Flax Varieties/Agronomy

Garry Hnatowich
ICDC Research Agronomist

Flax Varieties

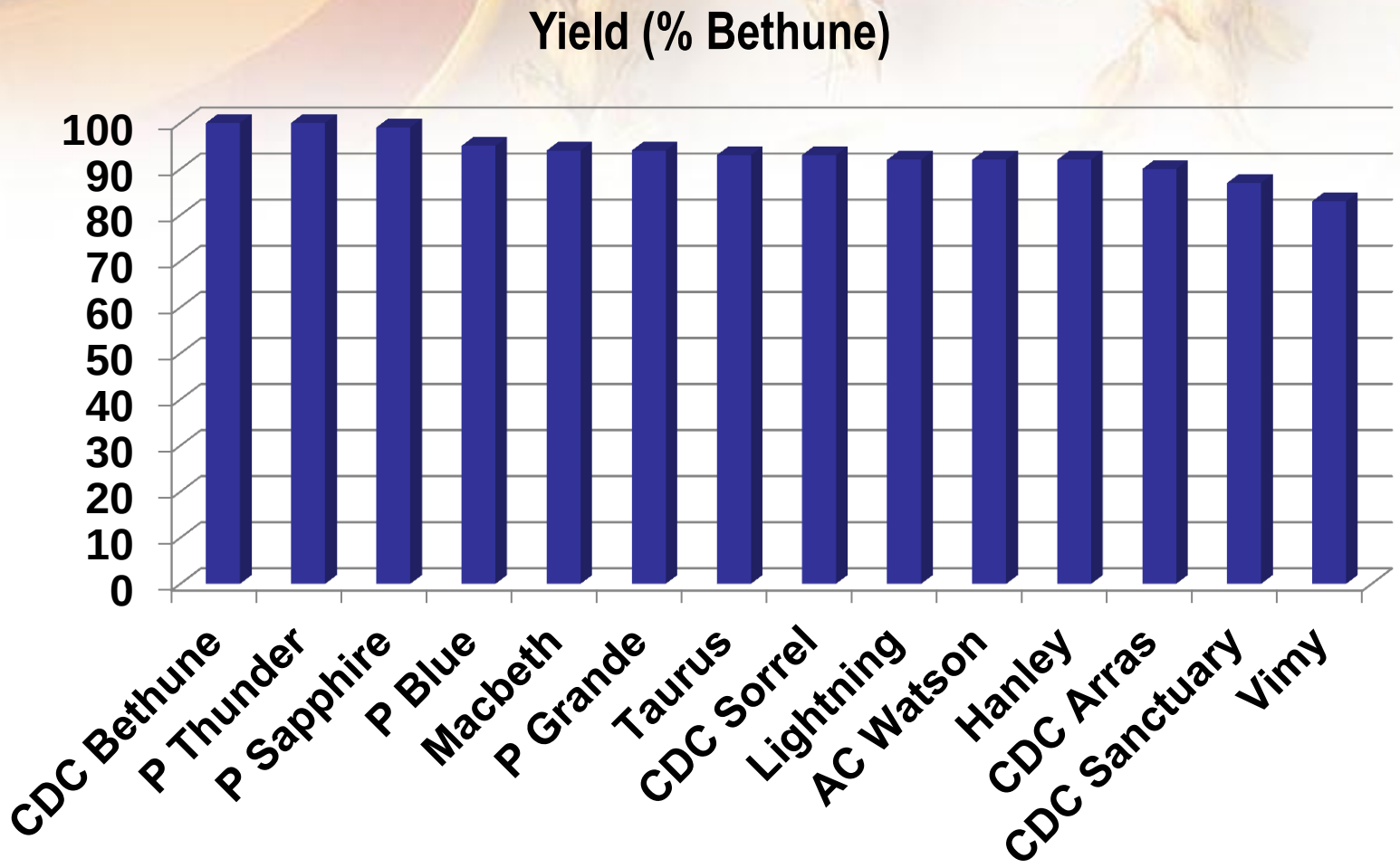
- Outlook 2013

Variety Treatments

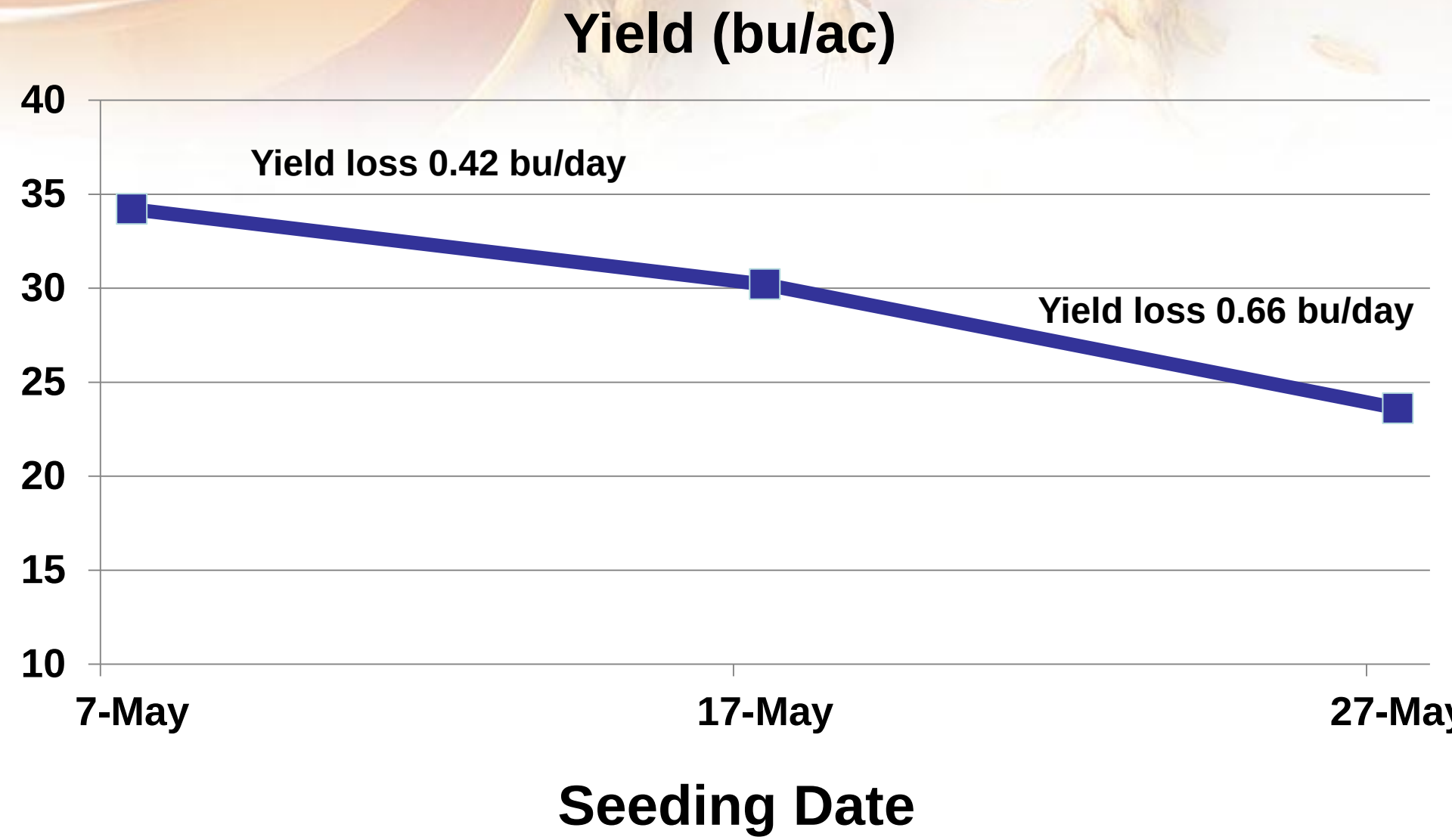
1. CDC Bethune
2. CDC Sorrel
3. AC Prairie Sapphire
4. CDC Sanctuary
5. CDC Glas
6. FP 2308
7. FP 2314
8. FP 2325
9. FP 2347

Flax Yield (bu/ac)

