

A wide-angle photograph of a lush green agricultural field, likely a soybean field, stretching to the horizon. The sky is a clear, bright blue. In the distance, several utility poles with power lines are visible against the horizon. The overall scene is bright and clear, suggesting a sunny day.

Weed Resistance

Agenda

- ACSC On-line Tools
- Common Ragweed
- Tall Waterhemp
- Betamix Distribution



WEED CONTROL

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Weed Control

Weed control is a critical part of sugarbeet production. Proper timing, as well as responsible herbicide usage to avoid resistant weeds, is needed for both short term and long term profitability. Being on time with herbicide applications gives the herbicide the greatest impact for control; it is always advantageous to control small weeds rather than larger ones even when using Round-up®/Glyphosate.


Using only Roundup® throughout your crop rotation is a recipe for disaster. Combat weed resistance by scouting fields to identify escapes, tank mix herbicides with different modes of action (MOA), and rotate herbicide MOA in consecutive years. Good crop rotations help accomplish this and having wheat or barley is also beneficial. The main goal is to prevent weed seed production.

 [Dual Magnum Registration](#)

 [Glyphosate Formulation](#)

 [Equivalent Rate](#)

 [Specifications For Proper Pesticide Use](#)

 [RR Resistance Management Quick Sheet](#)

[Sugarbeet Production Guide](#)

[North Dakota Weed Control Guide](#)

[University Presentations & Industry Resources](#)



[Extension Publications / ACSC Weed Library](#)



[Ag Notes - Weed Control](#)



[ACSC Herbicide Calculators](#)



[ACSC Quick Sheets](#)



- [Glyphosate Conventional Herbicide Quicksheet - 2015](#)
- [Micro-Rate & Conventional Quicksheet - 2015](#)
- [Glyphosate Formulation](#)
- [Equivalent Rate](#)
- [Specifications For Proper Pesticide Use](#)
- [RR Resistance Management Quick Sheet](#)

[Fact Sheets](#)



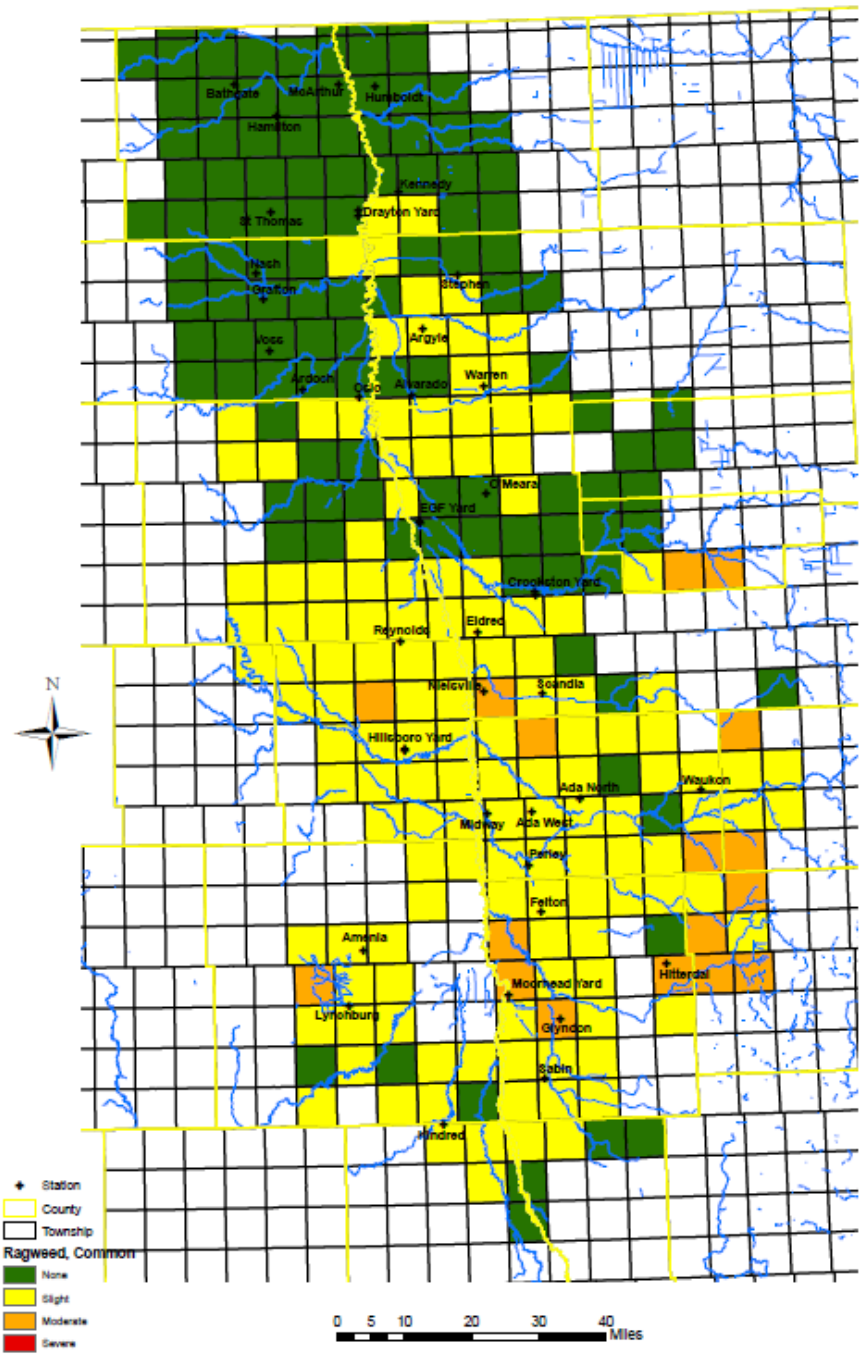
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2015 Weed Resistance Map - Ragweed, Common



