

# Clean Resources

Smart Agriculture and Food

## Field-Tested: Facilitated on-farm research (OFR) for effective evaluation and adaptation of novel products, crops and agronomic practices.

Alberta farmers want to see new products, technologies, and ideas proven and adapted in a real-world setting on a farm scale. Emerging agricultural technologies, practices and products require early adopters to take a certain amount of risk, which slows their adoption. Farmers take many risks each year and need new products to undergo testing before they can comfortably use them. This project proposes to develop a revenue-based business program that will offer a complete on-farm research (OFR) service package where experienced co-operating farmers will work with researchers to implement reliable field-scale research. The program gives companies, government scientists and grower groups the opportunity to have their products and technologies tested in a field environment.



### FUNDING DETAILS



**RECIPIENT:**  
**Farming Smarter**  
**PI: Ken Coles**



**PARTNERS:**  
21 Farmers  
20/20 Seed Labs  
Acadian Seaplants  
Alberta AG Centre  
ATP Nutrition  
Corteva Agriscience  
FMC Canada  
Kubota Canada  
Rowland Farms  
Seed Alfalfa Commission  
Spornado Inc.  
Sulvaris  
Vanee Farm Centre  
Veritas Farm Management



**TOTAL BUDGET:**  
**\$192,000**



**AI FUNDING:**  
**\$80,000**



**PROJECT DATES:**  
**May 2018 –**  
**June 2021**



**PROJECT TRL:**  
**Start: 7**  
**End: 10**

## APPLICATION

Not every technology transitions easily from the laboratory or research plot setting into a real-world environment. Field-scale trials can have serious flaws and fail to provide reliable and statistically valid results. Government scientists, grower groups and agricultural companies are clients interested in seeing their products and technologies validated in a field setting. This project is building a network of highly qualified farmer-technicians who can work with Farming Smarter, an agriculture research association, to complete on-farm trials. Farming Smarter's research team provides experience and expertise to ensure that high-quality, reliable and statistically valid research is completed.



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### PROJECT GOALS

- Develop a revenue-based and self-sustaining business program that offers a complete on-farm research (OFR) service package to validate products and technologies for various clients (e.g., scientists, grower groups, agricultural companies, farmers and innovators).
- Develop research trial management skills among growers who will become experienced reliable partners in conducting scientific on-farm trials.
- Improve access to high quality, reliable and statistically valid OFR data.
- Increase the adoption of agricultural best management practices in Alberta.
- Build partnerships with agricultural companies, research scientists, grower groups, etc., to accelerate development of new ideas and technologies.

### BENEFITS TO ALBERTA

- The on-farm research service package offers an incentive to test and validate new smart agricultural technologies, practices and products, and decrease their adoption risk. It provides a field platform for companies and innovators for extension and adoption programs of new products and emerging technologies.
- This project will benefit producers by exposing them to new technologies and demonstrating how these technologies behave in a field environment. This will guide producer decision making on the farm and better direct crop production investments.
- In-field evaluation, adaptation and development of new technologies helps to break down barriers to adoption, encouraging greater uptake among crop growers.



14 Publications



20 Students Trained



34 On-Farm Trials



1 New Product/Service

### CURRENT STATUS

#### June 2021

The trials conducted to date have provided critical information to farmers interested in adopting emerging smart agriculture technologies. This has included validating pesticide thresholds, crop disease monitoring, planting technology, soil moisture monitoring and crop input evaluations. The program continues to grow in terms of trial volume and number of collaborating partners. Farmer Smarter has successfully developed a growing pool of reliable farmer-technicians to carry out trials. There is an appetite for trustworthy OFR, and this program is growing to satisfy it by adapting to accommodate the varying needs of a wide range of clients.