

Agronomy & Pest Management Research



Acknowledgements

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Grad Students: J. Kelly, C. Rodrigues Correa

Partners:



2022 is a Transition Year

- Don Depuydt is acting farm manager
- Peter Sikkema moved his work to Ridgetown
- Future of Huron Research Station???
 - Lack staff, research and resources
- Both challenges and opportunities

Weather Data

Month	Temperature	Rainfall
May	520 (365)	54 (83)
June	650 (662)	51 (81)
July	789 (764)	45 (80)
August (16)	401 (409)	74 (36)

- May was warm, planting was early
- Summer has been warm, no cold stress
- Rainfall <65% for May, June, July
- May 16-Aug 3 2 rainfalls >10 mm
- Early dry beans are short, soybeans better, corn?

Summary of my talk

- 1) White mold fungicides
- 2) Western bean cutworm
- 3) Starter fertilizer research

White Mold



White Mold Fungicide Performance

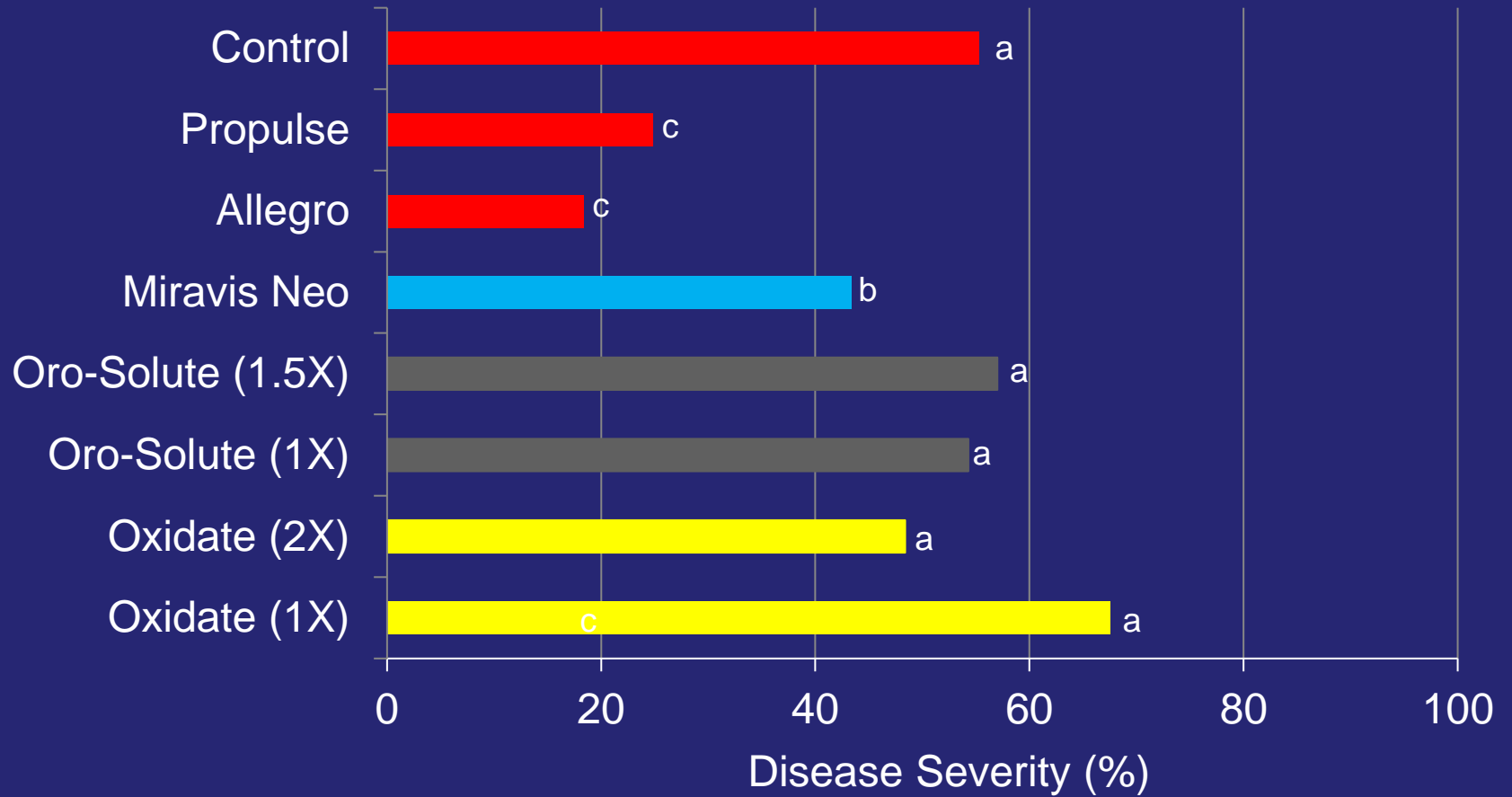
Growers frequently ask us to test products

