

# Palmer amaranth identification

Recent Palmer amaranth (*Amaranthus palmeri*) discoveries in fields planted to native seed mixes (e.g. pollinator and wildlife habitat) have land owners on high alert. Newly-seeded fields should be scouted for Palmer amaranth and steps be taken to preferably eliminate the newly introduced weed, or at minimum reduce seed production.

Palmer amaranth is a serious concern due to its fast growth, high competitiveness, prolific seed production, and resistance to multiple herbicides. Currently, Palmer amaranth has a very limited distribution across Iowa. Seed production within fields planted to conservation plantings may provide this weed an opportunity to move into Iowa crop fields.



Photo credit: Robert Hartzler



Photo credit: Meaghan Anderson

**Palmer amaranth inflorescences: female (L); male (R). The large, sharp bracts on female plants are the definitive trait to tell Palmer amaranth apart from waterhemp.**

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Palmer amaranth is closely related to waterhemp (*Amaranthus tuberculatus*); to the untrained eye the two species look very similar. Fields in which Palmer amaranth has been introduced are likely to contain both species. The following traits can distinguish these two species, and other weedy pigweeds.

1. Both Palmer amaranth and waterhemp have hairless stems.
2. Palmer amaranth usually has a much denser canopy than waterhemp.
3. Palmer amaranth will have some leaves with petioles longer than the leaf blade.
4. Seedheads of Palmer amaranth are usually longer and thicker than those of waterhemp.
5. Female Palmer amaranth flowers have large, sharp bracts that are painful to touch when mature.

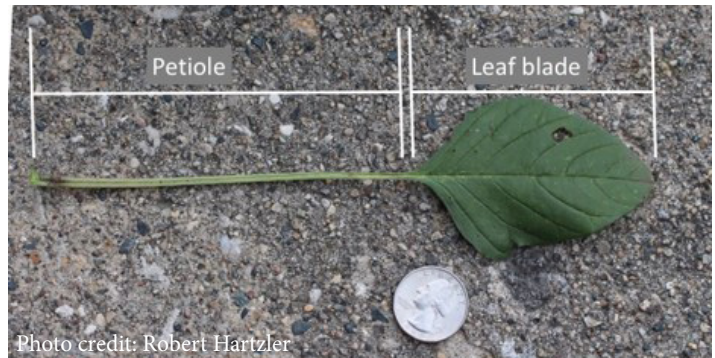


Photo credit: Robert Hartzler

**A petiole longer than the leaf blade is the most reliable vegetative trait to distinguish the two pigweeds. Not all leaves on a Palmer amaranth will have this trait.**



Photo credit: Robert Hartzler

**Dense canopy of Palmer amaranth. The ends of stems often have a rosette appearance due to tightly clustered leaves.**

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