

Exciting Future Ahead for Pulse Breeding

Big changes are underway for Saskatchewan's pulse breeding landscape. Saskatchewan Pulse Growers' (SPG) previous breeding program agreement with the Crop Development Centre (CDC) at the University of Saskatchewan came to an end on September 30, 2020.

In the last 20 years, SPG invested over \$60 million on pulse breeding, genetics, and genomics. Much of that funding went to the CDC breeding program in exchange for commercialization rights to all program-developed pulse varieties. SPG released those varieties royalty-free to growers in Saskatchewan.

Since 1997, 129 varieties were released royalty-free by SPG. Those varieties occupy 90% of Saskatchewan's pulse acres. In that time, pulse acreage across Saskatchewan has tripled and has attracted the attention of additional plant breeders who are eager to develop new pulse varieties for Saskatchewan growers.

What has Changed Since 1997?

Breeding technologies and available plant breeding tools have become far more advanced in the last 20 years. Genome sequences and genetic markers are now available to researchers and will give all future projects a head start.

SPG can now expand its partnership opportunities, bringing fresh ideas and a competitive atmosphere into pulse breeding. While the organizations will still work together, they can now also work with new players in the breeding world.

"Through new partnerships, we want to encourage additional investment into pulse breeding and variety development that will bring desirable traits and well-adapted varieties to Saskatchewan growers more quickly," says Dave Greenshields, Director of Research and Development with Saskatchewan Pulse Growers.

Strategic Breeding Objectives

With new partnership opportunities available, SPG is looking forward to being more strategic in its breeding objectives. Its focus over the next 10 years will be in developing:

- **Resistance to root rot in peas and lentils**
- **New herbicide tolerance traits in lentils**
- **Broader adaptability of chickpeas, dry beans, and faba beans** to increase acreage and crop rotation options across the province

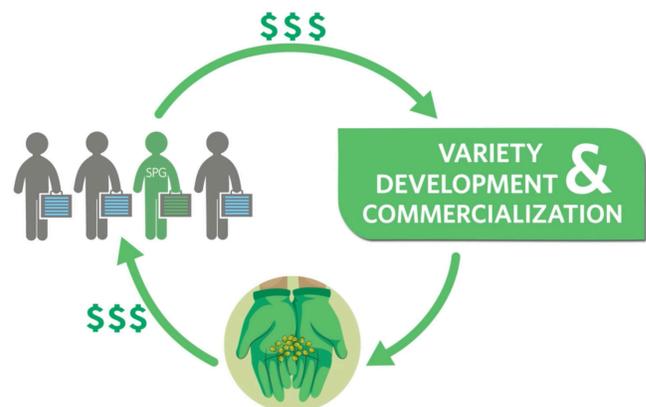
What Will Not Change?

Royalty-free varieties released over the last 20 years that are currently available royalty-free will remain so. With the high-quality royalty-free varieties that are available to growers today, any new varieties with royalties attached will need to show substantial improvements. SPG will take a new approach to breeding, forming strategic partnerships, targeting investments into high-value pulse varieties that will provide the best possible return on value to Saskatchewan pulse growers.

"With SPG starting new partnerships with public and private plant breeders, growers can be sure that those breeders will be focused first on the major issues facing pulse production in the province," explains Greenshields.

SPG will continue to invest in pulse breeding and variety development in strategic ways that will address the biggest issues for growers. By working with multiple partners, they hope to make high-value pulse varieties available, with the traits growers are looking for, that will provide a solid return on investment to growers.

As the Saskatchewan pulse industry continues to evolve, the priorities of increased acreage, development of new varieties, and expanding market share continue. It is an exciting time to be a Saskatchewan pulse grower.



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