The Dirty Dozen and Beyond

Identifying and Managing 25 Pasture Weeds of Wisconsin
More than a quarter of agricultural land in the Midwest is in pasture, yet 80% of these pastures suffer from poor, uneven fertility coupled with weed and erosion problems. Whether you practice rotational grazing or traditional continuous grazing, good pasture management is a must. A healthy pasture with a dense stand of grasses and few weeds not only promotes productive livestock, but keeps rain from washing manure, soil, pesticides and nutrients into nearby waterways.

As shown in the illustration at right, the most important element in preventing weeds is promoting healthy grasses through proper fertility, along with preventive measures to keep weeds from gaining a foothold. This booklet can be one part of your weed prevention measures, allowing you to identify and target weeds before they become a widespread problem.

Management is key!
Pastures are always composed of a mixture of species – some we planted and some we did not. Some we find useful and some we do not. Among the unwanted plants, 25 are found in Wisconsin pastures. In many pastures, perhaps only two or three weed species exist, while others may have five or six species. You will certainly find other plants and weeds not described here. However, this booklet should help you determine the important weeds in your pastures.

This information is the first step in developing a weed management program. Contact your County Extension Educator or other agricultural professional for additional assistance in identifying and managing your pasture weeds. You will also find information on pasture weed identification and management at these web sites:

http://cecommerce.uwex.edu/pdfs/A3646.PDF
http://ipcm.wisc.edu/uw_weeds/
Life Cycles of Pasture Weeds

It is helpful to know the life cycle of the weeds you have. Let’s review the three life cycles in the plant world:

**Biennial** plants require two years to produce seed and die. The first year, they form only a rosette of leaves. They require the cold temperatures of winter to shift from vegetative growth to the reproductive (flowering) stage. Biennial plants do not re-grow from roots. We have many biennial weeds in pastures and fencerows in Wisconsin.

**Perennial** plants like Canada thistle and horse-nettle may become established from seeds but once established, perennials re-grow each year from roots or crown buds. Perennials live indefinitely and, like biennials, they thrive in non-disturbed habitats like pastures.

**Annuals** are plants that complete their life cycle (go from seed to seed) in 12 months or less and only produce new plants by seeds. Annual weeds are not common in productive, well-managed pastures. The perennial forage grasses and legumes in your pastures should prevent weeds with this life cycle from pre-dominating. This happens because the forage species are already established and prevent seeds of annual weeds from germinating and becoming established. If you find annual weed species in your pastures, you need to assess why this is happening. Of course, some annual weeds around the barn lot, feeding areas, trails, etc. are to be expected because soil disturbance creates the right environment for them to germinate and grow. The main pasture area should have few if any annual weeds.
Here is a comparison of the characteristics of plants within each life cycle:

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>BIENNIALS</th>
<th>PERENNIALS</th>
<th>ANNUALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>plants live for...</td>
<td>2 years: first year plants form rosettes; second year they flower, set seed and die</td>
<td>indefinitely</td>
<td>less than one year</td>
</tr>
<tr>
<td>they spread by...</td>
<td>seeds only</td>
<td>vegetatively (buds on root crowns and spreading roots) and perhaps seeds</td>
<td>seeds only</td>
</tr>
<tr>
<td>plants flower...</td>
<td>in the second summer only</td>
<td>every summer (except horsetail and ferns)</td>
<td>a few months after they germinate</td>
</tr>
<tr>
<td>root system</td>
<td>taproot</td>
<td>spreading or taproot</td>
<td>fibrous or taproot</td>
</tr>
<tr>
<td>mowing effectiveness</td>
<td>fair to very good</td>
<td>poor to fair</td>
<td>good to excellent</td>
</tr>
<tr>
<td>herbicide effectiveness</td>
<td>excellent</td>
<td>fair to very good</td>
<td>excellent</td>
</tr>
</tbody>
</table>

Technical terms are often used to describe and identify plants. Several of these terms are defined in the glossary at the end of this booklet. Words listed in the glossary are italicized in the booklet text.
In the information that follows, we describe ways to contain, control or suppress each weed species. When herbicides are suggested, we often use the common names of the active ingredients of the herbicides because products with different trade (brand) names often have the same active ingredients. This is especially true when a patent expires and generic products appear as has happened with glyphosate, the active ingredient in Roundup®, Touchdown® and many other products. Also, some products have identical active ingredients and are marked with different trade names for specific markets. An example is Transline® and Stinger® (trade names). Both contain clopyralid (common name of the active ingredient) but Transline® is only registered for use in non-crop sites and forests while Stinger® is approved for use in pastures and grass crops like corn and wheat.

