



MINNESOTA DEPARTMENT
OF AGRICULTURE



The Minnesota Noxious Weed Lists By Category

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Life Cycle of Weeds

- **Annuals**

- Complete their life cycle in a growing season
- Spread by seed

- **Biennials**

- Complete their life cycle in two growing seasons
- Reproduce by seed (rosette first year, flower and seed production during second year)

- **Perennials**

- Live three or more years
- Reproduce by seed, underground root structures, and/or plant cuttings

Statewide Listed Noxious Weeds

18 State Prohibited Noxious Weeds

Eradicate List – 8 Species

Control List – 10 Species

3 State Restricted Noxious Weeds

1 Specially Regulated Plant

Prohibited Noxious Weeds

- **Prohibited Noxious Weeds** are annual, biennial, or perennial plants that the commissioner designates as having the potential or are known to be detrimental to human or animal health, the environment, public roads, crops, livestock or other property. There are two regulatory listings for prohibited noxious weeds in Minnesota:
 - **Eradicate List** – Prohibited noxious weeds that are listed to be eradicated are plants that are not currently known to be present in Minnesota or are not widely established. These species must be eradicated, meaning all of the above and below ground parts of the plant must be destroyed, as required by Minnesota Statutes, Section 18.78. Additionally, no transportation, propagation, or sale of these plants is allowed. Measures must also be taken to prevent and exclude these species from being introduced into Minnesota.
 - **Controlled List** - Prohibited noxious weeds that are listed to be controlled are plants that are established throughout Minnesota or regions of the state. Species on this list must be controlled, meaning efforts must be made to prevent seed maturation and dispersal of plants into new areas, thereby reducing established populations and preventing reproduction and spread as required by Minnesota Statutes, Section 18.78. Additionally, transportation, propagation, or sale of these plants is prohibited.

State Prohibited Noxious Weeds

Eradicate List

- | | |
|------------------------|---------------------------------|
| • Yellow Starthistle | <i>Centaurea solstitialis</i> |
| • Grecian Foxglove | <i>Digitalis lanata</i> |
| • Oriental Bittersweet | <i>Celastrus orbicaulatus</i> |
| • Japanese Hops | <i>Humulus japonicas</i> |
| • Dalmatian Toadflax | <i>Linaria dalmatica</i> |
| • Common Teasel | <i>Dispsacus fullonum</i> |
| • Cut-leaved Teasel | <i>Dispsacus laciniatus</i> |
| • Giant Hogweed | <i>Heracleum mantegazzianum</i> |

Prohibited - Eradicate Noxious Weeds

Yellow Starthistle – *Centaurea solstitialis*



Annual – 1 – 3 ft tall

Many branched stems, leaves are covered with a cottony wool giving the plant a blue-green color appearance

Basal leaves are 2-6 inches long and deeply lobed upper leaves are shorter and narrow with few lobes

Yellow flowers with distinct sharp spines on the bracts

Highly Invasive! Contact MDA if Found

Reproduces by seed

Prohibited - Eradicate Noxious Weeds

Grecian Foxglove – *Digitalis lanata*



Perennial – 2 - 5 ft tall – rosette first year, bolts 2nd and subsequent years

Flowers form in elongated clusters at the top of reddish colored stems

Flowers are tubular in appearance, white to pale yellow with brownish venation inside

Flowering stems are covered with woolly hairs

Leaves are simple, alternate, oblong, with pointed tips

Reproduces by seed



Prohibited - Eradicate Noxious Weeds

Oriental Bittersweet – *Celastrus orbiculatus*



Perennial – Woody vine that grows up to 70 ft
(*Species similar in appearance to our native American bittersweet*)

Leaves are alternate, oblong to almost round, 2- 5 in. long
by 1.5 – 4 inches wide, edges with rounded teeth

Separate male and female plants

Females produce flowers clusters of 2-7 in the leaf axils

Flowers produce green fruits that turn bright red with
distinctive yellow capsules in the fall (*American
bittersweet fruits are red with red capsules*)

