Farmer Directed Research Of Products & Practices

IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Soil & Crop Management Seminar
February 1, 2012
Melville Communiplex, Melville, SK

The Origins of Yield Busters

- Initiated by IHARF Board of Directors February 2010 in response to two main concerns:
  1. Strong desire as Directors (& Farmers) to become more directly engaged in process of establishing research priorities
  2. Unprecedented influx of products introduced & marketed with little or no 3rd party research supporting their efficacy
- Researchers saw the project as an effective means of connecting with farmers to identify their current challenges & potential gaps in research knowledge while enhancing public awareness & interest in activities
- Process involved canvassing individuals within agricultural community & challenging them to present the top 2 or 3 agronomic questions which they would like to see addressed
- All ideas put forward considered with final selections based on what was:
  1. Important to producers
  2. Practical and relatively straight forward to evaluate
  3. Has not / is not already been extensively tested in W. Canada

Field Trials - 2010

- Two separate trials initated for 2010 growing season with funding provided by IHARF and Viterra and in-kind contributions from Western Ag Labs, BASF and Western Applied Research Corporation (WARC)

1. **Micronutrient Seed Dressings on Various Crops**
2. **Fungicide Applications on Flax**

Field Trials - 2011

- Secured additional funding from ADOPT & initiated a 3rd trial in 2011

Saskatchewan Ministry of Agriculture

Growing Forward

AGRICULTURAL DEMONTRATION OF PRACTICES & TECHNOLOGIES

1. Evaluating Various Fungicide Applications on Canola

- In-kind contributions from BASF, Bayer CropScience & Syngenta

MicroNutrient Seed Dressings on Various Crops

Locations

1) Canora 2) Indian Head 3) Scott 4) Swift Current

Crops

1) Wheat 2) Canola 3) Lentil 4) Field Pea

Seed Treatments

1) Untreated 2) Treated*

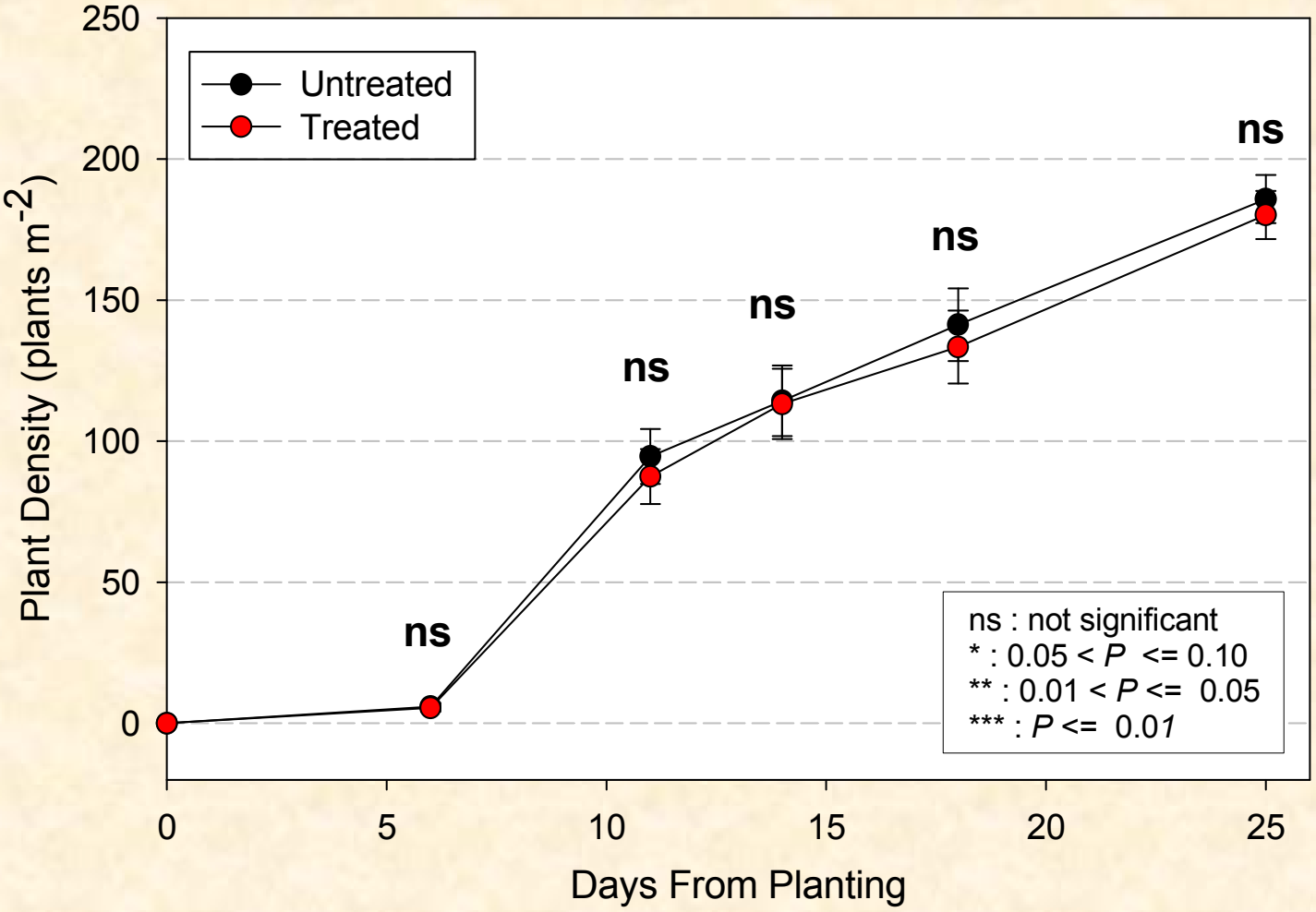
*Omex Zn Primer for wheat/canola & Omex Pulse Primer for lentil/field pea)

Data Collection

1) Emergence 2) Yield

Emergence Rate (All Crops)

Indian Head 2010



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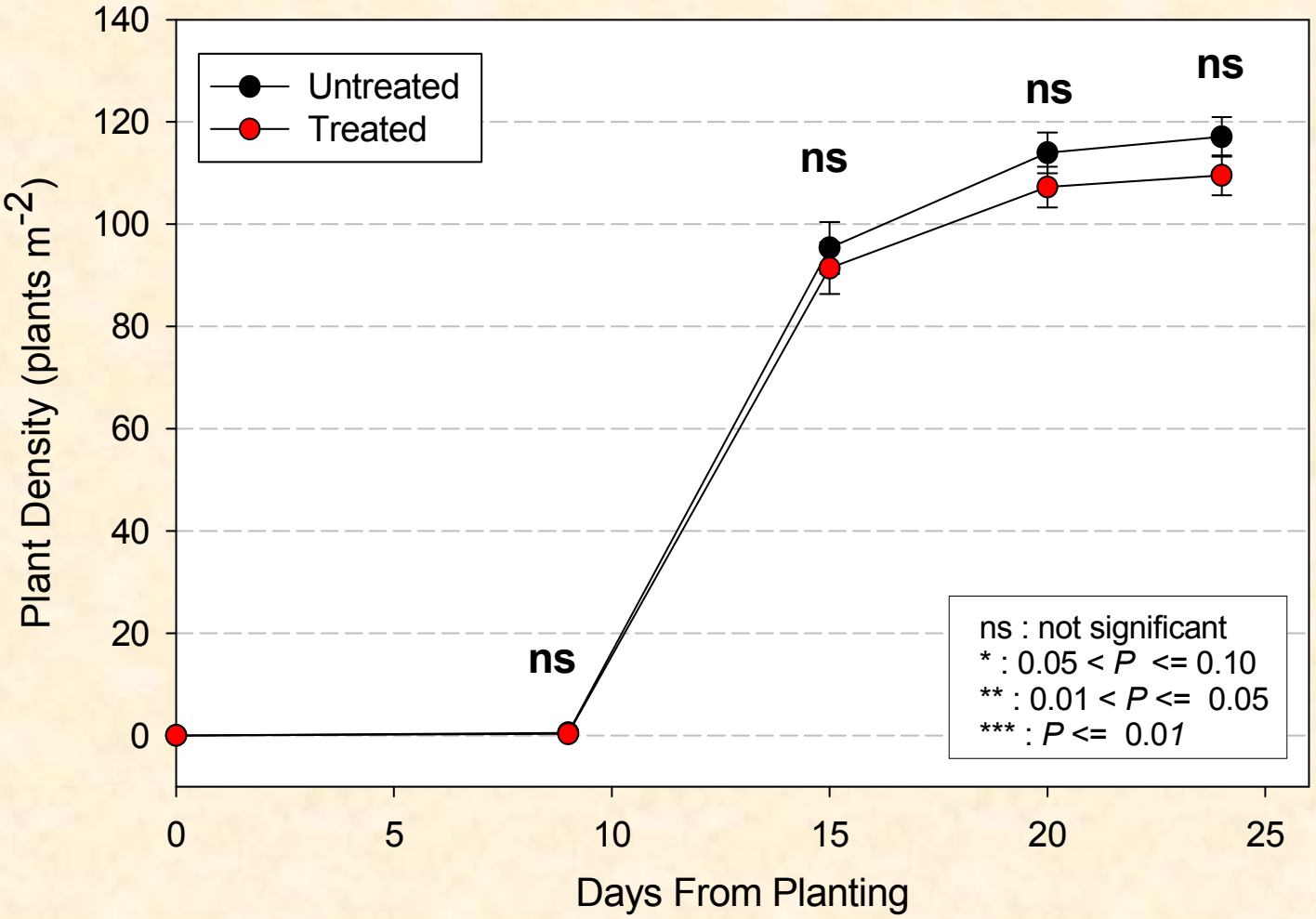
Emergence Rate (All Crops)