- Oxidate – broadspectrum bactericide/fungicide contains hydrogen peroxide/ peroxyacetic acid
- Oro-Solute – surfactant (solubilizing and compatibility agent, 8.15%)

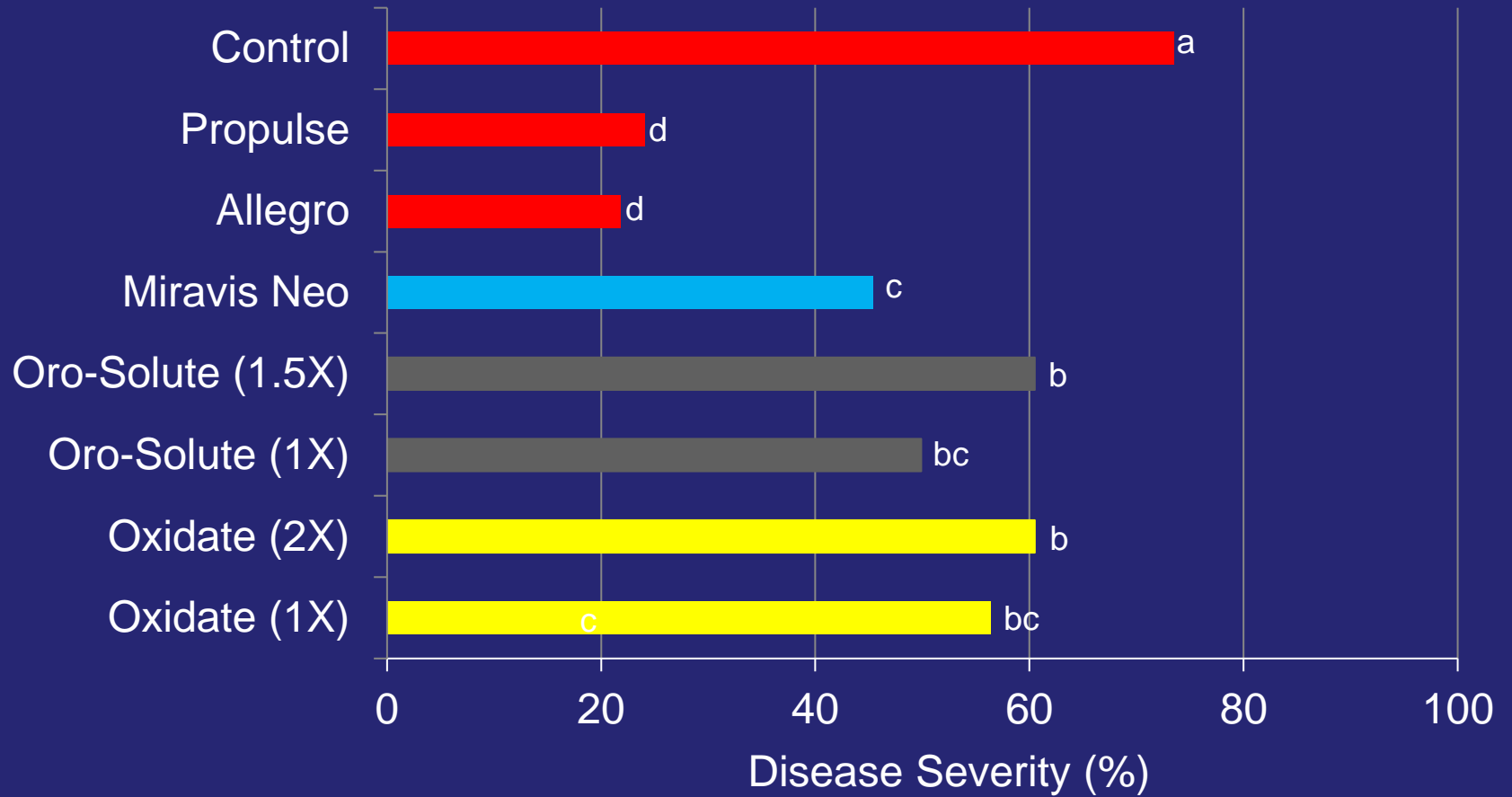
