



LINN COUNTY SECONDARY ROAD DEPARTMENT

1888 County Home Road
Marion, Iowa 52302
(319)892-6400

PROGRAM - Enhancing Roadsides / Using Native Plants to Help Improve Sustainability and Reduce Maintenance Costs

Public road right-of-way throughout Iowa, including Linn County, is being seeded and replanted with native prairie species. The purpose of this handout is to help adjacent property owners and the general public better understand not only the planting process in Linn County, but also the long term maintenance benefits associated with native vegetation in roadsides.

How Are Roadsides Planted?

All roadsides are seeded with a non competitive stabilizing crop seed mix after grading or tillage to provide cover to control erosion. These mixes are predominately oats in the spring and early summer and predominately winter wheat in late summer and fall. Our permanent seed mix is typically comprised of 10-30 native species, depending on sources of funding, soils, safety considerations and aesthetic goals determined for each project. Native mixes are comprised of both grasses and flowering plants (forbs) and are usually seeded at a rate of 50-60 seeds per square foot. Because permanent seed mixes contain both warm season and cool season species, areas are either frost seeded in March, spring seeded in May and June or dormant seeded in November.

Where Are Native Plants Used?

Almost all rural areas and many urban areas are being seeded with native plant material. Warm season plants exhibit tolerance to road surface de-icing materials and remain short during spring and early summer; enhancing visibility near intersections and field drives. Turf grass species are planted in some urban areas and typically in all right-of-way immediately in front of a residence. If adjacent property owners would like prairie species planted in front of their homes after road reconstruction, they should contact our office.

ESTABLISHMENT

Year One: What to Expect

Native seedlings will not get very tall during the first growing season. The annual weeds such as foxtail and ragweed which occur naturally, along with our stabilizing crop seeding, are mowed to reduce competition for sunlight and nutrients.

Year Two: What to Expect

Some native species will mature and produce seed. Some weedy non-native biennials may be mowed to reduce competition. Perennial noxious weeds present due to the plant bank in the soil may be carefully spot sprayed.

Year Three: What to Expect

Our stabilizing crop seedlings will begin to be replaced by native long lived perennials. Annual weeds should be nearly gone. Native species such as Partridge Pea, Blackeyed Susan and Canada Wildrye, visible in years one and two, will be joined by other grasses and forbs.

Year Four and Beyond:

Native perennials in our permanent seed mix will begin to occupy the space and out compete weedy species. Disturbances such as mowing, especially mid to late summer, will hinder native establishment. Some native species may take six or more years to mature and produce seed. Roadside planting projects may be signed as prairie construction or native vegetation planting areas.



**NATIVE
VEGETATION
PLANTING**



QUESTIONS ABOUT MOWING

Linn County periodically mows the road surface shoulders along our roadways. Frequency of shoulder mowing depends on safety considerations, road surface type and traffic count. Noxious weeds and unwanted volunteer woody plants may be spot mowed from time to time or when specifically requested. Landowners often ask about mowing roadsides. Frequent mowing of native rights-of-way or the “blanket mowing” of established roadside vegetation is highly discouraged. Vegetation management goals must meet certain safety and functional requirements before aesthetic and recreational consideration can be addressed.

QUESTIONS ABOUT BURNING

Prescribed fire is a valuable tool for enhancing and maintaining native plant communities. At the same time, fire and smoke have the potential to create possible problems along roadways. Within Linn County, a burn permit is required through the Health Department and local fire district before open burning is allowed. Linn County Road Department may from time to time use prescribed fire to manage native vegetation along roadways. Frequency and timing of burning can affect the sustainability and composition of right-of-way plantings. If you would like to burn roadsides adjacent to your property, please contact this office before you burn.

QUESTIONS ABOUT SPRAYING

Herbicides can be very effective for controlling undesirable plants on a short-term basis. However, pesticides may also impact non-target species. Linn County Road Department periodically applies herbicides to targeted species or locations along roadways. All applicators are trained and may be certified by the state. Selection of chemicals is based on effectiveness, label constraints and residual effects on the environment. Private landowners sometimes ask about roadside spraying. The County Road Department will address requests for service. Adjacent landowners may be issued a permit to apply herbicides within the right-of-way, depending on target, timeliness and product used. For more information on roadside spraying, please contact this office.

The prime purpose of road corridors is to transport people and goods safely and efficiently from one location to another. Being aware of native planting projects can help everyone understand their long term benefits to the right-of-way environment.

MAINTENANCE



Photo by Kirk Henderson
Tallgrass Prairie Center

The photo on the left is a Linn County Secondary Road Department right-of-way planting shown ten years after the roadside was seeded. Native perennials not only provide color throughout the growing season, but also improve soil organic matter and help to reduce storm water runoff. Long term maintenance costs for native vegetation plantings (fertilizing, mowing and spraying needed) are less than that of non native forage grasses, legumes and turf grass. Diverse plantings improve sustainability and provide habitat for a variety of species.



Photo by Amy Carolan
Tallgrass Prairie Center

The photo on the left is a comparison of crowns of yellow coneflower, trimmed to 5cm above and below ground level. Both plants emerged as seedlings in 1999. The plant on the left was from a frequently mowed plot. The plant on the right was from an unmowed plot. Mowing during the first growing season helps native plants establish by reducing competition for sunlight and nutrients. Frequent mowing beyond the second growing season significantly reduces native plant growth and the ability of native plants to compete.



Illustration by Heidi Natura
Conservation Research Institute

The illustration on the left is a comparison of not only the root systems of native prairie plants, but also of growth above ground. Deep root systems increase the plant materials ability to hold soil over time in highly erodible areas and can help to increase water infiltration. Top growth helps shade and reduce the growth of undesirable vegetation and acts as a filter to improve snow retention and increase snow storage.



The photo at the left, taken in the fall, is of a Linn County road right-of-way seeded with native plants in 1971. Only a narrow strip adjacent to the rock shoulder is mowed. Tall native plants within the right-of-way can benefit motorists and winter roadway maintenance operations, just as a well designed wind break, by reducing the amount of snow that blows across or drifts onto the traveled portion of the road.