



Tall Waterhemp Fact Sheet

Common Name: Tall waterhemp

Alternate Names: Common waterhemp, roughfruit amaranth

Scientific Name: *Amaranthus tuberculatus*

Legal Status: Prohibited- Eradicate

Tall waterhemp was added to the Maryland Noxious Weed Regulations in 2020. The Noxious Weed Law prohibits the import and transport of the noxious weed throughout the state and requires infested lands be managed for the eradication of the species.

What is Tall waterhemp?

Tall waterhemp is an aggressive, fast growing, summer annual weed in the pigweed family that has become a major challenge for farmers across the U.S. for much of the last decade.

Historically, tall waterhemp has been problematic in disturbed habitats associated with waterways and floodplains. However, since the 1950's waterhemp has become more abundant in **agricultural fields** because it **prefers well-drained, nutrient-rich soils**, which are also preferred for crop production.

Waterhemp reproduces via seed. Seeds are viable within a couple of weeks of forming. It is dioecious, meaning male and female flowers occur on different plants and require cross pollination.

Female plants may produce over 1 million seeds in one growing season. Waterhemp **grows rapidly, up to one inch per day** under favorable conditions and can **reproduce up to 3-4 times per growing season**. Seed may be dispersed by water, birds, machinery, contaminated manure, and by wind for short distances.

In Maryland, tall waterhemp, like palmer amaranth, has widespread **resistance to Group 9 herbicides (glyphosate)** and **Group 2-ALS herbicides**. See *management strategies*.



Photo source: (Left to right) Cornell University, MDA, University of MD Ext, MDA.

Appearance

Waterhemp seedlings **emerge in early summer** and are light green to red-pink (fig a). The **true leaves are oblong, dark green, lack hairs** on the surface and have a **waxy appearance** (fig b). Unlike palmer amaranth, the stalk that joins the leaf to the stem (**petioles**) are **shorter than the leaf blades** (fig c). Waterhemp **stems are smooth** and can be **green, red, or red and green striped in color**. The plant erect can be **up to 8 feet tall**. **Flower spikes can be 1-2 feet or more in length** and are **smooth, long and slender** (fig d). Female **flowers do not contain sharp bracts** and clusters are more widely spaced compared to those of palmer amaranth.

Prevention

- Start with a **weed-free seedbed** through use of burndown herbicides or tillage.
- Scout your farm frequently in the early growing season. Practices that limit light exposure to the soil surface, **such as cover crop residue, crop canopy closure, or targeted tillage**, may reduce waterhemp populations.
- Prevent seeds from entering the farm. **Equipment is the most common method for moving seeds.** When harvesting crops, do not move equipment between infested and non-infested fields.
- **Clean equipment thoroughly between fields using a leaf blower or compressed air.** Sending one or two bales of clean straw through the combine before entering non-infested fields can also help to dislodge seeds.

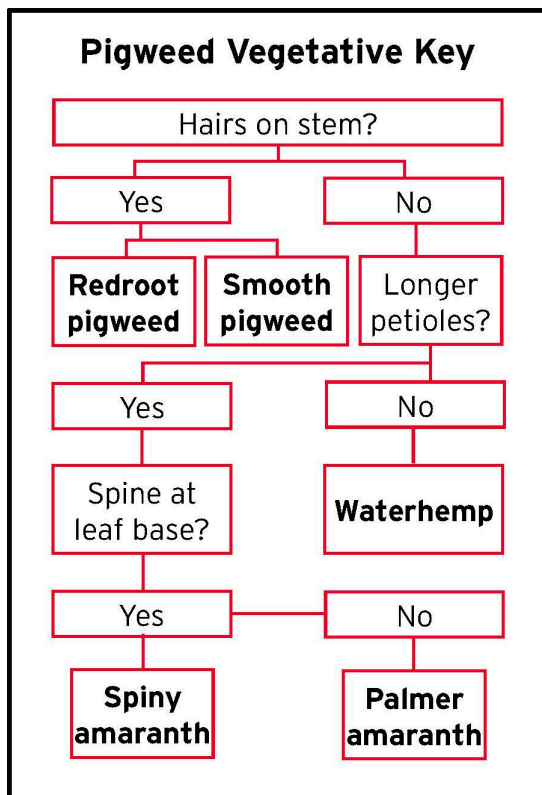


Figure credit: University of Maryland Extension

Management

Managing tall waterhemp requires a multi-year integrated control strategy. With a relatively short-lived seedbank, eliminating seed production for 3 to 5 years will result in a dramatic reduction in population density of this weed.

- **Chemical.** Start clean using a **good burndown herbicide program or tillage**. Apply **residual herbicides** with multiple effective modes-of-action at planting. **Apply effective POST herbicides** before weeds are 3-4" tall include an additional residual herbicide in the tank to extend control later into the growing season. **Additional POST herbicides may be required** depending on infestation size.

Applicators should always follow the herbicide label, use full-labeled rates, and apply in a timely manner.

For **specific herbicide recommendations** as well as **organic options**, contact University of Maryland Extension **Weed Management Specialist, Kurt Vollmer: kvollmer@umd.edu** or **Ben Beale: bbeale@umd.edu**

- **Mechanical.** Tillage or cultivation may be effective if done timely and only on seedlings. **Mature plants may re-root.** Occasional **moldboard plowing** can be used to bury seeds beyond the germination zone.

Cutting or mowing alone is not the best management option for control, consider combining with a herbicide program.

Resources

MDA has entered into an agreement with many counties throughout the State to provide technical assistance to landowners.

Many of the programs provide herbicide application to landowners on a fee-for-service basis.

To learn whether your county has a Weed Control Program, visit <https://mda.maryland.gov/plants-pests> or call (410) 841-5920.

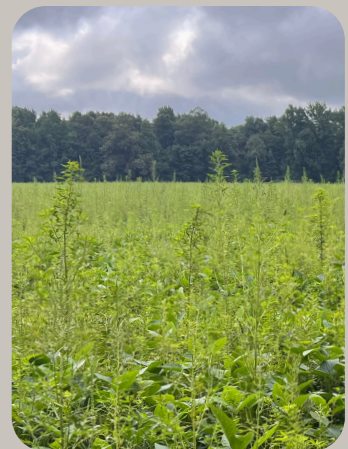


Photo credit: MDA

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