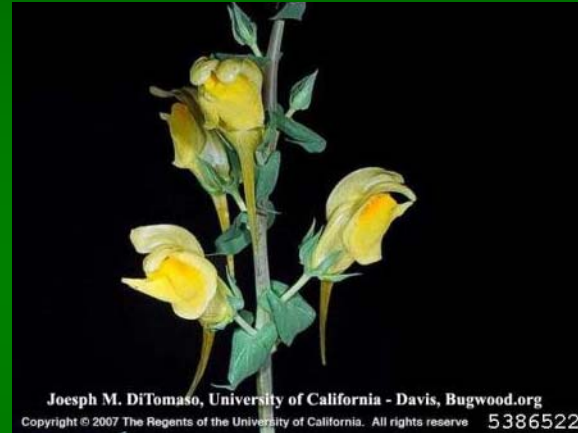
Reproduces by seeds and roots



Prohibited - Eradicate Noxious Weeds

Dalmatian Toadflax – *Linaria dalmatica*

NOT TO BE CONFUSED WITH THE MORE COMMON YELLOW TOADFLAX (*Linaria vulgaris*)



Short –lived Perennial – resembles a large yellow snapdragon

Thick woody stems grow 2 – 4 ft. and are bluish-green

Leaves are broad/heart-shaped, waxy, 1- 3 inches long, and clasp the stem alternately (*Yellow Toadflax has small linear leaves*)

Flowers are arranged on spikes at the top of stems, are bright yellow (snapdragon–like) and have an extruding bottom spur

Reproduces by seeds and roots

Prohibited - Eradicate Noxious Weeds

Japanese Hops – *Humulus japonicas*

*Not to be confused with Native Hops (*Humulus lupulus*)*



Climbing annual vine that rapidly grows 8 – 35 ft.

Leaves are simple, opposite, heart-shaped, and palmately divided into 5 - 7 lobes and 3 – 5 lobes on upper leaves (*native hops – *H. lupulus* has 3 lobed leaves with no lobes on upper leaves*)

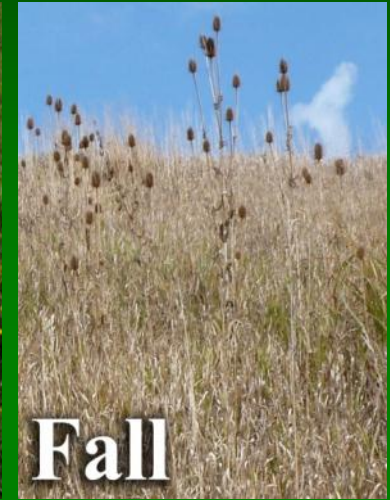
Male and female greenish flowers are produced mid to late summer on separate plants. Female flowers/plants produce green “hops” that contain oval yellowish brown seeds.

Stems and leaves have hooked climbing hairs

Reproduces by seed

Prohibited - Eradicate Noxious Weeds

Cut-leaved Teasel – *Dispsacus laciniatus*



Monocarpic perennial (produces seeds once then dies)

Rosettes develop from seed and exist for one to several years

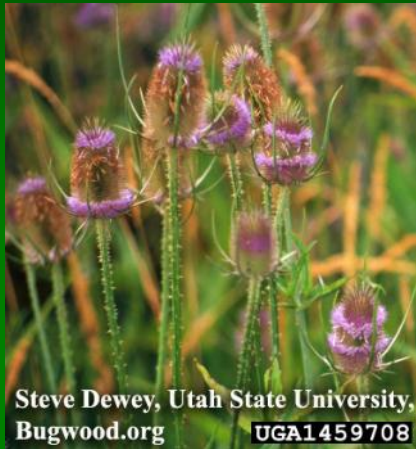
Thick prickly stems eventually arise from rosettes producing large, prickly, opposite, deeply lobed leaves that wrap around the stems forming cups that can hold water

Stems terminate with a distinctive cylindrical flowering head subtended by long pointed bracts and containing many small white flowers; stems reach heights of 6 – 8 ft.

Reproduces by seed

Prohibited - Eradicate Noxious Weeds

Common Teasel – *Dispsacus fullonum*



Monocarpic perennial (produces seeds once then dies)

Rosettes develop from seed and exist for one to several years

Thick prickly stems eventually arise from rosettes producing large, prickly, oblong/lanceolate, opposite leaves that wrap around the stems forming cups that can hold water

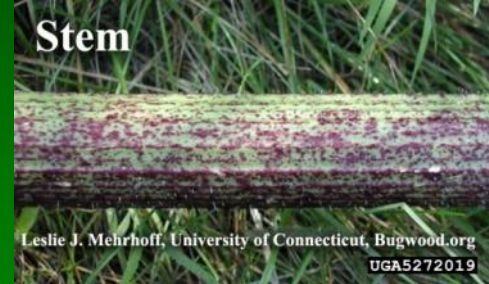
Stems terminate with a distinctive cylindrical flowering head subtended by long pointed bracts and containing many small purple flowers; stems reach heights of 5 – 7 ft.

