

# Tallgrass Prairie Center's Support Services for Counties and WMAs

2016



Tallgrass Prairie  
CENTER

UNIVERSITY OF NORTHERN IOWA

www.tallgrassprairiecenter.org

The Tallgrass Prairie Center (TPC) at the University of Northern Iowa will provide multiple layers of assistance to each WMA in native vegetation establishment and management, across a range of agricultural practices. A cornerstone of the effort will be a collection of demonstration sites used for teaching and learning. Where feasible, TPC will use side-by-side contrasting practice to communicate basic principles that learners can readily apply in many other contexts and locations. Current demonstration sites include the Northeast Iowa Research Farm in the Upper Cedar River Watershed and an on-farm site near Dysart on the Middle Cedar.

In summary, TPC will:

- **Disseminate scientifically-based information on benefits of native vegetation for flood protection, nutrient reduction, soil conservation, pollinators, wildlife habitat via:**
  - Field days
  - Winter meetings for WMA coordinators
  - Print and on-line technical guides and videos
  - A fully supported and annually updated on-line seed mix calculator
  - Individual WMA consultation
  
- **Establish demonstration sites for teaching and learning on or near WMA's.**
  - Work with private landowners and watershed coordinators to establish prairie demonstration areas within WMAs
  - Host field days for WMA stakeholders, private landowners, land managers, and interested public
  
- **Provide assistance to each WMA specific to native vegetation establishment and management via:**
  - Consultation on seed mix designs for specific plantings within WMA's based on soil hydrology and geographic location
  - Advising on site preparation, seeding, post seeding management
  - Print and on-line technical guides and videos
  
- **Host the University of Northern Iowa's Tallgrass Prairie Center on-line resources:**
  - Tallgrass Prairie Center webpage: <http://www.tallgrassprairiecenter.org/>
  - Technical Guides/Publications/Videos: <http://www.tallgrassprairiecenter.org/publications>, <http://www.tallgrassprairiecenter.org/prairie-reconstruction-how-videos>
  - Prairie Seed Calculator: <http://www.tallgrassprairiecenter.org/restoration-and-research>
  - Prairie on Farms: <http://www.tallgrassprairiecenter.org/prairie-farms>

# Prairie as a Conservation Tool

2016

## Benefits of Prairie

- Flood protection
- Nutrient reduction
- Soil conservation
- Pollinators
- Wildlife habitat



## Example of in-field prairie strips planted in Benton County



### Determining strip layout:

- On the contour
  - Worked with local NRCS office
  - Water quality benefit
- 30ft wide
  - Account for drift
  - Preferred minimum width
- Tractor accessibility
- Worked with current farming practice



## Science-based Trials of Row-crops Integrated with Prairie Strips

### Strategically adding ~10% prairie to crop fields:

- 44% reduction in water runoff
- 95% reduction in soil loss
- 90% reduction in P runoff
- 84% reduction in N runoff
- 70% reduction in subsurface NO<sub>3</sub>-N concentrations (not tilled)
- Potentially improves beneficial insects and wildlife
- Doesn't reduce per acre yields
- Doesn't create a weed problem
- Cheaper than installing terraces; cost comparable to cover crops

Source: Data collected by STRIPS team between 2007-2014 at Neal Smith National Wildlife Refuge

[www.prairiestrips.org](http://www.prairiestrips.org)

## Prairie on Farms

### General Strategy

- Creation of demonstration sites designed for learning
- Technology transfer through focused training such as field days, workshops and on-line tools
- Applied research
- Support for a "community of practice" that is bringing practitioners together to learn from one another, identify key barriers and challenges, and expand their technical capacity



These flumes measure surface water movement and soil, nitrogen and phosphorus export from the STRIPS experiment sites at the Neal Smith National Wildlife Refuge. Compare the transport of these resources from: 1) a 100% no-till corn crop field, 2) a 90% corn crop field treated with a 10% prairie strip, and 3) a 100% prairie. These pictures were all taken after the same 4" rain event in June, 2008.

Photos: Jasper Co., STRIPS - Jose Gutierrez Lopez



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