We test recent products

- Miravis Neo (adepidyn, azoxystrobin, propiconazole)
Now registered in dry beans.

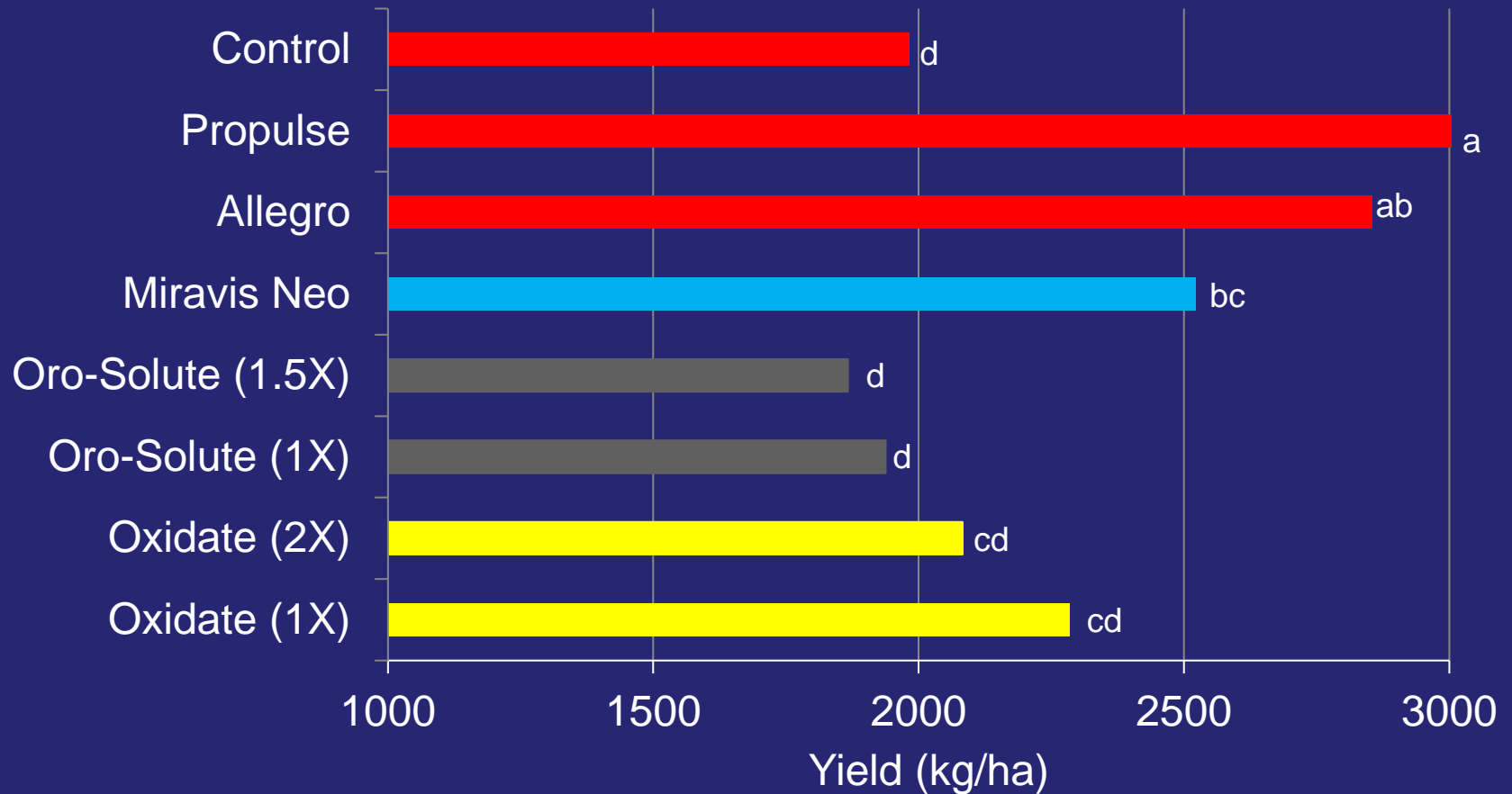
White Mold Foliar Fungicide Disease Severity – Trial A



