

# Success grows our future



## The History of the Crop Development Centre

### 1970s

The Crop Development Centre will turn 50 years old in 2021. In a six part series written by freelance writer Kathy Fitzpatrick, we look back at the story of how the centre came to be and some of the successes it has seen over the past 5 decades.

Postcard-pretty fields of blue flax set against yellow canola, now as emblematic of Canadian prairie as wheat. Stubble poking through a snowswept expanse, ready to receive springtime's direct-seeded crop. Row upon row of ripening dainty-leafed lentils, Saskatchewan's newer green and gold.

In the past half-century, the western Canadian farm landscape has been transformed. Much of the credit goes to the Crop Development Centre at the University of Saskatchewan's (USask) College of Agriculture and Bioresources.

In its mission to generate new profit centres for producers, the CDC has added billions of dollars to the economy. Its impact has been "enormous" says barley breeder and former CDC director Bryan Harvey. The introduction of new crops to the region, and new varieties of old standbys, has helped spread financial risk he says, balancing falling wheat prices with better-paying pulses for instance.

Scarce funds on the farm and in crop research was the common element that led to the CDC's creation back in 1971. In the late 1960s a world glut had driven down the price of wheat, by far Saskatchewan's dominant crop back then. At the same time, the USask Crop Science Department was searching for more money.

As one of the CDC's leading wheat breeders Brian Fowler wrote, the department's inability to raise enough money to conduct research, hire enough staff and attract graduate students were the "basic factors motivating initial efforts" to establish the CDC.

Faced with a budget cut in 1970, the College of Agriculture (as it was then called) set as its top three priorities undergraduate teaching, graduate teaching, and research – in that order.

But, "it was clear at this time that earlier fears had been justified and it would be next to impossible to finance research through the structure of the university,"



*Dr. Al Slinkard rides the seeder as summer student Fiona Cribb drives the tractor in a photo that is dated May/79.*

Fowler continued.

Harvey, who had returned from Guelph in 1966, recalls the crop science department was "way understaffed for the responsibility that it had", considering Saskatchewan has almost half the arable cropland in Canada. There were only four people doing field work including himself, Harvey says, adding it was "unreasonable to expect us to cover the full spectrum of needs."

Meanwhile, the prairie farm crisis provided the rationale for a bigger push in agricultural research, particularly in Saskatchewan. At the time Saskatchewan was without "a major plant breeding centre" according to the department's 1971 funding application to the National Research Council. Graham Simpson, then Acting Head of Crop Science, was the one to spot an NRC grant program as a promising funding source, Harvey recounts.

In its application, the department made the case that with agricultural markets changing rapidly, prairie farmers had to diversify and lessen their dependence on wheat, while at the same time improving traditional

crops (wheat and barley in particular) to meet world demands. It also argued that plant breeding is most effective when done where the resulting varieties are to be used, and Saskatoon was put forward as the logical location.

As Harvey recalls, at the time most of Agriculture Canada's wheat research was being done in Swift Current (in the drier southern prairie) and Winnipeg (where the focus was almost entirely on rust resistance). The northern prairie, with its shorter growing season and greater moisture, was not being serviced as well as it should be, he notes.

More crop research was a tough sell in the midst of a declining wheat market, but Harvey says the real risk in launching the CDC was the time required to develop and launch a new variety. Back then, it typically took 15 years or more. Success would take patience along with money.

The NRC approved \$455,100 over three years to support research in three areas: feed barley; field peas and other new crops; and spring and winter wheat. Meanwhile, as Harvey recalls, Doug Knott (Department Head from 1965 to 1975) persuaded the provincial government to contribute as well.

The Province agreed to cover the capital cost of the new Crop Science field laboratory, initially estimated at



photo source University Archives dated August 1976. Executive members of Flax Growers Western Canada touring the Crop Development Centre's flax studies.

\$260,000 and later reported to be \$318,000. As well, the Province committed \$200,000 annually for the first three years, and agreed to cover the CDC's operating budget after the NRC term grant expired.

In 1972 the U of S announced that an additional \$100,000 had been set aside for growth room facilities to be built that summer. Five years later, Fredrick Wesley Kernen's large gift of farmland to USask led to the creation of the Kernen Crop Research Farm, another valuable resource for CDC crop breeders.

Simpson became the first director of the CDC. It was staffed with an initial six scientists: John Berdahl (feed and food barley breeding), Al Slinkard (pea breeding), Brian Fowler (winter wheat breeding and agronomy), Gordon Rowland (new crop evaluation), Ron Bhatti (quality analysis), and Larry Gusta (cold hardiness physiology).

But it was Slinkard's work on lentils that generated two of the CDC's earliest game-changing varieties before its first decade had passed, the Laird lentil (released in 1978) and the Eston lentil (1980). Lentils would vault from a minor crop in Saskatchewan to a major commodity, making Canada the world's top producer and exporter, with nearly all of the country's production coming from Saskatchewan.

The CDC's next decade would be marked by many more launches and discoveries, impacting a broad range of domains from beer brewing to crop and soil management.



BRIAN FOWLER

Dr. Brian Fowler in an undated photo.