



**Plot2
Farm**

AVAILABLE PROTOCOLS

Wheat protocols

Protocol #	Title	Objective
W001	Spring wheat variety comparison	Compare the yield and quality of different spring wheat varieties or classes.
W002	Chlormequat chloride (Manipulator) application on spring wheat	Compare the standability, yield and quality of the plant growth regulator (PGR) chlormequat chloride (Manipulator) on spring wheat.
W003	Spring wheat in-crop nitrogen application	Compare the effects of in-crop nitrogen on spring wheat yield and quality.
W004	Enhanced efficiency fertilizer use in spring wheat	Compare the yield, protein and quality of utilizing enhanced efficiency fertilizers (EEFs) at seeding on spring wheat.
W005	Spring wheat seeding rate comparisons	Compare the yield and quality of spring wheat seeded at different seeding rates based on Thousand Kernel Weight (TKW).
W006	Spring wheat row spacing comparison	Compare effects of row spacing on the yield and quality of spring wheat.
W007	Spring wheat fungicide timing	Compare the yield and quality impacts of different fungicide application timings on spring wheat.
W008	Increasing nitrogen rates in spring wheat	Compare the yield and quality impacts of increasing nitrogen fertilizer rates on spring wheat.

Barley protocols:

Number	Title	Objective
B001	Increasing seeding rates (malt or feed)	Compare the yield and quality of barley seeded at different seeding rates based on Thousand Kernel Weight (TKW) (malt or feed)
B002	Trinexapac-ethyl (Moddus) plant growth regulator on barley (malt or feed)	Compare the standability, yield and quality of the Plant Growth Regulator (PGR) trinexapac-ethyl (Moddus) application on barley compared to an untreated check (malt or feed).
B003	Increasing nitrogen rates in barley (malt or feed)	Compare the yield and quality impacts of increasing nitrogen fertilizer rates on barley (malt or feed).
B004	Barley variety comparison (malt or feed)	Compare the yield and quality of different barley varieties (malt or feed).
B005	Barley fungicide timing (malt or feed)	Compare the yield and quality impacts of different fungicide application timings on barley (malt or feed).

C001 - Custom Protocol

Each year, a small number of spaces are left open in the Plot2Farm program to implement custom protocols. These spaces are intended for applicants who want to test a management practice outside of the protocol options listed above. Careful consideration needs to be taken when developing a protocol such as logistics, timing, costs, equipment capacity, field size, and much more. It is highly recommended that the applicant develops protocol treatments with an experienced agronomist. Details of the protocol can be noted in "App Section B" of the application form. Applications for custom protocols will be reviewed by the Commissions' agronomy team and selected based on agronomic and logistical viability. When developing a custom protocol please consider:

1. No more than 3 treatments - Simplicity increases chances of success
2. Equipment capacity
3. Availability of products required to implement custom protocol
4. Time required to execute treatments, collect data, and harvest protocol
5. Protocols must contain at least 4 replications

If applying for a custom protocol, please indicate "C001" in "App Section B" of the application form, fill out treatment list in "App Section B" of the application form and provide as much additional detail in the "Additional Comments" box of "App Section B". Applications with thorough detail on treatments and how treatment applications will be carried out will be prioritized for consideration. If the application requires more space to detail the protocol, please feel free to provide additional information in supplemental documents (such as Microsoft Word).

Additional steps for a successful trial

Below is a list of steps that are necessary for implementing and completing an accurate on-farm protocol.

