Identifying Pasture and Hayfield Weeds

Emily Herring- Pender County
Livestock Agent
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Why worry with proper identification?

Control measures for one of these weeds will not necessarily work for the other!
What is a weed, anyway?

Annual Ryegrass

Lambsquarter

Soybeans

Corn

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Why Control Weeds?

- Maintain a “pure stand”
- Competition with desired forages
- Hay harvesting and quality
- Some noxious or poisonous to livestock
- Some are nitrate accumulators
What weeds do

- Reduce forage yield and quality
- Cause injury or death to livestock
- Interfere with hay drying
- Compete with desired forage
- Weaken stand of grass
Forage Weed Issues

- Lack of management - fertility, lime, mowing, overgrazing
- No weed control
- Weed control knowledge
- Grazing and haying restrictions
- Weedy grass control in hay fields
Controlling weeds

• Accurate identification is the first step!
• Scout pastures to look for weeds
• Keep a record of what weeds are in particular fields. This will help you determine if your control measures are working.
  – Some weeds may take years to control.
  – Prevention is key!
Weed Prevention

• Weed seeds dispersed by:
  – Haybales
  – Grass seed
  – Livestock movement
  – Mowing equipment
  – Wind
  – Water
  – Wildlife

You have a lot of control
You have little control
What are advantages to early weed identification?

- Desired crop doesn’t get choked out
- Less herbicide needed for younger plants
- May not control mature plants no matter the rate
- Herbicides do not kill weed seeds (you may kill the parent plant, but offspring will be unaffected)
Plants are classified as:

- Annuals, Biennials and Perennials
- Cool Season and Warm Season
- Grasses and Broadleaves
  - Example- Annual warm season grass – Crabgrass
  - Example- Perennial cool season broadleaf- Red sorrel
Annuals, Biennials and Perennials

- **Annuals**
  - Germinate, reproduce and die within one growing season

- **Biennials**
  - Require two growing seasons to complete life cycle, rarely set seed first year

- **Perennials**
  - Generally live more than 3 years
  - Reproduce through seed or vegetative structures
Cool/Warm Season

• Cool Season
  – Grow best at cool temperatures
  – Usually germinate in fall

• Warm Season
  – Grow best at warm temperatures
  – Usually germinate in spring-summer
Grasses and Broadleaves

- **Grass**
  - Leaves generally longer than wide
- **Broadleaf**
  - Leaves generally wider than long
- **Sedges**
  - Similar to grasses, but triangular stem section
Round or square

Round, heart, oval, or linear

Tap roots, bulbous roots, fibrous

Source: NCSU TurfFiles
Application Timing – Cool Season

• Best time is early fall (September through November) unless new grass
  – Weeds are germinating, young, actively growing
• Good time is February through April
  – Winter weeds begin growth spurt
• Treat broadleaf weeds while immature, before flowering stage
• Treat grasses before seedhead forms
• Don’t wait too late!
Application Timing - Warm Season

- Control April – mid July
  - when weeds have germinated, are young, and are actively growing

- Treat broadleaf weeds while immature, before flowering stage
- Treat grasses before seedhead forms
- Don’t wait too late!
Bahiagrass
Goosegrass
Crabgrass
Vaseygrass
Dallisgrass
Sandbur
Purple Nutsedge
Dock
Horsenettle
Agriculture Chemical Manual

- Importance of it
- How to read it
- What to look for
Grazing Restrictions

• Grazing and haying restrictions are product dependent
• Always read and follow the label
• Examples:
  • Beef grazing – 0 d
  • Dairy grazing – 7 d
  • Hay – 30 d
Winter Weeds Controlled with 2,4-D

<table>
<thead>
<tr>
<th>Broadleaf plantain</th>
<th>Horseweed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckhorn plantain</td>
<td>Prickly lettuce</td>
</tr>
<tr>
<td>Buttercup species</td>
<td>Spiny sowthistle</td>
</tr>
<tr>
<td>Canadian thistle</td>
<td>Virginia pepperweed</td>
</tr>
<tr>
<td>Carolina geranium</td>
<td>Wild garlic</td>
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<td>Wild mustard</td>
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<tr>
<td>Curly dock</td>
<td>Wild radish</td>
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2,4-D amine

Grazing and haying restrictions are product dependent

- Beef grazing - 0 day
- Dairy grazing - 7 day
- Hay - 30 day (all livestock types)
- Slaughter - 3 day
2,4-D

• Numerous trade names and formulations
• Esters - volatile, use in winter months
• Amines - non-volatile, use in warm months
• Excellent control of bitter sneezeweed, plantains, buttercup, ragweed, horseweed, mustards, sidas
• Fair to good control of curly dock
• Poor control of horsenettle, clovers, most woody species
• Low cost
## Winter Weeds Controlled with Banvel

