



AGENDA
Land Conservation Committee
March 21, 2019 at 1:00 PM
USDA Service Center Conference Room
1124 Professional Drive
Dodgeville, WI 53533

**Iowa
County
Wisconsin**

For information regarding access for the disabled please call 935-0399.

Any subject on this agenda may become an action item.

1	Call to Order
2	Roll Call
3	Approve the agenda for this March 21, 2019 meeting
4	Approve the minutes of the February 21, 2019 meeting
5	Report from committee members and an opportunity for members of the audience to address the Committee. No action will be taken.
6	NRCS update
7	Blackhawk Lake update
8	Friends of Birch Lake update
9	CREP management plan approval
10	Public access on County dams
11	Land Conservation Department updates: a) 2020 DATCP grant request b) MDV funding amounts and process c) Groundwater study updates d) Program updates e) Annual conference recap
12	Agenda items for future meeting: manure storage ordinance, farmer awards (May)
13	Motion to set the next meeting date and adjourn

Posting Verified by: your name or title Date: _____ Initials: _____

	UNAPPROVED MINUTES LAND CONSERVATION COMMITTEE MEETING Thursday February 21, 2019 at 3:30 PM HHS Building, Room 2002 303 W. Chapel St. Dodgeville, WI 53533	Iowa County Wisconsin
Meeting was called to order by chair Dave Gollon at 3:30 P.M.		
Roll Call. Members present: Ron Benish, Kevin Butteris, Dave Gollon, Don Leix, and Dan Nankee. Members excused: Rod Anding and Roger Dax. Members absent: Thomas McGraw Others present: Katie Abbott, Larry Bierke, Dave Terrall, Andy Walsh, John Meyers		
Approve the agenda for this February 21, 2019 meeting and the minutes of the January 17, 2019 meeting. Sup. Benish made a motion to approve the February 21, 2019 agenda and approve the January 17, 2019 minutes. Sup. Leix seconded the motion. Motion carried.		
Report from committee members and an opportunity for members of the audience to address the committee. No action will be taken. Sup. Nankee showed the committee the LCD newsletter, an article about Todd Novak chairing Wisconsin's Water Quality Task Force, WI Counties Association article written by Scott Godfrey, and a State Journal article about federal policy proposals targeting greenhouse gas emissions from cattle. Sup. Benish provided a State Journal article about a request to the State Supreme Court regarding authority of legislators vs. DNR to protect water quality. Sup. Gollon passed around a memo from Corporation Counsel about public access on County dams.		
APHIS wildlife claims and harvest waivers approval: Dave Terrall from USDA Wildlife Services provided the 2018 Iowa County Wildlife Damage Program Claim Summary and discussed two harvest waiver requests. Discussion of appraisals, payments, harvest requirements, appeals process, and program background. Sup. Benish moved to approve the waiver request by Matt Limmex. Sup. Nankee seconded. Motion passed. Sup. Benish moved to reject the waiver request by Jered Meyers. Sup. Butteris seconded. Motion passed. Sup. Leix moved to approve the claims. Sup. Benish seconded. Motion carried.		
NRCS update: Andy Walsh reported that the Farm Bill is in the rulemaking process, so NRCS is in a holding pattern.		
Blackhawk Lake update: Sup. Leix reported that the Blackhawk Lake Commission was willing to hear Iowa County's proposal for a dam maintenance fund, provided that they are ensured the funding will only be used for that purpose. Discussion of need to clarify what happens to the fund if DNR takes ownership of the dams.		
CREP perpetual easement recommendations: Discussion about splitting hayings and benefits of removing cut vegetation. Sup. Benish moved to approve the CREP easement guidelines with the addition that: only half of a field 40 acres or larger may be hayed in one year, and haying may be approved more frequently if a disaster or drought emergency is declared. Sup. Leix seconded. Motion carried.		
Manure storage ordinance updates: Ms. Abbott reported that a draft ordinance will be ready for review soon. She is waiting for feedback from DATCP.		
Farmland Preservation Program extension request: Ms. Abbott presented a request by Ryan Lindsey to extend his deadline for adding new acres to his NMP from March 1 to July 31 2019. Sup. Benish moved to approve the extension. Sup. Leix seconded, motion carried.		