Common Ragweed Management Strategies

- Start with a weed free seed bed
- Proper weed ID!
- Use full herbicide rates with tank mixes
- Spray small weeds
- Scout fields before & after spray application
- Need 2 applications of Stinger to get desired control ex. 3oz. Fb. 3oz.

Common Ragweed vs. Biennial Wormwood ID



Common Ragweed

Biennial Wormwood

Common Ragweed Management Strategies

- May see Stinger injury
- Manage field borders and ditches
- Utilize crop rotation



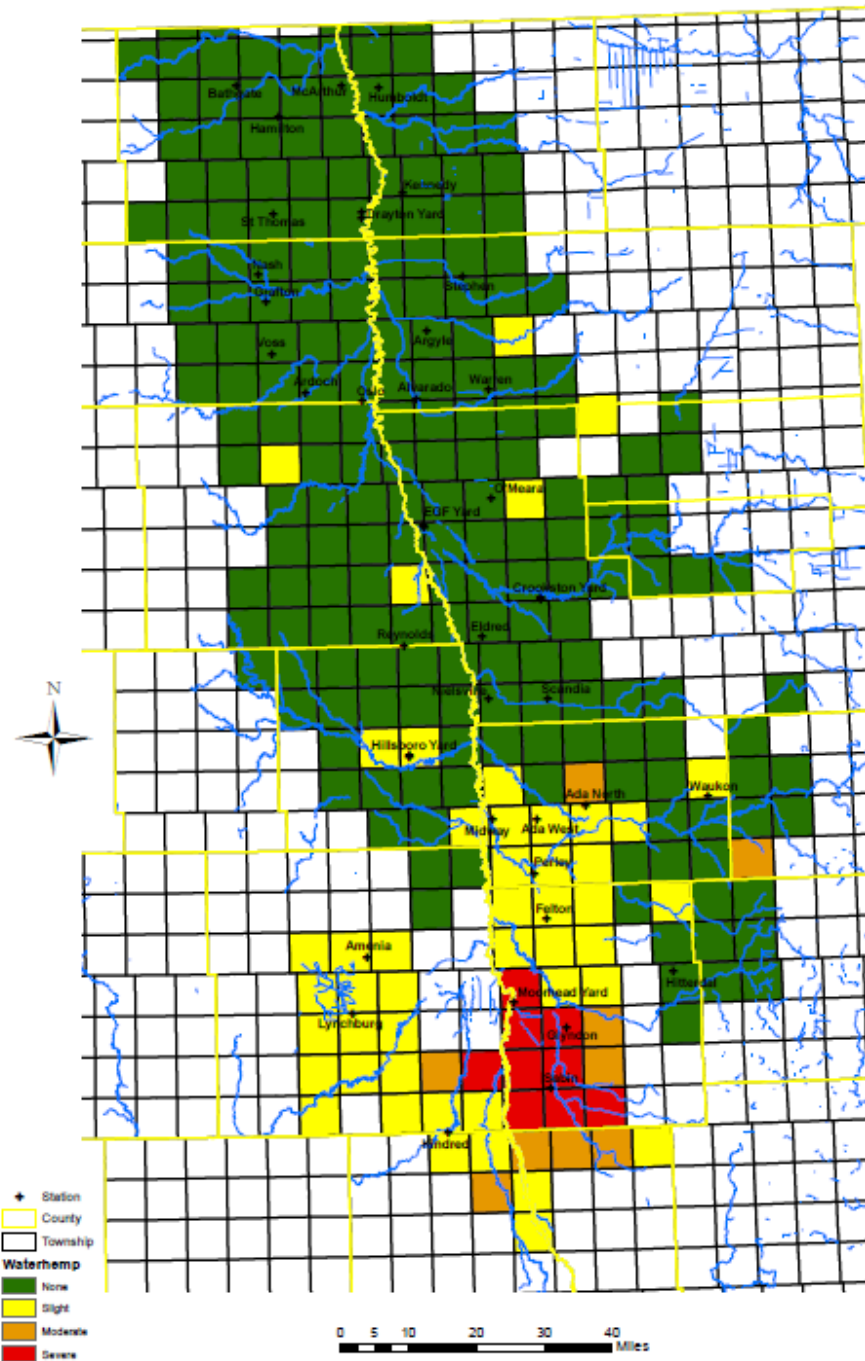
Common Ragweed

- Common ragweed control <1" tall
 - Roundup PowerMax 28 oz/a + Stinger 2 oz/a
 - Repeat application approximately 14 days later
- Common ragweed control 1"-4" tall
 - Roundup PowerMax 28 oz/a + Stinger 4 oz/a **or**
 - Roundup PowerMax 28 oz/a + Stinger 2 oz/a + either Nortron 4 oz/a, Upbeet .5 oz/a, **or** Betamix 12 oz/a
 - Repeat application approximately 14 days later

