



Agriculture and
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CANARYSEED RESEARCH- 2007

**W.E. May Y. Gan, S.S. Malhi and
G.P. Lafond**
Agriculture and Agri-food Canada

Potassium or Chloride?

- **Producers reported yield responses using KCl**
- **Effect of KCl on canaryseed yield was investigated.**
- **a significant response to KCl at two sites in two years with a soil residual level of 310 to 660 lbs /acre of K₂O.**
- **At four other locations there was no response to KCl fertilizer.**

Potassium or Chloride?

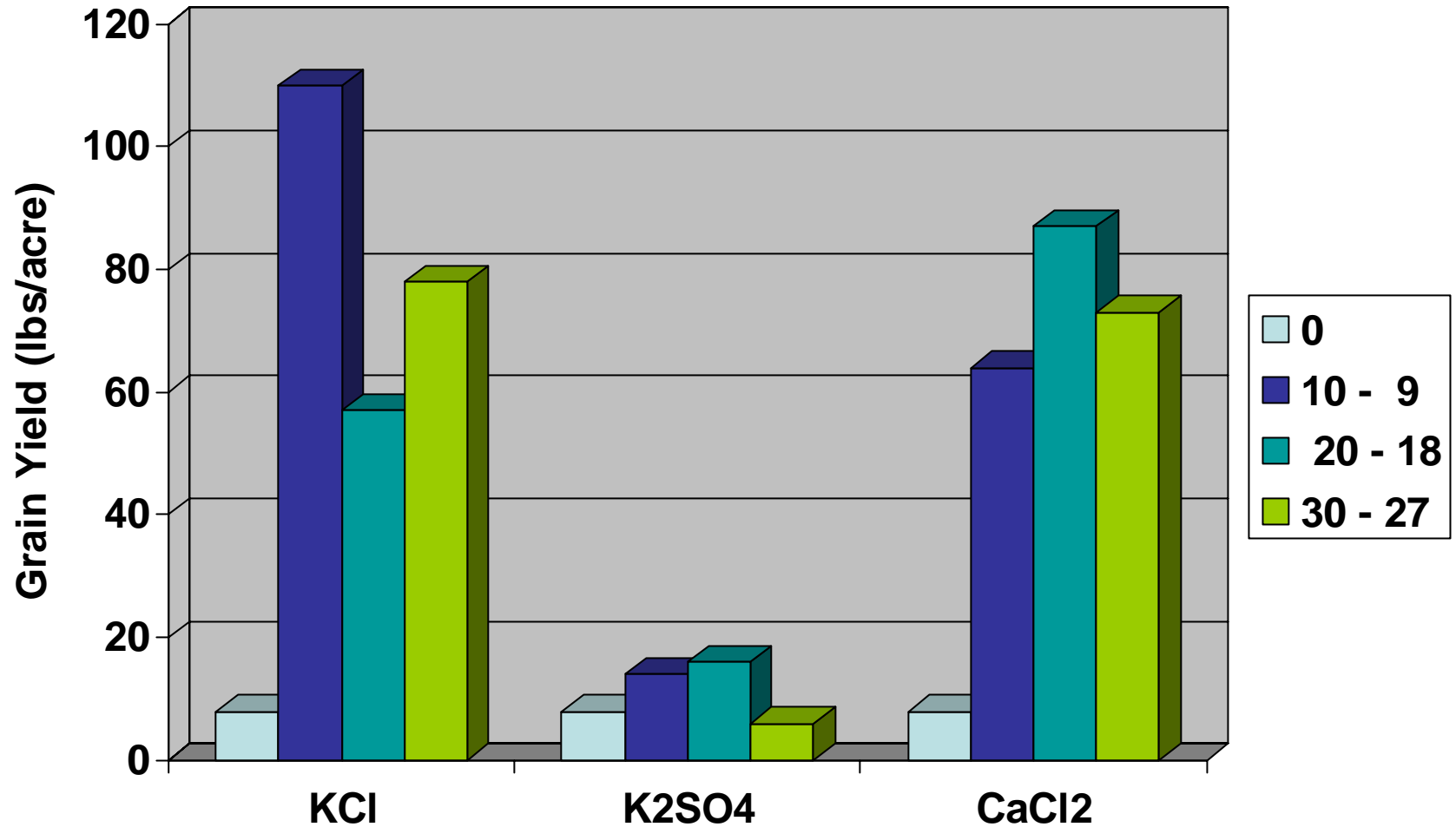
Objectives:

- 1) To determine the responsiveness of canaryseed seed yield to K and Cl
- 2) To provide better recommendations to producers on the use of KCl in Canaryseed from soil test results

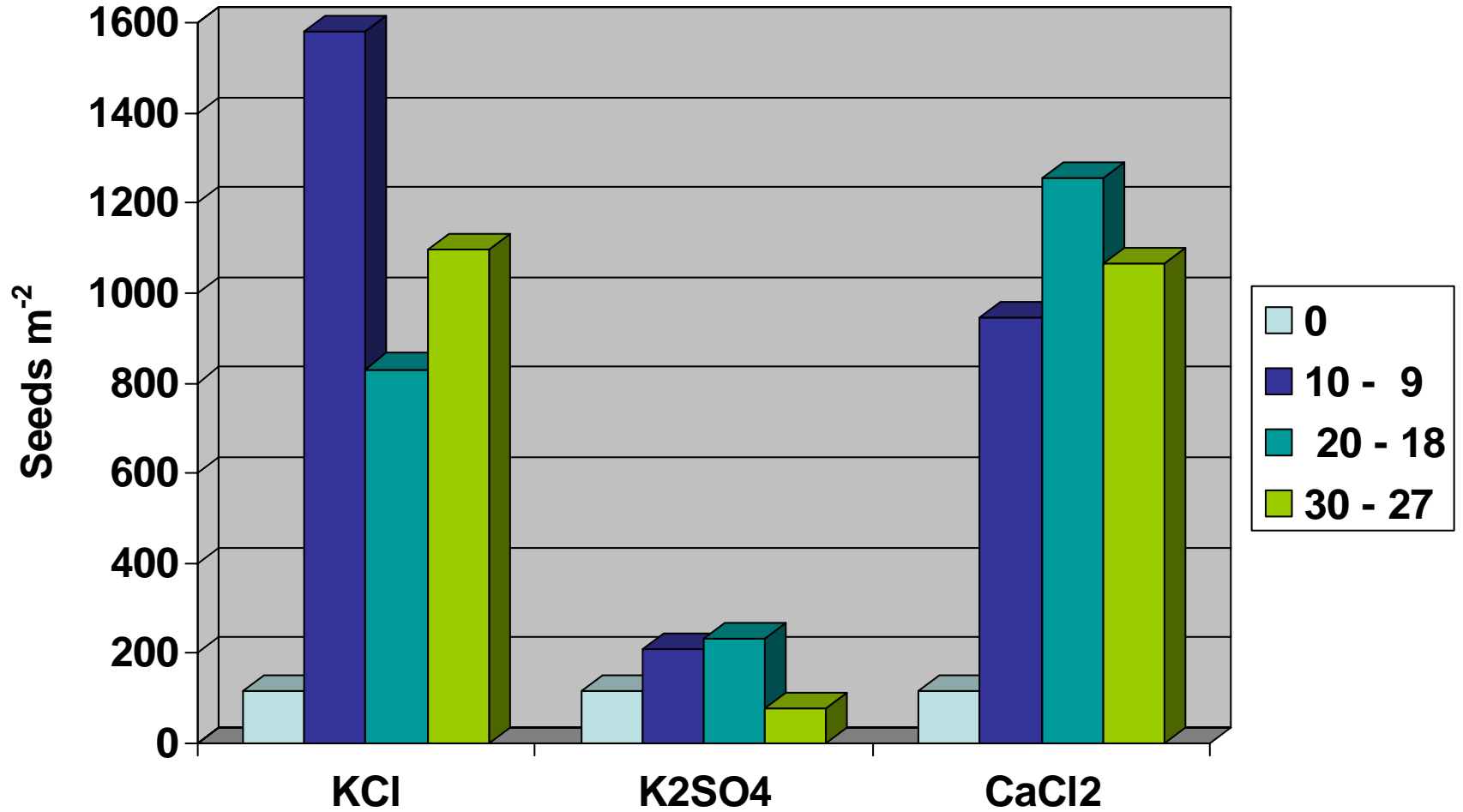
Treatments

- no K or Cl
- 10, 20, 30 kg ha⁻¹ of K and 9, 18 and 27 kg ha⁻¹ of Cl as KCl
- 10, 20, 30 kg ha⁻¹ of K as K² SO⁴
- 9, 18 and 27 kg ha⁻¹ of Cl as calcium chloride