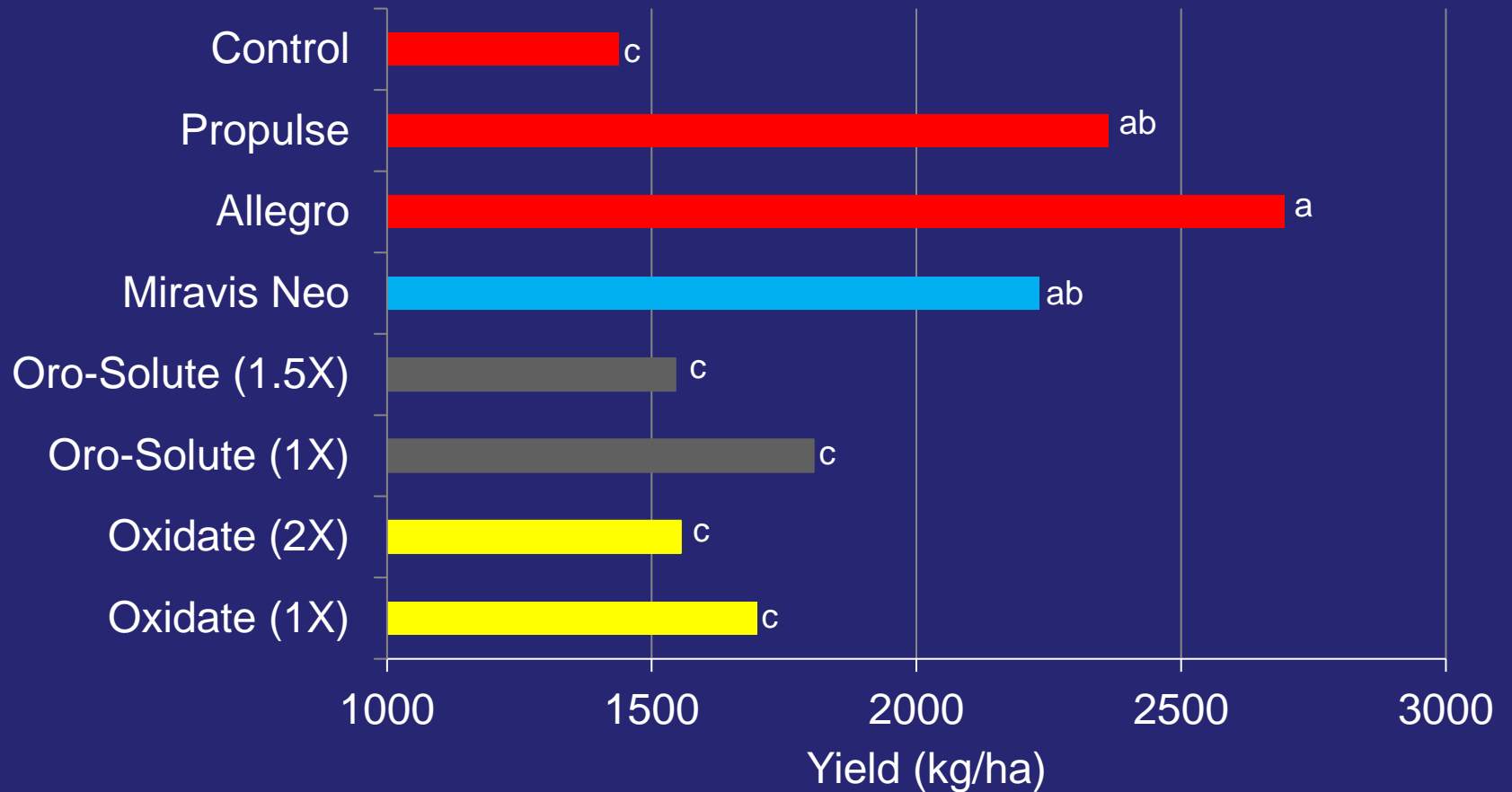
White Mold Foliar Fungicide Disease Severity – Trial B



