

TIMELY INFORMATION

Agriculture & Natural Resources

Counties with Confirmed and/or Suspected Glyphosate-Resistant Palmer Amaranth in Alabama and management programs for row crops.

August 2010

Alabama Cooperative Extension System
Department of Agronomy and Soils
Auburn University



North AL
Colbert
Lauderdale
Lawrence
Limestone
Madison
Etowah
Calhoun
Cullman

Southeast AL
Barbour
Russell
Henry
Houston
Dale
Coffee
Covington
Pike
Geneva

Southwest AL
Baldwin
Escambia
Mobile

**Alabama Counties
With resistant palmer 2010**

Produced by the Dept. of Geography
College of Arts and Sciences
The University of Alabama

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.

Critical Points for Glyphosate-Resistant Palmer Pigweed Management in Row Crops

- Kill all weeds prior to planting, especially resistant weeds using products that give residual control past planting.
- Maintain constant residual control by using soil active herbicides throughout the season.
- Rogue escaped palmer pigweed plants out of fields in late season.
- Maintain post-harvest pigweed control, especially in early harvested crops like corn by mowing followed by 2,4-D or Gramoxone + 2,4-D.
- Rotate crops and use herbicides with different modes of action in each crop.

Cotton Weed control Program for Glyphosate-Resistant Palmer Amaranth

- Maintain residual weed control from burndown through layby.
 - Diuron + Gramoxone with crop oil concentrate (with Ignite if resistant horseweed) preplant foliar (PPF) 15 days ahead of planting.
 - Reflex (w/ Prowl, or diuron, or Staple) preemergence (PRE) behind the planter, must use Reflex with PPF mix on fine textured soils of Tennessee Valley (and get 0.5 inch of rain before planting cotton). If this is not activated by rain or irrigation before cotton emerges then apply Staple before palmer is two inches tall.
 - Metolachlor (Dual Magnum, etc.) or Warrant with glyphosate (RRF cotton) or Ignite (Liberty-Link cotton) early post (3-4 leaf cotton).
 - Layby Pro, or diuron (add 2 oz Valor) + MSMA layby (these mixtures will kill a relatively large pigweed if the sprayer can cover it, but it must be kept off the cotton).

note: All the above residual herbicides must be activated by timely rainfall or overhead irrigation in order to work. These products will add between \$30 (Reflex, Staple, Dual, Valor) and \$40 (add Ignite burndown) per acre to your weed control costs above a system where two to three applications of glyphosate have worked in the past.

Soybean Weed control Program for Glyphosate-Resistant Palmer Amaranth

- Maintain residual weed control from burndown through row lapping.
 - 2,4-D @ 1pt + glyphosate or paraquat 15 days ahead of planting.
 - Prefix, Valor, or Boundary (PRE) behind the planter (can add Prowl H2O).
 - Firstrate (no ALS resistance), Warrant or Reflex (if ALS resistance) with glyphosate (RR soybean) or Ignite (LL soybean) post.
 - Flexstar or Cobra post.

note: All the above residual herbicides must be activated by timely rainfall or overhead irrigation in order to work. These products will add around \$20 (Prefix, Valor, Boundary, Cobra) per acre to your weed control costs above a system where two to three applications of glyphosate have worked in the past. Check variety tolerance before using Boundary (contains metribuzin).

Corn Weed control Program for Glyphosate-Resistant Palmer amaranth

- Maintain residual weed control from burndown through row lapping.
 - 2,4-D @ 1 pt + Gramoxone + crop oil concentrate 7 days ahead of planting.
 - Dual, Micro-Tech, Outlook, or Harness + simazine (2 pts) PRE.
 - Atrazine (3 pts) + crop oil concentrate or atrazine (3 pts) + glyphosate (RR corn) post. Atrazine (3 pts) + Ignite (LL corn).
 - 2,4-D + Gramoxone post-harvest after mowing stalks to kill emerged pigweed.

note: Residual herbicides applied preemergence must be activated by timely rainfall or overhead irrigation in order to work.

