Management of Field Bindweed, Yellow Nutsedge, and Dodder in Processing Tomatoes (just not at the same time)

Tom Lanini

wtlanini@ucdavis.edu

Field Bindweed

Deep rooted perennial
Seedling to perennial in ~30 days
POST treatments less effective in the spring
or after 10am

Most Effective treatments for Field Bindweed

PRE treatment

- Treflan @ 1.0 lbs/a – Best (higher rates ?)
- Zeus @ 0.10 lbs/a – Fair-good
- Matrix @ 0.0625 oz/a – Fair-good (4 oz/a)

POST treatment

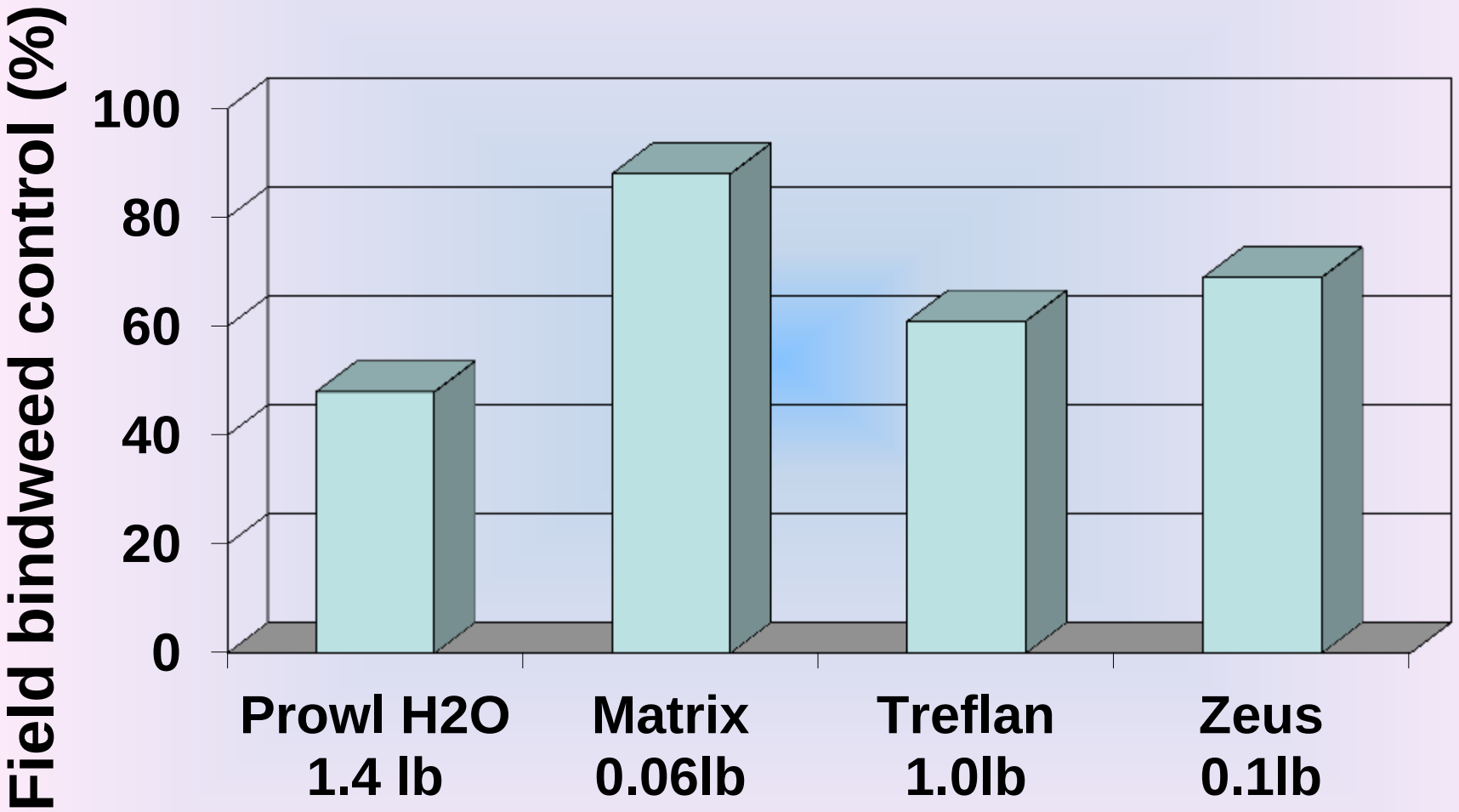
- Matrix 0.03 lb/a – Fair (2 oz/a)
- Shark 0.03 lb/a - Good

Treatments in 2012

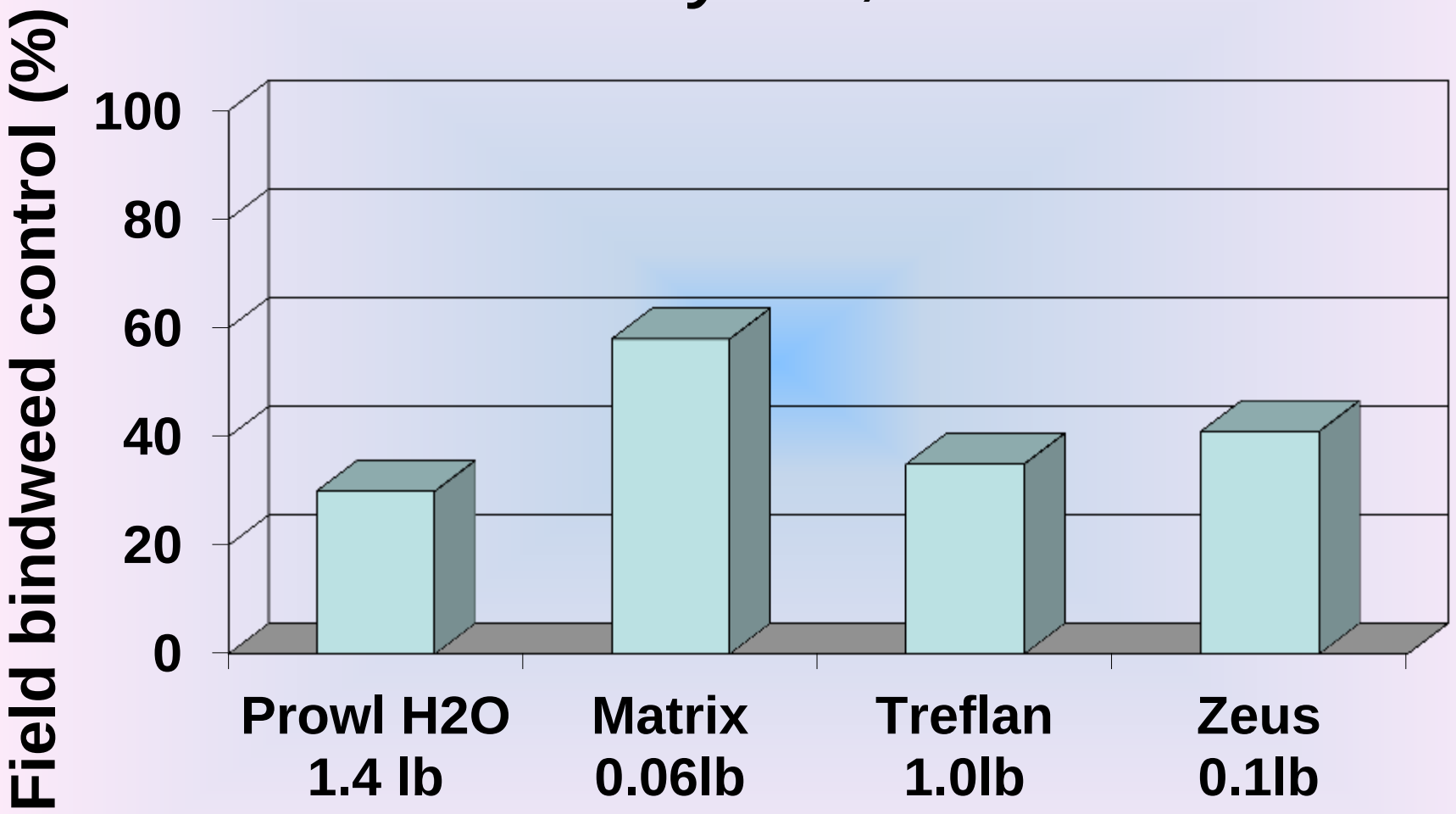
Treatment	Timing	Rate (lbs/ac)
• Prowl H_2O	PRE	1.4
• Matrix	PRE	0.06
• Treflan	PRE	1.0
• Zeus	PRE	0.1
PRE herbicides+ Matrix	POST	0.03
PRE herbicides + Shark	POST	0.03
• Matrix	POST	0.03
+ Matrix	POST (20 day interval)	0.03
• Shark	POST shielded	0.03
• Shark	POST shielded	0.03
+ Shark	POST shield (20 day interval)	0.03
• Untreated		

