

Evaluation of Electrocution as a Method of Controlling Weed Escapes in Soybean



How the Weed Zapper™ Works:

- Copper boom attached to front of tractor which electrocutes any plant that it contacts
- <110,000 watt generator attached to back of tractor
- Up to 15,000 volts translocating through plants contacted



Initial Impressions of Electrocution as a Weed Control Tactic

1. #1 disadvantage – it can be dangerous!



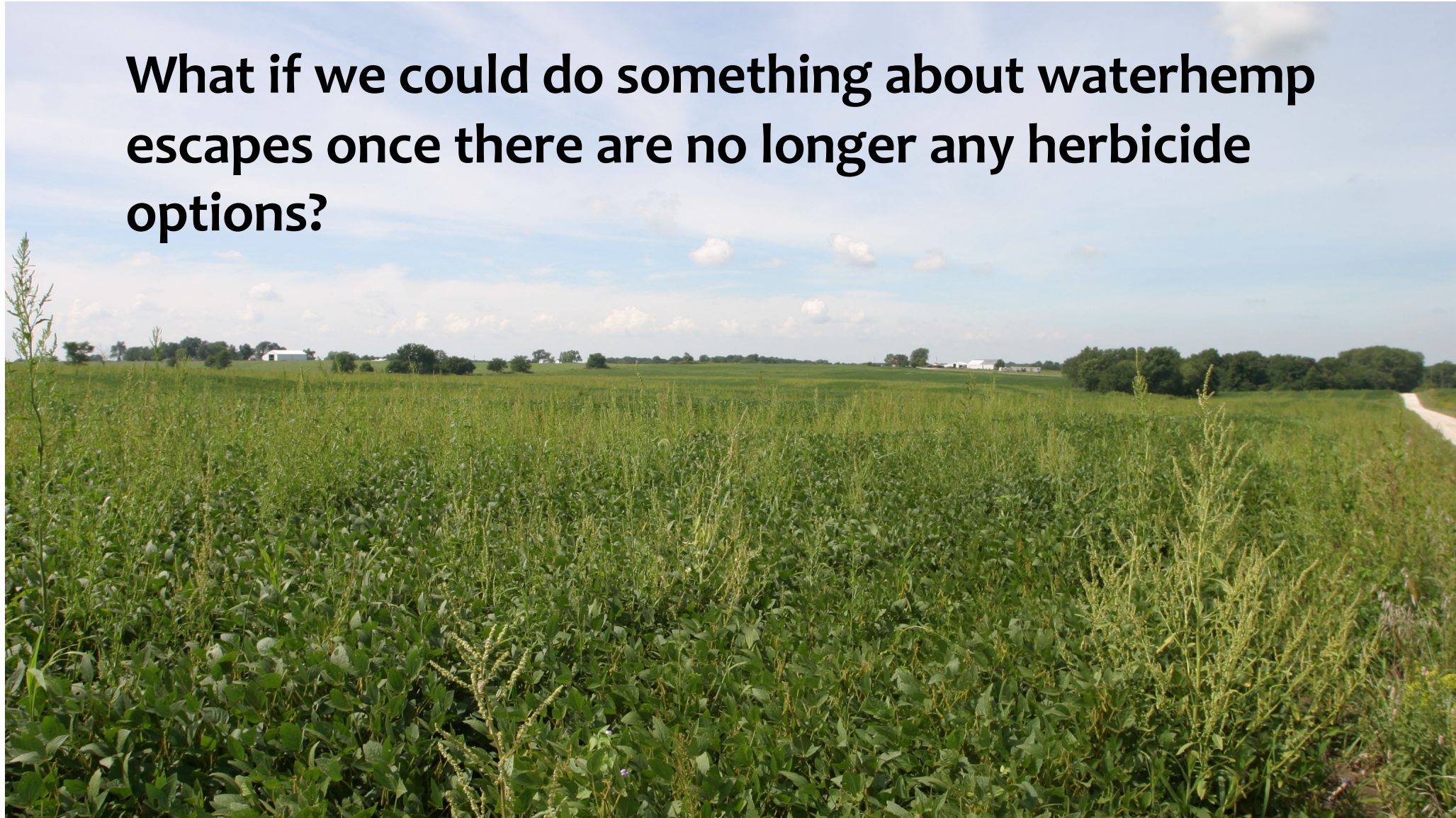


Initial Impressions of Electrocution as a Weed Control Tactic

2. This is not a weed management tool. This is
a weed rescue tool.



What if we could do something about waterhemp escapes once there are no longer any herbicide options?



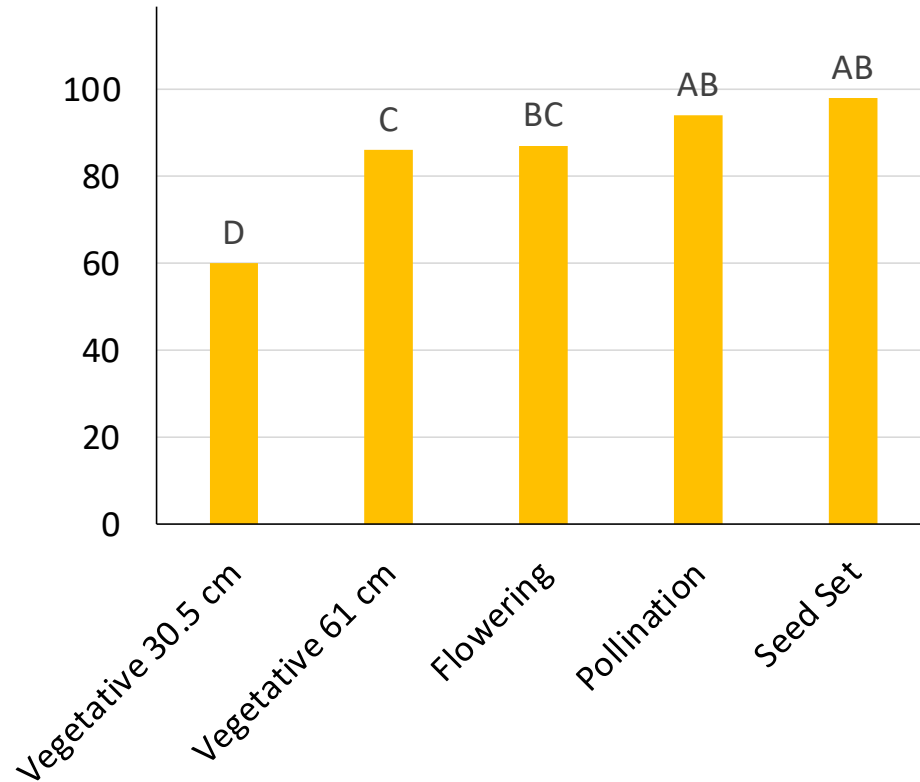
**3. The bigger the
weed(s), the better!
And results are
immediate.**



