

# **Pinto Bean Tillage and Placement of Fertilizer Research at the NDSU Carrington Research Extension Center**

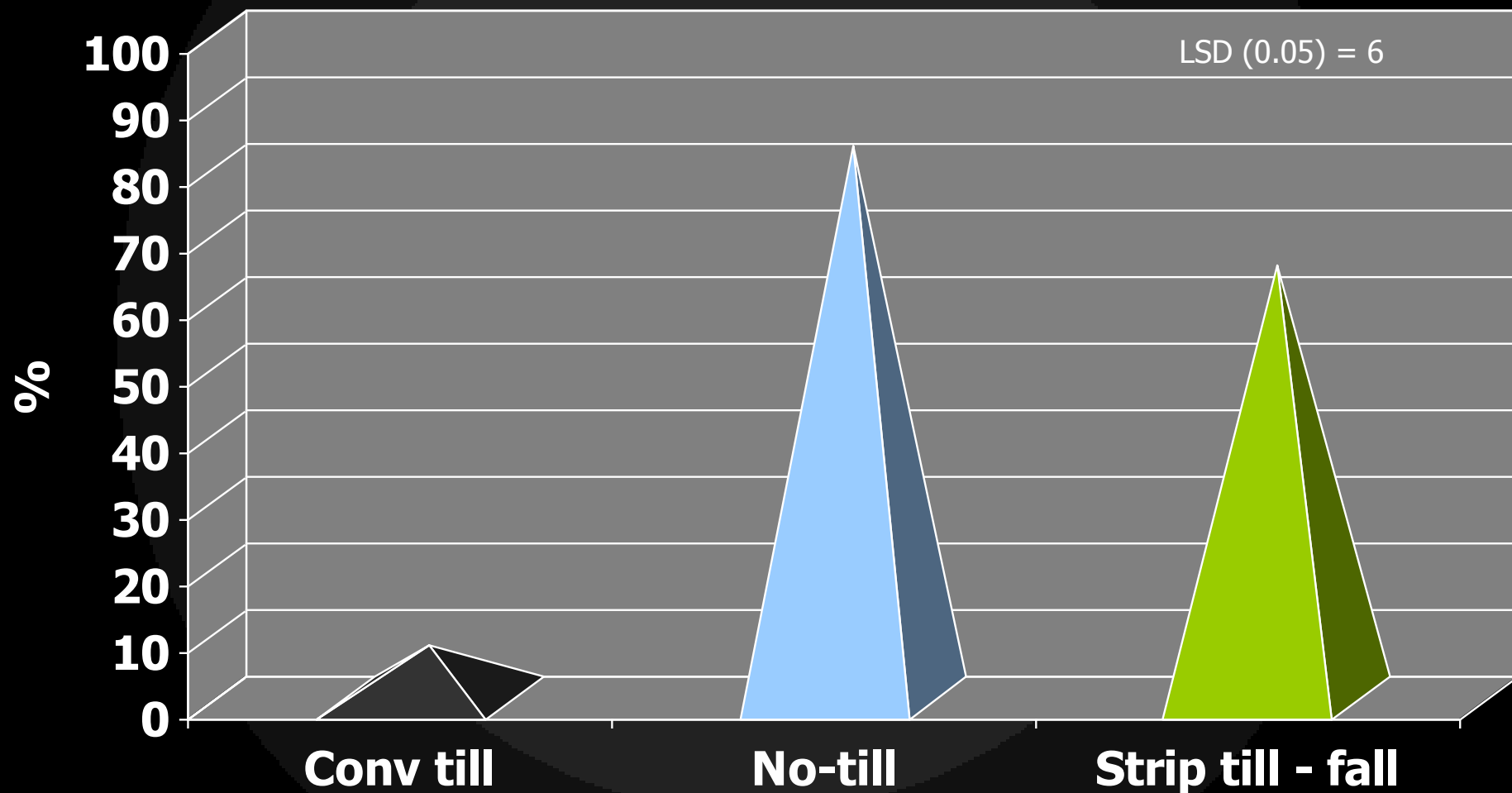
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**Dry bean**