2012 Bindweed study

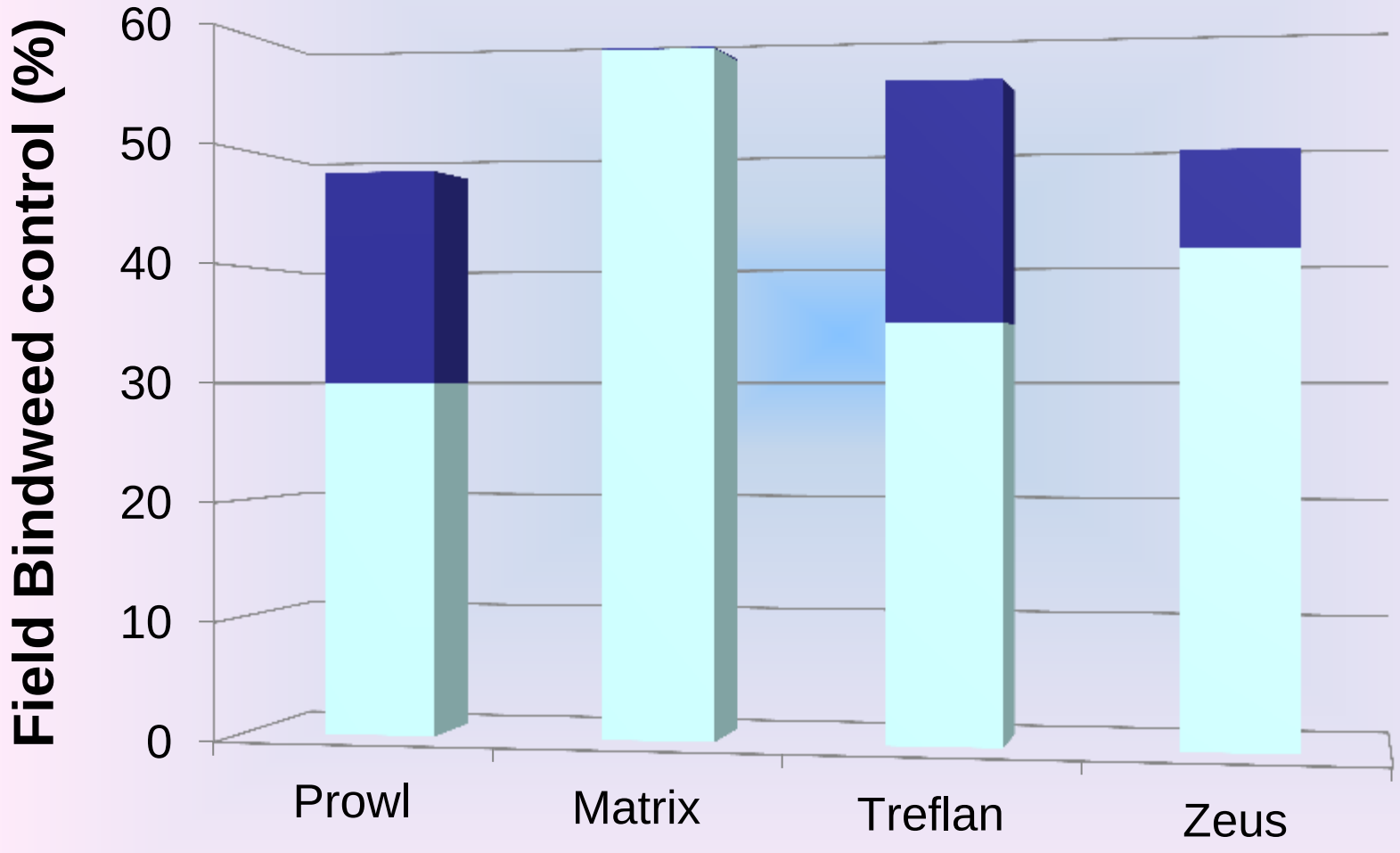
Field Bindweed Control (%) on June 11, 2012



Field Bindweed Control (%) on July 13, 2012



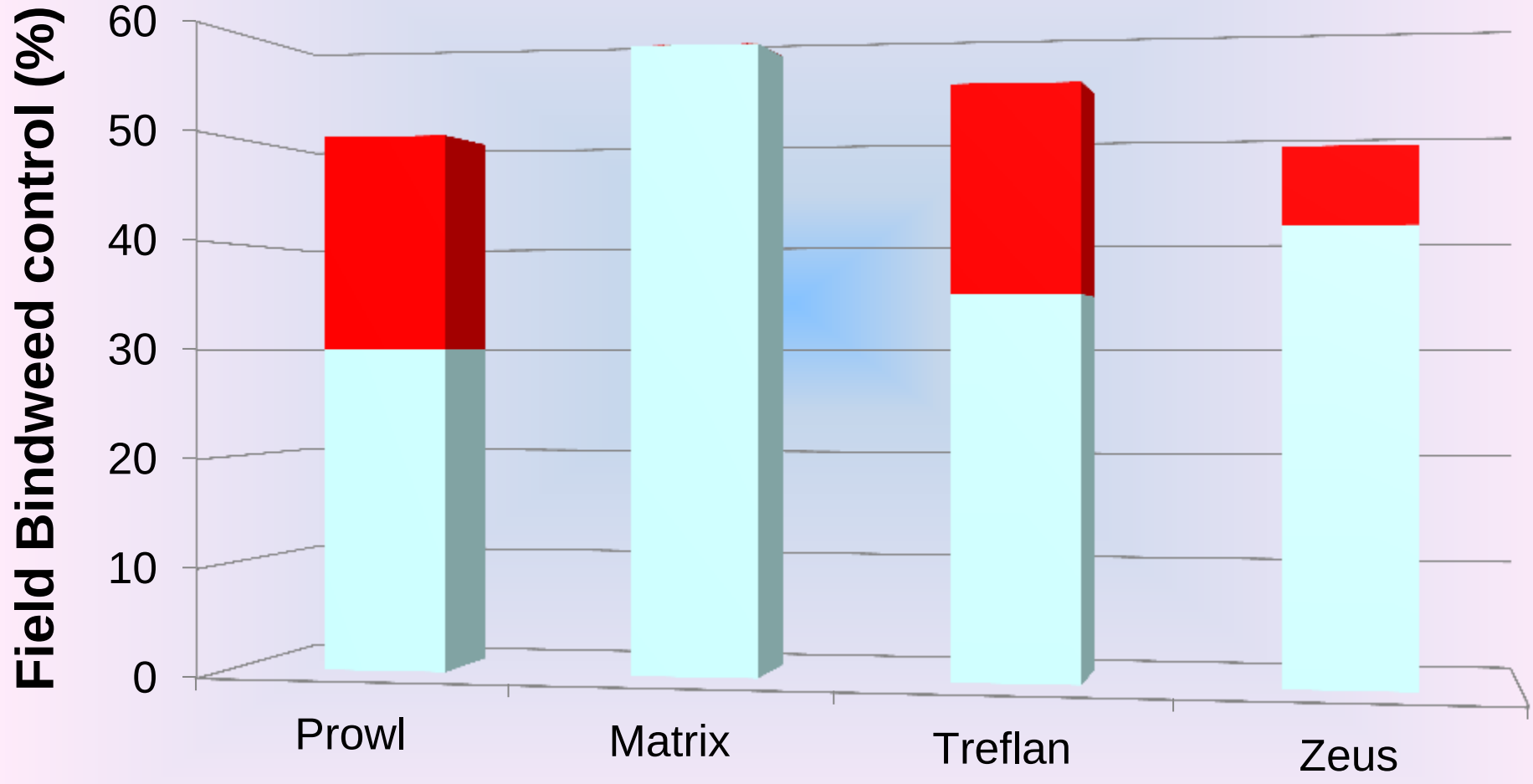
Field Bindweed control (%) on July 13, 2012



