



I WILL  
SCOUT MY FIELDS.

I will walk my rows, and I will stand my ground. I will take action against herbicide-resistant weeds.

I will scout my fields and field borders, ditches and waterways. I will scout them early and often.

I'll be here when weeds emerge. And I'll be back after I spray.

I will track down escapees and late emergers. I will take action before weeds take over.

Now is the time to take action against herbicide-resistant weeds. Visit [www.TakeActionOnWeeds.com](http://www.TakeActionOnWeeds.com) to learn how you can prevent herbicide-resistant weeds from spreading.



Brought to you by the soy checkoff.



# The Big Three Texas' Major Threats



## COMMON WATERHEMP



**Name:** *Amaranthus rudis*  
**AKA:** Waterhemp  
**Growth:** 1 to 1.25 inches per day; rapid early-season growth allows seedlings to acquire more light than other weeds

### THREATS:

- Emerges throughout growing season
- Can escape many pre-emergence herbicides and postemergence applications without residuals
- Herbicide-resistance traits can transfer by pollen very quickly
- Major ability to infest fields; up to 1,000,000 seeds per plant; seeds remain viable in soil for up to four years

### WEAKNESSES:

- Does not emerge from low soil depths
- Relatively short-lived in the soil seed bank (four to five years)

## PALMER AMARANTH



**Name:** *Amaranthus palmeri*  
**AKA:** Palmer Pigweed  
**Growth:** Up to 2.5 inches per day; rapid growth in all stages makes control with postemergence herbicides exceedingly difficult

### THREATS:

- Extremely competitive
- High reproductive capacity; up to 1,000,000 seeds per plant
- Herbicide-resistance traits can transfer by pollen
- Extended germination period

### WEAKNESSES:

- Does not emerge from deep soil depths
- Relatively short-lived in the soil seed bank (four to five years)

## ITALIAN RYEGRASS



**Name:** *Lolium multiflorum*  
**Growth:** Winter annual

### THREATS:

- Resistance has developed to many of the commonly used herbicides
- Can move via contaminated wheat and cover crop seed

### WEAKNESSES:

- Poor winter hardiness
- Seed normally persist on the plant without falling to the ground



## The Big Three: Texas' Major Threats



### 1. What type of herbicide strategy do you recommend for Texas farmers?

"Starting clean is key. I recommend farmers eliminate any and all weeds prior to planting. Then, start with a soil-applied herbicide, whether it's a preplant or pre-emergence herbicide. Pre-emergence herbicides are generally very effective for controlling common waterhemp and Palmer amaranth."



Paul A. Baumann, Ph.D. |  
extension weed specialist,  
Texas A&M University

### 2. Why is it so important for Texas soybean farmers to manage early-season weeds?

"It has been shown that the 10 weeks after the crop comes up is critical in terms of eliminating weed competition. Even if you don't have a resistance issue in your fields, the use of a soil-applied herbicide is going to be a benefit managing that early-season competition and preserving yield. It's critical to get these weeds under control early in the season. If not treated in a timely manner, they could compete with the crop for essential nutrients and soil moisture, reducing yield potential."



Credit: Paul Baumann, Ph.D., Texas A&M AgriLife Extension


*This photo shows a massive infestation of both Palmer amaranth and common waterhemp in a Texas soybean field. Common waterhemp and Palmer amaranth are the two biggest herbicide-resistance threats for soybean farmers in Texas.*

### 3. How have herbicide-resistant weeds changed the way farmers should create weed-management plans?

"If herbicide manufacturers continue to come out with new chemistries that are effective for managing resistant weeds, our problems with resistance could be alleviated, but farmers need to follow recommendations for resistance management to avoid new herbicide-resistant weeds developing in their fields."

For more information and links to additional resources, visit [www.TakeActionOnWeeds.com](http://www.TakeActionOnWeeds.com).