Common Ragweed



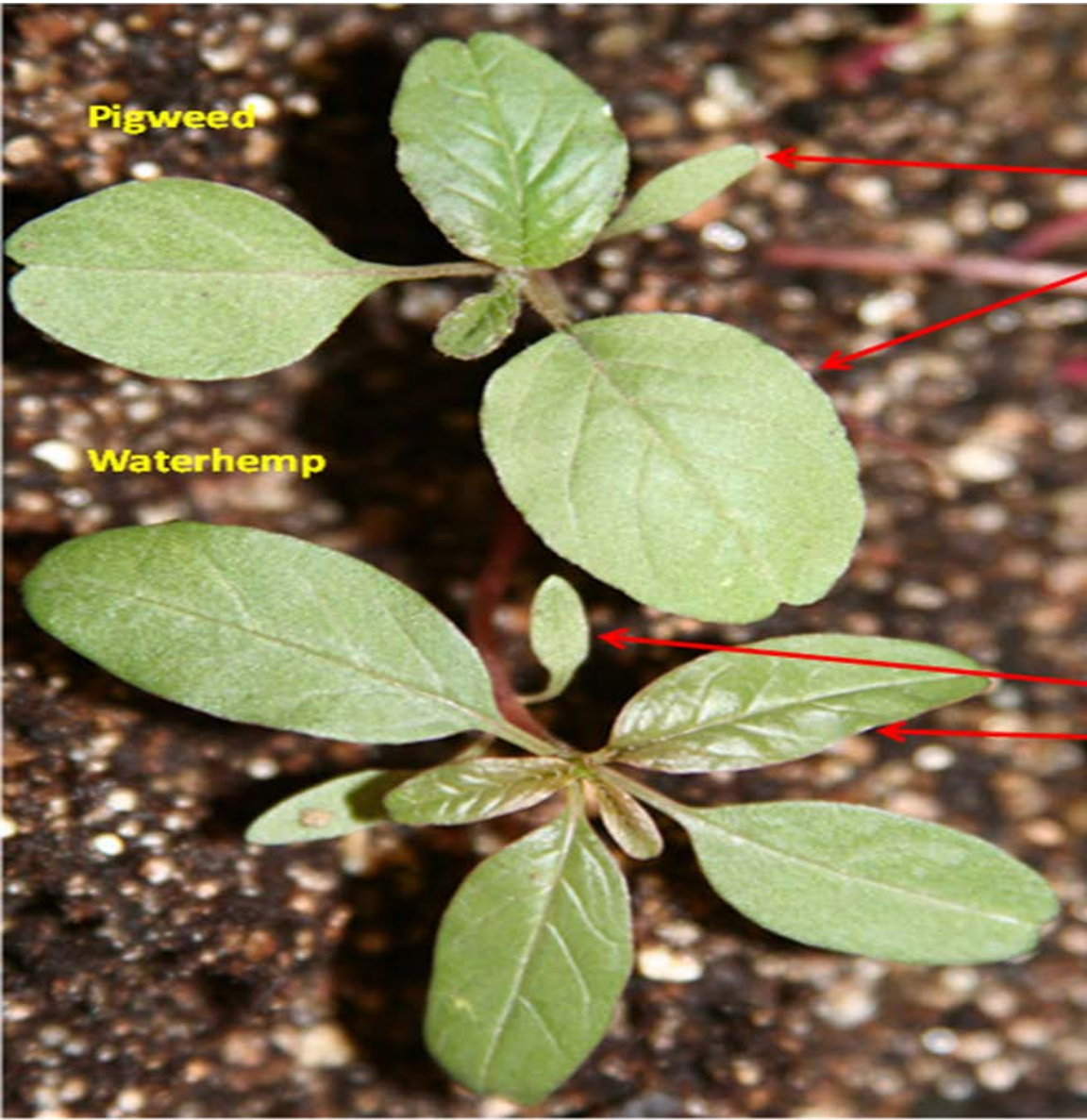
2015 Weed Resistance Map - Waterhemp



Waterhemp Management Strategies

- Start with a weed free seed bed
- Proper weed ID!
- Use full herbicide rates with tank mixes
- PPI, PRE, or Lay-by needed
- Dual needs Indemnified Label signed by grower for PRE
- Spray small weeds
- Scout fields before & after spray application

Waterhemp vs. Pigweed ID



Pigweed

Pigweed Seedling Stage

- Cotyledons "Elongated"
- 1st Leaves rounded like "C" shape
- Fine hairs throughout plant
- Rough stem & leaf surfaces

Waterhemp

Waterhemp Seedling Stage

- Cotyledons "Egg-Shaped"
- Actual leaves are waxy long & narrow
- No hairs on plant "hairless"
- Smooth stem & leaf surfaces

Waterhemp Management Strategies

- Manage field borders and ditches
- Utilize crop rotation



Waterhemp Early Planting- April/Early May

- 1st Post Application (2 leaf beets)
 - Roundup PowerMax 28 oz/a + Nortron 6 oz/a + (Stinger 2 oz/a **or** Betamix 12 oz/a **or** Upbeet .75 oz/a) + (Outlook 12 oz/a **or** Dual 1 pt/a **or** Warrant 2.25 pt/a) + HSMOC 1 pt/a + AMS 1 #/a
- 2nd Post Application (4-6 leaf beets)
 - Roundup PowerMax 28 oz/a + Nortron 6 oz/a + (Stinger 2 oz/a **or** Betamix 16 oz/a **or** Upbeet .75 oz/a) + (Outlook 12 oz/a **or** Dual 1 pt/a **or** Warrant 2.25 pt/a) + HSMOC 1 pt/a + AMS 1 #/a

Waterhemp Late Planting- Mid May/June

- Pre-Emerge
 - Nortron 6-7.5 pt/a **or** (Dual Magnum .5 pt/a FB layby)