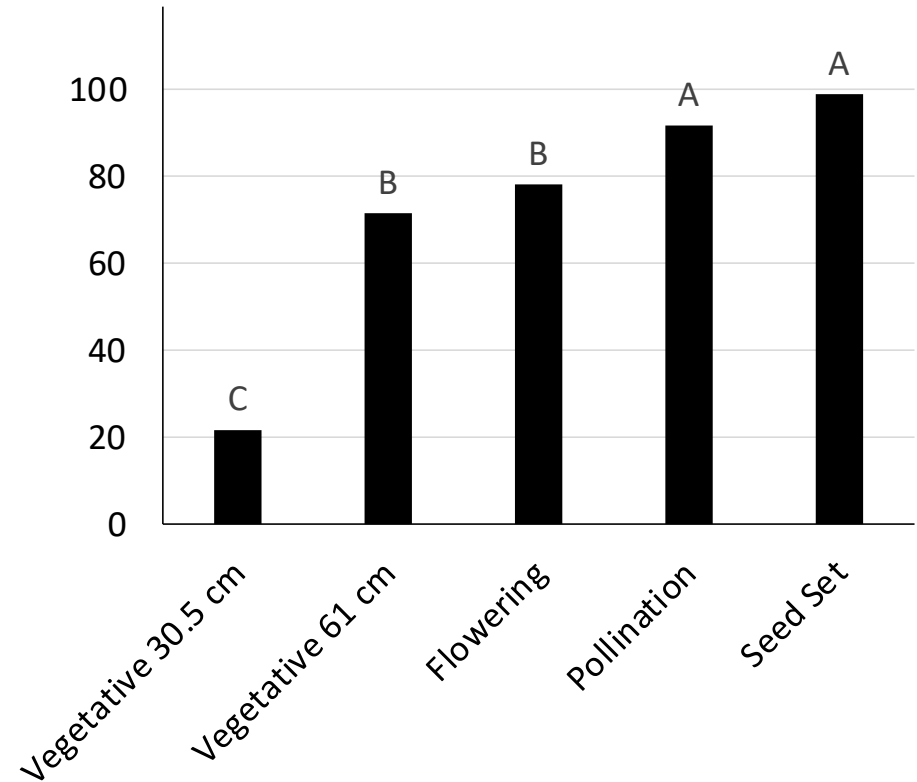
Influence of Growth Stage on Waterhemp Control

Visual Waterhemp Control (%)