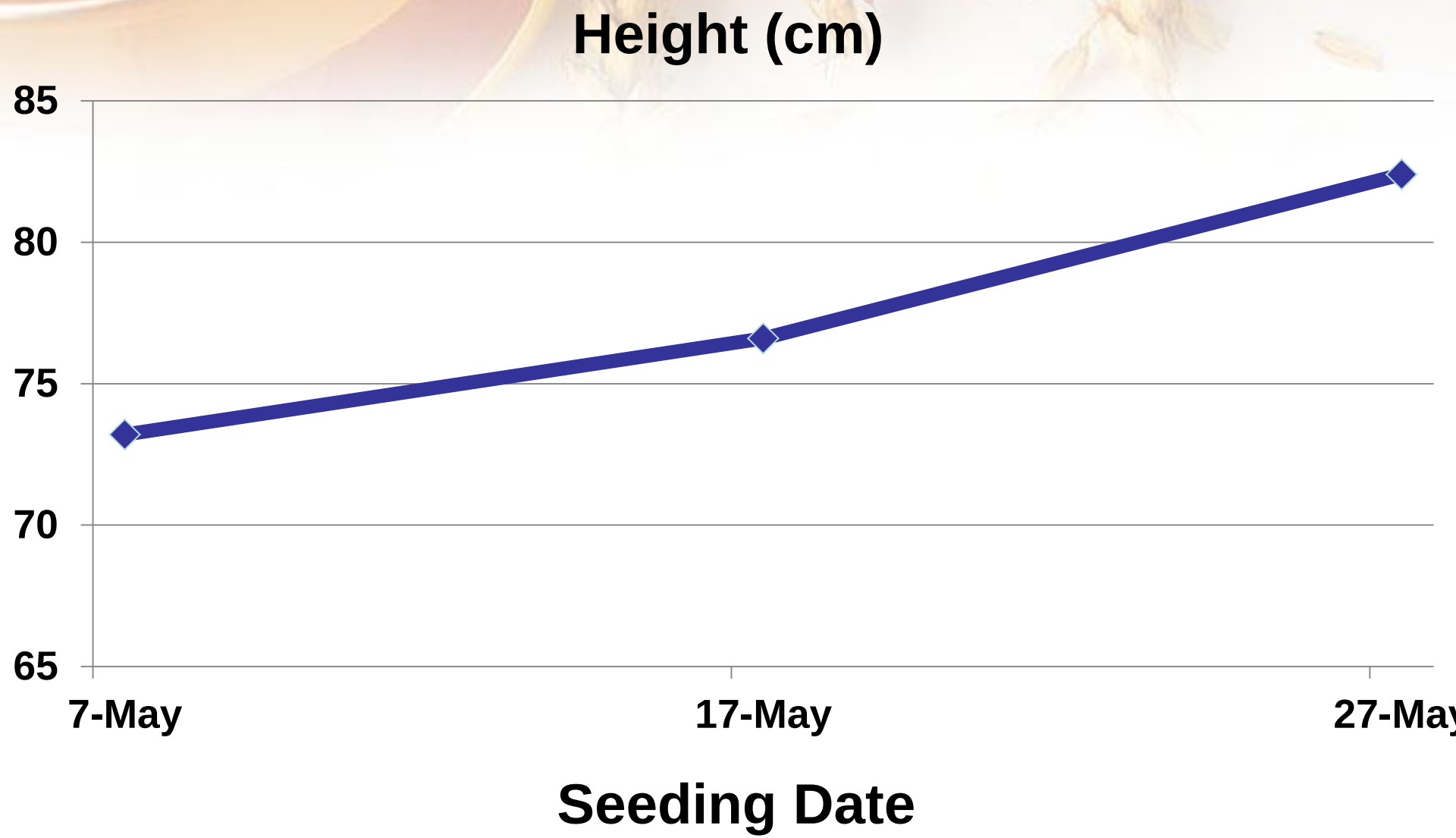
“Crop Varieties For Irrigation”



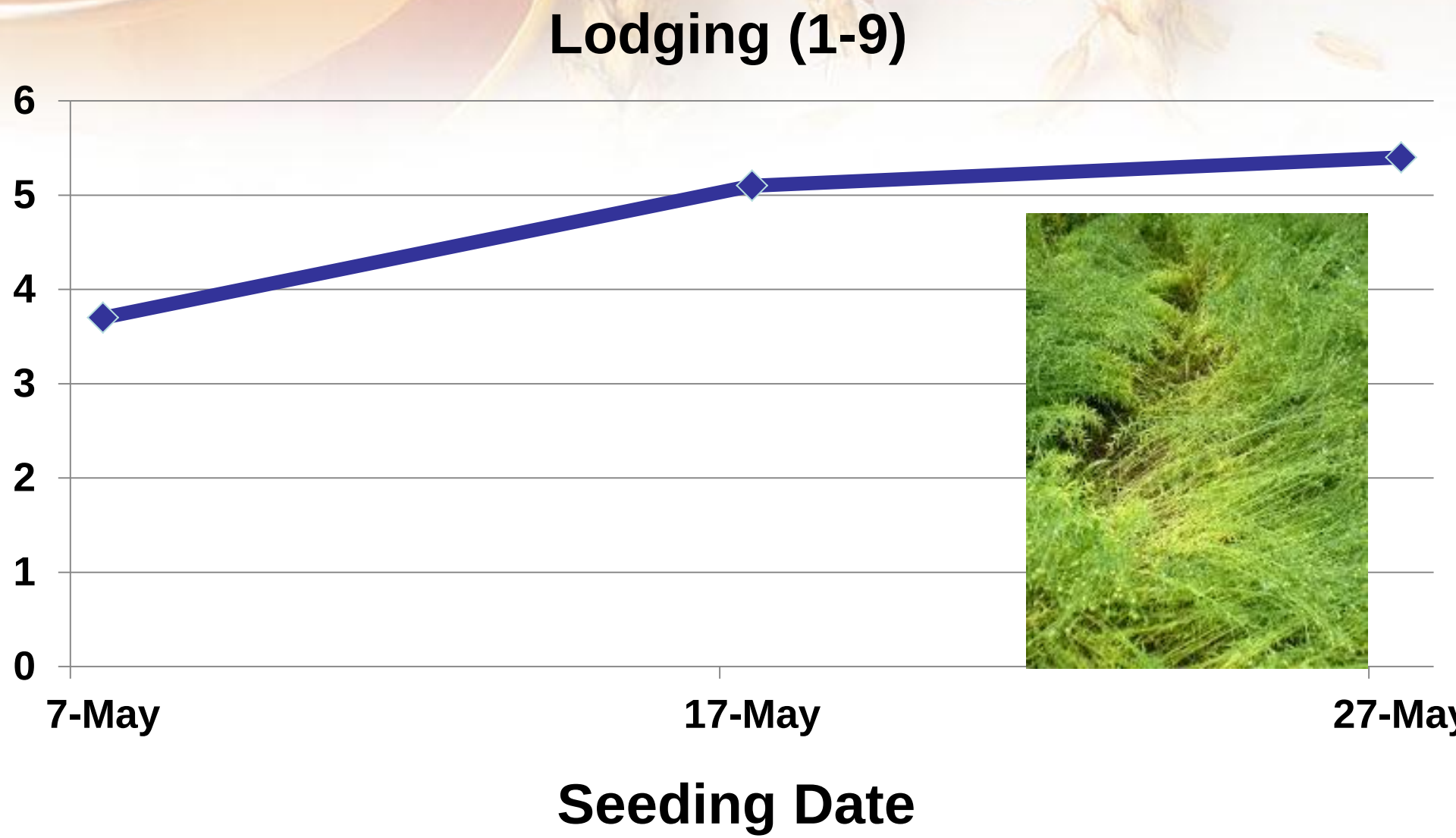
Effect of Seeding Date on Irrigated Flax