The suggested herbicide treatments (if listed) for weed control are only that: suggestions. Other products may also give satisfactory performance. Consult the pasture section of UWEX Bulletin A3646 (Pest Management in Wisconsin Field Crops, available at http://cecommerce.uwex.edu/pdfs/A3646.PDF) for a more complete listing of herbicide performance on specific pasture weeds. Mention of specific herbicides in this booklet is for your convenience and is not an endorsement or criticism of one product over other similar products. You are responsible for using herbicides in full compliance with the current product label.
**Biennials**
- p 8 Bull thistle
- p 10 Plumeless thistle
- p 12 Musk thistle
- p 14 Burdock
- p 16 Wild parsnip
- p 18 Wild carrot

**Perennials**
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- p 22 Bracken fern
- p 24 Spotted knapweed
- p 26 Canada thistle
- p 28 Horsenettle
- p 30 Stinging nettle
- p 32 Curly dock
- p 34 Bittersweet nightshade
- p 36 Giant chickweed
- p 38 Hoary alyssum
- p 40 Goldenrod
- p 42 Multiflora rose
- p 44 Prickly ash

**Annuals**
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- p 48 Common & giant ragweed
- p 50 Pigweeds
- p 52 Smallflower buttercup
- p 54 Smartweeds
- p 56 Jimsonweed
## Bull thistle

### Cirsium vulgare

<table>
<thead>
<tr>
<th>root</th>
<th>• non-spreading taproot</th>
</tr>
</thead>
</table>
| leaves        | • wrinkled, deeply *lobed*, with a gray-green surface covered with hairs  
               | • appear old even when young  
               | • *rosette* leaves 6 to 12 inches long  
               | • stem leaves smaller  
               | • each leaf lobe has a prominent needle-like spine |
| stem          | • base of leaves extends down the stem, giving the stem the appearance of being spiny  
               | • 3 to 5 feet tall; branched |
| flower        | • flower head is flask-shaped and 1 to 2 inches across with pink flowers  
               | • seeds with *pappus* |
| other         | • found throughout Wisconsin; seldom in high populations |

### Management

- ✔ mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- ✔ spray rosettes with 2, 4-D, dicamba or a combination of these
Plumeless thistle

Carduus acanthoides

- **root**: non-spreading taproot
- **leaves**: deeply lobed, spiny and hairy, especially on the lower surface and midrib. The leaf lobes are often at an angle to midrib; do not lay flat.
- **stem**: very spiny from base to top of the plant. 3 to 5 feet tall; branched
- **flower**: flower heads 0.75 to 1 inch across, with pink flowers. Seeds with pappus
- **other**: most common in southwest and southcentral Wisconsin where it is often (incorrectly) referred to as “Russian thistle”

**Management**

- ✔ mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- ✔ spray rosettes with 2, 4-D, dicamba or a combination of these
Plumeless thistle is a flowering plant that often starts at the barn. It has a rosette of leaves and a whole plant structure.
### Musk thistle

<table>
<thead>
<tr>
<th><strong>Carduus nutans</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>root</strong></td>
</tr>
<tr>
<td><strong>leaves</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>stem</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>flower</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>other</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

### Management

- ✔ mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- ✔ spray rosettes with 2, 4-D, dicamba or a combination of these
MUSK THISTLE

- Habitat
- Leaf above
- Leaf below
- Rosette
- Inflorescence and leaf
- Whole plant
### Burdock

