

Proposed Review of *Minister's Order Designating Prohibited, Noxious and Nuisance Weeds* (Weed List) for *The Weed Control Act*

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Ministry of Agriculture

Weed Inspector Training
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Proposed review of

Ministers Order Designating Prohibited, Noxious and Nuisance Weeds

- Reviews are supposed to take place every five years (it's been 10)
- Will produce one-pager rationales for each weed
- Will propose:
 - Add new weeds
 - Move weeds between the Prohibited, Noxious And Nuisance categories as needed
 - Unlikely to remove any weeds

Weed Categories

Criterion and Enforcement Goals

- ***Prohibited*** - Absent or rare in Saskatchewan and threatening
- plant has demonstrated aggressiveness (27 sp.)
 - Enforcement goal is to monitor for presence and eradicate (scorched earth)
- Prohibited list *(current or former ornamental or medicinal species)

- African rue
- common barberry*
- common crupina
- curly-leaved pondweed*
- darnel
- Dalmation toadflax*

- diffuse knapweed
- Eurasian water milfoil*
- field scabious*
- flowering rush*
- garlic mustard*
- giant foxtail
- giant hogweed*
- halogeton

- hound's-tongue*
- jointed goatgrass
- perennial pepperweed
- poison hemlock*
- puncturevine*
- red bartsia
- saltcedar*

- spotted knapweed
- squarrose knapweed
- wooly cupgrass
- yellow star-thistle
- yellow floating heart*
- wild chervil*

Prohibited Weeds

- When a Prohibited Weed is found:
 - A municipality may declare a *Prohibited Area* by bylaw:
 - Contains infested area plus any required buffer
 - May last for 5 years from the last occurrence of the weed at the site
 - May authorize the spending of any money needed to eradicate the weed
 - Must inform director of Crops and Irrigation Branch
 - The weed inspector:
 - shall monitor the site from spring to fall for occurrences of the weed
 - shall treat any plants that emerge with the most effective measures available to eradicate the plants
 - shall post the boundary of the *Prohibited Area* with signs
 - May erect a safe barrier to prevent entry
 - May prohibit the seeding of crops or entry of any person, machine or domestic animal to the *Prohibited Area*
 - May order the destruction of the crop

Weed Categories

Criterion and Enforcement Goals

Noxious - Established in Sask. beyond practical eradication but still spreading in non-infested areas (37 species)

– Enforcement goal is to prevent the spread of noxious weeds

- Noxious list *(current or former ornamental or medicinal species)

<ul style="list-style-type: none">• absinthe*• baby's-breath*• black henbane*• bladder campion• bull thistle• Canada thistle• cleavers• false cleavers• common annual sow-thistle• common burdock*	<ul style="list-style-type: none">• common tansy*• Cypress spurge*• Dames' rocket*• downy brome• European buckthorn*• field bindweed*• hoary alyssum*• hoary cress (<i>Cardaria</i> spp.)• Japanese brome• Kochia*	<ul style="list-style-type: none">• leafy spurge• narrow-leaved hawk's-beard• night-flowering catchfly• nodding thistle• oxeye daisy*• perennial sow-thistle• Persian darnel• prickly lettuce• purple loosestrife* (all <i>Lythrum</i> spp.)	<ul style="list-style-type: none">• round-leaved mallow• Russian knapweed• scentless chamomile*• spiny annual sow-thistle• stork's-bill• wild parsnip*• white cockle• yellow toadflax*
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Noxious Weeds

In the case of a *Noxious Weed* a weed inspector may make agreements or issue orders to:

- If less than 5 ha per quarter section, cause the weed to be **eradicated**
 - May order the destruction of a 'crop' with authorization of Reeve or Division Councillor
- If greater than 5 ha, cause the infestation to be contained and controlled;
 - cause the weed infestation to be **contained** using eradication measures in a boundary area (up to 20 m beyond infestation) and,
 - within the contained area cause integrated weed **control** measures to be introduced that reduce the impact of the weed and prevent it from spreading
 - Orders and Agreements may span a period of three years
- Prohibit the movement of any material, machine, or domestic animal if they contain or have adhered to them noxious weeds

Weed Categories

Criterion and Enforcement Goals

Nuisance Weeds

- Widely established across Saskatchewan - still a problem for agriculture due to ease of spread (7 sp.)
- could include native species
 - Enforcement goal is to bring the Nuisance weed infestation back into 'context' with surrounding areas through integrated management practices.

