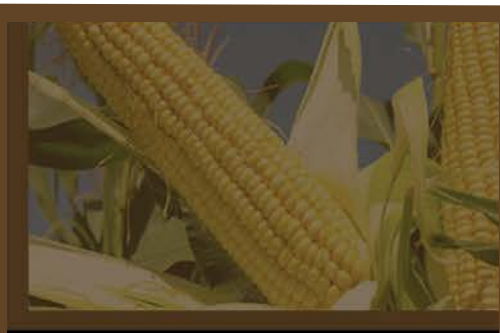


# Burrus Buzz

*Delivering more than just seed!*

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## Which Amaranth Enemy is in Your Field? - Tips to ID Palmer amaranth

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We have been hearing about the importance of early action on weeds while they are small, at a max of about six inches in height. This is really important for Palmer amaranth and waterhemp, which in some cases, have been shown to be glyphosate resistant. The only problem is that these weeds look very similar to each other and can be hard to differentiate between the two. Here are a few tips to help you identify Palmer amaranth:

1.) Are the stems hairy or not hairy? If they are hairy, the amaranth species is a pigweed. Waterhemp and Palmer amaranth will have green or red smooth stems.

2.) Waterhemp, pigweed, and Palmer amaranth can easily hybridize, which can make identification difficult, especially when looking at leaf shape. Seedlings (juveniles) of waterhemp tend to have a shiny, narrow leaf with a notched tip, while Palmer amaranth will have ovate shaped leaves that are not shiny with a notched tip.

3.) Palmer amaranth can sometimes have a white or purple "chevron" present on the top of the leaf, but, this marking may not always be present. Some pigweed species can have a "chevron" on leaves too, but their stems will be hairy!

4.) Palmer amaranth may or may not have a single long hair on the end of its leaf, but so can waterhemp in the Western cornbelt.

5.) The leaves of Palmer amaranth are arranged in more of a "rosette" shape, when compared to waterhemp.

6.) The best way to identify Palmer amaranth during its early growth stage is by the length of its leaf petiole (where the leaf connects to the stem) at the base of the plant (older leaves). The Palmer amaranth leaf will be longer than the leaf. A waterhemp's leaf petiole is much shorter and only half the size of the leaf.

7.) Unfortunately, early identification of Palmer amaranth can be very, difficult and identification is more likely to occur during its reproduction stages. Both Palmer amaranth and waterhemp are dioecious, which means they can have separate male and female plants. Generally, Palmer amaranth seed heads tend to be greater than 3 feet long and greater than 1/2 inch in diameter, with some branching. Waterhemp will have shorter seed heads that are more slender and branched.

8.) The most reliable way to differentiate between Palmer amaranth and waterhemp are the bracts that grow within the flowers on the seed heads and these will be sharp to the touch. The shorter bracts on waterhemp seed heads will be smooth to the touch.

9.) Please note that some pigweed species can also have long seed heads with sharp bracts, but remember pigweed's stems will be hairy and not smooth!

"An integrated herbicide program should include soil-residual herbicides applied at full recommended use rates within two weeks of planting and followed by postemergence herbicides applied before Palmer amaranth plants exceed 3 inches tall. Most herbicides that control waterhemp also control Palmer amaranth, but successful, long-term management of Palmer amaranth in Illinois will likely require more than herbicides." - Dr. Aaron Hager, U of I Crop Science Extension Specialist



Narrow, shiny leaves with notched tip of waterhemp



Hair at leaf tip of Palmer amaranth



Long petioles of ovate Palmer amaranth leaves



Long seed heads of Palmer amaranth