

# **NOXIOUS AND INVASIVE WEEDS**

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# Noxious Weeds of North Dakota

(North Dakota Law 2011)

## ▣ Noxious Weeds:

- Leafy spurge
- Canada thistle
- Wormwood
- Musk thistle

## ▣ Noxious Weeds (not as common):

- Salt Cedar
- Russian knapweed
- Spotted knapweed
- Diffuse knapweed
- Purple loosestrife
- Dalmation toadflax
- Yellow toadflax

# North Dakota's Noxious Weeds

(ND Dept. of Ag. 2010)

- Leafy spurge
  - 850,079 acres
- Canada thistle 
  - 824,659 acres
- Absinthe wormwood 
  - 419,300 acres
- Musk thistle 
  - 83,266 acres
- Yellow Toadflax 
  - 14,942 acres
- Spotted knapweed 
  - 3,739 acres
- Dalmatian toadflax 
  - 918 acres
- Salt cedar 
  - 497 acres
- Russian knapweed 
  - 439 acres
- Purple loosestrife
  - 316 acres
- Diffuse knapweed
  - 71 acres

# Common Invasive Weeds

## ▣ Common Invasive Weeds:

- Baby's breath
- Fringed sagewort
- Curlycup gumweed
- Houndstongue

## ▣ Common Invasive Weeds:

- Cheatgrass (Downy brome)
- Japanese brome

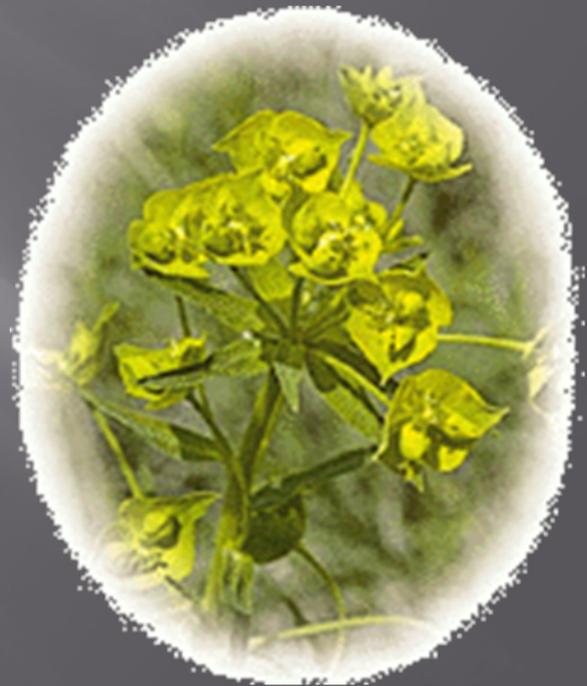
# Leafy Spurge

*Euphorbia esula*



# Leafy Spurge

- ▣ Perennial forb with milky latex
- ▣ Escaped ornamental introduced from Europe, north Africa and central Asia
- ▣ **NO FEED VALUE for Cattle**
- ▣ EXCELLENT FEED VALUE for SHEEP and GOATS
- ▣ Invades anywhere it wants once brought in, especially good soils



# Leafy Spurge

- Generally spreads from field to field by seed dispersal from man and wildlife



# Leafy Spurge

- ▣ Once plants are established:
  - Propagation is by means of roots and seed
  - Roots are 15 to 30 feet deep or deeper
  - Roots grow laterally
  - Seed disperse up to 15 away from plant



# Leafy Spurge

- ▣ The best control is PREVENTION
- ▣ Make sure you don't transport it
- ▣ *STAY* Aggressive on new stands



# Canada Thistle



# Canada Thistle

- ▣ Perennial forb with sharp, stiff spines on leaves
- ▣ Escaped ornamental introduced from Europe, north Africa and central Asia
- ▣ **LITTLE FEED VALUE**
  - Livestock feed on flowers
- ▣ Invades open soils, overgrazed pastures, idle lands, wastelands, and roadsides



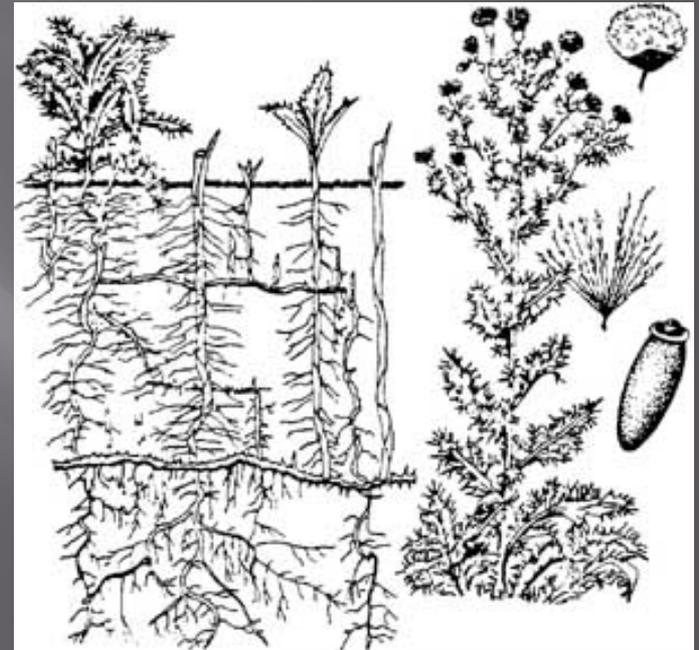
# Canada Thistle

- ▣ Generally spreads from field to field by seed dispersal in late summer and fall by wind dispersal of COTTONY pappus



