



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

South Dakota's Major Threats



KOCHIA



Name: *Kochia scoparia*
Growth: Shallow germination; early-season and extended germination

THREATS:

- High seed producer; tumbleweed seed dispersal
- Drought tolerant; salt tolerant

WEAKNESSES:

- Poor competitor in wet, humid environments
- Short seed life

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)

COMMON RAGWEED



Name: *Ambrosia artemisiifolia*
Growth: Emerges from up to 5 inches deep in soil

THREATS:

- Very competitive to Midwest crops
- Herbicide-resistance traits can transfer by pollen

WEAKNESSES:

- Seed does not persist if lying on soil surface (long-term no-till)

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

“South Dakota farmers need to be cognizant of all the different types of weeds that are in their fields, even weeds that aren’t resistant to herbicides. We have waterhemp, wild oat, kochia, ragweed and others. We know some of them out there are resistant, and some we haven’t tested. But it doesn’t matter, because if we keep using the same techniques to combat resistance, we’re going to have more problems.”



Sharon Clay, Ph.D. | Professor of weed science, South Dakota State University

2. What can farmers do to keep their fields weed-free?

“Farmers need to rotate their herbicides. No one should be using the same chemicals year after year after year. Also, farmers should be scouting their fields multiple times during the year to know what they have. Once they have a handle on which weeds are present, they can figure out how to control them. It’s all about how we can diversify our tactics each year.”

3. How can farmers be sure their weed-management plans are working?

“Know your weeds, scout your fields before and after applications, and plan for rotations and tactics other than herbicides to help in weed control! You have to know your weeds, know your herbicides and know how long it takes for that herbicide to work. Then, if that herbicide doesn’t work, think about what other kinds of tactics can be used on your fields. Plan ahead. Even George Washington had a 16-year plan for diseases, insects and weeds when he was going to farm his land.”



Pictured is a field invested with waterhemp. Among the glyphosate resistant weeds in South Dakota, common waterhemp has the potential to have the highest impact areas where a corn-soybean rotation is the mainstay.

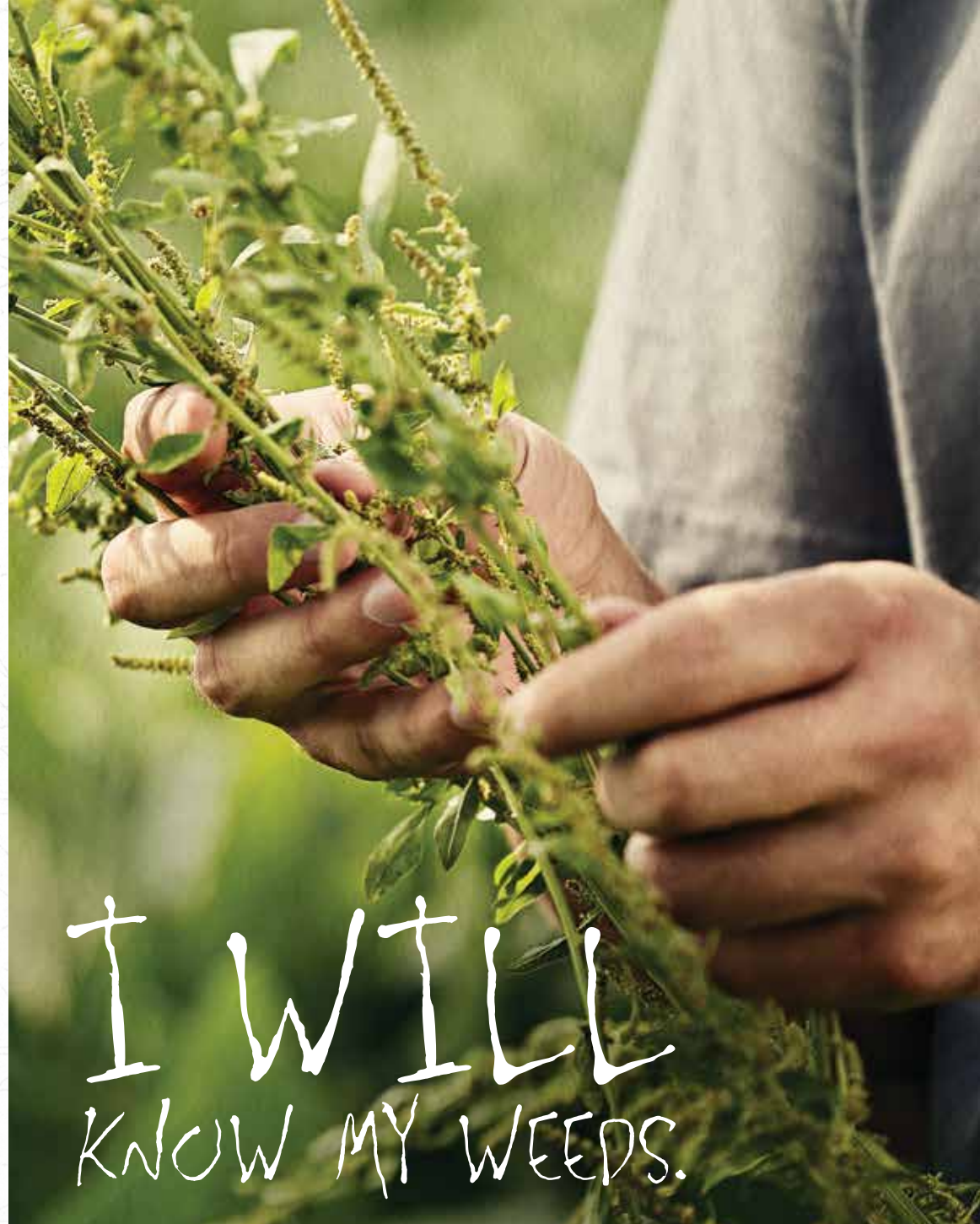
Source: Christy Sprague, Ph.D., Michigan State University

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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