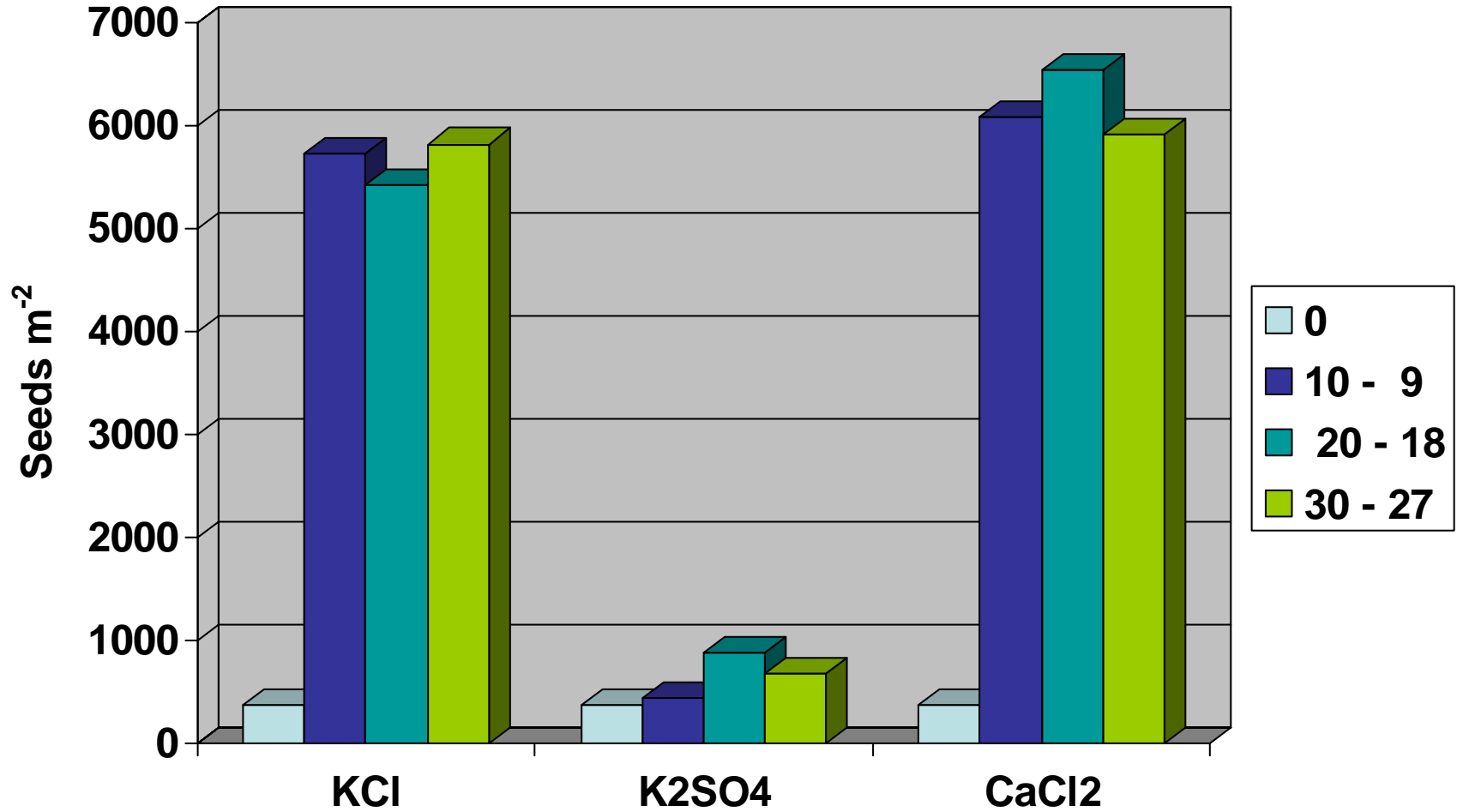
Halford Valley, 2007



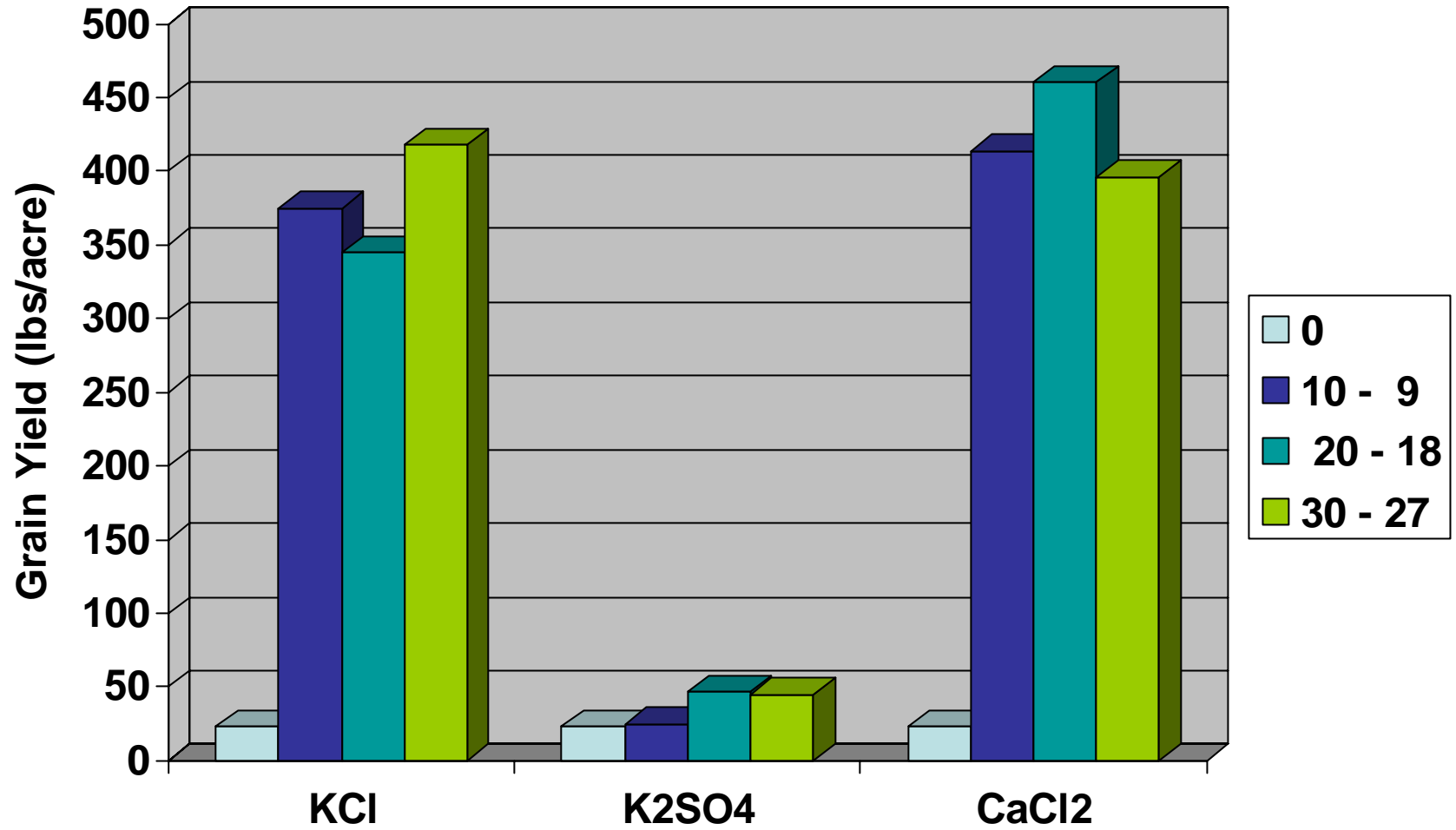
Halford Valley, 2007



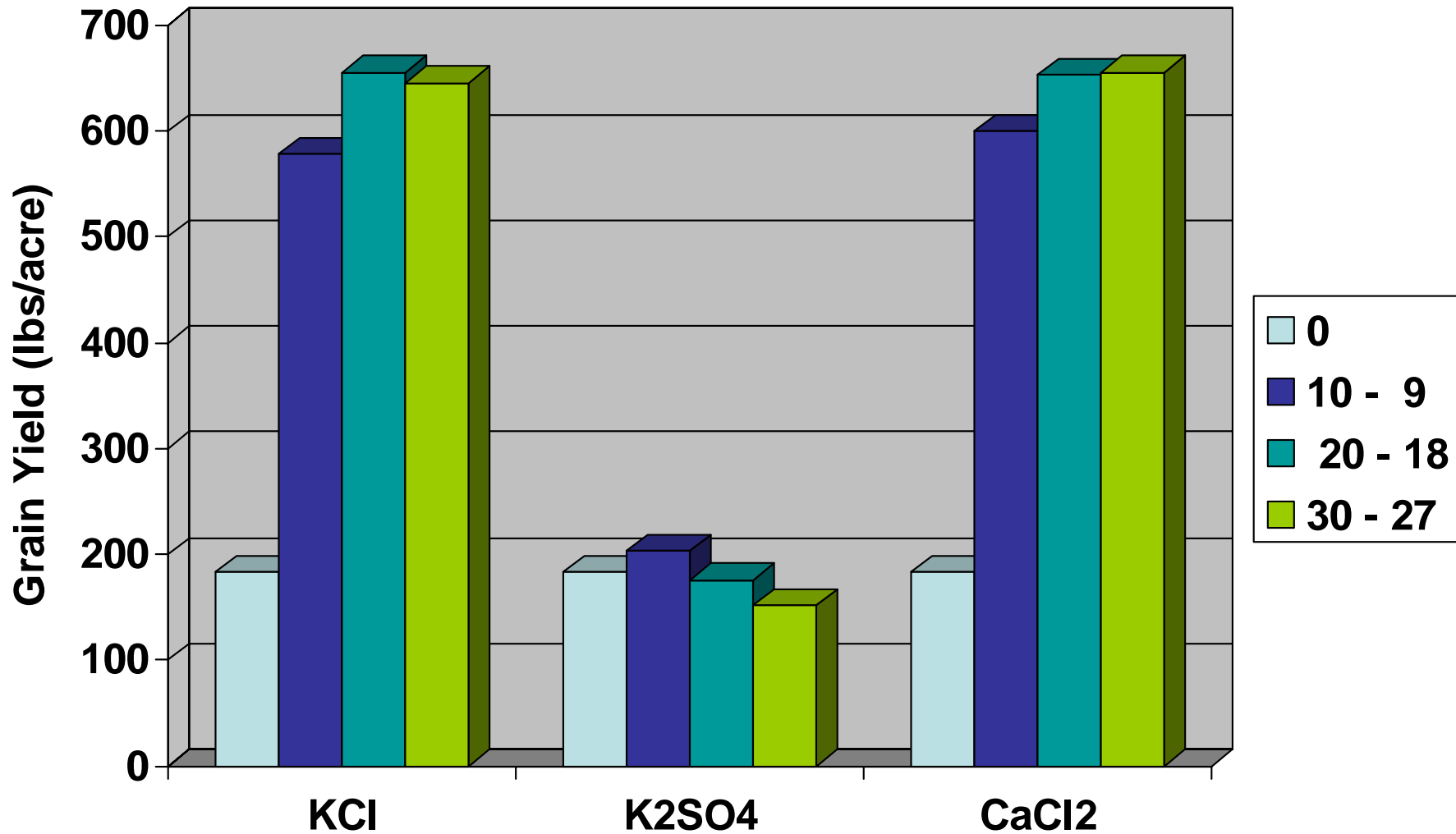
Halford Valley, 2008



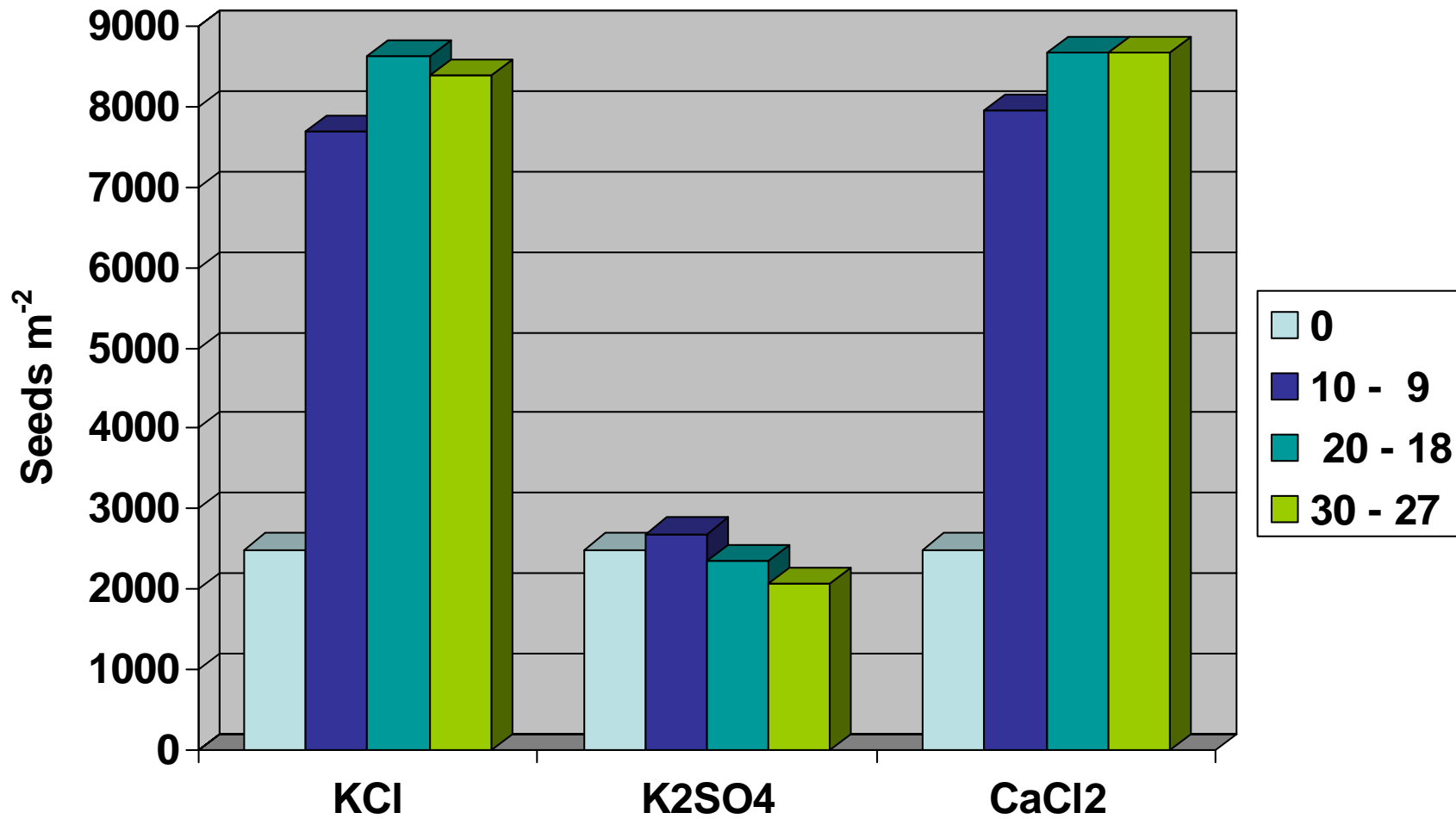
Halford Valley, 2008



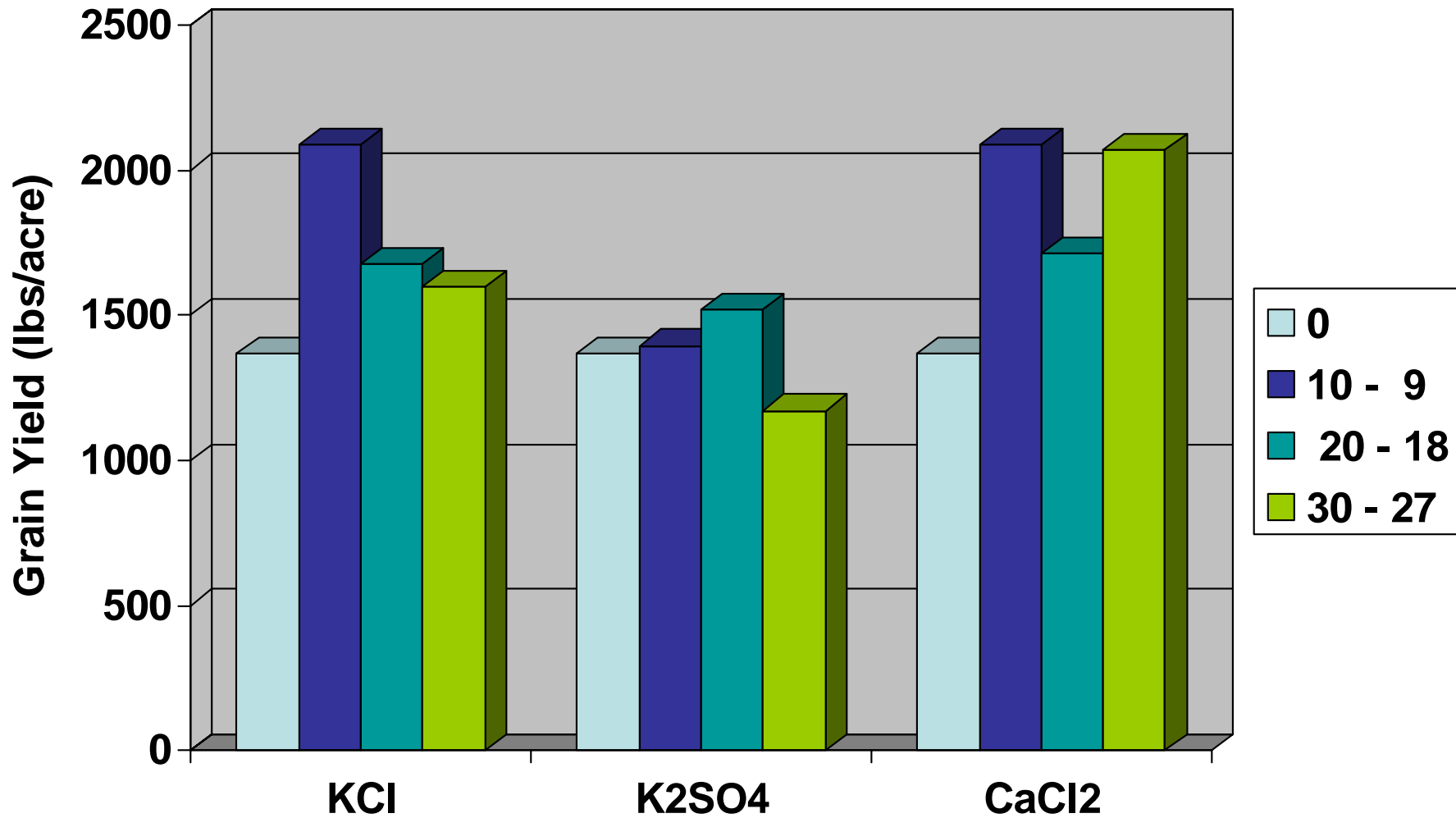
Vale Farms, Oxbow Loam, 2007



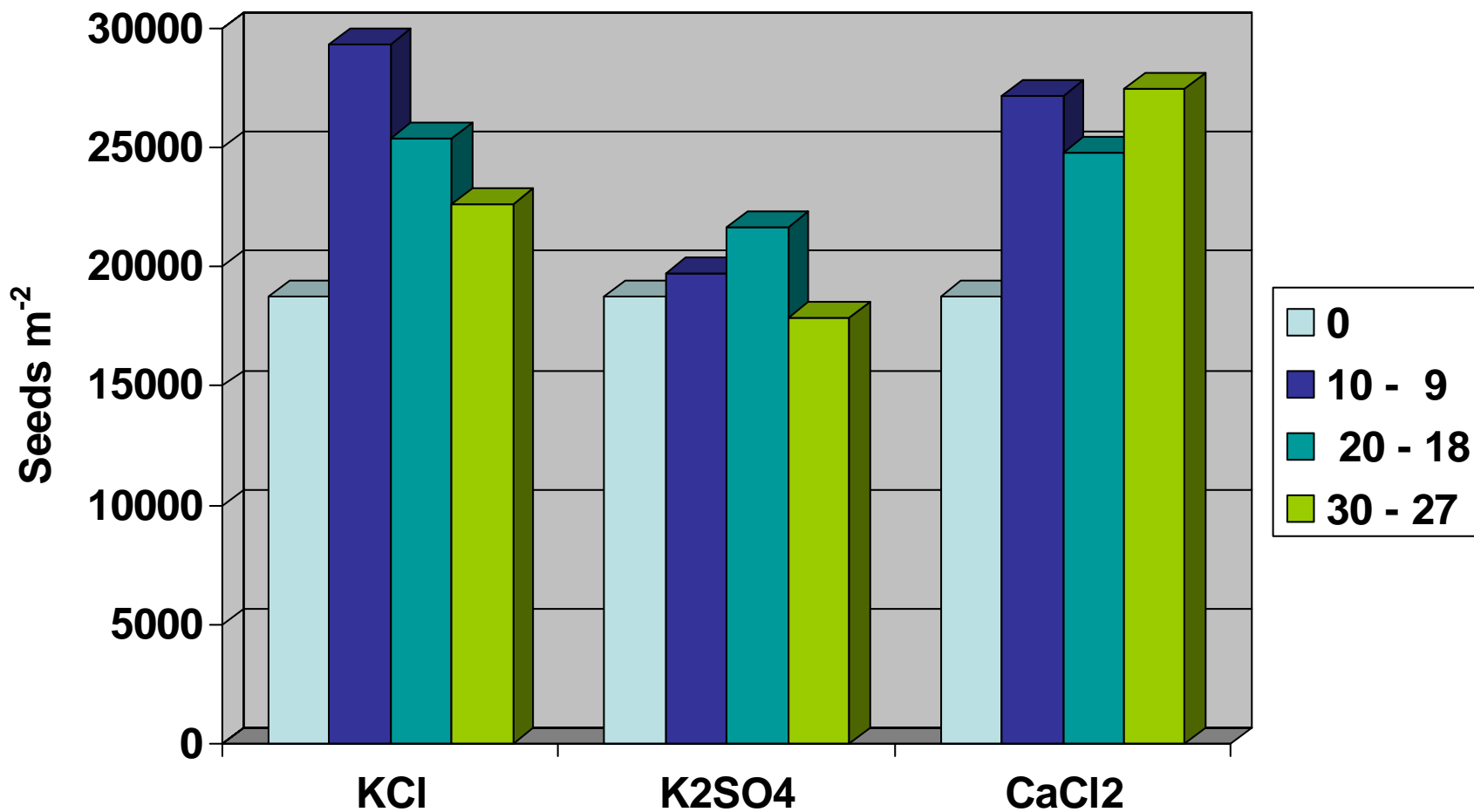
