

2013 Tulelake Onion Research Updates

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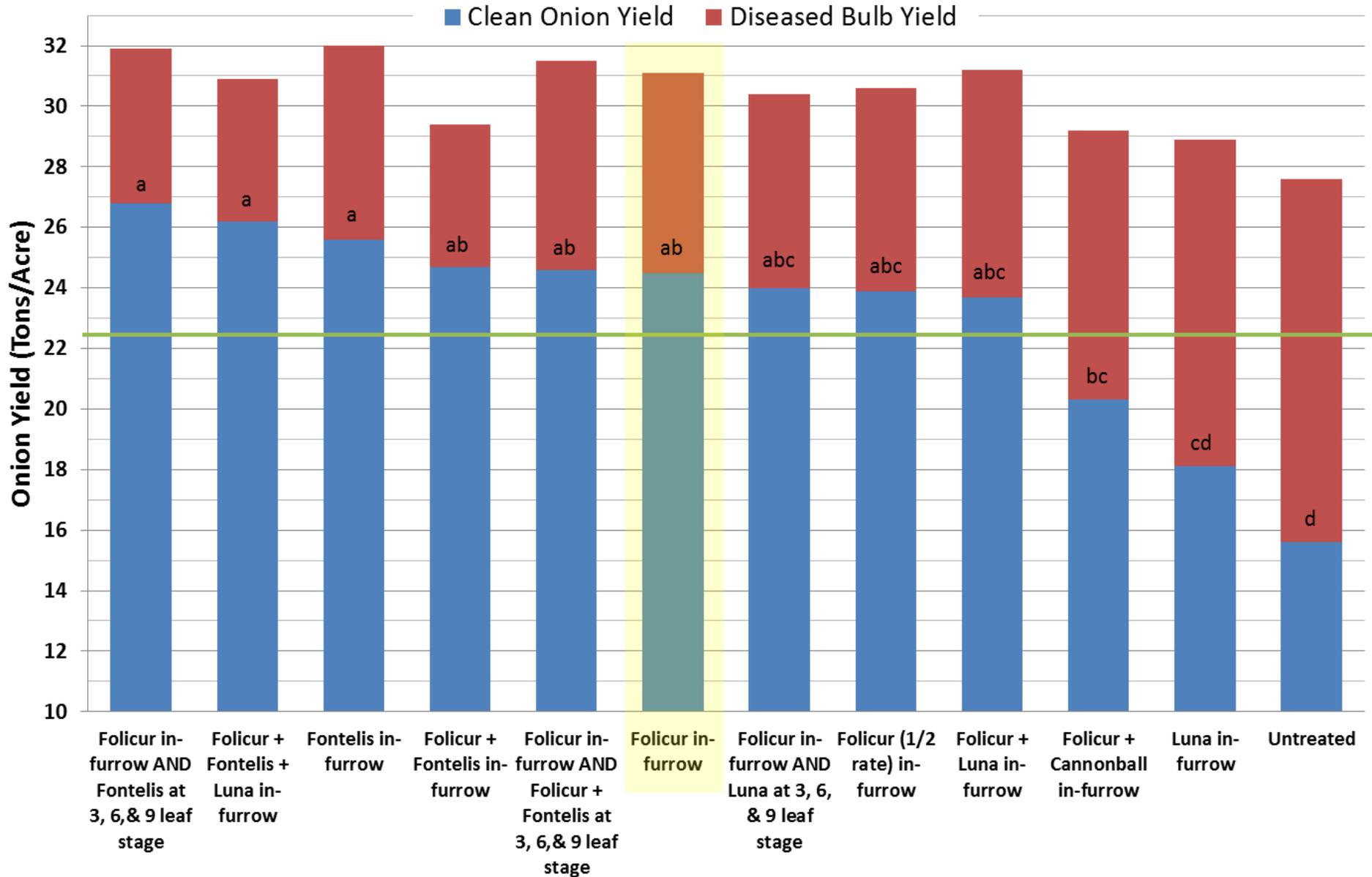
White Rot Studies

- Allison Ferry and Mike Davis Trials
 - Sclerotia Germination Stimulants & Fungicide Studies
- Fungicide Tank-mixes
 - Does tank-mixing fungicides at planting have an additive effect on white rot suppression?
 - Do foliar fungicide applications after planting improve white rot suppression?



