

W-1103 (Revised)



North Dakota

Noxious and Troublesome Weeds

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Absinth Wormwood

(*Artemisia absinthium* L.)

State Noxious Weed List: Yes

Growth form: Perennial fragrant forb that grows three to four feet tall. The stem is woody at the base and regrows from the soil surface each spring from a large taproot. Leaves are light to olive green, two to five inches long, and deeply divided. Flower stalks grow on the upper portion of the plant and produce numerous yellow flower heads one-eighth-inch in diameter from late-July through mid-August.

Absinth wormwood is a member of the sagebrush or mugwort family and is easily recognized by the strong sage odor. The plant appears grayish from a distance due to numerous fine hairs on the leaves and stems.

Absinth wormwood escaped from cultivated areas after it was introduced as a garden herb from Europe. Oil from the flower heads is used to prepare vermouth and absinth. The oil is also an ingredient in antiseptic liniments. This plant is a strong source of pollen for allergies and asthma and taints the milk of animals that graze it.



Field Bindweed

(*Convolvulus arvensis* L.)

State Noxious Weed List: Yes

Growth form: Creeping perennial that spreads by both roots and seed. The twining stems vary from 1.5 to 6 feet or more in length. Leaf size and shape varies but generally the leaves are one to two inches long, smooth, and shaped like an arrowhead. Flowers are funnel shaped (morning glory), about one inch in diameter and white or pink in color. The flower stalk has two small bracts about 0.5 to 2 inches below the flower which helps to distinguish it from hedge bindweed. Roots of field bindweed may extend 20 to 30 feet laterally and have been excavated as deep as 30 feet below the soil surface. Buds located all along the root can send up new shoots, or establish a new patch when roots are cut and moved, such as from cultivation. The fruit is a small round capsule that contains up to four hard-coated seeds that can remain viable for at least 50 years.

Field bindweed is native to Europe and western Asia. The plant was introduced into the United States during colonial days and was referred to as devilgut.



Canada Thistle

(*Cirsium arvense* L.)

State Noxious Weed List: Yes

Growth form: Perennial spreading by both seed and root. Usually grows two to three feet tall with alternate, dark green leaves. The leaves are oblong, usually deeply lobed, and have spiny toothed edges. Canada thistle is dioecious, so cross pollination is necessary for seed production. Many ecotypes exist and flower color can vary from purple to light lavender to white. Stem color can vary from green to lavender. Rosette leaves are shiny green with spiny tips. Plants require at least 14 hours of day length to bolt and flower. The roots are fleshy, creeping, and grow deeper in clay or muck soils than in sand or gravel (20 feet). Flowers produce 40 to 80 seeds per head and can move long distances, although most seeds remain in the head until winter and eventually germinate nearby.

Canada thistle grows best in the northern portion of the United States, where temperature and rainfall are moderate. The roots have medicinal uses.



Musk Thistle

(*Carduus nutans* L.)

State Noxious Weed List: Yes

Growth form: Winter annual or biennial, spreading only by seed. Often grows in excess of six feet tall. Easily identified by the very large flower heads (two to three inches across) that tend to droop. The flower is generally rose to violet, rarely purple and has very characteristic brown bracts that resemble a pine cone. Stems are usually very branched with spiny wings; however, the wings are interrupted and not complete along the stem. The leaves are oblong to lanceolate, lobed to four-fifths of the width with slender spines on the margin. Each lobe ends in a spine.

Musk thistle produces more than 10,000 seeds per plant. The achenes are light brown with stripes and a light apical rim. Rosettes have a light green midrib and can grow two feet in diameter or more. Two subspecies which differ in flower size and pubescence occur in North Dakota.



Plumeless Thistle

(*Carduus acanthoides* L.)

State Noxious Weed List: No

Growth form: Plumeless thistle is a winter annual or biennial forming rosettes in late summer and bolting in early spring. The stems are winged and very branched, giving the plant a candelabrum appearance. The wings are very spiny and are continuous along the stem. The leaves are deeply lobed, narrower than musk thistle, and very pubescent underneath. Each lobe has one to three very sharp marginal spines. Flower heads are small (0.5 to 1 inch) but very numerous. The bracts are very narrow and resemble spines.

