

Onion Weed Control Update



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Issues in Onion Weed Control

- **Challenges**

- **Yellow Nutsedge**
- **Long season that spans from cool to warm season weeds**
- **Crop is subject to multiple flushes of weeds**
- **No effective mechanical cultivation strategies**
- **Hand weeding:**
 - **can be very expensive**
 - **can cause stand loss and damage**

**Prior
to
planting**

Metam
Paraquat
Roundup
Shark
Scythe

**At
planting**

Dacthal
Prefar

preemergence
to weeds

1st true leaf

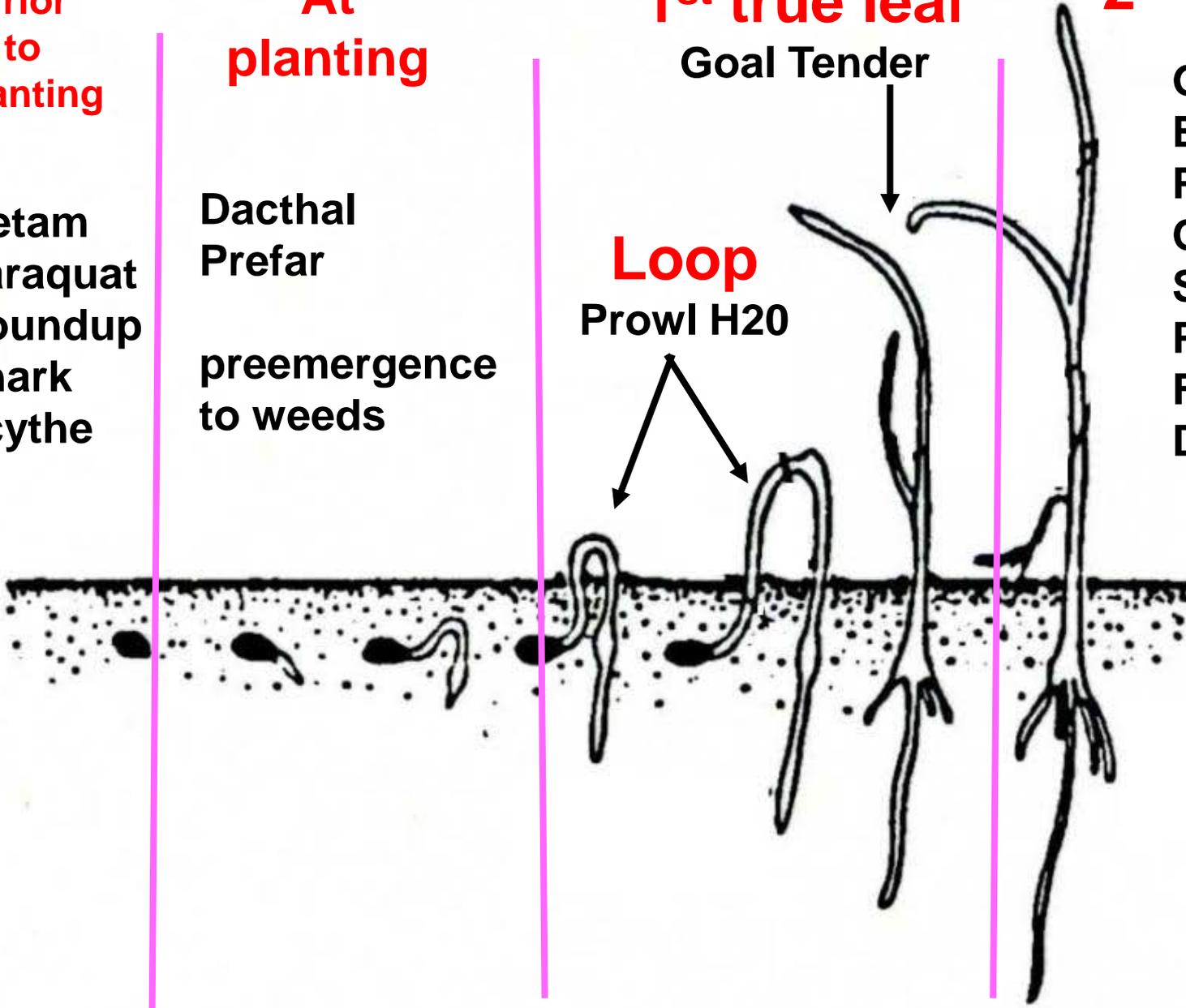
Goal Tender

Loop

Prowl H20

2nd true leaf

Goal
Buctril
Prowl
Outlook
Select Max
Poast
Fusilade
Dual Magnum



Possible New Herbicide for Onions?