Reproduces by seed



Prohibited - Eradicate Noxious Weeds

Giant Hogweed – *Heracleum mantegazzianum*



Do not confuse with native Cow Parsnip (Heracleum maximum)

Monocarpic perennial (produces seed once then dies);
rosette first year (or more) then bolts, producing stems
that reach heights of 10 – 15 ft.

Stout hollow stems and leaf stalks that are spotted
purple/red and contain sturdy white bristles

Large alternating compound leaves that are deeply lobed and
can reach widths of 5 ft.

The flower head is a compound umbel with many tiny white
flowers; 2 – 3 ft. diameter

Reproduces by seed

State Prohibited Noxious Weeds

Control List

- Purple Loosestrife
- Garlic Mustard
- Spotted Knapweed
- Leafy Spurge
- Wild Parsnip
- Common Tansy
- Canada Thistle
- Musk Thistle
- Plumeless Thistle
- Narrowleaf Bittercress

Lythrum salicaria

Alliaria petiolata

Centaurea stoebe

Euphorbia esula

Pastinaca sativa

Tanacetum vulgare

Cirsium arvense

Carduus nutans

Carduus acanthoides

Carduus acanthoides

Prohibited - Control Noxious Weeds

Purple Loosestrife – *Lythrum salicaria*



Perennial – 3 to 7 feet tall – stout stems with alternate or whorled leaves

Lance-shaped leaves with large showy purple flower spikes

Individual flowers are 5-petaled and star-shaped

Found primarily along river/streams, lake shores, wet roadsides, and wetlands

Reproduces by seed and fragments of roots or stems

Prohibited - Control Noxious Weeds

Garlic Mustard - *Alliaria petiolata*



Biennial – 12 to 36 inches tall

One of few plants of this height in wooded landscapes during May with 4-petal white blooms

Crushed heart-shaped leaves/stems have strong garlic odor

Reproduces by seed

Prohibited - Control Noxious Weeds

Spotted Knapweed – *Centaurea stoebe*



Biennial (or short-term perennial)– 3 to 5 feet Tall

Erect/stout/branched stems

Upper leaves alternate, are linear and not lobed.
basal leaves are deeply lobed

Purple flowers develop at the end of branched
stems from June – August.

Stiff bracts on flowers are tipped with black fringes
giving the flower a spotted appearance

Reproduces by seed

Prohibited - Control Noxious Weeds

Leafy Spurge – *Euphorbia esula*



Perennial – 2 to 3 feet tall

Injured leaves and stems exude white sap

Yellow-green flowers surrounded by paired, heart-shaped bracts

Reproduces by seed, lateral roots, and root fragments

Prohibited - Control Noxious Weeds

Wild Parsnip – *Pastinaca sativa*



Biennial – 3 - 5 feet tall

Erect, stout, hollow stems with alternate compound leaves

Yellow flowers in a distinctive terminal umbel

Compounds in plant can cause severe skin burns

Reproduces by seed

Prohibited - Control Noxious Weeds

Common Tansy - *Tanacetum vulgare*



Perennial – 2 - 5 feet tall

Alternate leaves that are divided into numerous narrow – toothed segments (fern like)

Yellow button-like flowers in flat-topped clusters

Reproduces by seed and rootstalks

Prohibited - Control Noxious Weeds

Canada Thistle – *Cirsium arvense*



Perennial – 2 to 5 feet tall

New plants emerge as rosettes

Numerous small pinkish flowers on upper stems

Flower buds are small, tear drop-shaped, and lack spines

Smooth stems lack spines

Leaf edges are wavy/lobed with many spines

Reproduces by seeds and roots

Prohibited - Control Noxious Weeds

Musk Thistle – *Carduus nutans*



Biennial (rosette year 1, bolted year 2) – 2 to 7 feet tall

Leaves are dark green with light green midrib and are deeply lobed with spiny edges

Stems are branched and covered with spiny winged leaflets

Flowers are large (3 inch dia.), deep pink to rose in color, and surrounded by stout/pointed leaf-like bracts

Flowers are borne on long-smooth solitary stalks and tend to nod or droop (sometimes called noddling thistle)

Reproduces by seed

Prohibited - Control Noxious Weeds

Plumeless Thistle – *Carduus acanthoides*



Biennial (rosette year 1, bolted year 2) – 2 to 7 feet tall

Stems are branched and heavily covered with spiny winged leaflets

Leaves are wavy, deeply lobed, and edges are covered with yellow spines

Flowers are small (1 – 2 inches dia.), pink/rose in color, and surrounded by many spiny bracts

