

## Faba Bean Seeding Reminders

Sherrilyn Phelps, M.Sc., P.Ag., CCA

### Planting Distance from Other Varieties

Tannin and low tannin faba bean varieties should not be grown side by side as cross pollination can occur. Canadian Seed Growers Association recommends a minimum of 100 metres between different varieties of faba beans, however Dr. Bert Vandenberg with University of Saskatchewan Crop Development Centre suggests even further distances should be used, up to 500 metres to really minimize the risk of cross pollination.

Dr. Vandenberg also states that once flowering starts it is too late to start roguing – the plants are too big by then and you may not see all the flowers in the canopy. Roguing can and should be started prior to flowering at the three-four leaf stage, when the plants are small and much easier to observe. Varieties that have coloured flowers (normal tannin) have a black dot on the stipules (the small leaf that wraps around the stems). This dot at the base of the leaf is evident even at the start of the season and they are easily identified at the three-four leaf stage. White-flowered types like CDC Snowdrop and Snowbird never develop the stipule spot.



**Figure 1.** Coloured flower (tannin) type showing the black dot on the stipule (right). White flower (low tannin) type with no black dot on stipule (left).

Source: Hamid Khazaei, University of Saskatchewan

### Seeding Rates

#### Target Plant Population

45 plants/m<sup>2</sup>

#### Calculations and Conversions

- (Target plant population/m<sup>2</sup>) x TKW / emergence rate = kg/ha
- Kg/ha x 0.89 = lb/ac
- (Target Plant Population/m<sup>2</sup>) x 0.09 = Target Plant Population/ft<sup>2</sup>

**Table 1.** Sherrilyn Phelps' suggested seeding rates for faba beans in kg/ha based on target plant population of 45 plants/m<sup>2</sup>, thousand kernel weights (TKW) in grams, and expected emergence rates.

Thousand Kernel Weight (TKW)	Expected Emergence Rates (%)					
	60	65	70	75	80	85
(grams)	kg/ha					
300	225	208	193	180	169	159
350	263	242	225	210	197	185
400	300	277	257	240	225	212
450	338	312	289	270	253	238
500	375	346	321	300	281	265
550	413	381	354	330	309	291
600	450	415	386	360	338	318
650	488	450	418	390	366	344
700	525	485	450	420	394	371

### Seed Dates

Faba beans should be the first crop going in the ground, which can be seeded as early as April 15 in the Saskatoon region if conditions are favourable for fieldwork. The early seeded faba beans flower earlier and have earlier maturity with no effect on yield. Faba beans have growing points below the soil surface which allows it to regrow if an above-ground killing frost occurs, similar to pea and lentil crops. Research in both Saskatchewan and Alberta showed that early seeding (as soon as field is passable) gave 32% yield advantage over those seeded two weeks later.

### Seeding Depth

2-3 inches.

### Seed Treatments

Apron<sup>®</sup> Maxx/Apron<sup>®</sup> Advance and Stress Shield<sup>®</sup> 600 are the only products registered for faba beans and should be considered for the low tannin white-flowered types especially.

### Fertility

Faba beans tolerate more seed-placed fertilizer than other pulse crops. The recommended maximum safe rate is 40 lb/ac actual P<sub>2</sub>O<sub>5</sub> seed placed (1 inch spread with 9 inch row spacing).

Faba beans have a high requirement for phosphorus. Uptake of phosphorus is approximately 2 kg/ha for every bushel produced (89-108 kg/ha for 50 bu/ac crop) and about 1.2 kg/ha removed from the field with every bushel produced (55-67 kg/ha for 50 bu/ac crop). Phosphorus response of faba beans is under investigation. We recommend applying phosphorus at removal rates to balance fertility programs for future crops.

No starter nitrogen is required unless soil nitrogen is very low (less than 15 lb/ac actual nitrogen). Under low nitrogen conditions the crop may benefit from application of 10-15 lb actual nitrogen.

Proper rhizobial inoculant for faba beans is recommended. Some pea/lentil products will work for faba beans but consult the label and/or manufacturer.

## Weed Control

Early weed control is important with faba beans. Use of pre-emergence products can help combat herbicide resistant weeds and give a jump on weed control in crop.

**Pre-emergence products registered for use on faba beans include:**

- Glyphosate
- Edge®
- Glyphosate + Express® (Tribenuron)
- Trifluralin
- Trifluralin + Sencor® (metribuzin)

**In-crop registered products include:**

- Basagran® & Basagran® Forte
- Odyssey
- Poast Ultra (grassy weed control)
- Assure II (quizalofop) (grassy weed control)

## Growth Stages

The cotyledon remains below-ground. Scale leaves develop below the first true leaves at the first and second node positions. At least one scale leaf remains below-ground during early growth, providing protection from spring frosts. The first true leaf at the third node stage.



## FABA BEAN GROWTH STAGES DIAGRAM

