



Survey of Stakeholders to Assess Management and Problem Weeds in Nebraska Cropping Systems



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Survey Questionnaire

❖ Divided into several sections:

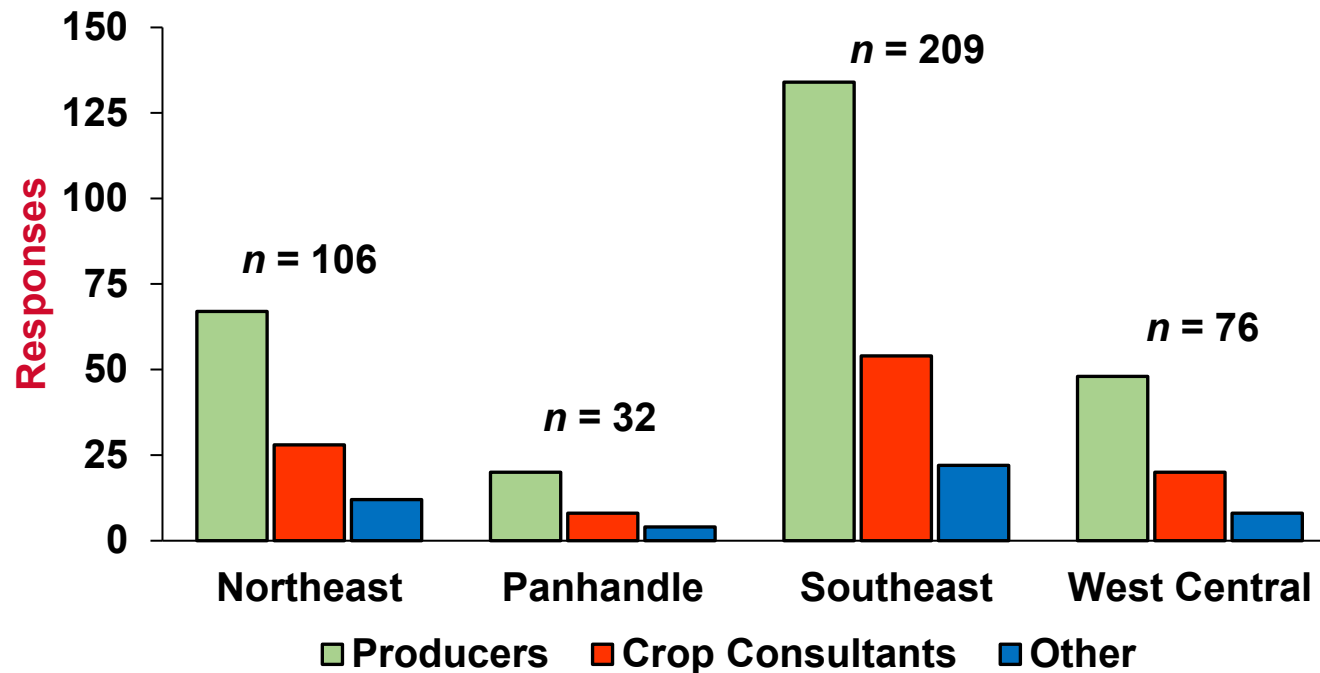
- 1: General Information
- 2: Crop Production
- 3: Problem Weeds & Herbicide-Resistance
- 4: Herbicide Usage & Timing
- 5: Weed Management & Perceptions
- 6: Future Research



**2019 Crop Production Clinics
Weed Science Questionnaire
Nebraska Extension**

1. Please circle what best describes your occupation. Are you a grower, crop consultant, certified crop adviser, or other (please specify) _____? Which county and state are you from?
County: _____ State: _____
2. Please circle what tillage practice(s) you use. Please specify how many acres are under no-till or under some form of tillage, and circle for what reason(s) you do these practices.
No-Till Minimal/Reduced-Till Deep Plow Other: _____
Acres under no-till: _____
Acres under tillage: _____
Reason(s): Weed Control Compaction Other(s): _____
3. Do you use cover crops on your farm? If yes, please specify which cover crops you use, number of acres planted, and circle for what reasons you use cover crops.
Cover crops used: _____
Acres planted: _____
Reason(s): Weed Control Erosion Control Other(s): _____
4. How many acres of the below crops do you grow/manage? Please write-out any other crops you raise/ manage that are not listed below.
1. Corn: _____ 2. Soybean: _____ 3. Wheat: _____
4. Sorghum: _____ 5. Alfalfa: _____ 6. Sugarbeet: _____
7. Sunflower: _____ 8. Dry Bean: _____ 9. Potatoes: _____
10. _____ 11. _____ 12. _____
5. What are the top five difficult to control weeds on your farm?
1. _____
2. _____
3. _____
4. _____
5. _____