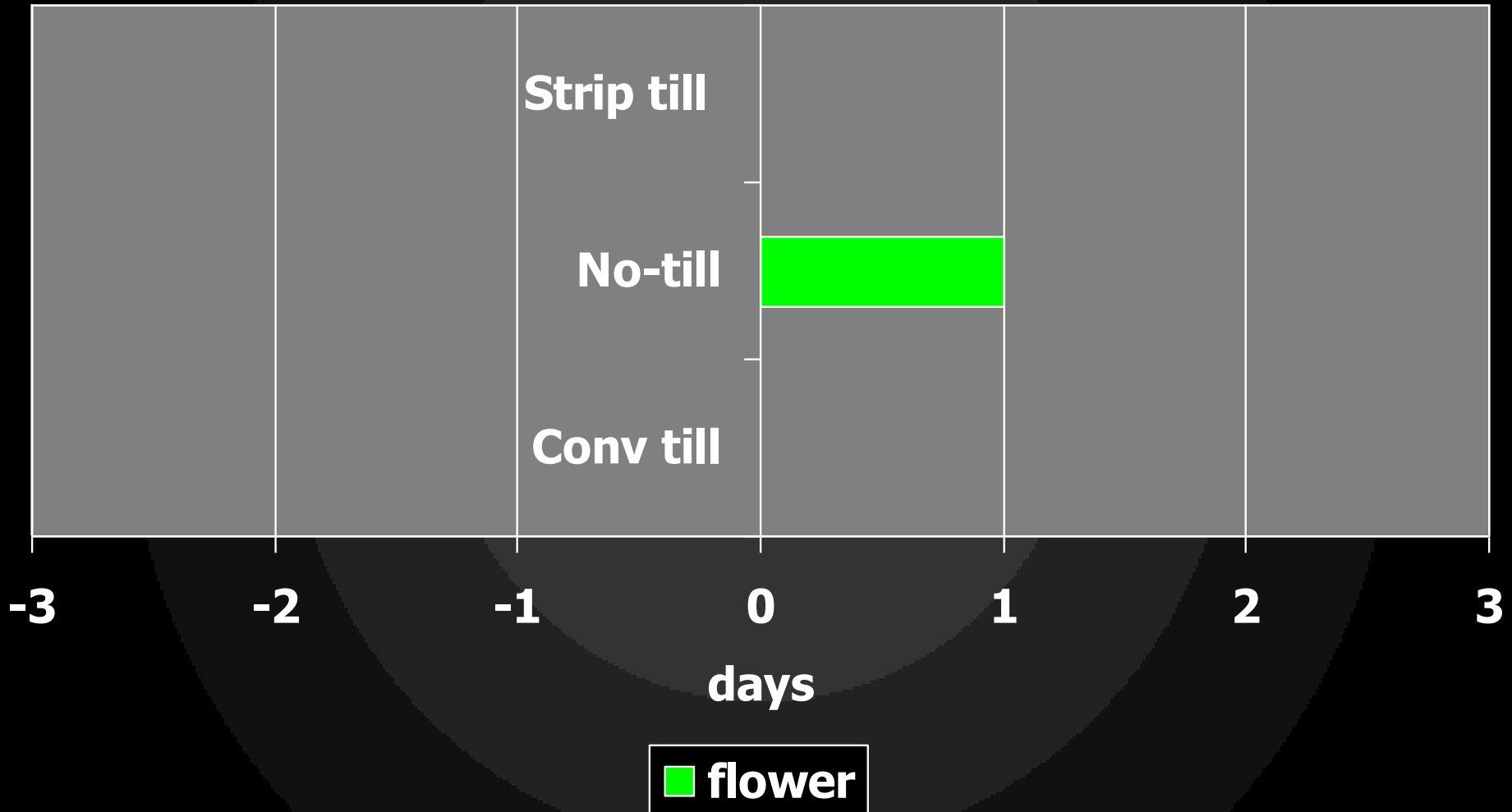


# Wheat residue levels among tillage systems in dry bean, Carrington, 2009\*.