Indian Head 2011



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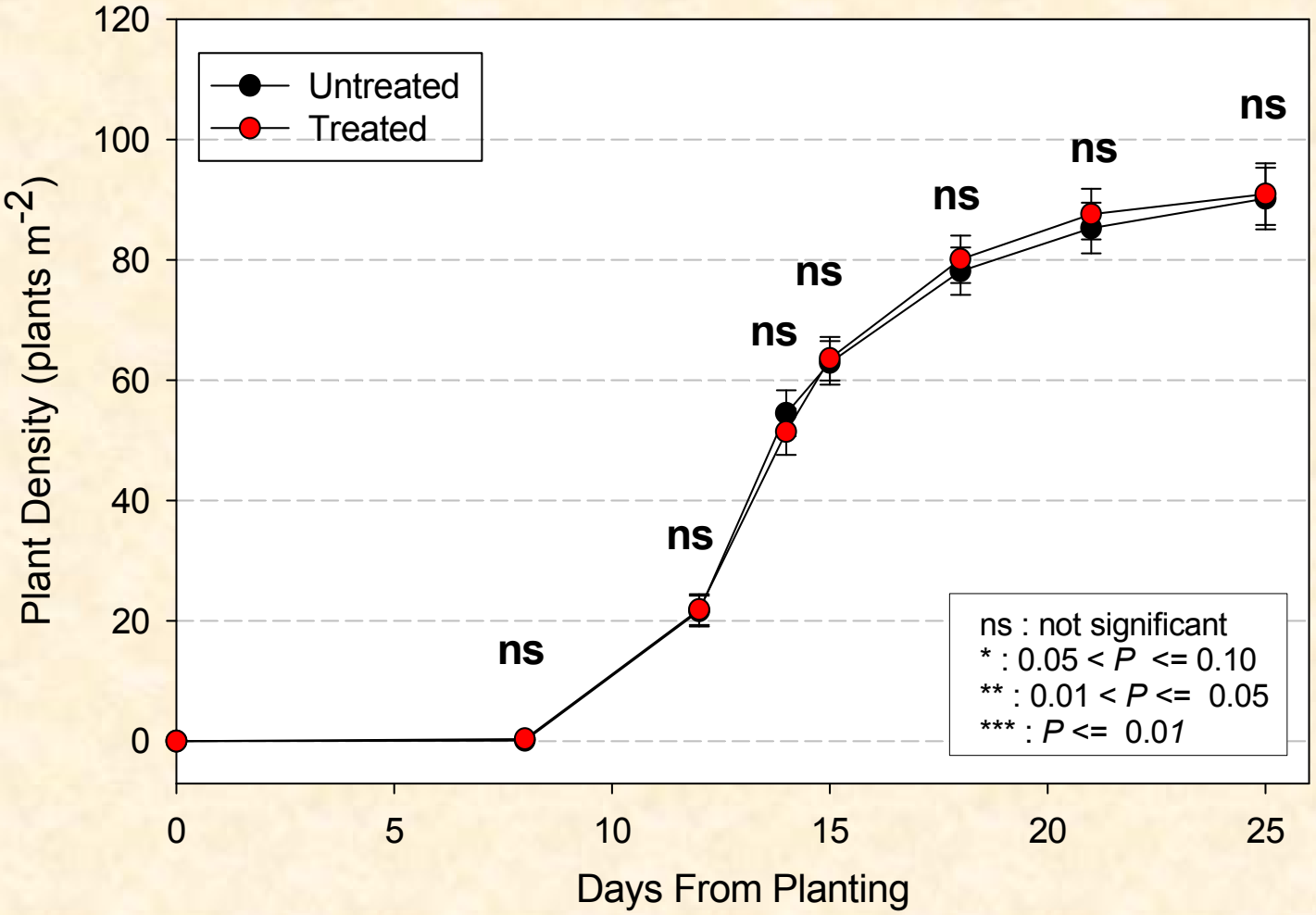
Emergence Rate (All Crops)

Scott 2011



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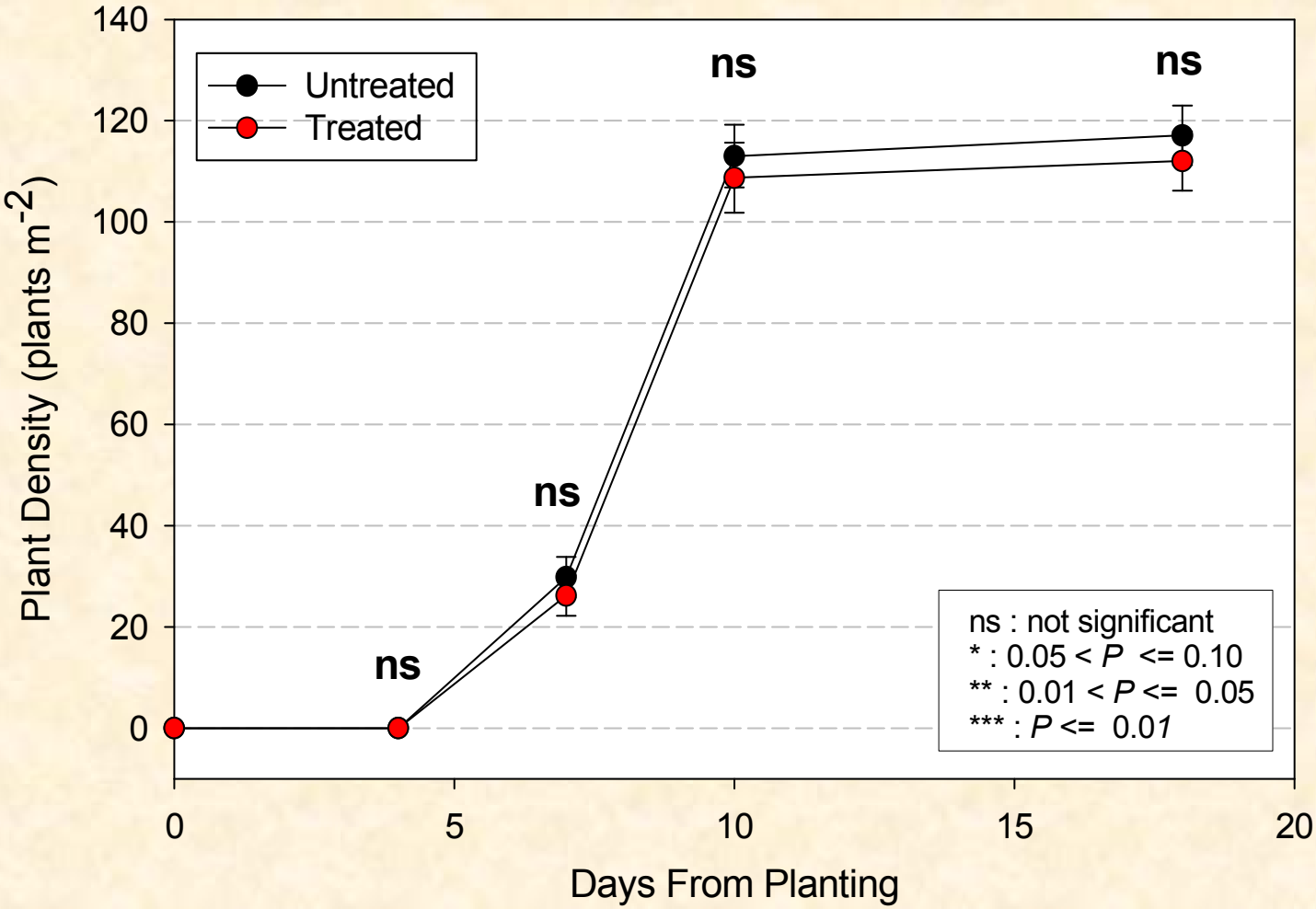
Emergence Rate (All Crops)

