

Shorter-season hybrids spark growth in Alberta corn production

By Kieran Brett

More corn in the province will benefit livestock producers significantly. That's why ACIDF and ALMA helped fund hybrid development work by DuPont Pioneer.



With grain corn acreage rising in Alberta in recent years, many are asking: how high can it go? The answer matters a great deal, not just to farmers but to agriculture and the economy more broadly.

More corn acres could help farmers increase their per-acre returns and add a high-value crop to often canola-heavy rotations. Livestock producers will benefit from the local availability of corn and have less need to import U.S. product. Alberta's industrial users and processors, including the ethanol industry, would love a new supply of feedstock in the neighborhood. If you're an equipment dealer with corn planters to sell, or a nitrogen fertilizer supplier, more corn is all good.

From where Steven King's sitting, (pictured above) Alberta and Western Canada seem ripe for growth in corn acres and everything that comes with it. The missing ingredient has been shorter-season hybrids.

"The first factor driving this is profit potential at a grower level that makes corn attractive," says King, who leads the corn breeding program for DuPont Pioneer in Canada. "By introducing shorter-season corn hybrids, we can take away the risk associated with that first frost, and this means a high percentage of growers will get a crop. Finally, crop insurance in Western Canada now provides a better safety net for growers who might want to try corn."

Corn poised for major growth

As King explains, only about 2 million acres in Western Canada get enough heat and moisture to grow 2200 Corn Heat Unit (CHU) hybrids. That's mainly long-established corn territories in Manitoba and southern Alberta. Once maturity is reduced to 2000 CHU, assuming sufficient soil moisture, the potential acreage soars toward 10 million acres.

In recent years, DuPont Pioneer has significantly accelerated its corn hybrid development work for Alberta. As part of its \$35 million investment in research and development for Western Canada over the past five years, DuPont Pioneer opened a research facility in Lethbridge in 2015 with a focus on developing ultra-early maturity corn hybrids for the area. The Lethbridge research center is the latest addition to the DuPont Pioneer research footprint in Western Canada. Other facilities are in Edmonton, Saskatoon, Sask. and Carman, Man.

Since 2014, this work has been supported by \$500,000 in funding provided to DuPont Pioneer by the Alberta Crop Industry Development Fund (ACIDF) through the \$8 million Feeding Initiative funded by the Alberta Livestock and Meat Agency (ALMA). Furthermore, DuPont Pioneer will be



receiving an additional \$500,000 for its work from Alberta Innovates Bio Solutions (AI Bio) by the end of 2018.

According to King, while DuPont Pioneer operates worldwide, Alberta's short-season challenge is in many ways unique.

"One of the biggest issues is, we have to create short-season genetics that don't exist anywhere else in the world," says King. "We can't go somewhere and cherry-pick genetics and bring them here."

Shorter-season hybrids are here

In 2015, DuPont Pioneer introduced three new corn hybrids with maturities as low as 2000 CHU. That's short enough to significantly widen corn acreage in Alberta, taking the crop north of Calgary and creeping up toward Edmonton.



As King's program progresses, expect more bred-in-Alberta hybrids with shorter-season characteristics. The sooner these hybrids come to market, the sooner Alberta can reap the benefits of corn production.

"One of our core philosophies is the importance of local R&D," says King. "Before, we didn't have any breeding in Alberta. ACIDF funding really kick-started our efforts and helped us get up to speed quickly."

Except for parts of southern Alberta, the province hasn't been a major corn producer historically. As maturities become better-aligned with Alberta conditions, more growers will bring corn into their rotations. For livestock producers looking for nutritional horsepower at a reasonable cost, it can't happen soon enough.

As for the acreage of corn that will ultimately be grown in Alberta and Western Canada, only time will tell. As he looks at the numbers, though, Steven King is optimistic the crop will catch on in a big way.

"There is no question in my mind, corn will become a normal crop in Western Canada in the future," he says. "The question is, how long will this take? A lot depends on factors like maturities and weather conditions. Even if you take our most conservative estimate, you're talking about a significant number of acres."