Zeus

Sulfentrazone – FMC Corp

- Protox inhibitor similar to Goal
- Preemergent & foliar activity
- Absorbed by roots in soil applications (not so with Goal)
- Not volatile
- There is precedent for safety with this group of herbicides on onions
 - Goal and Chateau
- Has activity against yellow nutsedge

Zeus

Sulfentrazone – FMC Corp

- **Registered on:**
 - **Asparagus**
 - **Cabbage**
 - **Tomato**
 - **Mint**
- **There are specific plant back restrictions listed on the label**
- **Three plant back studies were done to evaluate its safety to rotational crops: Salinas, UCD and Yuma**

Zeus

Sulfentrazone – FMC Corp

- **FMC wants to be assured about crop safety before moving forward with registration**

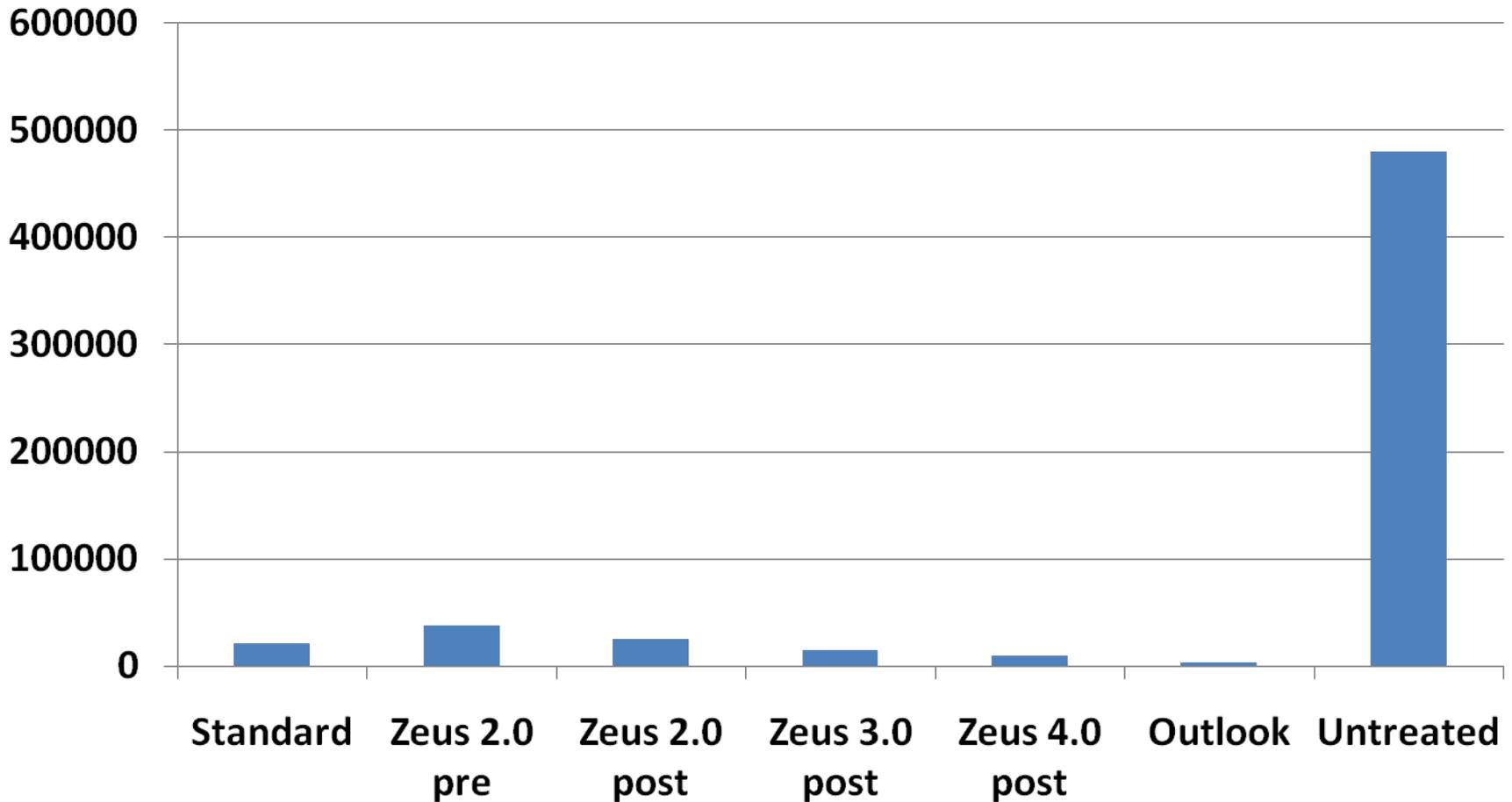
2012 Weed Control Evaluation

Conducted at a site with Yellow Nutsedge

| Treatments | Rate | Timing |
|--|-------------------------------------|--|
| Untreated | ---- | ---- |
| Dacthal Goal Tender + Bucril | 1.33 gals 6.0 + 16.0 oz | Pre Post 2 nd ; 3 rd leaf |
| Zeus Goal Tender + Bucril | 2.0 oz 6.0 + 16.0 oz | Pre Post 2 nd ; 3 rd leaf |
| Dacthal Zeus | 1.33 gals 2.0 oz | Pre Post 2 nd leaf |
| Dacthal Zeus | 1.33 gals 3.0 oz | Pre Post 2 nd leaf |
| Dacthal Zeus | 1.33 gals 4.0 oz | Pre Post 2 nd leaf |
| Dacthal 7-7-0-7 + Goal Tender + Outlook | 1.33 gals 72 gal + 6.0 + 14.0 oz | Pre Post 2 nd leaf |
| Alternative treatments | | |
| Dacthal Final-San-O | 1.33 gals 20% v/v | Pre Post 2 nd leaf |
| Dacthal Scythe | 1.33 gals 9% v/v | Pre Post 2 nd leaf |