Reproduces by seed



Prohibited - Control Noxious Weeds

Narrowleaf Bittercress – *Cardamine impatiens*



Annual or biennial forb grows 6 – 36 inches tall

Commonly found in forested floodplains and along rivers and streams

Rosettes develop from seeds; eventually bolting and producing erect stems with many small alternate compound leaves

Bolted stems have 6-20 sharply toothed leaflets

Multiple small 4-petaled white flowers are produced along the upper stem

Flowers produce slender seedpods (siliques)

Reproduces by seed

State Restricted Noxious Weeds

Restricted Noxious Weeds are plants that are widely distributed in Minnesota and are detrimental to human or animal health, the environment, public roads, crops, livestock or other property, but whose only feasible means of control is to prevent their spread by prohibiting the importation, sale, and transportation of their propagating parts in the state except as allowed by Minnesota Statutes, Section 18.82. Plants designated as Restricted Noxious Weeds may be reclassified if effective means of control are developed.

- Common or European Buckthorn *Rhamnus cathartica*
- Glossy Buckthorn *Frangula alnus, Rhamnus Frangula, and all cultivars*
- Multiflora Rose *Rosa multiflora*

Restricted Noxious Weeds

European or Common Buckthorn

Rhamnus cathartica



Perennial shrub/tree – up to 25 feet tall

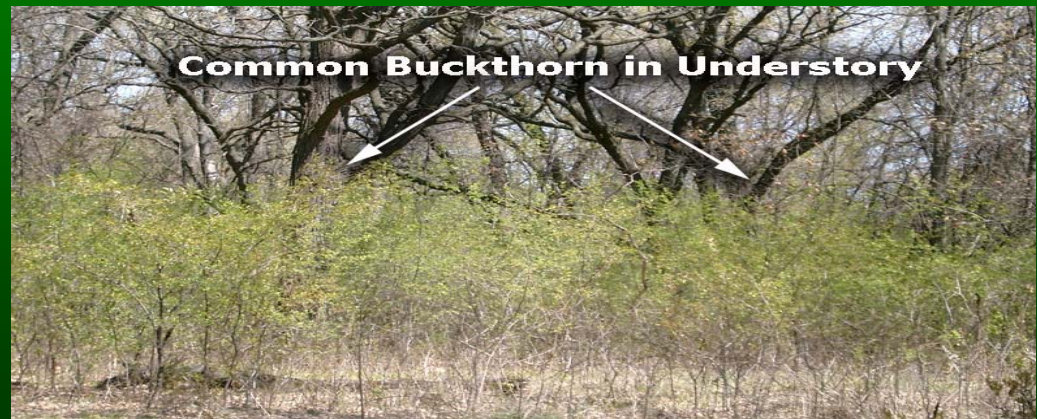
Leaves dark glossy green, smooth, oval, and finely toothed (stay green late into fall)

Leaf veins curve toward tip of leaf

Produces many small dark blue/black berries

Twigs grey with pale lenticels, spine tipped

Reproduces by seed, cut stumps will resprout



Restricted Noxious Weeds

Glossy or Alder Buckthorn

Frangula alnus, *Rhamnus Frangula*, and all cultivars



(similar to common buckthorn in appearance)

Perennial shrub/tree – up to 20 feet tall

Leaves glossy green on upper surface and may be fuzzy underneath, mostly oval; edges are untoothed and slightly wavy (stay green late into fall)

Twigs hairy, with pale lenticels, not spine tipped

Produces many small red to dark purple berries

Reproduces by seed, cut stumps can resprout



Restricted Noxious Weeds

Multiflora Rose – *Rosa multiflora*



Perennial shrub/vine – 4 – 10 ft. tall, forms large thickets

Pinnately compound alternate leaves divided into 5 – 11 oval dark green leaflets that are $\frac{1}{2}$ - 1.5 inches wide, with serrated margins

Stems are long and arching, without hairs, having stout curved brownish/reddish thorns throughout.

5 – petaled showy and fragrant white (sometimes pink) flowers ($\frac{1}{4}$ - $\frac{3}{4}$ inch diameter) begin to bloom in June.

Fruits are bright red ($\frac{1}{4}$ diameter) and visible fall - winter

Reproduces primarily by seed, shoots can sprout from existing roots or canes coming in contact with the ground.