Rosettes of plumeless thistle resemble musk thistle rosettes, but are more deeply lobed and much more pubescent. The plant bolts in late-April to early-May and will grow four feet or more in height.

Plumeless thistle can become very weedy and form dense colonies, especially along waterways, ditches, and roadsides. The plant is spread only by seed.



Bull Thistle

[*Cirsium vulgare* (Savi) Tenore]

State Noxious Weed List: No

Growth form: Biennial that grows from a flat rosette of leaves the first year to a flowering stem, often five feet or more in height the second year. Plants are multi-branched, stems have purple veins, are winged and bush like. Leaf margins are deeply toothed and toothed again (double dentate) and each ends in a lone stiff spine. The leaf surface has a distinct center vein with slight pubescence above, more so below. Flower heads are usually singular on the end of each stem, gumdrop shaped, two to three inches tall, with long, stiff, yellow-tipped spines. Flowers are generally purple but rarely a white form is observed. Achenes are favored by birds.

Bull thistle is the least serious of the introduced thistles in North Dakota, generally growing singularly or in small patches. Bull thistle is often referred to as edible. Many plant parts, from the root to the flower, are eaten. The flower petals are used as chewing gum.



Flodman Thistle

[*Cirsium flodmanii* (Rydb.) Arthur]

State Noxious Weed List: No

Growth form: Deep-rooted perennial thistle that grows two to three feet tall. The leaves are shiny green on top with slight pubescence and white and very pubescent below. The leaves are alternate, rigid, and deeply lobed and end in a spine. Each lobe has three points, one of which is at a near right angle giving it a “flipping appearance.” The flowers are tube shaped, one-inch long and purple to pink. The flower head has strong yellow spines that secrete a sticky substance which attracts insects.

The rosettes are often four to six inches in diameter with oblong or lanceolate leaves that vary from deeply lobed to nearly complete. The achenes vary from tan to brown and have a conspicuous yellow collar.

Flodman thistle is a native species found throughout North Dakota. This thistle is a food source for a variety of insect and bird species, which keep the plant from becoming weedy.



Wavyleaf thistle

[*Cirsium undulatum* (Nutt.) Spreng.]

State Noxious Weed List: No

Growth form: Perennial that grows two to four feet tall or taller. The leaves are alternate and tipped with yellow spines. The leaves are very pubescent giving the plant a gray cast and are less deeply lobed than Flodman thistle. The flowers are pink to purple, often more than two inches in diameter, with globe-shaped heads. The yellow spines on the heads lack the sticky secretion found on Flodman thistle.

Rosettes leaves are very wavy and gray in appearance and especially pubescent underneath. The achenes are brown and lack an apical band.

Wavyleaf thistle is a native species and predominates in western North Dakota, while Flodman is more common in the east. In general, wavyleaf is a larger plant and more gray in color than Flodman. Wavyleaf thistle is a food source for a variety of insect and bird species, which keep the plant from becoming weedy.



Leafy Spurge

(*Euphorbia esula* L.)

State Noxious Weed List: Yes

Growth form: Long-lived perennial spreading by both root and seed. Normally grows two to three feet tall from a woody crown. Leaves are alternate, bluish-green about two inches long and one-quarter-inch wide. Showy yellow bracts appear in May and early-June, but the true flowers are small and green and do not develop until mid-June. Seed pods contain three gray-brown, oblong, smooth seeds that mature in mid-July.

Leafy spurge contains latex throughout the plant that can be an irritant, emetic, and purgative. Most livestock avoid grazing the plant until late fall when the latex disappears. However, sheep and goats will graze leafy spurge.

The plant is found throughout North Dakota on all soil types, mostly on non-cropland. Each plant can annually spread up to 15 feet laterally by root.



Purple Loosestrife

(*Lythrum salicaria* L.)

State Noxious Weed List: Yes

Growth form: Perennial forb with a large fleshy taproot. Flowers are very characteristic, rose to purple in color with five petals arranged on a spike of a few inches to three feet long. Also, the stems are four-sided. The plant flowers in July and August, produces two celled seed capsules that contain hundreds of very small, pepper-like seed. The leaves are simple, 0.75 to 4 inches long, entire, and can be opposite or whorled.