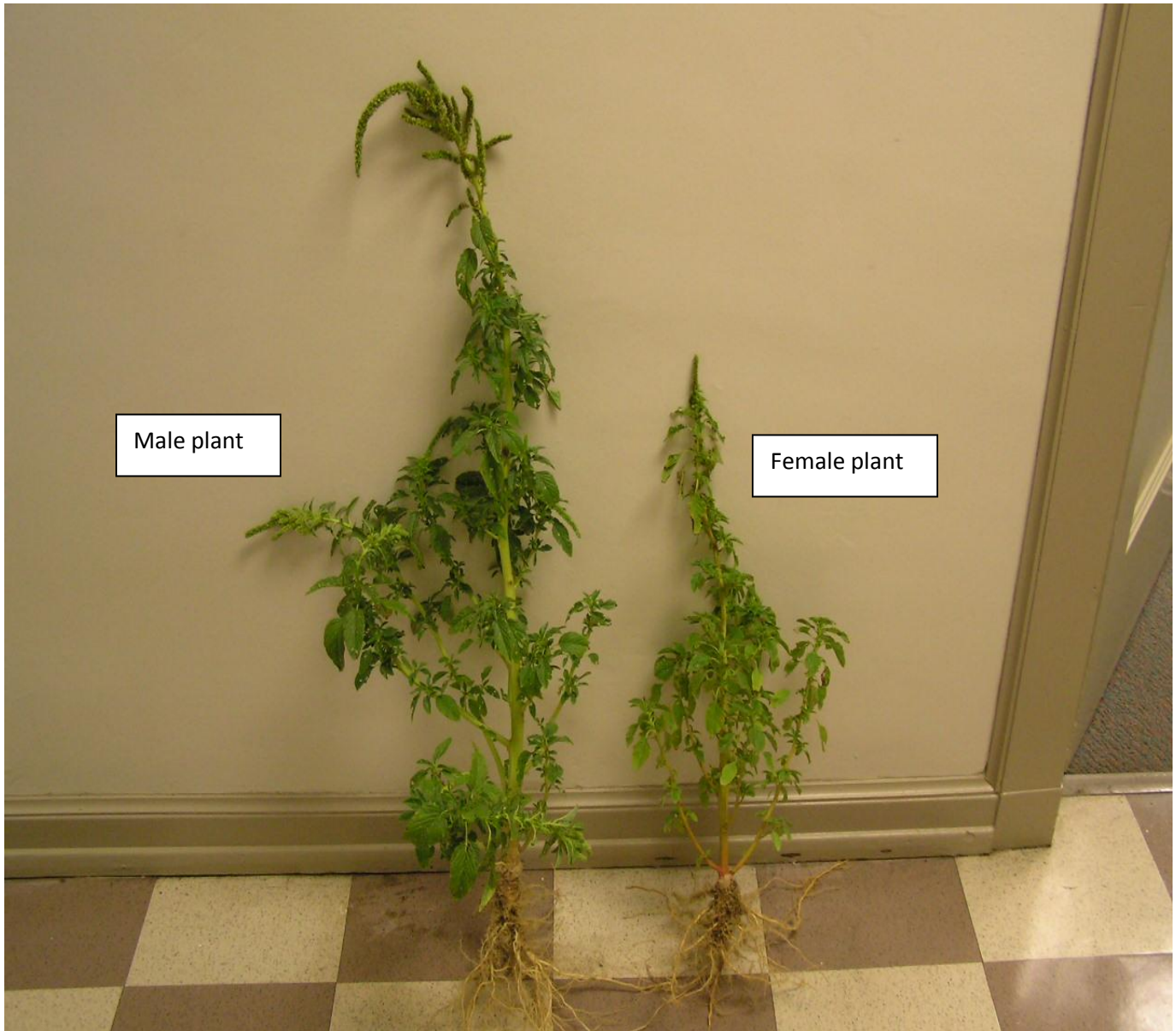
Peanut Weed control Program for Glyphosate-Resistant Palmer Amaranth

- Maintain residual weed control from burndown through row lapping.
 - Dual, Outlook, Prowl, or Sonalan preplant incorporated.
 - Valor or Strongarm preemergence.
 - Cadre/Impose (no ALS resistance) or paraquat + 2,4-DB post.
 - 2,4-DB, Cobra, or UltraBlazer later post.

note: Residual herbicides applied preemergence must be activated by timely rainfall or overhead irrigation in order to work.

Palmer Amaranth Identification

- No hairs on the plant-- stem and leaf surfaces are smooth.
- Leaf petioles (leaf stalk) as long or longer than the leaf blade. Leaves occasionally have v-shaped variegation. Plants Do Not have spines.
- Flowering structure (spike) on large plants (6-8 ft) is one to two foot long.
- Each plant is either male or female. Male flowering structure feels soft and sheds pollen, female flowering structure feels prickly and produces seed.



Contributing Authors

Charles Burmester
William Birdsong
Dennis Delaney
David Derrick
Brandon Dillard
Warren Griffith
Bob Goodman
Mark Hall
Leonard Kuykendall

Dale Monks
Shannon Norwood
Mike Patterson
Richard Petcher
Eric Schavey
Jim Todd
Amy Winstead
Rudy Yates