State Specially Regulated Plants

Specially Regulated Plants are plants that may be native species or have demonstrated economic value, but also have the potential to cause harm in non-controlled environments. Plants designated as specially regulated have been determined to pose ecological, economical, or human or animal health concerns. Plant specific management plans and or rules that define the use and management requirements for these plants will be developed by the Minnesota Department of Agriculture for each plant designated as specially regulated. Measures must also be taken to minimize the potential for harm caused by these plants.

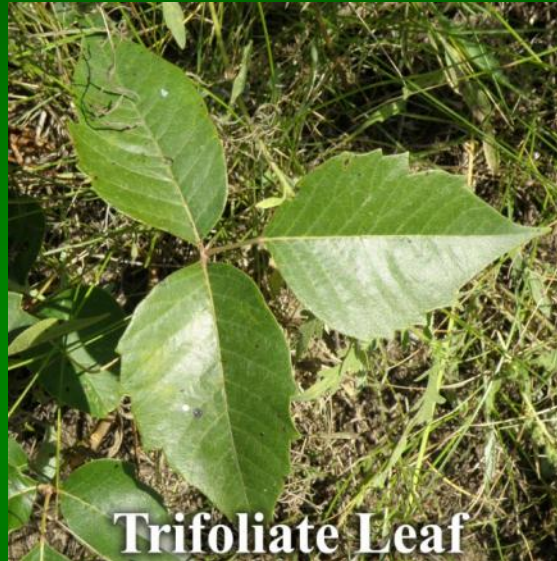
- **Poison Ivy** *Toxicodendron radicans*

Must be eradicated for public safety along rights-of-ways, trails, public accesses, business properties open to the public or on any lands where public access for business or commerce is granted.

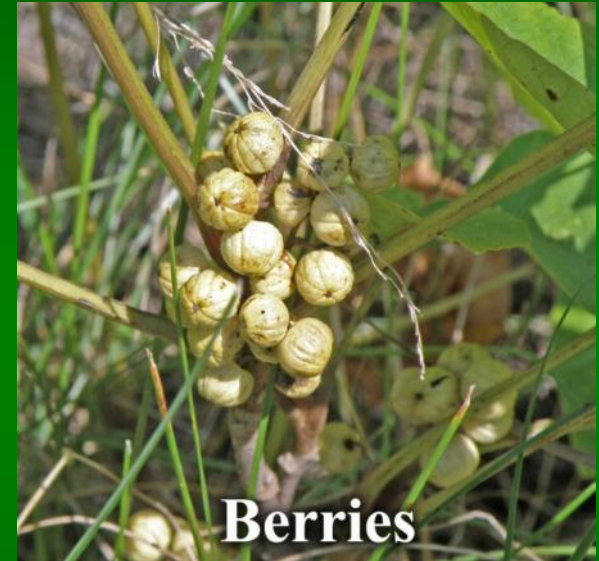
Must also be eradicated along property borders when neighboring landowners request.

Specially Regulated Plants

Poison Ivy – *Toxicodendron radicans*



Trifoliate Leaf



Berries

Native Perennial – 1- 3 ft tall, sometimes as a climbing vine

Compound leaves with 3 distinct shiny-pointed leaflets (2-4 inches long)

Produces small clusters of white berries in leaf axils (August – September)

Reproduces by seeds and roots

Seeds are highly beneficial to wildlife species

County Noxious Weeds

County Noxious Weeds are plants that are designated by individual county boards to be prohibited within the county's jurisdiction and must be approved by the Commissioner of Agriculture, in consultation with the Noxious Weed Advisory Committee. Each county board must submit newly proposed County Noxious Weeds to the Minnesota Department of Agriculture for review. Approved County Noxious Weeds shall also be posted with the county's general weed notice prior to May 15th each year. Counties are solely responsible for developing County Noxious Weed lists and their enforcement.

Weed Management Basics

- There is a weed for every occasion
- There is a weed species that is adapted to your management, no matter what it is

Weed Management Basics

- Therefore, repeated use of the same management will result in a few species that are out of control
- Goal should be to get as many species as possible, but few of any one species
 - Means you are using diversified weed management

Impact of Seed Bank on Weed Management

- Level of inputs required to control weeds directly related to seed bank size
- Seed production by weeds needs to be considered in management decisions
- What is an acceptable level of seed production?