Swift Current 2011



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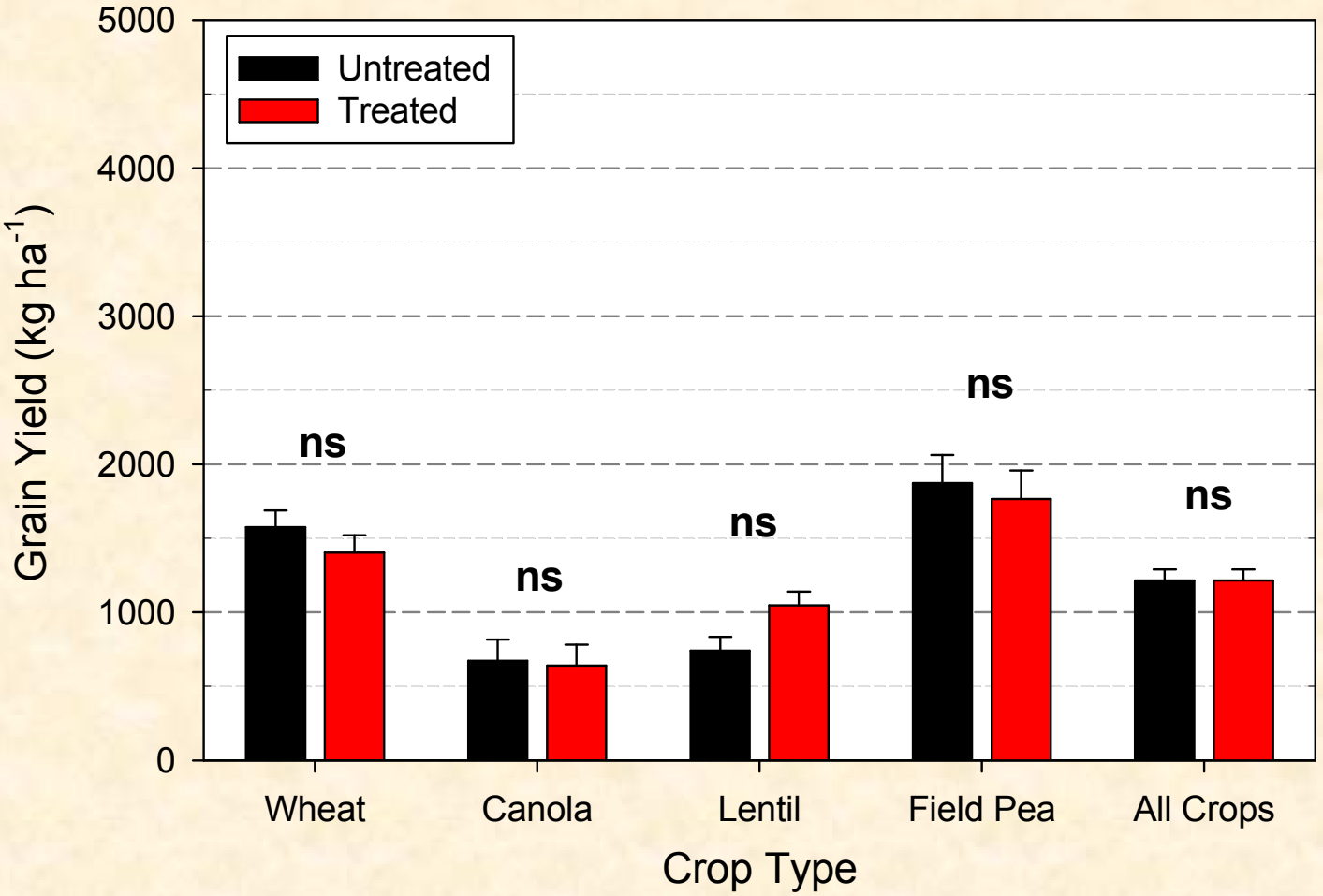
Seed Dressing Effects on Grain Yield
Canora 2010

Treated vs Untreated*

Wheat: *P* = 0.376
Canola: *P* = 0.878
Lentil: *P* = 0.109
Pea: *P* = 0.720
All: *P* = 0.995

*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



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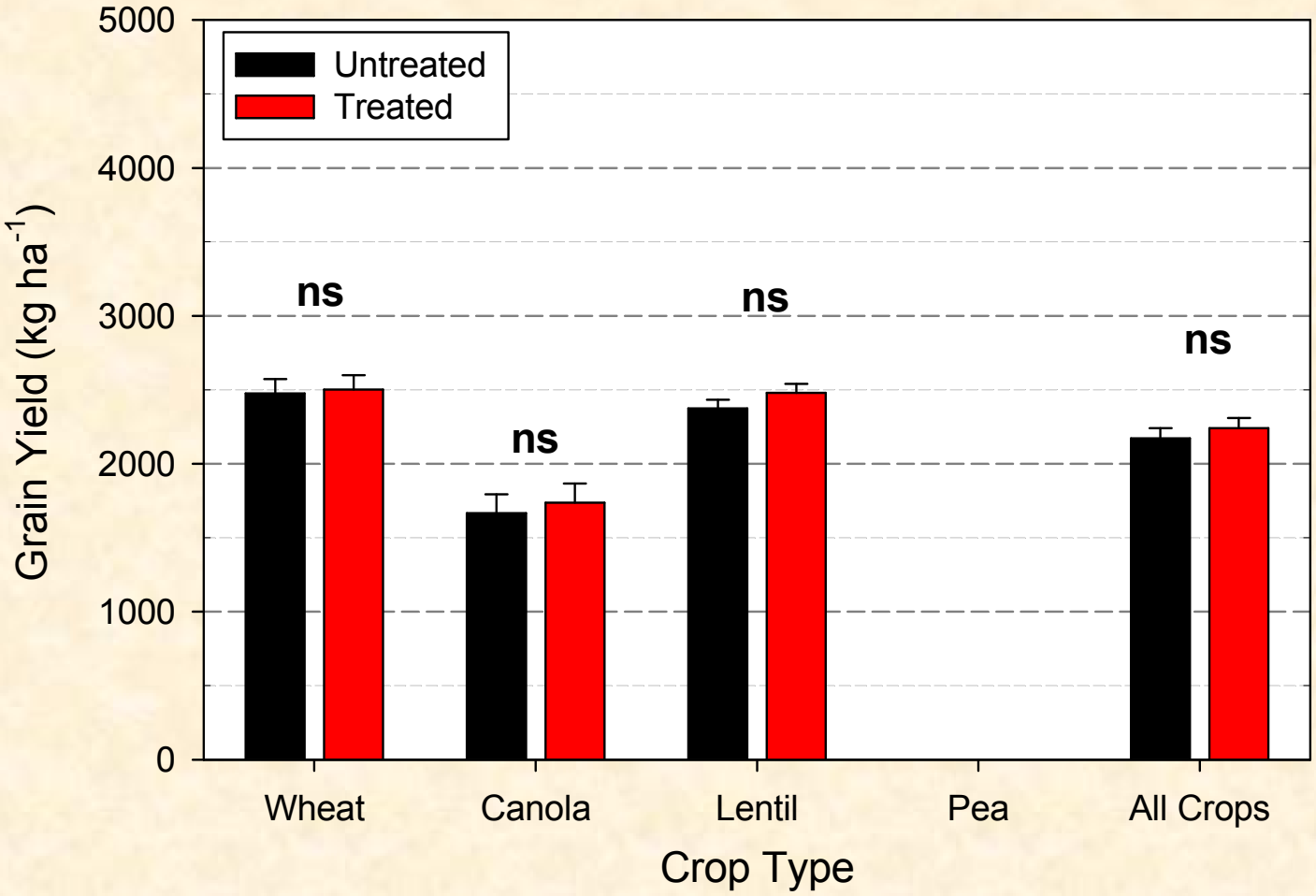
Seed Dressing Effects on Grain Yield
Indian Head 2010

Treated vs Untreated*
Wheat: *P* = 0.860
Canola: *P* = 0.720
Lentil: *P* = 0.288
Pea: n/a
All: *P* = 0.482