Vale Farms, Oxbow Loam, 2007



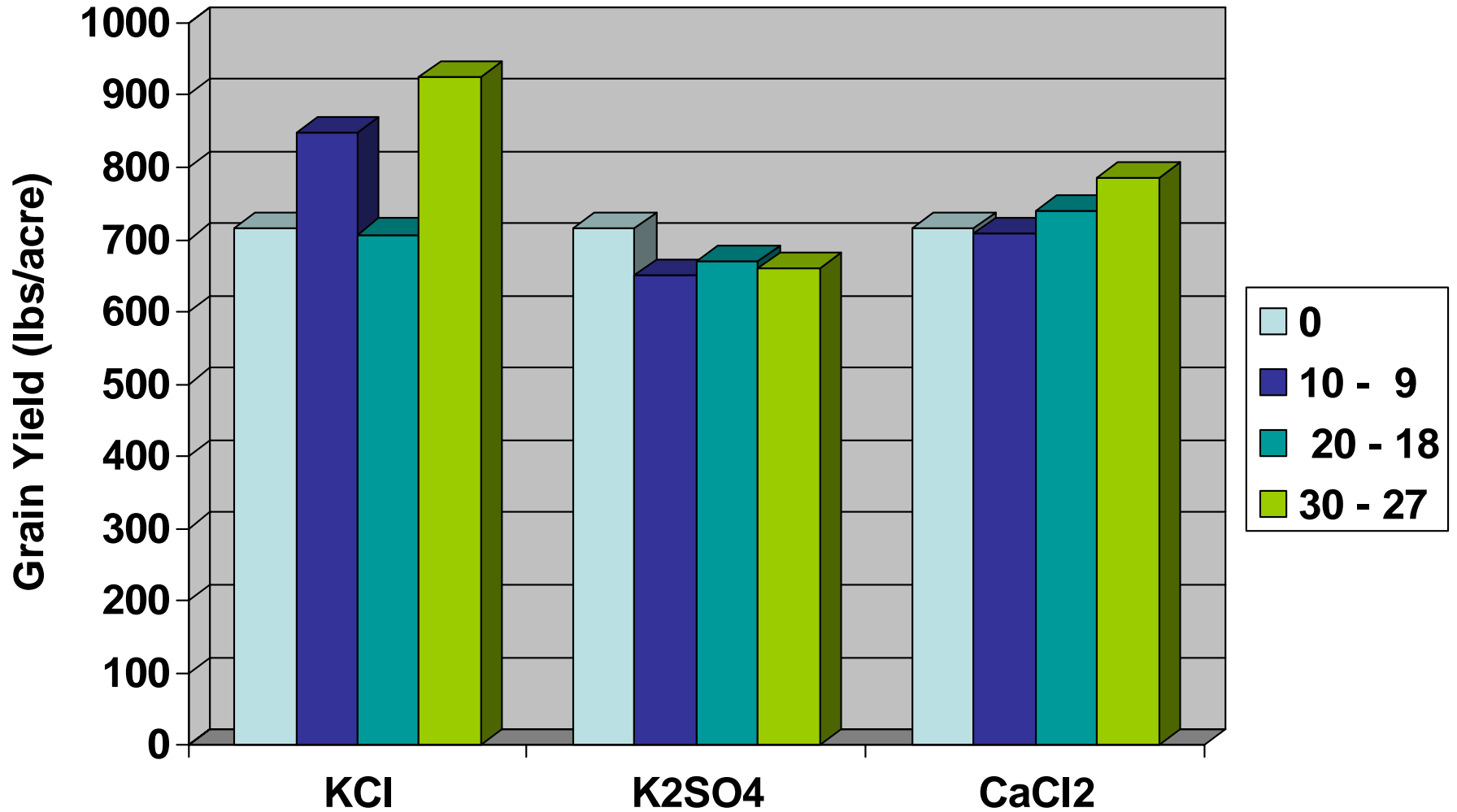
Vale Farms, Oxbow Loam, 2008



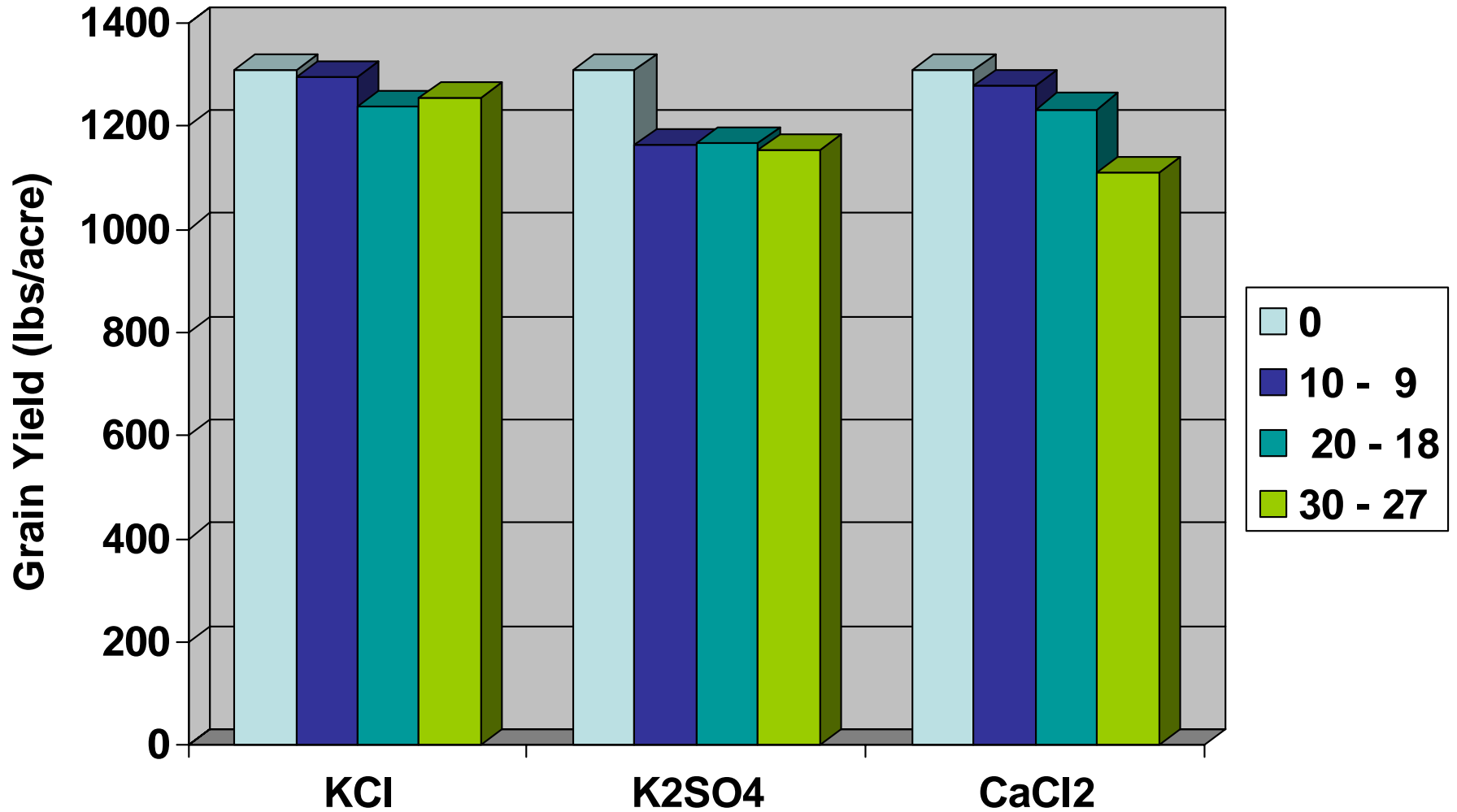
Vale Farms, Oxbow Loam, 2008



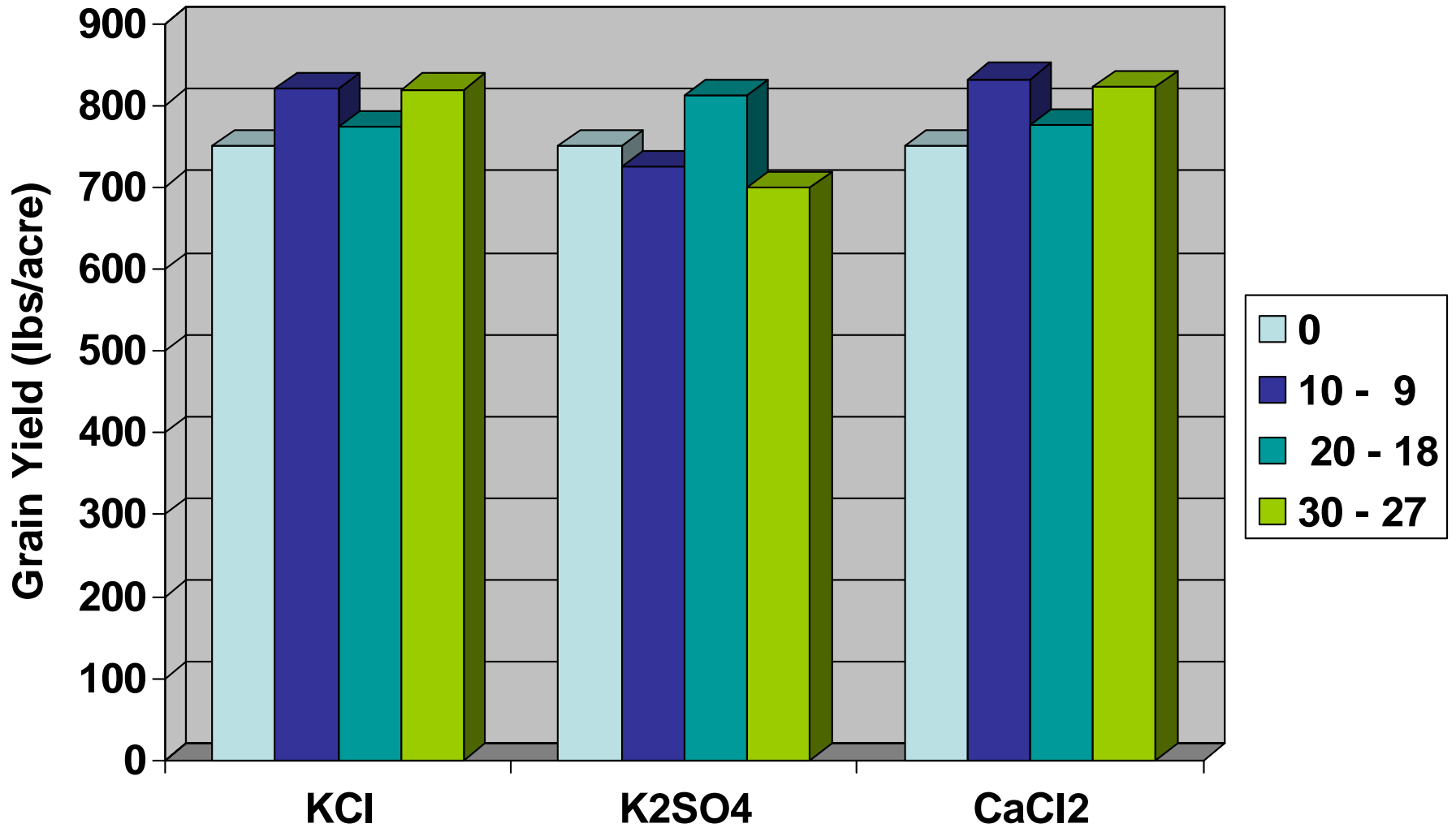
Regina Plains, 2007



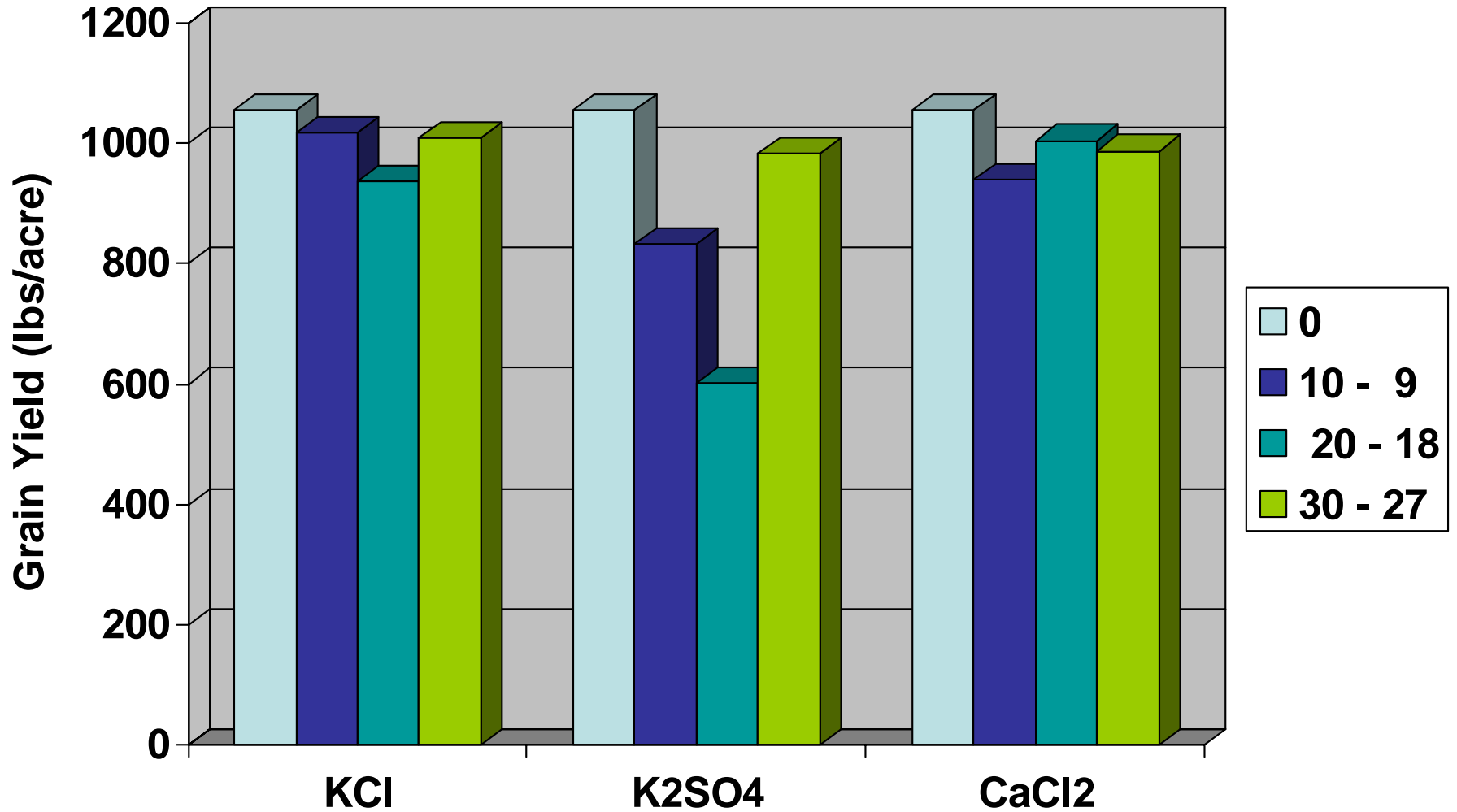
Regina Plains, 2008



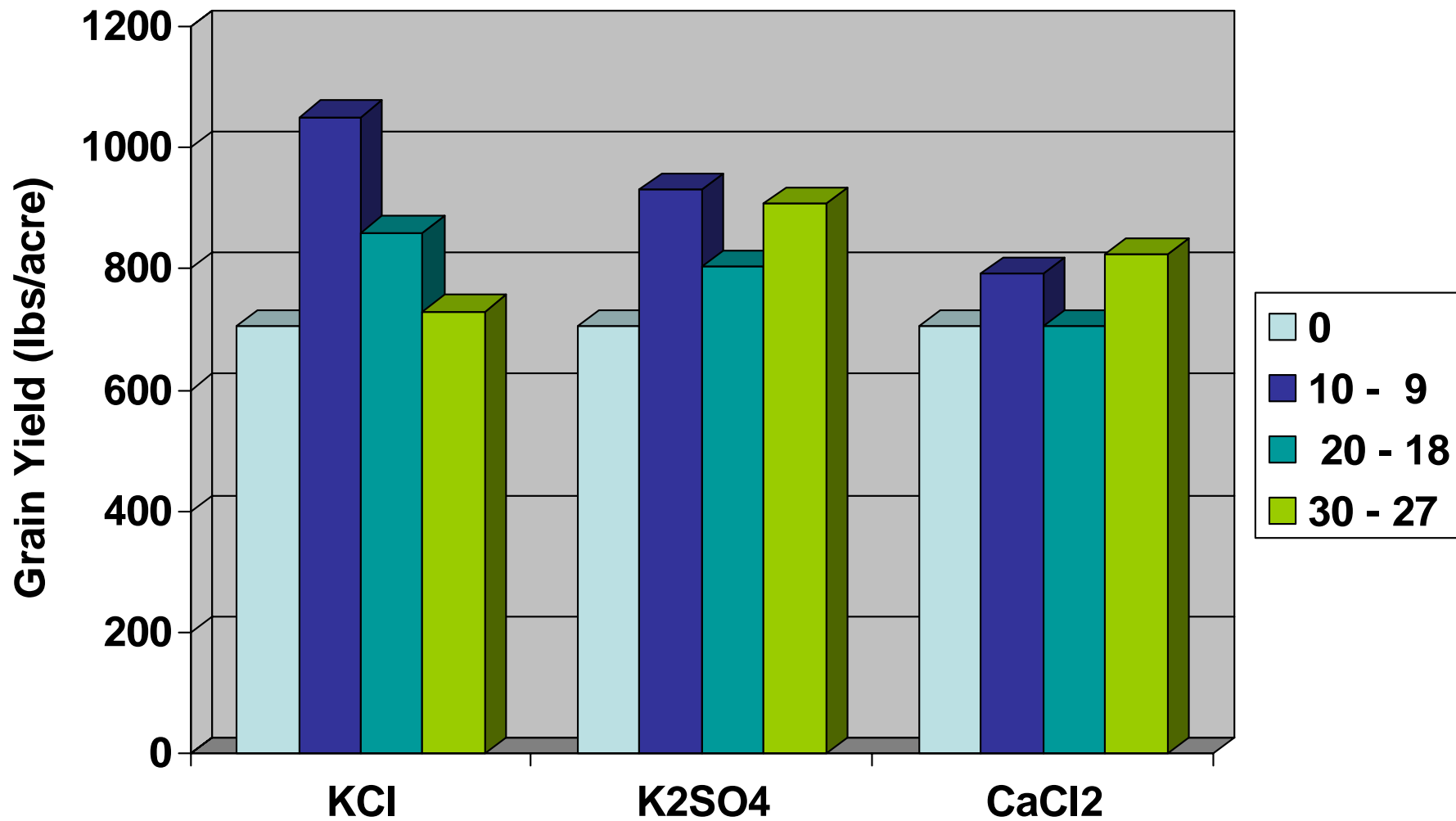
Stewart Valley, 2007



