

Glyphosate Management for Wisconsin

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Herbicide Resistant Weeds

Simple Truths

Herbicide resistance is not new

Risk of resistance is greatest when one herbicide mode of action is used repeatedly

Herbicide resistance is not predictable

Herbicide Resistance Truths

Prevention practices do not make growers more money

No “Guarantee Program” with resistance management practices

- ▶ Selection for resistance occurs each time a herbicide is used

Resistance management doesn't protect one farm against the neighbor's farm

My Concern

80% or more of the soybeans in Wisconsin are Roundup Ready

Use of Roundup Ready corn will increase, especially as more hybrids have stacked traits

The price of glyphosate is declining

Potential for excessive use of glyphosate

Who Cares?

Glyphosate Resistance

Bradshaw et al. (1997 Weed Technology)
concluded:

“resistance to glyphosate has not yet occurred”

“the probability of evolution of glyphosate
resistance seems low”

Current glyphosate resistance

rigid ryegrass

Italian ryegrass

goosegrass

horseweed

buckhorn plantain

hairy fleabane

Chances for Resistance

Wisconsin and Soybeans and Lambsquarters

Assume resistance is a very rare mutation

1 in a trillion chance

5 lambsquarters/square foot

80% Roundup Ready soybeans

What's the risk of finding a resistant
lambsquarters?

How many lambsquarters are sprayed?

Resistant Lambsquarters

With 1.5 million acres of soybeans
0.25 trillion lambsquarters per year

What's the risk of finding a resistant
lambsquarters?

Low, but possible

Who Cares?

Glyphosate Resistance Roundtable

Are Wisconsin farmers and agri-business concerned about the risk of glyphosate resistance?



Wisconsin Farmers and Agri-Business Call for Glyphosate Stewardship

Key Points

- Glyphosate and Roundup Ready Crops are valuable tools for Wisconsin farmers.
- The risk of glyphosate-resistant weeds will increase with improper use of glyphosate.
- Glyphosate-resistant weeds will reduce the value of this technology.
- New herbicides are not being developed to replace glyphosate.
- Wisconsin farmers should be proactive leaders and practice glyphosate stewardship.

Stewardship Promoted and Endorsed by

Wisconsin Fertilizer and Chemical Association

Wisconsin Assn of Professional Agricultural Consultants

Wisconsin Soybean Association

Wisconsin Corn Growers Association

Wisconsin Potato and Vegetable Growers Association

Wisconsin Forage Council

UW-Extension Team Grain

UW-Madison Weed Scientists

UW-Madison Production Agronomists

Glyphosate Stewardship Practices

Rotate between Roundup Ready and conventional crops or crops with other types of herbicide resistance. Use Roundup Ready crops in your rotation where they have the greatest economic and management value.

Rotate glyphosate with other herbicide modes of action. Rotate non-glyphosate herbicides over time as well.

Glyphosate Stewardship Practices

Apply glyphosate at labeled rates at the correct stage of growth.

If glyphosate is used as a burndown treatment and in-crop, tank mix the glyphosate applied in the burndown treatment with another mode of action.

Use cultivation after in-crop applications of glyphosate when possible.

Glyphosate Stewardship Practices

Scout fields regularly and identify weeds present.

Respond quickly to changes in weed population.

Tilled Corn/Soybean

Year 1 Conventional Corn
apply herbicides with
non-glyphosate modes of action

Year 2 Roundup Ready Soybean
apply glyphosate
early postemergence

Year 3 Repeat rotation

No-Till Corn/Soybean

Year 1 Conventional Corn

Burndown: apply glyphosate + 2,4-D

In-crop: apply herbicides with
non-glyphosate modes of action

Year 2 Roundup Ready Soybean

Burndown: apply glyphosate + 2,4-D

In-crop: apply glyphosate early post

Year 3 Repeat rotation

Continuous Corn

Year 1

Conventional Corn

apply herbicides with non-glyphosate
modes of action

Year 2

Roundup Ready Corn

apply glyphosate early postemergence*
cultivate

Year 3

Repeat rotation

*An application of a preemergence herbicide is recommended to minimize the risk of early season weed competition

Alfalfa/Corn

Year 1

Alfalfa

apply glyphosate + 2,4-D in early fall

Year 2

Roundup Ready Corn

apply glyphosate early postemergence*
cultivate

Year 3

Conventional Corn

apply herbicides with non-glyphosate modes of action

Year 4

Alfalfa

*An application of a preemergence herbicide is recommended to minimize the risk of early season weed competition

**Herbicide resistance is not a
problem of ignorance.**

It's a question of action.

**Will you promote
Glyphosate Stewardship?**