Nuisance list

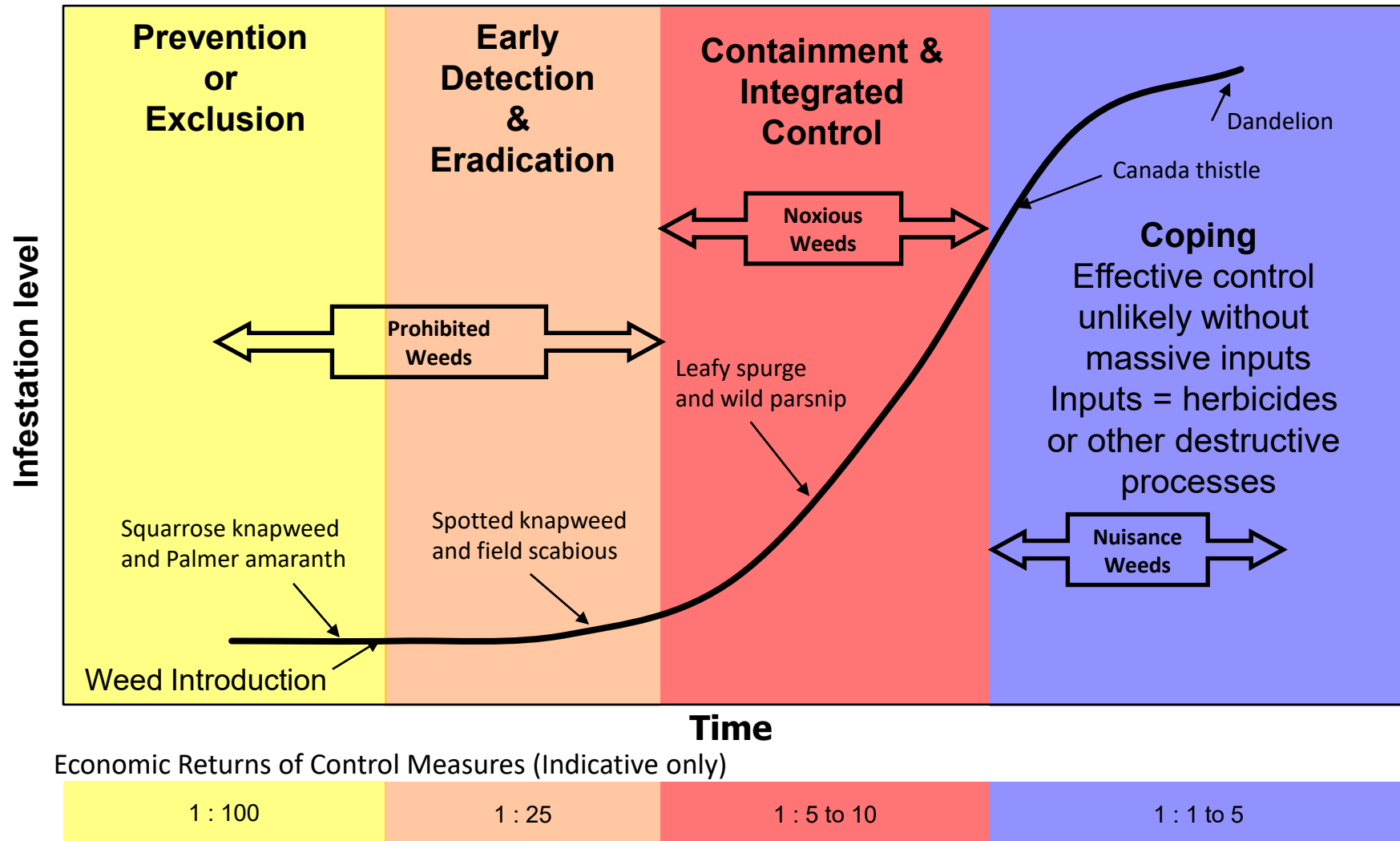
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|--|--|---|
| <ul style="list-style-type: none">• Blue lettuce• dandelion | <ul style="list-style-type: none">• foxtail barley• meadow goat's-beard• Povertyweed | <ul style="list-style-type: none">• quack grass• Russian thistle |
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* White text are native species

