

<https://www.grainews.ca/features/precision-planter-research-is-encouraging/>

# Precision planter research is encouraging

Still many questions about how it would fit for grains, pulses and oilseed crops

By [Lee Hart](#)

*Field Editor*

Published: February 10, 2020



*Farming Smarter has been looking at the potential of precision planters for grain, pulse and oilseed crops for several years. Photo: File*

Southern Alberta researchers say there is increasing evidence that seeding a wide range of western Canadian field crops with a vacuum or precision planter makes sense, but they need co-operative weather to prove it.

That's how Ken Coles and Lewis Baarda with the Lethbridge-based Farming Smarter applied research organization sum up results of several years of field trials comparing crops seeded with a Monosem precision planter versus a conventional air seeding system.

In 2019, early in the growing season, durum wheat, several pulses and canola crops seeded with a precision planter showed excellent or better stand establishment than those seeded with an air seeder. Some of the irrigated sites pulled through the year with minimal hail damage. But the dryland research plots and field scale acres were hard hit with both drought and hail.

"I am really excited about the potential of precision planters for seeding a wide range of crops," says Coles, Farming Smarter general manager. "And a three-year project with canola under irrigation has shown a definite yield advantage from the precision planter."

Even with a low seeding rate of 1.5 to 1.7 pounds per acre, Coles says canola yielded between 15 and 20 per cent more on precision planter plots, compared to air seeder plots. And while different row spacings were tried, the 12-inch spacing produced the best results.

"We have seen excellent stand establishments, but the weather hasn't co-operated so we can get meaningful yield results," says Coles. "Actually we've had three years of drought which makes it difficult to properly evaluate using the planter under dryland conditions."

Farming Smarter has been looking at the potential of precision planters for grain, pulse and oilseed crops for several years. The interest began a decade ago as farmers faced with increasing canola seed costs wondered if they could obtain optimal yields at reduced seeding rates.

Farming Smarter's three-year research project involved seeding canola at different rates with the two seeding systems in both irrigated and dryland research scale plots. With

promising results from the small-plot work, Lewis Baarda, Farming Smarter research manager in 2019 took it to field-scale research to evaluate irrigated and dryland canola seeded with a 45-foot side Monosem precision planter compared to a conventional John Deere air seeding system.

“We really wanted to see how the precision planter system worked under field scale zero till farming conditions,” says Baarda. Fertilizer for crop seeded with the precision planter was applied in a separate operation prior to seeding.

The weather didn’t co-operate for the field-scale trials. The dryland acres sustained about 70 per cent loss from both hail and drought conditions; the irrigated sites sustained about 40 per cent yield loss.

“Canola seeded with the precision planter was looking very good at the lower seeding rates,” says Baarda.

In 2019, Farming Smarter also looked at using a precision planter for durum, peas, chickpeas, faba beans, lentils and soybeans. Those crops were seeded with the two seeding systems at different row spacings and both low and normal seeding rates.

Having more optimum growing-season conditions would have been better, say Coles and Baarda, but they were still encouraged. With virtually all crops seeded at conventional and low seeding rates, those seeded with the precision planter produced a more uniform stand establishment. Results from the 12-inch precision planter row spacing produced better results than 20-inch row spacing.

Coles wonders if the seed row spacing with a precision planter can be narrowed even more for improved seed bed utilization and more efficient use of inputs. He also wonders if seed drill manufacturers could develop hybrid air seeding/precision planter technology that could work through crop residue in a zero-till cropping system. With John Deere now owning the Monosem line, there may very well be some version in the development pipeline.