Winter Canola Establishment and Survival under 3 Tillage Systems.

Perkins, Oklahoma

2006 – 2007

Dr. Tom Peeper, Mark Boyles

Oklahoma State University
INTRODUCTION:
Some growers have seen severe canola stand loss in No-Till wheat stubble.

OBJECTIVE:
This work was done to determine whether the stand loss was from emergence failure or death of established plants.
Methods

• DKW 13-86 RR was planted Oct 9\textsuperscript{th} 2006 with Great Plains No Till drill.
• Conventional Tillage: Sunflower offset disk 6” deep, followed by 3 point offset disk 4” deep, followed by packer and light harrow.
• Minimum Tillage: 3 point offset disk 2.5” deep, followed by packer and light harrow.
• No Till: No soil disturbance since wheat harvest.
Methods

- **Conventional Tillage:** 10% wheat residue ground cover on soil surface at planting.
- **Minimum Tillage:** 25% wheat residue ground cover on soil surface at planting.
- **No Till:** 83% wheat stubble residue on soil surface at planting.
- Plants were counted in 3 one meter sections of row from each plot.
- The exact same row sections were counted on each date.
Canola plants per one meter of row.

![Bar graph showing canola plants per meter for different dates and tillage methods.](chart)

- **Conventional**
- **Minimum T.**
- **No Till**

- **NS** indicates no significant difference.
- **S** indicates a significant difference.
Canola Yields
% of Conventional Tillage

June/8/07

NS

S

% of Conventional Tillage

Conventional
Minimum T.
No Till

0 10 20 30 40 50 60 70 80 90 100
Summary

• Excellent fall stands of canola were obtained in all three tillage systems.
• A 40% reduction in plants occurred in conventional and minimum till during the winter as big plants shaded out smaller plants. This is typical.
• In No-Till stand reduction was 70%.
• A significant reduction in yield was found in No-Till. No difference in yield was found between Conventional or Minimum Tillage.