Land Conservation Department update: Ms. Abbott provided the following updates:

- a) 2019 work plan: Ms. Abbott explained the strategic planning process for creating the work plan. Discussion of parts of the work plan. Recommendation to look into email or text message alerts for Runoff Risk Advisory alerts.
- b) Groundwater study updates: The next samples will be taken April 12 & 13. Letters to selected participants will be mailed March 1. Pathogen testing will begin this spring as well. Gov. Evers directed \$75,000 be provided for the study, which will cover the additional objectives and was not meant to offset County contributions. Ms. Abbott mentioned a position paper from the local Trout Unlimited chapter supporting more CAFO regulations.
- c) Birch Lake dredging update: the drawdown will begin in early to mid-May. The dredging will begin once the contractor decides it is dry enough. Discussion of a press release before drawdown so the public is aware, and of having Friends of Birch Lake provide an update at the next LCC meeting.

Agenda items for future meetings: manure storage ordinance, CREP management plan approval, dam public access issue

Motion to set the next meeting date and adjourn. The next meeting date was set for Thursday March 21 at 1:00pm. Sup. Benish moved to adjourn. Seconded by Sup. Nankee. Motion carried.

A binder with the following contents is on file at the LCD office, and copies will be available to view during the March 21, 2019 LCC meeting:

TABLE OF CONTENTS..... BIRCH LAKE RESTORATION

- 1...BIRCH LAKE & DAM...NARRATIVE DESCRIPTION & PROPOSAL**
- 2...SAND BEACH ...WIS. DNR PERMIT , APPROVAL & CONSTRUCTION PLAN**
- 3...BOAT RAMP...WIS. DNR, U. S. ARMY CORPS OF ENGINEERS & COUNTY PERMIT APPROVALS & CONSTRUCTION PLAN**
- 4...LAKE DREDGING...WIS. DNR & U. S. ARMY CORPS OF ENGINEERS PERMIT APPROVAL & DREDGING PLAN**
- 5...RULE CONSTRUCTION...DREDGING AGREEMENT**
- 6...RULE CONSTRUCTION...SEQUENCE OF OPERATIONS**
- 7...BARD MATERIALS AGREEMENT...SEDIMENT DISPOSAL SITE
...REESON FAMILY AGREEMENT.....SEDIMENT DISPOSAL SITE**
- 8...TOWN OF BRIGHAM...PARK MAINTENANCE *MOU**
- 9...PROJECT PERSONAL DIRECTORY. ..BIRCH LAKE RESTORATION**
- 10...DAM FAILURE ANALYSIS (DFA)...HYDRAULIC SHADOW**

*MEMORANDUM OF UNDERSTANDING

Perpetual CREP Conservation Plan

Agreement #: 1125

Landowner name(s): Roger and Jean Kessenich

Parcel address: 3829 County Road K, Barneveld WI 53507

CRP-1 practice: CP21 Filter strip, prairie mix, Fields 1 and 2, 6.79 ac.

All practices are subject to DATCP approval. Notice must be given to the Iowa County land Conservation Department before beginning any practice, except for burning or spot mowing, to allow staff to monitor the practice and its effects.

Prescribed fire: Burns must be conducted by trained personnel with adequate equipment to control the burn. Follow any DNR or Township rules regarding burning and permits.

- Allowed once every 3-5 years
- Burn breaks may be mowed in the fall prior to a burn year.
- The burn must follow a plan that details:
 - the goals of the burn
 - the safe range for wind speed, wind direction, temperature, and humidity
 - burn break and safe zone locations
 - method for burning (back burn, ring fire, strip fire, etc.)
 - nearby hazards
 - an emergency plan
 - equipment and personnel needed
- The burn plan does not have to be approved or submitted to LCD but should be kept on file with the landowner

Spot mowing and spraying:

- Spot mowing as need to control invasive weeds or brush is allowed and should be timed to maximize control of the target species. Mowing an entire field should be avoided.
- Spot spraying is allowed with approval of a plan that details the type, method, and timing of chemical treatment.
 - Hand-apply Roundup or Garlon 4 to cut tree/brush stumps in the dormant season (late fall-winter), following herbicide labels
 - Do not broadcast spray due to likely injury to desirable species
 - *Spot spray crown vetch or birdsfoot trefoil*
 - *use legume-specific herbicide if possible*
 - *hand spray to avoid non-target plants*
 - *see attached guidelines for timing & other specifics*

**LAND CONSERVATION DEPARTMENT**

1124 Professional Drive Suite 500

Dodgeville, WI 53533

Phone: (608) 930-9891

Haying:

- Allowed in order to control invasive plants and reinvigorate plant growth.
- Allowed once every 3 years
- More frequent haying may be approved during a disaster or drought emergency declaration.
- Haying must take place after July 31
- Vegetation may be cut no shorter than 6 inches
- Hay bales must be moved off the field to avoid smothering vegetation
- Spreading manure or fertilizer is not permitted

Additional practices?: *none*

Landowner certification

Roger Kessenich *March 11, 2019*
Roger Kessenich Date

Jean Kessenich *3-11-2019*
Jean Kessenich Date

Land Conservation Department certification

Katherine Abbott *3-11-2019*
Katherine Abbott, County Conservationist Date

Date of LCC approval: _____

INVASIVE PLANTS
IN WISCONSIN

Brendon Panke and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/weedsci/category/invasive-plants-of-wisconsin.