**Arctium minus**

<table>
<thead>
<tr>
<th>root</th>
<th>• non-spreading taproot</th>
</tr>
</thead>
<tbody>
<tr>
<td>leaves</td>
<td>• rosette leaves heart-shaped, resembling rhubarb leaves; dark green on top and lighter green and woolly white below</td>
</tr>
<tr>
<td></td>
<td>• rosette leaves very large (up to 20 inches long); stem leaves much smaller</td>
</tr>
<tr>
<td></td>
<td>• leaves with petioles</td>
</tr>
<tr>
<td>stem</td>
<td>• branched, thick, grooved and hollow</td>
</tr>
<tr>
<td></td>
<td>• 5 to 8 feet tall; nearly as wide</td>
</tr>
<tr>
<td>flower</td>
<td>• flower heads 0.5 to 0.75 inches across with pinkish to red-violet flowers</td>
</tr>
<tr>
<td></td>
<td>• when mature, each fruit is covered with hooked spines (bracts) that form the burs that are 0.5 inch across</td>
</tr>
<tr>
<td>other</td>
<td>• very common in fencerows and pastures</td>
</tr>
<tr>
<td></td>
<td>• burs with hooked spines a nuisance for humans and animals</td>
</tr>
</tbody>
</table>

#### Management

- ✔ mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- ✔ spray rosettes with 2, 4-D, dicamba or a combination of these
inflorescence
underside of rosette leaf
rosette leaves
seedling
bolted burdock
2-year-old (dead) and 1-yr-old plant (rosette)

Burdock (Arctium lappa)
**Pastinaca sativa**

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>non-spreading white to yellowish taproot</td>
</tr>
<tr>
<td>leaves</td>
<td>rosette leaves large and erect with long petioles</td>
</tr>
<tr>
<td></td>
<td>basal and lower stem leaves are pinnately compound with saw-toothed edges</td>
</tr>
<tr>
<td></td>
<td>and not hairy</td>
</tr>
<tr>
<td></td>
<td>the leaflets are often mitten-shaped and the leaf petioles clasp the stems</td>
</tr>
<tr>
<td></td>
<td>the stem leaves much smaller with 2 to 5 pairs of leaflets</td>
</tr>
<tr>
<td>stem</td>
<td>grooved and branched up to 6 feet tall</td>
</tr>
<tr>
<td>flower</td>
<td>inflorescence a flat-topped compound umbel</td>
</tr>
<tr>
<td></td>
<td>single flowers with 5 small, yellowish petals; form two flat, rounded,</td>
</tr>
<tr>
<td></td>
<td>ribbed seeds</td>
</tr>
<tr>
<td>other</td>
<td>plant sap on skin usually causes sunburn and/or blisters</td>
</tr>
<tr>
<td></td>
<td>not poisonous to livestock</td>
</tr>
</tbody>
</table>

**Management**

- ✔ mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- ✔ spray rosettes with 2, 4-D, dicamba or a combination of these; Ally® also effective
WILD PARSNIP

Habitat

Close view of inflorescence with ripe fruits

Rosette leaf

Umbel-shaped inflorescence

Whole plant
**Daucus carota**

**Root**
- Non-spreading, deep, tough, whitish-yellow, fleshy taproot

**Leaves**
- Finely divided, carrot-like in appearance and aroma
- Rosette leaves with long petioles

**Stem**
- Hairy, rough-textured, hollow
- 2 to 4 feet tall

**Flower**
- Inflorescence a large, flat-topped compound umbel, 2 to 5 inches across
- Flowers small with 5 white petals in clusters
- A single dark purple flower often in center of umbel

**Other**
- Also called Queen Anne's lace
- Small plants may not flower second year

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**Management**
- **✔** Mow as needed to prevent seed production; dig or cut plants 1-2” below soil surface
- **✔** Spray rosettes with 2, 4-D, dicamba or a combination of these; Ally® also effective
### Equisetum arvense

#### Field horsetail

| root | • spreading rhizome system with tubers  
• rhizomes forked with a dark felt-like coating |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>leaves</td>
<td>• needle-like in whorls of 8-12 at joints of vegetative stems only</td>
</tr>
</tbody>
</table>
| stem | • two types: **vegetative stems** tough, grooved, hollow, wiry with leaves at joints  
• **fertile stems** are whitish, succulent, unbranched, hollow; pull apart like stove pipe  
• both types have jointed stems with cup-shaped, toothed sheath at nodes and are 12 to 24 inches tall |
| flower | • does not flower; fertile stems produce spores in cones at the tips |
| other | • plants look like small pine trees or bottle brushes; poisonous to horses  
• common in wet areas; tolerates acidic soils |

