



Crabgrass

Quick facts

- Crabgrass is an aggressive warm-season annual that outcompetes cool-season turfgrasses in hot and dry conditions.
- Crabgrass can be identified in lawns by its light-yellow appearance and older leaves that look dark red.
- Raising mowing heights to at least 3 inches helps decrease crabgrass seed germination.
- Pre-emergent herbicides should be applied in the spring when the soil temperatures reach approximately 55°F.
- Post-emergent herbicides should be applied while the plants are still young.
- One of the best strategies to combat crabgrass, and other weeds in general, is to maintain a healthy lawn.

Characteristics

Crabgrass in lawns can be identified by its light green color. Crabgrass (*Digitaria spp.*) in Minnesota is primarily one of two species: large crabgrass (*Digitaria sanguinalis*), also known as hairy crabgrass, and smooth crabgrass (*Digitaria ischaemum*). Both species are annual warm-season members of the Poaceae family (grasses). You can tell them apart by the abundance of hairs on young crabgrass ligules (a membrane where the blade and sheaf meet) and leaf blades.

Typically growing between 1 inch and 3 feet high, crabgrass survives harsh conditions through its abundant tillering (creation of shoots other than the main shoot) and seed production.

Flowers, fruit and seeds

- Seed germination time: early spring to late spring, when soil temperatures have an average temperature high enough to support growth.
- Seed reproductive time: summer to fall.
- Both Minnesota crabgrass species form seedhead racemes (spikes) between 2 and 6 inches long at the tips of stems.
- The branching structure of seedhead racemes combined with tillering allows up to 150,000 seeds per plant to be produced in a single season.

Leaves or blades

- Large crabgrass grows up to 3 feet tall, while smooth crabgrass typically only grows up to 1 foot.
- Crabgrass contains a hairy ligule (collar-shaped growth) between the sheath and grass blade.
- Crabgrass blades are between 1 and 6 inches long and light green.
- Young large crabgrass blades have small hairs, although older leaves may become hairless.
- Smooth crabgrass may have some small hairs on the blades but will be primarily smooth.
- Older leaves and sheathes of both large and smooth crabgrass turn reddish-purple.
- Alternate growth.

Stem and roots

- Crabgrass stems form tillers (shoots other than the main shoot).
- Stems typically creep along the ground and can root at nodes.
 - Some people believe that the “crab” in crabgrass derives from the stems looking like crab legs.
- Crabgrass produces fibrous roots.

Where it thrives

Crabgrass thrives in turf and landscapes with hot, dry, compacted soils. Crabgrass can outcompete many turfgrasses found in lawns due to its ability to thrive in intense heat and sunlight. Crabgrass moves through stages of its life cycle according to day length. In the spring, once soil temperatures reach approximately 55 degrees, crabgrass seeds begin to germinate. The grass grows throughout the summer until days start to shorten and crabgrass enters its reproductive stage, forming seedheads. Crabgrass drops its seed and dies by the first frost, returning in the spring.

Managing crabgrass in home lawns

Even the healthiest turf can have crabgrass. It may be impossible to get rid of crabgrass completely, but you can reduce crabgrass growth by improving turf health and using the following methods:

- Maintaining a dense and healthy turf is the most effective method for reducing crabgrass encroachment.
- Raising mowing heights to at least 3 inches reduces the amount of sunlight that reaches the soil, reducing crabgrass seed germination.
- Select turfgrass species suitable for your location for healthier turf.
- Small infestations can be removed by hand or spot-treated.

Pre-emergent herbicide

Pre-emergent herbicides work by placing a layer of chemicals in the soil that crabgrass seeds absorb as they take in nutrients during germination and sprouting.

- Apply pre-emergent herbicides before soil temperatures have reached approximately 55°F.
 - Early or late pre-emergent applications can cause herbicides to dissipate in soils or enter unintended sources.
 - In some years, pre-emergent herbicide applied in the late fall can allow for control of germinating seedlings in early spring, but this will also require a secondary pre-emergent application in late May or early June.
- Water in pre-emergent herbicides after application.
 - Without water, the herbicide remains on the soil's surface, allowing weeds to germinate and sprout under the soil.
- Do not apply pre-emergents if turfgrass is weak or has been recently seeded.
- Effective pre-emergent herbicides include:
 - Pendimethalin
 - Proflam
 - Benefin
 - Bensulide
 - Dithiopyr

Post-emergent herbicide

Post-emergent herbicides work by entering the grass through the leaves and stems, moving the chemicals down into the roots.

- For the best control, herbicides should be applied according to the crabgrass life cycle, but all tend to work better on younger plants.
- Treating crabgrass with herbicides after early July in Minnesota is ineffective and not recommended
- Many post-emergent herbicides should not be watered after application to allow for uptake by leaf blades.
- Non-selective herbicides should generally be avoided. While they can kill crabgrass, they can also damage turf and other desired landscape plants.
- Effective post-emergent herbicides include:
 - Mesotrione: Apply to grasses before 4-tiller. Less effective as plants get bigger.
 - Quinclorac: Apply before tiller stage 2 or after tiller stage 5 for best results.
 - Topramezone: Use higher rates on crabgrass larger than one tiller.
 - Dithiopyr: Apply before tillering at leaf stage 1-5.

CAUTION: Mention of a pesticide or use of a pesticide label is for educational purposes only. Always follow the pesticide label directions attached to the pesticide container you are using. Be sure that the area you wish to treat is listed on the label of the pesticide you intend to use. Remember, the label is the law.