Weed and Brush Control

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Range and Pasture Weed Management

• Brush and weeds are unwanted plants that can reduce production
• Causes of brush/weed invasion
  – Reductions in fire
  – Climate fluctuations
  – Seed transport by animals, wind, water, etc.
  – Decreased fertility in tame pastures
  – Grazing by domestic livestock
Value of Forbs

Different root zone
Decrease evaporation
Nitrogen fixation by legumes
Wildlife habitat
Browse for sheep, goat, deer, cattle
Add to production and forage quality
Crude Protein (%CP)

Obermeyer and Blocksome, 2009 (Woodson and Wabaunsee Co.)
Control Options

- Prescribed Burning
- Mechanical Control
- Grazing Management
- Chemical Control
Prescribed Burning

• Several weeds and brush can be easily controlled by fire
  – Must be small
  – Must have adequate fuel
  – Must burn completely to kill plant
  – Timing of susceptibility to fire
Mowing to Control Johnsongrass

Root Carbohydrate Concentration vs. Days After Emergence

- Roots provide food to rapidly growing shoots
- Produce rhizomes and secondary tillers. Leaf growth can slow during this period.
- Boot to head stage.
- Flowering.
- Seed formed.

Days After Emergence:
0 20 40 60 80
Mowing to Control Johnsongrass

Days After Emergence

Carbohydrate concentration
Mowing effects on sericea lespedeza density

![Graph showing the comparison between 'Check' and 'Mowed' conditions over time. The y-axis represents plants per 0.25 m², and the x-axis represents years from 2000 to 2007. The graph illustrates a decrease in plant density in the 'Mowed' condition compared to the 'Check' condition, especially noticeable after 2002.]
Chemical Control

- Soil applied
  - Pellets or granular
  - Liquid
- Cut stump/basal bark
- Foliar applied
  - Broadcast spray
  - Spot spray
Timing of Foliar Chemical Control

% Root TNC

- Buckbrush
- Smooth Sumac
Weed Control in Cool Season Grass

• Weeds can be suppressed by increasing health of brome or fescue
  • Soil pH, fertility, fall fertilization

• Beneficial legumes
  • Legumes can increase ADG
  • Decrease endophyte toxicity

• Herbicides that control weeds and brush also injure legumes
  • Exception: lespedeza can tolerate moderate levels of 2,4-D
Sericea Lespedeza

Remedy 1.5 pt/a (Pastureguard 2 pt/a)
- 1.33 floz/gallon water
- 32 floz/25gallon water
Apply from June 15 up to flowering

Escort 0.5 oz/a + 0.25% NIS
- 0.3 gram/gallon water + 2tsp NIS
- 7.5 gram/gallon water + 8oz NIS
Apply from at full bloom and beyond
Eastern Red Cedar

- Burning complete
- Cut at soil surface
- Tordon applied on soil 3cc/3ft of tree in April-May or Sep-Oct
Hedge

Remedy 1.5 pt/a
- 1.33 floz/gallon water
- 32 floz/ 25gallon water
Apply from June 15 thru summer

Pastureguard 2 pt/a
- 1.8 floz/gallon water
- 48 floz/ 25gallon water
Apply from June 15 thru summer
Honey Locust

Tordon 1 pt/a
• 0.64 floz/gallon water
• 16 floz/ 25gallon water
Apply from June 15 thru summer

Grazon P+D 8 pt/a
• 5 floz/gallon water
• 1 gal/ 25gallon water
Apply from June 15 thru summer
Smooth Sumac

Remedy 1.5 pt/a (Pastureguard 2 pt/a)
- 1.33 floz/gallon water
- 32 floz/ 25gallon water
Apply mid June for Sumac

2,4-D 2qt/a
- 1.33 floz/gallon water
- 32 floz/ 25gallon water
Apply mid June for Sumac
Buckbrush / Coral Berry

Remedy 1.5 pt/a (Pastureguard 2 pt/a)
- 1.33 floz/gallon water
- 32 floz/25gallon water
Apply in late May

2,4-D 2qt/a
- 1.33 floz/gallon water
- 32 floz/25gallon water
Apply in late May
Blackberry / Multiflora Rose

Remedy 1.5 pt/a (or Pastureguard 2pt/a)
- 1.33 floz/gallon water
- 32 floz/ 25gallon water
Apply at mature blooms or when new grow of canes are 18”

Escort 0.5 oz/a + 0.25% NIS
- 0.3 gram/gallon water + 2tsp NIS
- 7.5 gram/gallon water + 8oz NIS
Apply at mature blooms or when new grow of canes are 18”

Multiflora rose  Blackberry
Summary

• Many forbs that exist on pastures and rangelands have forage value to livestock
• Many weed problems can be solved with management
  – Best to use an integrated approach
    • Combine of burning, fertility, mechanical, grazing, and herbicide control
• There are several chemical control methods for both weeds and brush and are effective if applied at the appropriate time
Questions?