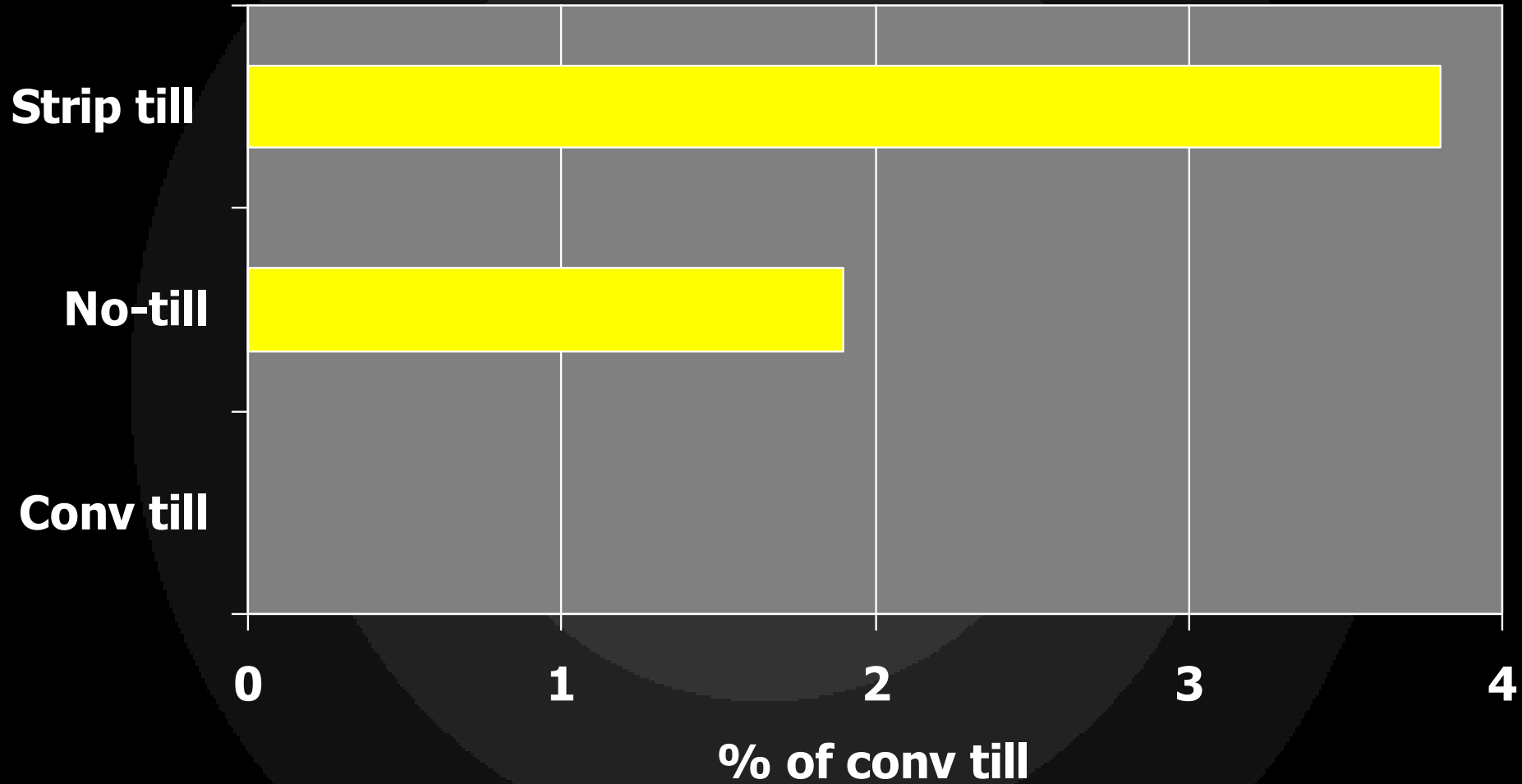
\*Taken after bean planting using line-transect method.