Wild infestations are associated with moist or marshy areas. Purple loosestrife forms dense monotypic stands and displaces native flora and fauna. Ducks avoid wetlands dominated by purple loosestrife.

Lythrum was once sold as a garden plant with many cultivars. The plant crossbred and/or reverted to the wild type *lythrum* and now threatens waterfowl habitat and native wetlands in North Dakota.



Russian Knapweed

[*Acroptilon repens* (L.) DC.] syn.
(*Centaurea repens* L.)

State Noxious Weed List: Yes

Growth form: Long-lived, deep-rooted perennial. Primarily spreads by root which is dark brown to black in color and scaly as if the plant had been burned. Roots often grow to depths greater than 20 feet. The leaves are alternate, lobed lower on the plant, while upper leaves are entire. Flowers vary from light pink to lavender and have rounded bracts with transparent tips. The plant grows to two to three feet tall and is shrub like with spreading branches. The stems die back to the soil surface each year.

Russian knapweed is often found in poorly drained and saline/alkaline soils with supplemental water sources such as rivers and streams. This persistent weed is generally found in southwestern North Dakota, but increasingly infestations have been found statewide.

Seed production is much more limited than in other knapweed species, but roots are difficult to eradicate.



Spotted and Diffuse Knapweed

[*Centaurea stoebe* spp. *micranthos* (Gugler) Hyek] and (*C. diffusa* Lam.)

State Noxious Weed List: Yes (both species)

Growth form: Both are short-lived perennials or sometimes biennial plants reproducing solely by seed. The plants grow two to four feet tall with one or more stems. The leaves are pale green and three to four inches long. Rosette leaves are deeply lobed. The physical appearance of these two knapweed species is similar, except diffuse knapweed is generally shorter and more highly branched. Plants flower from early July through August and produce 1,000 or more seeds per plant.

These species are distinguished by the bracts below the flower. Spotted knapweed has stiff, black-tipped bracts while diffuse knapweed has a rigid terminal spine about one-third of an inch long with four to five pairs of shorter, lateral spines (crab like). Both species have pink to light purple, and occasionally white, flowers.

Knapweed infestations in North Dakota have been found primarily along transportation lines.



Saltcedar

(*Tamarix* spp.)

State Noxious Weed List: Yes

Growth form: Shrubby bush or tree that can grow at least 20 feet tall. The bark is reddish brown, the leaves are small and flat, and resemble evergreen shrubs such as arborvitae. Flowers are pink to white, five-petaled, and appear in late-summer. Seeds are very tiny, similar in size and color to pepper, and short-lived. Plants are deciduous and grow from a long, woody taproot.

Saltcedar is native to Eurasia and has escaped ornamental plantings to waste areas, river flood plains, and lakes. A single plant can transpire over 200 gallons of water per day and salts exuded from the leaves cause the soil to become saline.

Naive riparian species are quickly replaced by saltcedar which also will choke waterways and has dried up entire lakes. Saltcedar was introduced to the southwest U.S. for erosion control.



Yellow Starthistle

(*Centaurea solstitialis* L.)

State Noxious Weed List: Yes

Growth form: Yellow starthistle is an annual which often grows three feet or more tall and is branched with winged stems. Each stem ends with a bright yellow flower that has needle-like, straw-colored bracts (spines) often up to two inches long. Lower leaves are deeply lobed while upper leaves are entire. Both stems and leaves have a gray pubescence. Yellow starthistle reproduces only by seed. A single plant can produce as many as 150,000 seeds, most of which are plumed. Yellow starthistle has a long tap root.

Livestock and wildlife will not graze where yellow starthistle grows because of the sharp spines around the flower. Yellow starthistle can cause “chewing disease” in horses, which is a lethal neurological disorder.

Yellow starthistle is a member of the knapweed family and spreads extremely rapidly. Seeds can germinate either in the fall and overwinter as a rosette or in the spring after snowmelt.