Total and Clean (white rot free) Onion Yield for Fungicide Tank-mixes tested at IREC in 2013

(5 sclerotia per kg of soil)



Untreated



Folicur + Fontelis In-furrow



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Onion Weed Control Study



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Study Objectives

- Determine the appropriate DCPA (Dacthal) rate for kochia control in Tulelake soil (silty clay loam)
- Determine the appropriate DCPA (Dacthal) rate for kochia control in Tulelake soil (silty clay loam) when used in combination with Pendamethalin (Prowl H20)
- Evaluate weed control and crop safety of Pendamethalin (Prowl H20) applied before onion emergence in Tulelake soil
- Investigate sulfentrazone for weed control in onions



Treatment application timings

- Post-Plant (broadcast at 45 GPA) after onion planting immediately before the 1st irrigation
- Loop (broadcast at 45 GPA) when over 95% of the onion stand reached the loop stage
- The entire trial area was treated with GoalTender at 4 fl. oz/A at the 1.5 leaf stage and Goal 2XL + Buctril at the 2.5 leaf stage



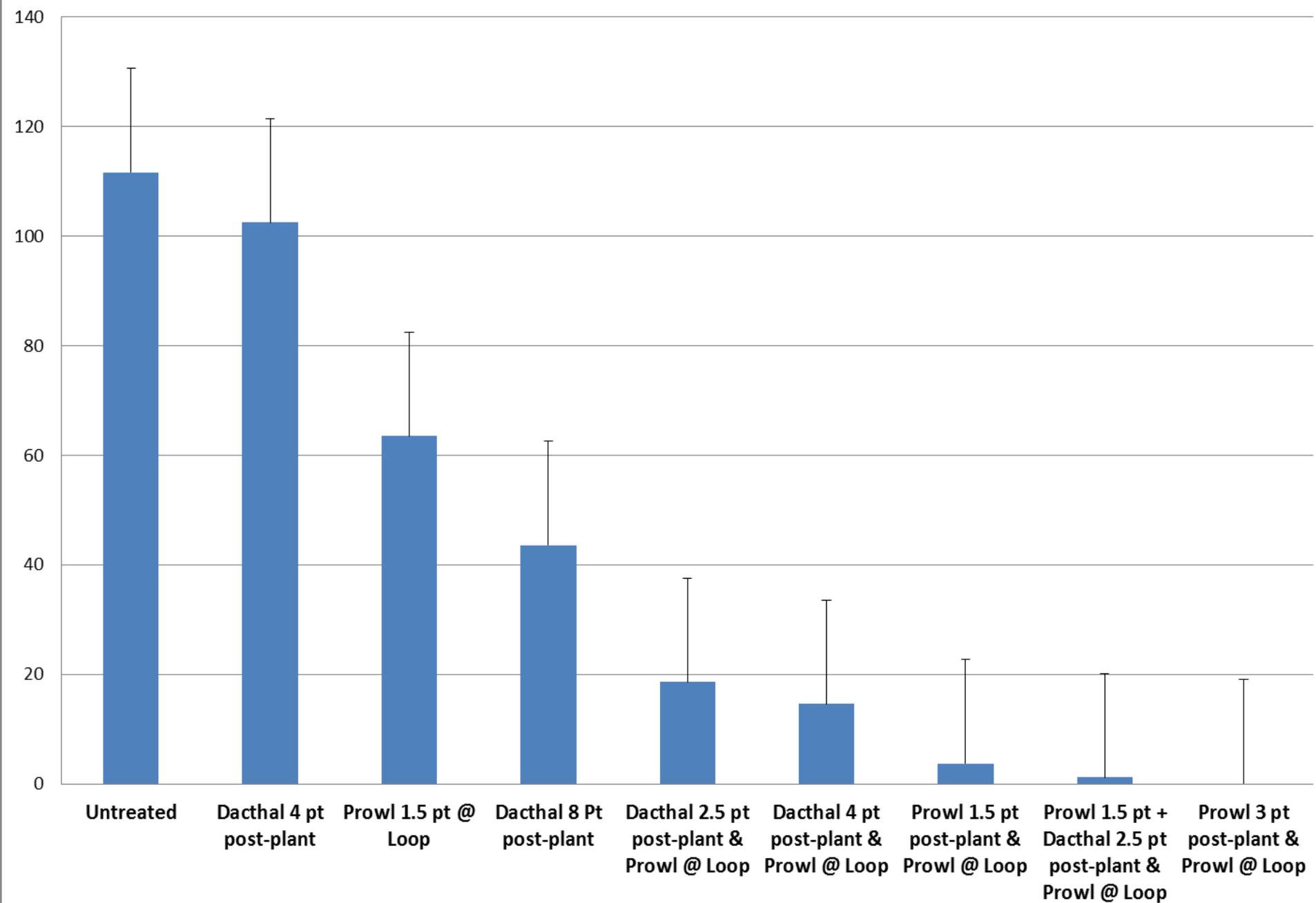




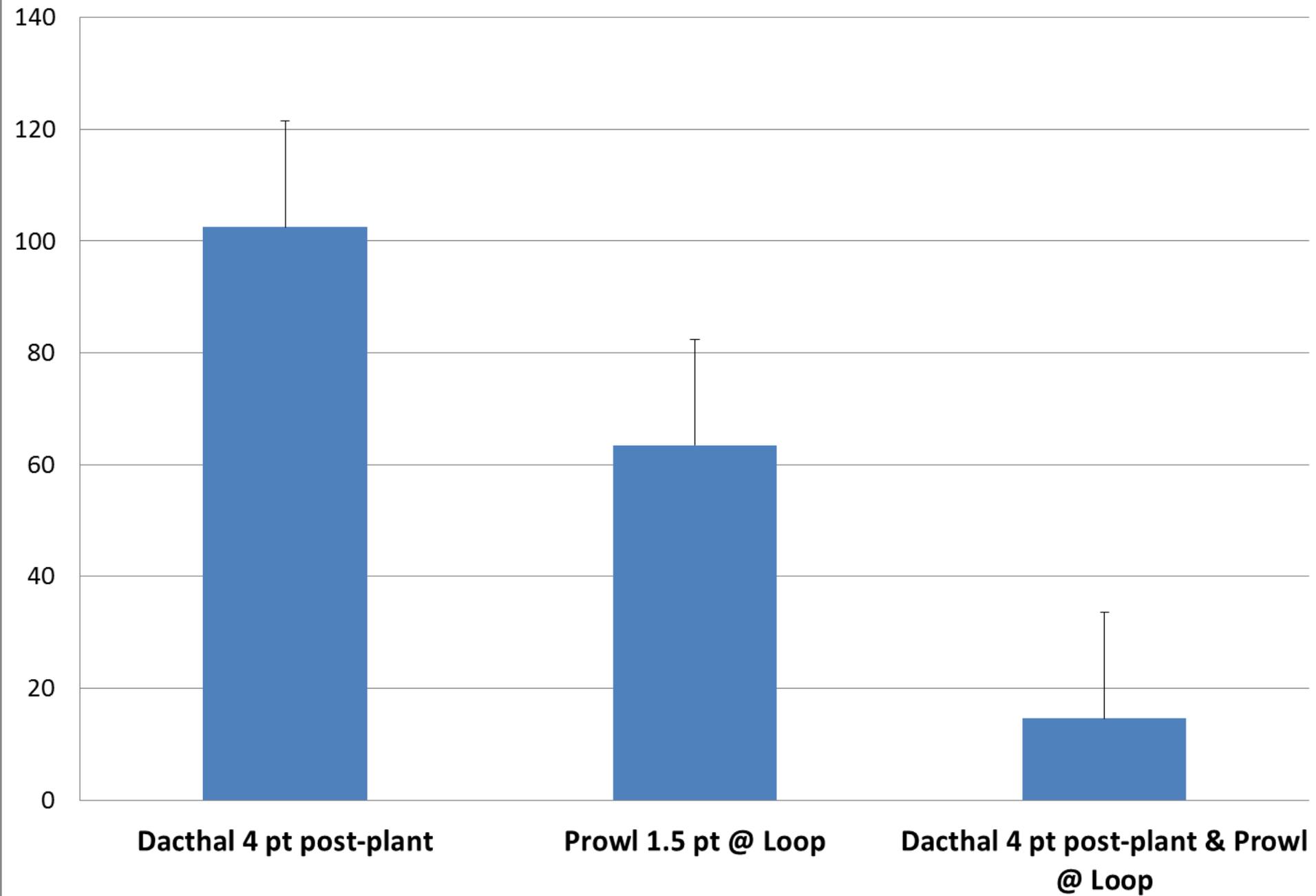
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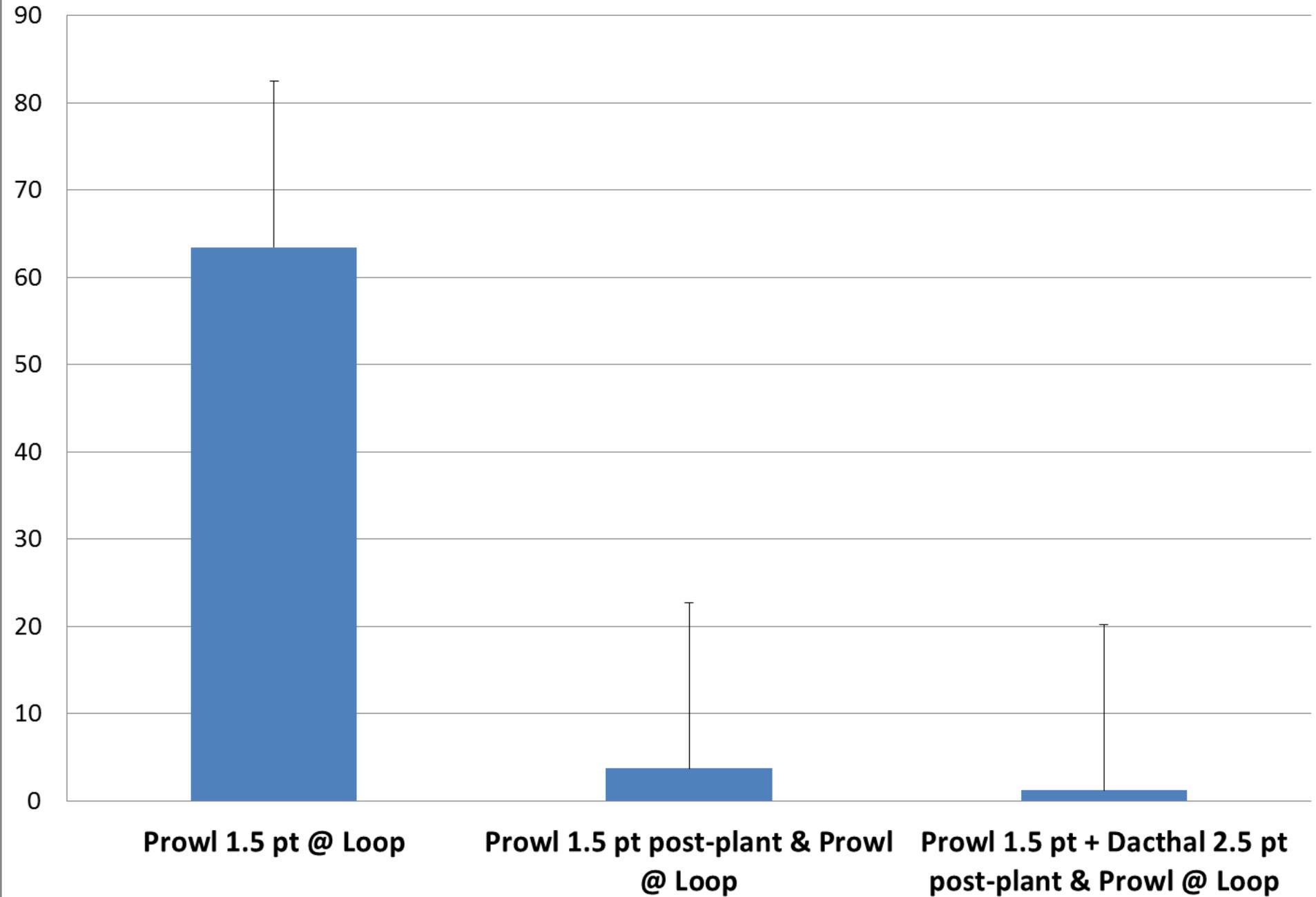
Kochia Density/Plot at the 4 Leaf Onion Growth Stage