# Pinto bean plant development differences among tillage systems, Carrington, 2007 and 2009\*.



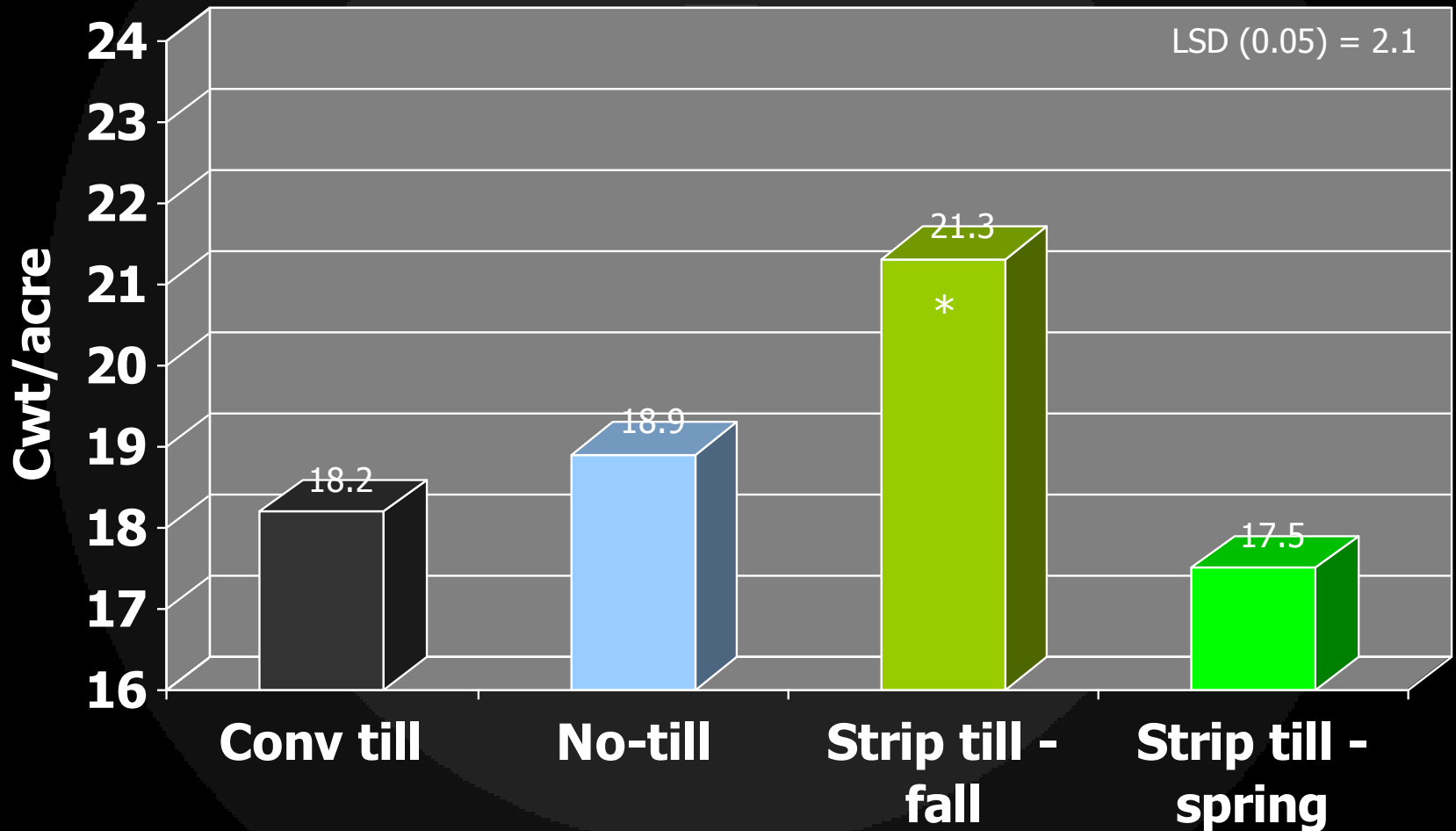
\*Statistically significant (LSD=0.05): none either year.

