

# APG RESEARCH MOVES FROM SMALL PLOTS TO FIELD SCALE

The 2020 growing season is the fourth year of APG's five-year Plot to Field initiative, which works with growers to conduct pulse research on their farms.

Have you ever seen something promising at a crop research strip trial, but wondered (or seriously doubted) if it would work on your farm? That's the heart of a challenge that APG's research team has been working to address.

"The benefit of small plots and strip trials is that they allow researchers to examine many different variables within a small footprint of land," said APG Research Manager Dr. Jenn Walker. "The trouble is, small plot results don't always translate into what a grower sees out in the field."

One example is when a new variety performs exceptionally well on a small scale in company or co-op trials. If the observed yield translated to field scale, you'd be growing 100 bushels per acre of peas. That's not happening. Clearly, there's some kind of correction factor at work – one that's frustrating for scientists and growers alike.

In 2015-16, APG wanted to boost its research capacity, partly in response to a shifting landscape of research funding and expertise in Alberta and Western Canada. Walker proposed what's come to be known as Plot to Field, which works with interested pulse growers to conduct research on their farms at full commercial scale. The five-year funding envelope for Plot to Field runs through 2021.

## Growers make it possible

What makes Plot to Field challenging is that long-standing crop research protocols have small-plot assumptions



*Agronomists play a key role in the success of APG's field scale research program.*

built in. To super-size the work and keep findings valid has been a formidable task for Walker and APG Research Officer Dr. Jagroop Gill Kahlon.

"We went on a hunt," Walker said, "to see if there are protocols out there for field-scale research that included replication of plots, randomization of treatments and other pillars of sound science."

In 2016, APG and a team of 10 cooperating Alberta pulse growers established the rules of the road for this field-scale research. The following year, those protocols were tested with a straightforward study of seeding rates. For 2018 and 2019, the focus widened with a look at a more complex issue: crop safety guidelines for seed-placed phosphorous.

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"This is a question that growers ask us about all the time," Walker said. "There was some small-plot work done many years ago, but with changes in technology and equipment, we wanted to look at it in a fresh way."

She credits Plot to Field's dedicated group of growers for making all this possible. The time they spend on extra equipment calibration and cleanout, on top of their other farm responsibilities, is appreciated by APG and will benefit fellow growers in a big way.

"From a scientist perspective, the program is allowing us to add to the body of available knowledge and publish our findings, but there are also some very practical outcomes that will have an immediate impact at the farm level," Walker said. "That's what makes Plot to Field so important and exciting."