Noxious Weeds of Indiana

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Noxious Weeds of Indiana
Cooperative Extension Work in Agriculture and Home Economics, State of Indiana, Purdue University and U. S. Department of Agriculture Cooperating. H. G. Diesslin, Director, West Lafayette, Ind. Issued in furtherance of the Acts of May 8 and June 30, 1914. It is the policy of the Cooperative Extension Service of Purdue University that all persons shall have equal opportunity and access to its programs and facilities without regard to race, religion, color, sex or national origin.
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Seeds of the 18 weeds discussed in this publication are designated as "noxious" by the Indiana Seed Law. These particular weed seeds fall into two categories--prohibited noxious and restricted noxious.

The prohibited group includes Canada thistle, field bindweed, Johnsongrass, perennial peppergrass, perennial sowthistle, quack grass, and wild garlic or wild onion. In the restricted group are bitter wintercress, buckhorn plantain, corncockle, curled dock, dodder, field peppergrass, giant foxtail, horensettle, mustard, oxeye daisy, and pennycress.

Although many types of weeds may cause concern, only these 18 are designated as noxious because of the prevalence of their seeds in crop seed and because of their seriousness as field weeds. This list is subject to change if new and serious weeds are introduced or if those presently on the list become of minor importance.

Seed Laws

The Indiana Seed Law, apart from certain exemptions, requires that agricultural seeds offered for sale or sold within the state be labeled. The label is the buyer's guide to the true value of the seed. The law prohibits sale of agricultural seed for seeding purposes if it contains (1) any prohibited noxious weed seeds, and/or (2) more than 1/4 of 1% of restricted noxious weed seeds, and/or (3) more than 2 1/2% of all weed seeds.

The Federal Seed Act controls the quality of all imported agricultural and vegetable seeds and restricts importation of screenings and seeds containing certain noxious weed seeds. The act requires complete and correct labeling of seeds in interstate commerce so as to comply with the requirements relating to noxious weeds of the state into which the seeds are transported.

Seed Tagging

The Indiana Seed Law requires that seed be labeled correctly to inform prospective buyers as to its quality and to protect reliable dealers against the practices of the careless, irresponsible ones. All agricultural and vegetable seeds (with certain exemptions) must be labeled if sold, offered or exposed for sale for seeding purposes within the state of Indiana, whether in bulk, packages, bags or other containers.

A properly filled-out seed tag provides information pertaining to the quality of the seed being tagged. The tag shall give the following information:

1. Name and address of the seedsman.
2. Kind and variety of seed offered.
3. Percent of pure seed present.
4. Percent germination of the pure seed designated and date the germination test was made.
5. Percent by weight of all weed seeds present.
6. Percent by weight of inert matter present.
7. Percent by weight of agricultural seed present other than those required to be named on the label.
8. State, territory or foreign country where grown.
9. Restricted noxious weed seed per pound.

Seed containing prohibited noxious weed seeds cannot be sold. Either a private or
state seed commissioner label may be used. The state label provides a listing of noxious weed seed on the reverse side with space provided for the number of restricted noxious seeds to be shown.

For complete information regarding provisions of the Indiana Seed Law, write to the State Seed Commissioner, Biochemistry Department, Purdue University, West Lafayette, Indiana 47907.

General Weed Control Practices

1. Use clean seed. Impure seed can bring new and dangerous weeds onto the farm. Sow only the best seed. Let the Indiana seed tag be your buying guide.

2. Rotate crops. Cultivated crops act as a cleansing crop when properly tilled. Plant crops best adapted for meeting the particular weed problems of each field.

3. Use smother crops. Alfalfa is a good smother crop and will crowd out many weeds.

Soybeans, buckwheat, sweet clover and sudangrass are also listed as smother crops.


5. Cultivate properly. The essential purpose of cultivation is the eradication of weeds. Use of proper cultivating implements will make the job more effective.

6. Spray weeds. Herbicides are selective chemicals that may be used to kill weeds in farm crops. They are applied either as pre- or post-emergence treatments. For determining which herbicides may be used on what crops and when they may be used, along with proper application methods and important restrictions, see Purdue Extension publication ID-1, “Weeding with Chemicals,” available at your county extension office.

7. Clip weeds before they mature. Weeds growing in fence rows, along roadsides, and in waste areas should be clipped before they mature. One plant may produce enough seeds to infest an entire area.