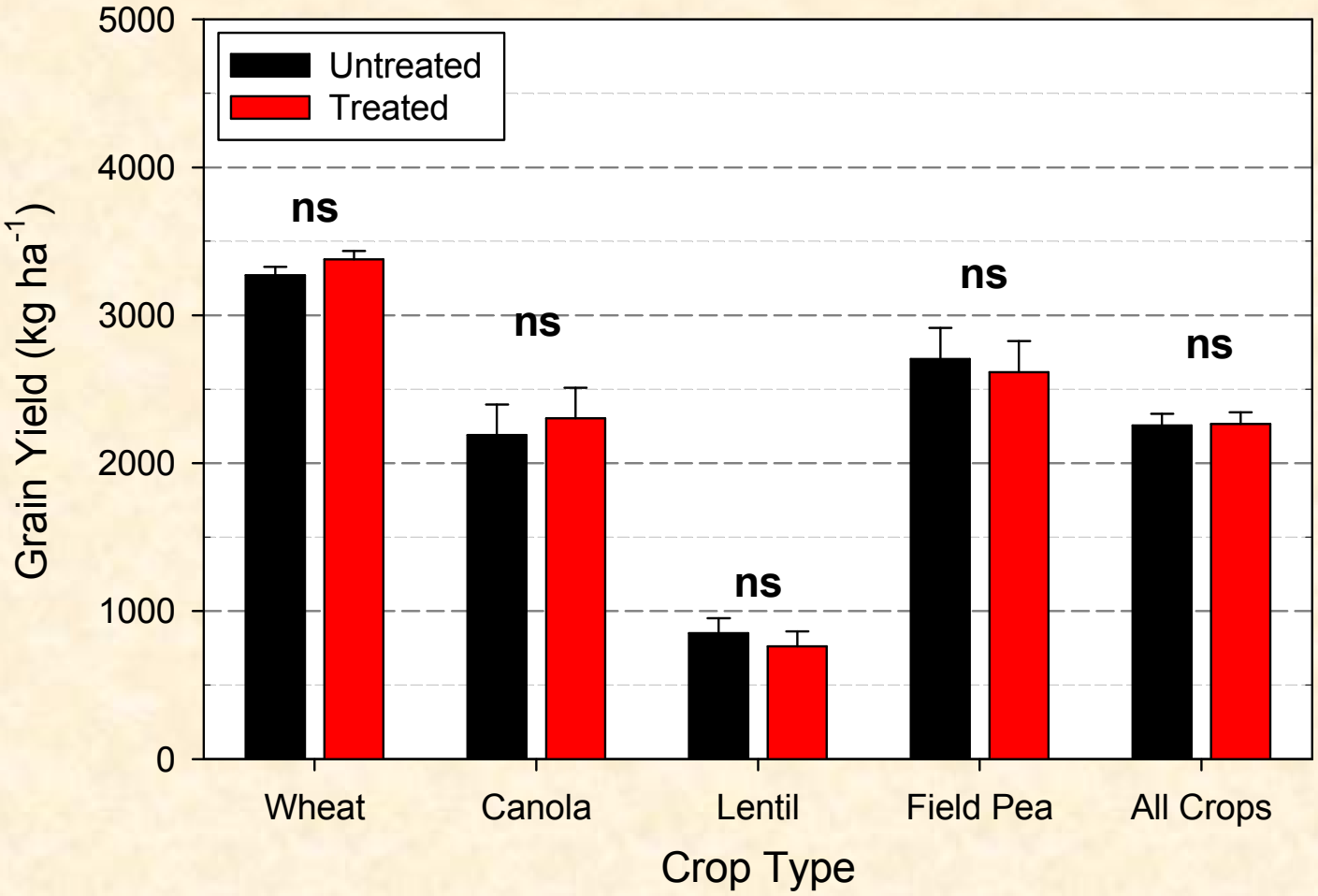
*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Seed Dressing Effects on Grain Yield
Scott 2010

Treated vs Untreated*
Wheat: *P* = 0.275
Canola: *P* = 0.725
Lentil: *P* = 0.607
Pea: *P* = 0.783
All: *P* = 0.927

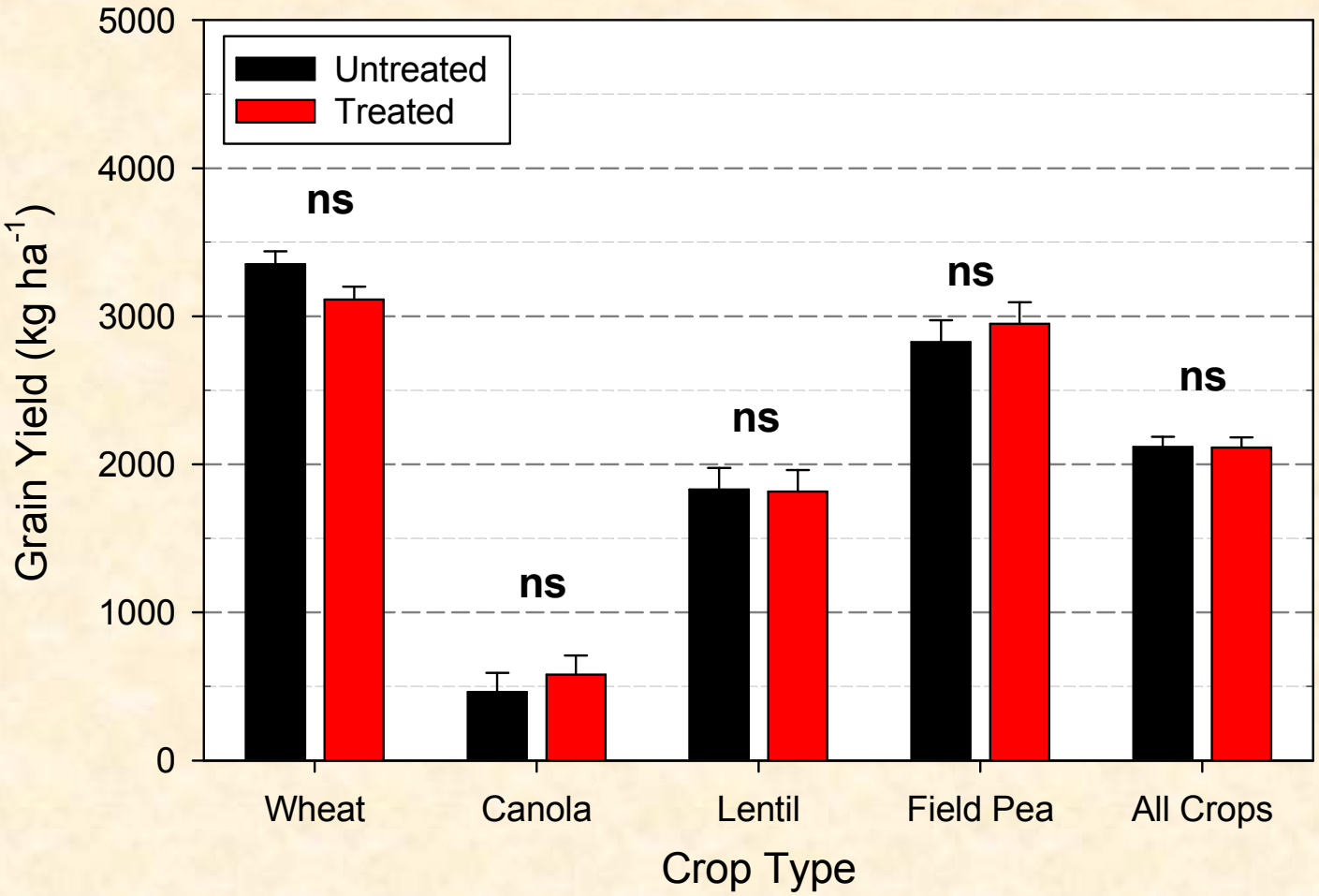
*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Seed Dressing Effects on Grain Yield
Swift Current 2010

Treated vs Untreated*
Wheat: *P* = 0.150
Canola: *P* = 0.567
Lentil: *P* = 0.947
Pea: *P* = 0.597
All: *P* = 0.973

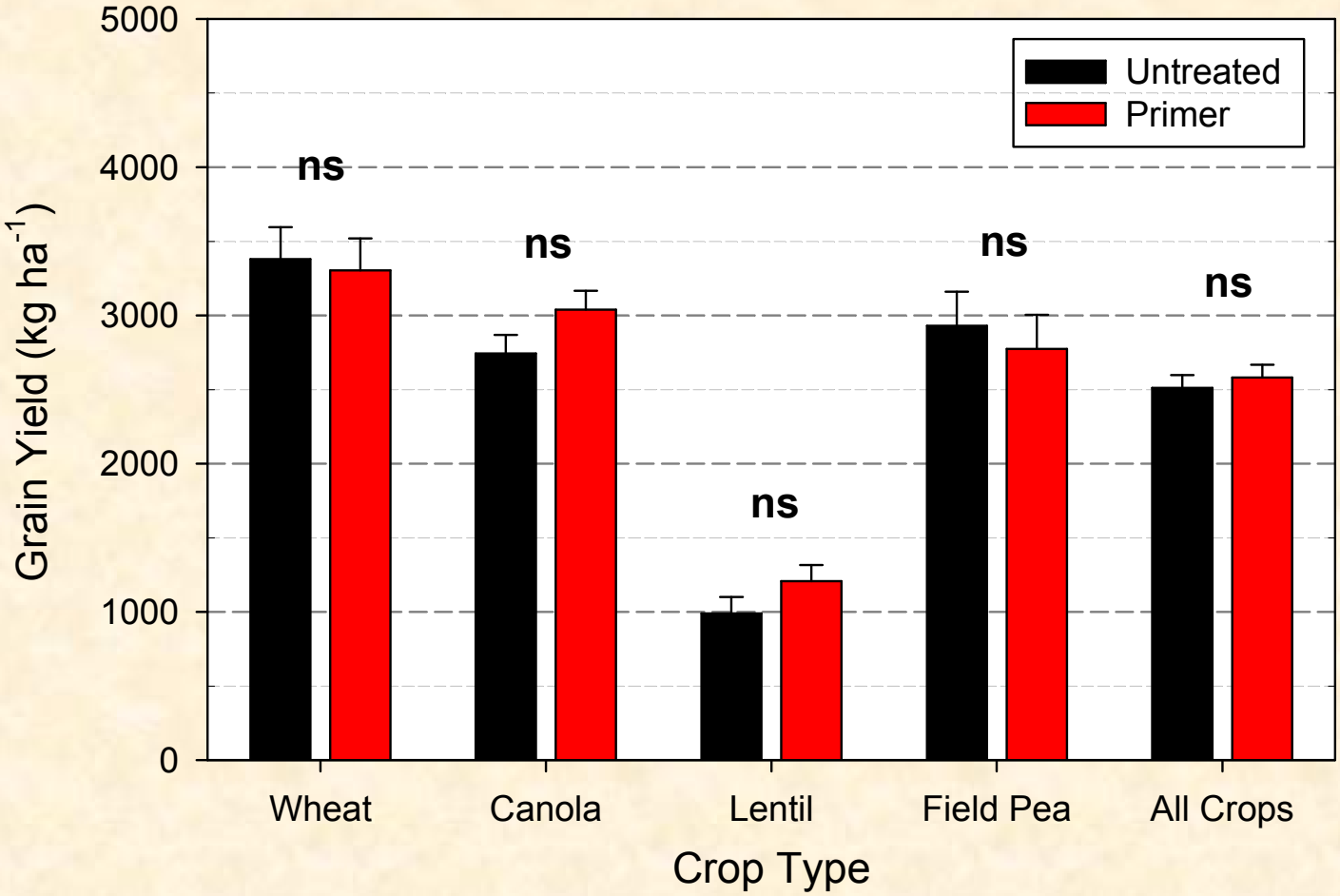
*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Seed Dressing Effects on Grain Yield
Canora 2011

