

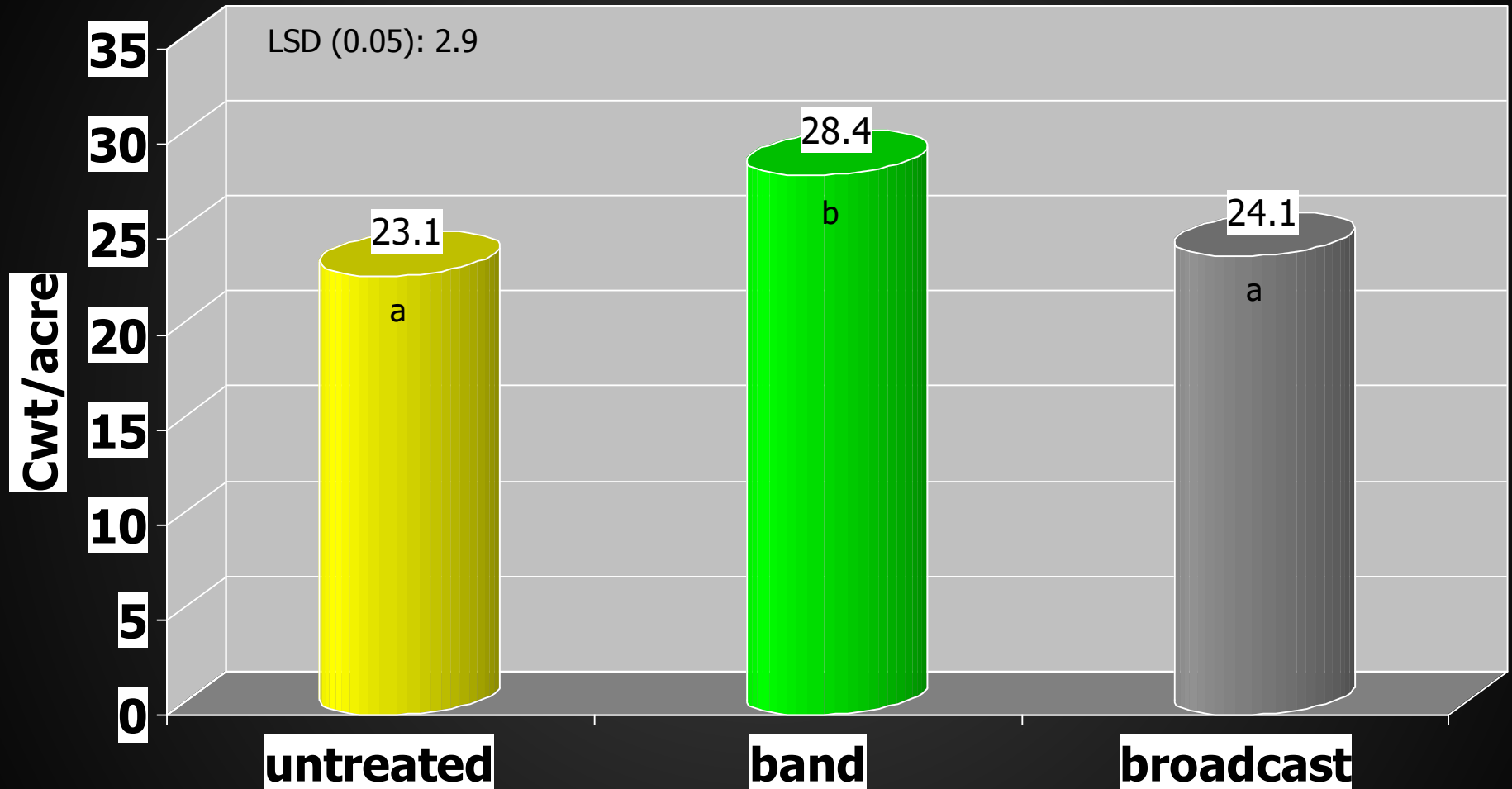
# Carrington Research Extension Center: **Dry bean plant establishment trials**

- 1. Planting date (2012-15)**
- 2. Row spacing (2011-16)**
- 3. Planting rate (2013-16)**
- 4. Plant nutrition (2009-16)**
  - Starter fertilizer
  - Special foliar inputs