Kochia Density/Plot at the 4 Leaf Onion Growth Stage

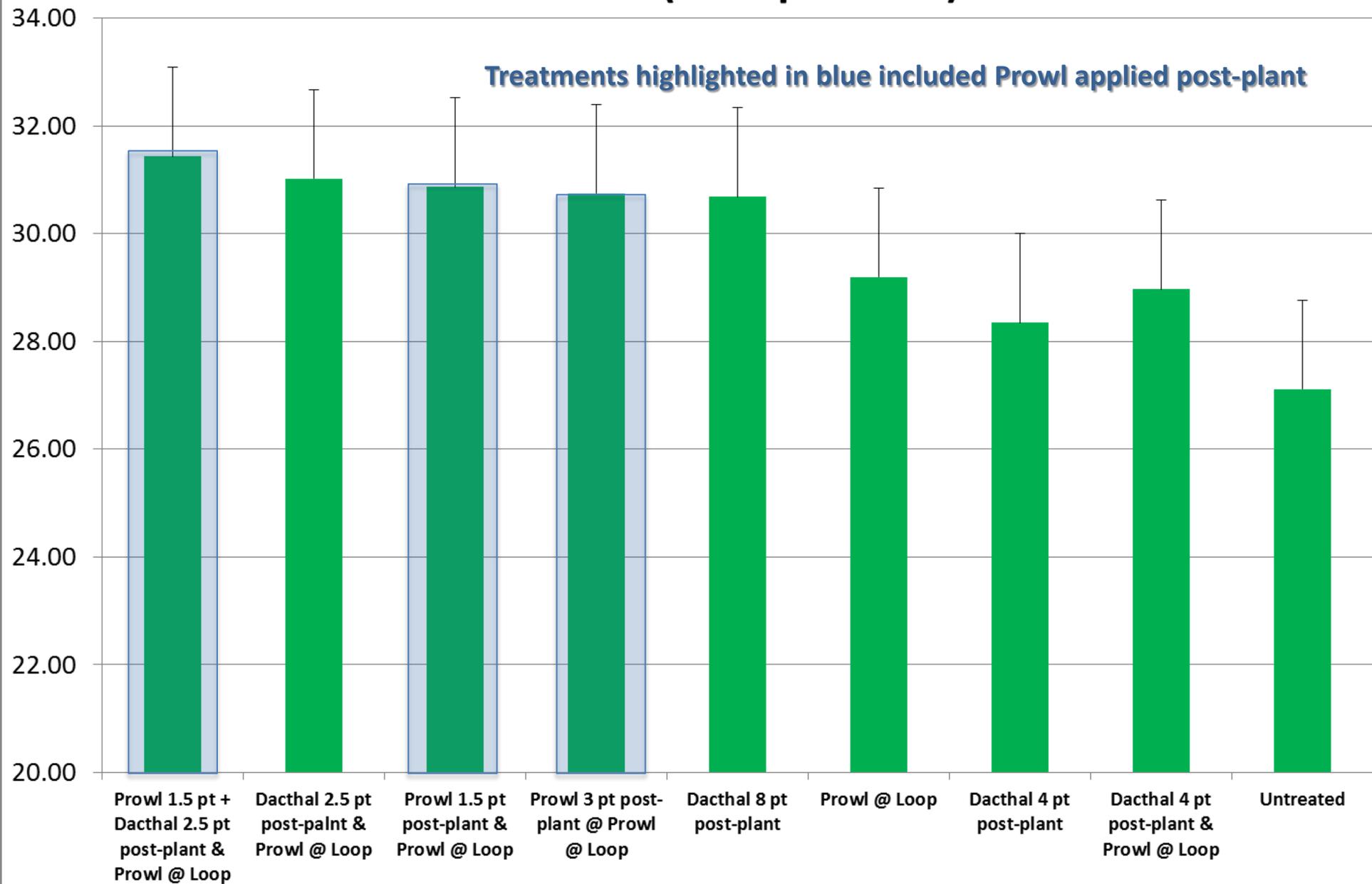


Kochia Density/Plot at the 4 Leaf Onion Growth Stage



Onion Yield (Tons per Acre)

Treatments highlighted in blue included Prowl applied post-plant



Onion Weed Control Highlights

- Reduced Dacthal rates (2.5 pt/A) were effective at lambsquarter, pigweed, and kochia control when combined with Prowl H2O applied at loop and a Goal postemergence program on sandy and silty clay loam soil types.
- On silty clay loam soil, Dacthal efficacy is greatly improved when combined Prowl H2O. The high rate range is needed if Dacthal is used alone on Tulelake soil.
- Prowl H2O application immediately after planting provided improved weed control and excellent crop safety on Tulelake silty clay loam soil (Prowl Section 24c for Northern Counties)



Maggot Control in Onions

- Study objectives were to compare insecticides and insecticide application methods (in-furrow at planting versus seed treatment) to the current in-furrow standard (Lorsban)
- Make sure seed treatments are compatible with in-furrow fungicides and insecticides







