

Emergence results show inter-row beats row cropping

Accurate seeding required Better seed-to-soil contact and soil closure play role

Posted Jun. 22, 2012 by Barb Glen



Canola plants emerge between rows of wheat stubble in Farming Smarter research plots east of Lethbridge. The applied research group is studying inter-row seeding using two types of openers. This is the second year of the trials. | Barb Glen photo

The second year of an inter-row seeding trial near Lethbridge shows better canola emergence compared to check plots.

Farming Smarter, an applied research group, held a crop walk June 13 to show area farmers early results of this year's trials.

Brent Nicol, a co-ordinator with Farming Smarter, said inter-row canola seeded on a test plot this year had 18 percent better emergence, and last year's plots near Wrentham, Alta., had 12 percent better emergence in canola planted into wheat stubble.

General manager Ken Coles said there are likely several reasons for those positive results, among them better seed-to-soil contact when seeding between stubble rows, and better closure behind the openers.

When seeding into the previous year's row, stubble and root mass can potentially prevent seed placement at the proper depth and adequate closure once the seed is planted.

"The other potential issue is more either nutrient or disease type effect," said Coles.

He speculated that plants from the previous year may have used all the nutrients in that immediate zone. There may also be higher organic matter in the previous year's root zone, affecting the carbon-to-nitrogen ratio.

Crop yellowing in the area of last year's swath might be caused by lack of nutrients due to early volunteers and competition, or residue breakdown that is somehow toxic to new seedlings.

"Our results have shown that seeding on the row is bad and seeding in between the row is good," Coles said.

"The trick is how much effort do you take to go from 90 percent inter-row ... to 100 percent inter-row."

Accurate inter-row seeding on a long-term basis would require an RTK positioning system.

And although better canola emergence has been noticed in the first two years of the inter-row trial, Coles said no yield advantage was found last year.

"So far, at least on the narrow rows, we haven't seen the yield advantage. I think that's just an attribute to canola. I can't really speak to any other crop."

Still, better seed emergence is an economic advantage for farmers in terms of seed cost.