Participants



Producers:

- Owner/Operators

Crop Consultants:

- Agronomists

- Cert. Crop Advisors

- Crop Consultants

Others:

- Applicators

- Industry Reps.

- Research Techs.

Farm Acreages and Crops

Statistics

- ❖ 68% area under no-till
- ❖ 87% area in corn and soybean production
- ❖ 61% of stakeholders use cover crops
- ❖ 87% of cover crop users plan cereal rye

Crop Production Questions	Extension Districts				
	Northeast	Southeast	Panhandle	West Central	Nebraska
Farming areas (ac) reported by producers	1853	2483	1957	2432	2308
Scouted areas (ac) reported by crop consultants	11461	13551	10028	10262	1155

Problem Weeds

Relative Problematic Rankings:

- ❖ Respondents were asked to rank top-five most problematic weeds
- ❖ Five, four, three, two, and one problematic points were assigned to the rank #1, #2, #3, #4, and #5 problem weeds, respectively.
- ❖ Relative problematic points were calculated as (Sarangi and Jhala 2018):

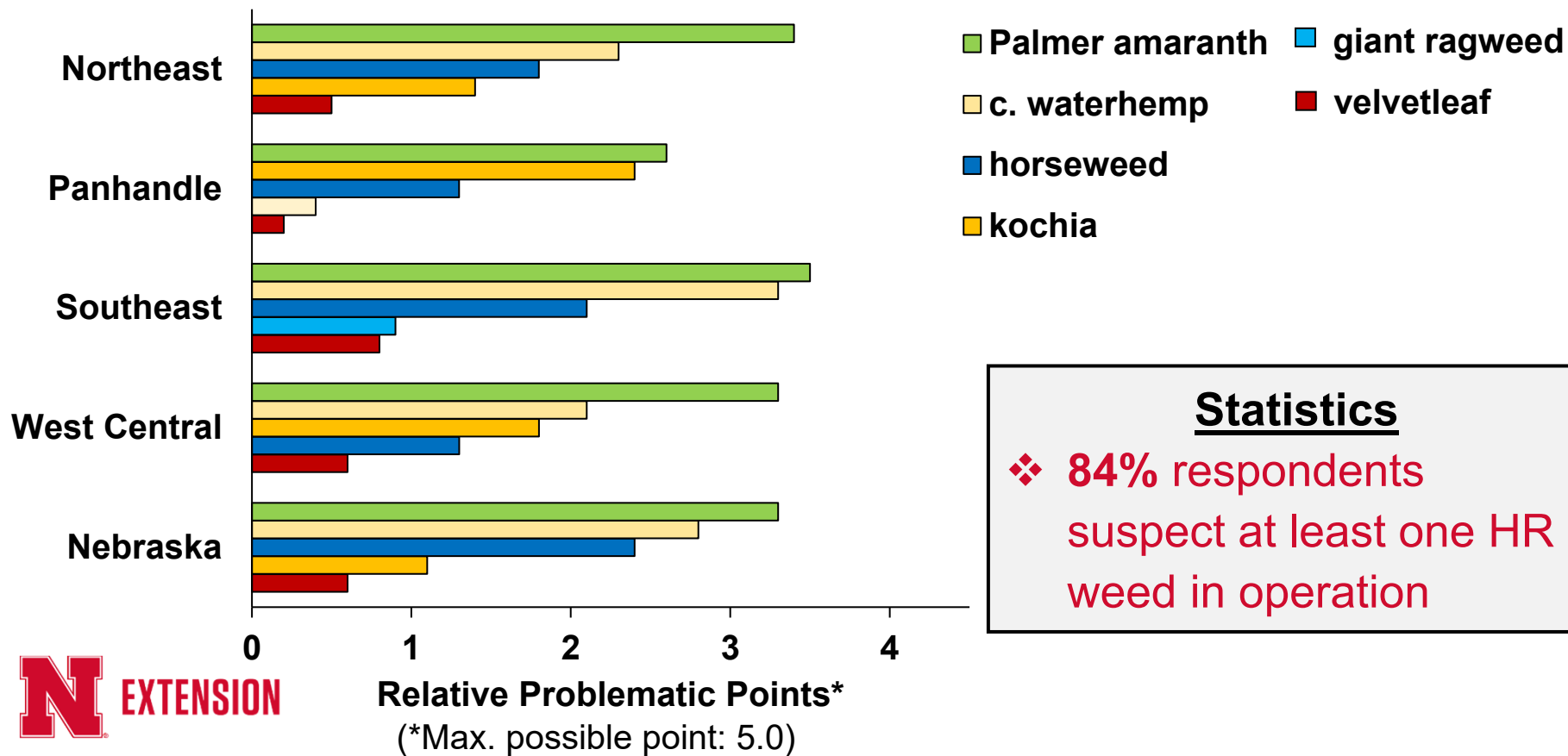
$$RP = \sum_{r=1}^5 \frac{FX}{n}$$

F is the number of respondents choosing the rank ' r ' for a particular weed, and X is the problematic points associated to r , and n is the total number of responses (including all the weeds) for that rank.