# Pinto bean plant stand differences among tillage systems, Carrington, 2007-09\*.



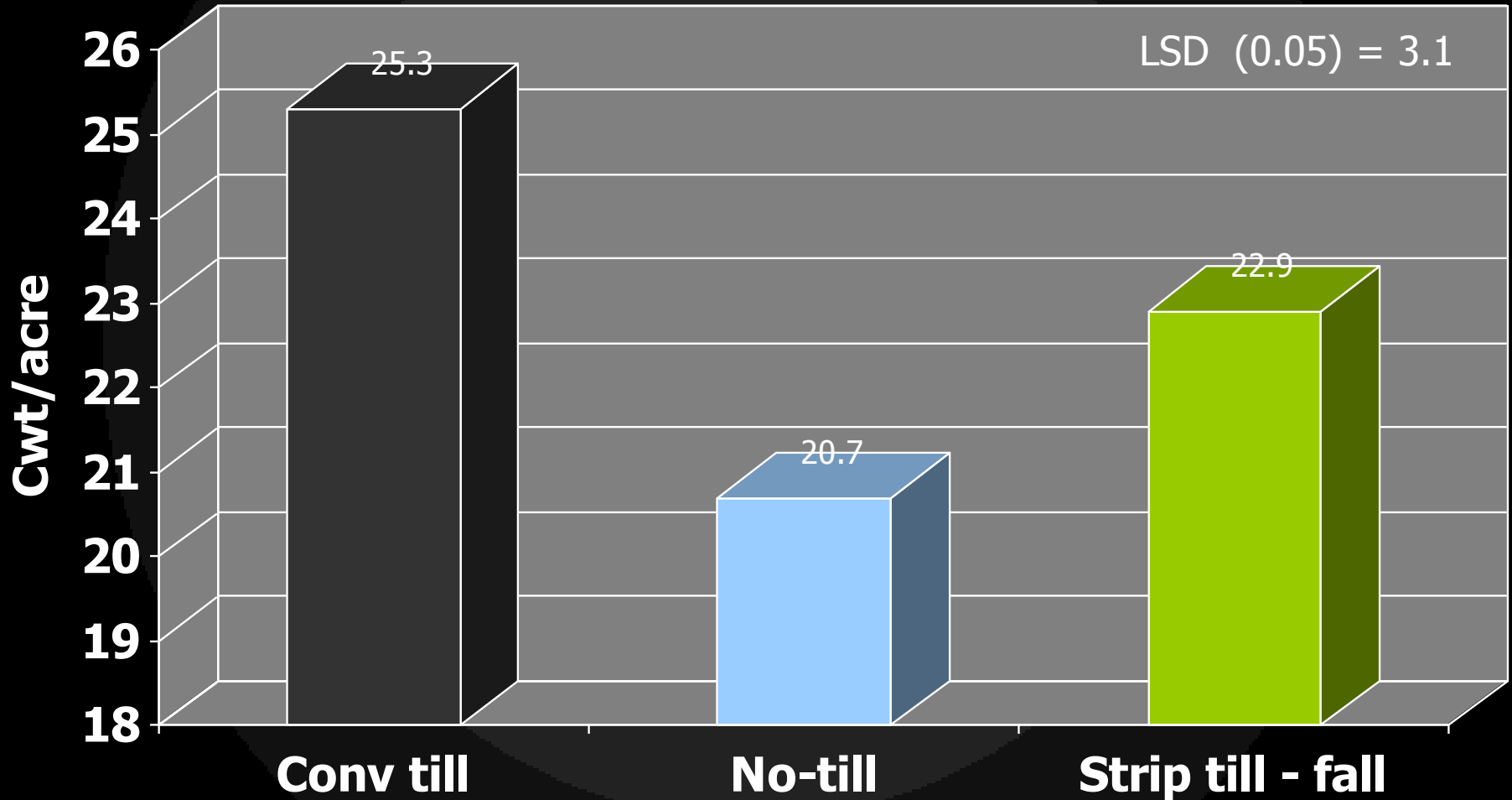
\*Statistically significant (LSD=0.05): 2009.