# Canada Thistle

- ▣ Once plants are established:
  - Propagation is by means of roots
  - Roots are 10 feet deep or deeper
  - Roots grow laterally 12 to 15 feet per year
  - Root segments 0.6 inches can initiate new shoot growth



# Canada Thistle



Canada Thistle 6/14  
0044190 - P.M. Breckenridge

# Absinth Wormwood

*Artemisia absinthium*



# Absinth Wormwood

- ▣ Perennial forb with strong sage odor
- ▣ Escaped ornamental introduced from Europe
- ▣ **NO FEED VALUE**
- ▣ Invades open soils, overgrazed pastures, wastelands, and roadsides



# Absinth Wormwood

- ▣ The best control is PREVENTION
- ▣ Healthy range and hay land will OUTCOMPETE this plant



# Musk Thistle

*Carduus nutans*



# Musk Thistle

- ▣ Winter annual or biennial forb
- ▣ Escaped from southern Europe and western Asia
- ▣ **NO FEED VALUE**
- ▣ Invades open soils, overgrazed pastures, wastelands, and roadsides



# Musk Thistle

- ▣ Very large flower heads that tend to droop.
- ▣ Flower is generally rose to violet, rarely purple and has very characteristic brown bracts that resemble a pine cone.
- ▣ Produces more than 10,000 seeds per plant.
- ▣ 2 subspecies found in North Dakota.



# Salt Cedar (Tamarix)



# Saltcedar

- ▣ Invades Riparian Habitats, stream and lake shores
- ▣ Quickly becomes a monoculture
- ▣ One plant transpires 200 gallons of water per day

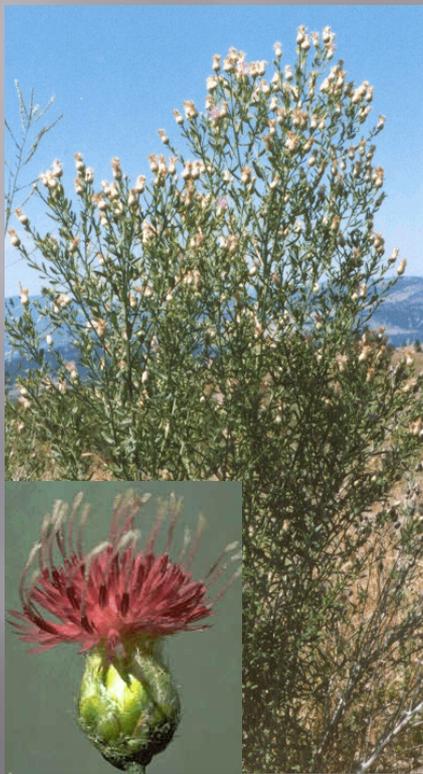


# Saltcedar

- ▣ **Best Control:**
  - Prevention
  - Hand Pull



# Knapweeds



Russian



Spotted



Diffuse

# Knapweeds



Spotted

Russian



Diffuse



# Spotted Knapweed

*Centaurea stoebe*



# Diffuse Knapweed

*Centaurea diffusa*



# Spotted & Diffuse Knapweed

- Both are short-lived perennials or sometimes annuals/biennial plants
  - Reproducing solely by seed.
- The plants grow two to four feet tall with one or more stems.
- The physical appearance of these two knapweed species is similar, except diffuse knapweed is generally shorter and more highly branched.
- Plants flower from early July – August, producing 1,000 or more seeds per plant.
- Spotted knapweed has stiff, black-tipped bracts.
- Diffuse knapweed has a rigid terminal spine about one-third of an inch long with four to five pairs of shorter, lateral spines (crab like).
- Both species have pink to light purple, and occasionally white, flowers.

# Russian Knapweed

*Acroptilon repens*



# Russian Knapweed

- ▣ A deep-rooted, rhizomatous, perennial forb that grows about two feet tall.
- ▣ The weed spreads both by seed and underground roots.
- ▣ Flower color is light pink to purple.
- ▣ Three characteristics distinguish Russian knapweed from the other knapweeds:
  - 1) Flower head bracts of Russian knapweed have light thin hairs, a papery tip and are green at the base;
  - 2) Russian knapweed spreads by deep, scaly, creeping rhizomes (the dark-colored roots can grow to depths of eight feet the first year and to 23 feet during the second growing season); and
  - 3) Russian knapweed causes the same neurological disease in horses as yellow starthistle.