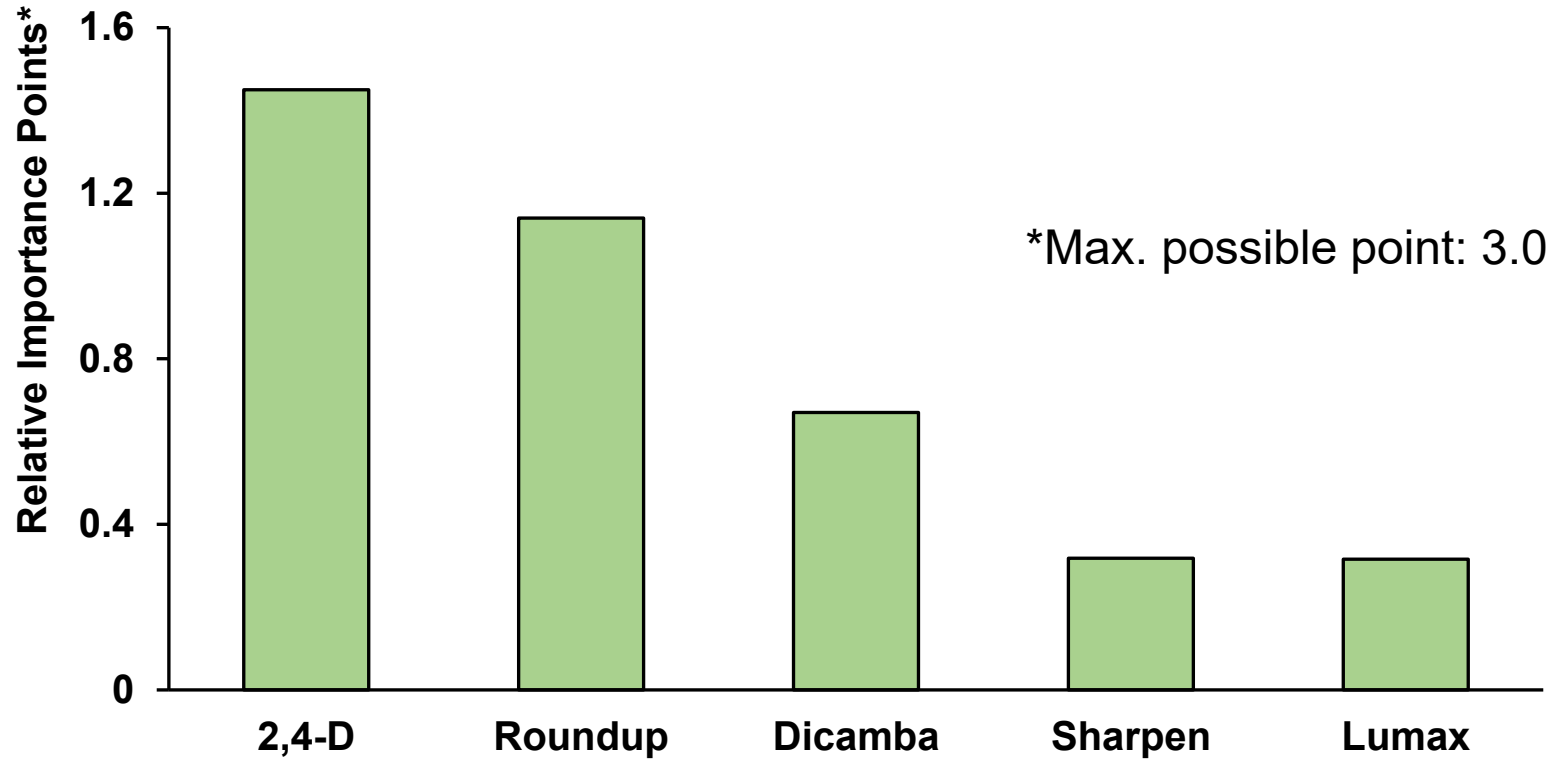


Sarangi D, Jhala AJ (2018) A Statewide Survey of Stakeholders to Assess the Problem Weeds and Weed Management