### Management
- ✔ *improve drainage; till site and replant adapted species*
- ✔ *no herbicide options*
spore heads of reproductive form

leaf arrangement

vegetative and reproductive form

vegetative form

habitat
<table>
<thead>
<tr>
<th><strong>root</strong></th>
<th>a spreading, black, scaly rhizome 20 or more feet in length</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>leaves</strong></td>
<td>fronds arise directly from rhizomes; many branches with many leaflets; up to 4 feet long and 3 feet wide with overall triangular shape</td>
</tr>
<tr>
<td><strong>stem</strong></td>
<td>none</td>
</tr>
<tr>
<td><strong>flower</strong></td>
<td>does not flower; forms brown spores in a dense band around the edges on the underside of frond leaflets</td>
</tr>
<tr>
<td><strong>other</strong></td>
<td>poisonous if consumed repeatedly; adapted to acidic soils and moist and shaded areas</td>
</tr>
</tbody>
</table>

**Bracken fern**

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**Pteridium aquilinum**

**management**

✔ improve drainage and raise soil pH

✔ 2, 4-D, dicamba and glyphosate give some level of control; retreatment often necessary
BRACKEN FERN

whole plant

habitat

frond
### Centaurea maculosa  
**Spotted knapweed**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>non-spreading taproot</td>
</tr>
<tr>
<td>leaves</td>
<td>basal leaves up to 6 inches long, deeply lobed with 3 to 10 lobes, gray-green with a rough hairy surface</td>
</tr>
<tr>
<td></td>
<td>leaves near the flower heads are smaller, narrow and less lobed to unlobed</td>
</tr>
<tr>
<td>stem</td>
<td>rough surfaced and highly branched</td>
</tr>
<tr>
<td></td>
<td>2 to 3 feet tall</td>
</tr>
<tr>
<td>flower</td>
<td>flower heads (up to 200/plant) flask-shaped with pink to purple flowers</td>
</tr>
<tr>
<td></td>
<td>tips of bracts at base of the flower heads fringed with black spots, giving this weed its name</td>
</tr>
<tr>
<td>other</td>
<td>most common in sandy, coarse-textured soils</td>
</tr>
</tbody>
</table>

**Management**

- ✔ remove plants by digging; mow as soon as flowers appear and repeat as needed to prevent seed production
- ✔ controlled with clopyralid or dicamba
typical habitat: sandy soil

view of inflorescence from top

stem leaves

view of inflorescence from side

whole plant

SPOTTED Knapweed
Canada thistle

*Cirsium arvense*

**root**
- branched, *spreading root system* that sends up new shoots

**leaves**
- shiny, wavy, with crinkled, spiny edges and no hair; 3 to 4 inches long

**stem**
- smooth and branched at the top
- 2 to 4 feet tall

**flower**
- flower heads 0.5 to 0.75 inches wide and flask-shaped
- flowers pink to almost purple (rarely white)
- male and female flowers are found on separate plants (*dioecious*)

**other**
- plants often appear in patches due to the way the roots spread

**Management**
- ✔ mow as soon as flowering starts to prevent seed production
- ✔ clopyralid alone or with other growth regulator herbicides most effective option; suppressed by dicamba
spreading root
seed with pappus
leaf
bud stage
male (left) and female (right) inflorescences
flowering plant
spreading root
### Solanum carolinense

**Horsenettle**

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>root</strong></td>
<td>branched, spreading root system that sends up new shoots</td>
</tr>
<tr>
<td><strong>leaves</strong></td>
<td>alternate, oblong, with wavy edges; resemble oak leaves</td>
</tr>
<tr>
<td></td>
<td>spiny, especially on midrib of the lower side</td>
</tr>
<tr>
<td><strong>stem</strong></td>
<td>prickly and hairy, simple or branched</td>
</tr>
<tr>
<td></td>
<td>1.5 to 3 feet tall</td>
</tr>
<tr>
<td><strong>flower</strong></td>
<td>white or bluish, about 1 inch across with 5-lobes in tomato-like clusters</td>
</tr>
<tr>
<td></td>
<td>fruits round, green, then yellow, juicy berries in clusters; become wrinkled and hang on the plants all winter</td>
</tr>
<tr>
<td><strong>other</strong></td>
<td>spreads by roots and seeds</td>
</tr>
</tbody>
</table>