PRE herbicides alone or plus Matrix @ 0.03 lb/a POST


Matrix POST

Field Bindweed control (%) on July 13, 2012



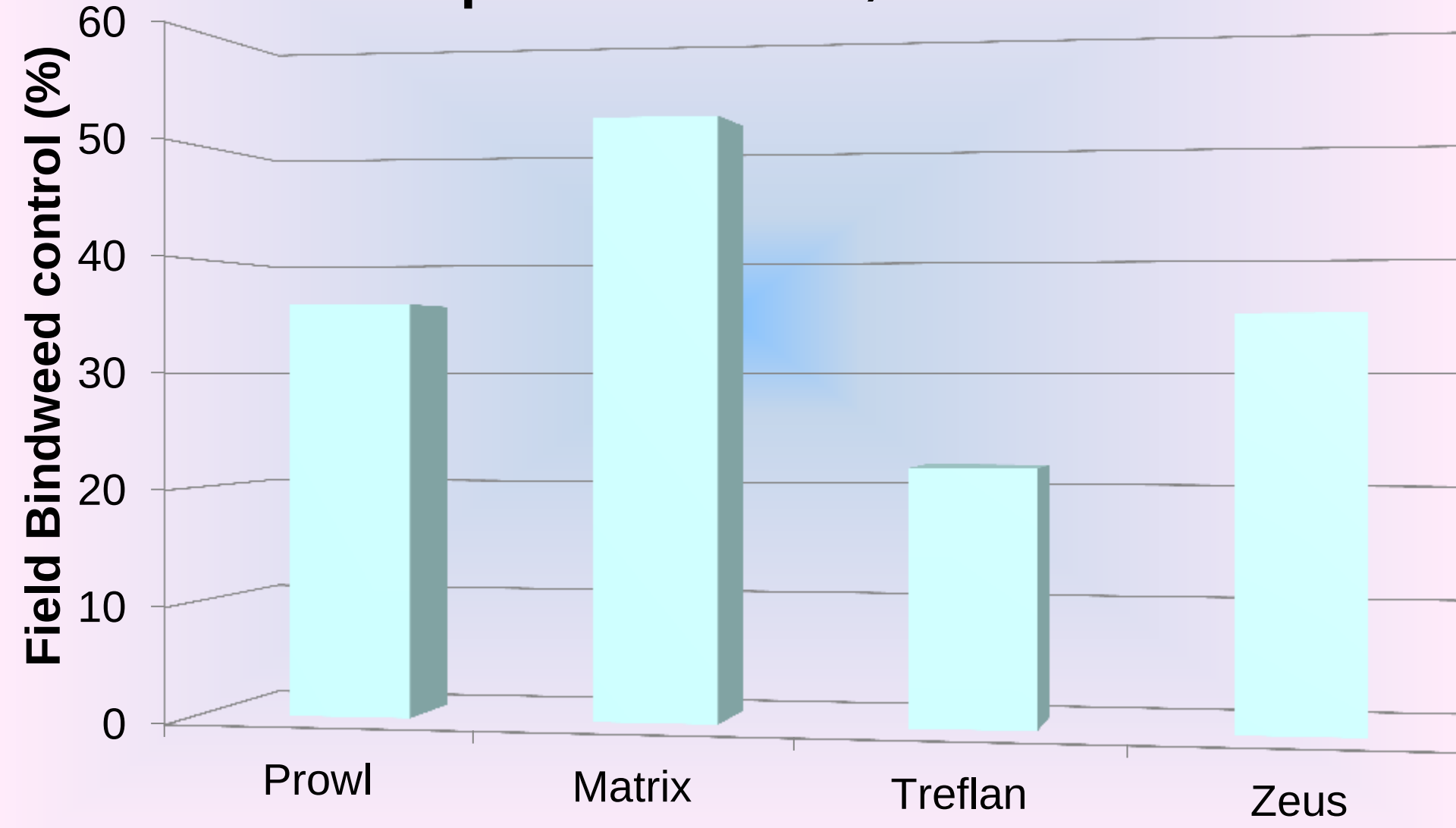
PRE herbicides alone or plus Shark @ 0.03 lb/a POST-directed


