# How to Identify Palmer Amaranth

<table>
<thead>
<tr>
<th>Palmer amaranth</th>
<th>Waterhemp</th>
<th>Redroot pigweed</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hair</td>
<td>No hair</td>
<td>Very short, dense hairs</td>
</tr>
<tr>
<td>Petioles longer than leaf</td>
<td>Petioles shorter than leaf</td>
<td>Petioles shorter than leaf</td>
</tr>
<tr>
<td>Separate male and female plants</td>
<td>Separate male and female plants</td>
<td>Male and female parts on same plant</td>
</tr>
<tr>
<td>Spiny bracts on female plants</td>
<td>No spiny bracts</td>
<td>No spiny bracts</td>
</tr>
<tr>
<td>Female head prickly, male head soft</td>
<td>Female and male head soft</td>
<td>Heads are soft</td>
</tr>
<tr>
<td>Leaves diamond or oval-shaped</td>
<td>Leaves long, narrow, shiny</td>
<td>Leaves round to oval-shaped</td>
</tr>
</tbody>
</table>

Palmer amaranth and waterhemp side by side. (B. Jenks, NDSU)

Female Palmer amaranth with spiny bracts. (B. Jenks, NDSU)

Palmer amaranth plants. (B. Jenks, NDSU)

Palmer amaranth petioles are longer than the leaf blade. (B. Jenks, NDSU)

Waterhemp has long, narrow leaves. (T. Peters, NDSU)

For the latest information, visit

www.ag.ndsu.edu/palmeramaranth
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Palmer amaranth (left) has no hair, Redroot pigweed (right) has short, dense hair.
(C. Sprague, Michigan State)

Palmer amaranth. (B. Jenks, NDSU)

Palmer amaranth female seed head (top) and male (bottom). Female is prickly, male is soft.
(B. Jenks, NDSU)

Palmer amaranth. (B. Jenks, NDSU)

Waterhemp female seed head on left, male head on right.
(T. Peters, NDSU)

Redroot pigweed seed head.
(B. Jenks, NDSU)

Palmer with long terminal seed head.
(Nick Nelson/Agweek)