**Management**

✔ suppressed by Ally®, glyphosate and dicamba
Ripe fruits
Immature fruits
Stem and leaf with spines; flower
Flowering plant
Young plant
Roots
HORSENETTLE
Stinging nettle

**Urtica dioica**

<table>
<thead>
<tr>
<th>root</th>
<th>• a spreading, extensive <em>rhizome</em> system</th>
</tr>
</thead>
</table>
| leaves | • *opposite*, narrow with saw-toothed margins and prominent veins  
• covered with stinging hairs; *petioles* relatively short |
| stem | • four-sided, ridged, usually not branched; covered with stinging hairs  
• 3 to 7 feet tall |
| flower | • no petals; greenish yellow in leaf axils and at tip of stems; male and female flowers in separate parts of same plant (*monoecious*)  
• fruits inconspicuous with one small yellowish to grayish-tan seed |
| other | • most common in wet sites and in patches; stinging hairs cause itching and numbness that lasts several hours |

**management**

✔ **improve drainage; mow several times during season**

✔ **Crossbow®, WeedMaster® and glyphosate are effective but retreatment often needed**
toothed leaf

stinging hairs

young plant

flowering plant

STINGING NETTLE
**Curly dock**

**Rumex crispus**

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>root</strong></td>
<td>• fleshy, thick, branched <em>taproot</em>; yellowish in color</td>
</tr>
</tbody>
</table>
| **leaves** | • basal leaves large (up to 12 inches long) with wavy margins  
• *ocrea* surrounds stem at base of leaf petioles |
| **stem** | • smooth, unbranched, ridged, often reddish, especially late in season  
• up to 3 feet tall |
| **flower** | • in clusters on upper part of stems; composed of greenish sepals that become rusty brown when seeds are ripe  
• fruit a papery 3-winged triangular structure |
| **other** | • tolerates poorly drained and compacted soils |

**Management**

- ✔ *dig individual plants at least 8 inches below soil surface*
- ✔ *apply dicamba, Crossbow® or glyphosate*
### Bittersweet nightshade

**Solanum dulcamara**

<table>
<thead>
<tr>
<th><strong>root</strong></th>
<th>• woody, branched</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>leaves</strong></td>
<td>• most with two <em>lobes</em> at the base; some without lobes; dark green, <em>alternate</em>, smooth; have foul odor when crushed</td>
</tr>
<tr>
<td><strong>stem</strong></td>
<td>• semiwoody vine 2 to 10 feet long&lt;br&gt;• stems form roots when in contact with soil</td>
</tr>
<tr>
<td><strong>flower</strong></td>
<td>• resemble potato flowers; have 5 purple or whitish petals with a yellow center; form branched clusters arising from leaf axils&lt;br&gt;• fruit an oval green berry that becomes bright red and juicy when ripe and contains small, yellowish seeds</td>
</tr>
<tr>
<td><strong>other</strong></td>
<td>• also known as bitter nightshade and deadly nightshade; can be poisonous to animals and humans&lt;br&gt;• usually climbs on fences and shrubs but can grow without support</td>
</tr>
</tbody>
</table>

#### Management

- ✔ find and dig root where plants arise
- ✔ apply dicamba or glyphosate

- **PERENNIAL**

- **semiwoody vine 2 to 10 feet long**
- **stem forms roots when in contact with soil**
leaves
fruits and flowers
fruiting plant
leaves
ripe fruits
Myosoton aquatica

Giant chickweed

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>• fibrous shallow; roots also form at stem nodes</td>
</tr>
<tr>
<td>leaves</td>
<td>• hairy, opposite, no petioles, pointed, 1 to 2 inches long</td>
</tr>
<tr>
<td>stem</td>
<td>• hairy, weak and branched; often trailing on ground</td>
</tr>
<tr>
<td>flower</td>
<td>• 5 snow-white petals that are deeply divided</td>
</tr>
<tr>
<td></td>
<td>• arise from branches in leaf axils</td>
</tr>
<tr>
<td></td>
<td>• fruit a capsule with many small tannish-orange seeds; often droops when ripe</td>
</tr>
<tr>
<td>other</td>
<td>• tips of hairs on stems and leaves have sticky droplets</td>
</tr>
<tr>
<td></td>
<td>• can invade rapidly</td>
</tr>
</tbody>
</table>