Total Weeds/A

Including the Untreated



Untreated

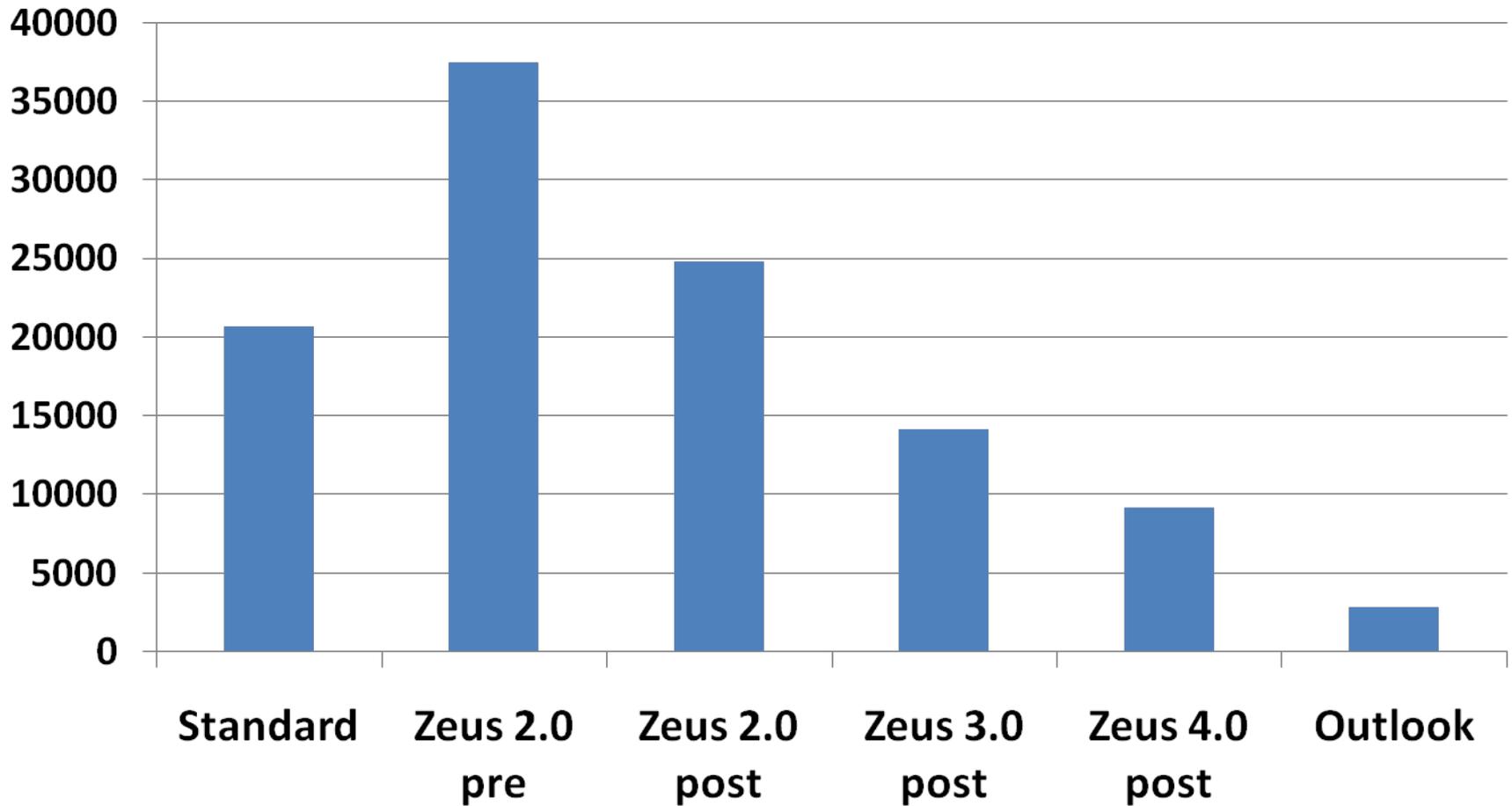


Standard



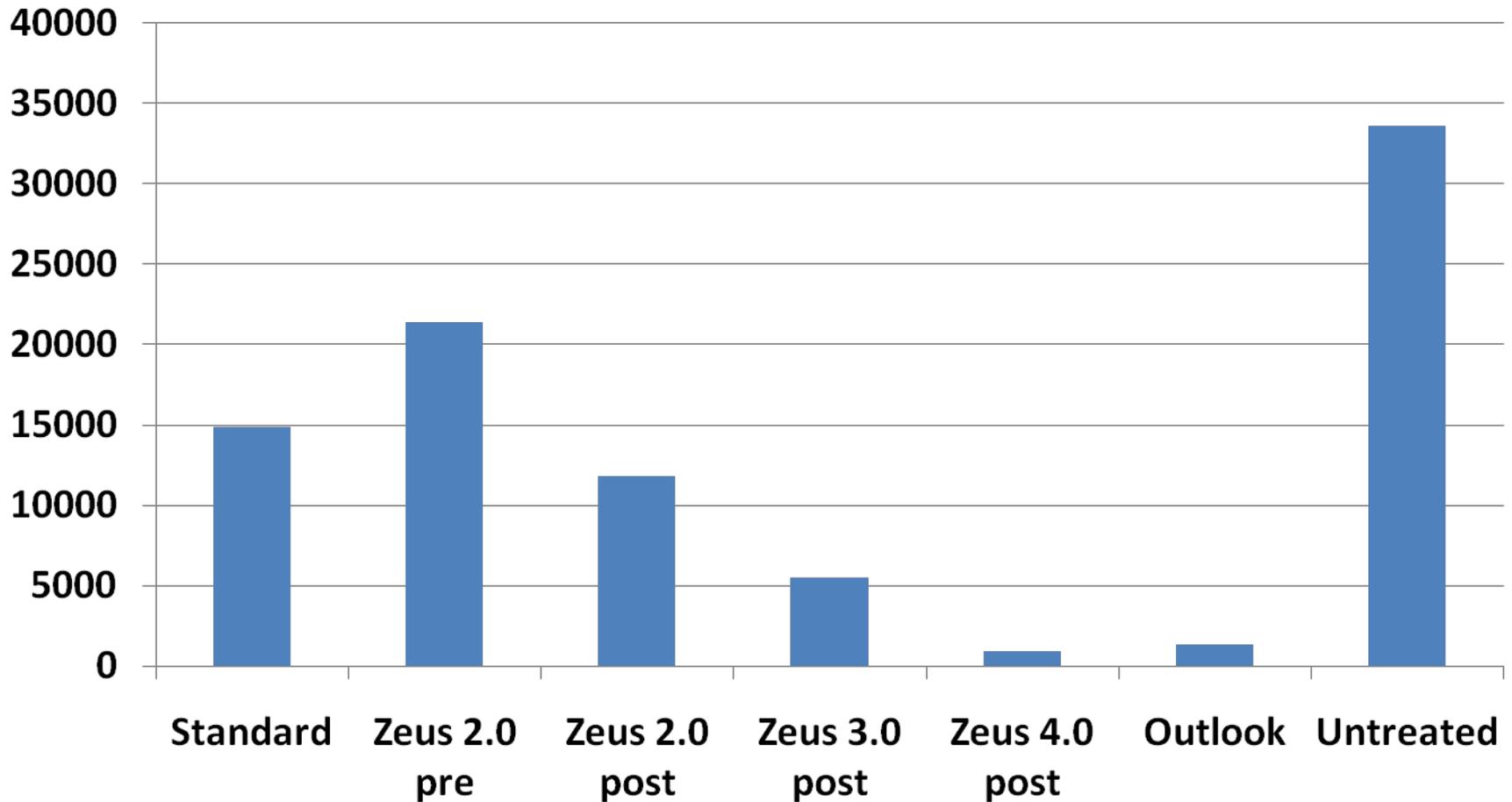
Total Weeds/A

Excluding the Untreated

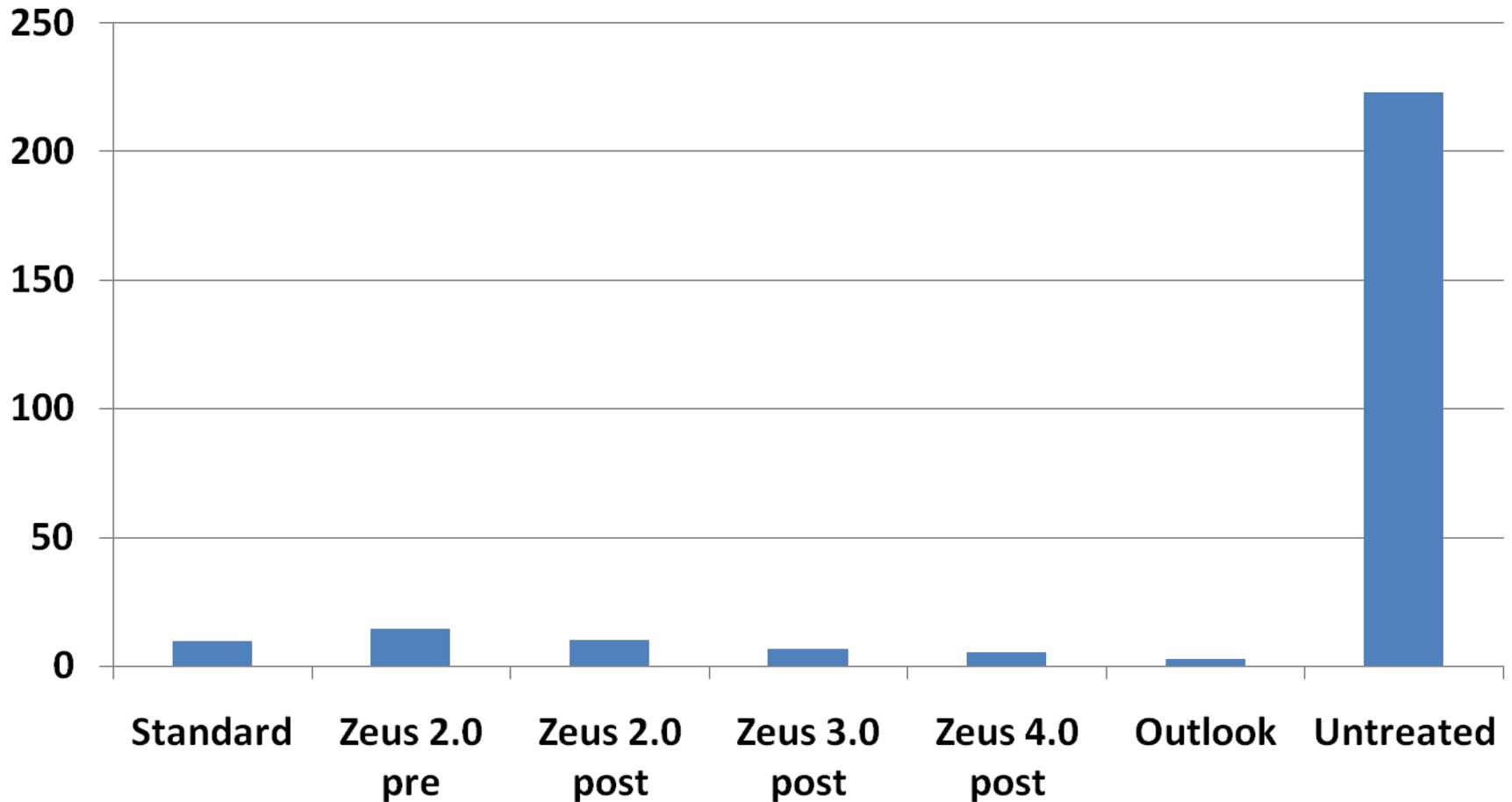


Yellow Nutsedge/A

Including the Untreated

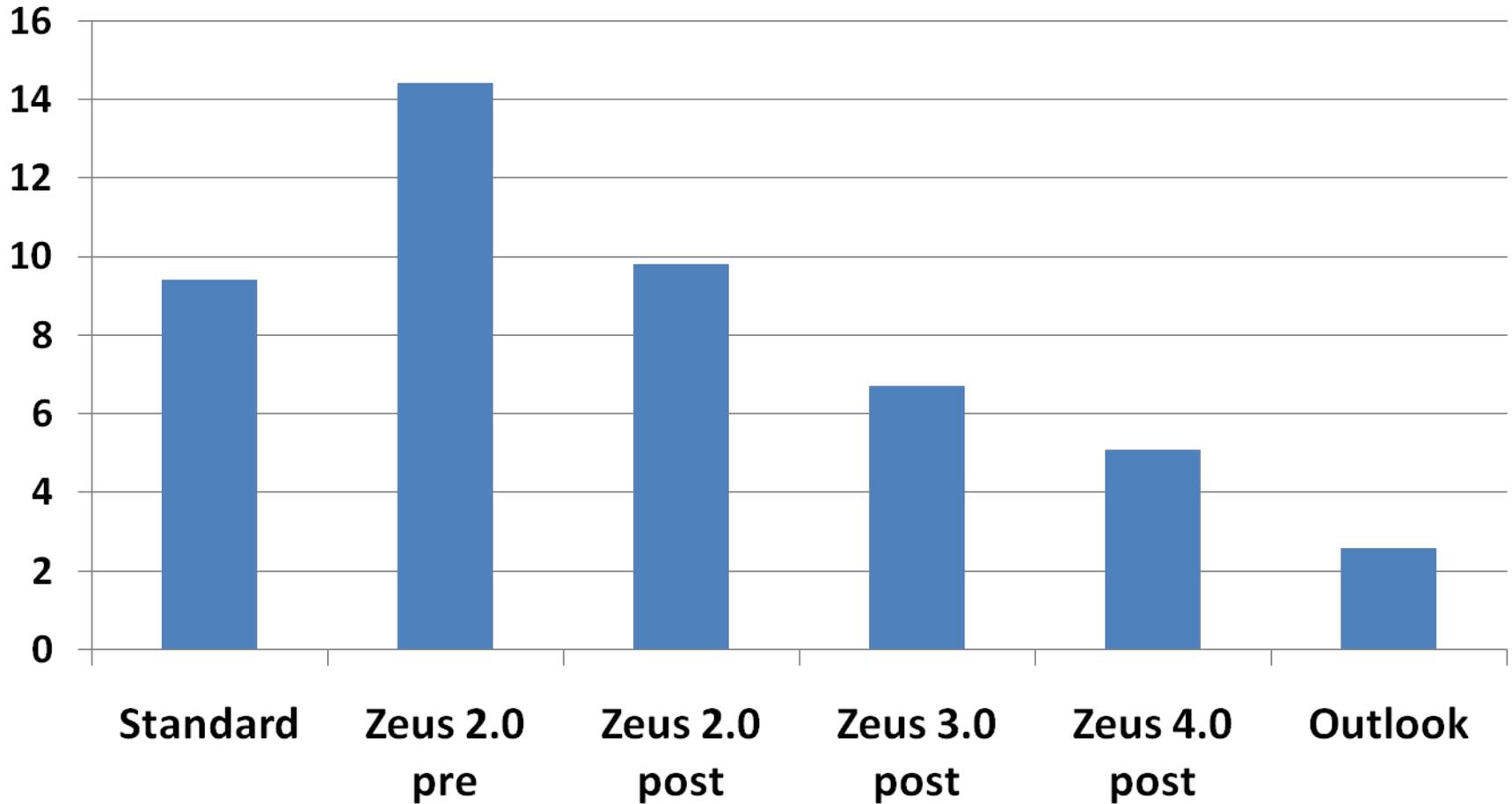


Weed Time Hours/A Including the Untreated

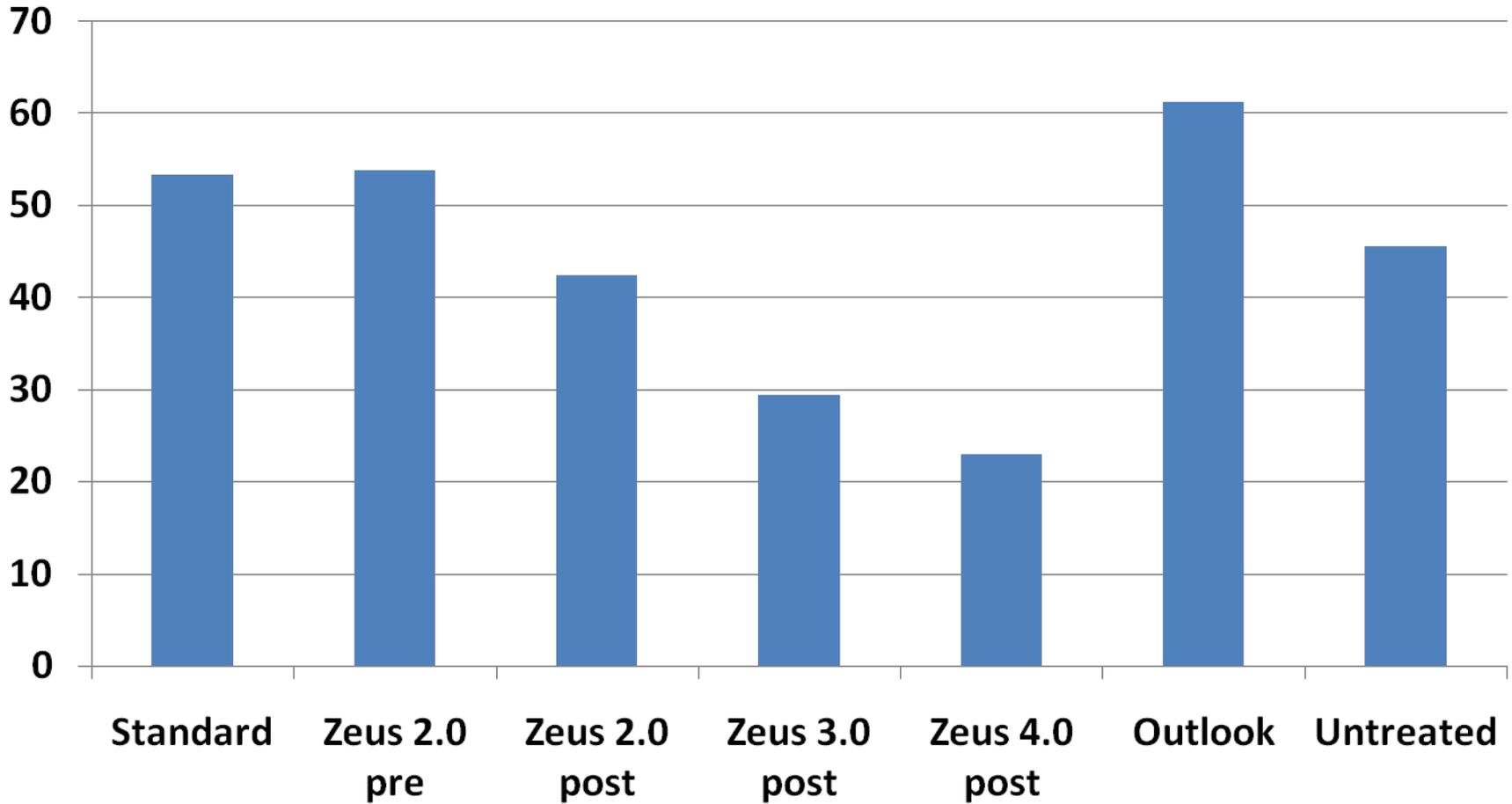


Weed Time Hours/A

Not including the Untreated



Yield T/A



Yield Increase Comparisons

