



Fact Sheet #2017.1

Soybean Establishment

When choosing a soybean variety consider the following;

1. Full season maturity
2. Highest yield potential
3. Consistent yield
4. Disease and pest package
5. Quality traits
6. Height at maturity

Tips for seeding

Seed rate varies with type of equipment

- Air Seeder- 200,000 – 220,000 seeds/acre
- Row Planter- 170,000 – 190,000 seeds/acre

Advantages of using solid seeding (air seeder) versus row planting

- Increased light interception
- Reduced weed competition
- Earlier canopy closure
- Better moisture and heat retention

Soil Temperature

- Extremely important!
- Soil should be at least 10°C AND be expected to remain at that temperature for 8 hours or longer
- Figure 1 demonstrates the importance of ensuring warm soil temperatures
- Consider seeding in the afternoon when soil will be at its warmest temperature



Planted in warm soil (21°) and kept at that temp for 17 days.

Planted in cool soil (7°C) and kept at 7°C for 20 hours, then warmed up to 21°C for 17 days.

Planted in warm soil (21°) for 8 hours, then kept at 7° for 4 days.

Seed depth

- Shallow!
- 0.75 to 1.5 inches deep, into moisture
- Soil is generally warmer at a shallow depth as well
- Figure 2 demonstrates the height potential of a soybean plant when seeded at a shallow 0.5" compared to deep seeding



Soil Fertility

- Low nitrogen levels <50 lbs/acre
- Phosphorus, med-high (10-20ppm)
- Phosphorus Management - Residual Preferred

Amount of nutrient removal with a soybean yield of:			
Nutrient	Concentration	30 bushels/acre	40 bushels/acre
		pounds/bushel	pounds/acre
Nitrogen	3.8	114	152
Phosphorus (P2O5)	0.84	25	34
Potassium (K2O)	1.3	39	52

Inoculants

- Soybean Rhizobia (*Brady japonicum*) isn't native to Canadian prairie soils
- Dual inoculation recommended
- Always use 2 formulations wherever possible (liquid, peat, or granular)
- Do not place potash or phosphate fertilizer with seed and inoculant
 - o These products both have high salt indexes which will dry out and kill the bacteria in the inoculant

Frost damage post emergence

- Smaller plants can tolerate more frost
- VE-VC can tolerate -2.8°C for a few hours
- 3 Potential Growing Points – *give them time*
- Able to compensate for reduced stands but not large areas