Management

✔ mow before seeds form; reseed heavily infested areas with competitive forage species
✔ apply dicamba or glyphosate
### Hoary alyssum

**Berteroa incana**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>branched taproot</td>
</tr>
<tr>
<td>leaves</td>
<td>narrow, alternate, rough textured, gray-green up to 3 inches long</td>
</tr>
<tr>
<td>stem</td>
<td>rough textured, gray-green branched</td>
</tr>
<tr>
<td></td>
<td>1.5 to 2 feet tall</td>
</tr>
<tr>
<td>flower</td>
<td>4 snow white, deeply cut petals in form of a cross</td>
</tr>
<tr>
<td></td>
<td>pods hairy, elliptical to oval with short beak on the end; up to 1/2 inch long with many, reddish-brown, small lens-shaped seeds</td>
</tr>
<tr>
<td>other</td>
<td>most common in sandy, coarse textured and gravelly soils</td>
</tr>
<tr>
<td></td>
<td>unpalatable; can be poisonous to horses if consumed in large amounts in hay</td>
</tr>
</tbody>
</table>

#### Management

- ✔ mow as needed to reduce seed production; reseed heavily infested areas with competitive forage species
- ✔ apply 2, 4-D in late summer or fall
HOARY ALYSSUM

- Flower with four split petals
- Flowers and pods
- Young plant
- Stems with flowers and immature and ripe pods
- Infestation
### Goldenrod

**Solidago spp.**

<table>
<thead>
<tr>
<th>root</th>
<th>spreading root/rhizome system; thus plants often appear in clumps</th>
</tr>
</thead>
<tbody>
<tr>
<td>leaves</td>
<td>alternate, without a petioles, lanceolate; usually rough textured</td>
</tr>
<tr>
<td>stem</td>
<td>leafy, coarse textured, hairy, seldom branched; 2 to 4 feet tall; remain erect all winter long</td>
</tr>
<tr>
<td>flower</td>
<td>usually on one side of horizontal flower branch with many small, yellow flowers; form very small seeds with tuft of white bristles on the top</td>
</tr>
<tr>
<td>other</td>
<td>many species; Canada goldenrod is one of the more common; poor livestock feed; goldenrods are native plants but are often invasive</td>
</tr>
</tbody>
</table>

**Management**

- repeated mowing minimizes spread; hard to kill but glyphosate and dicamba + 2, 4-D give suppression
infestation

flowering branches

GOLDENROD

41
### Multiflora rose

<table>
<thead>
<tr>
<th><strong>Rosa multiflora</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>root</strong></td>
</tr>
</tbody>
</table>
| **leaves** | • *compound* with 5 to 11 *leaflet*s  
  • leaflets up to 1.5 inches long with toothed margins |
| **stem** | • woody, long, arching canes with hooked thorns |
| **flower** | • white to pinkish, fragrant, 0.5 to 0.75 inches across  
  • 25 to 100 flowers in a cluster  
  • form rounded and bright red fruits that stay on plant into winter |
| **other** | • plants start from seeds and form large, dense clumps |

### Management

- ✔ dig individual plants
- ✔ goats eat and control multiflora rose bushes
- ✔ *Ally®, Crossbow®* and glyphosate as foliar spray are effective; cut or mow tall plants first and then treat regrowth
MULTIFLORA ROSE

- Typical habitat
- Many flowers
- Leaves and green fruits
- Stem and thorns
- Ripe fruits
- Many flowers
## Prickly ash

### Xanthoxylum americanum

<table>
<thead>
<tr>
<th><strong>root</strong></th>
<th>• non-spreading shallow root system</th>
</tr>
</thead>
</table>
| **leaves** | • *opposite, compound*, to 12 inches long with 2 to 5 pair of *leaflets* and a terminal leaflet; leaflets 1.5 to 2 inches long  
  • dull green above; lighter green below |
| **stem** | • 6 to 20-feet tall shrub or small tree with triangular spines  
  • bark gray to brown, smooth |
| **flower** | • flowers with 5 petals; appear before leaves  
  • small, greenish-yellow on slender stalk  
  • small, berry-like capsules contain one or more shiny black seeds |
| **other** | • common as thickets in partially shaded areas and edges of woods  
  • native to North America; many medicinal uses  
  • leaves, stems and fruits highly aromatic with a citrus scent |