# Plant Nutrition

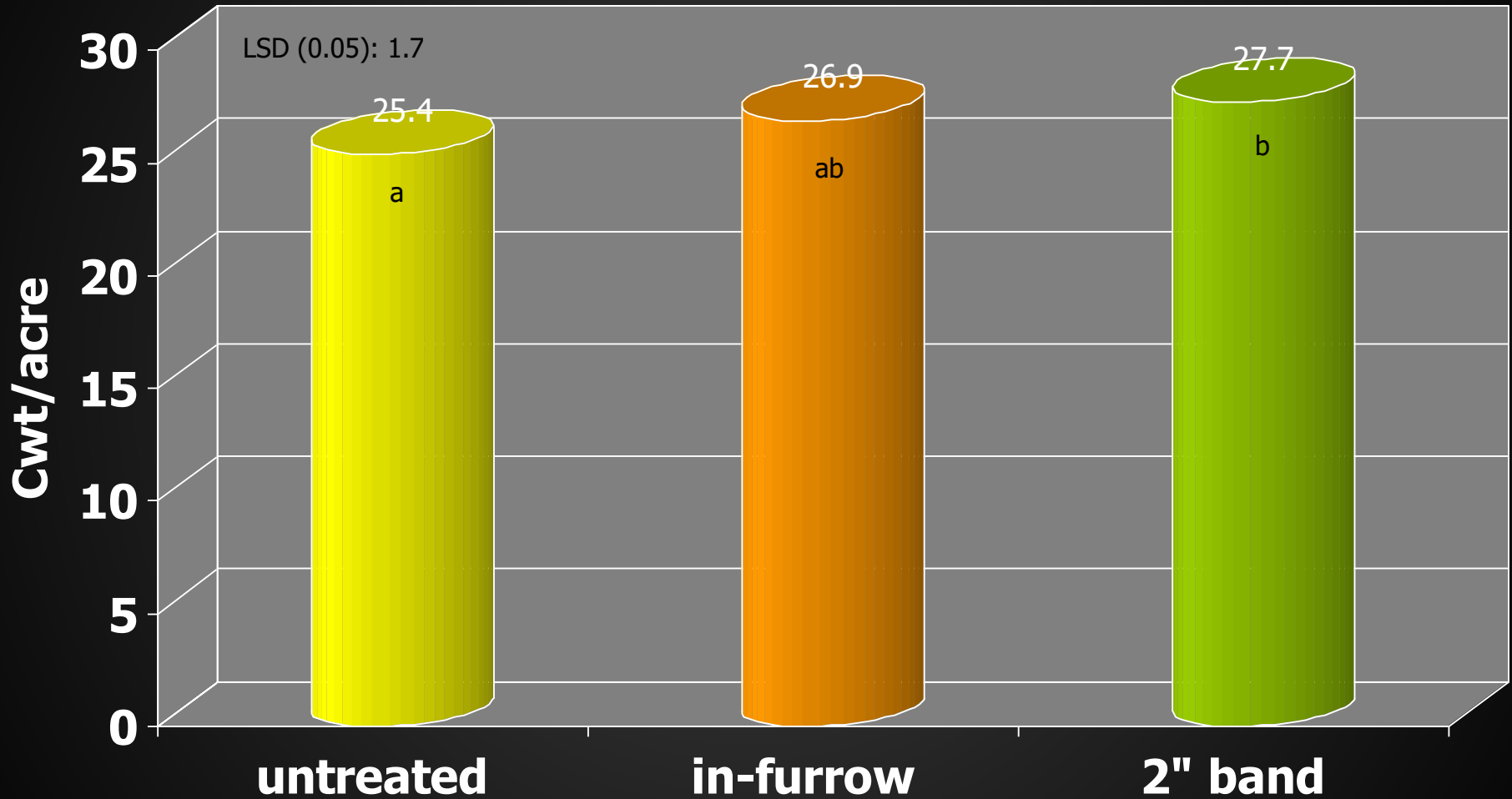


# Pinto bean yield with band vs. broadcast applied 10-34-0, Carrington, 2013-15\*



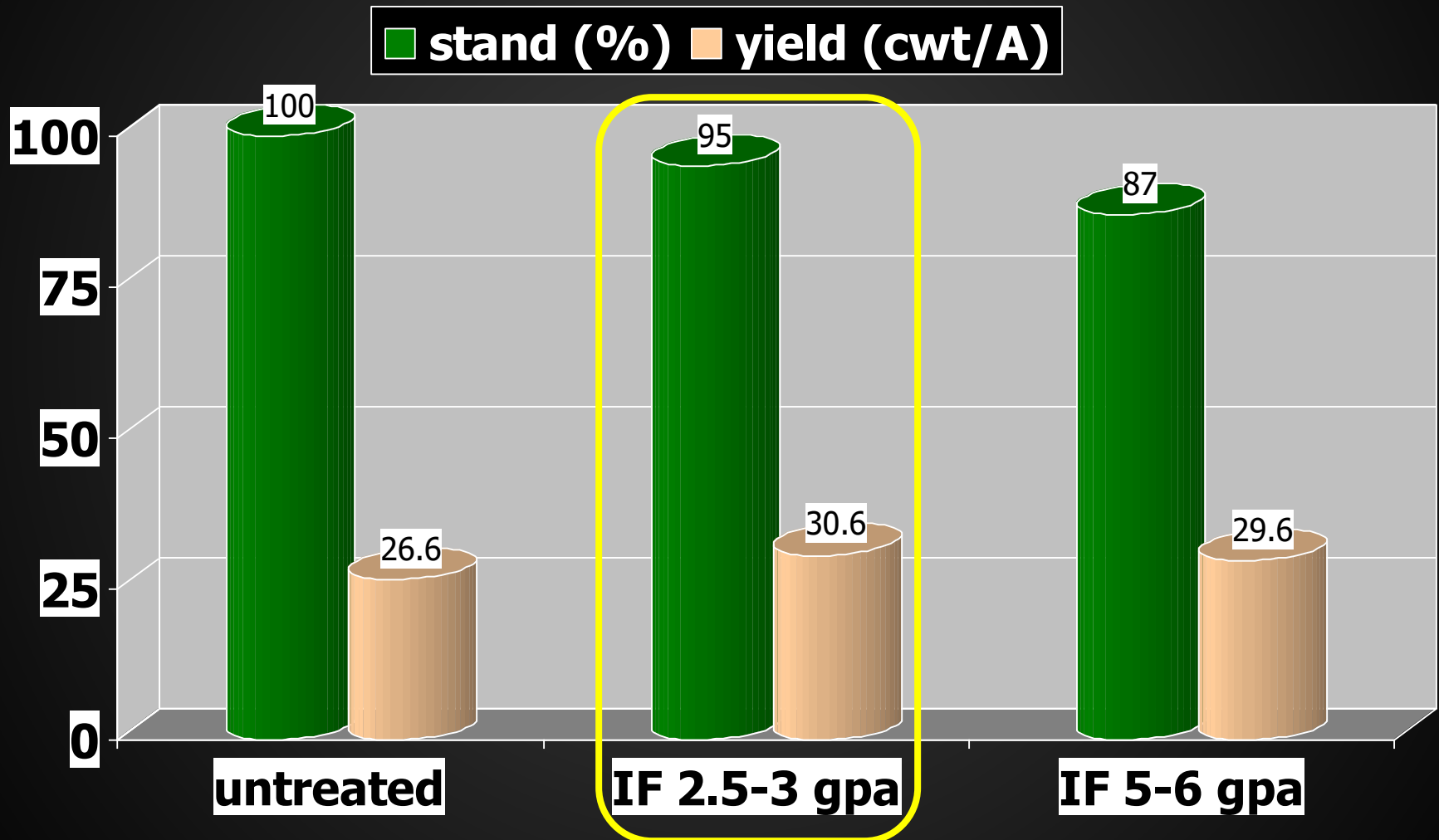
\*spring soil tests: P=5 ppm (low). 10-34-0 rates: 2013=8 gpa broadcast PRE (without mechanical incorporation) and 5 gpa IF; 2014=9 gpa broadcast PPI and 6 gpa IF; and 2015=4.5 gpa broadcast PPI and 3 gpa 2x0" band. 'Lariat' planted in 22" and 30" rows in 2013, and 30" rows in 2014-15.