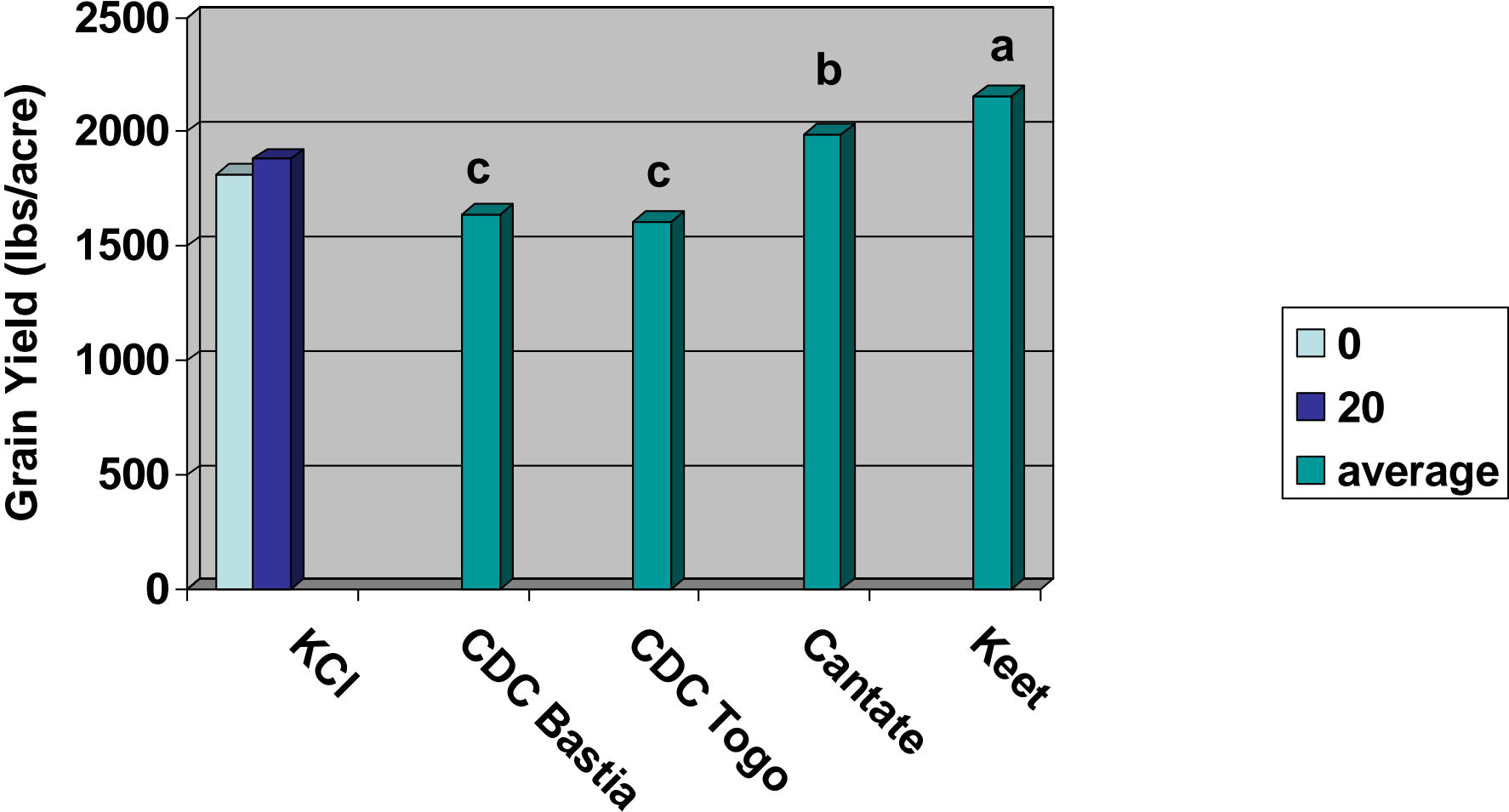
Stewart Valley, 2008



Nipawin, 2007

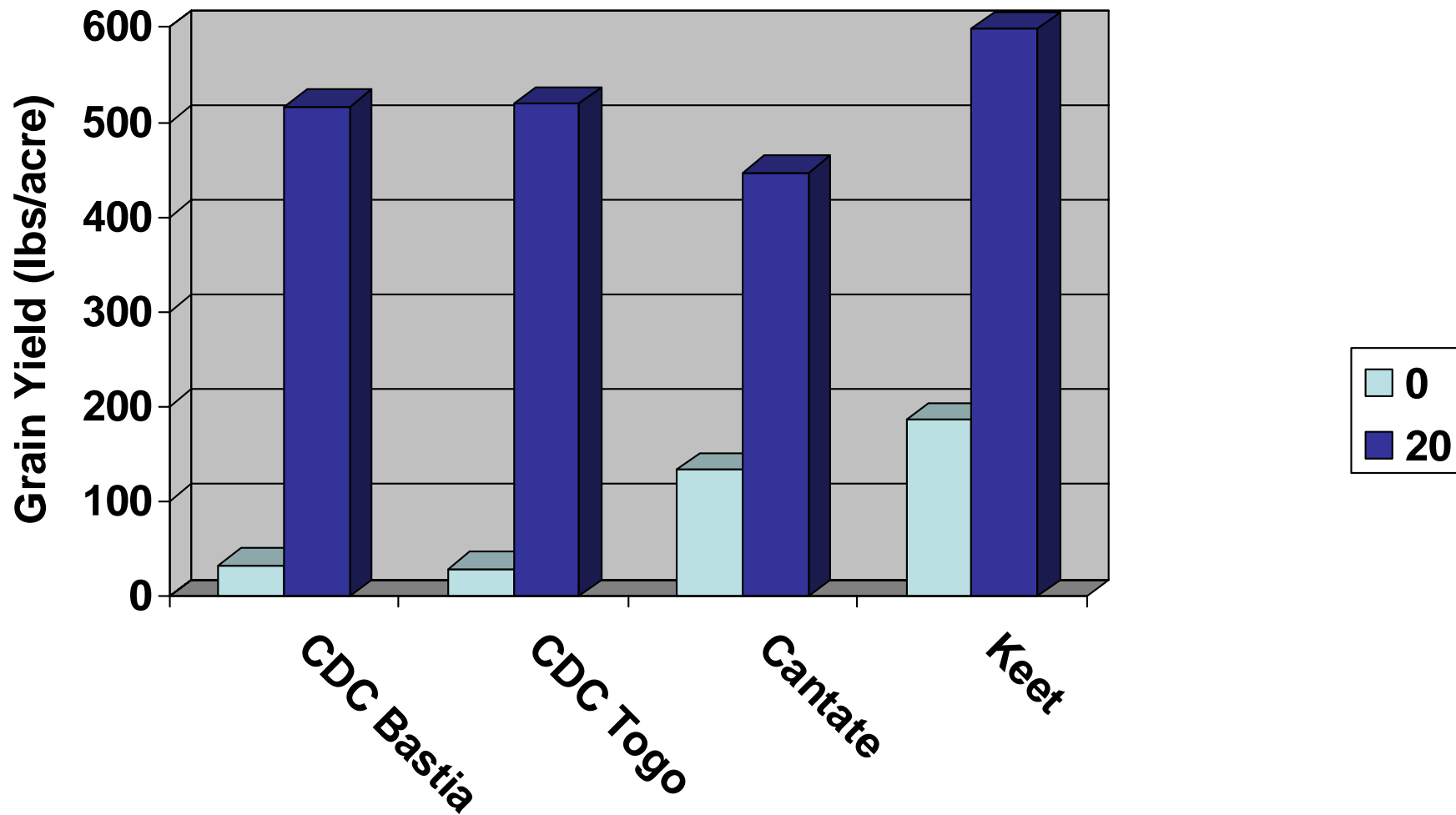


Indian Head Cultivars and KCL, 2008



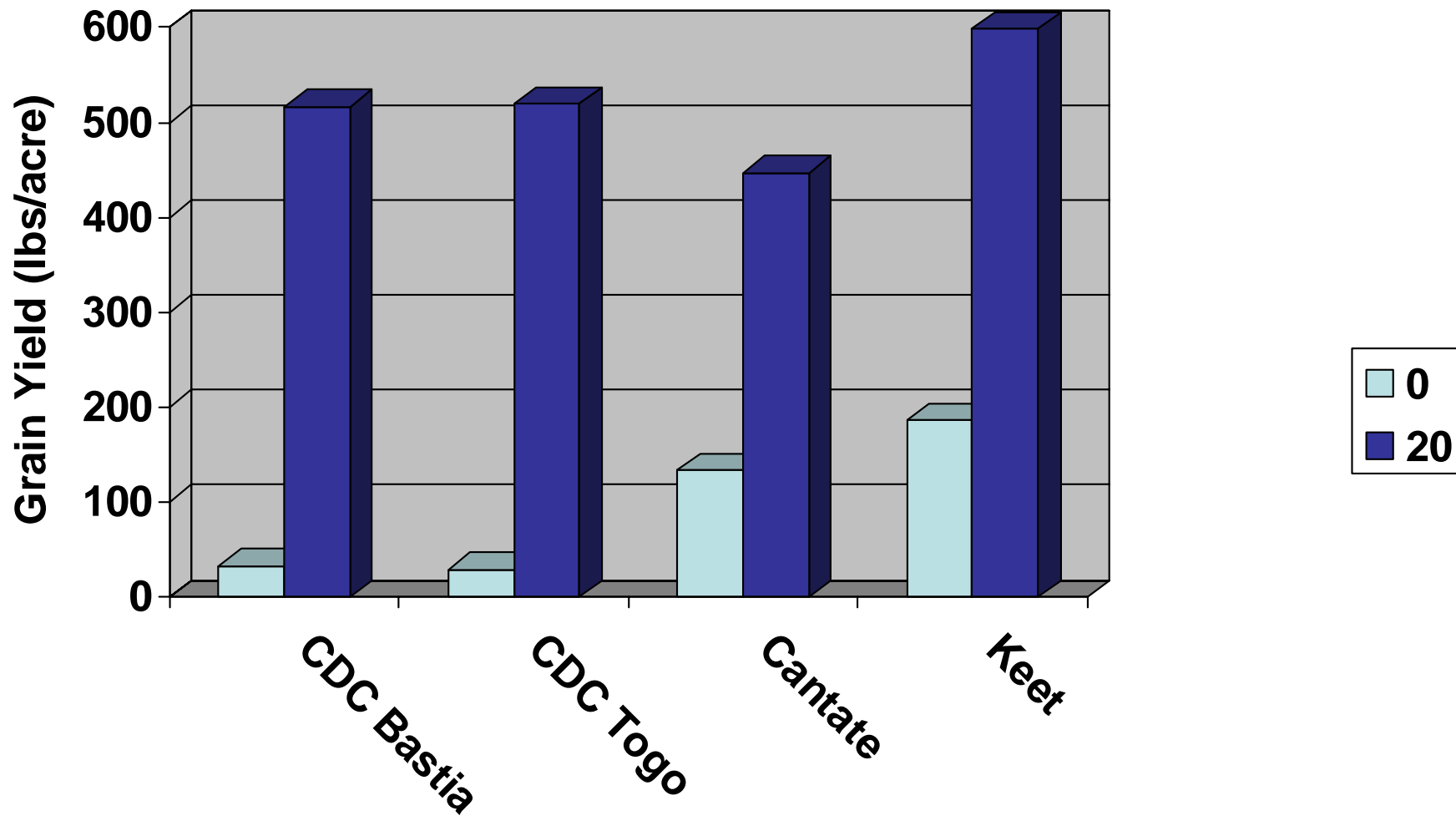
Vale valley

Cultivars and KCL, 2008

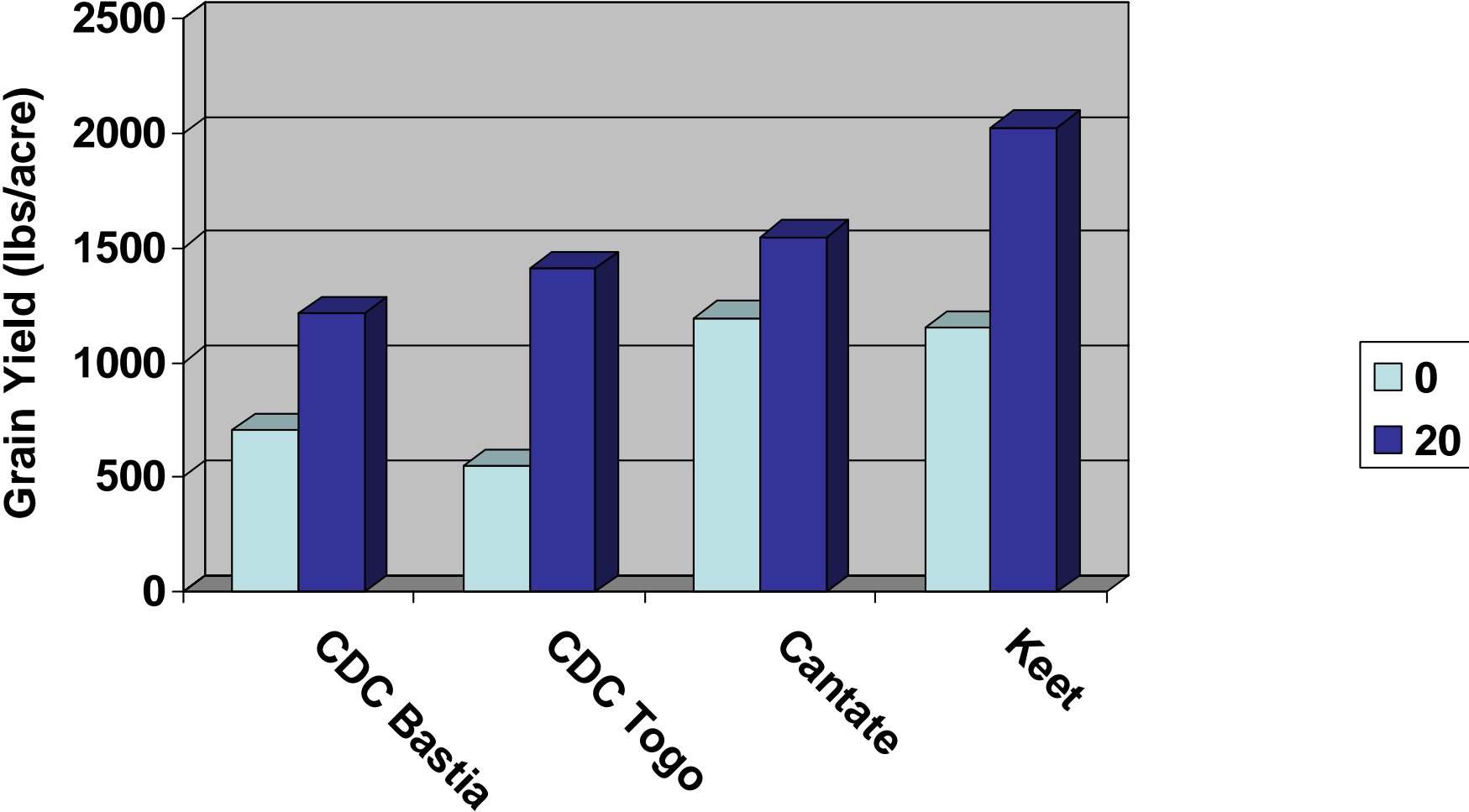


Vale valley

Cultivars and KCL, 2008



Halford, Oxbow loam Cultivars and KCL, 2008



Preliminary Conclusions

