Incentives Program, Conservation Stewardship Program, and Agricultural Conservation Easement Program can provide financial assistance to help cover the cost of implementing those practices.



Conservation Choices

NRCS offers more than three dozen conservation practices that can benefit monarchs by providing for healthy stands of milkweed and high-value nectar plants, and protecting these stands from exposure to pesticides. While many of these practices may target improving grazing lands or reducing soil erosion, simple tweaks to the practice can yield big benefits for monarchs. Here are a few examples:

	Conservation Practice	What Is It?	How Does It Help Monarchs?	What Are Other Benefits?
Brush Management		Removal of invasive woody species in grasslands.	Increases sunlight that is critical for monarch habitat to thrive. Allows wildflowers and other native vegetation to return to degraded habitats.	Increases groundwater recharge. Increases plant pollination. Reduces soil erosion. Provides wildlife habitat. Reduces risks of catastrophic wildfires.
Conservation Cover		Permanent vegetative cover of native grasses, legumes, and forbs.	Plantings can include milkweed and valuable monarch nectar plants. Plant diversity will ensure flowers are in bloom for as long as possible to provide nectar and pollen throughout the growing season.	Increases plant pollination. Improves water quality. Reduces soil erosion. Provides wildlife habitat.
Contour Buffer Strips*		Strips of vegetation that run along a contour of a farmed field.	Plantings can include milkweed and valuable monarch nectar plants.	Increases plant pollination. Improves water quality. Reduces soil erosion.
Critical Area Planting		Plants that stabilize the ground to curb soil erosion.	Plantings can include milkweed and valuable monarch nectar plants.	Increases plant pollination. Improves water quality. Reduces soil erosion.
Early Successional Habitat Development & Management		Creates open and sunny habitats on which many species depend.	Management plans can be designed to increase the abundance of milkweed and valuable nectar plants, and maintain open and sunny habitat.	Increases plant pollination. Provides habitat for a variety of wildlife.

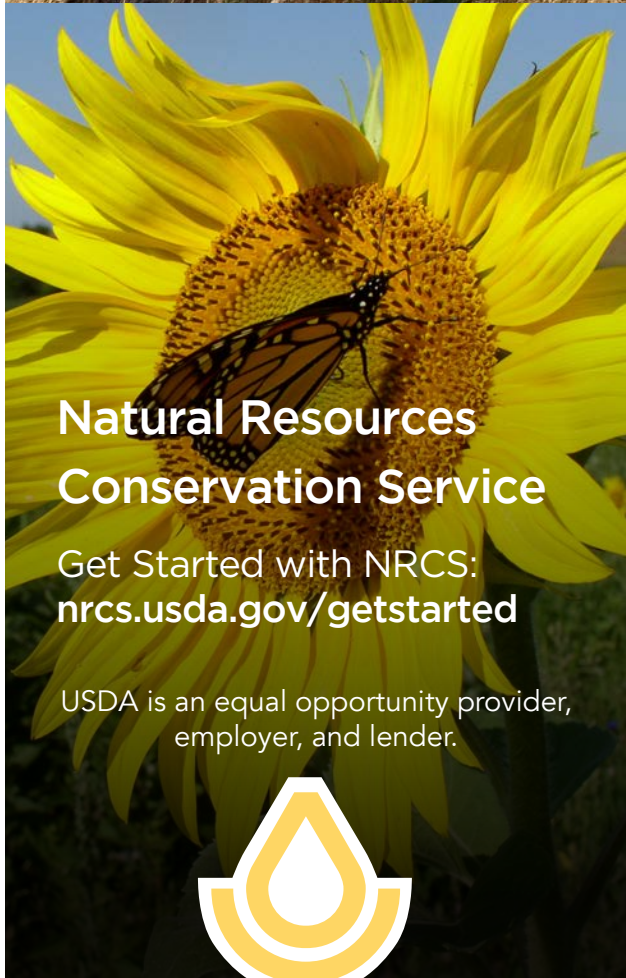


Regional Approach

Differences across the country necessitate a regional approach to monarch butterfly conservation. Different plants and practices make sense for different areas and different types of working lands. Plant lists are available at nrcs.usda.gov/monarchs.

	Conservation Practice	What Is It?	How Does It Help Monarchs?	What Are Other Benefits?
Filter Strip*		Strips of vegetation next to water bodies, designed to filter sediment and nutrient runoff.	Plantings can include milkweed and valuable monarch nectar plants.	Increases plant pollination. Improves water quality. Reduces soil erosion.
Forage & Biomass Planting		Planting grass and legumes suitable for pastures or hay production.	Plantings can include alfalfa or red clover that provide nectar for monarch butterflies.	Increases plant pollination. Improves water quality. Reduces soil erosion.
Integrated Pest Management		Supports implementation of practices or pest control systems that reduce the impacts of pest management programs to natural resources.	Can be designed to reduce exposure of monarchs and monarch habitat to pesticides, thereby boosting populations.	Reduces drift and runoff of pesticides into nearby fish and wildlife habitat.
Prescribed Grazing		Managing pastures and rangeland to prevent overgrazing and to manage for high-quality forage.	Can be used to manage the timing and intensity of grazing to encourage the bloom of monarch nectar plants, as well as minimizing disturbance to milkweed.	Yields high quality forage and healthier rangeland and pasture. Increases plant pollination. Improves water quality and water infiltration. Reduces soil erosion. Supports other wildlife.
Riparian Herbaceous Cover		Permanent herbaceous vegetative cover along riparian corridors.	Plantings can include milkweed and valuable monarch nectar plants.	Increases wildlife habitat. Improves water quality. Reduces soil erosion.

*These practices work most effectively when combined with integrated pest management.



Natural Resources Conservation Service

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Plans and Plants

The variety of practices available offer producers many choices for how they can best help monarch butterflies and address other natural resource concerns on their land. As part of NRCS conservation programs, NRCS and conservation partners, like The Xerces Society for Invertebrate Conservation, work with producers to develop a property-wide or site-specific plan, which takes into account the land as well as the producers' goals. Additionally, NRCS, Xerces and others have collaborated to develop lists of the best plant species to use while implementing the wide variety of conservation practices.

Bees and Butterflies

Conservation practices that benefit monarchs also help honey bees, native bees, and other pollinators. Honey bees pollinate an estimated \$15 billion worth of crops annually, including more than 130 fruits and vegetables. Pollinators play an important role in boosting yields on working lands. One out of every three bites of food in the United States depends on honey bees and other pollinators. Like monarchs, honey bees and many native bee species are struggling.



Targeting Resources

Conservation practices that benefit monarch butterflies are available to producers nationwide. But to accelerate monarch habitat improvement, NRCS provides additional technical and financial assistance to help producers in select states implement practices to help bolster the Eastern population of monarch butterflies. These states compose the heart of the monarch's migration route. The monarch butterfly is one of eight nationally identified species of Working Lands for Wildlife, the agency's targeted conservation effort for wildlife.



NRCS' effort contributes to a multi-agency, international strategy to reverse the monarch's population decline in North America, estimated to have decreased from one billion butterflies in 1995 down to about 34 million. Through the National Strategy to Protect Pollinators and Their Habitat, the United States has a goal of increasing the eastern population of monarchs to 225 million by 2020.

Get Started

Two-thirds of the continental United States is privately owned, and producers can play a crucial role in helping recover the monarch. NRCS accepts applications for conservation programs on a continuous basis. Producers interested in assistance are encouraged to contact their local NRCS field office.

More information is also available at
nrcs.usda.gov/monarchs.