

Spring 2021 Roquette Agronomy Update

Seeding Date:

- Peas are cold-tolerant, similar to spring wheat and barley.
- Start seeding when soils at seeding depth (1.5 – 2 inches) average 5°C for 3 to 5 days and no <0°C air temperatures in the forecast for next week.
- At 5°C, plants will emerge in 3+ weeks; at 10°C, emergence occurs in 10 to 14 days. If you can wait for warmer soils, you will reduce potential for root rot infection and increase plant stands.
- Measuring soil temperature – for a daily average, measure 2x in the day, first around 9am and then at 7pm. Average the two readings for the daily average. Take soil temperature readings at expected seeding depth (typically around 1 ½ inch deep).

Seeding Rate:

- General seeding rate for peas is 3 bu/ac, but it is better to target a live plant stand of 7 to 8 plants/ft² (75 to 85 plants/m²) and seeding rate to match. To do this, you need to consider seed size (measured as Thousand Kernel Weight (TKW)), % germination and % seed survival.
- Seed size can change by variety and year, so find out the seed size from your seed supplier. The chart below can give you an idea on seed size and resulting seeding rates:

		Seed Size (g/1000 seeds)													
Desired Population		220	225	230	235	240	245	250	255	260	265	270	275	280	285
live plants/ac	live plants/ft ²	Field Pea Seeding Rate (bu/ac) - corrected to 95% germination and 90% survivability													
335,000	8	3.2	3.2	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.0	4.1
300,000	7	2.8	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7

- Below 7 plants/ft² can increase need for better management in field to control weeds.
- Also, gentle seed handling needed to reduce mechanical damage to the seed. Slowing the fan speed on the air distribution system can reduce seeds bouncing and cracking before seeded.

Fertility

- Peas are sensitive to seed row placed fertilizer, especially in dry soils. Maximum rates of seed row placed fertilizer is 15 lbs/ac (17 kg/ha) of phosphate (P₂O₅). For potassium (K₂O), use the P₂O₅ guidelines making sure the total amount of K₂O plus P₂O₅ does not exceed the minimum safe rate for seed placement.

Inoculant Use

- Inoculants help peas fix up to 80% of their nitrogen requirement through nitrogen-fixation. Liquid or peat inoculants are applied to the seed and have a 24- to 48-hour life span. Granular inoculants are placed in the seed row through the seeder at the time of seeding. You will need a separate tank from your seed tank and fertilizer tank for this option on your seeder.
- Single inoculation (either on-seed or in furrow) in most fields is okay. In virgin fields (never had peas), double inoculation (on seed and in furrow) may be required.

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Seed treatment

- To be considered, if seeding into cool, wet soils or in situations where seed germination is lower than desired, or where disease is present on the seed. Talk to your seed provider about the disease screening report on the seedlot.
 - Ascochyta blight, a seed treatment is recommended if the disease on seed is >10%.
 - Other diseases (sclerotinia, botrytis, fusarium) add the levels together and if combined seed borne levels are >10%, then seed treatment is recommended.
 - Aphanomyces – if identified in the field, growers may want to consider a seed treatment with activity against aphanomyces in addition to extending the time between pea crops to six to eight years.

Pre-season weed management

- If peas can be kept relatively weed-free before using a herbicide in the standing crop, yields will increase and issues with weed dry-down at harvest can be reduced. To do this, consider a pre-emerge herbicide to burn off emerged weeds and control/suppress weeds not yet emerged. Check your provincial “Guide to Field Crop Protection” for more details.
 - Burn-off emerged weeds – Aim, Cleanstart, Glyphosate, Heat LQ, MCPA Amine, Express SG
 - Suppress/control of ungerminated weeds – Authority Charge, Authority Supreme, Authority 480, Fierce, Goldwing, Valtera, Zidua SC (note: needs ½ inch rain to activate)
 - Burn-off emerged weeds and suppress of un-emerged weeds – Heat Complete (note: need ½ inch rain to activate)
- In-crop herbicides will still be required to control weeds emerged after the peas.

Rolling Fields? Fields can be rolled to push down rocks and provide a smooth and level surface to improve harvest efficiency. Rolling can be done immediately after seeding, as soon as the soil surface is dry or can be delayed done up to the third to fifth true leaf stage.

Caution: Land rolling leaves the soil very fine. Under very dry conditions and if not absolutely required, you may not want to roll your field to save some soil moisture and reduce soil erosion.

Have questions going into spring? Contact your Roquette Agronomists:

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