- 1st Post Application (2-4 leaf beets)
 - Roundup PowerMax 28 oz/a + Nortron 6 oz/a + (Stinger 2 oz/a **or** Betamix 12 oz/a **or** Upbeet .75 oz/a) + (Outlook 18 oz/a **or** Dual 1-1.25 pt/a **or** Warrant 3.25 pt/a) + HSMOC 1 pt/a + AMS 1 #/a
- 2nd Post Application (Prior 8 leaf beets)
 - Roundup PowerMax 28 oz/a + Nortron 6 oz/a + (Stinger 2 oz/a **or** Betamix 12 oz/a **or** Upbeet .75 oz/a) + HSMOC 1 pt/a + AMS 1 #/a

Lay-By Rainfall Activation



1/4"

Outlook
Herbicide



1/2"

 **Dual Magnum**[®]



3/4"

 **WARRANT**[®]
HERBICIDE

****Rough estimates****

What is the Cost of Late Season Waterhemp?

by Bob Hartzler



Do the math...

6 to 12 inches above the canopy
= 21,000 seeds per plant.



2 to 3 feet above the canopy
= 124,000 seeds per plant



- One small female waterhemp per 15 row feet = 1,162 plants per acre.
At 21,000 seeds per plant = 24,400,000 seeds per acre.
- If 60% enter seedbank and 6% emerge, that = 878,000 plants per acre, which = 20 plants per square foot.
- If your herbicide program provides 95% control, you will still have one waterhemp per square foot.



For more information contact:

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Waterhemp





Kochia



2015 Chemical Distribution

- Chemical Distributed
 - 64,427.5 gallons distributed
 - 28,260 gallons left in inventory
- Distribution of remaining Betamix
 - Chemical needs to be in growers hands by 2018





Any Questions?