



**Plot2
Farm**

W001 - Spring wheat variety comparison

Objective: Compare the yield and quality of different spring wheat varieties or classes.

Research support

Each variety and class of wheat carries distinct genetic traits that cause it to perform better or worse under different environmental and management conditions. Comparing varieties prior to full adoption can assist you in gaining insight into how new varieties may perform on your farm under specific management. The following is a field-scale research design that compares wheat varieties within or between market classes (i.e.: CWRS vs. CPSR wheat; AAC Brandon vs. AAC Hodge).

This on-farm research protocol will help compare varieties or classes of wheat on your farm under typical management.

Field Layout and Selection

Field layout will depend on the number of treatments selected. Review the Research Guide for the best practices on treatment design, choosing your trial and how it should be laid out.

Treatments

To follow good experimental protocol, treatments should be both replicated and randomized. For example, if you are testing 2 treatments, the order of those treatments change in each replication. For example, in replication 1, treatment 1 precedes treatment 2, but in the second replication, treatment 2 precedes treatment 1. This reduces the effects of field variability on results. Take detailed notes to remember the order of treatment applications.

This protocol includes the option for 3 treatments. However, applicants can select only 2 treatments if desired. Note that this trial can include varieties from multiple classes. If multiple wheat classes are being compared be sure to review the Additional Notes below for fertility considerations.

Treatment 1: Variety 1: Seed desired Variety 1 at a seeding rate that achieves a set target plant population (i.e., 25-35 plants m²) based on thousand kernel weight (TKW) and adjusted for seed lot germination.

Treatment 2: Variety 2: Seed desired Variety 2 at a seeding rate that achieves the same target plant population (i.e., 25-35 plants m²) based on TKW and adjusted for seed lot germination.

Treatment 3: Variety 3: Seed desired Variety 3 at a seeding rate that achieves the same target plant population (i.e., 25-35 plants m²) based on TKW and adjusted for seed lot germination.

Replication 1	Treatment 1
	Treatment 2
	Treatment 3
Replication 2	Treatment 2
	Treatment 3
	Treatment 1
Replication 3	Treatment 3
	Treatment 1
	Treatment 2
Replication 4	Treatment 2
	Treatment 3
	Treatment 1

Additional Notes:

- Note that all varieties will be seeded to meet the same target plant population but weight of seed per acre will vary between varieties based on differences in germination and TKW. In addition, all varieties within the same class may receive the same fertilizer, seed treatments, herbicide, fungicide, pre-seed and harvest treatment.
- If varieties from multiple classes are being compared, different nitrogen rates for different classes will be required for the trial. In these situations, the fertility rates must be adjusted to ensure proper fertility for that class. This will ensure one class is not at an advantage or disadvantage in regards to fertility management. Please consider this when planning fertility for the trial and ensure the appropriate fertility adjustments are made at seeding time.
- Fertility rates for different classes should be designed to represent normal fertility management of those classes on your farm.
- Always read and follow label directions.