Shark POST
1DAT

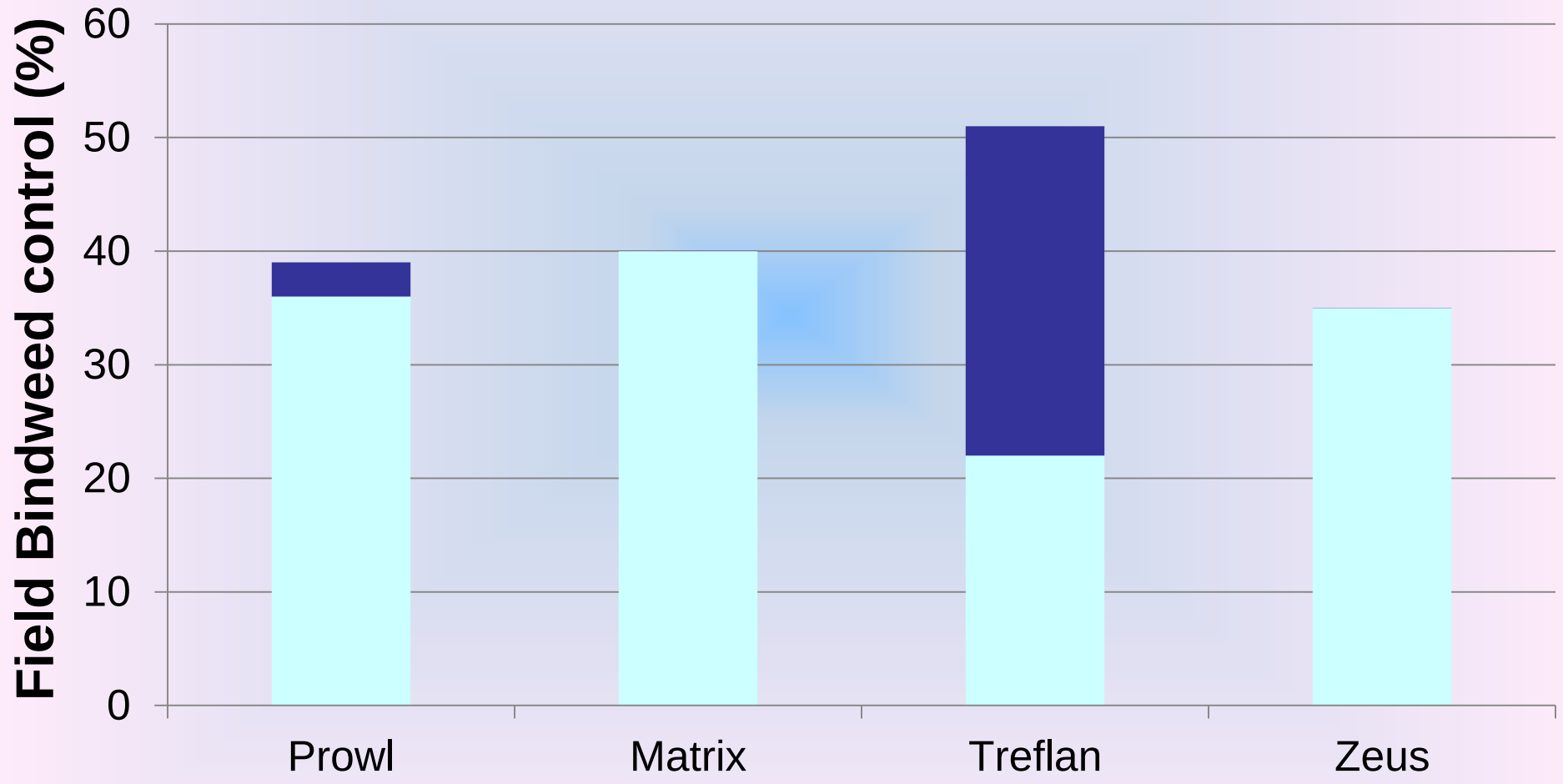

Shark POST
12 DAT


Shark over the top

Field Bindweed control (%) on September 6, 2012

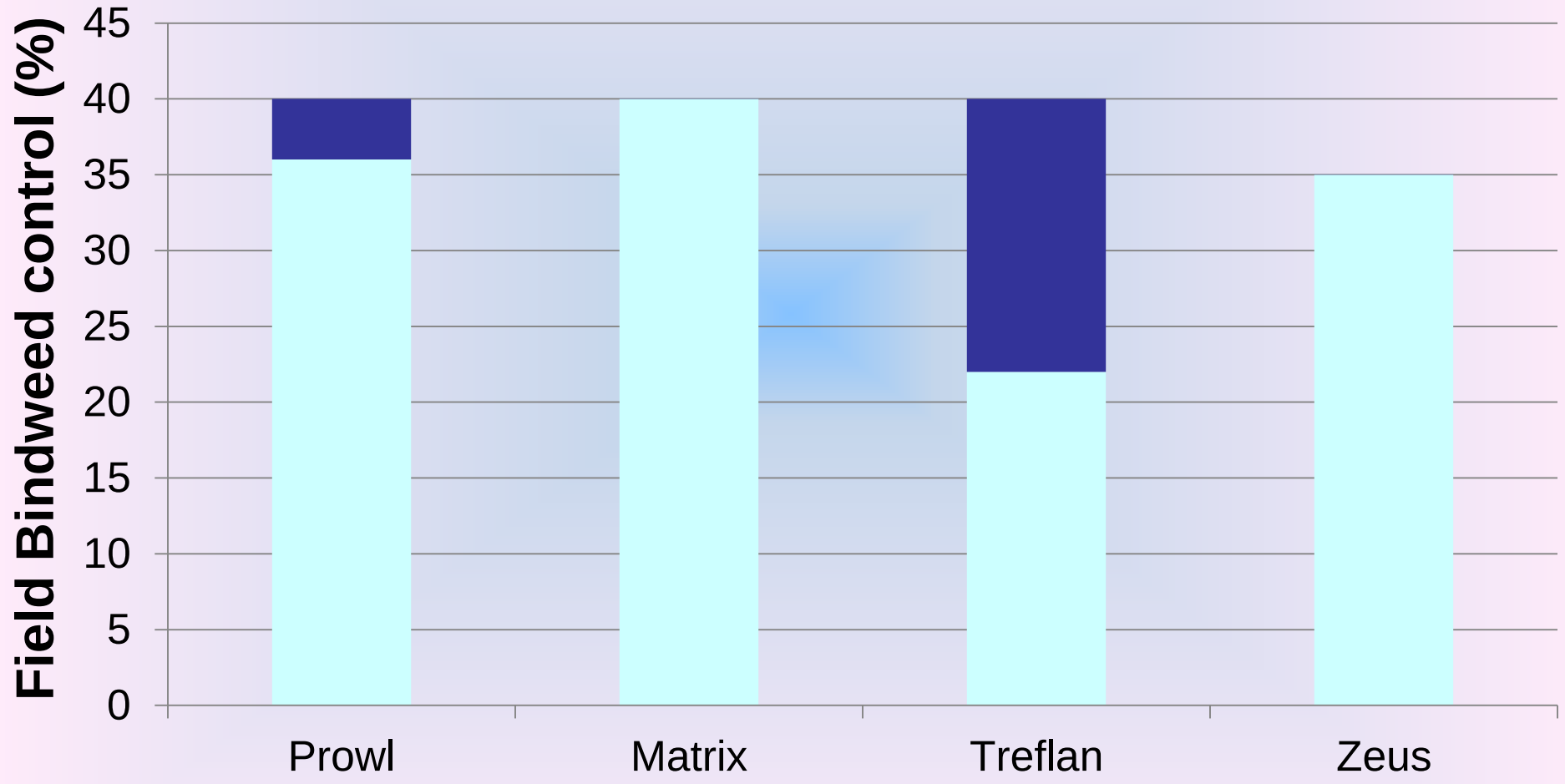


Field Bindweed control (%) on September 6, 2012



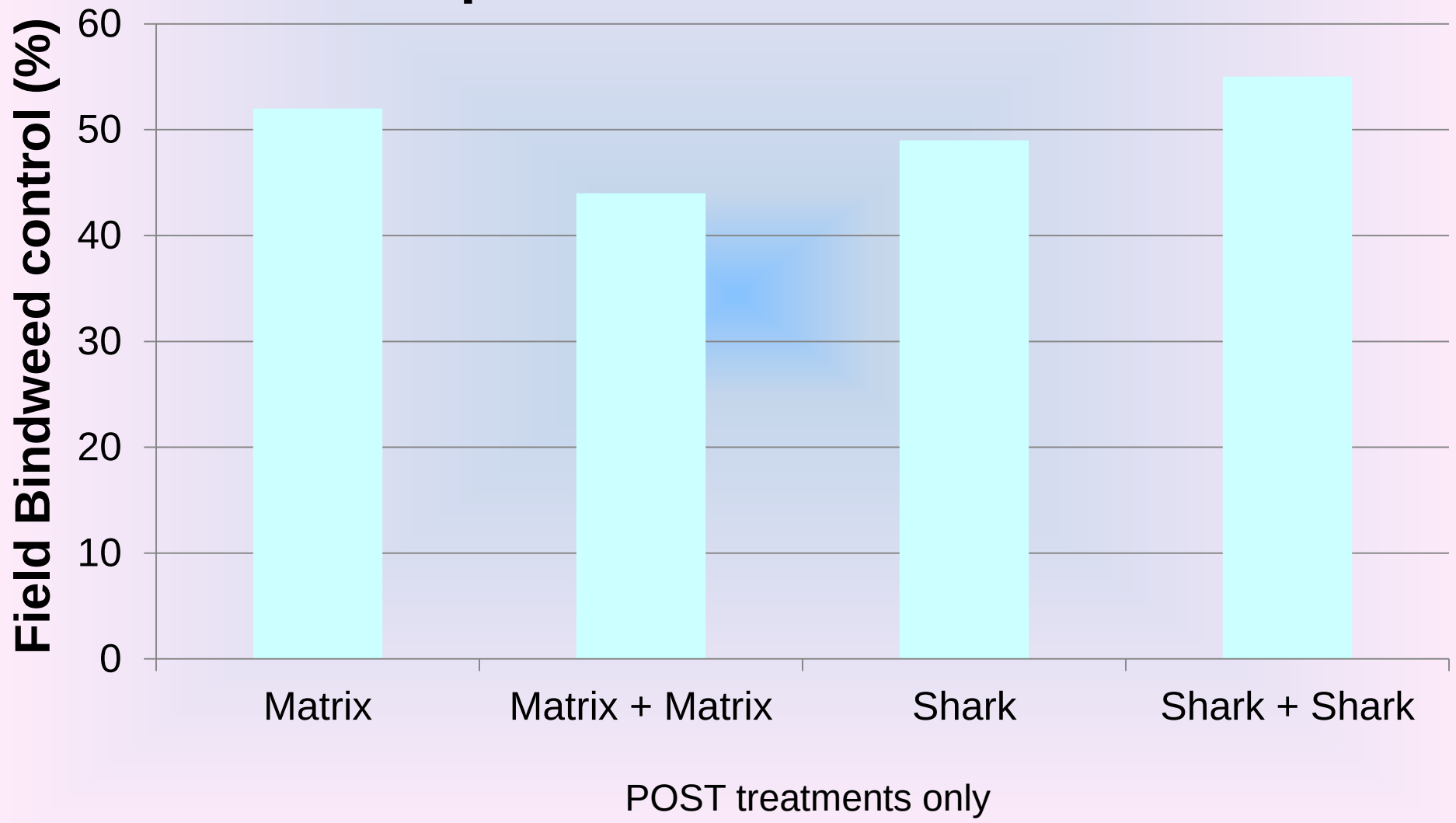
PRE herbicides alone or plus Matrix @ 0.03 lb/a POST