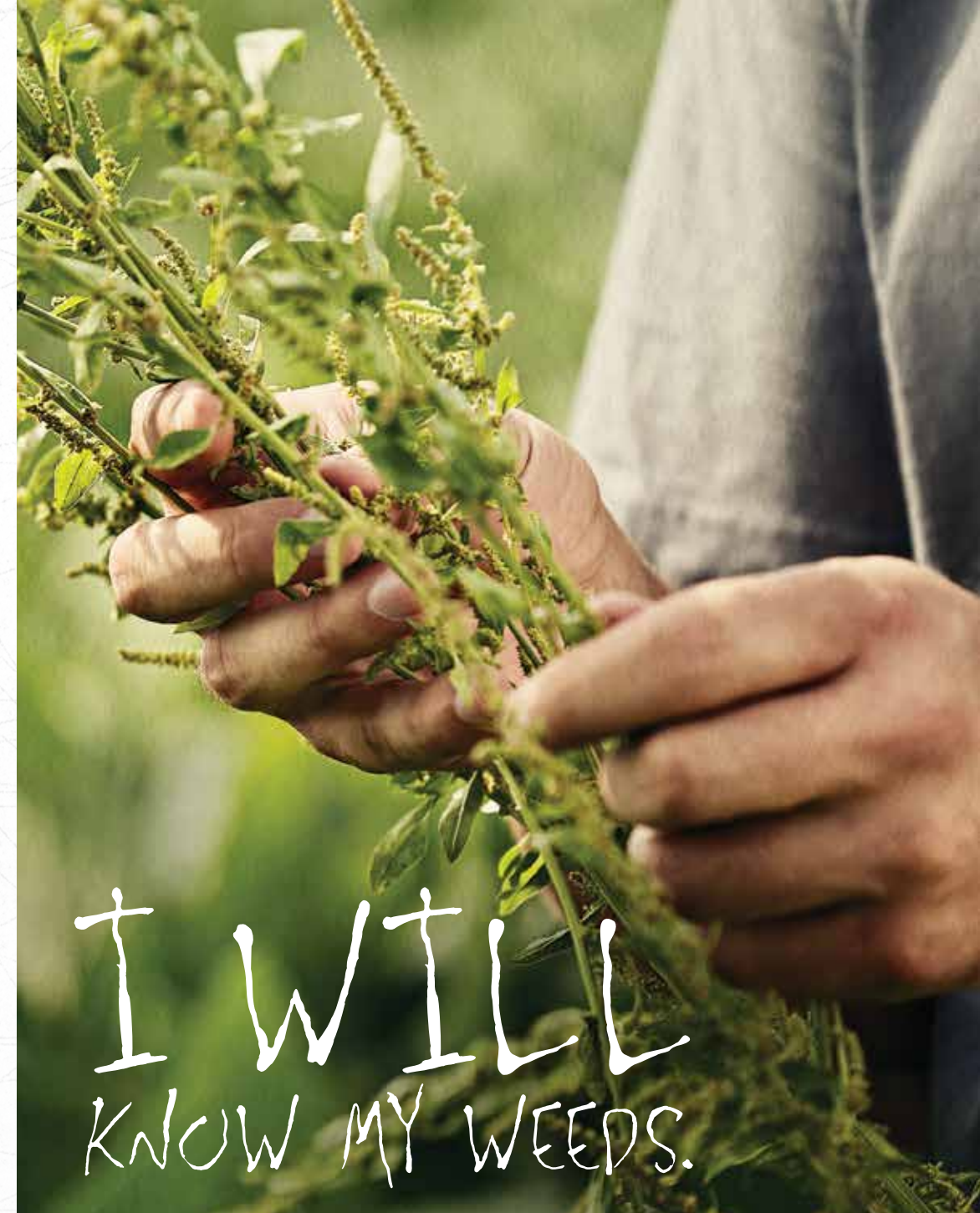
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Texas Soybean Board



I will take action against herbicide-resistant weeds.

I will know my weeds. When they grow, when they pollinate, and I will stop them before they go to seed.

I will know their strengths, and I will exploit their weaknesses.

Troublesome weeds won't go down without a fight. Neither will I. Because it's worth the trouble.

Now is the time to take action against herbicide-resistant weeds. Visit [www.TakeActionOnWeeds.com](http://www.TakeActionOnWeeds.com) to learn about the most troublesome weeds.



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