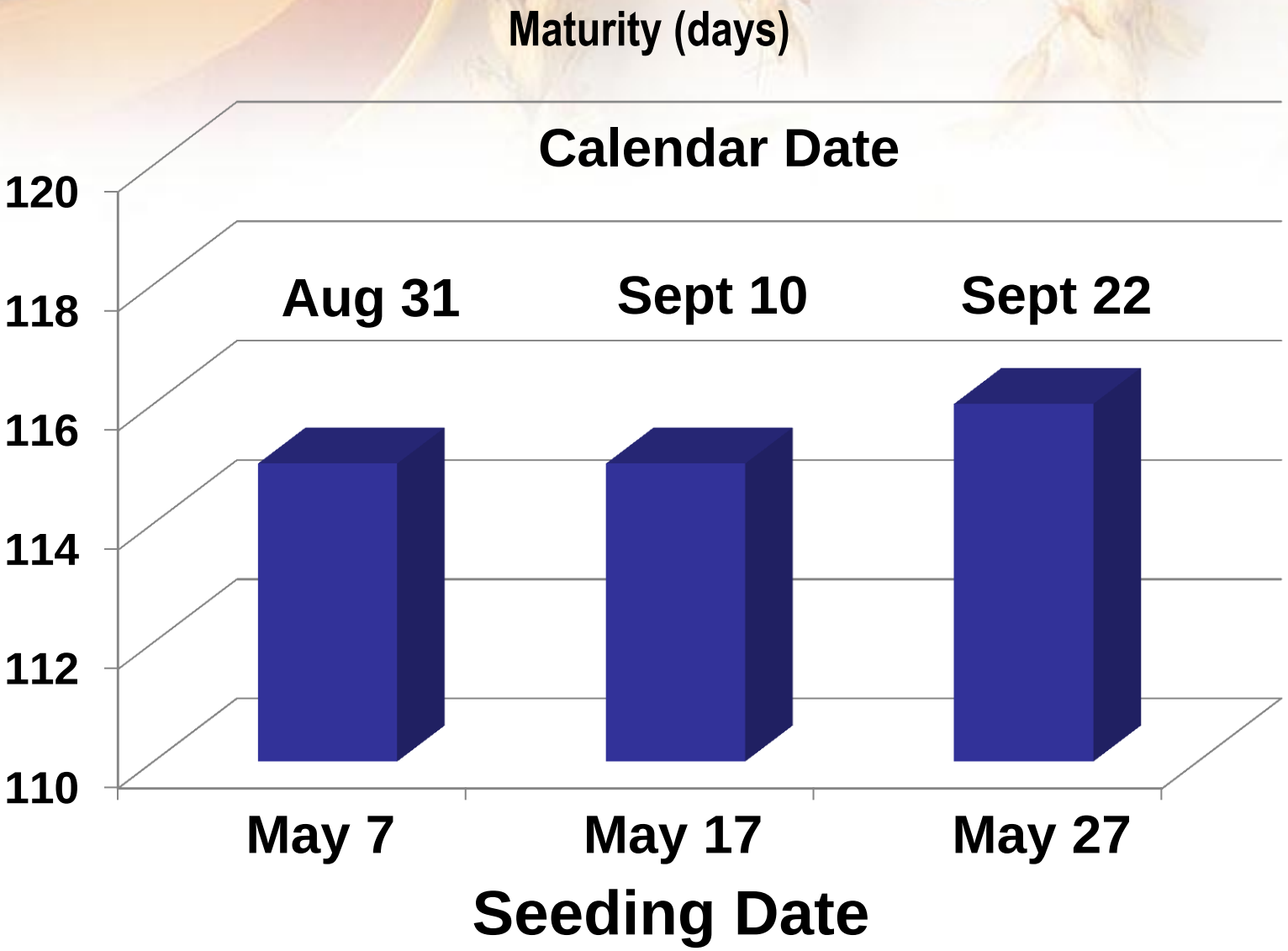
Effect of Seeding Date on Irrigated Flax