8. Guard against new weeds. Inspect your farm often to check for any new weeds that may have been introduced. Early attention to such weeds can often prevent their spread.

9. Clean harvesting equipment before moving from weedy to clean fields. Weed seed may be scattered rapidly and in many directions if this practice is ignored.

10. Cooperate with your neighbor. Weed control is a community job, especially when dealing with weeds that produce wind-blown seeds, such as Canada thistle and perennial sowthistle.
FIELD BINDWEEDE
(Convulvulus arvensis)

Perennial—reproduces by seed and creeping roots. Roots—system extensive, often growing to a depth of several feet. Stems—smooth, slender, 2 to 7 feet long, twining on the vegetation or spreading over surface of the ground. Leaves—ovate with basal lobes. Flowers—white or pink, funnel or bell-shaped, about 1 inch across, usually borne singly in the axils of leaves. Seed pod—egg shaped, usually contains 4 seeds. Seeds—dark brownish-gray, roughened, about 1/8 inch long, with 1 rounded and 2 flattened sides.

Field bindweed is commonly found in gardens and among shrubs as well as in fields. It is often confused with hedge bindweed but differs in that the flowers are smaller and the leaves rounded at the top rather than pointed.

CANADA THISTLE
(Cirsium arvense)

Perennial—reproduces by seeds and horizontal rootstocks. Roots—extend several feet deep and some distance horizontally. Stems—2 to 5 feet tall, grooved, branching only near the top, slightly hairy. Leaves—usually with crinkled edges and spiny margins, somewhat lobed; leaf shapes will vary greatly depending on variety. Flower heads—numerous, compact, lavender, of the disk type surrounded by bracts; male and female flowers borne on different plants. Seed—brown, smooth-coated, tapering about 3/16 inch long with a silky parachute-like structure attached to the upper end.

Canada thistle is most commonly found in the northern half of the state and is most troublesome in small grain crops and in pastures.
JOHNSONGRASS
(Sorghum halepense)

Perennial -- reproduces by husky rootstocks (rhizomes) and seeds. Rootstocks -- stout, pointed, with purple spots, usually with scales at the nodes. Stems -- erect, stout, 3 to 8 feet or more tall. Leaves -- alternate, smooth, 6 to 20 inches long, 1/2 to 1 1/2 inches wide. Panicle (seed head) -- branched purplish in color. Seeds -- about 1/8 inch long, oval, reddish brown marked with fine lines on the surface, bearing an awn that is easily broken off.

Johnsongrass is most common in the southern part of the state and is most troublesome along rivers on land subject to flooding.

PERENNIAL PEPPERGRASS
(Cardaria or Lepidium draba)

Perennial -- reproduces by seeds and creeping roots. Roots -- deep, slender, extending horizontally and vertically as much as 10 feet. Stems -- 1 to 1 1/2 feet tall, branched at the top, covered with whitish hairs. Leaves -- on lower stem tapering to a slender base, upper leaves clasp the stem, covered with whitish hairs. Flowers -- white, 4-petaled, borne in flat topped clusters. Seed pods -- two parted, heart-shaped, numerous. Seeds -- oval, rough about 1/16 inch long, reddish-brown, seed coat marked with small net-like depressions.

Perennial peppergrass is common in states west of here where it is a pest in pastures and meadows. It has been found in Indiana but is not common.
PERENNIAL SOWTHISTLE  
(Conchas arvensis)

Perennial--reproduces by seeds and creeping roots. Roots--may penetrate to a depth of several feet and spread horizontally producing shoots from buds on the roots. Stems--smooth, 3 to 6 feet tall, erect, hollow, brittle, with a milky juice. Leaves--4 to 8 inches long, irregularly toothed, lobed with spiny edges. Flowers--yellow, about 1 1/2 inches across. Seed--dark reddish-brown, about 1/8 inches long, slightly flattened, 5 to 7 ribbed with a silk-like parachute attached to the upper end.

Perennial sowthistle is found only in the northern counties of the state where it is a problem in field crops and pastures. It should not be confused with the annual sowthistle found more commonly throughout the state.

