

Western Canada Faba Bean Co-op Trial Guidelines 2015

Trial Protocol for 2015

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The trials will be organized and conducted as follows:

1. The Western Canada Faba Bean Co-op Trial (WCFBCT) system for support of registration recommendations is based on a minimum of two years of testing to provide a minimum of 6 station years of performance data. The trial will be conducted at a minimum of 5 locations for 2 years or one year of WCFBCT testing and one other year of private testing (minimum of 3 locations). Target locations are 2 in Manitoba, 3 in Saskatchewan, and 3 in Alberta.

Check varieties proposed for 2015 are as follows.

Trial A: For zero-tannin (white-flowered) types. Snowbird for normal sized seeds; CDC Snowdrop for small-seeded types, less than 400 mg per seed.

Trial B: For coloured flower types. CDC Fatima (regular size, around 500 mg per seed); SSNS-1 (small seeded, less than 400 mg per seed); FB 9-4 (large seeded, coloured flower).

2. Experimental Design: Randomized Complete Block Design (3) replicates

Sites: Minimum of 6 : 2 in MB, 2 in SK; 2 in AB

Number of entries: Plot plan including randomization to be sent before seeding

Plots size: Send seeder/plot dimensions to Co-op Trial Coordinator by March 31 to accommodate required seed numbers per plot per site.

Entries: Five kg of untreated seed of each entry to be sent to Co-op Trial Coordinator by March 31.

Background site information: a) General soil information; b) Precipitation

3. Data collection priorities:

1. Emergence – uniform plant emergence in each replicate. Make note of entries with low plant densities.
2. Flower date – time of 10% of plants with first open flower.
3. Plant height prior to harvest.
4. Maturity* at time of desiccation (early, medium and late) or swathing.
5. Seed yield in grams/plot (please send harvested plot size) and in kg/ha
6. Seed weight-1000 seeds in grams. 100 seeds, weight in grams X 10. (1) measurement per replicate.
7. Crude protein content may be analysed on second year entries if sufficient financial resources are available.
8. Lodging if environmental conditions are conducive.
9. Appropriate disease data with scoring system supplied in report for identifiable diseases that may occur, for example, chocolate spot (*Botrytis fabae*).

*Maturity of faba bean may be variable because of its indeterminate growth habit.

Staging on the basis of % change from green to black pod starting at the base of the plant may be useful as a guide to relative maturity. Observing the threshed grain sample for % immature green seeds may also be useful in determining relative maturity.

4. Data Analysis:

Normally only yield data with acceptable C.V. (less than 15%) will be considered valid..

5. Field Protocols

Seeding rate: A target plant population of 4 plants/ft² or about 45 plants/m²

Seeding depth: 5 cm – 8 cm deep

Inoculation: Faba bean granular inoculant (or field pea inoculant if not available) @ 5-6 kg/ha supplied with seed entries.

Fertilizer application: Apply 12-51-0 fertilizer up to 35 kg/ha with seed. If higher rates are required, or in extreme dry soil conditions, apply as a side band if possible.

Seed treatments: None applied for coloured flower trials. Optional for white-flowered trials, but ALL entries must be treated.