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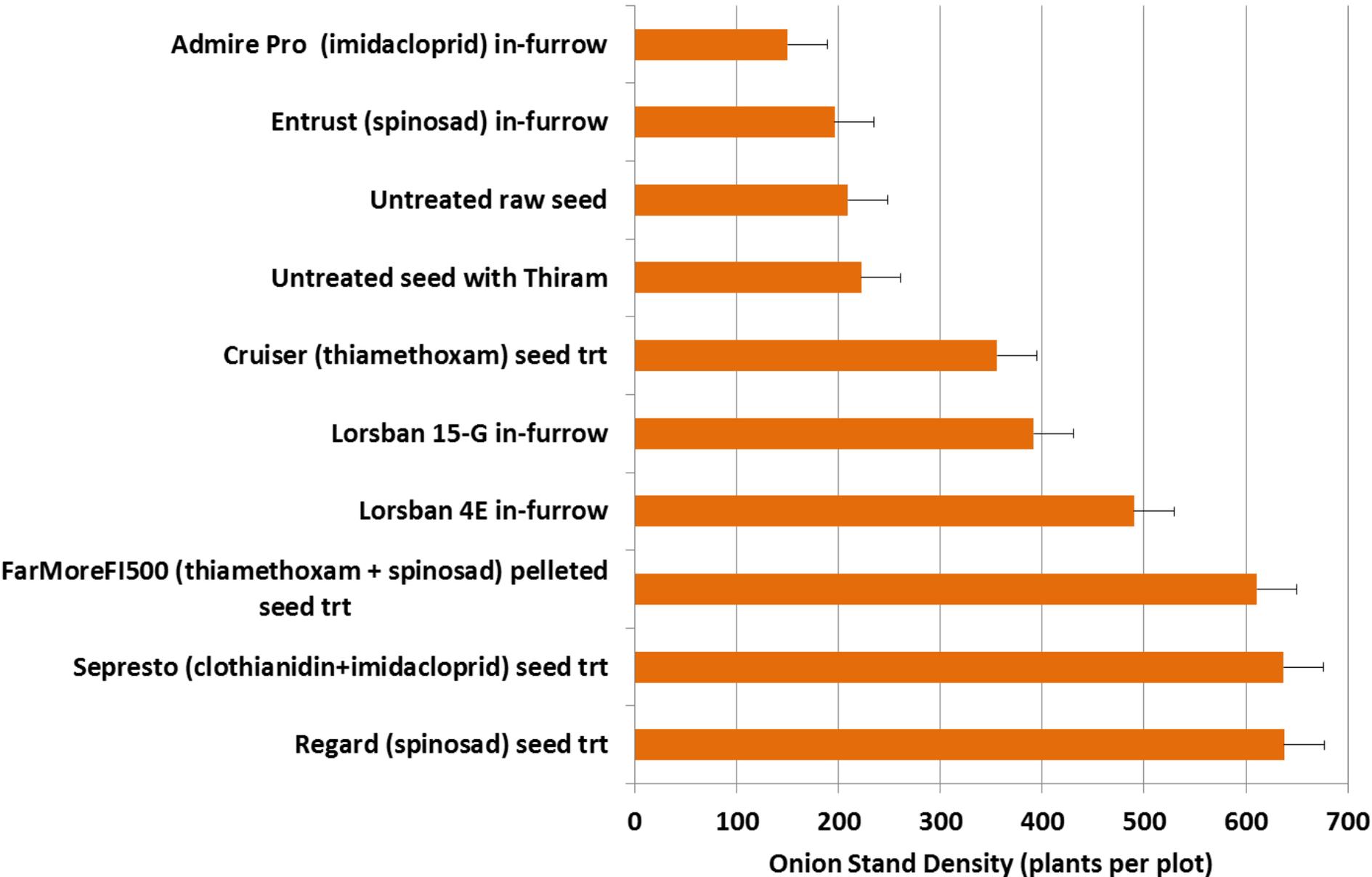
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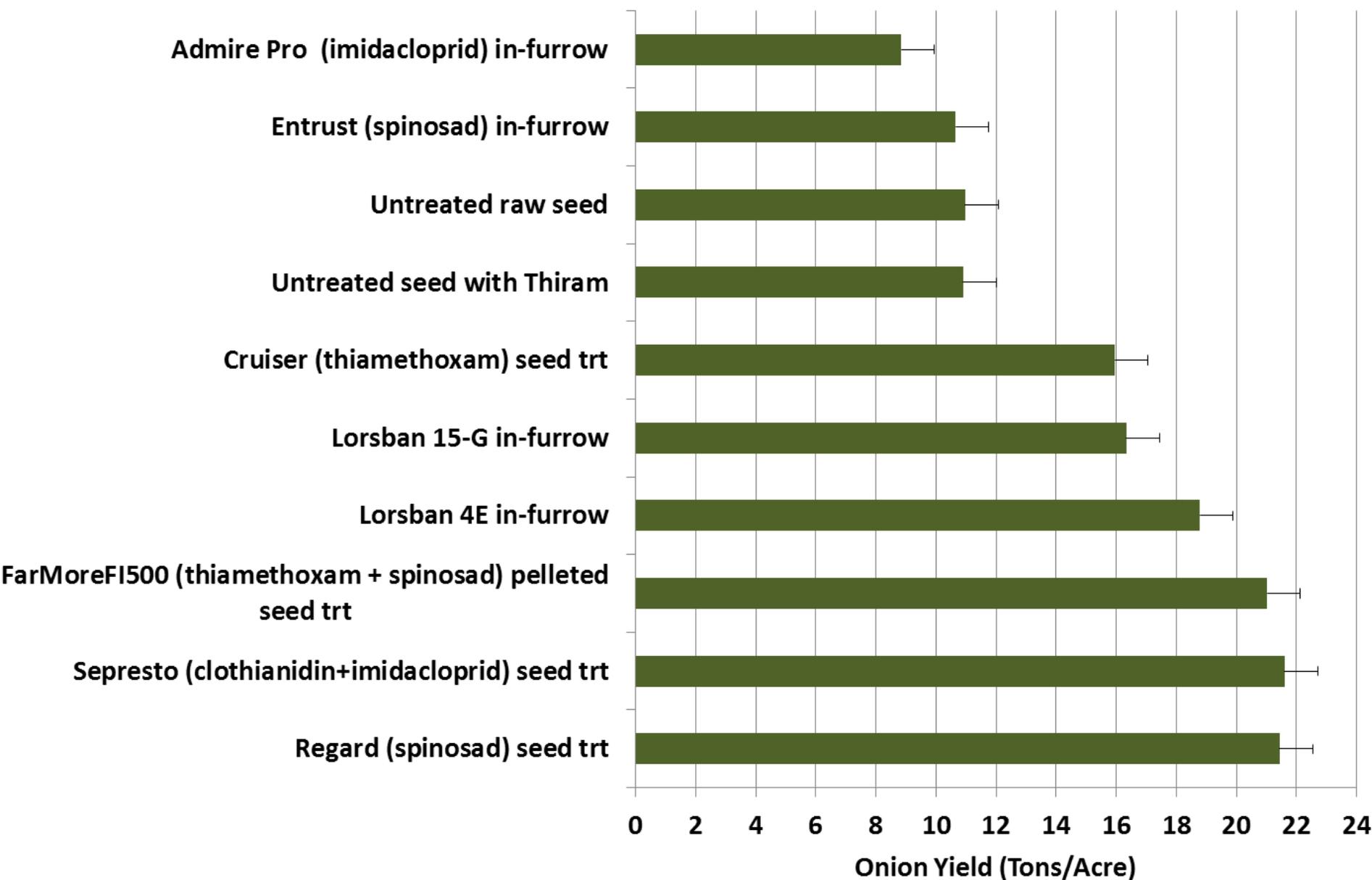