Treated vs Untreated*
Wheat: *P* = 0.819
Canola: *P* = 0.195
Lentil: *P* = 0.257
Pea: *P* = 0.661
All: *P* = 0.574

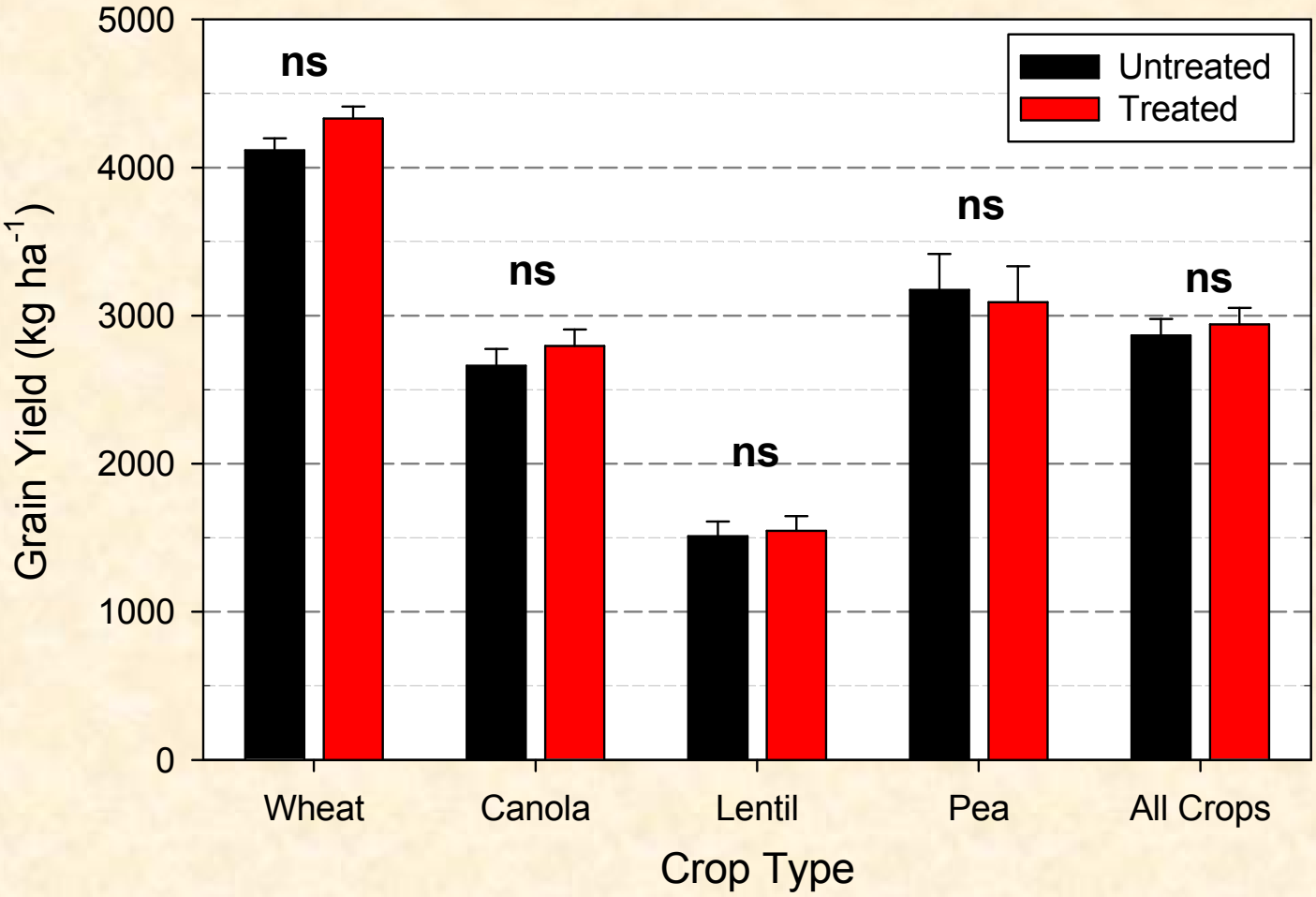
*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Seed Dressing Effects on Grain Yield
Indian Head 2011

Treated vs Untreated*
Wheat: *P* = 0.157
Canola: *P* = 0.467
Lentil: *P* = 0.809
Pea: *P* = 0.822
All: *P* = 0.638

*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



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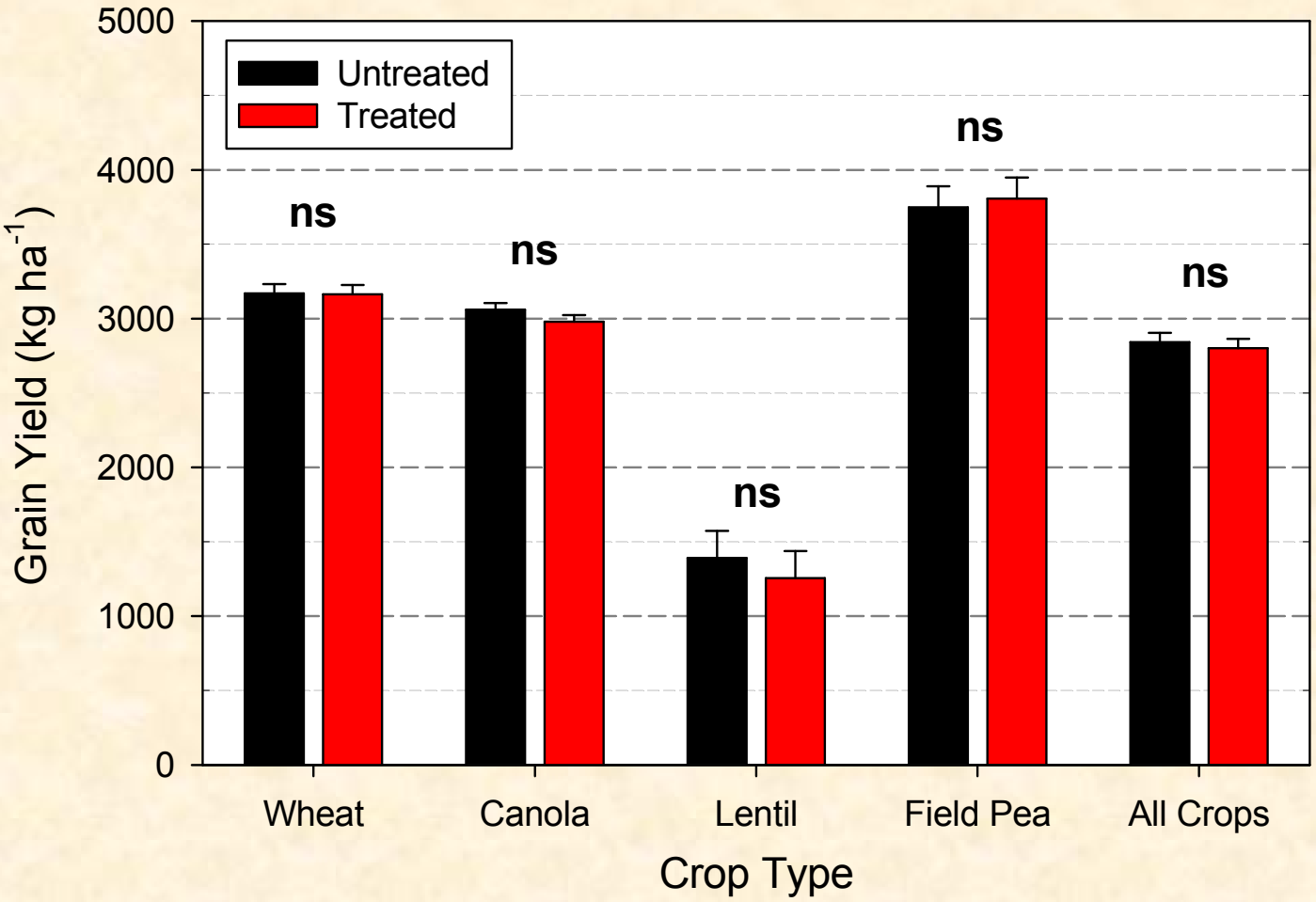
Seed Dressing Effects on Grain Yield
Scott 2011