7 Days After Treatment Rating



End of Season Rating



Waterhemp Growth Stage at Electrocution

Initial Impressions of Electrocution as a Weed Control Tactic

4. Effective on waterhemp, ragweeds
horseweed/marestail, cocklebur. Slightly
less so on foxtails, barnyardgrass.



Electrocution of Tall, Flowering Horseweed/Marestail Plants

non-treated control



electrocuted 7 days previously



Electrocution of 24-inch Tall Ragweed Plants

non-treated control



electrocuted 7 days previously

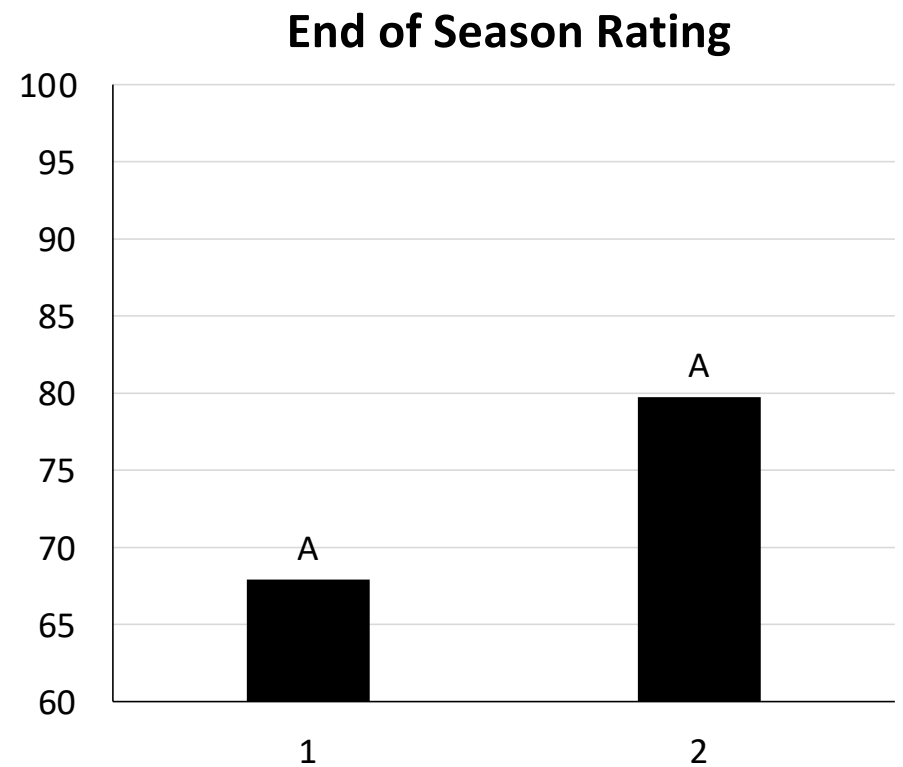
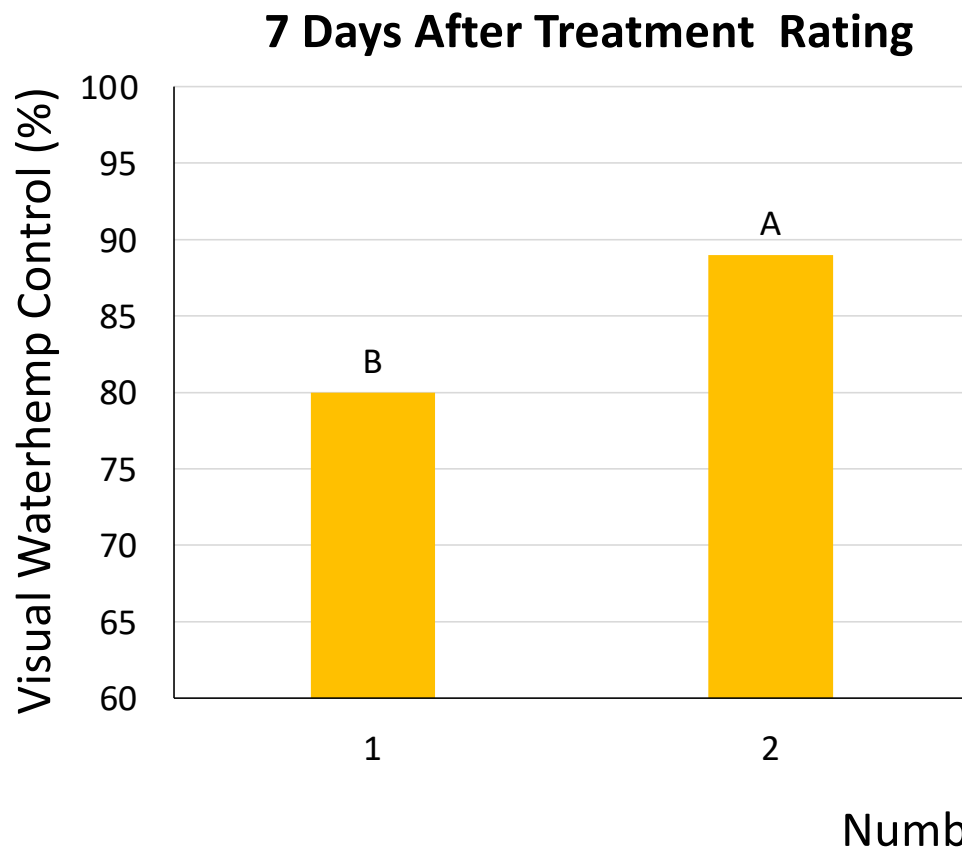


Initial Impressions of Electrocution as a Weed Control Tactic

- 5. Zapping sequentially at ~ 7-day interval is “lights out” and better than just 1 pass.