- ❑ The applicant has read the Research Guide document.
- ❑ The applicant has attended the pre-season webinar hosted by Alberta Wheat and Alberta Barley Commissions.
- ❑ The applicant has a weigh wagon or grain cart with scales for weighing yield. Alternatively, the applicant can source a weigh wagon or cart with scales from a third party.
- ❑ The applicant has GPS technology on seeder, sprayer, swather, and combine.
- ❑ The applicant has a field large enough to implement multiple replications of multiple treatments.
 - > Example of a seeding-based protocol: if you have a 50ft seeder and want to test 3 seeding rate treatments:
 - The protocol would require 3 treatments x 4 replications = 12 plots
 - A plot can be 1, 2, 3 or more seeder passes
 - The applicant will need a field that can comfortably accommodate at least 12 side-by-side seeder passes (50' x 12 passes = 600 ft) plus at least 2 seeder passes (on each side) between the protocol plots and field borders/ tree lines etc. (600 ft + 200 feet = 800 feet total)
- ❑ > Example of a sprayer-based protocol: If you have a 120-foot sprayer and want to test 3 treatments:
 - 3 treatments x 4 replications = 12 plots
 - A plot can be 0.5, 1, 2 or more sprayer passes depending on your sprayer width (i.e. 100 ft) and combine header size (i.e. 30 ft)
 - The applicant will need a field that can comfortably accommodate at least 600 feet (0.5 x 100 ft = 50 ft/plot x 12 plots = 600 feet) plus at least 2 seeder passes (on each side) between the protocol plots and field borders/ treelines etc. (600 ft + 200 ft = 800 ft)
- ❑ The applicant must ensure their drill has the capacity required for the protocol. For example, if a particular protocol involves testing urea nitrogen (N) fertilizer rates of 75 and 150 lbs of actual N, the seed drill must have the ability to apply 326 lbs of actual N/acre as urea. If the drill can only apply 300 lbs urea/acre, this protocol is not possible.
- ❑ The applicant must be willing to do seed and fertilizer calibrations for each treatment before seeding each treatment. For an experiment with 4 treatments, this means 4 calibrations must be done in the field on the day of seeding the protocol.
- ❑ The applicant must have the capability to load different fertilizer treatments if multiple tote bags are involved.
- ❑ The applicant must have well maintained equipment including seeder, sprayer, combine, headers, and grain carts.
- ❑ The applicant must have sufficient quantities (plus at least 15% extra) of quality seed for the protocol.
- ❑ If the applicant uses variable rate, they must be willing to shut off the variable rate in the area that the protocol will be conducted.
- ❑ Applicant must apply basic agronomics such as seeding rates and fertilizer rates that are based on government or extension recommendations:
 - > Targeting low plant stands and unbalanced, limited fertility can hide treatment differences making the protocol meaningless.



Note: The applicant must be in good standing with either the Alberta Wheat Commission or Alberta Barley meaning that they have paid check-off to one or both commissions within the last 2 years.

App Section A

Farm Name:		
First Name:	Last Name:	Phone #:
Farm Email:		
Are you a member in good standing with Alberta Barley or Alberta Wheat Commission? <input type="checkbox"/> YES <input type="checkbox"/> NO		
Field Location for trial (LLD or GPS):		
Closest Town:		
Supporting Agronomist Name and Business:		
Agronomist Email:	Agronomist Phone #:	

App Section B - Trial Details

Protocol Number (Please select from the list that can be found before this application form):
If selecting "custom protocol" or a protocol that requires selecting specific treatments, provide additional comments in the box below.
Treatment 1:
Treatment 2:
Treatment 3:
Treatment 4:
Additional comments:
The trial will require rainfall collection over the growing season. If you require a rain guage to capture rainfall within a reasonable radius of the trial (within a few kilometres), please indicate by checking yes or no: <input type="checkbox"/> YES <input type="checkbox"/> NO

Note that Plot2Farm protocols must be implemented without variable rate. If your farm utilizes variable rate, it must be turned off for the trial area.

App Section C - Field Soil Test Results

	Sampling Depth			Identify ppm or lbs
	0" - 6"	6" - 12"	12"-24"	
pH				
OM%				
Nitrates (NO-3)				
Phosphorus				
Sulfur				

If possible, please attach soil test results and leave the above information empty.

App Section D - Crop Rotation

Year	Crop	Yield (bu)	Notes (hail, manure application, major agronomic issues, etc)
Year (-1)			
Year (-1) Herbicides Used:			
Year (-2)			
Year (-2) Herbicides Used:			
Year (-3)			
Year (-3) Herbicides Used:			
Year (-4)			
Year (-4) Herbicides Used:			

App Section E - Map of Field

Please use the below area to sketch the field, indicate position of the trial within the field and include any agronomic considerations (e.g. slope direction, sloughs, historical manure, pipelines, etc.). If satellite map is available, please attach.



Does this field have irrigation? YES NO

Does this field have any notable agronomic concerns? YES NO

If yes, what are they?

App Section F - Equipment

Seeder		
Brand:	Style (e.g. hoe, disk etc.):	
Seeder Width (ft):	Opener Type:	
Row Spacing (cm):	Seed and Fertilier Placement:	
Sprayer		
Brand:	Boom Width (ft):	Track Width (ft):
Swather (If using)		
Brand:	Model:	
Header Model:		Header Width (ft):
Combine		
Brand:	Model:	
Header Model:		Header Width (ft):