# Pinto bean yield with band vs. in-furrow 10-34-0 placement, Carrington, 2009-13 and 2015-16 (7 site-years)\*



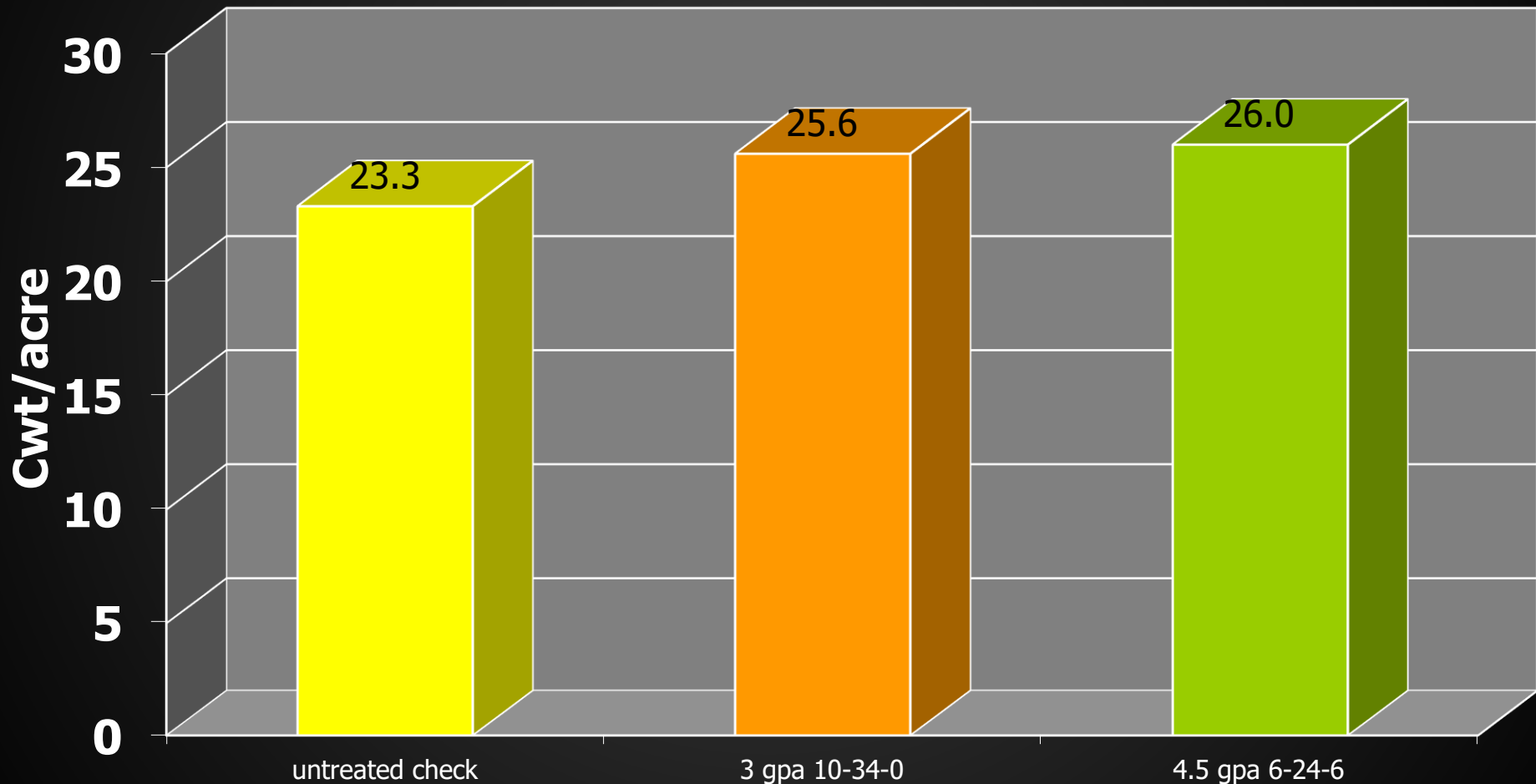
\*spring soil tests: P=5-10 ppm (low-med); 10-34-0 rates (gpa): 2016=3; 2010 and 2015=4-4.5; 2013=5; and 2009, 2011-12=6.

