The Western Producer

Higher seeding rate helps grain corn

by Barb Glen

Increased interest in growing grain corn in southern Alberta has prompted Farming Smarter, an applied research group, to study some of the crop's agronomic aspects.

The three-year project, one of the last to be funded by the former Alberta Crop Industry Development Fund, experimented with row spacing, number of seeds per acre and fertility.

Ken Coles, general manager of Farming Smarter, discussed results Dec. 5 during the organization's annual conference and trade show.

"It's a pretty amazing crop," said Coles. "It continues to grow well into the nice August weather that we have."

Grain corn takes advantage of the extra heat often experienced in southern Alberta in September and October, after other crops have reached maturity.

Research indicated the crop did better on 20-inch row spacing compared to 30-inch spacing, and that a seeding rate of 30,000 kernels per acre resulted in better yields than did other rates ranging from 15,000 to 35,000 seeds per acre.

"Corn really doesn't like to have other plants nearby," said Coles about row spacing.

Corn planted in narrower rows out-yielded that in wider rows, and a higher seeding rate also paid off.

"As much as it hurts and seed is expensive, it seems to be worth the investment," said Coles.

At that spacing and seeding rate, plots yielded about 75 bushels per acre in a very dry year. Plots were located in Lethbridge, Vauxhall, Bow Island and Medicine Hat, all of which had lower than average precipitation during the growing season.

Fertility proved to be among the biggest surprises in the research.

"We literally had no response to nitrogen," said Coles.

Though corn is considered a greedy user of nitrogen, research showed a 70 to 80 bu. corn crop is actually nitrogen efficient.

The study also examined the grain corn yield effect following crops previously grown on the same plot.

The team tested grain corn grown after corn, soybeans, wheat, peas, lentils, canola and mustard. The corn was direct-seeded on one set of trials and planted after tillage in another set.

Residue management was a limiting factor in most direct-seeded plots and there was poor crop emergence, Coles said.

Plots seeded conventionally using a row planter had better results, especially those following peas and lentils.

Corn grown after canola and mustard had the poorest results and was even slightly stunted

"The learning here is try not to plant corn after canola or mustard."

barb.glen@producer.com