Tons/A

| Treatment | Material/A | Yield Tons/A | Increase over Untreated | Increase over Standard |
|--|---|--------------|-------------------------|------------------------|
| Untreated* | ---- | 45.5 | ---- | ---- |
| Dacthal Goal Tender+Buctril | 1.33 gal 6.0+16.0 oz | 53.3 | 7.8 | ---- |
| Zeus PRE Goal Tender+Buctril | 2.0 oz 6.0+16.0 oz | 53.8 | 8.3 | ---- |
| Dacthal 7-7-0-7 Goal Tender Outlook | 1.33 gal 72 gal 6.0 oz 14.0 oz | 61.1 | 15.6 | 7.8 |

* Weeding costs were >\$2,200/A

Post Plant Preemergence Comparisons

**Zeus 2.0 fl oz followed by
Goal Tender/Buctril**



**Dacthal followed by
Goal Tender/Buctril**



Nutsedge Treatments

Outlook Program



Zeus 3.0 fl oz Post emergence



Comments on Final-San-0 and Scythe

- **Final-San-O and Scythe provided some burn back of weeds in onions**
- **The yield in these treatments was similar to the untreated**
- **This trial was probably too challenging of a test for these types of materials because the weed pressure was so severe that the weeds regrew vigorously and weeding costs were very high**

2012 Onion Weed Control Trial Summary

- **This trial gave us a great opportunity to evaluate Zeus under high nutsedge pressure**
- **Post emergent applications of Zeus are too phytotoxic to the onions**
- **Preemergent applications of Zeus look promising and should be further tested**

Weed Reports On-line

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Calendar

| Event Name | Date |
|---|------------|
| Salinas Valley Weed School 2012 | 11/13/2012 |

Make a Gift Online

UCCE MAKE A GIFT Monterey County

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Vegetable Crops & Weed Science

- 2012 Irrigation & Nutrient Management & Water Quality Field Day
- 2011 Salinas Valley Entomology Meeting
- 2011 Irrigation and Nutrient Management Meeting and Cover Crop and Water Quality Field Day Presentations
- 2010 Salinas Valley Weed School
- 2010 Irrigation & Nutrient Management & Cover Crop & Water Quality Field Day.
- 2009 Irrigation & Nutrient Management & Cover Crop & Water Quality Field Day
- 2008 Irrigation & Nutrient Mgmt. Mtg. - February 19
- 2007 Irrigation & Nutrient Management Meeting Reports
- Conference Presentations
- Cost Studies
- Cultural Practice Reports
- Vegetable Crops & Weed Science Links
- Vegetable Production Series
- Weed Reports

Acknowledgements

- **Matt Kelly, Rio Farms**
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