Crown-vetch

(*Securigera varia*)

Crown-vetch is an herbaceous perennial with trailing stems that form dense patches, growing 2–6' long.

Legal classification in Wisconsin: Not regulated

Leaves: Pinnately compound, alternate, 2–6" long, with 11–25 oval leaflets occurring in an odd number.

Flowers: Spring to middle summer. Pea-like, ranging in color from pink or lavender to white. Flowers are clustered in flat-topped umbels of 14–20 flowers on long stalks growing where the leaf meets the stem (axils).

Fruits and seeds: Slender, pointed seed pods 2–3" long, each containing 3–7 narrow seeds.

Roots: Reproduces vegetatively by rhizomes that grow up to 10' long.

Similar species: Crown-vetch is distinguished from other plants in the legume family by compound leaves with an odd number of leaflets, leaves and flower stalks arising from the main stem, and flat-topped umbels.

Ecological threat:

- Invades open areas of varying soil types. Spreads into natural areas from roadsides where it was planted for erosion control.
- Fixes nitrogen, which alters soil conditions for other plants.

Non-chemical control Removal

Effectiveness in season: 70–90%
Season after treatment: < 50%

If all perennial tissue (rhizomes) is removed, populations can be eliminated. This can be difficult, especially in medium to fine soils. A pitchfork or other tool can be used to loosen the soil around the plant to make removal easier. Removal of shoots alone will suppress established populations, but the frequency and length of period necessary to reduce populations is not known. If flowers are present, bag material and dispose of in a landfill or burn it to avoid potential for seed spread.



Mowing

Effectiveness in season: 50–70%
Season after treatment: < 50%

Mowing for 2–3 years will decrease the vigor of a stand and suppress, but not control, crown-vetch. Begin mowing in the late spring and repeat at least three times a year as plants regrow. To be sure that mowing will prevent seed production, mow before plants flower.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Late spring burns can kill germinating seedlings and can suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will quickly resprout and reinvade areas; this management method is not recommended unless integrated with other techniques. Low-intensity and short-duration burns can increase the germination rate of vetch seeds. Fire may benefit other species well-adapted to this management (e.g., prairie grasses), resulting in improved competition with crown-vetch. A handheld propane torch can be effective for treating seedlings.

Grazing

Effectiveness in season: < 50%
Season after treatment: < 50%

Crown-vetch is very palatable to a number of grazing animals. Crown-vetch tolerates grazing, but heavy grazing can reduce stands. This typically results in invasion by other non-native species. If using grazing as a control method, the area should be overseeded with desirable species or grazing should be used as part of an integrated control program. Grazing can be an effective method to prepare a site for later herbicide application.

Chemical control

Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations. Absorption of herbicide can be limited with this species, resulting in reduced effectiveness. Including a recommended surfactant at 0.25–0.5% can alleviate any potential reduction in effectiveness.

2,4-D*

Effectiveness in season: 50–70%
Season after treatment: < 50%

Common name: Many

Rate:

broadcast: 2.0–4.0 lb a.e./A

spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use aquatically labeled product if potential exists for solution to contact surface water. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

aminopyralid*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Milestone

Rate:

broadcast: 5–7 fl oz/A

(0.08–0.1 lb a.e./A)

spot: Equivalent to broadcast rates.

Timing: Apply before flowering.

Remarks: 14 fl oz/A can be used as long as less than half of the area is treated. Depending on the volume of solution applied per acre, typical mixtures for spot treatments are 2–8 mL Milestone per gallon of water.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

clpyralid*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Transline

Rate:

broadcast: 16–21 fl oz/A

(0.4–0.5 lb a.e./A)

spot: 0.25–0.4% (0.008–0.01 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

dicamba*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Banvel

Rate:

broadcast: 32–64 fl oz/A

(1.0–2.0 lb a.e./A)

spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Rates > 16oz/A (0.5 lb a.e./A) may cause stunting and discoloration of sensitive grasses, such as smooth brome.

fluroxypyr*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Vista XRT

Rate:

broadcast: 22 fl oz/A (0.5 lb a.e./A)

spot: 0.4% (0.01 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

glyphosate*

Effectiveness in season: 50–70%
Season after treatment: < 50%

Common name: Roundup

Rate:

broadcast: 1.5–3.0 lb a.e./A

spot: For a 3 lb a.e./gal product. 1–2% (0.03–0.06 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

metsulfuron*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Escort

Rate:

broadcast: 0.3–0.5 oz/A

(0.2–0.3 oz a.i./A)

spot: 0.04 oz/gal (0.02 oz a.i./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in the soil for months, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

picloram*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Tordon K

Some products containing picloram are restricted-use in Wisconsin.