### Management

- ✔ small plants easily pulled out by hand
- ✔ readily eaten by Scottish Highland cattle
- ✔ Garlon 4® the most effective herbicide
Infestation

Branch with fruits

Clusters of ripe fruits on branches

Leaves

Old, hard spines

Young spines at leaf axil

Prickly Ash
Yellow foxtail

**Setaria lutescens**

<table>
<thead>
<tr>
<th>Part</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>• fibrous; no rhizomes</td>
</tr>
<tr>
<td>leaves</td>
<td>• long hairs at the base of the blade only</td>
</tr>
<tr>
<td>stem</td>
<td>• hairless and flattened</td>
</tr>
<tr>
<td></td>
<td>• bases often purplish</td>
</tr>
<tr>
<td></td>
<td>• 1.5 to 3 feet tall</td>
</tr>
<tr>
<td>flower</td>
<td>• a spike, 3 to 5 inches long with yellowish bristles; does not droop</td>
</tr>
<tr>
<td>other</td>
<td>• comes from seed every year</td>
</tr>
<tr>
<td></td>
<td>• unpalatable to horses and cattle</td>
</tr>
</tbody>
</table>

**Management**

✔ mow frequently to prevent seed production; reseed heavily infested areas with competitive forage species
Infestation of yellow foxtail

- Mature plants
- Seed heads
- Leaf blade with hairs
- Seeds
<table>
<thead>
<tr>
<th></th>
<th>Common &amp; Giant ragweed</th>
<th>management</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>• branched taproot</td>
<td>✔ mow as needed to prevent seed production</td>
</tr>
</tbody>
</table>
| leaves | • **common ragweed**: pinnately compound; lower leaves opposite, middle and upper leaves alternate  
• **giant ragweed**: three-lobed, large, mostly opposite | ✔ 2, 4-D and dicamba control young plants |
| stem   | • hairy and branched, rough textured  
• **common ragweed**: 2 to 3 feet tall  
• **giant ragweed**: 4 to 12 feet tall | |
| flower | • inconspicuous; **monoecious**  
• male flowers clustered on stalks at tips of branches  
• female flowers in leaf axils below male flowers | |
| other  | • both ragweed species rather unpalatable | |
### Pigweeds

*Amaranthus spp.*

<table>
<thead>
<tr>
<th>root</th>
<th>• taproot; may be branched; often reddish</th>
</tr>
</thead>
<tbody>
<tr>
<td>leaves</td>
<td>• young leaves have a notch at tips, alternate, with petioles</td>
</tr>
<tr>
<td>stem</td>
<td>• smooth or hairy</td>
</tr>
<tr>
<td></td>
<td>• 2 to 4 feet tall</td>
</tr>
<tr>
<td>flower</td>
<td>• many inconspicuous flowers in cylindrical spikes; some species with shiny bracts making seed heads prickly</td>
</tr>
<tr>
<td></td>
<td>• seeds small, shiny, black</td>
</tr>
<tr>
<td>other</td>
<td>• common species include redroot, smooth, prostrate, tumble pigweed and waterhemp; spiny amaranth is a new weed in Wisconsin pastures</td>
</tr>
<tr>
<td></td>
<td>• can accumulate nitrates</td>
</tr>
</tbody>
</table>

**Management**

- ✔ mow as needed to prevent seed production; reseed heavily infested areas with competitive forage species
- ✔ apply 2, 4-D or dicamba to control pigweed species
**Smallflower buttercup**

- **Root**: many and fibrous
- **Leaves**: two types; both succulent and shiny
  - **Basal leaves**: round with toothed margins and borne on long petioles
  - **Stem leaves**: divided into 3 to 5 leaflets with somewhat toothed margins and on shorter petioles
- **Stem**: slender, branched, smooth
  - up to 18 inches tall
- **Flower**: small with 5 bright yellow petals; flowers appear in May
  - each flower head with small, yellowish-brown, wrinkled seeds
- **Other**: smallflower buttercup behaves as an annual or biennial
  - common and tall buttercup are perennials found in Northern Wisconsin
  - buttercups can be toxic when consumed fresh; non-toxic in dry hay