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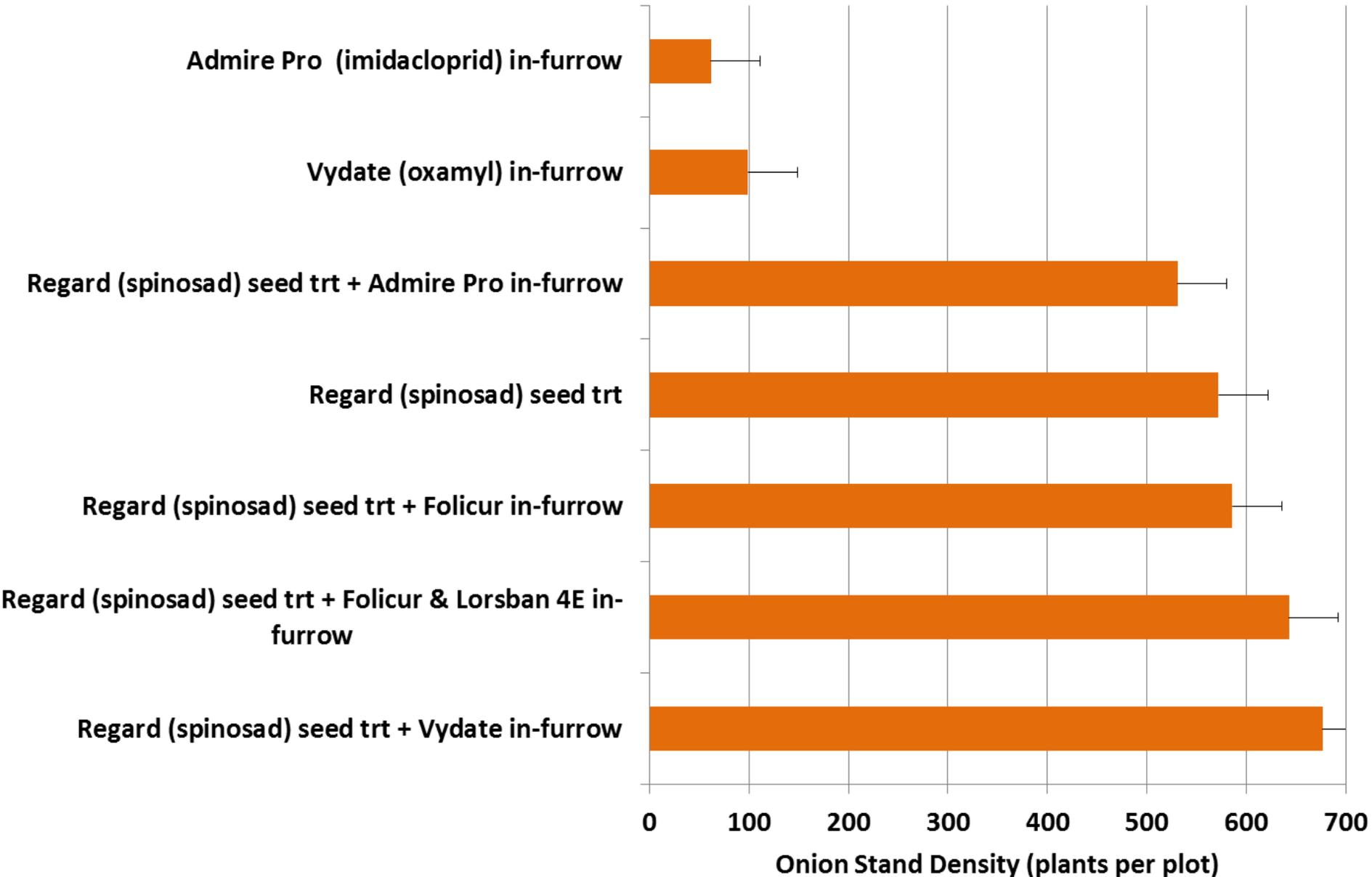
Average Onion Stand Across 2011-2013 For Insecticide Treatments Tested all Three Years at IREC