- Large Yield Response to Chloride when soil residual chloride is at a low level
- Don't yet know the probability of a grower getting a response
- **WHEN SOIL TESTING**
 - **MEASURE CHLORIDE IN YOUR CANARYSEED FIELDS**

Cultivars at Indian Head

Yield (Bu/acre)

Cultivar	2004	2005	2006	2007	2008
Keet	50.3 <i>a</i>	44.8 <i>ab</i>	40.0 <i>a</i>	27.7 <i>a</i>	35.8 <i>a</i>
Cantate	45.4 <i>b</i>	37.9 <i>bc</i>	41.6 <i>a</i>	22.0 <i>b</i>	33.6 <i>a</i>
CDC Bastia				19.3 <i>c</i>	28.7 <i>b</i>
CDC Maria	40.7 <i>c</i>	31.2 <i>c</i>	39.6 <i>a</i>	17.2 <i>cd</i>	27.7 <i>b</i>
CDC Togo	42.3 <i>cb</i>	46.9 <i>a</i>	36.3 <i>b</i>	16.0 <i>d</i>	28.8 <i>b</i>

Septoria Leaf Mottle

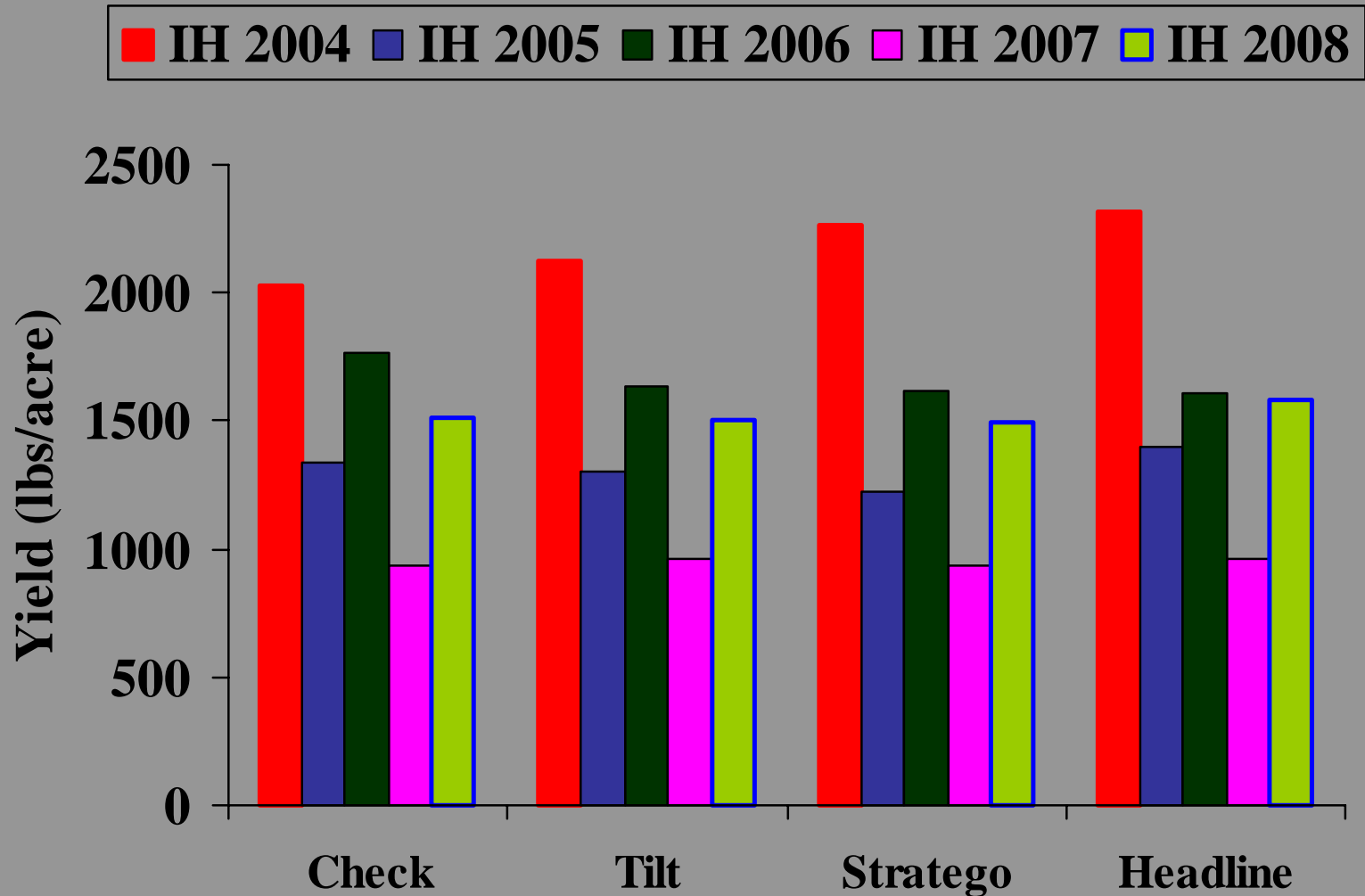
To spray or not to spray that is the question