Field Bindweed control (%) on September 6, 2012

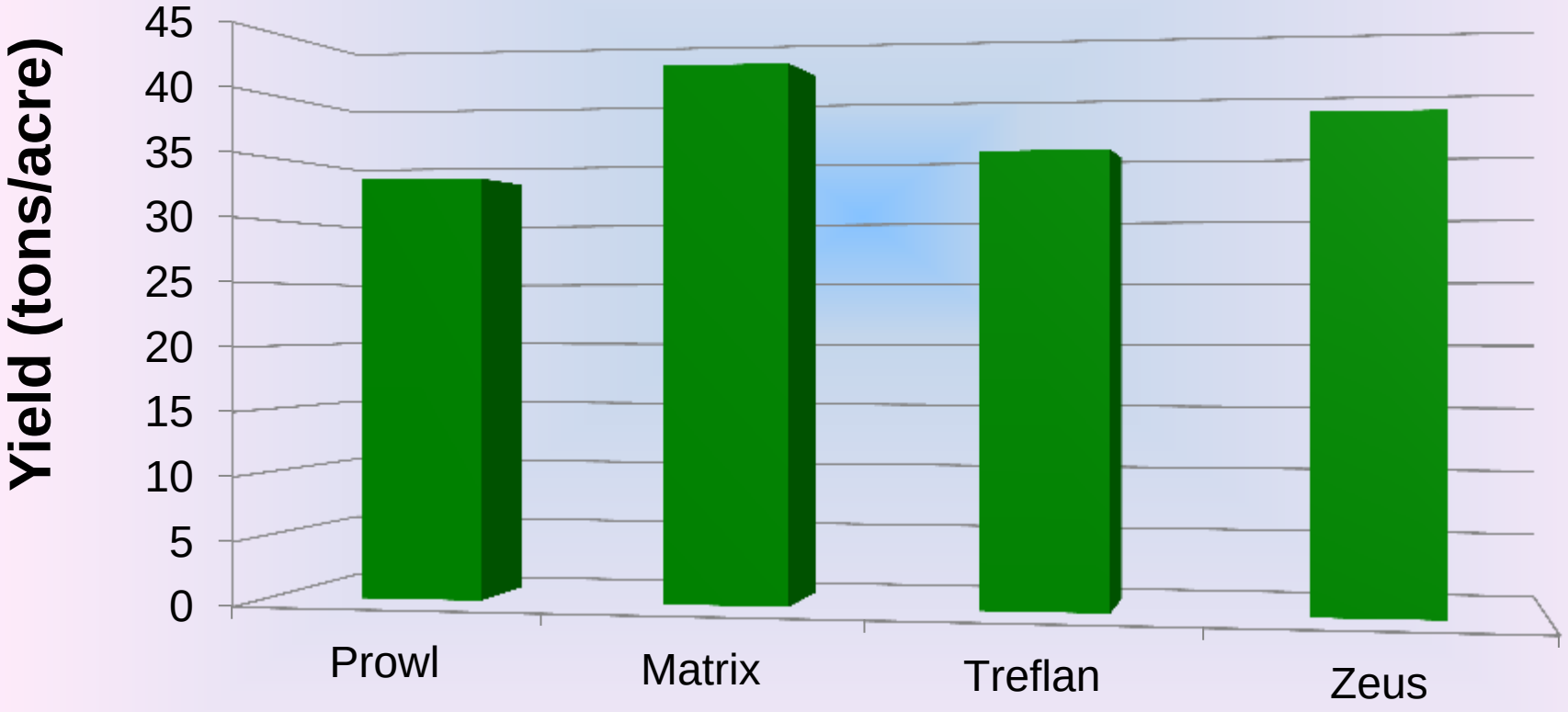


PRE herbicides alone or plus Shark @ 0.03 lb/a POST-directed

Field Bindweed control (%) on September 6, 2012



Tomato Yield (tons/acre) on Sept. 6, 2012



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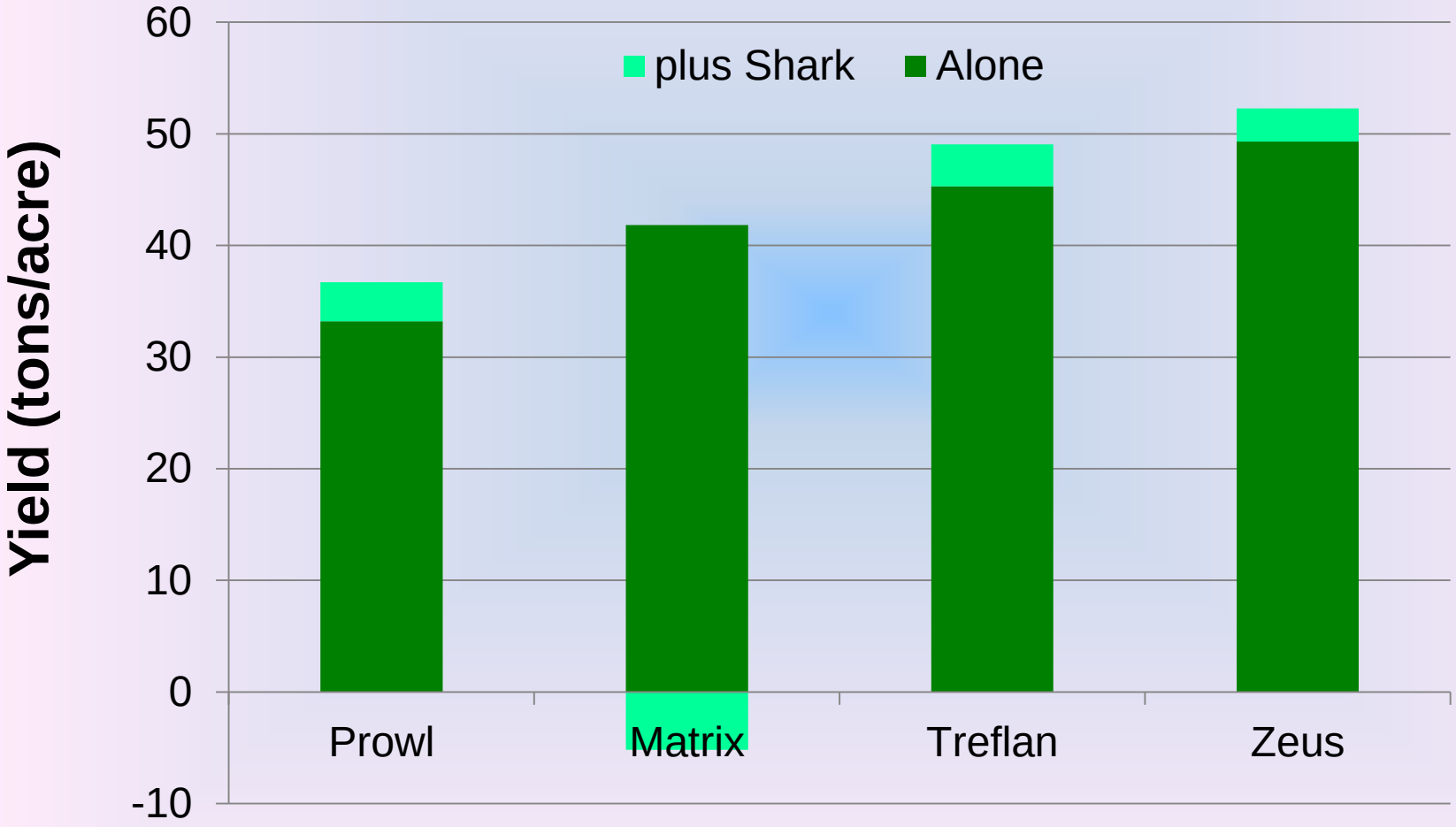


Field bindweed conclusions

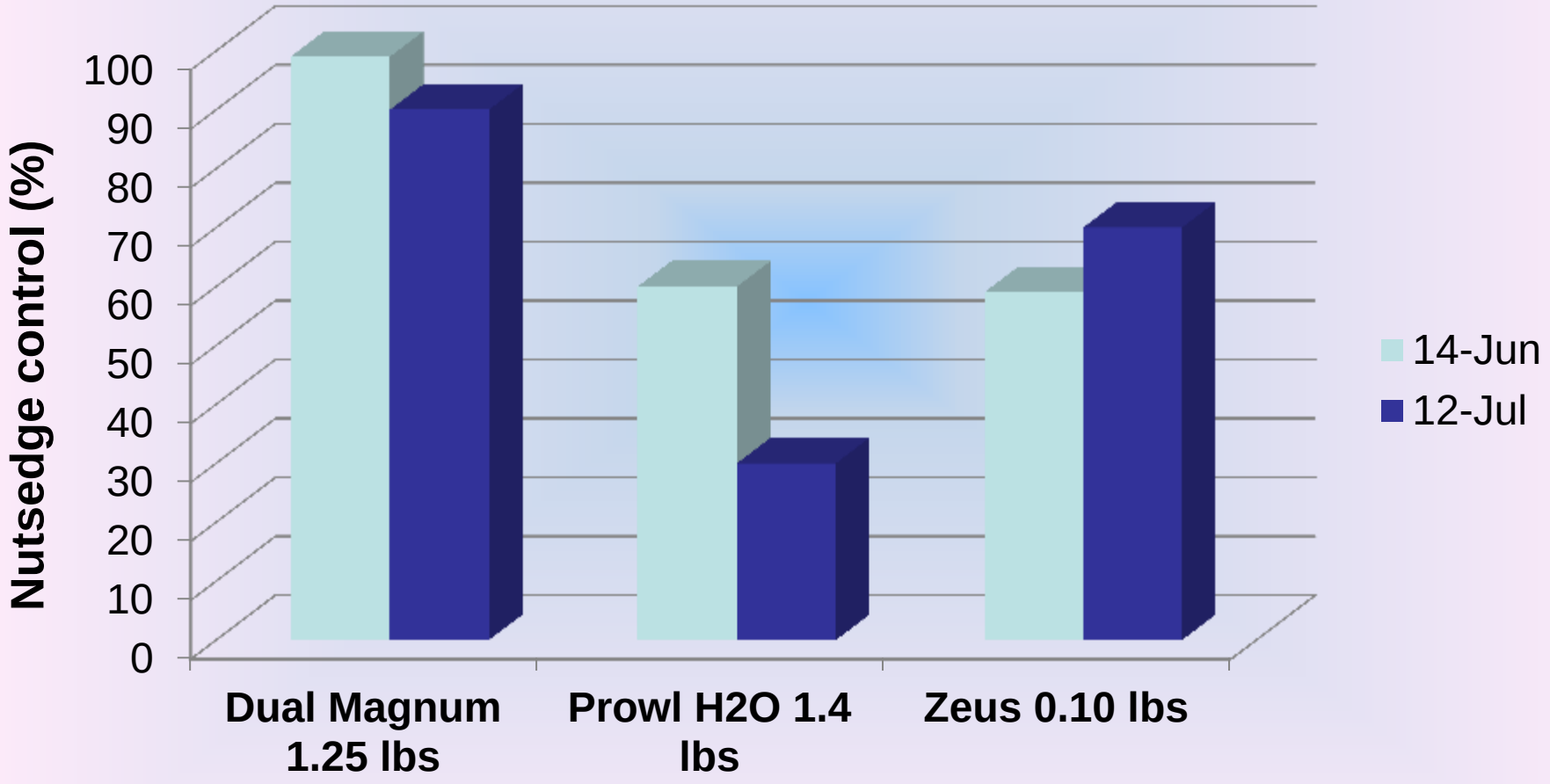
- Treflan is best PRE at suppressing established field bindweed, but Zeus and high rate Matrix (4 oz/a of product) also good
- POST treatments improved control in many cases
- Dual Magnum, Prowl H_2O, Matrix and Zeus good at suppressing seedling bindweed