The Effect of Number of Passes on Waterhemp Control

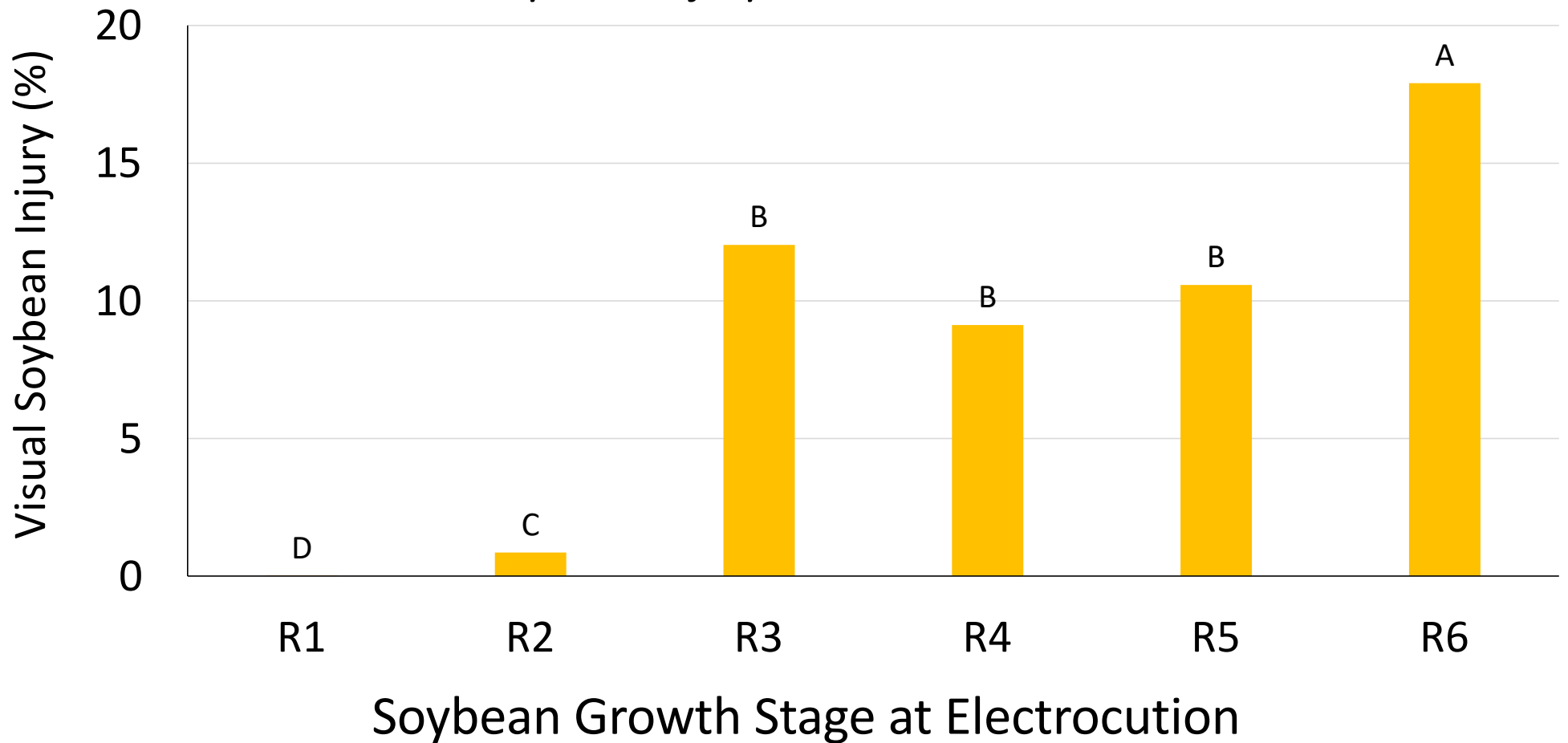


Initial Impressions of Electrocution as a Weed Control Tactic

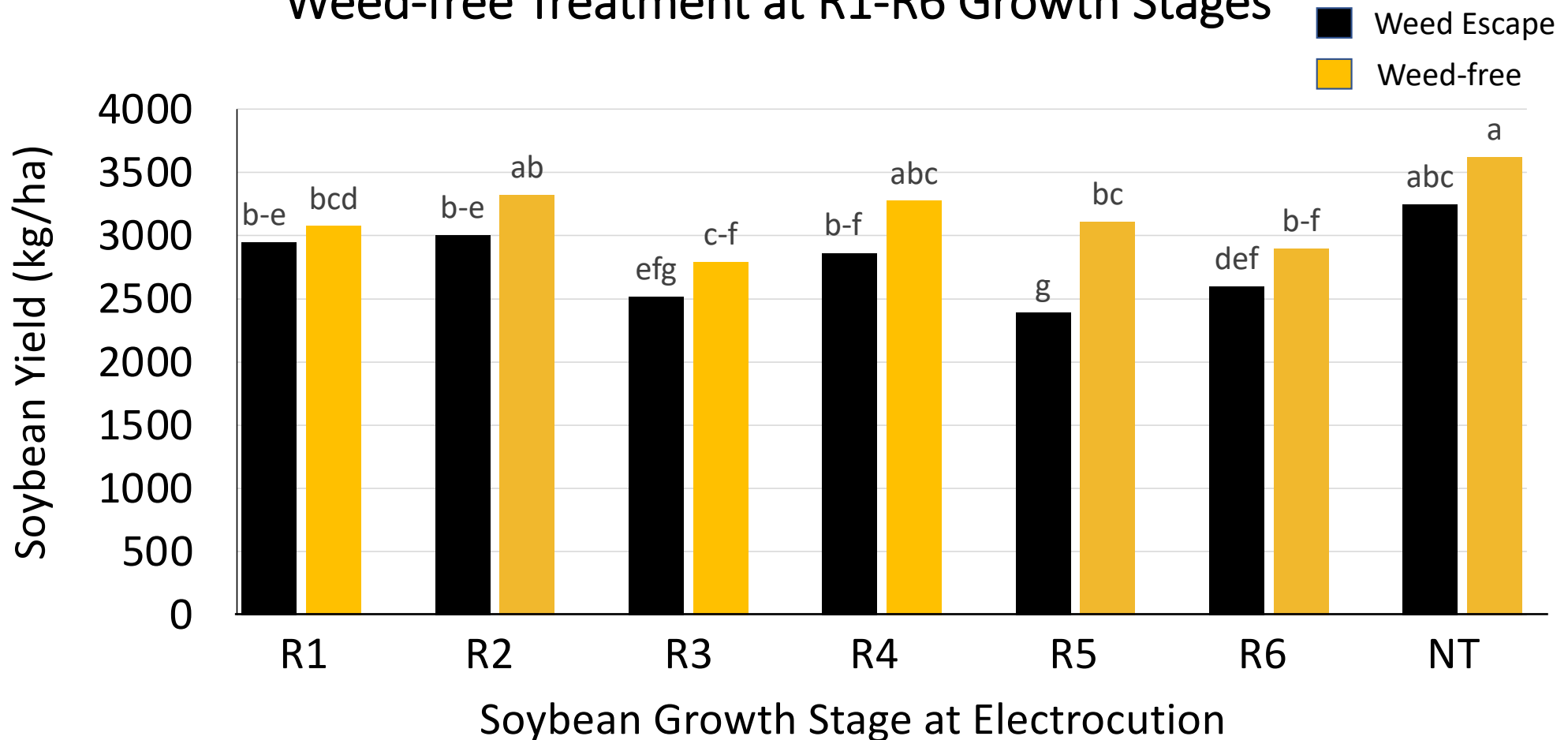
6. Soybean that get contacted in the later reproductive stages of growth can experience substantial injury (and possibly yield loss).



Influence of Growth Stage at the Time of Electrocutation on Soybean Injury at the End of Season



Soybean Yield Response to Electrocutation and Weed Escape or Weed-free Treatment at R1-R6 Growth Stages



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Mizzou®
**weed
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Mizzou[®] Weed science

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