

Palmer Amaranth

In Wisconsin



What is Palmer amaranth?

Palmer Amaranth (*Amaranthus palmeri*) is a problematic annual broadhead weed in the amaranth genus. It has several common names including carelessweed, dioecious amaranth, Palmer's amaranth, Palmer amaranth and Palmer's pigweed.

It is native to most of the southern half of North America but has recently been found and documented in Wisconsin. The U.S. Department of Agriculture, Natural Resources Conservation Service; Wisconsin Department of Agriculture; University of Wisconsin–Extension; landowners and other partners are working to eradicate these infestations before they spread to new areas. Palmer amaranth is very fast growing and highly competitive.

Why the concern?

Palmer amaranth is a very fast growing weed that has spread east and north out of native areas. It has developed resistance to multiple classes of herbicides, including glyphosate, and their different modes of action, making it very difficult and expensive to control, especially on productive farmland. It also is a highly competitive weed, and has been shown to be the most competitive of the pigweed species. Palmer amaranth has an extended germination and emergence window, rapid growth rates, high water use efficiency, and produces large quantities of seed. It is a very prolific seed producer, producing up to 250,000 seeds from one plant.

Palmer amaranth has a fast growth rate of 2–5 inches in 3 or fewer days and commonly reaches heights of 6–8 feet, greatly inhibiting productive crop growth. Yield losses have been reported up to 91% in corn and 79% in soybeans. The weed can also compete with and decrease other agricultural crop production.



Banner photo: Palmer amaranth seeds, shown here, are very prolific; one plant can produce up to 250,000 seeds. Above: A male Palmer amaranth plant found in a Dane County, Wis. farm field.

Palmer amaranth can also be toxic to livestock animals due to the presence of nitrates in the leaves.

What can you do?

As landowners and farmers, be proactive in identifying palmer amaranth on your property to prevent establishment. Familiarize yourself in the look and identification of this species, actively searching for it in your crop fields, borders, ditches, conservation lands and around dairies.

If you suspect Palmer amaranth on your property, immediately call your local county extension agent and/or crop consultant to report it. Avoid entering areas where the plant is suspected or confirmed. If you must enter an infested area, always clean vehicles,

For More Information

Visit the University of Wisconsin–Extension website at <http://www.uwex.edu/> for more information on the weed, identification tips, and management techniques.

Use the search function on the website and type in Palmer amaranth.

Watch videos on identifying Palmer Amaranth and other herbicide resistant weeds in Wisconsin available at the following University of Wisconsin–Extension website: <http://wcws.cals.wisc.edu/tag/palmer-amaranth/>

Helping People Help the Land

Photos provided by Dr. Vince Davis, Assistant Professor, University of Wisconsin–Extension.

equipment and clothing prior to exiting the area that has come in contact with the weed. Be certain machinery is clean when moved field to field.

If planting grasses and other flower mixes for conservation plantings, use only local reputable sources to ensure native plants are compatible with Wisconsin's climate. Limit soil disturbance and utilize cover crops to prevent and help suppress weed infestations. Hay may also be planted to help provide protection against this weed.

How do you identify Palmer amaranth?

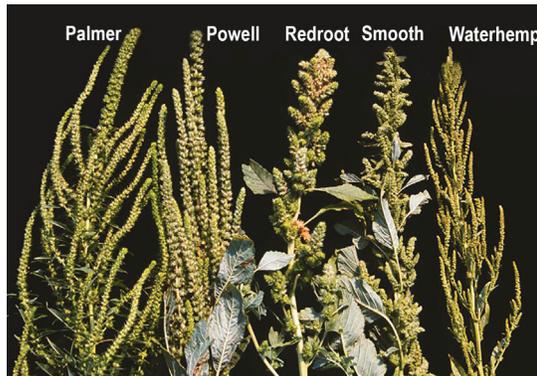
- Palmer amaranth is a summer annual that commonly reaches heights of 6–8 feet, but can reach 10 feet or more.
- Green leaves are smooth and arranged in an alternative pattern that grows symmetrically around the stem. Leaves are oval to diamond-shaped. There is a small, sharp spine at the leaf tip. Some Palmer amaranth leaves have a whitish V-shaped mark on them. Not all plants display this characteristic.
- There are separate male and female plants.
- Palmer amaranth looks similar to our native pigweeds such as common waterhemp, wadroot, and smooth pigweeds.
- Redroot and smooth pigweeds have fine hairs on their stems and leaves. Palmer amaranth and waterhemp do not have these hairs.
- The stalk connecting a leaf to the stem of Palmer amaranth is longer than the length of the leaf. For common waterhemp, the stalk connecting a leaf to the stem will only be half the length of the leaf.
- Seedhead spikes on female Palmer amaranth plants are much taller, up to 3 feet long, and more prickly than waterhemp or redroot and smooth pigweed spikes. Palmer flower heads are sharp and prickly to the touch with bare hands.



A female Palmer amaranth plant found in a Dane County, Wis. farm field.



Comparison of a Palmer amaranth petiole (the stalk that joins a leaf to a stem) length to the leaf blade length.



Comparison of Palmer amaranth (left) to other similar species. Photo courtesy of University of Illinois.