Yellow Nutsedge

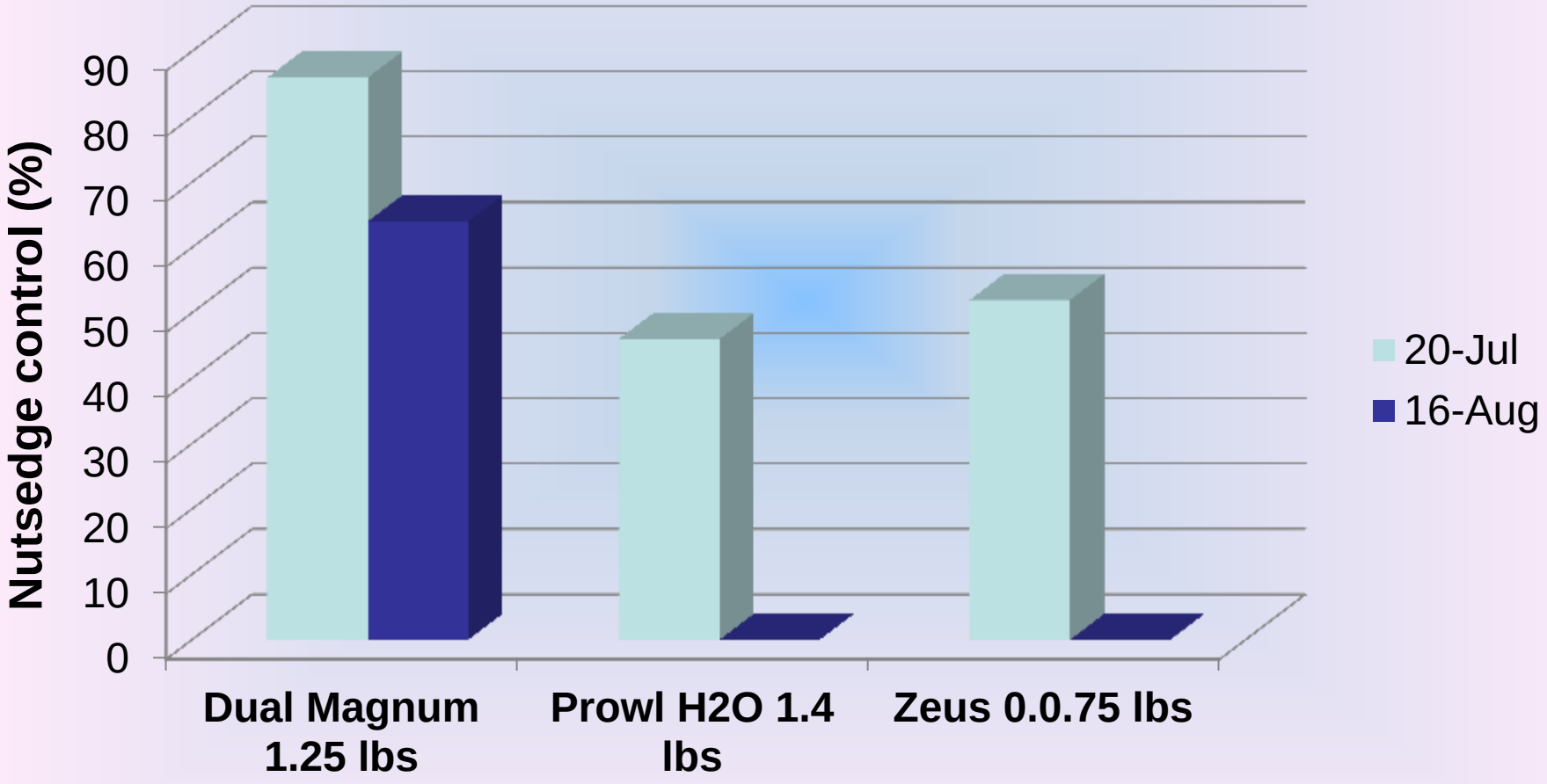
* Not very competitive


Yellow Nutsedge
Tubers main source of spread
Seed rarely (if ever) viable

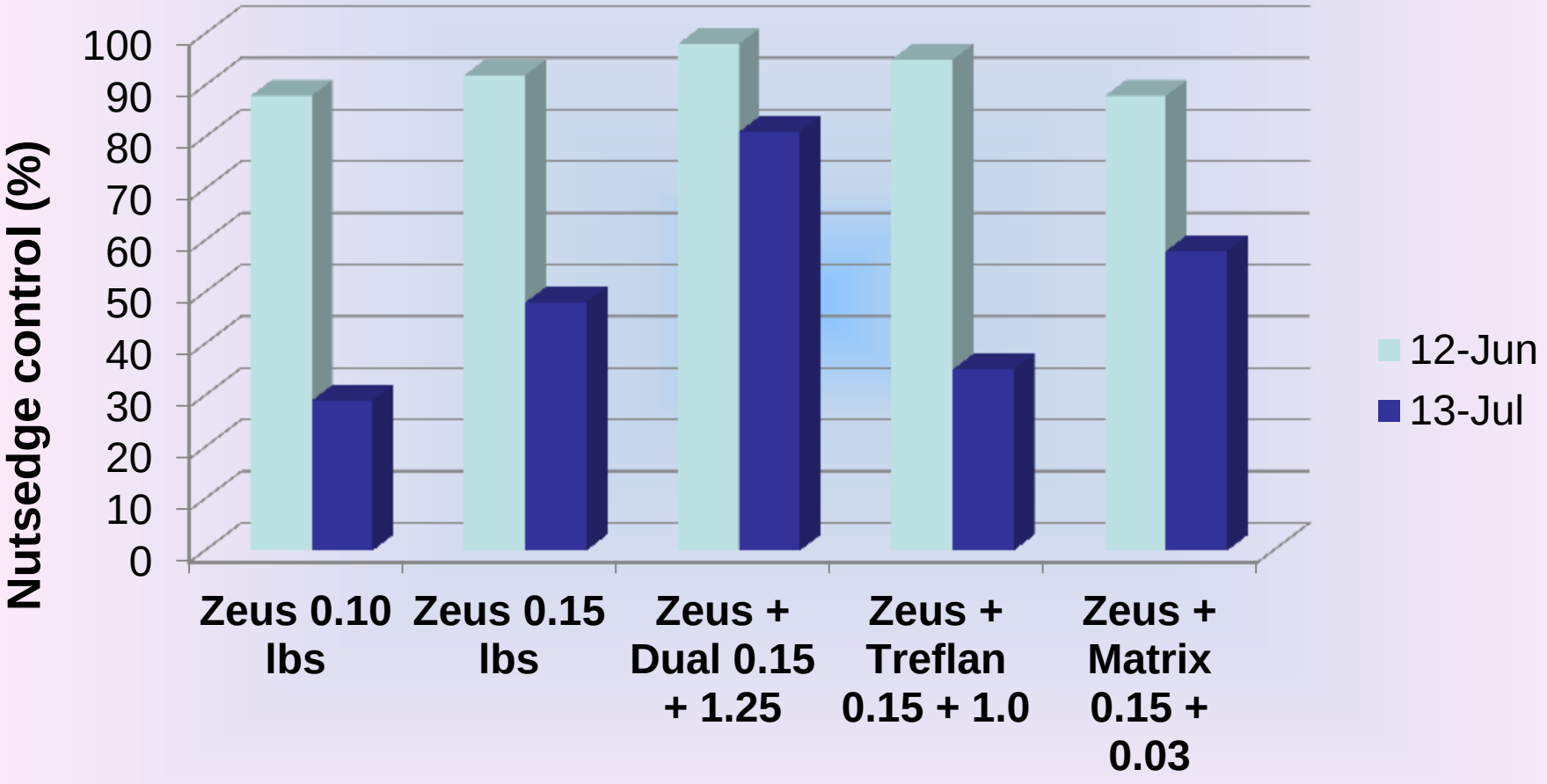
Yellow Nutsedge Control 2012



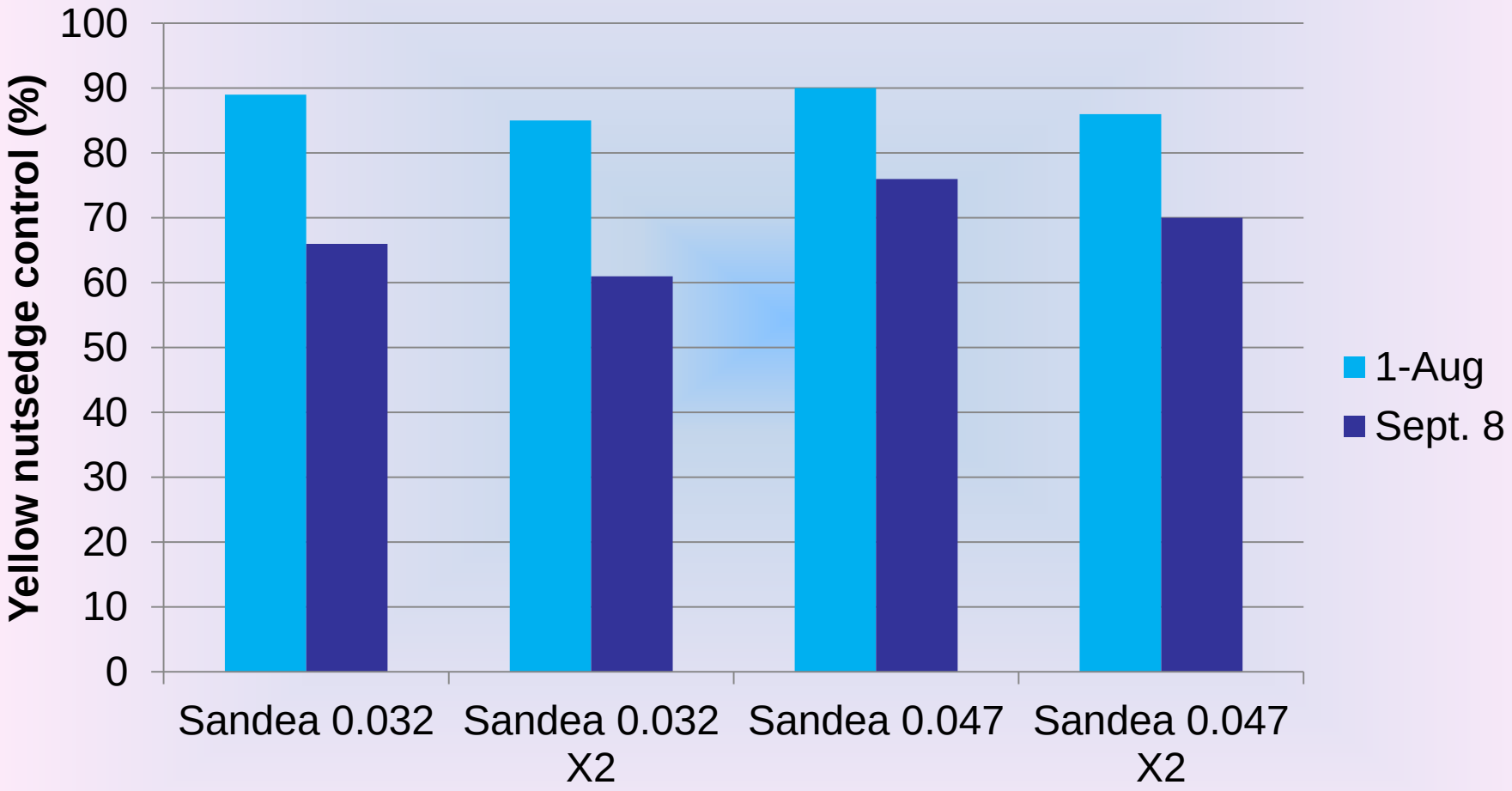
Yellow Nutsedge Control 2011



Yellow Nutsedge Control 2012



Yellow Nutsedge Control with Sandea



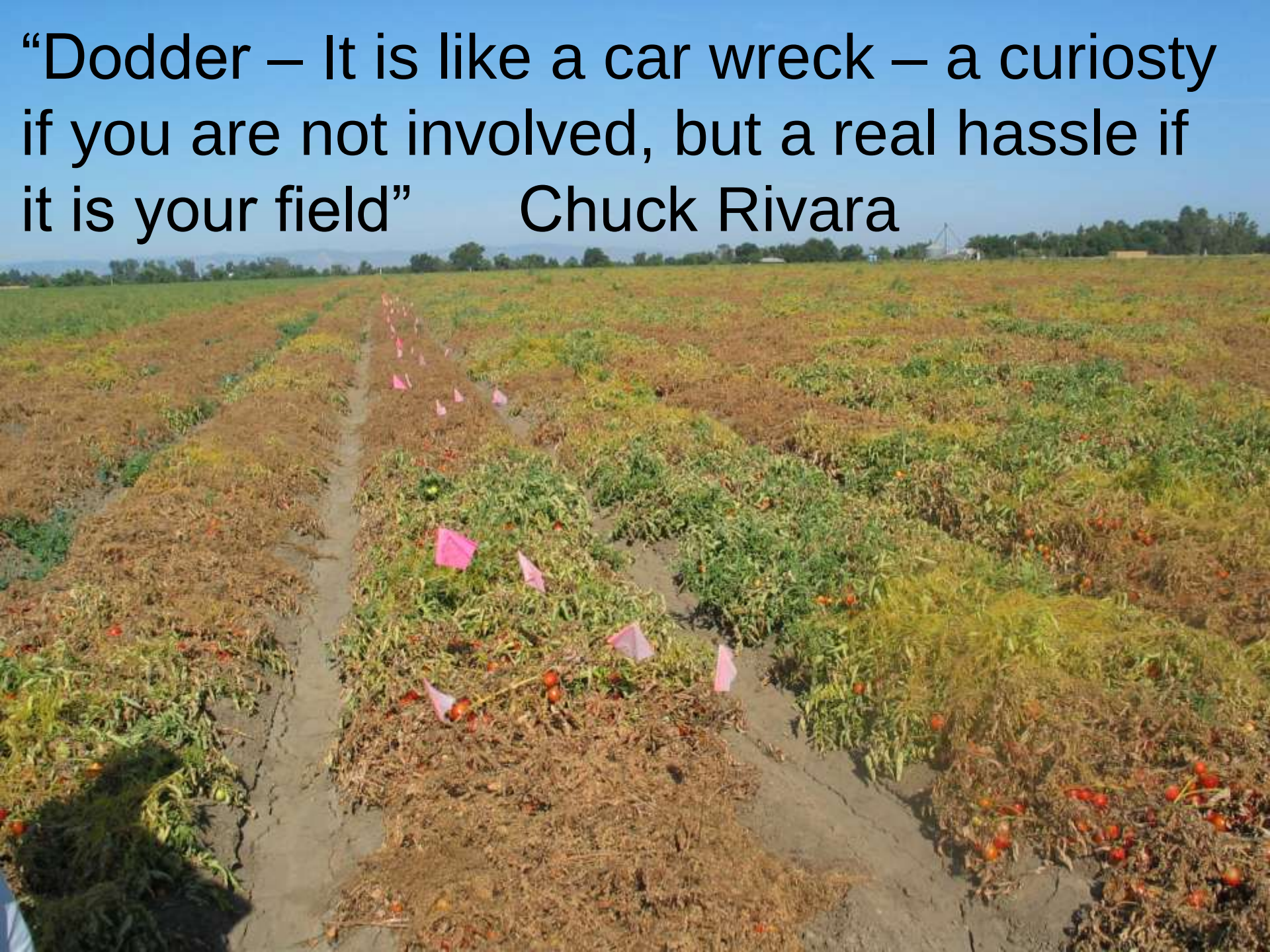
Treated on June 11 (3 to 5 leaf stage of nutsedege), and X2 on July 9.
Methylated seed oil (0.5% v/v) added to all treatments.

Yellow Nutsedge Conclusions

- Dual Magnum is the best treatment, with Zeus providing some control.
- Sandea is good for POST control
