

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 to learn how you can prevent herbicide-resistant weeds from spreading.



Brought to you by the soy checkoff.



The Big Three Tennessee's Major Threats



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

HORSEWEED



Name: *Conyza canadensis*
AKA: Marestalk, Canada Fleabane
Growth: Emerges from late March through June and from late summer through late fall.

THREATS:

- Up to 200,000 seeds per weed
- Approximately 80 percent of seeds will germinate right off the plant
- Windblown seeds disperse easily across great distances

WEAKNESSES:

- Doesn't tolerate soil disturbance, such as deep tillage
- Doesn't tolerate shading from crop canopy

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The Big Three: Tennessee's Major Threats

1. What do farmers need to know about herbicide resistance?

"The first week after planting, it's essential for farmers to be out in the field spraying. If you're not observant, you can miss the stage of being able to control them. Most farmers may not know that a Palmer amaranth plant can go from a seed no bigger than a period on this page to 8 inches tall in 13 days. They're not going to be able to control it with most herbicides once they get past 2 or 3 inches tall."



Larry Steckel, Ph.D. | weed specialist, University of Tennessee

2. What can farmers do to prevent herbicide resistance from building up in their fields?

"Farmers need to get a residual out in the field that's going to be effective on the target weeds they're trying to manage now, like the pigweed species. They need to use a residual and at least two herbicide modes of action to be effective on those weed species. Using multiple modes of action is the foundation of a weed-management program. It all starts from there."



Pictured is herbicide-resistant Palmer amaranth. Herbicide-resistance can be spread by harvest equipment, so it's important to clean equipment between each field.

3. Why should farmers care about herbicide resistance?

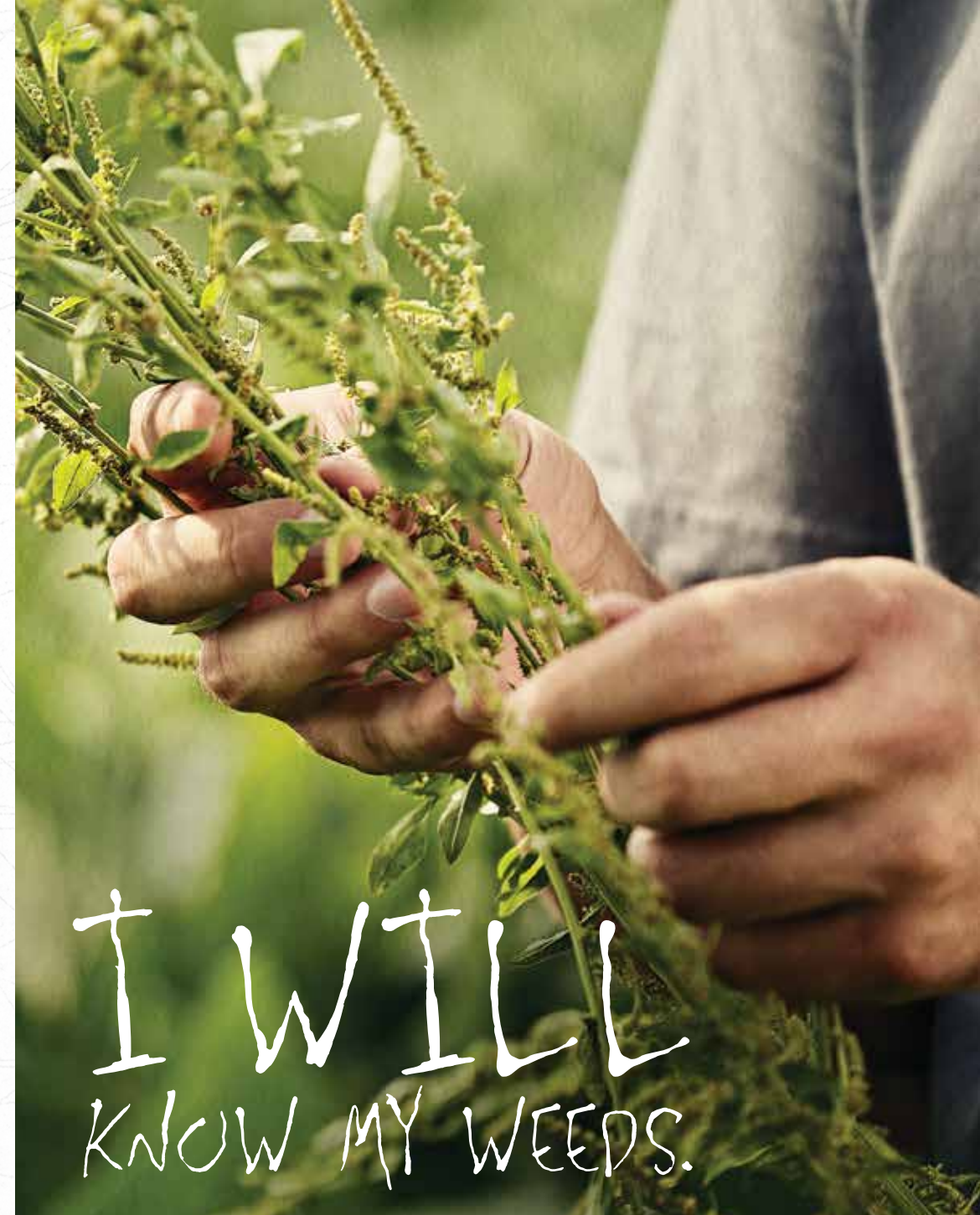
"If you look at the fields where farmers are trying to control glyphosate-resistant pigweed and marestail in Tennessee, they're spending a minimum of \$60 per acre on herbicides, and typically a lot more than that. If farmers include a residual herbicide that's effective on those weeds, it's going to save them from spending \$80, \$90 or \$100 down the line."

For more information and links to additional resources, visit www.TakeActionOnWeeds.com.

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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 to learn about the most troublesome weeds.



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