Treated vs Untreated*
Wheat: *P* = 0.957
Canola: *P* = 0.277
Lentil: *P* = 0.634
Pea: *P* = 0.792
All: *P* = 0.650

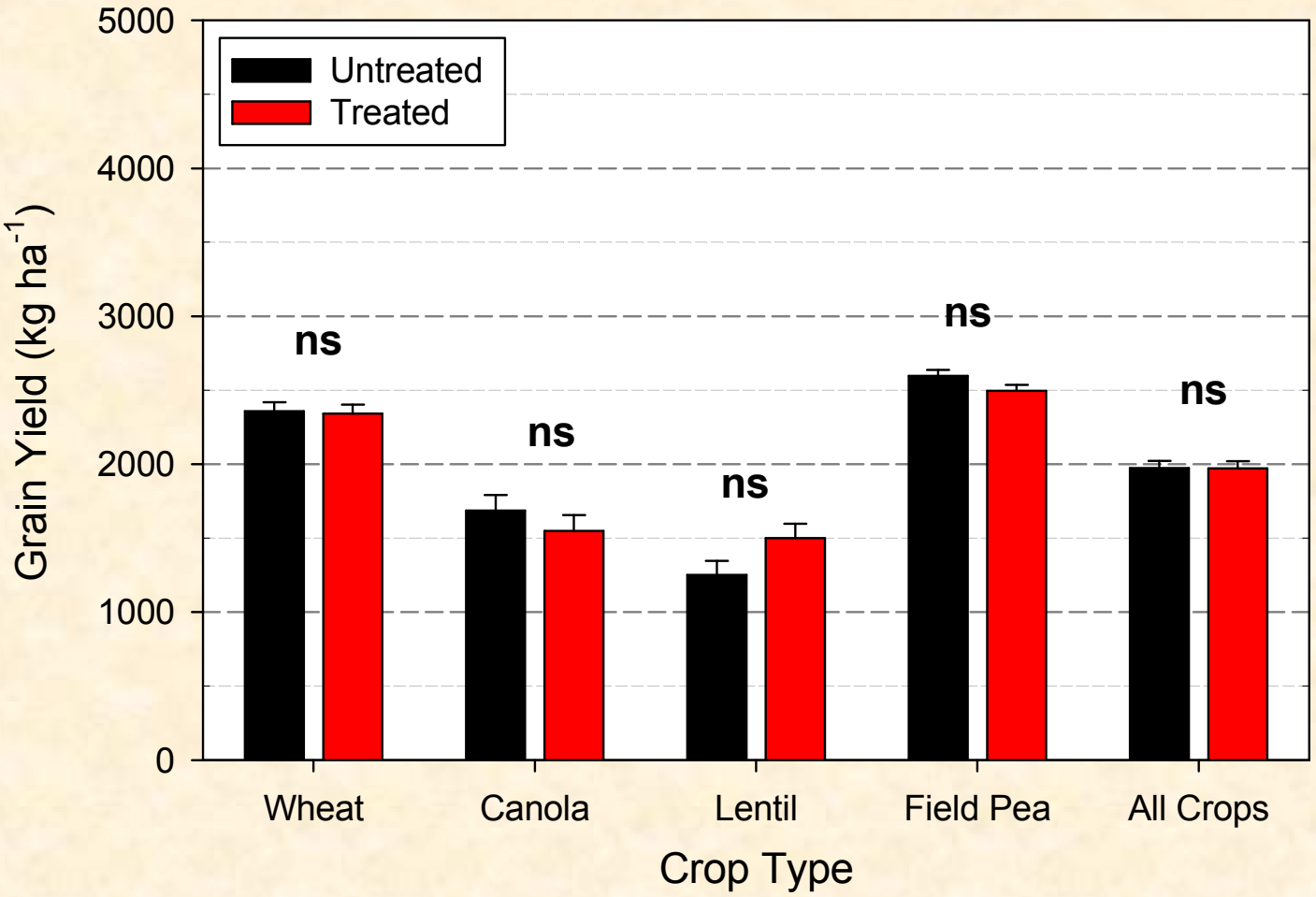
*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Seed Dressing Effects on Grain Yield
Swift Current 2011

Treated vs Untreated*
Wheat: *P* = 0.858
Canola: *P* = 0.429
Lentil: *P* = 0.164
Pea: *P* = 0.177
All: *P* = 0.984

*Results presented are from contrasts comparing yield with treated seed directly to untreated yields for each crop



Flax Response to Fungicide

Locations:

1) Indian Head 2) Canora
3) Swift Current

Treatments

- Untreated
- Headline® EC
  (0.16 l/ac)
- Proline®
  (0.15 l/ac - 2011 only)

Data Collected:

1) Seed Yield

Visible Response

Untreated Check

Aug 12

Visible Response

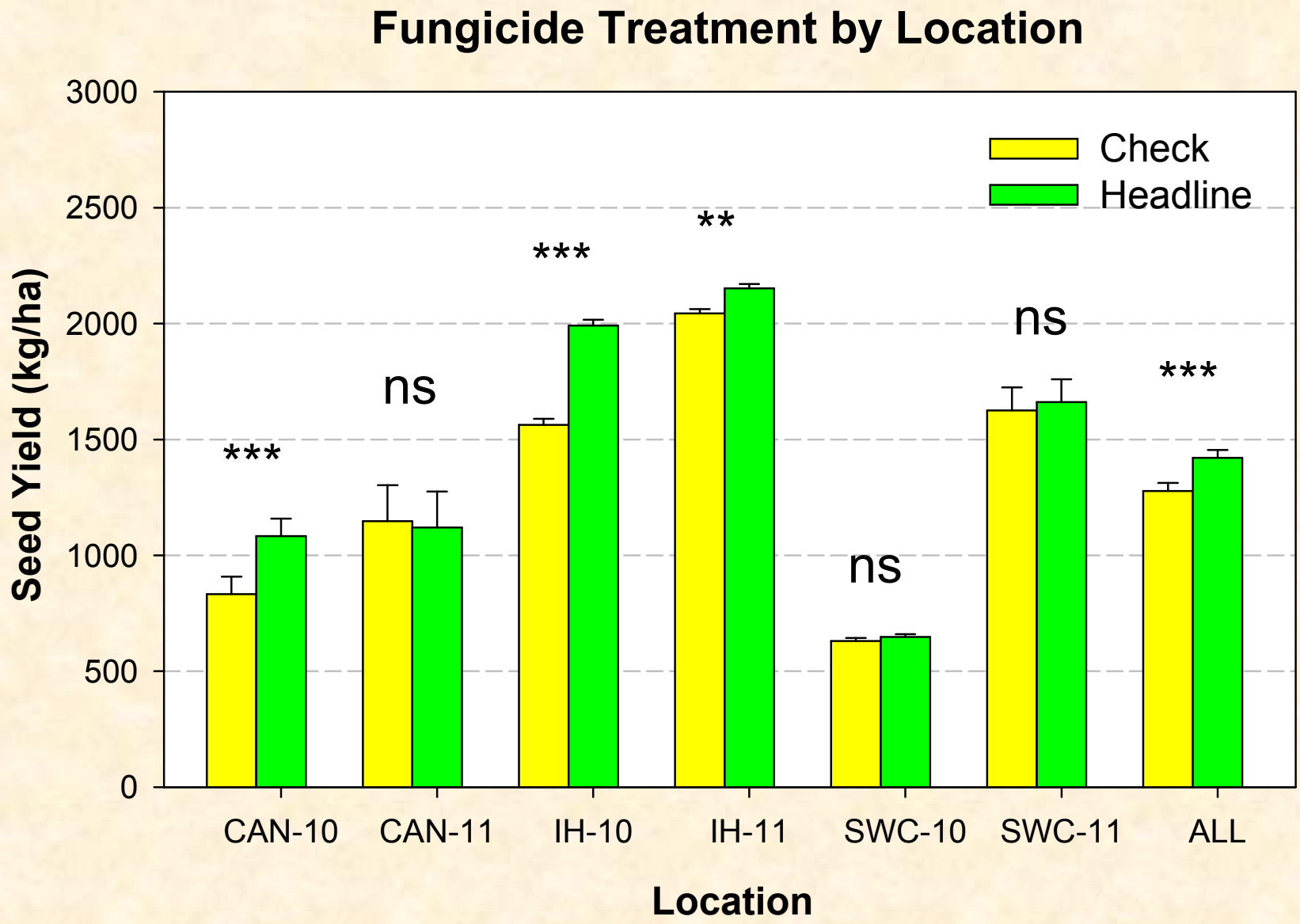
Headline

Aug 12

Visible Response

Visible Response

Effects of Fungicide on Flax Yield



Canola Response to Fungicide

Locations

1) Indian Head
2) Canora
3) Swift Current

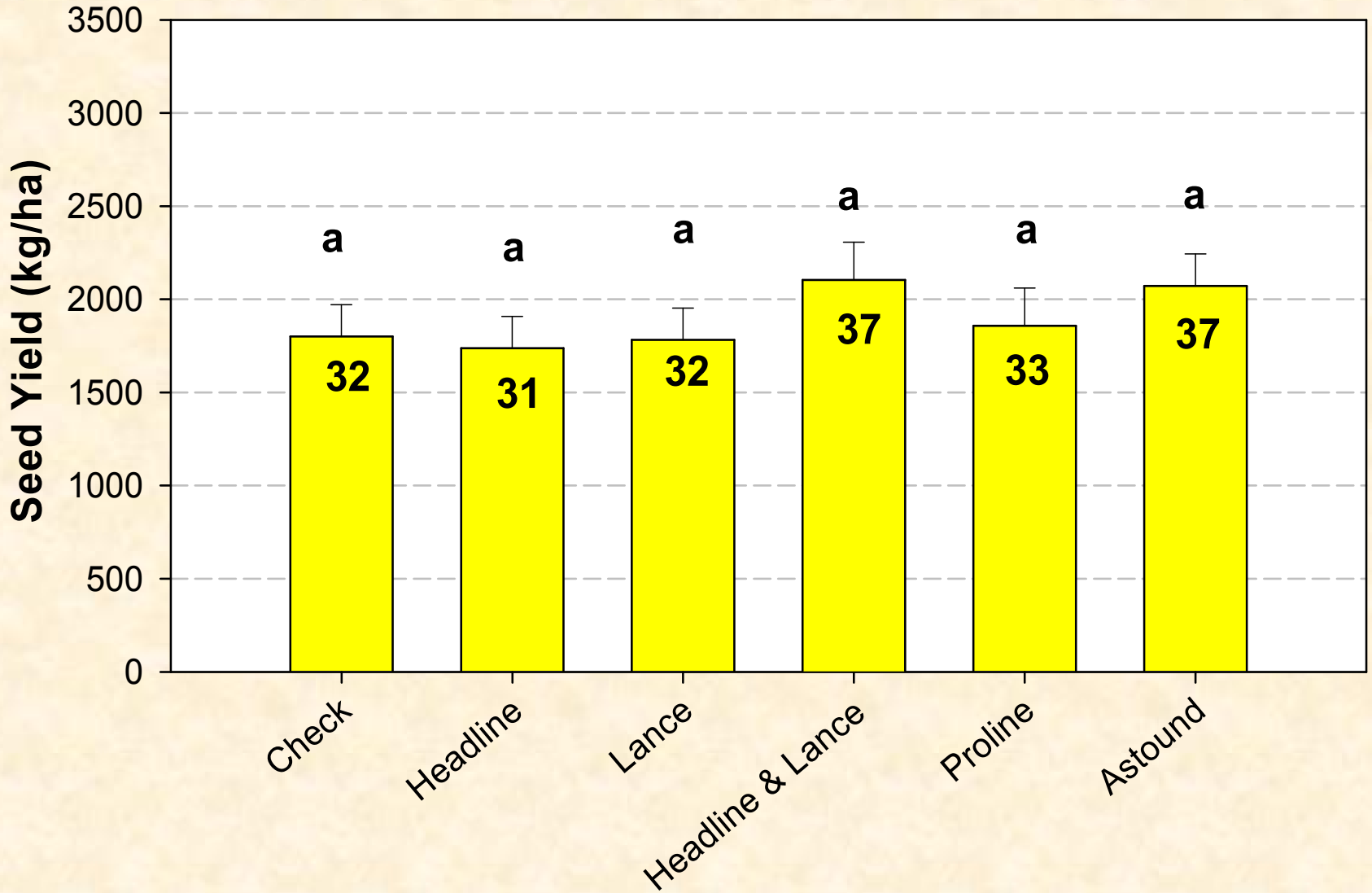
Treatments

1) Untreated
2) Headline (0.16 l/ac)
3) Lance (142 g/ac)
4) Lance + Headline (142 g/ac+0.12 l/ac)
5) Proline (0.15 l/ac)
6) Astound (390 g/ac)