- Sulfosulfuron (Certainty, Maverick) – NOT Registered in tomatoes, but excellent nutsedge control

Nutsedge control

Certainty 1.25 oz/a - Untreated


“Dodder – It is like a car wreck – a curiosty if you are not involved, but a real hassle if it is your field” Chuck Rivara

Crop Rotation??

Susceptible crops

- Alfalfa
- Asparagus
- Carrot
- Onion
- Safflower
- Sugarbeet
- Melon

Grass type crops are Resistant

Hand removal

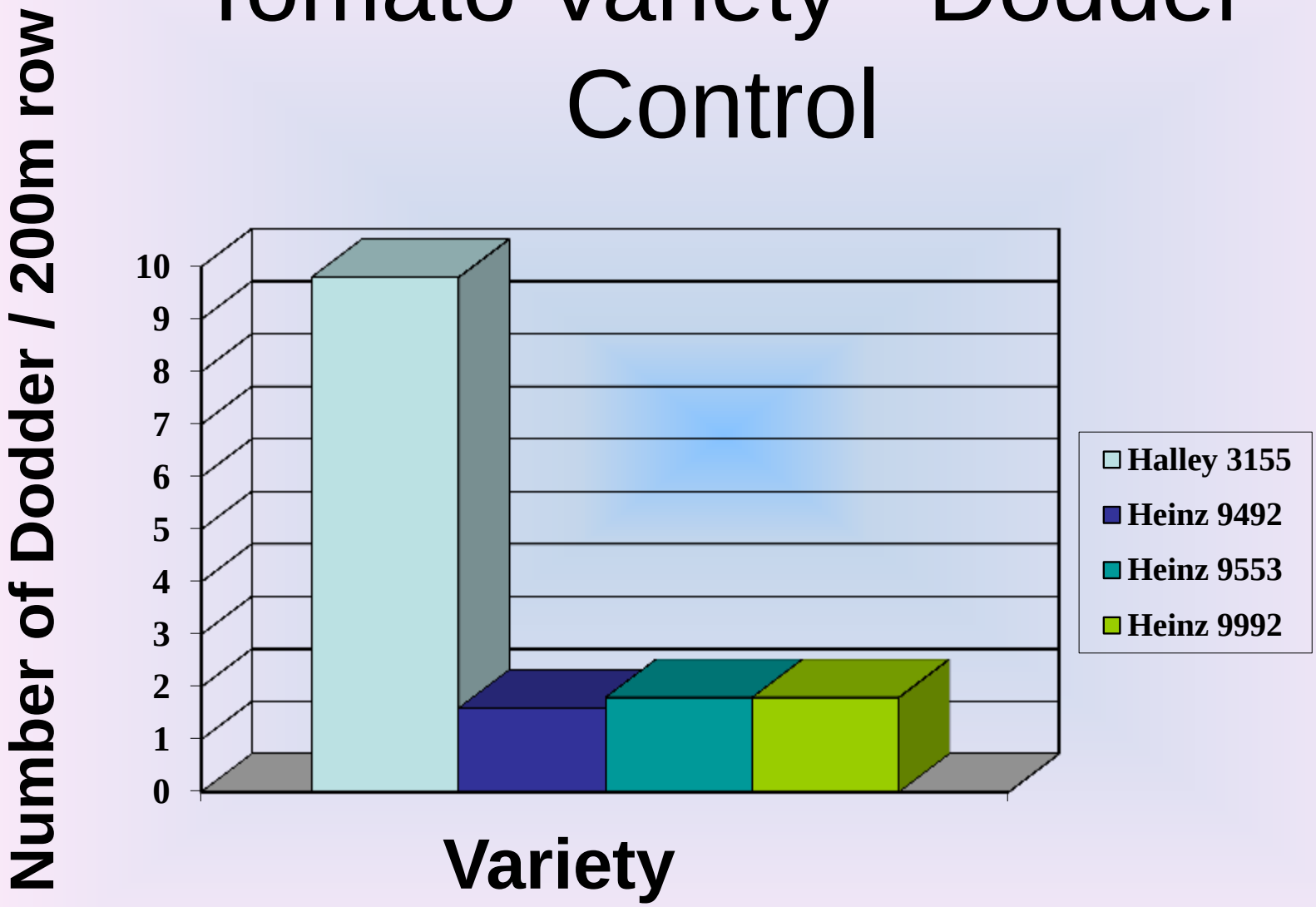
- Hand crews typically miss about 5 to 10% of attached dodder plants
- Follow initial hand cultivation with a second spot treatment about 3 weeks later to catch new or missed infestations
- Plants removed from the field?