Effect of Seeding Date on Irrigated Flax

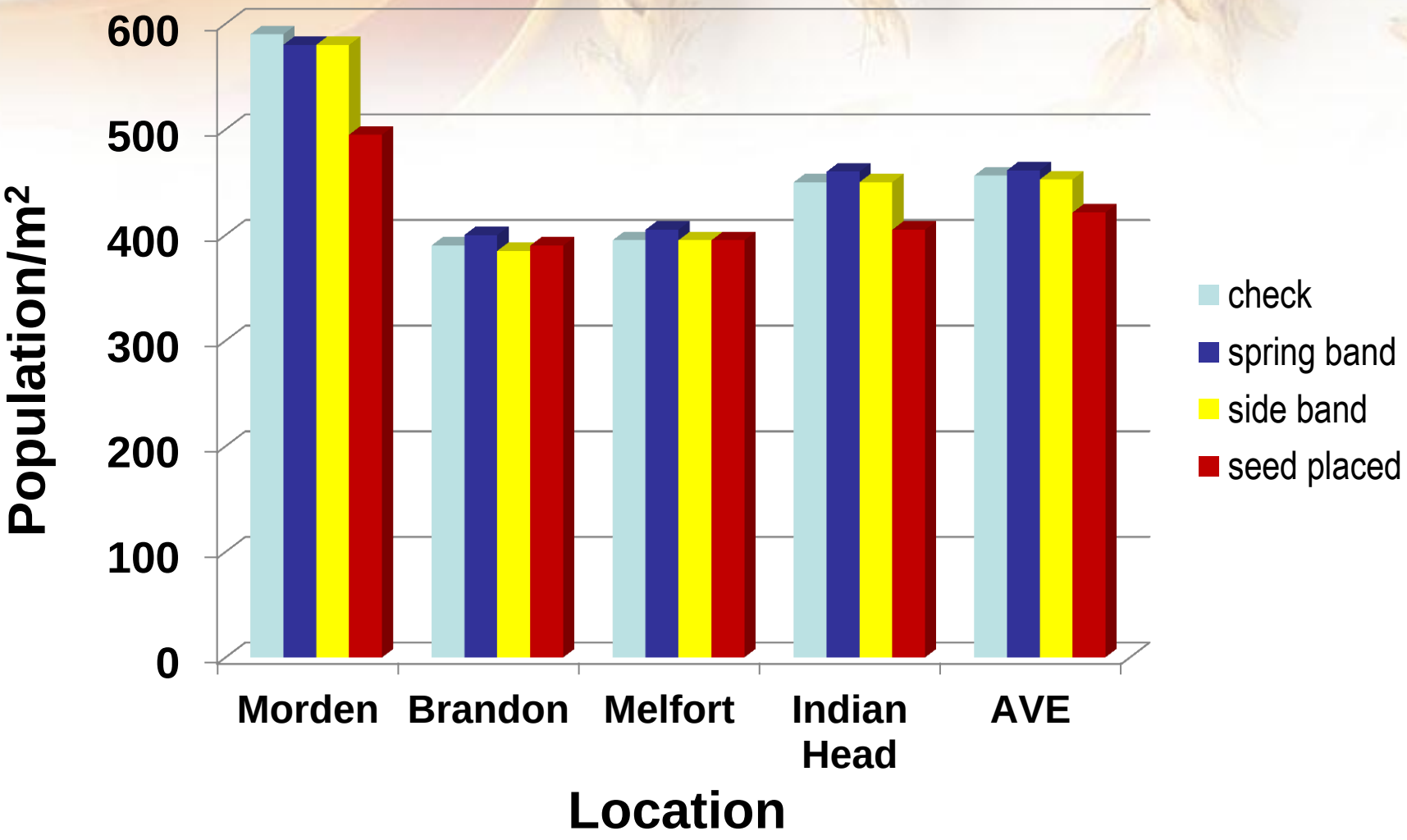


Effect of Seeding Date on Irrigated Flax



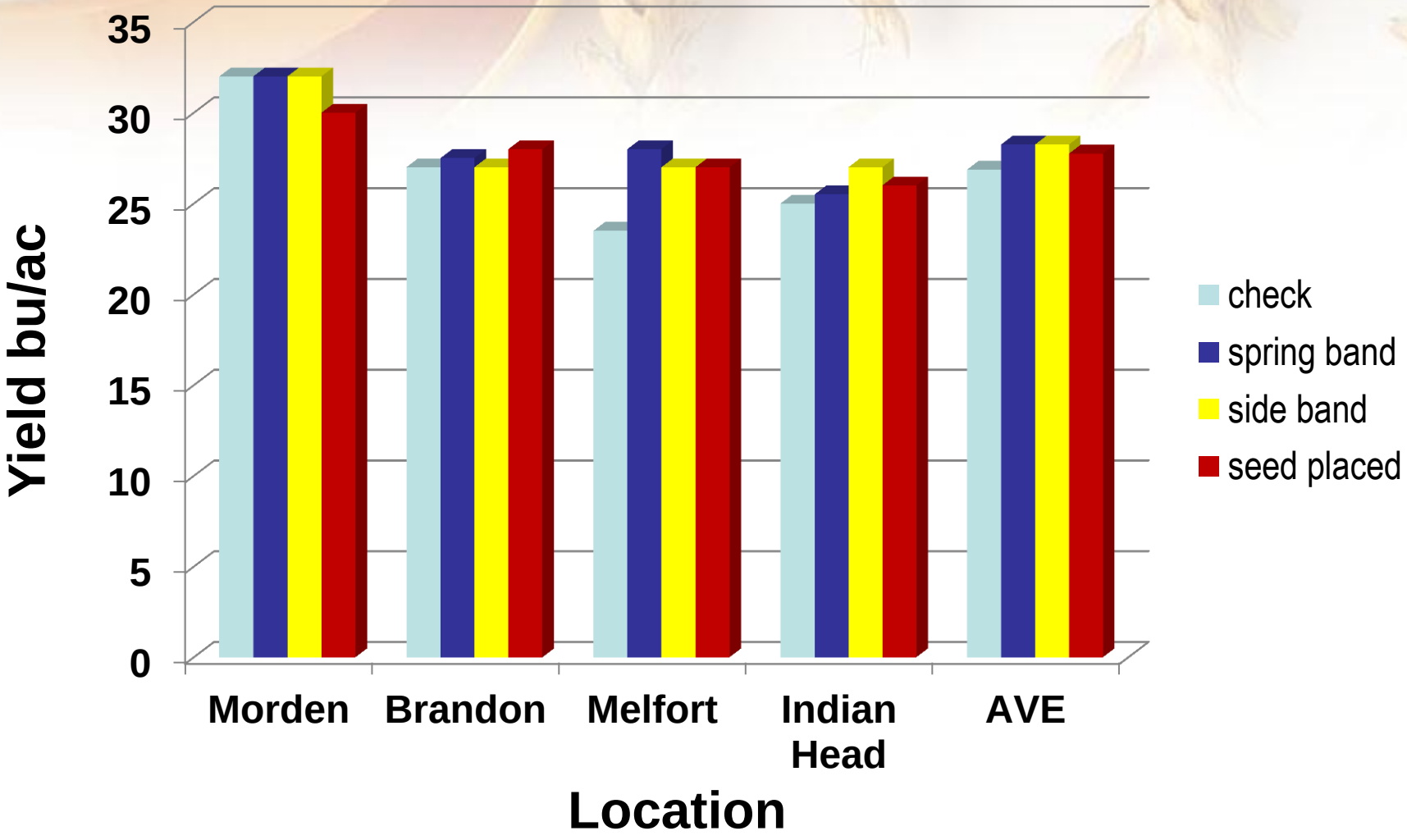
Flax Fertility

P Placement Affect on Stand



Lafond et al., 1996-99

P Placement Affect on Yield



Lafond et al., 1996-99

Flax Fertility Demo
Indian Head 2013

Fertilizer Treatments

1. 0-0-0-0
2. 45-0-0-0
3. 45-15-0 SB
4. 45-15-8-8 SB
5. 45-15-0-0 SP
6. 45-15-8-8 SP
7. 90-15-0-0 SB
8. 90-15-8-8 SB
9. 90-15-0-0 SP
10. 90-15-8-8 SP
11. 90-30-0-0 SB
12. 90-30-15-15 SB
13. 90-30-0-0 SP
14. 90-30-15-15 SP

Site Information

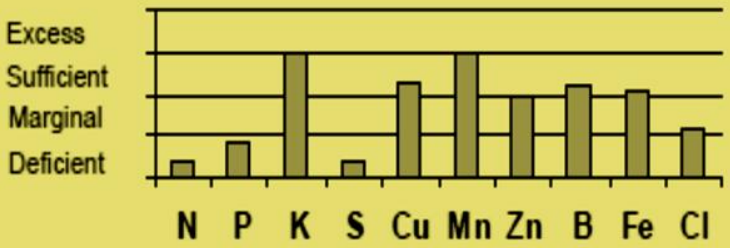
- Indian Head Heavy Clay, Rego Black Chernozem
- Bethune flax seeded May 11 at 45 lbs/ac into wheat stubble
- Seeded w/SeedMaster drill, 12” row spacing
- All N side-banded, P,K,S side-banded or seed-placed

SOIL TEST CHARACTERISTICS

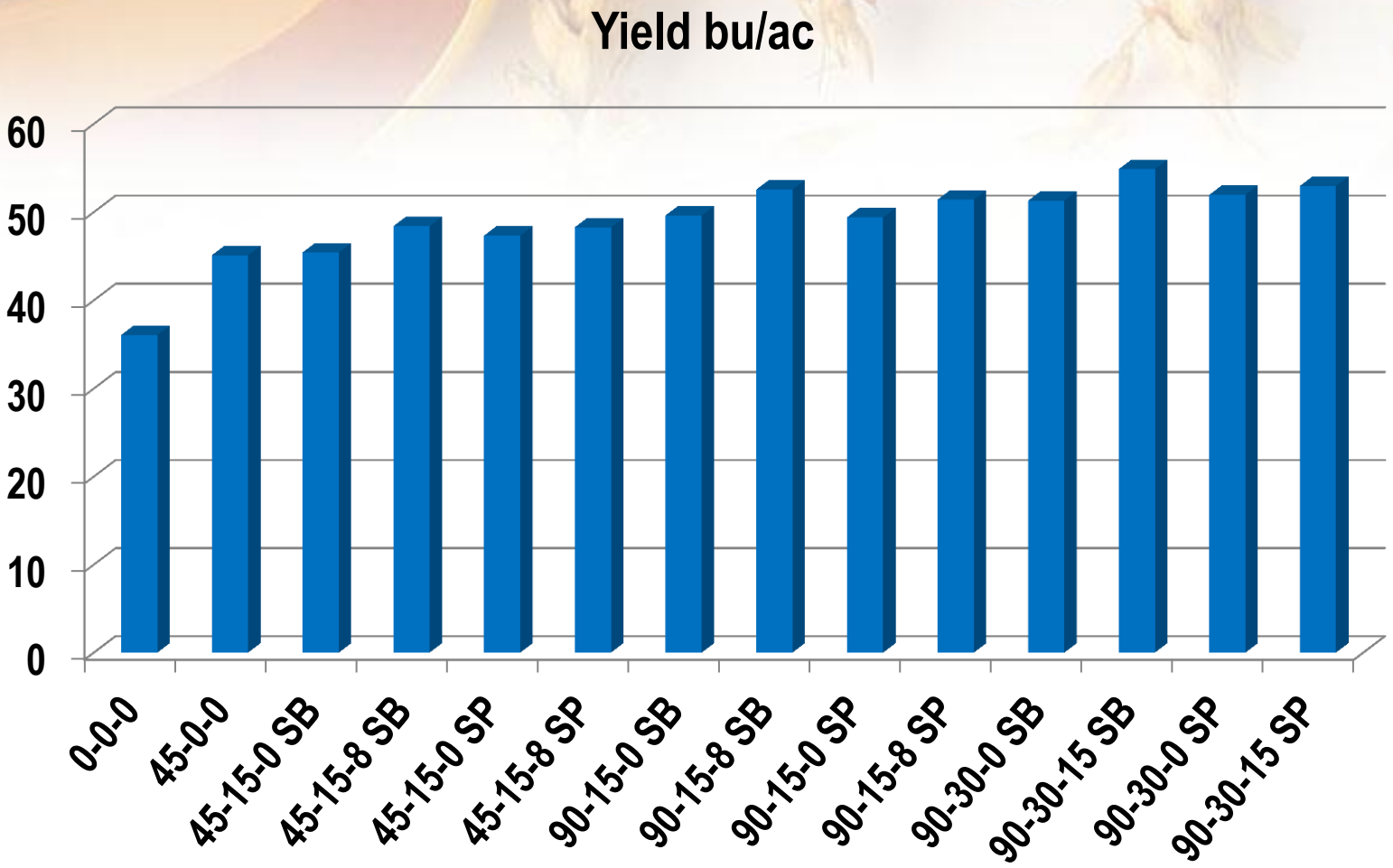
Depth (inches)	Texture	pH 1S:2W	E.C. 1S:2W (mS/cm)	E.C. Calc.Sat.Extr. (mS/cm)	Salinity Rating	Organic Matter %	NH_4-N (lb/ac)	Calculated CEC meq/100g	Base Saturation Ca (ppm)	Mg (ppm)	K (ppm)	Na (ppm)	Ca (% of CEC)	Mg (% of CEC)	K (% of CEC)	Na (% of CEC)
0-6	Loam	7.8	0.2	0.5	Non Saline	3.9										
6-24	Clay Loam	8.3	0.2	0.4	Non Saline											

SOIL TEST NUTRIENT LEVELS

Depth (inches)	NO_3-N (lb/ac)	P (lb/ac)	K (lb/ac)	SO_4-S (lb/ac)	Cu (lb/ac)	Mn (lb/ac)	Zn (lb/ac)	B (lb/ac)	Fe (lb/ac)	Cl (lb/ac)
0-6	13	18	>600	8	4.5	27.1	1.1	2.3	24	10
6-24	18			18						15

