

Palmer amaranth ID

Palmer Amaranth	Common Waterhemp	Redroot Pigweed
Ovate to diamond leaves with apex towards the petiole	Long lanceolate leaves	Round to oval leaves with apex towards the middle
No hair	No hair	Fine hairs on stem especially towards newest growth
Long petioles and rosette leaf pattern	Waxy leaf surface	Rough leaf surface





1



2



3

1) Mature Palmer amaranth plant with long seed heads. 2) Palmer amaranth just starting to form flower buds. 3) Mature palmer amaranth plants in a soybean field. Palmer will often grow above the crop canopy before setting seeds.



Redroot Pigweed

Palmer amaranth plants lack hairs along the stem and leaves. Redroot pigweed and Smooth pigweed both have small pubescent hairs that line the stem and leaves. This is a very helpful identification tool, especially when the plants are very small or hybridization is suspected.



Palmer Amaranth



Palmer amaranth



Smooth pigweed

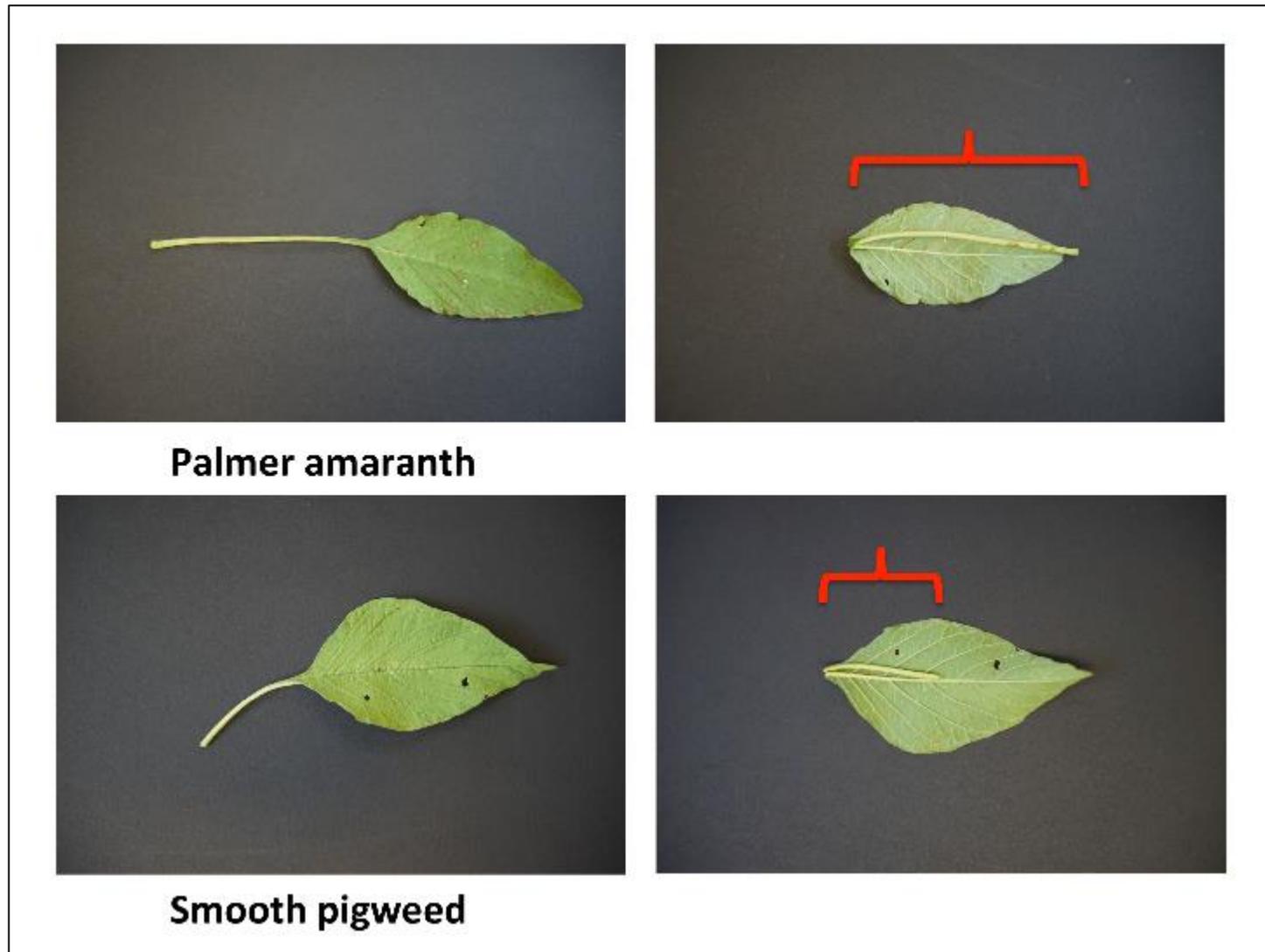


Figure 3. Palmer amaranth petioles (upper panel) are longer than the leaf blade, petiole of smooth pigweed (lower panel) are about half the length of the leaf blade.



Redroot pigweed (on the left) will have petioles that are shorter than the leaf blade. Palmer amaranth (three leaves on the right) will have petioles as long as or longer than the leaf blade.

Also note the watermark on the leaf second from the right. This watermark is not found on all Palmer amaranth leaves. Use the watermark as a way to confirm ID after looking for other positive characteristics.

Petiole Length



Common waterhemp

Palmer amaranth

May also be seen on
spiny amaranth



“Watermarks” on Palmer amaranth leaves. Two Palmer amaranth plants are shown in a soybean field with (left) and without (right) the typical chevron-shaped “watermark” discoloration on the leaf surface.



Flower heads of Palmer amaranth. Palmer amaranth has male and female plants. The flower heads of Palmer amaranth are the longest found within the pigweed family (left panel). Flower heads of other pigweed species such as smooth pigweed are often more compact and shorter than in Palmer amaranth (right panel).



Male



Female

Female flowers are spiny and feel prickly to the touch (right), male flower heads are smooth (left).



Female palmer amaranth plant. Female palmer amaranth plants can have a prickly feel due to stiff bracts at the leaf axil. Note these are not long thorns like spiny amaranth. Male plants do not have these stiff bracts and thus have a softer feel.



Look Alike:
spiny amaranth



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Spiny amaranth

Palmer amaranth



How to ID Palmer Amaranth

