

Glyphosate-Resistant Palmer Amaranth Status in Tennessee

University of Tennessee

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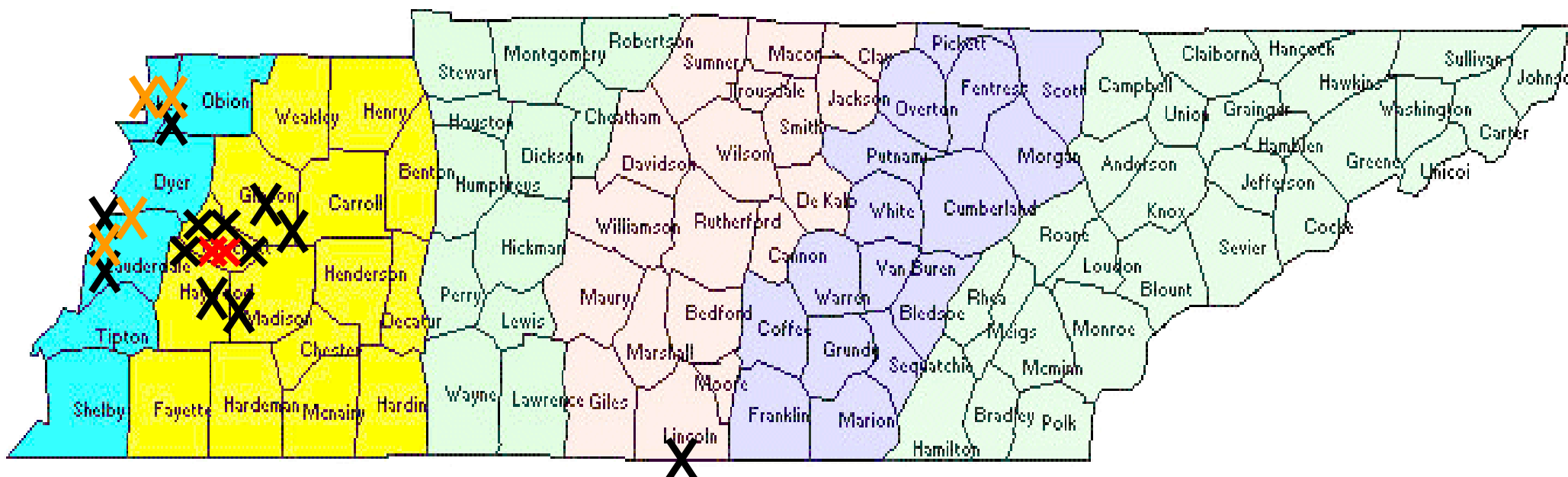
Pigweed Status

- There are 4 fields in three counties with confirmed glyphosate-resistant Palmer pigweed.
 - ❖ 1.5 to 5x reduced sensitivity to glyphosate.
 - ❖ Steckel et al. 2008. Palmer amaranth (*Amaranthus palmeri* S. Wats) in Tennessee has low level glyphosate resistance. Weed Technol. (*In Press*)
 - ❖ Placed on Ian Heap site.
- There is 1 field where we are investigating possible GR waterhemp.
 - ❖ Field testing showed possible resistance.
 - ❖ Greenhouse screen ongoing.

Palmer Pigweed Glyphosate Screen

2006-2007

- X 2-5 x Less sensitive to glyphosate
- X 1.5-3 x Less sensitive to glyphosate
- X susceptible



22 fb 22 ozs/A Roundup WM



22 fb 22 ozs/A Roundup WM



22 fb 22 ozs/A Roundup WM



108 ozs/A Roundup WM



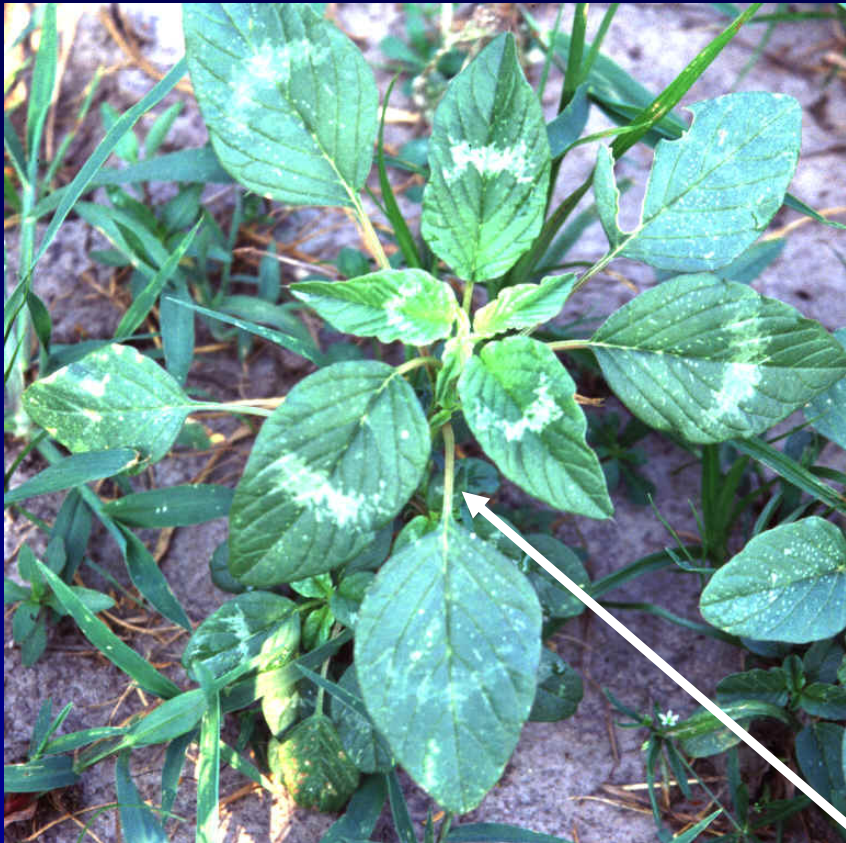
Waterhemp-108 ozs/A Roundup WM



108 ozs/A Roundup WM



Palmer Identification



Palmer



Waterhemp

petioles

Palmer will have petioles longer than the leaf while Waterhemp will have petioles the same size to shorter than the leaf

Waterhemp and Palmer

Waterhemp



Palmer

Pigweed ID



Palmer

Smooth

Redroot

Green

Waterhemp and Palmer



40 (2'') + 88 (6'') + 88 (18'') oz/A Roundup WM



40 oz RWM fb disk fb 22 oz/RWM 1st/4th nodes fb 29 oz Ignite





22 oz/RWM 1st/4th nodes fb Ignite hooded

22 oz/RWM 1st/4th nodes fb 0.15 oz Envoke fb 29 oz Ignite hooded



GR Weed Summary

- GR horseweed a problem in all cotton and 90% of the soybean acres.
 - ❖ Starting to become evident in corn as well.
- GR Palmer pigweed is probably an issue in about a dozen fields in 3 counties.
 - ❖ The switch to corn acres has hidden this problem in these fields.
- Waterhemp is being screened.
- Giant ragweed (glyphosate-tolerant/resistant) is a serious problem in a number of fields in 4 counties.
 - ❖ This was my #1 “new” call in 2007.