QUACKGRASS  
(Agropyron repens)

Perennial--reproduces by seed and underground rootstock. Rootstocks--numerous, tough, wiry with sharp pointed tips, rather shallow, forming a mat in the first few inches of soil. Stems--1 1/2 to 3 feet tall, smooth, 3 to 6 joints or nodes. Leaves--parallel, veined with a restriction near the tip, ligules grasp the stem, leaf sheaths hairy or smooth. Seed head--slender, 2 to 4 inches long with 3 to 7 short-awned florets in a spikelet. Seeds--approximately 1/2 inch long, pointed at the tip.

Quackgrass is found mostly in the northern part of the state, rarely in the southern. It is a serious weed in cultivated fields.
WILD GARLIC AND WILD ONION
(Allium spp.)

Wild garlic (Allium vineale): perennial—reproduces from bulblets and underground bulbs. Stems—1 to 3 feet tall, smooth and waxy. Leaves—slender, hollow, nearly round, attached to the lower half of the stem. Aerial bulblets—form in ball-like clusters at the top of the stem. Flowers—greenish-white, forming on short stems above the aerial bulbs. Seeds—black, flat on one side, about 1/8 inch long, formed only occasionally.

Wild onion (Allium canadense) is similar to wild garlic. It does not produce underground bulblets, the leaves are flat, not hollow and arise from the base of the plant.

Both species are common field weeds in the southern half of Indiana, especially objectionable in wheat fields and pastures.

BITTER WINTERCRESS
(Barbarea vulgaris)

Either winter annual, biennial or perennial—reproduces by seed, has tap root. Stems—numerous, grow from a crown, upright, 1 to 2 feet tall, branching at the top, angular and ridged. Leaves—vary from lobed to entire, the lower basal leaves lobed forming a dense rosette. Flowers—lemon yellow 4-petaled, borne on branches, bloom in early April. Pod—about 1 to 2 inches long, 1/16 inch in diameter, nearly square. Seeds—light yellow or yellowish brown, 1/32 inch in diameter.

Found along roadsides, in pastures, and in clover and alfalfa fields. Seldom survives in spring-plowed fields.
BUCKHORN PLANTAIN
(Plantago lanceolata)

Perennial—reproduces by seed; possesses tap root. Stems—erect arising from the root crown, leafless, 4 to 12 inches tall with flower spikes at the top. Leaves—hairy, 2 to 10 inches long, 1/4 to 1 inch wide with 3 to 5 prominent veins running lengthwise, form at the base in rosettes. Flowers—numerous, inconspicuous, form on short spikes at top of stems. Seed pods—two-seeded, split across the middle. Seeds—brown, shiny, waxy, boat-shaped, sticky when damp.

Buckhorn plantain is common in all parts of the state in lawns, playgrounds, meadows, pastures, and clover fields.

CORNCOCKLE
(Agrostemma githago)

Annual or winter annual—reproduces by seed; shallow tap root. Stems—rough, hairy, erect, 2 to 3 feet tall, swollen at joints, slightly branched. Leaves—opposite on the stem, joined at the base, slender, hairy. Flowers—5-petaled, large, purple with narrow green sepals extending beyond the petals. Seed pods—hold several seeds in a 10-ribbed pod. Seeds—black, rough triangular about 1/8 inch in diameter.

Corncockle is not abundant in Indiana but can be found on cultivated land where fall sown grain crops are grown.
CURLED DOCK  
(Rumex crispus)

Perennial -- reproduces by seed; large, yellow, deep, somewhat branched tap root. Stems -- smooth, erect, 1 to 4 feet tall, growing single or in groups from the root crown. Leaves -- mostly at the base, smooth, 6 to 12 inches long with curled edges; upper leaves alternate on the stem with a papery tissue or shield on the stem where the leaf is attached. Flowers -- in clusters on branches at tip of stem, without petals, small, greenish becoming red at maturity. Seeds -- brown, shiny, triangular.

Curled dock is common in pastures, roadsides, meadows and occasionally in cultivated fields.

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DODDER  
(Cuscuta spp.)

Annual -- reproduces by seed, a parasitic plant obtaining food through haustoria which it sends into the stems of the host plant. Stems -- wire like, yellow or orange, branching and twining on other vegetation forming dense masses. Leaves -- not present or reduced to small bracts. Flowers -- numerous, small, white with 5 lobes borne in clusters. Seed pods -- about 1/8 inch in diameter with thin papery walls containing four seeds. Seeds -- nearly round with a rough, sugar-like coating.

