



Johnsongrass Fact Sheet

Common Name: Johnsongrass

Scientific Name: *Sorghum halepense* (L.) Pers.

Legal Status: Prohibited-Eradicate

Johnsongrass was added to the Maryland Noxious Weed list in 1969. The law prohibits the import and transport of noxious weeds throughout the state and requires infested lands be managed for their eradication or control.

What is Johnsongrass?

Johnsongrass is an aggressive, fast growing, warm-season perennial grass native to the Mediterranean region. It grows in dense clumps or nearly solid stands if not controlled. Johnsongrass reproduces via seed and a **dense creeping rhizome** (underground stem) network. Seed is dispersed by water, by machinery, in contaminated grain and hay, and by wind for short distances.

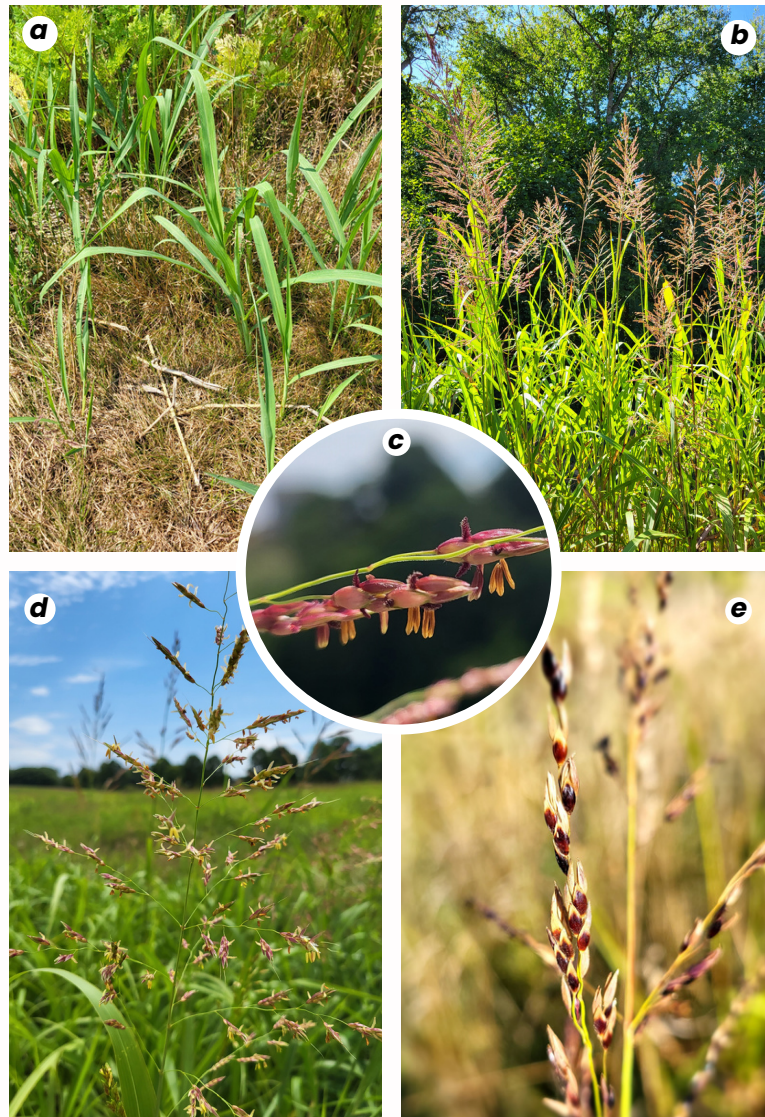
Johnsongrass establishes well in disturbed areas, cropland, pastures, abandoned fields, rights-of-way and roadsides. It **thrives in moist environments** and can be found growing on streambanks, canals and ditch banks. It can also persist in drier areas due to its extensive rhizome system.

Highly competitive, it severely reduces yields of many crops. Johnsongrass is the overwintering host for maize dwarf mosaic virus. Its dense tangled rhizomatous mats also prevent the establishment of trees. The **foliage can produce cyanide and prussic acid** when plants are stressed from cold and drought, which is considered toxic to livestock.

Appearance

Johnsongrass has **upright growth and can reach up to 7 feet tall**. As a young plant, Johnsongrass resembles other plants, including young corn and shattercane. It can also be mistaken for barnyard grass, fall panicum and gamagrass prior to seedhead formation.

The culm (jointed stem) of Johnsongrass is light green and smooth. Leaves are flat and smooth (hairless) and occur primarily along the lower half of each culm. Its bright green leaves have a **distinctive thick white midvein** (sometimes light yellow). Leaves can grow 6–20 inches long and up to 1.5 inches wide. The **large membranous ligule** (outgrowth where leaf and leafstalk meet) is 3 to 4 mm long and often with a fringe of hair at the top. **Auricles** (small ear-like projections from the base of a leaf) **are absent**.