# Pinto bean yield among tillage systems, Carrington, 2007\*.



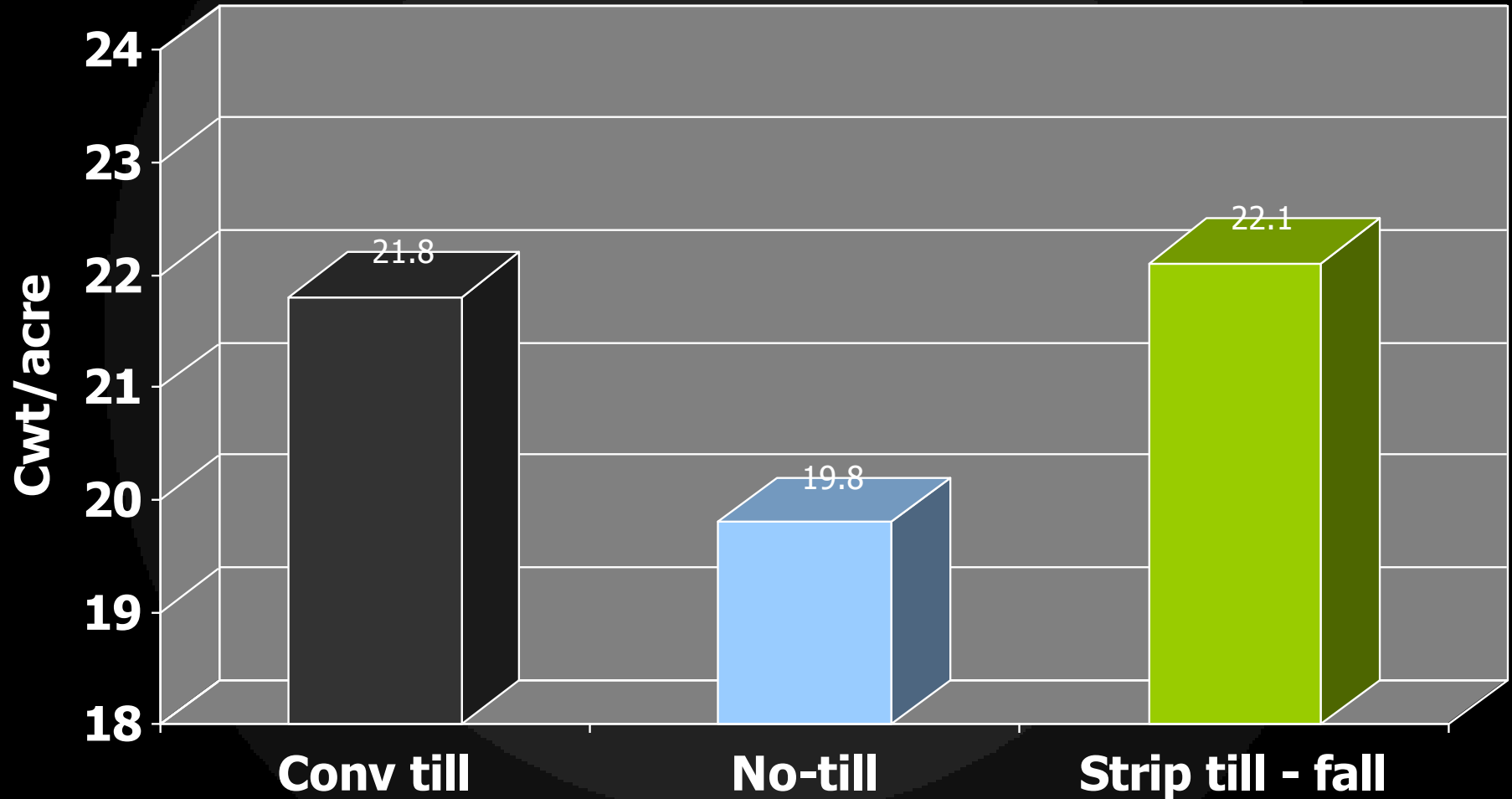
\*Strip till: fall=Oct 16, spring=Apr 23; 'Maverick' planted June 18.

# Pinto bean yield among tillage systems, Carrington, 2009\*.



\*Strip till=Oct 31; 'Lariat' planted May 22.

# Pinto bean yield among tillage systems, Carrington, 2007 and 2009.





# CREC Research Summary:

## Pinto bean yield with strip-till compared to other tillage systems

- 2 site-yr average:
  - similar to conventional till
  - 10% (2.3 bags/A) > no-till



## Carrington, 2009

Spring P soil analysis: **9 ppm**

Fertilizer placement treatments :