- Broadleaf plantain
- Buckhorn plantain
- Wild radish
- Canadian thistle
- Carolina geranium
- Common chickweed
- Common dandelion
- Curly dock
- Cutleaf eveningprimrose

- Henbit
- Horseweed
- Wild mustard
- Mouseear chickweed
- Prickly lettuce
- Red sorrel
- Shepherd’s-purse
- Spiny sowthistle
- Virginia pepperweed

White clover
Hairy vetch

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Banvel

Grazing and haying restrictions

Beef grazing - 0 day
Dairy grazing - 7 to 40 day
Hay - 37 to 90 day (all livestock types)
Slaughter - 30 day
Banvel

- Dicamba amine (0.5 to 2 pt/acre rate)
- Highly injurious to clovers
- Apply to seedling grasses 5 to 6 inches tall or after tiller development
- Excellent control of dogfennel, clovers, better on chickweed, henbit and brush than 2,4-D
- Poor control of plantains, fair on blackberry
- Expensive
## Winter Weeds Controlled with Cimarron

<table>
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<th>Plant Name</th>
<th>Controlled by</th>
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Cimmaron

- 60DF metsulfuron (0.1 to 1 oz/acre rate)
- Effective for bahiagrass, spiny amaranth, curly dock, buttercup, wild garlic, blackberry, henbit, horseweed
- Poor to fair horsenettle, thistle and dogfennel control at tall fescue rates
- Injurious to legumes & ryegrass (4 mo plant back)
- Do not mix with liquid fert. for bahiagrass control
- 0 day grazing or haying restriction - all livestock
Cimarron

To minimize stunting, yellowing or seedhead suppression of tall fescue...

- Tankmix with 2,4-D
- Do not exceed 0.4 oz/acre (go as low as possible)
- Use surfactant at 0.5 to 1 pt per 100 gal solution
- When liquid N is carrier, do not use surfactant
- Do not apply until 24 months after establishment

***1st cutting yields may be reduced***
## Weeds Controlled by Weedmaster

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Weedmaster

Grazing and haying restrictions

Beef grazing - 0 day
Dairy grazing - 7 day
Hay - 37 day (all livestock types)
Slaughter - 30 day
When Bermuda is dormant...

- Glyphosate (Roundup Ultra) at 1 pt/A will control winter annual grasses such as annual bluegrass, little barley and Italian ryegrass if < 6 inches. Glyphosate will not control perennial grasses such as perennial ryegrass and orchardgrass, or rush species at the labeled 1 pt/A rate.

- There is a 60 day grazing and haying restriction.
Glyphosate in ‘Coastal’ Bermudagrass

Label: Apply **IMMEDIATELY** after 1st cutting

**Problems**

- **Regrowth:** cut hay lays on ground 4 to 7 days  
  NCSU 2001 trial - up to 3 new shoots per stolon were produced 8 days following mowing

- **Weed timings often not optimum (mowed)**  
  Dry conditions, crop canopy, no soil residual
### Control in Tall Fescue Pastures

**Summer annuals and warm season perennials**

<table>
<thead>
<tr>
<th>Grass Type</th>
<th>Control</th>
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<tbody>
<tr>
<td>Large crabgrass</td>
<td>NO</td>
</tr>
<tr>
<td>Smooth crabgrass</td>
<td>NO</td>
</tr>
<tr>
<td>Broadleaf signalgrass</td>
<td>NO</td>
</tr>
<tr>
<td>Yellow foxtail</td>
<td>NO</td>
</tr>
<tr>
<td>Barnyardgrass</td>
<td>NO</td>
</tr>
<tr>
<td>Goosegrass</td>
<td>NO</td>
</tr>
<tr>
<td>Bahiagrass</td>
<td>NO</td>
</tr>
<tr>
<td>Vaseygrass</td>
<td>NO</td>
</tr>
<tr>
<td>Field sandbur</td>
<td>NO</td>
</tr>
<tr>
<td>Johnsongrass</td>
<td>NO</td>
</tr>
<tr>
<td>Smutgrass</td>
<td>NO</td>
</tr>
<tr>
<td>Goosegrass – NO</td>
<td></td>
</tr>
<tr>
<td>Yellow and Purple nutsedge</td>
<td>NO</td>
</tr>
<tr>
<td>Annual sedge</td>
<td>NO</td>
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Remember…

- Start with cultural practices
- Identify weeds
- Select appropriate product
- Follow label directions
- Follow grazing and haying restrictions
- Apply at proper time
Online guides

• NCSU TurfFiles
  • www.turffiles.ncsu.edu
• Virginia Tech Weed ID
  • http://www.ppws.vt.edu/weedindex.htm
• Poisonous plants page:
  http://www.library.uiuc.edu/vex/toxic/toxic.htm
• Ag chemical manual:
  http://ipmwww.ncsu.edu/agchem/agchem.html
• Crop protection manual:  http://www.greenbook.net/
• Pesticide safety:  http://www.pested.unl.edu/