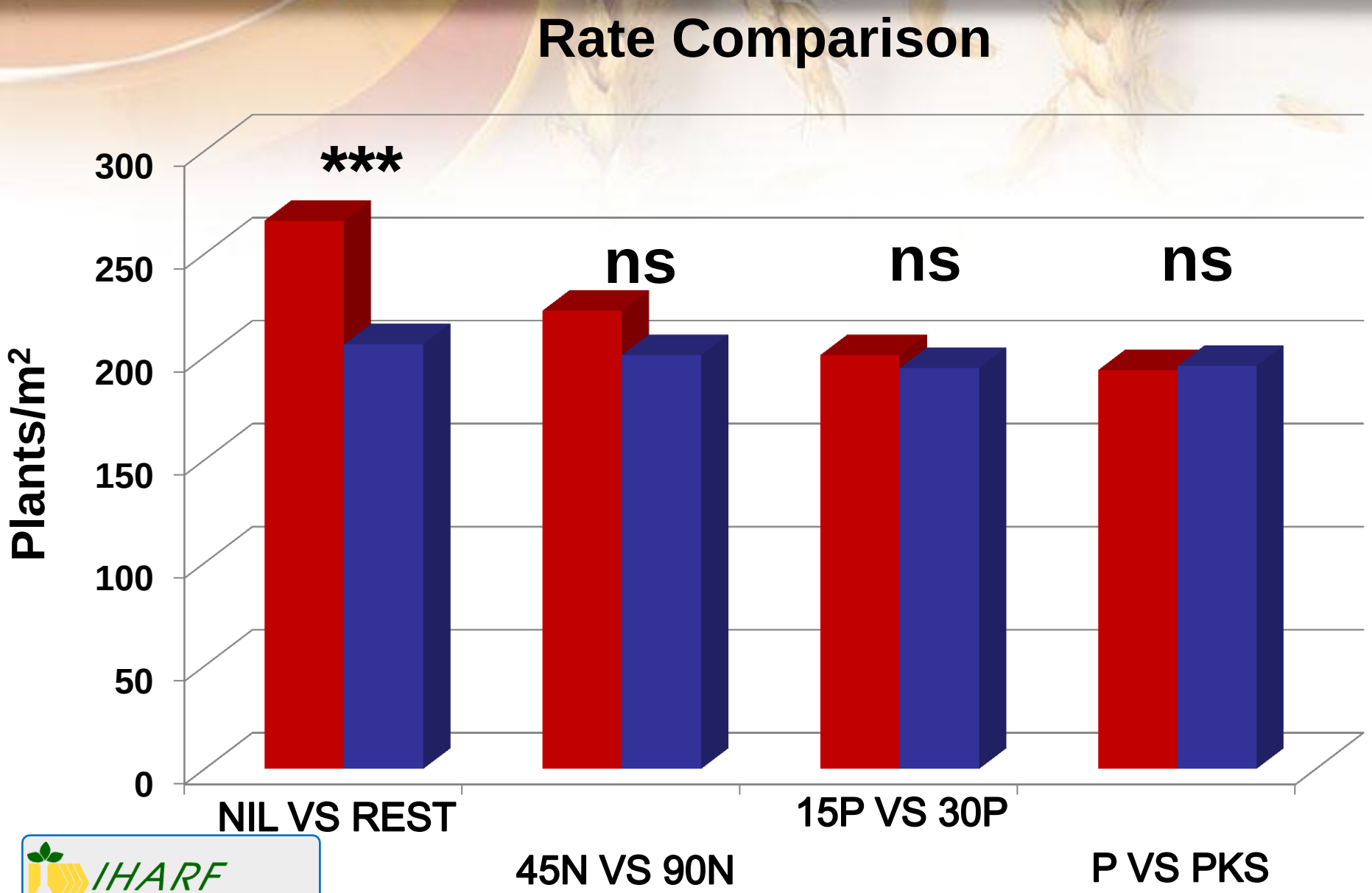


Flax Seed Yield – Indian Head 2013



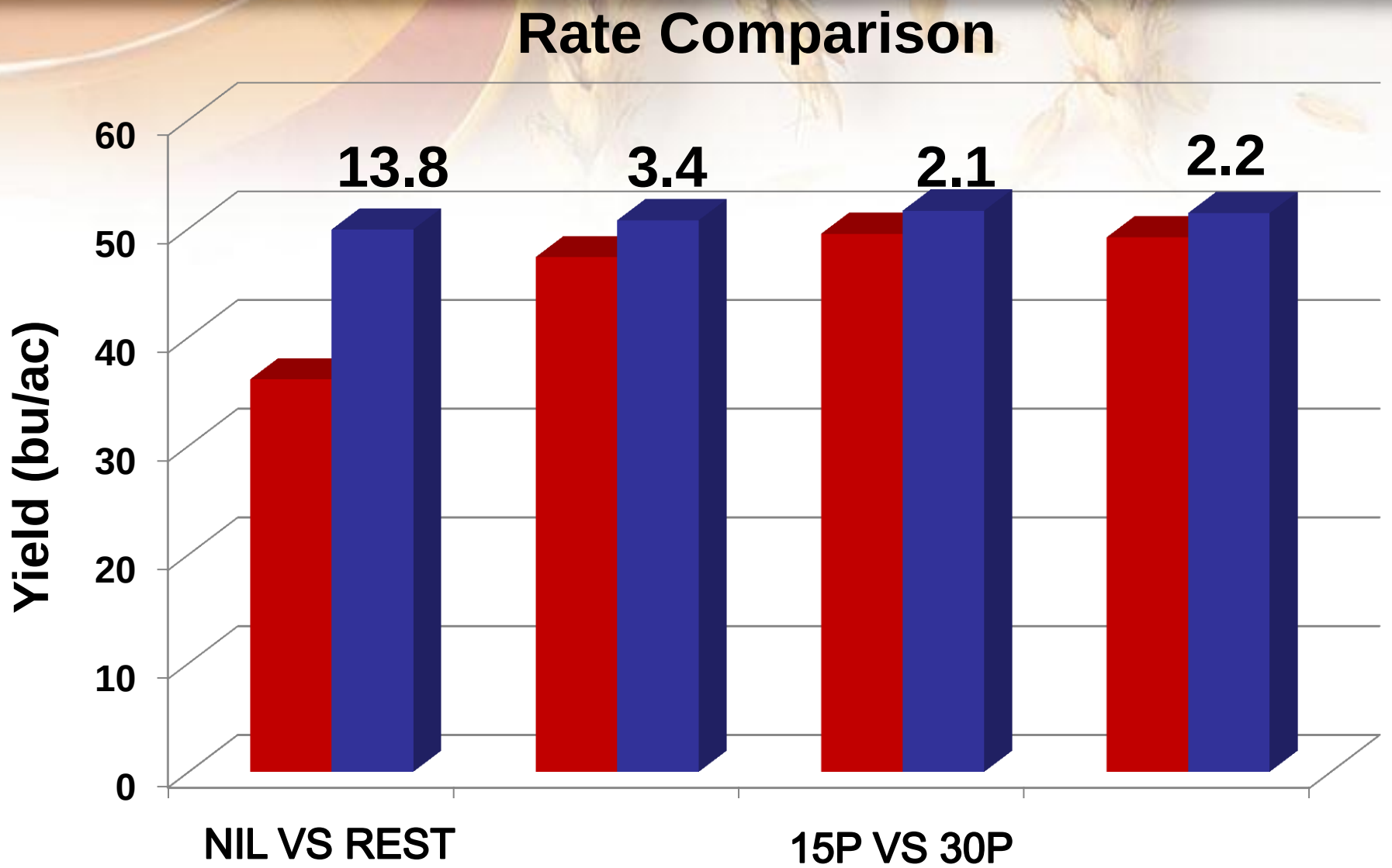
IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Emergence – Indian Head 2013



