

# WHICH INTERCROPPING COMBINATIONS WORK BEST?

Some Alberta farmers have practised intercropping for years, with a pulse crop very often included in the crop package. Their observations have tended to be anecdotal – this worked, that didn't – rather than science-based research.

As more farmers in recent years have thought about the economics, soil health implications and environmental benefits of intercropping, the need for hard data has become clear.

In 2020, Dr. Eric Bremer of Western Ag Innovations completed a three-year APG-funded study into the feasibility and economics of intercropping.

COVID and flea beetles made for a challenging 2020 field trial season. Flea beetles tended to favour the pulse crops (particularly pea, also lentil) compared to their field-mates of yellow mustard or canola. That said, the study left Bremer with a better view of when intercropping might be a fit.

“Consistent with previous years, intercropping increased the dependence of pulse crops on biological N<sub>2</sub> fixation,” Bremer said. “Oilseed crops took up more soil and fertilizer nitrogen than lentil, but not more than pea. Overall, intercropping of pulse and oilseed crops increased overall productivity when no nitrogen fertilizer was applied, soil nitrogen supply was low and seeding rates and nitrogen management could be used to modify final yields of both crops.”



## PEA BREEDING PROGRAM KEEPS ON PRODUCING

With 30 new pea varieties registered since 2001, Dr. D.J. Bing's pea breeding program has been marked by consistent innovation, year in and year out.

Bing, who's based at Agriculture and Agri-Food Canada's Lacombe Research and Development Centre, is now three years into a five-year funding commitment from the Canadian Agricultural Partnership AgriScience Program.

The program's primary breeding objectives are high and stable yield, good standability, resistance to major field pea diseases, high seed quality and appropriate maturity for different production regions.

Despite facing a challenging year in 2020 because of COVID-19, it was also one of the program's busiest and most productive years in some time. Two new pea varieties were registered:

*AAC Julius*, a new yellow pea variety licenced to FP Genetics in Canada and Great Northern Ag in the U.S.

*AAC Beyond*, a new field pea variety licenced to Canterra Seeds in Canada.

“With the reopening of society in the year 2021, we plan to have a nearly full-scale breeding program,” Bing said. “We are optimistic that one or more new field pea varieties can be developed in the remaining years of the project for Canadian pulse producers.”