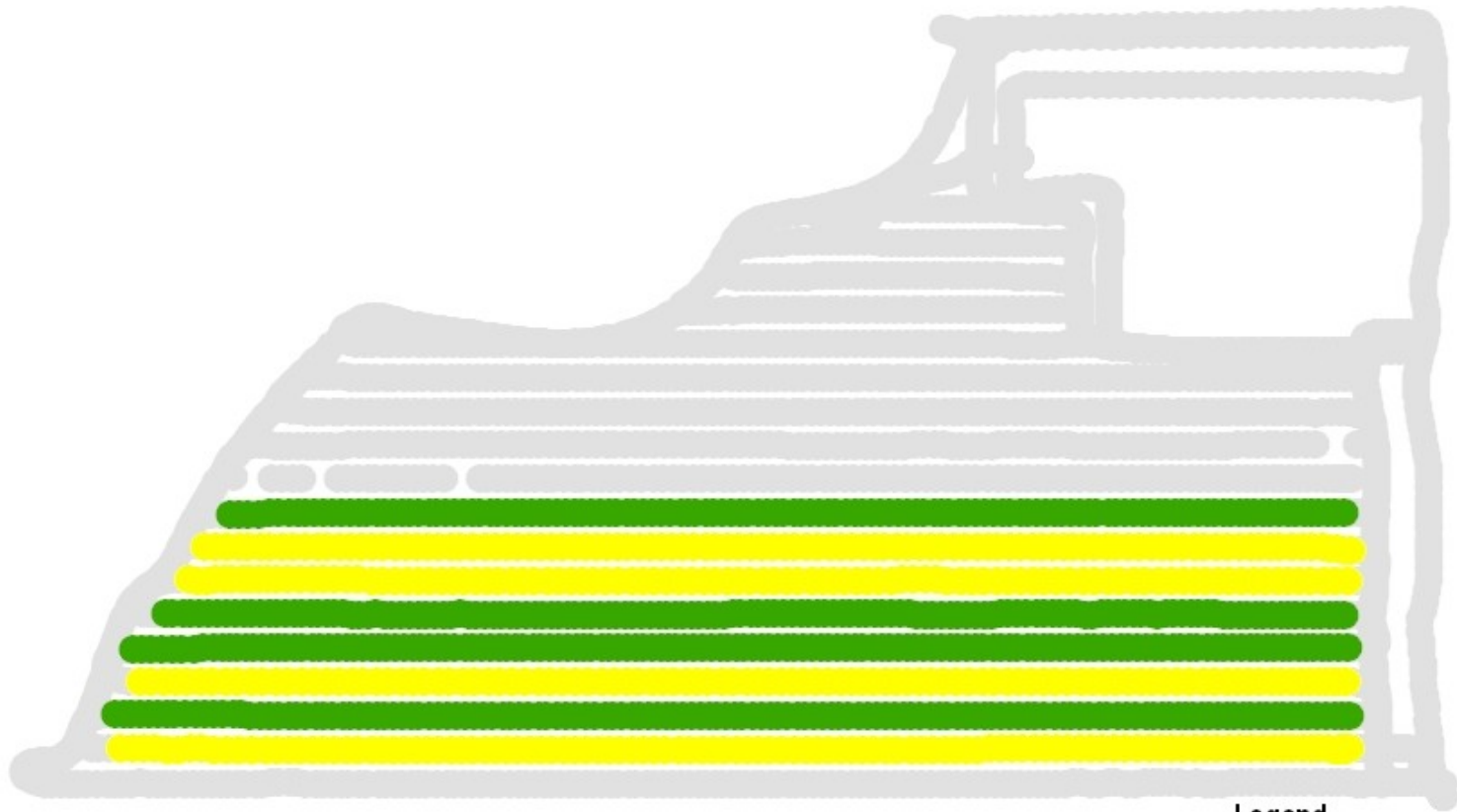
Septoria Leaf Mottle

- **No response at Indian Head in 2004, 2005, 2006, 2007 and 2008**
 - 2004 cool and wet
 - 2005 mod temperature and wet
 - 2006, 2007 wet June, dry in July
- **A better understanding of the amount of disease pressured at flag leaf that is needed to result in economic reductions in yield.**