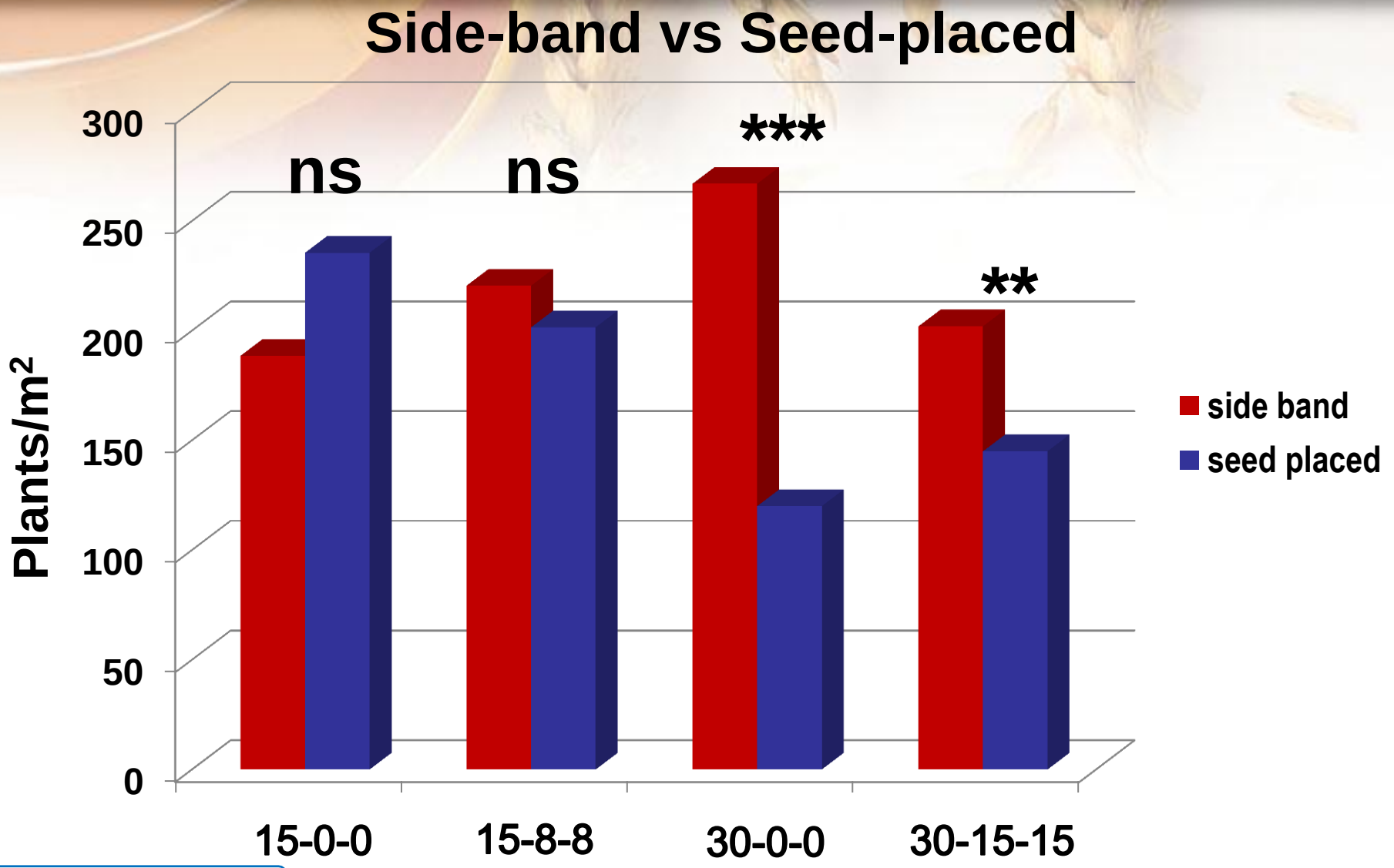
IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Seed Yield – Indian Head 2013

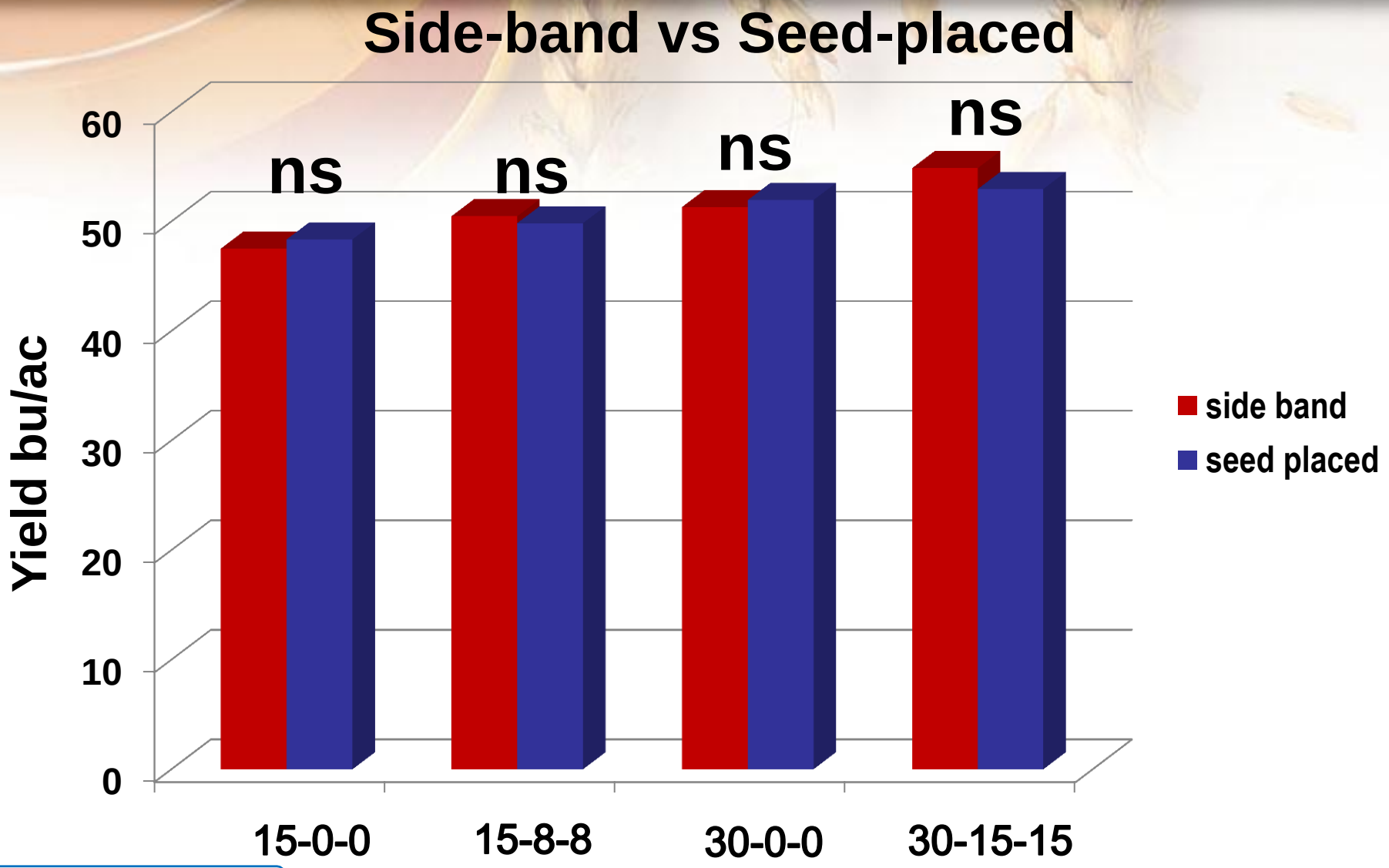


IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Emergence – Indian Head 2013