Practices in Nebraska. Weed Technol 32:642–655

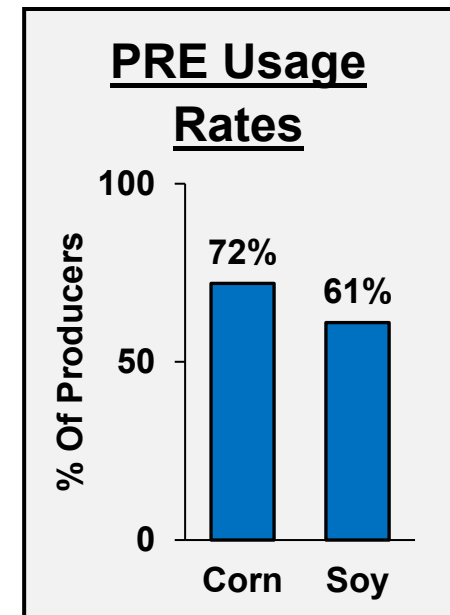
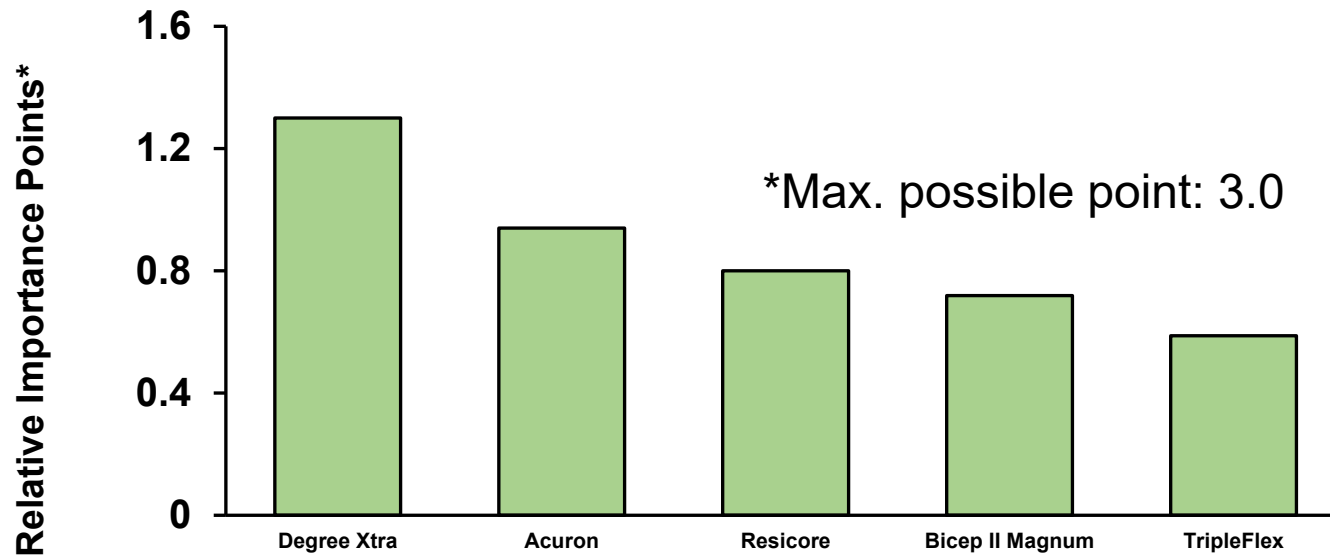
Problem Weeds