Septoria Leaf Mottle and Yield



2008 Canaryseed Fungicide Trial



0 75 150 300 Meters



Legend

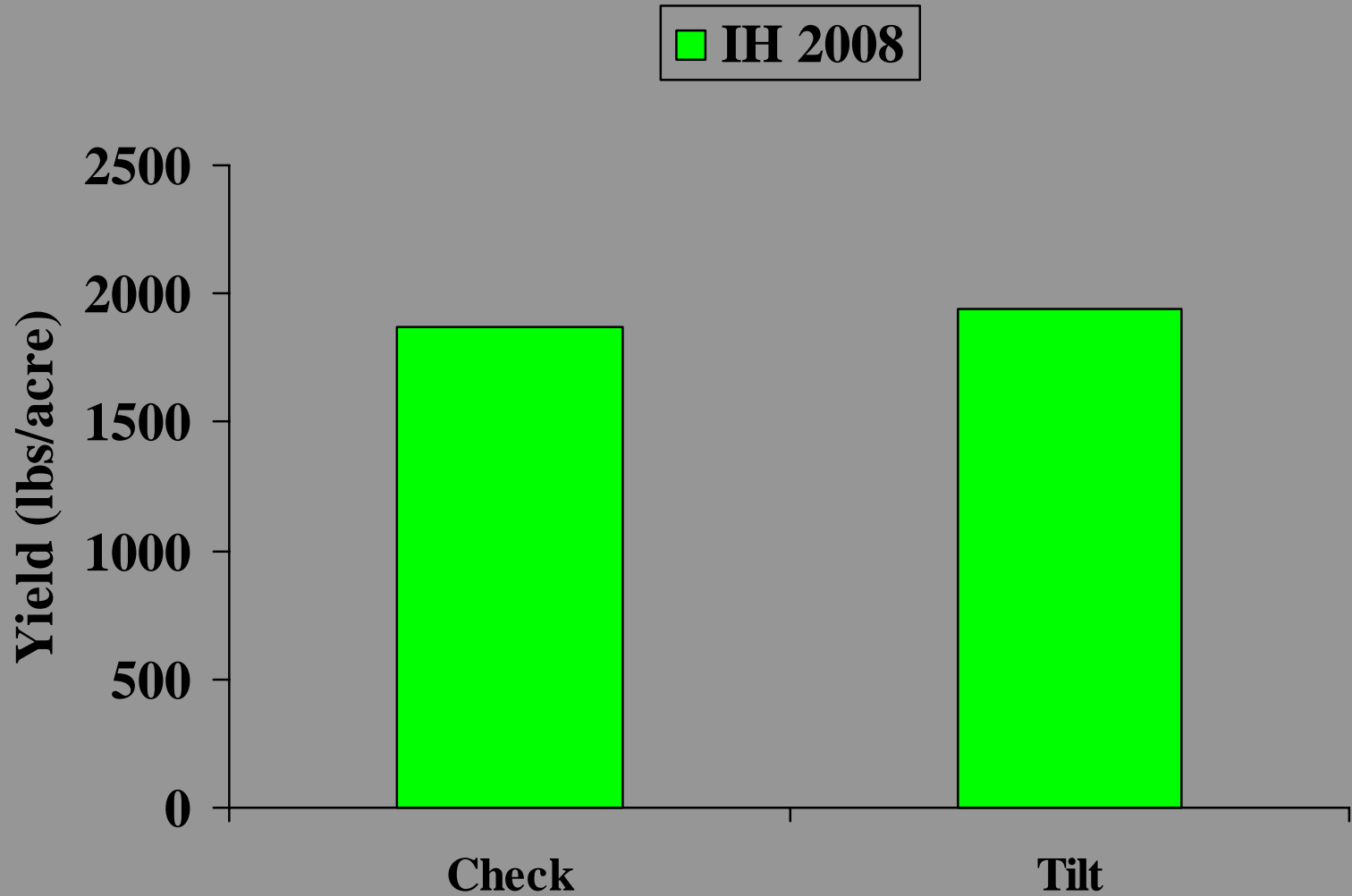
F2021_canaryfung_2008

Entry

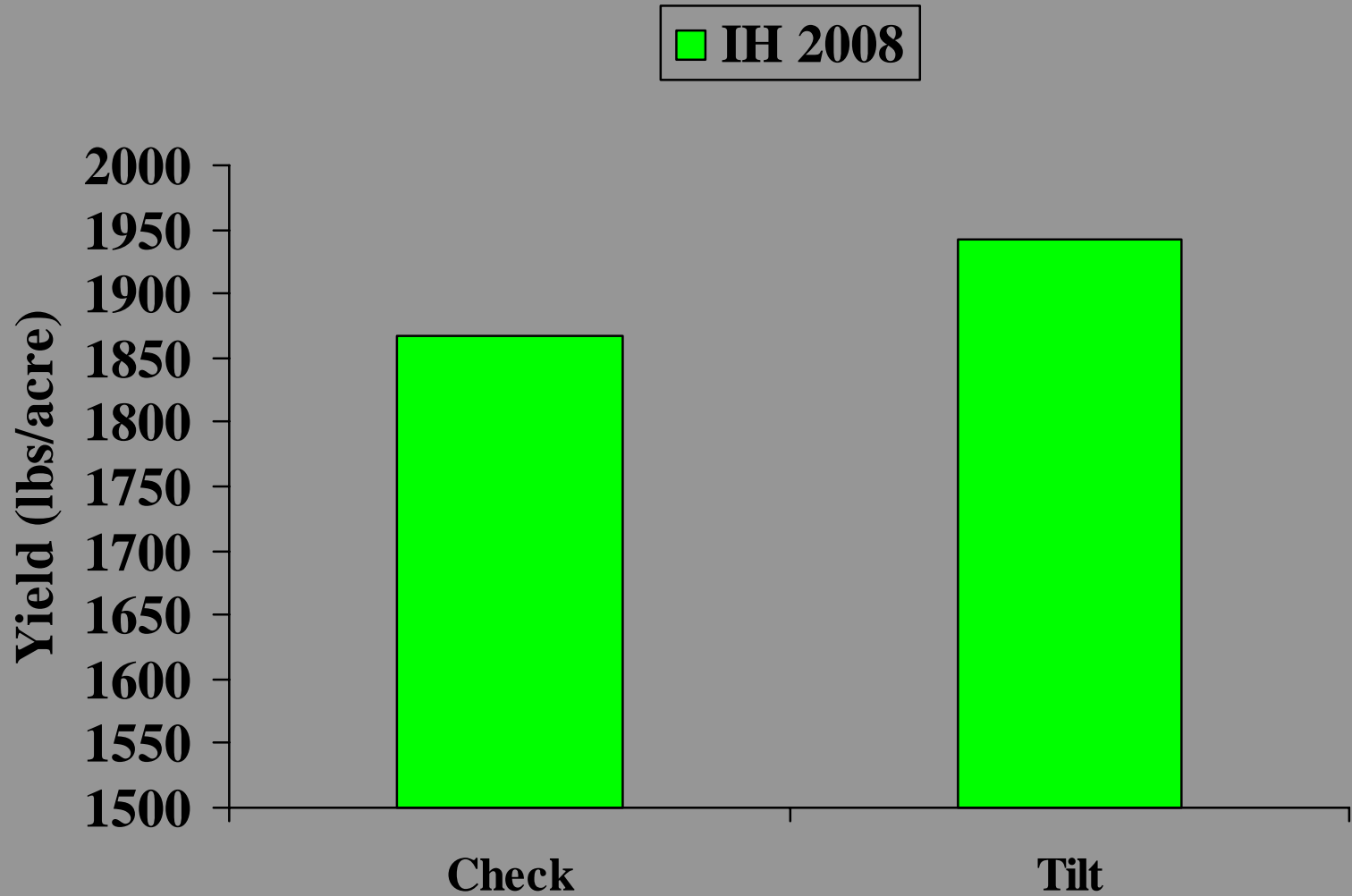
● Check

● Tilt

Septoria Leaf Mottle and Yield



Septoria Leaf Mottle and Yield





On-Farm Research - Data Analysis Tool (v1.1): Randomized Complete Block Design (RCBD)

Study: Canola Fungicide Year: 2008 Measurement: Grain Yield

Observations (Inputs)		
Treatment		
Rep#	1	2
1	1974	2123
2	2340	1900
3	2222	2321
4	2984	2800
5	1745	2000
6	1999	1849

Results (Outputs)	
# of Plots	12
# of Reps	6
Overall Average	2188.1
Overall Std. Dev.	377.2

Means Comparison			
Treatment	1	2	Difference
Mean	2210.7	2165.5	45.2
LSD (P=0.05)	271.5		
LSD (P= 0.10)	213.4		

Notes

avg

avg

Program to Analyze field scale trials

- KCL
- william.may@agr.gc.ca
- 306-695-5225

- Hope to be up on IHARF's web site soon

- Chris Holzapfel is the developer
- chris.holzapfel@agr.gc.ca

Crop Management Field Day

- **July 21, 2009**
- **Indian Head, SK**



The People Who Do The Work

- Orla Willoughby
- Randy Shiplack
- Alan Davies
- Judy McKell