Dodder Resistant Tomatoes

- Processing tomato varieties shown to have resistance to dodder: **CDX 233**, **H9492**, **H9553**, **H9888**, **H9992**, **H9997**, **H1100**, and **SVR 024 2 0665**

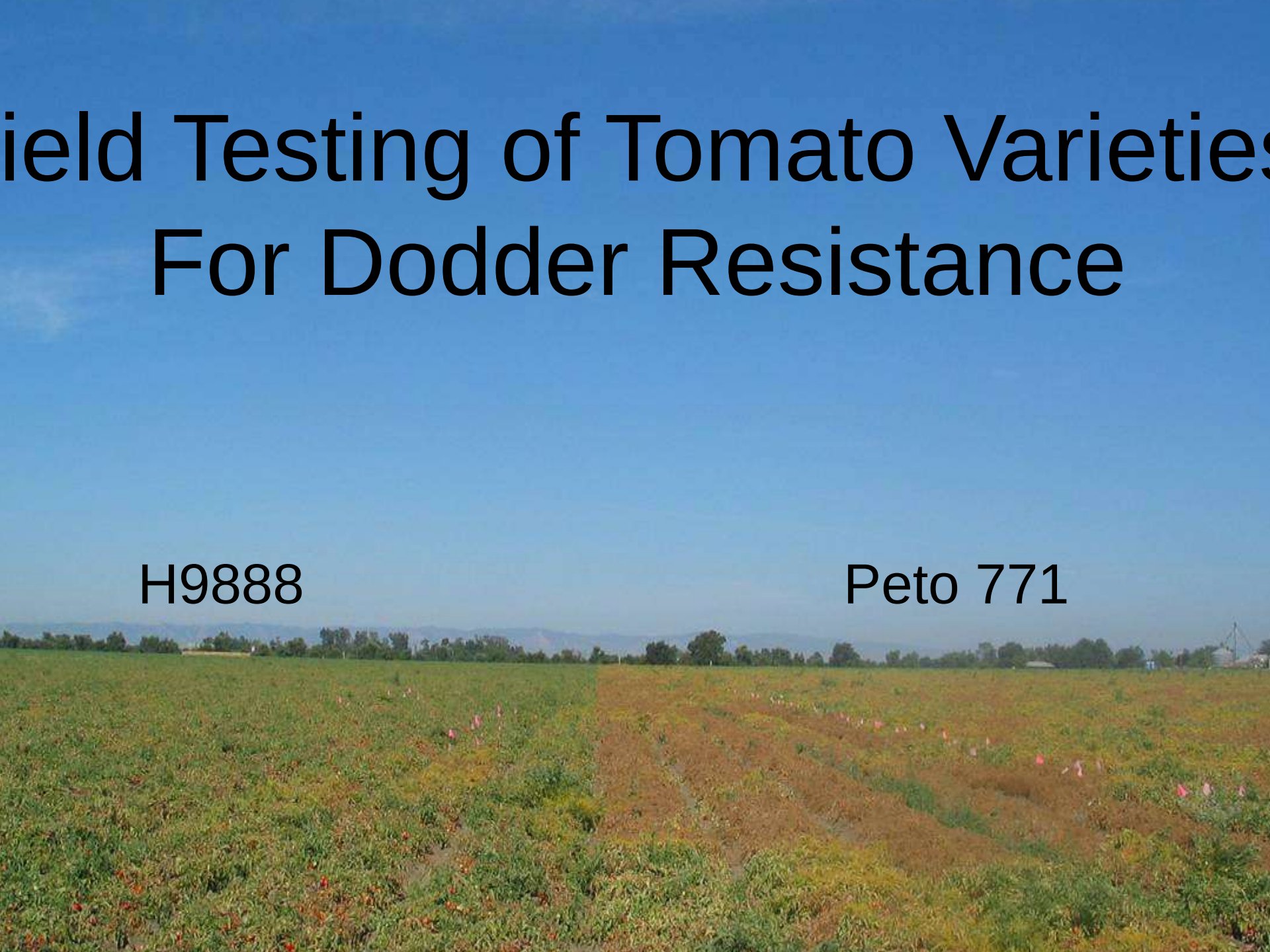
(Probably a few others)

Tomato Variety - Dodder Control




Dodder susceptible
H9665
Dodder resistant H9492

ield Testing of Tomato Varieties For Dodder Resistance

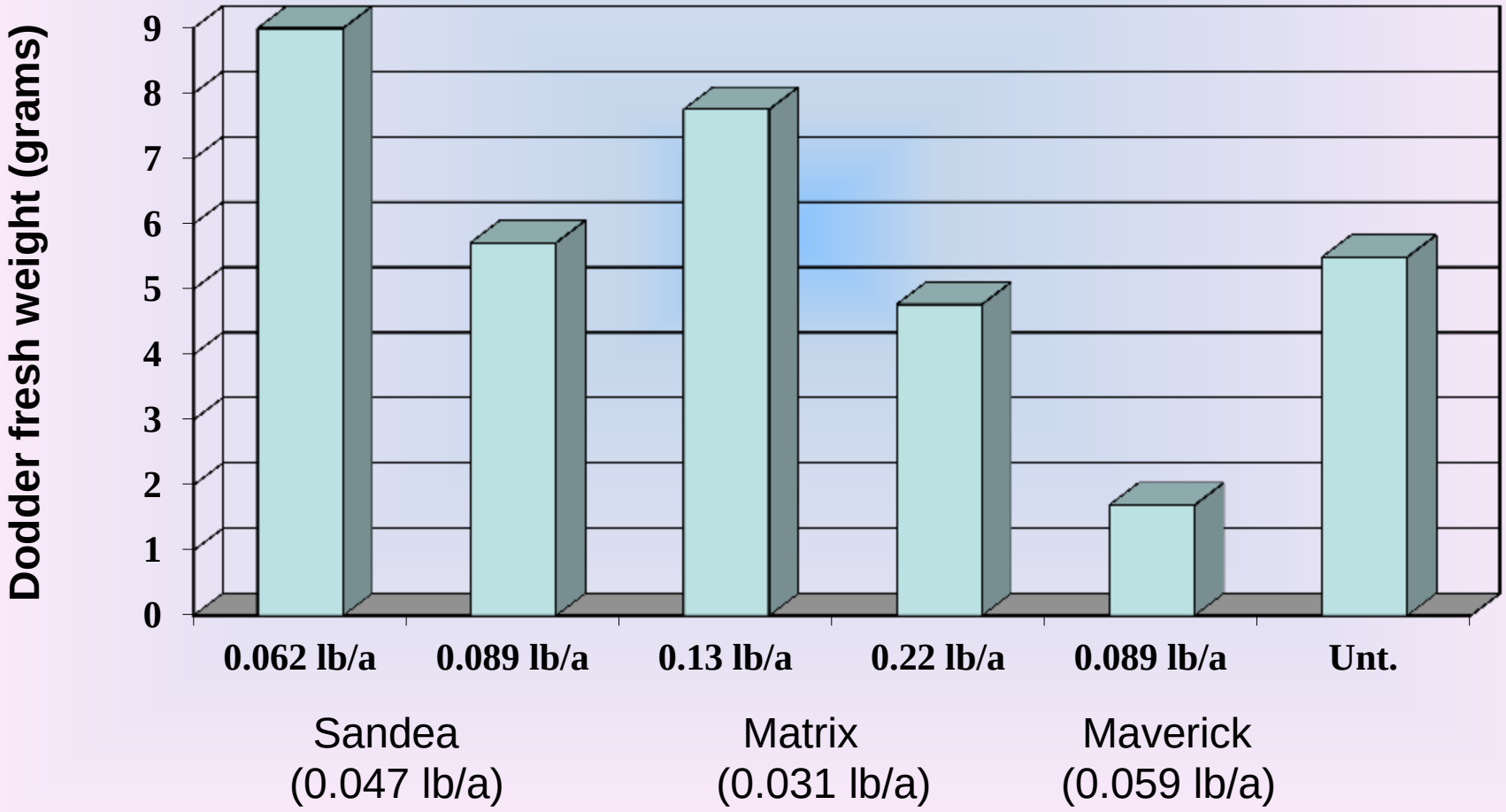



H9492
H9665

Postemergence Herbicide options

- Rimsulfuron
- Halosulfuron
- Sulfosulfuron – Not labeled

Dodder Biomass after Herbicide Treatment



Conclusions

- Crop rotation to grass type crops
- Tolerant varieties reduced dodder attachments and dodder growth
- Matrix (rimsulfuron) and Sandea (halosulfuron) only marginally effective
- Plant late with transplants (May ?)
- Combination of tolerant varieties and Matrix is the most effective option


Thanks to the
California Tomato
Research Institute
for their support

Questions?