Nuisance Weeds

- In the case of *Nuisance Weeds*:
 - Weed inspector will act only upon a complaint
 - Prohibited and Noxious categories the WI can also enforce in the absence of a complaint
 - Enforcement will involve the implementation of integrated weed management to correct the reason why the weed is out of control
 - Orders and Agreements may span a period of three years

The Invasion Cycle and Invasive Weed Management



Proposed Changes

Proposed New Prohibited

Himalayan balsam (*Impatiens glandolifera*)

- Annual introduced as an ornamental
- Grows up to 4 cm per day and achieves heights of 1 to 3m
- Explosive seed dehiscence = 7m from parent
- Can reroot from adventitious roots at nodes
- Outcompetes neighbouring vegetation and lays land bare to invasion from other invasive weeds
- Significant infestation in Prince Albert

Photos: Harvey Anderson, Saskatoon



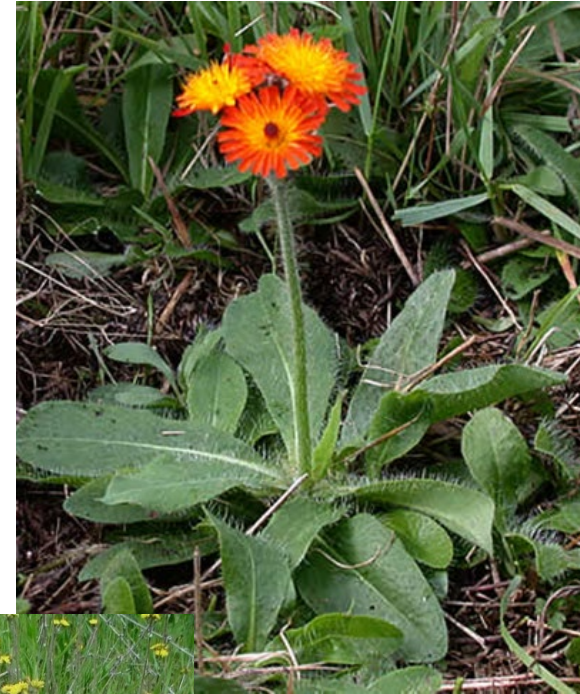
Proposed New Prohibited

Orange & Meadow Hawkweed

(*Hieracium aurantiacum* & *H. caespitosa*)

- Low lying perennials with aerial flower stalks
- Entire plant covered in dense hair
- Leaves are spatula shaped
- Aerial flower stalks bear 3 to 4 ray shaped flowers (bright orange or yellow for meadow)
- Reproduce via creeping lateral stolons or wind-borne seeds
- Tolerate shade
- Displace desirable vegetation
- Specimens found in Moose Jaw and Regina

Photos: P. Dziuk, Minnesota Wildflowers, Washington State
Noxious Weed Control Board, Richard Old – XID Services



Proposed New Prohibited

Teasels

(*Dipsacus sp.*)

- Course taprooted biennials or perennials
- “Comb”-like seed heads
- Wavy leafy surface
- Course hairs over entire plant
- Common/Fuller’s teasel (*D. fullonum* - right) has mostly unlobed leaves and purple flowers
- Cut-leaf teasel (*D. lanciniatus* - left) has deeply lobed leaves and white flowers

Photos: Midwest Invasive Species Network
and Steve Dewey, Utah State Uni. Bugwood.org