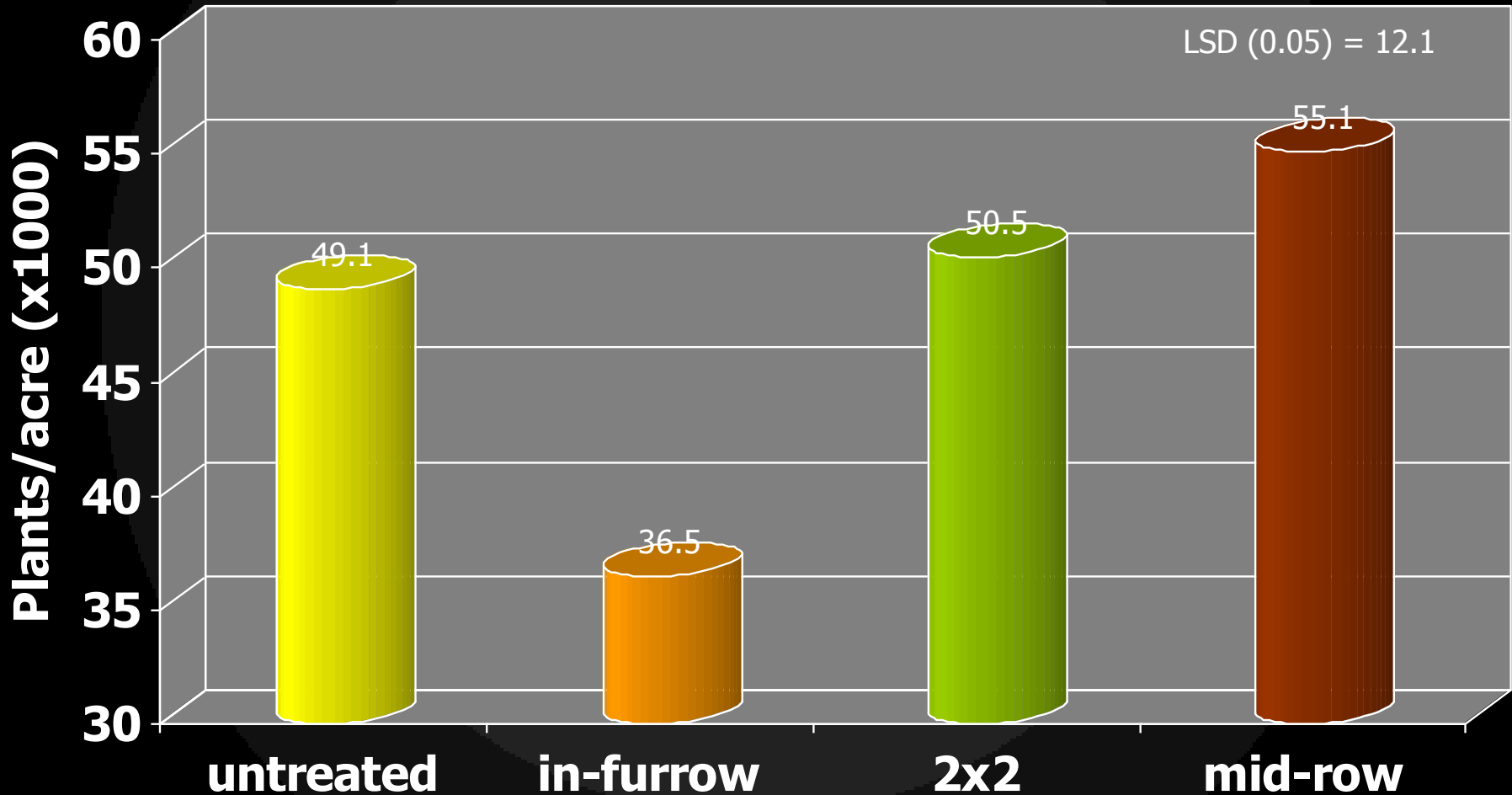
1. **untreated check (ST)**
2. **spring mid-row band (ST)**
3. **spring in-furrow (ST)**
4. **spring 2x2 band (ST, conv till, NT)**