# Purple Loosestrife

*Lythrum salicaria*



# Purple Loosestrife

- ▣ Perennial forb with a large fleshy taproot.
- ▣ Flowers are very characteristic, rose to purple in color with five petals arranged on a spike of a few inches to three feet long.
- ▣ Stems are four-sided.
- ▣ The plant flowers in July and August, produces two celled seed capsules that contain hundreds of very small, pepper-like seed.
- ▣ Wild infestations are associated with moist or marshy areas that can form dense, monotypic stands and displaces native flora and fauna.
- ▣ Lythrum was once sold as a garden plant with many cultivars. The plant crossbred and/or reverted to the wild type lythrum and now threatens waterfowl habitat and native wetlands in North Dakota.

# Purple Loosestrife

- ▣ No grazing value for any species



# Dalmatian Toadflax

*Lineria dalmatica*



# Yellow Toadflax

*Lineria vulgaris*



# Dalmatian and Yellow Toadflax

- ▣ Escaped perennial ornamentals from the Mediterranean region and Eurasia.
- ▣ Dalmatian toadflax is adapted to drier sites than yellow toadflax and often grows over three feet tall.
- ▣ The plants are distinguished by the bright yellow "snapdragon" flowers which end in a long spur.
- ▣ Dalmatian toadflax has broad, heart-shaped leaves that clasp a woody stem unlike the narrow leaves and stem of yellow toadflax.
- ▣ Plants spread by both a creeping root system and seed. The roots can spread up to 10 feet per year and give rise to numerous shoots, while the flowers can produce over 500,000 seeds per plant.

# Other Problem Weeds



# Fringed Sagewort

- ▣ Perennial, native half-shrub found on sandy, loamy and clayey sites.
- ▣ **Increases with overgrazing and drought**
- ▣ Life span 7 to 10 years



# Curlycup Gumweed

- ▣ Biennial, native forb found on many soil types.
- ▣ Invades when bare soil occurs; such as overgrazing, road grading or any method that removes perennial vegetation.



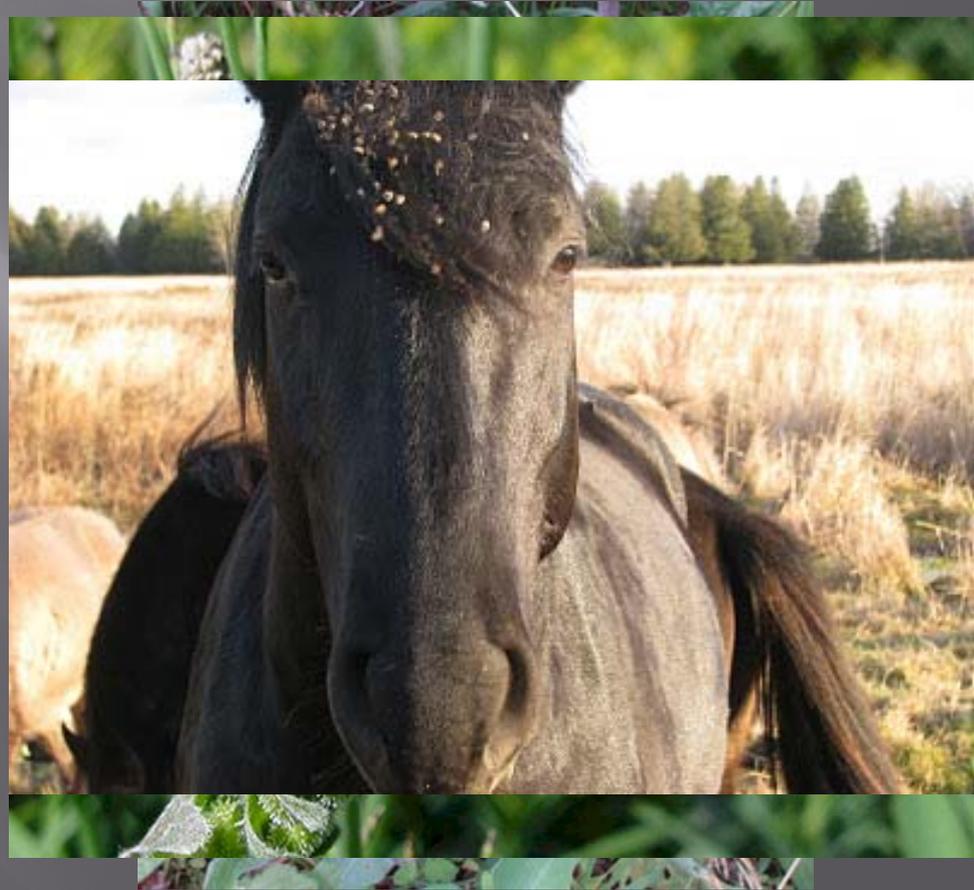
# Baby's Breath

- ▣ Ornamental perennial plant from Eurasia.
- ▣ Commonly invades from cemeteries, spreading by seed (10,000 + per plant).



# Houndstongue

- ▣ Introduced biennial plant from Eurasia.
- ▣ Commonly invades disturbed areas such as roadsides, trails, and pasture/woodlands following soil disturbance or overgrazing.



# Downy and Japanese Brome



Downy Brome - Cheatgrass



Japanese Brome

# Any Questions?

