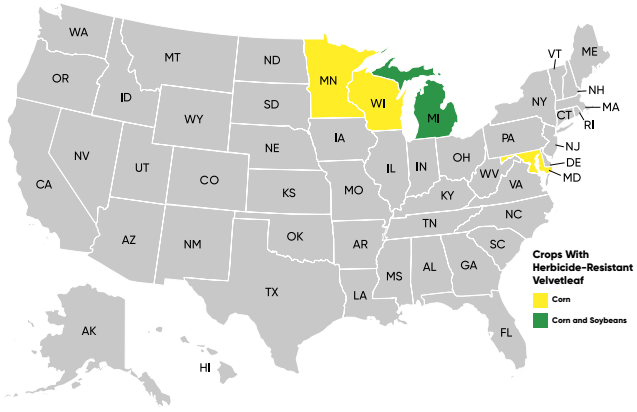
Field facts: Velvetleaf

Velvetleaf is a summer annual weed that is common in cornfields and soybean fields across the Midwest. Under the right conditions, velvetleaf can cause up to 34% yield loss in corn[1] and up to 40% yield loss in soybeans.[2] At this time, herbicide-resistant velvetleaf has been recorded in four states: Maryland, Michigan, Minnesota and Wisconsin.

- **Common names:** Velvetleaf, buttonweed, butterprint
- **Scientific name:** *Abutilon theophrasti*
- **Cotyledons:** One heart-shaped cotyledon and one round cotyledon
- **Leaf shape:** Heart-shaped in an alternating pattern
- **Stems:** Covered in short hairs
- **Flowers:** Yellow with five petals

Fast facts

- Velvetleaf is one of the taller weed species, with some plants reaching as high as 8 feet tall. The average velvetleaf plant, however, is about 2 to +4 feet tall.[2]
- One velvetleaf plant can produce up to 9,000 seeds.[1]
  - About 40 seeds are encased in hard-shelled capsules. These capsules protect velvetleaf seeds, making them very persistent in the seedbank.[2]
- Velvetleaf emerges from soil depths of about 2 inches. The weed does not survive germination on the soil surface.[1]
- Velvetleaf thrives in compacted soil rich with nitrogen and with a high pH.[1]
- Velvetleaf can reduce corn yield by up to 34% with three plants per foot of corn row.[1] The weed can reduce soybean yield by up to 40% with three to six plants per square yard.[2]
- No states have confirmed populations of glyphosate-resistant velvetleaf. However, there is anecdotal evidence that suggests glyphosate does not always effectively control the weed.
  - This may be due to high concentrations of calcium on velvetleaf surfaces, which can negatively impact the efficacy of glyphosate.[2]
- According to the International Herbicide-Resistant Weed Database, four states have recorded populations of atrazine-resistant velvetleaf.



Control tips

- A weed control herbicide program can be effective at controlling velvetleaf.
  - In corn, a strong program could include a preemergence application of SureStart® II herbicide followed by an early postemergence application of Resicore® herbicide.
  - In Enlist E3® soybeans, a strong program could include a preemergence application of Kyber™ herbicide followed by a timely postemergence application of Enlist One® herbicide or Enlist Duo® herbicide.
- In addition to a herbicide program, consider the following mechanical and cultural practices to control velvetleaf:[1]
  - A no-till operation, which can be good for suppressing velvetleaf because the weed will die if it germinates on the soil surface. Tillage will only serve to promote germination below the surface.
  - Rotary hoeing, which can be successful if plants are less than ¼ inch in height.
  - Crop rotation, which is a recommended practice for controlling velvetleaf long term. Small grains and forages can be good rotational crops.
  - Flaming, which can be effective against small velvetleaf plants.

[1] Michigan State University, Department of Plant, Soil and Microbial Sciences. Velvetleaf. https://www.canr.msu.edu/weeds/extension/velvetleaf

[2] United Soybean Board. 2021. Velvetleaf. https://iwilltakeaction.com/weed/velvetleaf.

CORTEVA™ agriscience