**2x2** 10-34-0 placement in no-till during planting

6 gpa 10-34-0

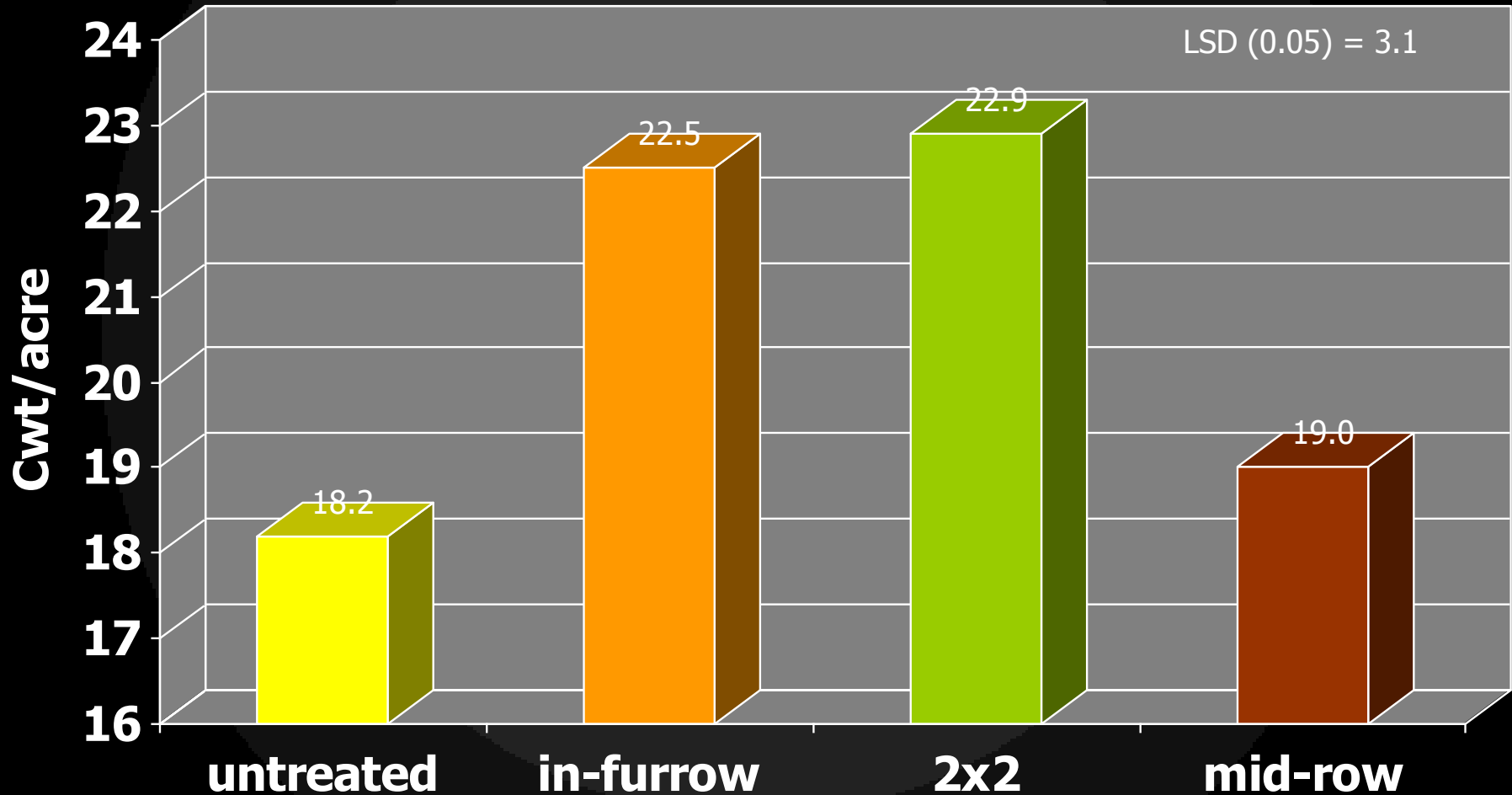
**in-furrow** 10-34-0 placement in strip till during planting

# Strip till pinto bean stand among fertilizer placement options, Carrington, 2009\*.



\*Strip till=Oct 31, 2008; 'Lariat' planted May 22; 6 gal/A 10-34-0; Stand counts taken June 10.

# Strip till pinto bean yield among fertilizer placement options, Carrington, 2009\*.



\*Strip till=Oct 31, 2008; 'Lariat' planted May 22; 6 gal/A 10-34-0.