# Pinto bean response among rates of in-furrow applied 10-34-0, Carrington, 2012-14\*



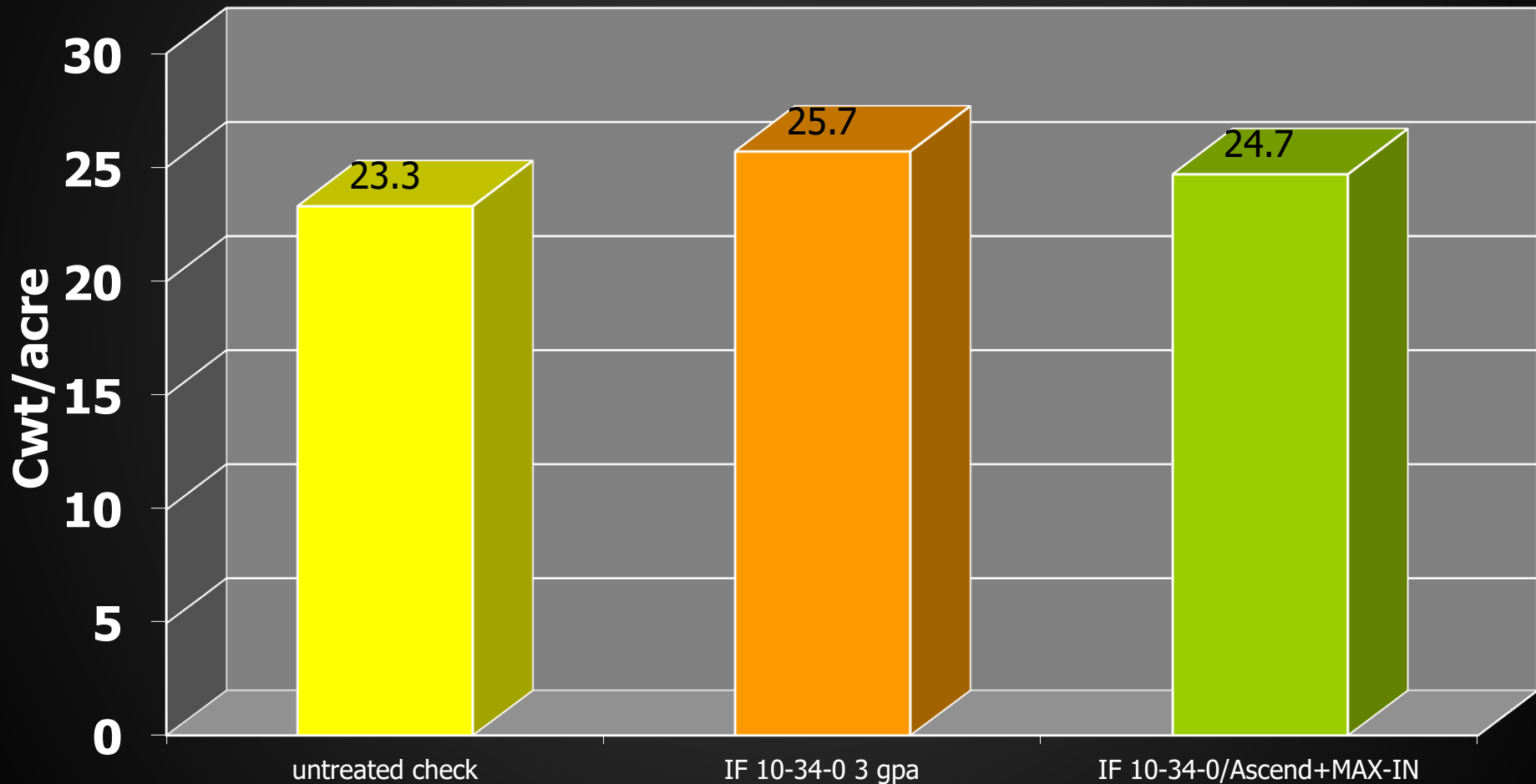
\*soil P=5-6 ppm (low). LSD (0.10): 2012 and 2013=NS, 2014=\*

# Pinto bean yield between in-furrow applied 10-34-0 and 6-24-6 fertilizer sources, Carrington, 2014-16\*



\*Spring soil test: P=5-7 ppm (low); K= high. 2016: fertilizer trts included chelated Zn at 0.25 gpa. 'Lariat' planted in 30" rows. Early season stand (plants/A x 1000): check=67.5; 10-34-0=61.6; 6-24-6=62.6. LSD: 2014=\*; 2015-16=NS.

# Pinto bean yield with foliar growth promoter plus fertilizer, Carrington, 2014-16\*



\*Spring soil test: P=5-7 ppm (low); Zn= 0.4-0.5 ppm (low). Ascend at 4.5 or 6.4 fl oz/A + MAX-IN Ultra ZMB at 32 fl oz/A applied at R1-5 stages. LSD: 2014=\*; 2015 and 16=NS.

# Plant nutrition summary

- Yield
  - 10-34-0 application as band = IF > broadcast = untreated check
  - in-furrow 10-34-0 = 6-24-6
  - no increase with selected special foliar inputs
- 2016-17
  - Also testing
    - Zinc (in-furrow)
    - Nachurs 3-18-18-1 (in-furrow)
    - Sulfur (foliar)





Hail damage on July 9 followed by Headline at 6 fl oz/A applied July 15 to 2 of 4 reps of 2016 pinto bean fertilizer trial

# Hail-damaged pinto bean response to 'plant health' foliar fungicide, Carrington, 2011 and 2016

Year	Treatment*	Yield (lb/A)		LSD (0.05)
		fungicide	untreated	
2011	Headline (6 fl oz)	1865	1955	NS
→ 2016	+ NIS (0.25% v/v)	1915	1880	NS

\*App at growth stages: 2011=R1-3 (flower/initial pods); 2016=pre-flower.

Questions or  
Comments?