Dalmatian Toadflax

(*Linaria genistifolia* spp. *dalmatica*)

State Noxious Weed List: Yes

Growth form: Escaped perennial ornamental from the Mediterranean region. Adapted to drier sites than yellow toadflax and often grows over three feet tall. The plant is distinguished by the bright yellow “snap-dragon” flowers which end in a long spur. The fruit is a two-celled capsule. Dalmatian toadflax has broad, heart-shaped leaves that clasp a woody stem unlike the narrow leaves and stem of yellow toadflax. Plants spread by both a creeping root system and seed. The roots can spread up to 10 feet per year and give rise to numerous shoots, while the flowers can produce over 500,000 seeds per plant.

The toadflax species are aggressive and will displace forage in pasture land and native species in wild land.

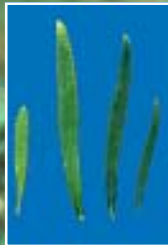
Yellow Toadflax

(*Linaria vulgaris* L.)

State Noxious Weed List: No

Growth form: Escaped perennial ornamental from Eurasia which often grows over three feet tall. The plant is distinguished by the bright yellow “snapdragon” flowers which have an orange-colored throat and a long spur. The weed spreads by both a creeping root system and seed. The roots of a single plant can spread laterally over 10 feet and give rise to daughter plants every few inches. Also, a single plant may produce over 500,000 seeds which are disk shaped and 0.08 inch in diameter. The leaves are long and narrow and attached to a narrow stem, similar to leafy spurge which helps distinguish it from the more broad-leaved dalmatian toadflax.

Yellow toadflax can be mildly poisonous to livestock that graze it. Often the origins of an infested area can be traced to an escape from a horticultural planting.





Annual Sowthistle and Spiny Sowthistle

(*Sonchus oleraceus* L.) [*Sonchus asper* (L.) Hill]

State Noxious Weed List: No

Growth form: Both species are annual and differ primarily in leaf form. Spiny sowthistle, as the name implies, has sharp stiff prickles along the stem and leaves. Leaves clasp the stem with rounded basal lobes (auricles) that resemble a ram's horn. Annual sowthistle leaves are deeply toothed lower on the plant but progressively less so on the upper stem and auricles are distinctly pointed. Both species have yellow flowers, borne on a long, vase-like involucre, with several in a cluster. Spiny sowthistle has slightly larger flower heads (0.5 to 1 inch across) compared to annual sowthistle (0.25 to 0.75 inches). The seeds for both are flattened with three to five ribs. Both species grow two to four feet tall.

These sowthistle species are both from Europe and now widely established in the region. They have a milky latex and a small taproot. The plants are often mistaken for perennial sowthistle. However, perennial sowthistle has a creeping perennial root system, larger and longer leaves and grows four to six feet tall.



Marsh or Perennial Sowthistle

[*Sonchus arvensis* L. ssp. *uliginosus* (Bieb.) Nyman]

State Noxious Weed List: No

Growth form: Perennial weed with extensive creeping root system. Leaves are lobed below, but less so above and have prickles on the margin and are 4 to 10 inches long (longer than the annual species). Generally fewer, but larger flowers (1 to 1.5 inches across) than the annual species in a terminal cluster. Marsh sowthistle does not have gland-tipped hairs on the flower bracts like perennial sowthistle. Some taxonomists consider marsh a separate species from perennial sowthistle, others consider it a subspecies. Both contain latex.

Perennial sowthistle was introduced from Europe and placed on the state noxious weed list in 1935 when it became a severe problem, especially in the north-eastern part of the state. The weed was subsequently removed from the list in 1999 after revised farming practices and new herbicides had severely reduced the infested acreage. Most sowthistle infestations in North Dakota are annual not perennial species.



Common Ragweed

(*Ambrosia artemisiifolia* L.)

State Noxious Weed List: No

Growth form: Taprooted annual forb which grows one to three feet tall. Leaves are deeply divided, pubescent, and opposite lower on the stem, becoming alternate above. The flowers are small, yellow-green in color and produced in racemes. The plant is monoecious with male flowers above the female flowers. Seeds are enclosed in a hard bur.

Ragweed pollen is considered the number one cause of hay fever in the late-summer and fall. Each plant can produce over a billion grains of pollen per season which occurs from mid-August until frost. Ragweed flourishes during dry hot summers.

This plant is a native species common throughout the region usually in waste or disturbed areas and over-grazed rangeland. Western ragweed (*A. psilostachya* DC.) is also found in the region, but it is a perennial with less finely divided leaves.