The most common species is found in clover, alfalfa and lespedeza fields where these plants are hosts. There are several species, some that grow on willows, onions and cultivated flowers.
FIELD PEPPERGRASS
(Lepidium campestre)

Winter annual or biennial—reproduces by seed. Roots—somewhat branched, shallow tap type. Stems—hairy, rarely hairless, 6 to 24 inches high, very leafy. Leaves—alternate on stem, covered with soft hairs, arrow-shaped base clasping the stem; basal leaves forming rosettes are lobed. Flowers—white or greenish with four petals grouped at the top of branches. Seed pods—boat-shaped containing two seeds. Seeds—dark brown, rough coated, pointed at the tip similar to but smaller than a grape seed.

Field peppergrass is general over the state in grain, clover, and alfalfa fields and meadows.

GIANT FOXTAIL
(Setaria faberii)

Annual—reproduces by seed. Roots—shallow, fibrous. Stems—usually 2 to 6 feet tall, some taller, slender, single but more generally several stems per plant. Leaves—up to 1 inch wide, covered with short hairs on upper surface. Seed head—dense panicle 3 to 8 inches long, bending near base so that the head is drooping; three to six bristles extend from the base of each spikelet. Seeds—mostly green or yellow, about 1/16 inch long. (Should not be confused with green and yellow foxtail, both of which are smaller plants with erect seed heads.)

Giant foxtail is widespread in Indiana and is of concern in all crops. Spreads rapidly because it produces an abundance of seeds.
HORSENETTLE
(Solanum carolinense)

Perennial—reproduces by seed and rootstocks. Stems—erect, upright, often branched, hairy, spiny. Leaves—alternate, slightly lobed with spines on petioles, midrib and veins. Flowers—white or bluish, five-lobed, about 1 inch across, borne in clusters. Berries—yellow, 3/8 to 5/8 inch in diameter, containing numerous seeds borne in clusters. Seeds—about 1/16 inch in diameter, round flattened, yellow in color.

Horsenettle is widely distributed, found in fields, pastures, waste places, especially prevalent on sandy soils.

MUSTARD
(Brassica arvensis or kaber)

Annual or winter annual—reproduces by seed. Stems—erect, branched near the top with few bristly hairs. Leaves—lower ones irregularly lobed with petioles hairy; upper leaves smaller, alternate, with no petioles or short ones. Flowers—showy yellow, four petals, in clusters at end of branches. Seed pods—slender, 1 inch or more long, about 1/3 of length is a beak at the tip. Seeds—round, black, smooth, hard, about 1/16 inch in diameter.

Mustard is most commonly found in small grain fields in all parts of the state. There are many other species of mustard.
OXEYE DAISY
(Chrysanthemum leucanthemum)

Perennial--reproduces by rhizomes and seed. Roots--shallow with mass of fibres. Stems--smooth, branched at top, 1 to 3 feet high. Leaves--alternate, lower leaves lobed, upper leaves notched. Flower heads--occur singly at end of branches, 1 to 2 inches in diameter, center disk yellow, petals white. Seeds--oval, curved with one side straight, the other convex, 1/16 inch long, black with 8 to 10 ridges or ribs.

Oxeye daisy is widespread in Indiana, most commonly found in pastures or on non-cultivated land.

PENNYCRESS
(Thlaspi arvense)

Annual or winter annual--reproduces by seed. Stems--erect, 1 to 2 feet tall, single stem or branched at the top, smooth. Leaves--alternate, toothed, 1 to 2 inches long, clasping the stem. Flowers--numerous, on upper end of branches, white with four petals. Seed pods--flat, about 1/2 inch in diameter, seeds forming in the center in two valves; outer portion are wing-like with a notch at the top. Seeds--dark reddish brown, flattened, about 1/16 inch long with distinct circular ridges.

Pennywort is found in grain and legume fields as well as waste places. Not abundant in Indiana.
Indiana’s Noxious Weed Seeds

Field peppergrass
Giant foxtail
Perennial peppergrass
Perennial sowthistle
Oxeye daisy
Wild garlic
Curled dock
Canada thistle
Dodder
Quackgrass
Bitter wintercress
Mustard

Pennygrass
Johnsongrass
Horseradish
Buckhorn plantain
Corncrake
Field bindweed