Rate:

broadcast: 64–96 fl oz/A

(1–1.5 lb a.e./A)

spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in the soil for more than one year, depending on application rate, and has the potential to contaminate surface runoff water during this timeframe. Maintenance of a vegetative buffer strip is recommended between the areas picloram is applied and surface water features. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.



*Active ingredient (a.i.)

sulfometuron*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Oust

Rate:

broadcast: 3.0–5.0 oz/A

(2.25–3.75 oz a.i./A)

spot: Equivalent to broadcast rates.

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Applications can result in bare ground since sulfometuron is not selective and can remain in the soil for months, depending on application rate and site conditions. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

triclopyr*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Garlon 4

Rate:

broadcast: 24–32 fl oz/A

(0.75–1.0 lb a.e./A)

spot: 1–2% (0.04–0.08 lb a.e./gal)

Timing: Apply when plant is fully leafed out and actively growing.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.



Herbicide information is based on label rates and reports by researchers and land managers. Products known to provide effective control or in common use are included. Those that do not provide sufficient control or lack information for effectiveness on target species have been omitted.

References to pesticide products in this publication are for your convenience and not an endorsement of one product instead of a similar product. You are responsible for using pesticides in accordance with the label directions. *Read the label before any application.*

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INVASIVE PLANTS
IN WISCONSIN

Brendon Panke, Michelle Dobbratz,
and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/weedsci/category/invasive-plants-of-wisconsin.

Bird's-foot trefoil

(*Lotus corniculatus*)

Bird's-foot trefoil is an herbaceous perennial legume. Stems are 2–3' long, slender, branching, square, and smooth to sparsely hairy. Because of its sprawling growth pattern, trefoil often smothers other plants that are less than 1' tall.

Legal classification in Wisconsin: Not regulated

Leaves: Palmately compound, alternate, smooth, or somewhat hairy. Consist of five leaflets, three leaflets at the end of each petiole and two stipules/leaflets attached where the petiole connects to stem (axil). Each leaflet is less than 0.66" long and 0.33" wide, roughly oval in shape with a rounded to pointed end, and tapering to the point where the leaflet attaches to the plant.

Flowers: Summer to early fall. Pea-like, 0.5" long, and light to dark yellow, occasionally with stripes of orange or red. Flowers are clustered in a whorl with 4–8 florets per whorl.

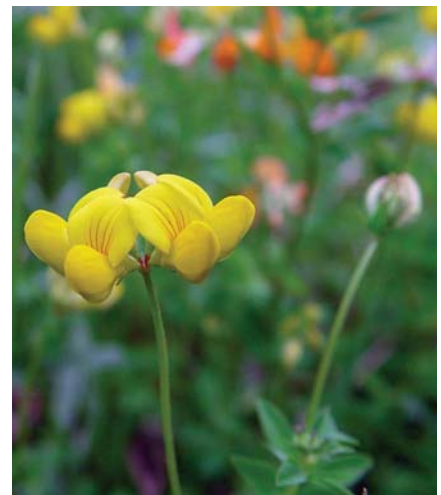
Fruits and seeds: Seeds contained in cylindrical brown pods (1–1.5" long) that become black upon maturity. Pods grow in clusters, averaging 5–6 pods per cluster. Clusters resemble a bird's foot. Seed pods contain 10–15 seeds and each seed is approximately 0.05" wide. Seeds are olive green to dark brown and often mottled with dark spots.

Roots: Taproot with lateral branches in the upper 1–2' of the soil that create a fibrous mat. All roots are perennial, and the lateral roots can produce new shoots.

Similar species: Distinguished from clovers and medics by its smooth leaf edges; other species have serrated leaf edges. Other legumes and plants with pea-like flowers are distinguished from trefoil by its compound leaves with five leaflets, prostrate growth habit, and yellow flowers.

Ecological threat:

- Invades open areas of varying soil types. Found spreading into natural areas from roadsides where it was planted for erosion control. Slow to establish, but once established, it is very persistent. New restoration plantings are especially susceptible to invasion by bird's-foot trefoil.
- Fixes nitrogen, which alters soil conditions for other plants.