Common and Showy Milkweed

(*Asclepias syriaca* L. and *A. speciosa* Torr.)

State Noxious Weed List: No

Growth form: Both are native perennials that generally grow from three to five feet tall. Leaves are opposite, oval-shaped, and four to eight inches long with prominent veins. The stems are hollow, pubescent, and very stiff. All plant parts contain a milky white latex. The plants spread both by large vertical and horizontal roots and by seed which are spread by wind on tufts of hairs.

Common milkweed flowers are light pink to white and are contained in ball-like clusters. Showy milkweed flowers are in umbels at the top of the plant and generally purplish-pink and more prominent than common milkweed.

Both species are favored by butterflies. Common milkweed is a major source of food for the monarch butterfly larvae (white, black, and yellow strips). Showy milkweed is a source of nectar for many insects including the swallowtail butterfly.



Dame's Rocket

(*Hesperis matronalis* L.)

State Noxious Weed List: No

Growth form: Biennial or occasionally short-term perennial herb in the mustard family. The plant resembles phlox, but has four petals, not five. The plant grows two to four feet tall, the stems are erect, and are often branched. Leaves are alternate, lanceolate, sharply toothed, and pubescent. Dame's Rocket flowers are found from early-May through June, fragrant, and generally purple but occasionally pink or white. Seeds are produced in long pods typical of the mustard family. Dame's Rocket overwinters as a rosette.

Dame's Rocket is an escaped ornamental from Eurasia and most often found along roads and streams, near woods and in thickets. The first introductions to North America began in the 1660s and the plant is considered naturalized. However, infestations have been increasing rapidly in the north central states. Dense infestations compete with native species.



Goldenrod

(*Solidago* spp.)

State Noxious Weed List: No

Growth form: Perennial herb with single or clustered stems which grow to a height of one to three or more feet. Leaves are alternate and lanceolate, and are usually rigid with three main veins easily identified on the underside of the leaf. The leaves can be entire or serrated, depending on the species. Numerous yellow-rayed flowers occur in showy clusters from late-summer until frost.

At least 12 species occur in the region with numerous subspecies which can be difficult to distinguish. The more common species include Missouri or Prairie goldenrod (*S. missouriensis* Nutt.), Canada goldenrod (*S. canadensis* L.), and rigid goldenrod (*S. rigida* L.).

Goldenrod is a native plant with some medicinal properties. Since goldenrod flowers during the peak of the allergy season, it is often misidentified as ragweed.



Poison Ivy

[*Toxicodendron rydbergii* (Small ex Rydb.)
Greene]

State Noxious Weed List: No

Growth form: Perennial native small shrub that spreads by both rhizomes and seeds. The leaves are alternate with tri-foliate leaflets. Remember the rhyme, leaves of three - let it be! The leaves are shiny green in the spring and turn yellow and deep red in the fall. The flowers grow in axillary panicles, are yellow-green and not showy. The fruit is globe-shaped, resembling small pumpkins, and turns yellow or light brown when mature.

The poison is from a white oil found in the phloem called urushiol that causes an allergic contact dermatitis in about 85 percent of the population. Plants retain urushiol even after desiccation and smoke from burning poison ivy can carry the oil. The reaction is to the oil, not the plant itself, so one can react by touching objects that have come in contact with the plant, such as tools and when removing footwear.



Swamp Ragwort

[*Senecio congestus* (R. Br.) DC.]

State Noxious Weed List: No

Growth form: Generally an annual, rarely biennial, shrub native to the northern Great Plains. Grows three to four feet tall along marshes, stream banks, and slough areas. The flowers are bright yellow in umbels of 6 to 12 or more heads. Each flower is about 0.15 to 0.5 inches across. The leaves are oblong, toothed and clasp the stem generally five to six inches long. The stems are hollow and pubescent. The plant flowers from May to early-July. The achenes have long pappus-hairs which are quite noticeable. The seed are thought to be spread by waterfowl.

The genus *Senecio* is found worldwide and contains about 3,000 species which range from tropical trees to succulents to arctic herbs. Swamp ragwort has been increasing in frequency recently and infestations should be monitored even though the plant generally is not considered invasive.

**For more information on this and
other topics, see:
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