

Crop Diversification Key To Farming Smarter's Research Mandate

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By Claudette Lacombe, Farming Smarter

Farming Smarter likes to focus on novel crop research to allow ambitious farmers to expand into new markets, diversify crop rotations and improve the bottom line.

One of Farming Smarter's accepted roles is to provide unbiased agronomy research on southern Alberta soils in local climate conditions to learn about potential pitfalls without bankrupting a farm. Its project funding comes from various sources including federal and provincial government, crop commission research budgets and some industry funded research.

"Corn offers an opportunity to southern Alberta," says Ken Coles, Farming Smarter general manager.

Grain corn sells into the food, biofuel and feed industries giving farmers that grow it access to different markets.

The current project looks at moving grain corn into zero till rotations on dryland using a precision planter equipped with side-banding fertilizer coulters, in furrow liquid fertilizer and residue managers.

One aspect Farming Smarter studied is crop sequencing for grain corn. Some of plots received tillage prior to seeding and some were direct seeded into the 2016 stubble.

"We didn't see a significant response to nitrogen applications. We did see a significant response to the preceding crop," Coles says.

The project also showed a yield reduction in the tilled plots over the no till plots.

In the 2017 plots, the corn on lentils and peas look much better than the corn on canola. Coles points out that canola and mustard are non-mycorrhizal crops; which limits the phosphorus uptake in corn. Lentils leave the soil mellow with no residue issues for the planter and the nodulation leaves nitrogen in the soil for the corn.

Two factors seem to impact the germination and uniformity of emergence in the no till plots. One is the mellowness of the soil from the previous crop and the other is likely hair pinning while planting.

Canola and wheat trash experienced visible challenges, but by far the corn on corn didn't work very well under no till. "If we're going to be successful with dryland corn, we're going to have consider what we do with residue," Coles insists. Farming Smarter is a farmer directed charitable organization that supports profitable, environmentally sound agriculture by creating innovative opportunities, adapting to emerging issues and disseminating unbiased information.

Editor's Note:

Ag-Matters is pleased to introduce our new featured columnist Claudette Lacombe, communication manager with Farming Smarter.

Farming Smarter is known as one of the top research and education organizations working in southern Alberta agriculture today. We have featured Farming Smarter events and guest speakers numerous times in our magazine the past few years, and we are excited by this chance for an ongoing, regular collaboration going forward.

-Tim Kalinowski, Editor

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Farming Smarter General Manager Ken Coles sharing information in the grain corn plots in Cypress County July 6, 2017. Credit: J. Puchinger