Non-chemical control

Removal

Effectiveness in season: 70–90%
Season after treatment: < 50%

If crowns and roots are removed, populations can be eliminated. This can be difficult, especially in heavy soils. A pitchfork or other tool can be used to loosen the soil around the plant to make removal easier. If only removing shoots, the frequency and length of removals necessary to reduce populations is not known, but likely many removals per year for several years will be necessary to reduce established populations. If flowers are present, bag material and dispose of it in a landfill or burn it to avoid potential for seed spread.

Mowing

Effectiveness in season: 90–100%
Season after treatment: < 50%

Repeated mowing to a height less than 2" at least once every three weeks during the growing season has been shown to suppress some populations. Repeating this procedure for multiple years can decrease stand cover, but will not eliminate populations.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Late spring burns can kill germinating seedlings and can suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will quickly resprout and reinvade areas, and the fire will promote seed germination and seedling establishment. This management method is not recommended unless being used to prepare the site for another treatment technique. A handheld propane torch can be effective for treating seedlings.

Grazing

Effectiveness in season: 50–70%
Season after treatment: < 50%

Bird's-foot trefoil is very palatable to a number of grazing animals. Trefoil tolerates grazing, but if heavily grazed, trefoil stands can be reduced. This typically results in invasion by other non-native species. If using grazing as a control method, the area should be over-seeded with desirable species, or grazing should be used as part of an integrated control program. Grazing can be an effective method to prepare a site for later herbicide application.

Biological control

Effectiveness in season: < 50%
Season after treatment: < 50%

Crown and root rots are the most significant diseases of bird's-foot trefoil. The trefoil seed chalcid (*Bruchophagus kolobovae* Fed.) is a small, black, wasp-like insect that can reduce seed production. To release biological control agents in Wisconsin, contact the Wisconsin Department of Agriculture, Transportation, and Consumer Protection for the required permit.

Manipulation of the environment

Effectiveness in season: < 50%
Season after treatment: < 50%

Bird's-foot trefoil is suppressed in highly fertile habitats. The addition of nitrogen can be detrimental to trefoil; however, additions of nitrogen can increase the competitive ability of invasive species as well as non-invasive species. Establishment and maintenance of vigorous species (e.g., *Solidago*) may effectively compete with establishing populations; however, once established, trefoil readily competes with most species.

Chemical control

Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations. Absorption of herbicide can be limited with this species, resulting in reduced effectiveness. Including a recommended surfactant can alleviate any potential reduction in effectiveness.

2,4-D*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Many

Rate:

broadcast: 2.0–4.0 lb a.e./A

spot: Equivalent to broadcast rates.

Timing: Apply in spring when plant is fully leafed out and actively growing.

Caution: Use aquatically labeled product if potential exists for solution to contact surface water. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

aminopyralid*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Milestone

Rate:

broadcast: 7 fl oz/A (0.1 lb a.e./A)

spot: Equivalent to broadcast rates.

Timing: Apply in spring when plant is fully leafed out and actively growing.

Remarks: 14 fl oz/A can be used as long as less than half of the area is treated. Depending on the volume of solution applied per acre, typical mixtures for spot treatments are 2–8 mL Milestone per gallon of water.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

clopyralid*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Transline

Rate:

broadcast: 16–21 fl oz/A

(0.4–0.5 lb a.e./A)

spot: 0.4–0.75% (0.01–0.02 lb a.e./gal)

Timing: Apply in spring when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in soil for up to one year, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

dicamba*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Banvel

Rate:

broadcast: 16–32 fl oz/A

(0.5–1.0 lb a.e./A)

spot: Equivalent to broadcast rates.

Timing: Apply in spring when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Rates > 16oz/A (0.5 lb a.e./A) may cause stunting and discoloration of sensitive grasses, such as smooth brome.

glyphosate*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Roundup

Rate:

broadcast: 1.5–3.0 lb a.e./A

spot: For a 3 lb a.e./gal product. 1–2% (0.03–0.06 lb a.e./gal)

Timing: Apply in spring when plant is fully leafed out and actively growing.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

metsulfuron*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Escort

Rate:

broadcast: 0.5–1.0 oz/A

(0.3–0.6 oz a.i./A)

spot: 0.04 oz/gal (0.03 oz a.i./gal)

Timing: Apply in spring when plant is fully leafed out and actively growing.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in the soil for months, depending on application rate. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.



Herbicide information is based on label rates and reports by researchers and land managers. Products known to provide effective control or in common use are included. Those that do not provide sufficient control or lack information for effectiveness on target species have been omitted.

References to pesticide products in this publication are for your convenience and not an endorsement of one product instead of a similar product. You are responsible for using pesticides in accordance with the label directions. *Read the label before any application.*

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