Photos by Susi Ponce, MDA

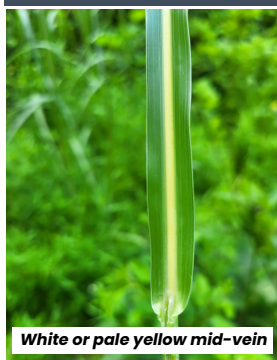
Stages of Johnsongrass a) young plant b) mature plant
c) close-up of orange stamens and purple feathery stigmas
d) flowering panicle e) seed head

The inflorescence (the complete flower head) is an erect, loosely open panicle with numerous whorled branches. It measures 4 to 24 inches and has an overall **pyramid or Christmas tree appearance**. Plants flower from June through November. Initially, the panicle is greenish yellow but matures to a dark red or purple. Seeds are oval, glossy reddish mahogany to black and measure 1/8 to 3/16 inches long. **A single plant may produce 80,000 or more seeds per year and over 200 feet of new rhizome growth per year**. Seed can germinate within a year and can remain viable for up to 6 years in the soil. The roots are fibrous, and the thick rhizomes are fleshy, short and segmented. **In the late fall, plants enter a dormant state**. Dormant rhizomes can over-winter while the aboveground growth dies after frosts.

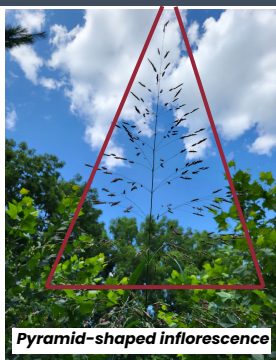
Prevention

1. Early detection is key to prevent invasion. **Scout your land frequently** in the early growing season. Look for Johnsongrass plants along field margins and fencerows.
2. **Use certified weed-free seed, hay, straw, and soil** to ensure the seed is not contaminated with Johnsongrass seed.
3. **Avoid bare ground and minimize soil disturbances** from vehicles, machinery and over-grazing in non-cropland areas. Promptly revegetate disturbed areas with desirable perennial forage species.
4. **Clean equipment** using a pressure hose, air compressor, or sweep before leaving infested areas.

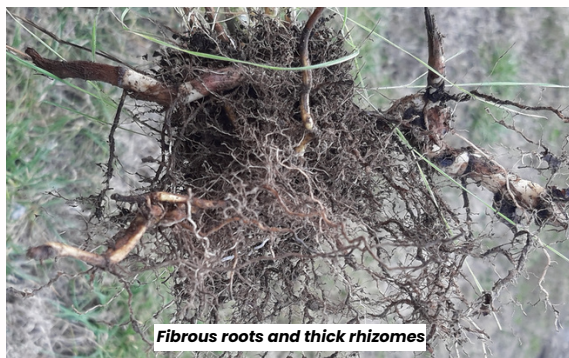
Key ID Characteristics



White or pale yellow mid-vein



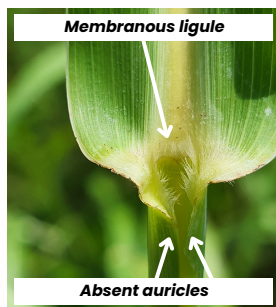
Pyramid-shaped inflorescence



Fibrous roots and thick rhizomes



Membranous ligule



Absent auricles

Photos by Susi Ponce and Andrew Bowles, MDA

Management

Managing Johnsongrass requires a multi-year, integrated control strategy.

General Control Practices

1. Prevent production and spread of seed
 2. Destroy seedlings before rhizomes are formed (within 3 – 4 weeks of emergence)
 3. Control new infestations as they appear
 4. Follow-up is needed to weaken and kill existing rhizomes
- **Chemical** (*Most Effective*). **Apply herbicide in the spring and/or fall.** Selection of herbicides depends on land use (cropland, pastures, hayfields, rights-of-way, commercial, residential, etc). For cropland, the choice of which herbicide or combination of herbicides to use depends on the crop and timing of chemical application. Additional label requirements may limit certain uses of the herbicides. **Read labels before use.**

For example, glyphosate, a post-emergent non-selective herbicide, is a widely used herbicide to control Johnsongrass. **It is most effective when applied to plants that are 18 inches tall to early flowering stage.** Fall applications are also effective before seed production. Johnsongrass begins allocating carbohydrates from leaves to rhizomes in the fall, which enhances the movement of herbicides. After glyphosate enters the plants, it is rapidly translocated to regions of active growth within the plant.

- **Mechanical.** **Mow/cut every 3 weeks** during the growing season to deplete root reserves enough to reduce Johnsongrass stands. Frequent short mowing below Johnsongrass growth points can kill seedlings, prevent seeding, and reduce rhizome growth and regrowth of shoots.

To further enhance Johnsongrass control, consider combining mowing with herbicide treatment. After mowing, allow 2 to 3 weeks for regrowth before applying a herbicide.

Resources

MDA has entered into an agreement with many counties in the State to provide technical assistance to landowners.

Many of the programs provide herbicide application to landowners on a fee-for-service basis.

To learn whether your county has a Weed Control Program, visit <https://mda.maryland.gov/plants-pests>

For **weed identification** and **herbicide recommendations**, contact your local Extension office at: <https://extension.umd.edu/locations>



Photo by Susi Ponce, MDA

Scan the QR code for more ID photos.



Note: Land under the Conservation Reserve Program should consult with USDA Farm Service Agency on weed control and management.



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