### Management
- ✔ mow as needed to prevent seed production
- ✔ Ally®, dicamba and Crossbow® effective
## Smartweeds

<table>
<thead>
<tr>
<th>ANNUAL</th>
<th>Polygonum spp.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>root</strong></td>
<td>• branched <em>taproot</em></td>
</tr>
<tr>
<td><strong>leaves</strong></td>
<td>• 2 to 5 inches long; pointed; <em>alternate</em>, with <em>petioles</em></td>
</tr>
</tbody>
</table>
| **stem** | • branched with an *ocrea* at the swollen *nodes*  
• stems that touch soil surface may root at nodes  
• 1.5 to 3 feet tall |
| **flower** | • pink or pinkish white in terminal spikes  
• seeds flattened and circular or triangular; black or dark brown |
| **other** | • two common species: ladysthumb (often with a “thumbprint” on the leaves) and Pennsylvania  
• both of low palatability to livestock |

### Management

- ✔ *mowing* reduces but will not prevent seed production
- ✔ *dicamba* and *glyphosate* effective
### Jimsonweed

*Datura stramonium*

**Root**
- Thick and very branched *taproot*

**Leaves**
- Large, *alternate*, smooth with irregularly toothed edges

**Stem**
- Smooth, hollow, often purple; branched, becoming almost woody
- 3 to 5 feet tall

**Flower**
- Tubular or trumpet-shaped, 2 to 4 inches long; white to whitish purple
- Fruits egg-shaped, green when young; when ripe covered with stiff prickles
- Seeds flattened, black with pitted surface

**Other**
- Stems and leaves with very strong, foul odor
- All plant parts poisonous to humans and animals
- Often appears first near barns and in feeding areas

### Management

- Hoe, cut or pull as plants appear
- 2, 4-D controls small plants; glyphosate controls larger plants
Glossary

**alternate leaves**: occurring singly at each node; not opposite

**bract**: a modified (reduced) leaf, often below a flower structure

**compound leaf**: composed of two or more leaflets

**control**: to kill plants with mechanical, chemical or biological means or to reduce their growth to levels that allow desired species to predominate

**crown**: the persistent base (at the soil surface) of herbaceous plants like dandelions; this region often has buds with the potential to re-sprout if main stem is cut

**dioecious**: plants with male and female flowers on separate plants (Canada thistle)

**fluff**: (refer to pappus)

**inflorescence**: any kind of flower cluster on a plant; for plants in the daisy family, the collection of individual flowers is called the flower head

**frond**: a fern or palm leaf

**lanceolate**: much longer than wide; widest below the midpoint and tapering to both ends

**leaflet**: a leaf-like segment of a compound leaf

**lobe**: the projecting part of a leaf; maple leaves are lobed

**midrib**: the middle vein of a leaf

**monoecious**: plants with male and female flowers in separate locations on the same plant (the ragweeds)

**node**: points along the stem where leaves are borne; joint of attachment along a stem

**ocrea (also spelled ochrea)**: the membranous, papery sheath surrounding the stem immediately above the point of leaf attachment on plants in the buckwheat family

**opposite leaves**: a pair of leaves directly across from each other on the stem

**pappus**: a group of hairs attached to some seeds in the sunflower family (most thistle seeds have a pappus); also referred to as fluff

**petiole**: stalk of the leaf that supports the leaf blade

**pinnate**: having a row of leaflets on each side of the midvein giving leaf a feather-like appearance

**rhizome**: underground stem with nodes and internodes on some perennial narrow leaf plants like quackgrass

**rosette**: a basal, crowded whorl of leaves; the first leaves formed on biennial plants
spreading root: thickened root that generally grows horizontally; forms buds that produce stems; found on some perennial broadleaf plants like Canada thistle and horsenettle

suppression: significantly reducing plant growth and hopefully minimizing competitive and reproductive ability; suppressed weeds often re-grow and may dominate desired species in time

taproot: thickened primary root; may be branched; taproot often has buds in the crown region that form leaves and shoots

umbel: a flat-topped or rounded inflorescence with the flower stalks arising from nearly the same point

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The Dirty Dozen and Beyond – 25 Pasture Weeds of Wisconsin

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For more information on pasture weed identification and management, visit this web site: http://ipcm.wisc.edu/uw_weeds/
This publication can be viewed and printed at: clean-water.uwex.edu/pubs/pastureweeds

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