

RESEARCH CAPACITY

Farming Smarter manages around 8,000 plots per season, split between Lethbridge, AB (dryland and irrigated), Stirling, AB (dryland and irrigated), Barons, AB (dryland and irrigated), Bow Island (irrigated) and Coaldale, AB (dryland and irrigated). We practice a 4-year rotation, which directs yearly location decisions based on trial requirements. This allows for varying growing conditions and soil types to choose from.

We collaborate with a multitude of Colleges, Universities, Provincial and Federal Governments and private research Associations across western Canada on many research projects. Past collaborations have included University of Saskatchewan, Manitoba, and Lethbridge. Along with InnoTech Alberta, SARDA Ag Research, and Lakeland and Lethbridge College to name a few.

We are experienced industry trainers and have conducted product demonstrations for Syngenta, BASF, Bayer, Valent, FMC, NuFarm, SeCan, SeedNet and many others.

SITE CHARACTERISTICS:

Lethbridge AB

 $\sim\!\!250\text{-}300$ acres total Clay loam (CL,SCL, L), 4% OM, 7.8 avg pH, 30-70 lbs/ac background N Irrigation and Dryland

Stirling

~20 acres/year Loam (L, CL), 4% OM, 7.7 avg pH, 30-70 lbs/ac background N

Barons

~30 acres/year Loam soils (SL, SiL, L,CL), 3% OM, 7.7 avg pH, 30-70 lbs/ac background N Irrigation and Dryland

Coaldale

100 acres irrigated, 15 acres dryland

Bow Island

115 acres irrigated

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RESEARCH CAPABILITIES

Our core staff bring the expertise and experience to the planning, execution, and reporting of all our research projects. We typically hire 12-15 university/college students each summer to ensure the field work takes place on time. These students often return for consecutive years. Our equipment lineup allows us to do a wide variety of research from simple variety trials to liquid fertilizer on variable row spacing with different openers.

Seeding

We have 2 custom-built air drills with dual cones and 4 boxes for an endless combination of seed and fertilizer configurations. One is equipped with Pillar Laser openers and calibrated Zero-max gear boxes and the other with Bourgault Openers and hydraulic variable rate metering. The Pillar Laser drill has a removable toolbar that can be fitted with our typical Pillar Laser disc-hoe openers or Stealth Pair row hoe openers. We setup all our plots using RTK guidance. We also have a 4 row Monosem Vacuum Precision Planter for narrow and wide row uses and a newly purchased Seed Pro 360 two-row planter for row crop trials. Additionally, we own a 2-Row Power Hiller (BASELIER) and 2-Row Cup Planter (BOMET) with the capability to plant separate varieties of potatoes and different fertilizer rates simultaneously. The BOMET potato planter is equipped with liquid and dry fertilizer tanks that allow us to apply fertilizer with a seed-placed liquid kit or with in-row dry fertilizer 2x2 banding. Furthermore, it comes equipped with an adjustable row spacing of 30-36" with adjustable features for seed spacing and planting depth.



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PESTICIDE APPLICATION

Our newly equipped removable, 6m, single boom, CO2 quad sprayers ensure even maintenance spraying of one full rep at a time. We have multiple 2m calibrated hand booms fitted with low drift nozzles for pesticide trials. We have a 2020 Amazone sprayer with a 16 m boom (to spray 2 replications at once) and variable rate capabilities. We have multiple spacing configurations and drop tubes for in crop fertilizer applications too.



FIELD WORK

We have different types of equipment to help us with various aspects of fieldwork. These include: VERIS, EM-38, Greenseeker (NDVI), hail simulator, grain drying, seed cleaning, soil sampling, soil moisture probes, soil drying ovens, soil texture equipment, weather stations, and topkilling capabilities. We also have closely established relationships for drones and imagery in GIS applications.



HARVEST

We have a 2013 Wintersteiger Classic combine (with weight scale and corn header) and a 2021 Wintersteiger Quantum Pro combine, a custom-built biomass/grain dryer and NIR machine for protein and oil measurements. For potatoes, we have an IMAC 1-Row Digger that handles a wide range of potato sizes with minimal drops and damages as well as bagging capabilities for post-harvest handling. We also have a multipiece grading line that includes a drum washer, specific gravity scale, and smart grader that allows for an automated size profiles analysis. This equipment allows us to efficiently size each potato and customize the weights and counts for a variety of size categories.



TEAM EXPERTISE

Our research team has a wide range of expertise in herbicide trials, weed management, PGRs, liquid fertilizer and novel crops. Our extension team provides education through events, demonstration tours and media in all its forms.

Name	Position	Expertise
Ken Coles	Executive Director	B.Sc., M.Sc., P.Ag, CCA
Jamie Puchinger	Assistant Manager	B.Sc., CCA
Thierry Fonville	Research Scientist	B.Sc., M.Sc., PhD
Michael Gretzinger	Agronomy Research Manager	B.Sc., CCA
Lewis Baarda	Field Tested Manager	B.Sc., M.Sc., CCA
Ashley Wagenaar	Conservation Agronomist	BSc. CCA
Trevor Deering	Custom Research Manager	B.Sc., M.Sc., CCA
Carlo Van Herk	Field Operations Manager	B.Sc., CCA
Claudette Lacombe	Communication Manager	Journalism Diploma
Toby Mandel	Shop Manager	Site Manager, >20 yrs experience
Sean Kjos	Communications Coordinator	Digital Media Diploma