Flax Seed Yield – Indian Head 2013



IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Herbicide/Fungicide Demo

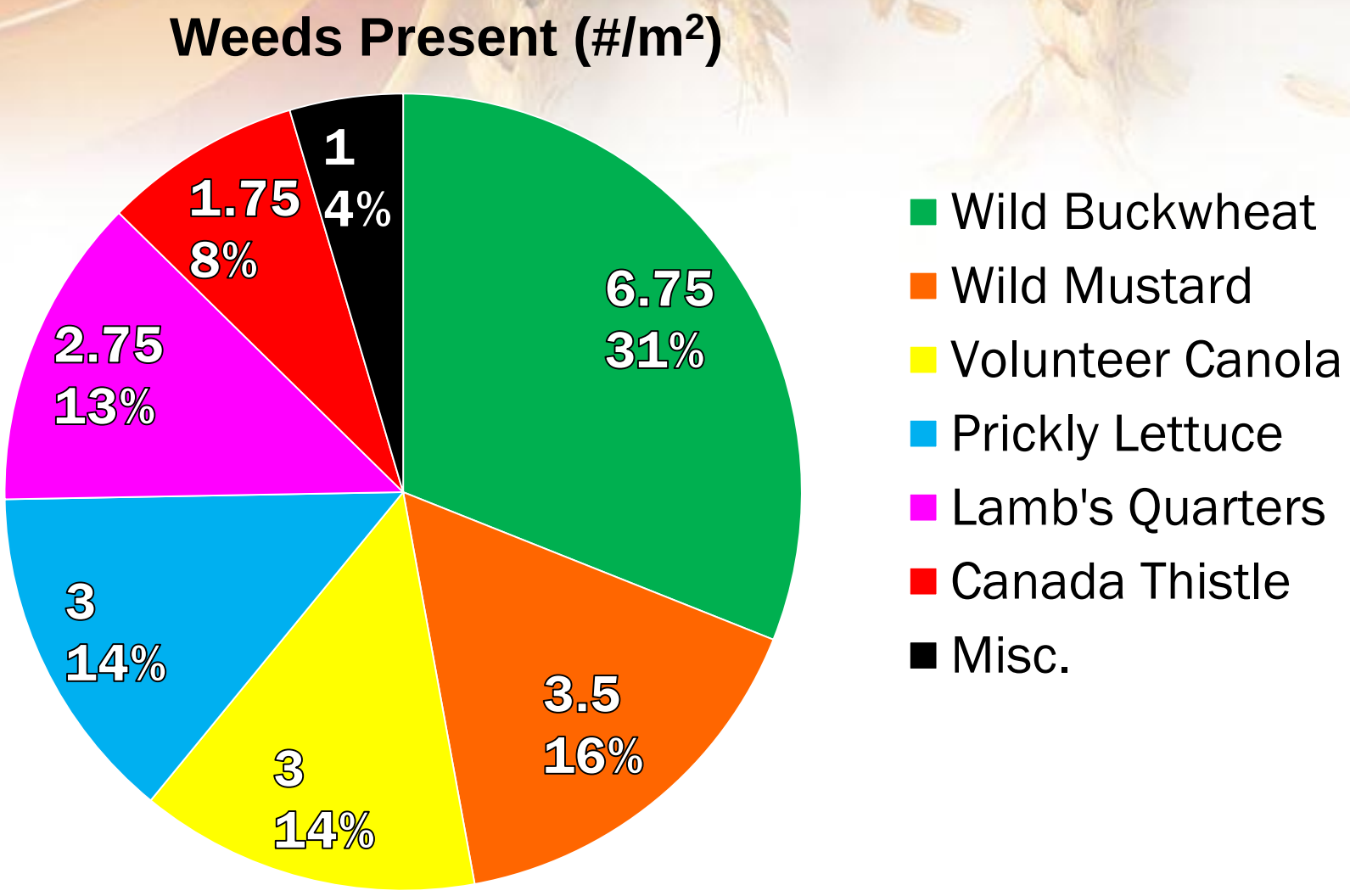
Flax Herbicide Demo
Indian Head 2013

Herbicide Treatments

1. Check (no broadleaf herbicide)
2. MCPA Ester
3. Authority (sulfentrazone)
4. Authority + Buctril M
5. Buctril M (MCPA + bromoxynil)
6. Curtail M (MCPA + clopyralid)

IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Herbicide Demo
Indian Head 2013



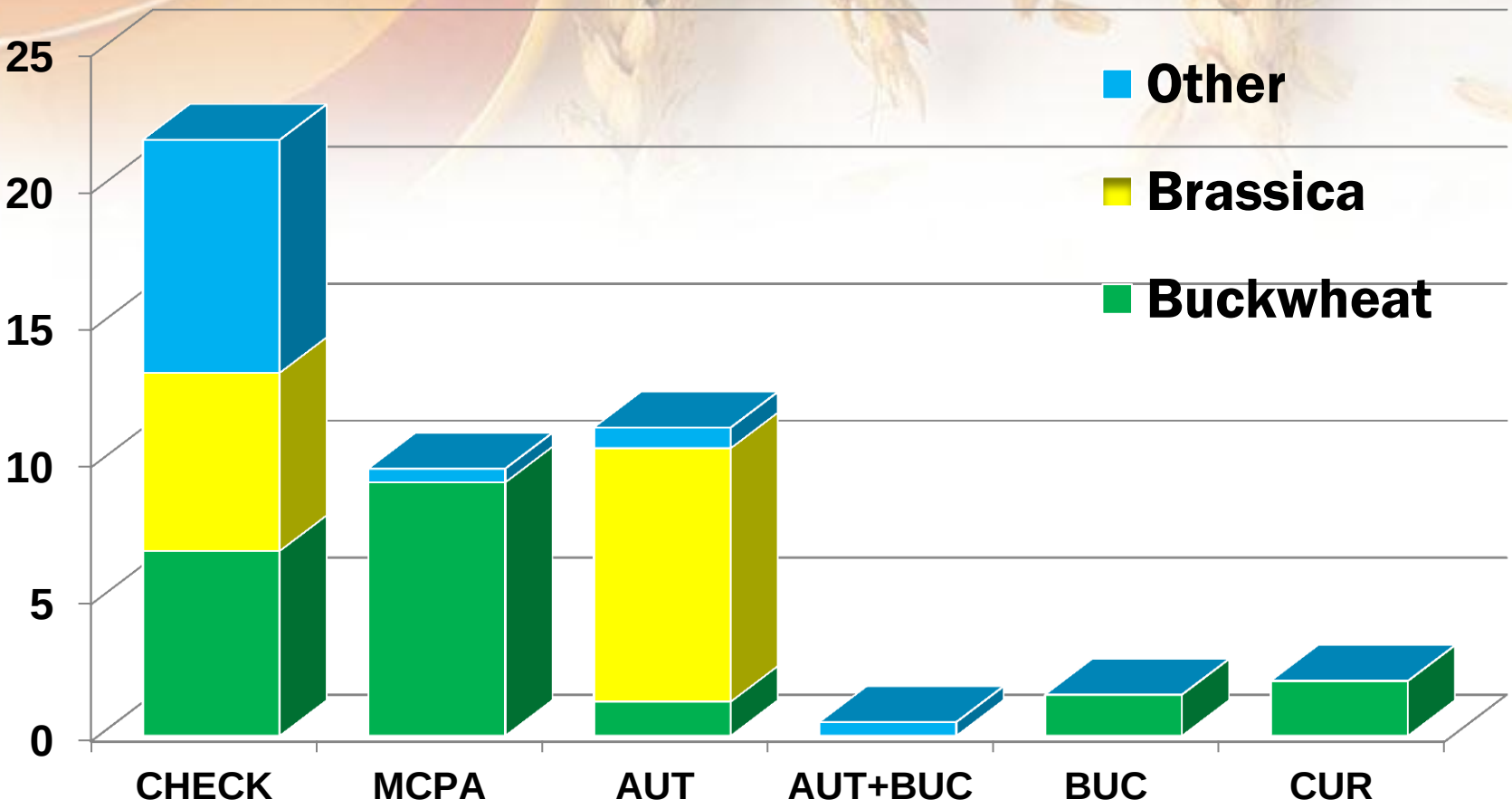
IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

No Herbicide Applied

July 11

IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Weeds Present (#/m²)



Herbicide Treatment

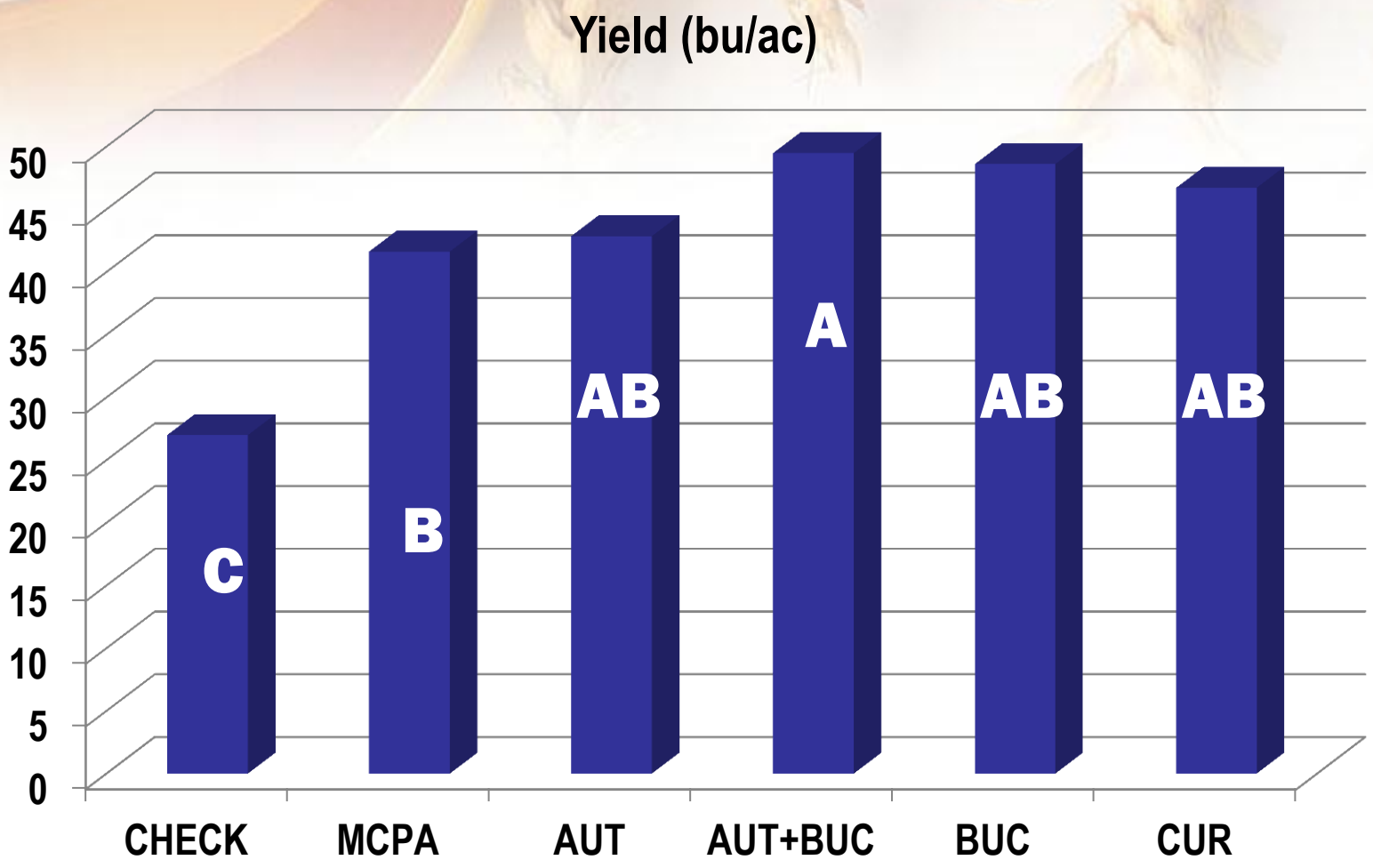
IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Authority + Buctril M