Herbicides



Mechanical



Fire/Burning

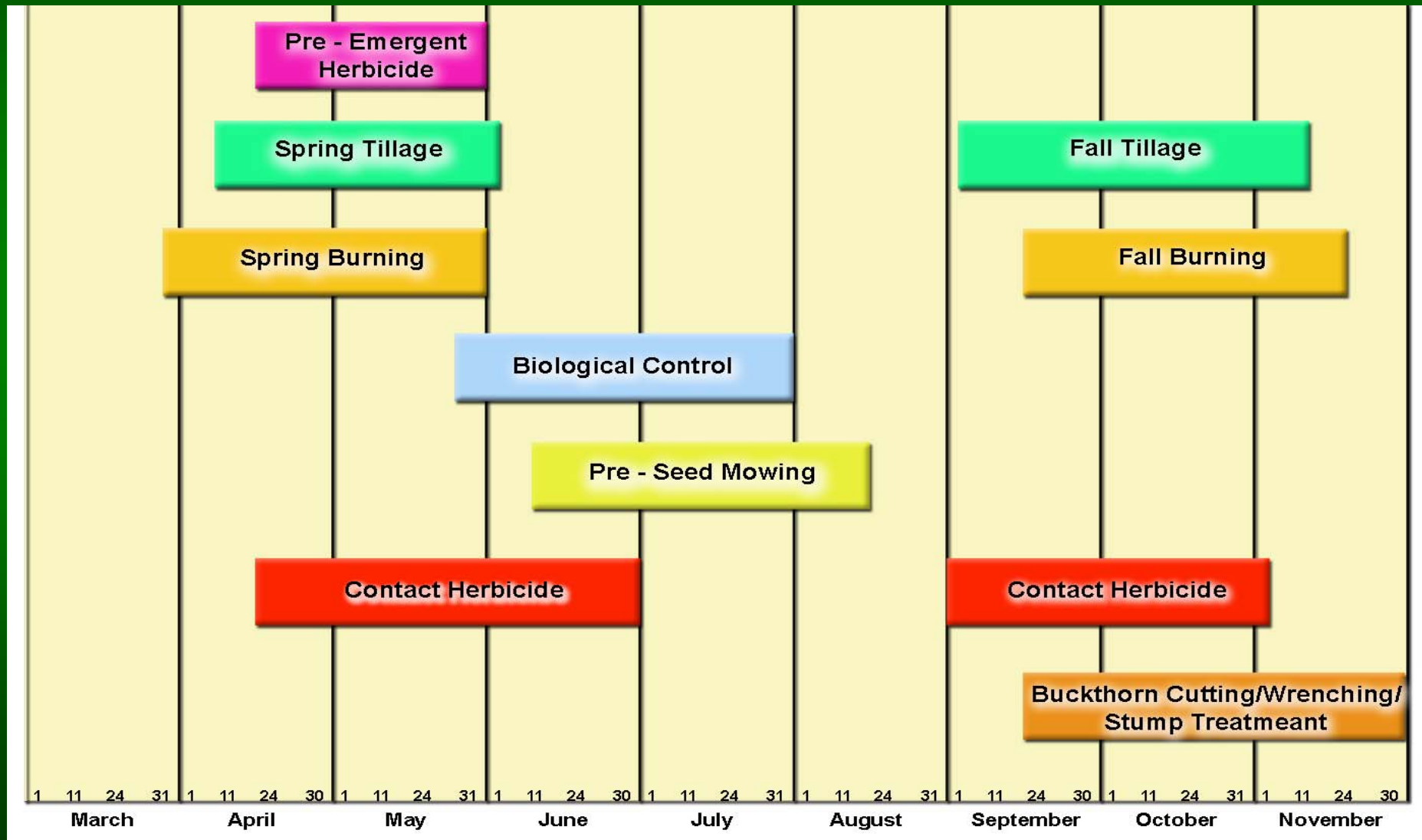
Photo courtesy of T. Markeson - MN DOT



Biological Control



Windows of Opportunity for Weed Management Practices



More Information?

- 1) **Contact Your Local County Agricultural Inspector or County Designated Employee**
- 2) **U of M Weed Science Extension**
 - **Dr. Roger Becker** (612) 625-5753
- 3) **Minnesota Department of Agriculture**
 - **Steve Malone (Seeds)** (651) 201-6531
 - **Anthony Cortilet (Noxious Weeds)** (651) 201-6538
 - **Monika Chandler (Early Detection)** (651) 201-6537
- 4) **Minnesota Department of Transportation**
 - **Tina Markeson** (651) 366-3619
- 5) **Minnesota Department of Natural Resources**
 - **Laura Van Riper (DNR Invasive Species)** (651) 259-5090