White Mold Foliar Fungicide Yield – Trial A



White Mold Foliar Fungicide Yield – Trial B



White Mold Fungicides

2018-2022

- Tested 9 new products
 - Six are average (e.g. Miravis, Cotegra, Delaro)
 - Three are poor (Double Nickel, Oxidate, Oro-Solute)
- Allegro and Propulse still #1
 - Reduce disease severity by 34-50%
 - Increase yield by 50-70%
 - Increase return on investment by \$335-1040/ha

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Grower Survey

- Biggest disease (67%), biggest problem (75%)
- Propulse (57%), Allegro (49%), Quadris (43%)

Western Bean Cutworm Studies



J. Smith, Ridgeway Campus

Western Bean Cutworm Studies

Insecticide Application Timing Study – Josee Kelly

Breeding for WBC Resistance – with Jamie Larsen

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Banded Starter Fertilizer for Dry Beans



Cover Crop Termination/Starter P Studies



Cover Crop Termination/Starter Fertilizer

Rye cover crop – weed control, erosion, soil health

Strip till in fall + spring = reduces competition, easier planting, add banded fertilizer (or through planter)

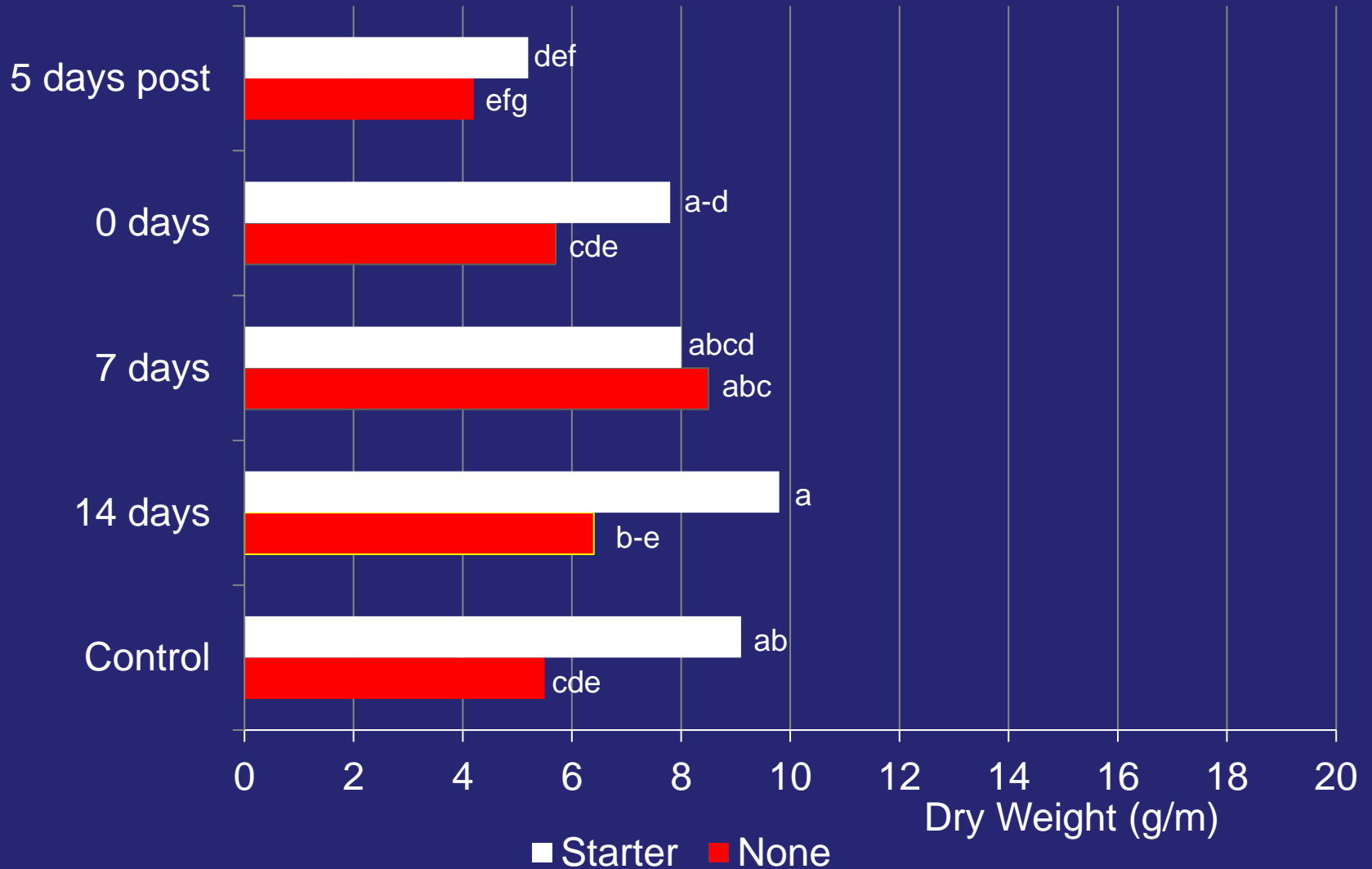
Rye termination -14, -7, 0, +5 after planting