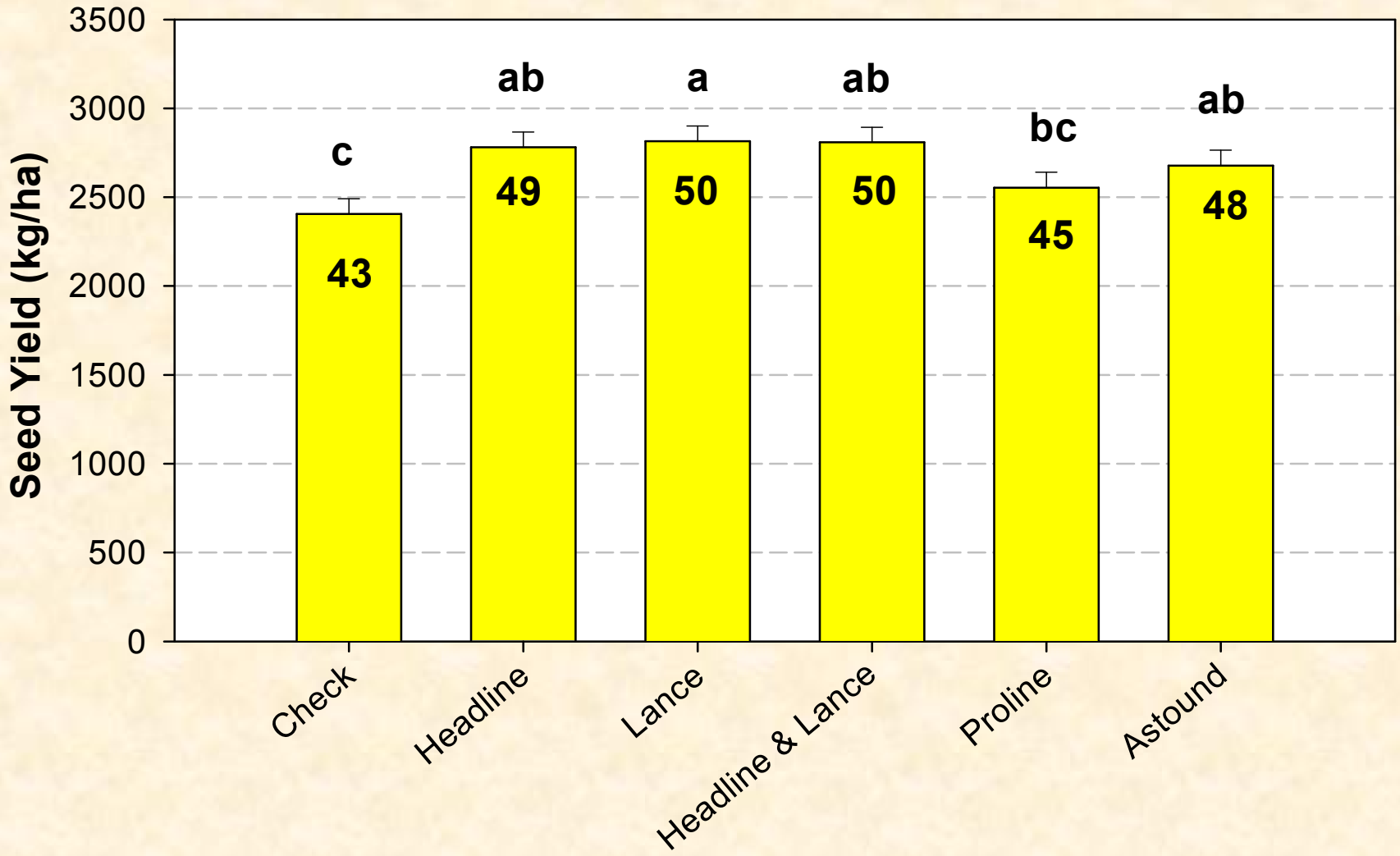
Data Collected

1) Seed Yield

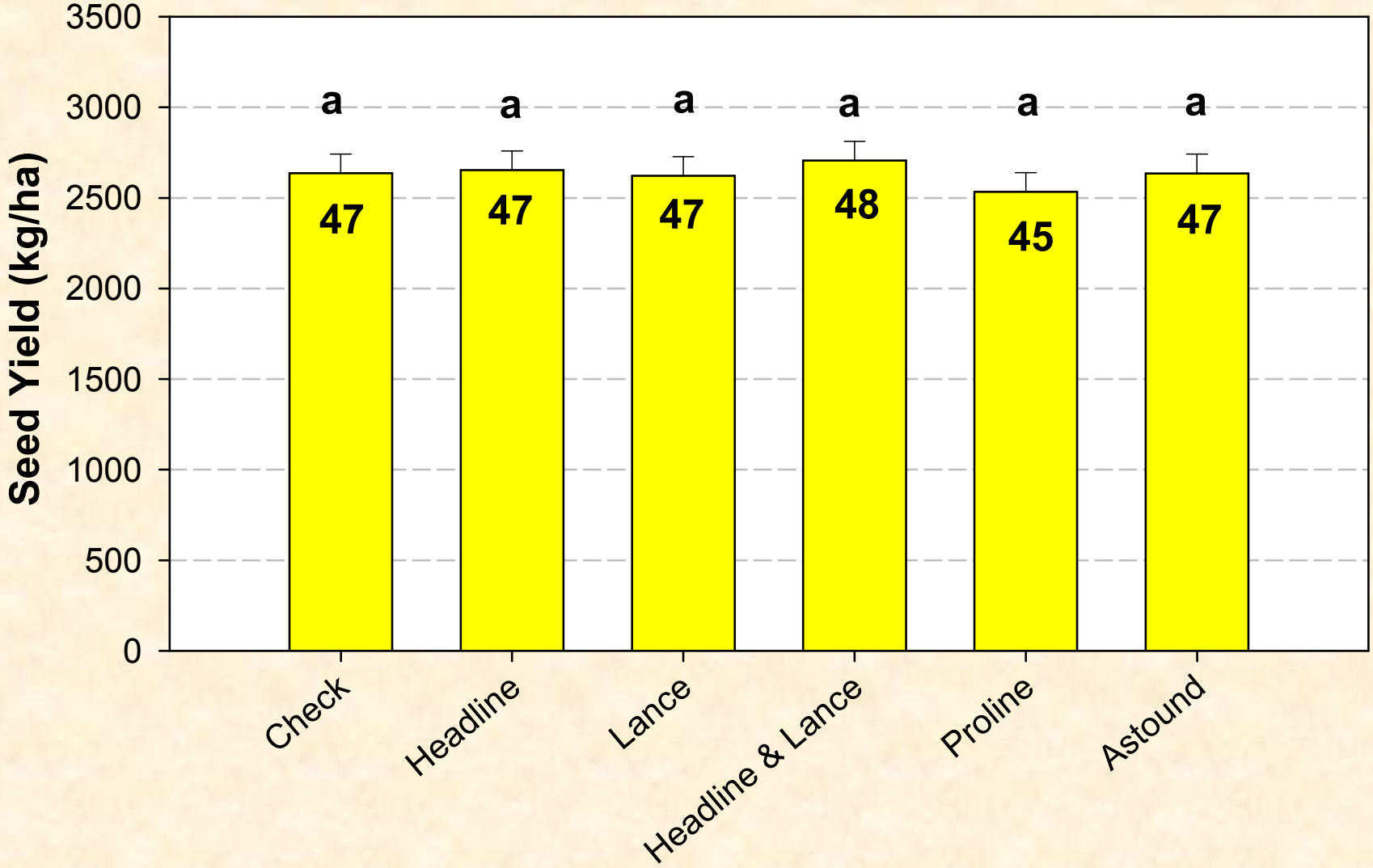
Canola Yield
Canora 2011



Canola Yield
Indian Head 2011



Canola Yield
Swift Current 2011



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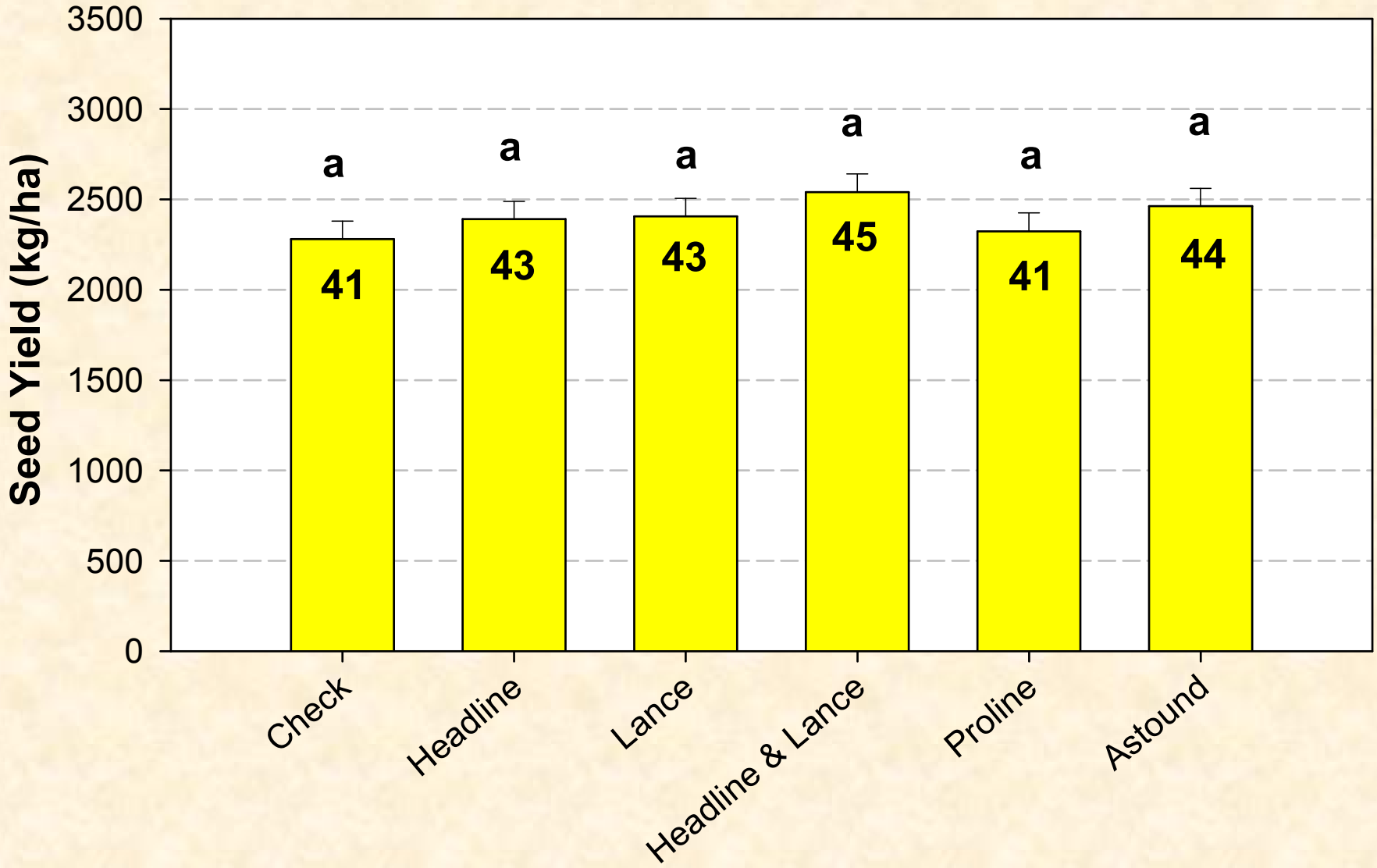
Canola Yield
All Sites 2011



Top Research Priorities 2011

Rank	Research Topic	# of Votes	Rank	Research Topic	# of Votes
#1	Fungicide application (more crops)	12	#7	Effects of elemental S on P2O5 availability	6
#2	Foliar (micro) nutrient products	11	#8	Nutritional / growth regulator products as 'safeners' for sensitive herbicide / crop combinations	5
#3	In-crop nutrition (micro and/or macro-nutrient products	7	#9	Intercropping research (various aspects)	4
#4	Effects of ESN on canola yield (seed place vs side band)	7	#10	MES P/S fertilizer vs ammonium sulphate blends	3
#5	Row-spacing research (canola, pulses)	7	#11	Variety blends of wheat and/or canola (high disease pressure)	3
#6	Fungicides at herbicide timing	6	#12	Pod sealants for preserving grain quality (cereals and pulses)	3

Yield-Busters Acknowledgements

WARC Western Applied Research Corporation

Wheatland Conservation Area Inc.

ECRF East Central Research Farm

Saskatchewan Ministry of Agriculture

Growing Forward

AGRICULTURAL DEMONTRATION OF PRACTICES & TECHNOLOGIES

Bayer CropScience

BASF The Chemical Company

VITERRA

WESTERN AG LABS

syngenta

OMEX the plant health professionals

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Thank You!

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