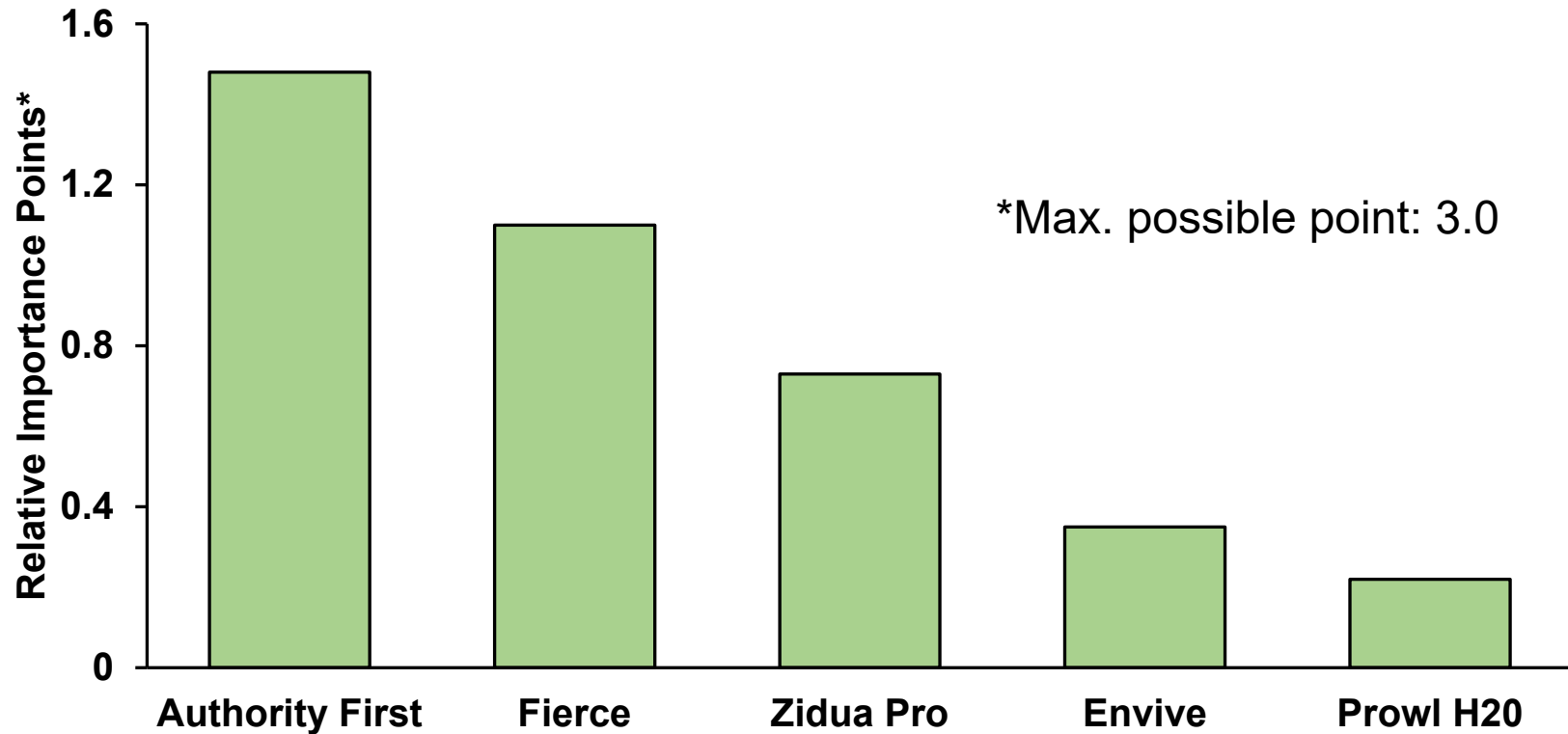
Pre-Plant Burndown Herbicides



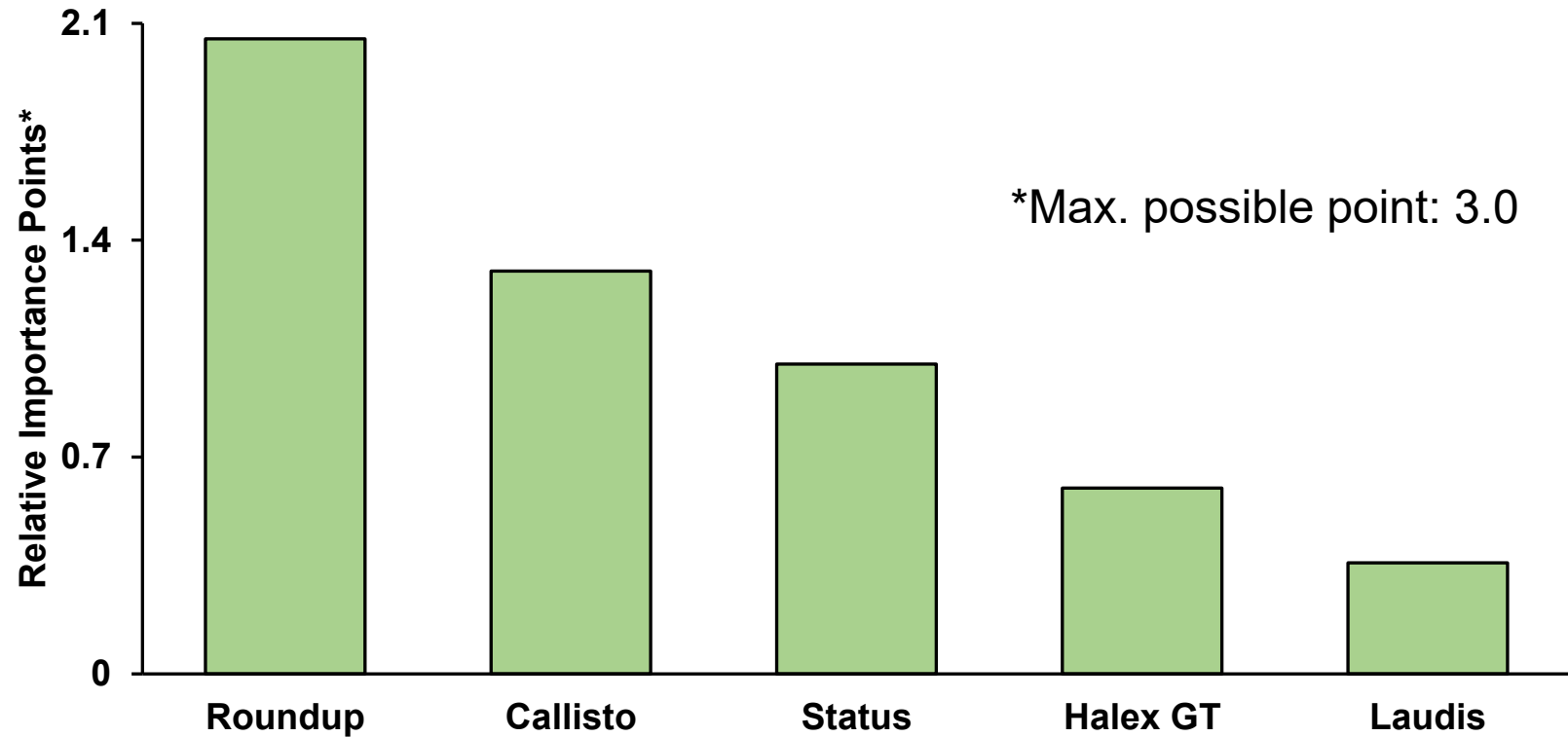
Corn Pre-Emergence Herbicides



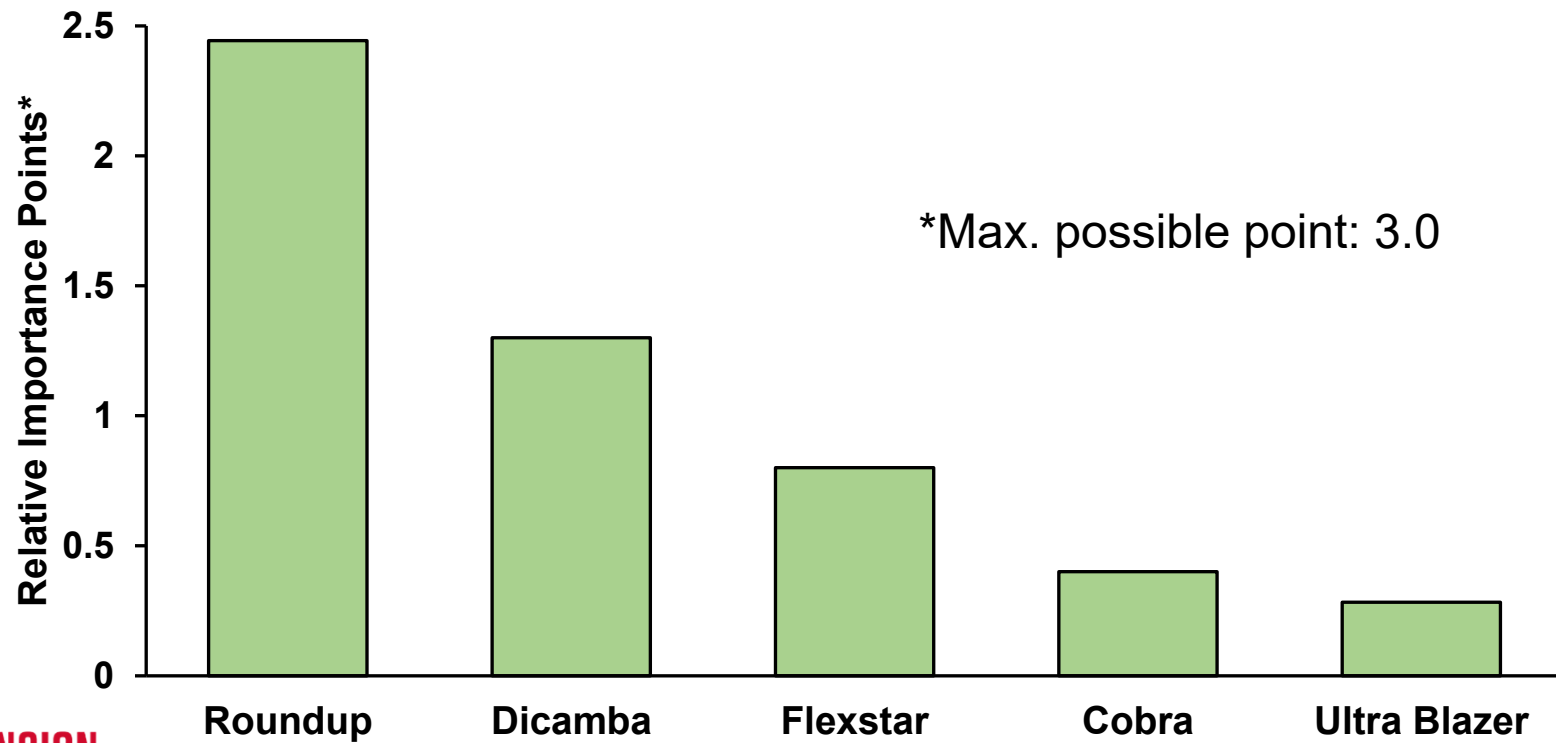
Soybean Pre-Emergence Herbicides



Corn Post-Emergence Herbicides



Soybean Post-Emergence Herbicides

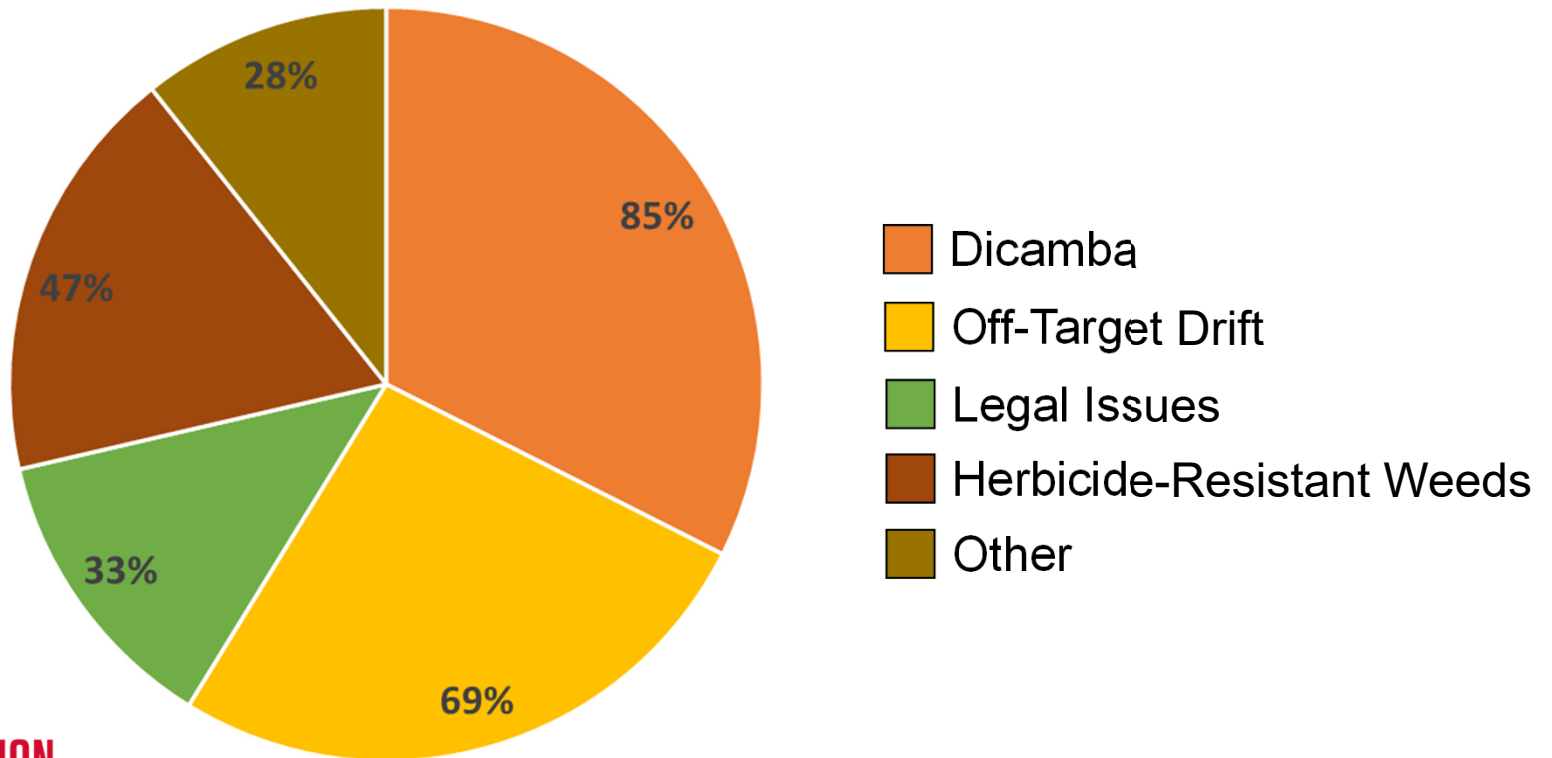


Glyphosate-Resistant Weed Management

Statistics:

- ❖ Q: How serious is weed resistance to glyphosate?
 - **Ratings: 8.1/10.0; median 9/10.0**
- ❖ Q: Do you rotate between glyphosate-resistant (GR) and non-GR crops?
 - **69% of producer – “No”**
 - Q: Acres of dicamba/glyphosate-resistant soybean
 - **37% of producer soybean acres**
- ❖ Q: Do you control weed escapes or prevent seed set later in the season?
 - **73% of producer – “Yes”**

Stakeholder Concerns



Conclusions

- ❖ Palmer amaranth, common waterhemp, and horseweed were the most problematic weeds in Nebraska
- ❖ Nebraska main crops, corn and soybean
- ❖ Despite high concern for GR weeds, glyphosate is the most popular POST option in corn and soybean

The Next Step

- ❖ Disseminate and fully analyze survey results
 - ❖ Compare and contrast results from previous Stakeholder's Survey (Sarangi and Jhala 2018)
 - ❖ Data collected will be provide a valuable framework and reference material for future research and extension outreach
- ❖ Plan for and repeat survey in five years (2025)

2015 → 2020 → 2025 → 20XX



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Questions?

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