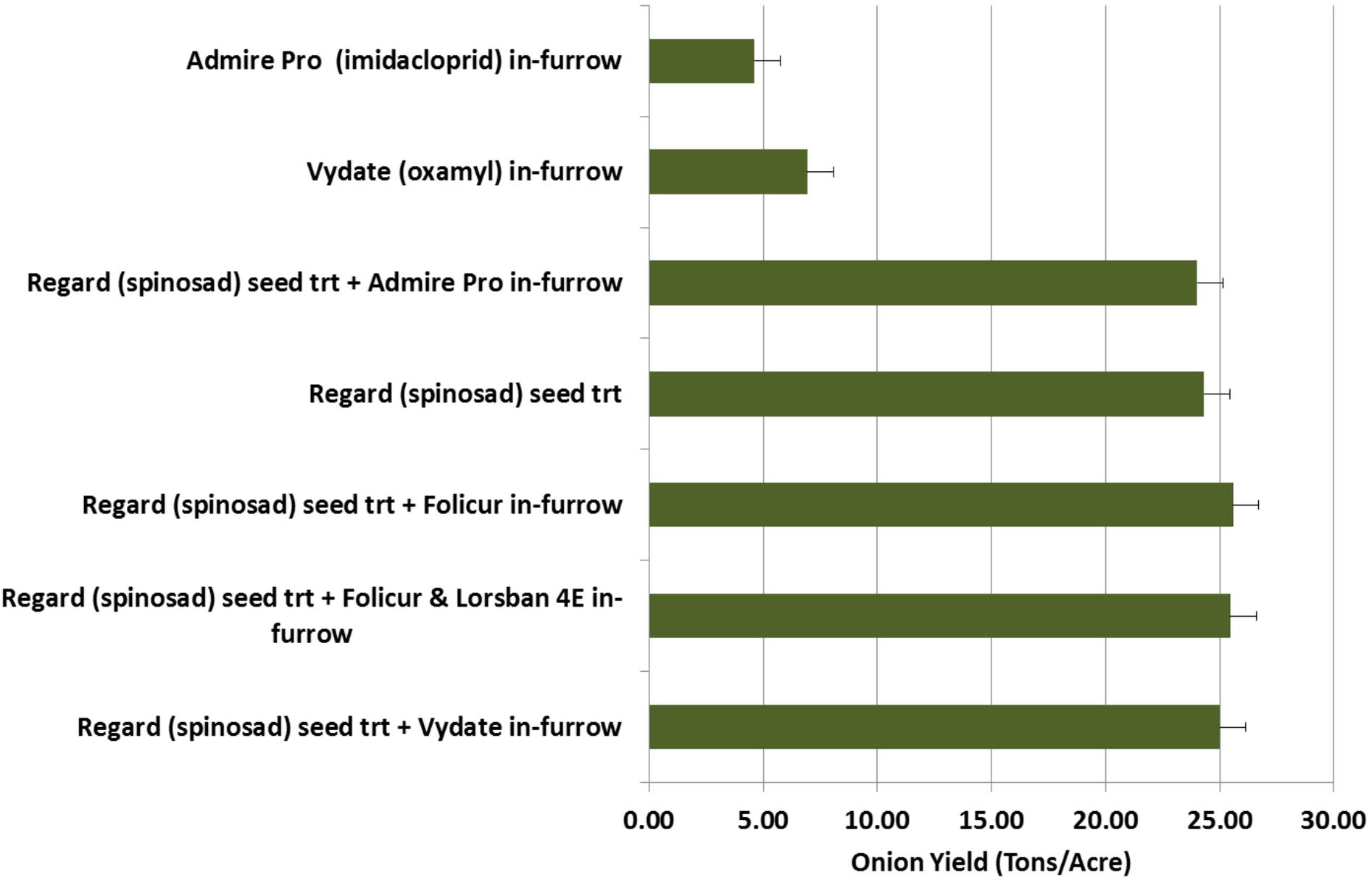
Average Onion Yield Across 2011-2013 For Insecticide Treatments Tested all Three Years at IREC



Compatibility of Insecticide Seed Treatments with Commercial Grower Practices



Compatibility of Insecticide Seed Treatments with Commercial Grower Practices



Maggot Summary

- Products with clothianidin (Sepresto) and spinosad (Regard and FarMore) applied as a seed treatment provided superior protection from maggot damage compared to the current standard Lorsban over a three period
- Spinosad seed treatment was much more effective than in-furrow applications of spinosad
- Syngenta labeled FarMore FI-500 and OI-100 for onion seed treatment in CA
 - **FarMore FI-500** (fludioxonil-Maxim, azoxystrobin-Dynasty, mefenoxam-Apron, spinosad-Regard, and thiamethoxam-Cruiser) applied as pellet form
 - **OI-500 (spinosad- Regard)** applied as film coat or encrustment
- Seed treatments were compatible with fungicide applied in-furrow



Thank You

- California Garlic and Onion Research Advisory Board
- Alan Taylor, Cornell University
- Tulelake Grower Cooperators
- Steve Orloff
- Matt Barber, Summer Intern
- IREC Staff



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