Proposed New Prohibited

Waterhemp & Palmer Amaranth

(*Amaranthus tuberculatus* & *A. palmeri*)

- Diecious members of the pigweed family (separate male and female plants)
- Waterhemp has longer and narrower leaves than typical pigweeds
- Palmer amaranth has petioles longer than the egg-shaped leaf blade
- Both are hairless
- Both carry high levels of herbicide resistance to several different herbicide modes of action (Groups)
- Both compete aggressively with crops



Proposed New Prohibited

Viper's bugloss/Patterson's curse (*Echium vulgare* & *E. plantagineum*)

- Monocarpic perennial (*E. vulgare*) & Winter annual (*E. plantagineum*)
- Distinctive purple flower with magenta centres
- Draws bees from desirable nectar plants
- Toxin causes terminal liver damage in mammals
- Toxin can be transferred in nectar into **honey**
- Introduced as an ornamental
- Viper's bugloss is present in isolate populations in SE Saskatchewan



Photos: Derek Parker, and King County
Noxious Weed Control Program

Proposed New Prohibited

Giant knotweed and Japanese knotweed

(*Polygonum sachalinense*, *Polygonum cuspidatum*)

- Woody perennial shrubs/vines
- Grows very aggressively in moist environments but also tolerates drought and salinity
- Develops monoculture stands that shade everything under them
- Can cause significant structural damage
- Reported in Calgary

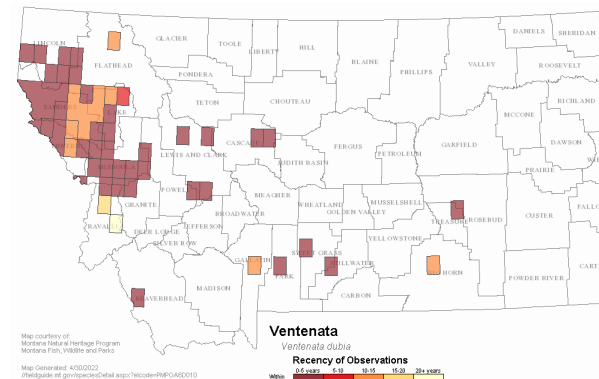


Photos: Wise knotweed Solutions and
Taylor Total Weed Control

Proposed New Prohibited

Ventenata/North Africa Grass (*Ventenata dubia*)

- Winter annual grass up to 18 inches tall
- leaves 1-3 mm wide & up to 12 cm long with a blunt-ended, membranous-shredded ligule
- Leaves hairless on upper, short stiff hairs on lower
- Invades rangeland, hay, roadsides
- Similar negative characteristics to downy brome
- Can reduce desired forage production by up to 50%
- Reported in Montana and southern Alberta



Photos: University of Idaho and Boise State University

Proposed New Prohibited

Medusahead

(*Taeniatherum caput-medusae*)

- Winter annual grass (related to rye) native to Europe that can reach 2 ft
- Has very narrow leaves with very small auricles (clasping structures at base of leaf)
- Seed heads have very long awns that present nearly perpendicular to the spike. Awns have small backward pointing barbs.
- Can reduce pasture utilization by up to 80%. Also infests annual crops
- Also federally regulated as a quarantine species

Photos: Steve Dewey, Utah State University, Bugwood.org and University of California-Davis



Proposed New Prohibited

Plumeless thistle

(*Carduus acanthoides*)

- Biennial thistle up to 2 m (7 ft)
- Tap rooted
- Has spiny wings the entire length of stems with few actual leaves beyond the rosette.
- Flower head resembles bull thistle with long recurved upward pointing spines.
- Similar concern to its cousin nodding thistle
- Found in Montana south of Grasslands National Park



Photos: Steve Dewey, Utah State University, Bugwood.org and Todd Pfeiffer-Klamath Co. Weed Control