Banded Fertilizer 20-28-28 @180 kg/ha

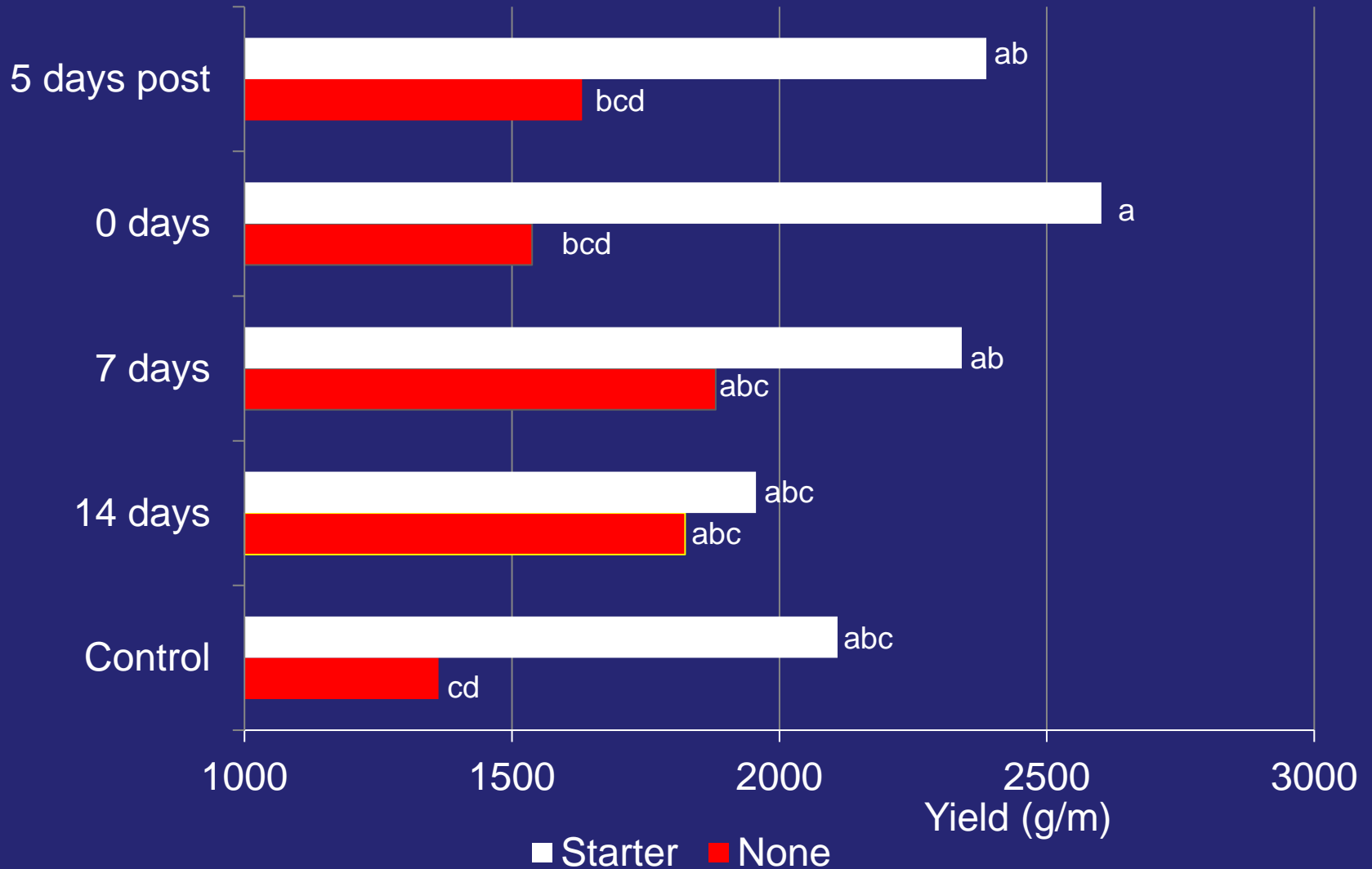
36 kg N, 50 kg P, 50 kg K

Soil Test: P (11 ppm) K (133 ppm)

Strip Till Cover Crop – Plant Dry Weight (49 days)



Strip Till Cover Crop – Yield



Cover Crop Termination/Starter P Studies

	Control	Day 0	Day 5
No Starter	 A photograph of a control plot without starter phosphorus at Day 0. The cover crop is a dense, green, leafy plant, likely a buckwheat, growing in rows. A white marker is visible in the lower right of the plot.	 A photograph of a control plot without starter phosphorus at Day 0, showing a similar view to the control plot. The cover crop is dense and green. A white marker is visible in the lower right.	 A photograph of a control plot without starter phosphorus at Day 5. The cover crop is still green but appears slightly less dense than at Day 0. A white marker is visible in the lower right.
Starter	 A photograph of a plot with starter phosphorus at Day 0. The cover crop is very dense and green, filling most of the row. A white marker is visible in the lower left.	 A photograph of a plot with starter phosphorus at Day 0, showing a similar view to the starter plot. The cover crop is very dense and green. A white marker is visible in the lower right.	 A photograph of a plot with starter phosphorus at Day 5. The cover crop is very dense and green, similar to Day 0. A white marker is visible in the lower right.

Photos: August 3, 64 days after planting

Questions?