July 11

IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Herbicide Demo
Indian Head 2013



IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Fungicide Effect on Flax Yield

Treatments

1. **Check**

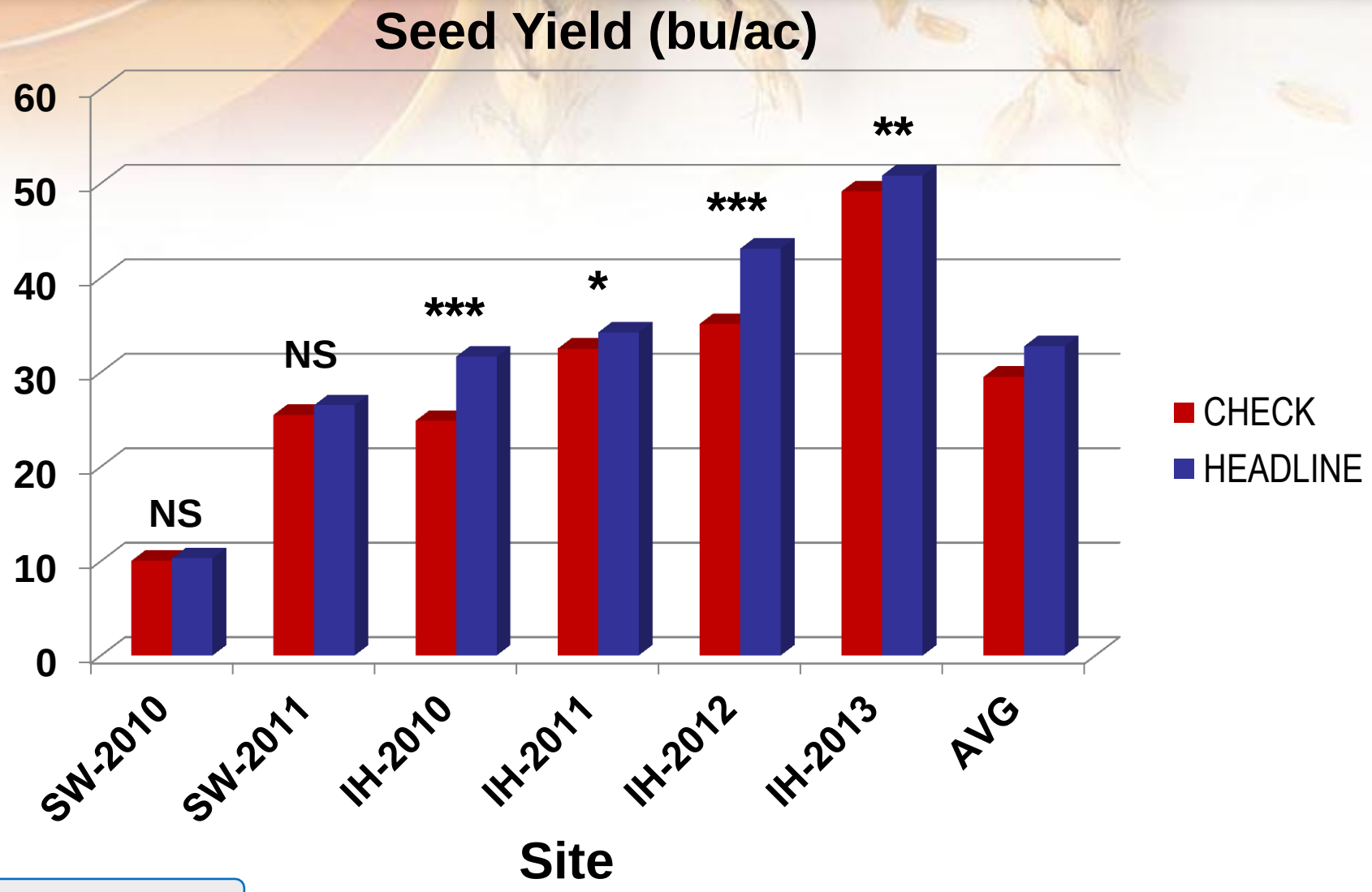
   - no fungicide

2. **0.16 l/ac Headline**

   - full bloom

IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Fungicide Effect on Flax Yield



IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Visual Fungicide Effect 2013

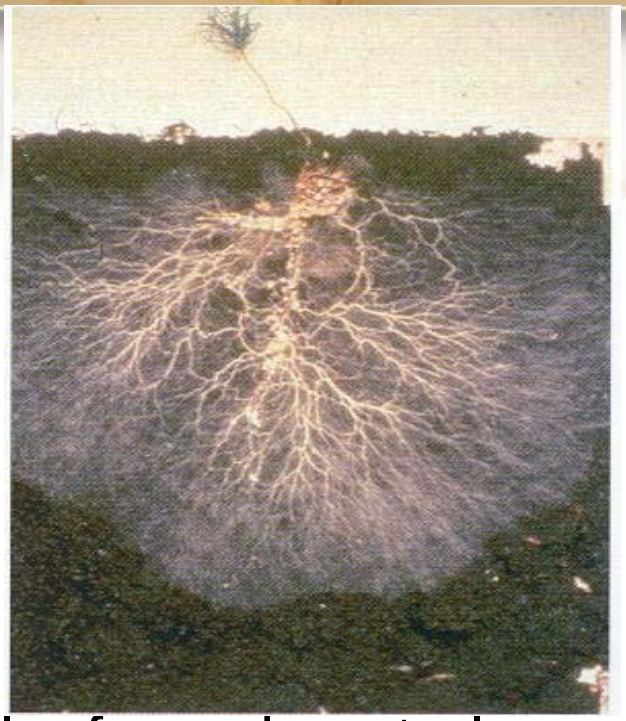
IHARF
INDIAN HEAD AGRICULTURAL RESEARCH FOUNDATION

Flax Summary

- Do not treat flax as a low input crop & expect consistent top yields
- Varieties are coming along…expected to accelerate
- Seeding early will usually be your best bet – but flax seeded in late May should perform well under most conditions
- Flax does respond well to fertilizer applications when soil test levels are low but will do best in fields with high residual P – limit or avoid seed placement of all fertilizer to avoid seedling injury
- Maintain medium to high soil residual P

Flax Summary

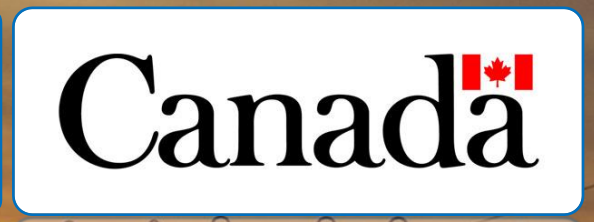
- Flax is highly mycorrhizal
  - Works with flax root to acquire P
  - Effectively acts to increase root hair activity and source P
  - Infection dependant upon rotation/cultural practices



- Buctril M or Curtail M for general broadleaf weed control – Authority good for full-season control of buckwheat & kochia
- Where pasmo is present, Headline application likely to pay for itself & can greatly improve yields under high disease pressure

Thank You

Financial Contributions and Assistance To:



garry.hnatowich@agr.gc.ca
P: (306) 867-5405
C: (306) 361-6231