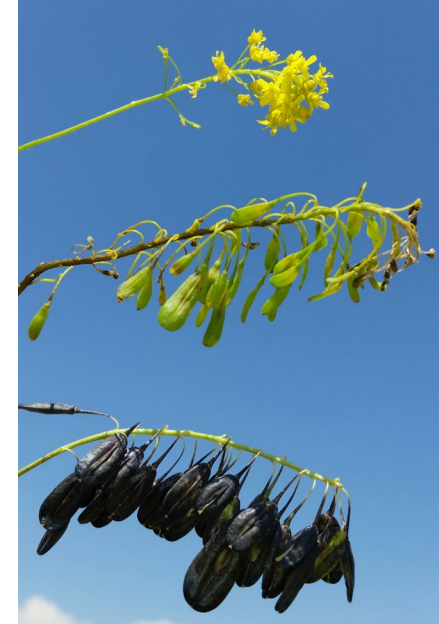
Proposed New Prohibited

Dyer's woad

(*Isatis tinctoria*)

- Annual, biennial and short-lived perennial member of the mustard family
- Long smooth margined blue-green leaves with a prominent white mid-vein were historically used as a source of blue dye
- Yellow four-petalled flowers
- Pear shaped seed pods turn black at maturity
- Native of Russia and eastern Siberia
- Found throughout most of Montana where it is a 1A regulated weed = Prohibited

Photos: Matt Lavin and Todd Pfeiffer-
Klamath Co. Weed Control



Proposed New Prohibited

Bighead, Brownray, Greater knapweeds (*Centaurea macrocephala*, *C. jacea*, *C. scabiosa*)

- All perennial, tap rooted plants with variations on the egg-shaped knapweed flower bud
- Similar issues to spotted and diffuse knapweeds
 - Competition, allelopathy, unpalatable
- Distribution
 - Bighead knapweed – Calgary & Edmonton, AB
 - Brownray knapweed – N. Idaho & N. Minnesota
 - Greater knapweed – Great Falls, MT



Bighead knapweed



Brownray knapweed



Greater knapweed

Photos: Alberta Invasive Species
Council, P.M. Dziuk, B. Gibbons, Science
Photo Library

Proposed New Noxious

Common mullein (*Verbascum thapsus*)

- Tap rooted perennial
- Invasive during wet cycles & retracts during dry cycles
- Can be particularly problematic in sparsely vegetated areas
- Found sporadically throughout Saskatchewan



Proposed New Noxious

Wooly burdock (*Actium tomentosum*)

- Tap rooted biennial
- Similar issues to common burdock
 - Spread in animal fur
 - Competition
 - Animal irritation
- Found sporadically throughout Saskatchewan

Photos: Cecil Vera, AAFC Melfort



Proposed New Noxious

Creeping Yellowcress (*Rorippa sylvestris*)

- Creeping rooted perennial member of the mustard family
- Grows up to one foot tall
- Base of leaves and older stems often purple
- Deeply lobed leaves
- Reproduces through creeping rhizomes and seed
- Can be found in potted ornamentals
- Found once in NE Saskatchewan

Photos: North Carolina Extension and
Midwest Invasive Species network



Proposed New Nuisance

Yellow Salsify

(*Tragopogon dubius*)

- Biennial member of the sunflower family
 - Overwintering rosettes look superficially like grass
 - Large yellow ray-type flowers where bracts (green) extend well beyond the petals
 - Seeds spread on a large pappus (parachute)
 - Widely distributed across Saskatchewan
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- Will move *T. pratensis* from 'Nuisance' to 'Noxious' as it is not widely distributed
 - *T. pratensis* has bracts roughly the same length as its petals



T. dubius –
Yellow Salsify



T. pratensis –
Meadow Goat's-beard

Photos: Glen Lee, Saskatchewan
wildflowers and Enrico Blasutto, North
Carolina Extension

Category Changes

- Prohibited → Noxious
 - Hound's-tongue
- Noxious → nuisance
 - Canada thistle
 - Kochia
 - Nodding thistle
 - Sow-thistles
 - Prickly lettuce
- Additional suggestions welcome
 - Cleavers (incl. false cleavers)?



Thank You

For more information contact:

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