# Prairie Learning Objectives & Resources

## North Dakota Envirothon

Updated 2/2/2016

#### **Overview**

North Dakota is a "Prairie" State. The ND Envirothon Prairie discipline will integrate the study and understanding of North Dakota's forests and grasslands.

Forests - native and planted, riparian and upland

Grasslands - including rangeland and pastureland

## **Prairie Learning Objectives**

#### General Understanding

- Be able to define and describe rangeland, pastureland, and the various types of forests found in North Dakota.
- Where are rangelands in ND? Where are forests?
- Know North Dakota's State Grass Western wheatgrass (*Pascopyrum smithii*) and State Tree American Elm (*Ulmus americana*)

#### Historical Perspective

- Understand how plant communities of North Dakota have changed and adapted historically.
- What are introduced vs native plant species?

#### Plant Identification

- Be familiar with the Latin roots frequently used to describe a plant characteristic, and used in botanical naming.
- Be able to identify common rangeland plants. Be able to identify common ND tree and shrub species.
- Be able to tell difference between important plant groups (grasses, grass likes (sedges and rushes), forbs, shrubs, trees)

#### Functionality

- Know the types of grasses (cool season and warm season) and know why it is important to understand these types of plants in ND.
- Be familiar with the essential elements of windbreak design and function.
- Understand the ecosystem services provides by rangeland and forests.

#### Management

- Understand sustainable management of forests and rangelands.
- Know how to use common forestry tools.
- Understand the difference between a noxious weed and an invasive or troublesome species; be able to identify ND's noxious weed species.
- Be familiar with the management of pollinator habitat.

### **Prairie Resources**

- 1. Range Judging Handbook for North Dakota, NDSU Extension
- 2. North Dakota Noxious and Troublesome Weeds, NDSU Extension
- 3. North Dakota Forestry Best Management Practices, NDFS
- 4. Trees & Shrubs of ND, NDSU Extension
- 5. Taking Forest Measurements, NDFS Field Guide
- 6. How Windbreaks Work, Nebraska Extension
- 7. Windbreaks for Rural Living, Nebraska Extension
- 8. Native Bee Habitat, Agroforestry Notes
- 9. Pollinator Fact Sheet, Xerces Society

The resources listed above will be used to test the student's understanding of the learning objectives. For more information, students may consider exploring the USDA Plants Database.

## For More Information

www.ndenvirothon.org

- Marc Murdoff, NRCS, Soil Conservationist Natural Resources Conservation Service 1301 Business Loop East Jamestown, ND 58401 (701) 252-2521 ext. 120
- <u>marc.murdoff@nd.usda.gov</u>

Christina Hargiss, Ph.D., NDSU, Assistant Professor Natural Resources Management, NDSU 203B Morrill Hall NDSU Dept. 7650, PO Box 6050 Fargo, ND 58108 (701) 231-8451 <u>email: christina.hargiss@ndsu.edu</u>