



## Pulse Agronomy Network~ *Partnership in Industry*

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### 1. Peas - Seeding Rates

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- For years, pulse researchers have suggested 7-8 established plants/ft<sup>2</sup>. Yet, a recent article in the Country Guide (January 2003) suggests 5 plants/ft<sup>2</sup> (50/m<sup>2</sup>) are all we need for field peas! The article says that higher density has little impact on yield, and raises seed costs!
- BUT read the article in its entirety before jumping to conclusions. First off, these guidelines refer to seed lots of good quality, plump seed with high vigor, a high germination rate, and minimal amount of cracked seed or other damage. As well, this research was completed under conditions of NO weed competition.
- To provide consistent yields under varying conditions 7-8 plants per square foot (70-80/sq metre) is still recommended. While growers claim they aim for 7-8 plants/ft<sup>2</sup>, we seldom find fields with more than 5 plants/ft<sup>2</sup>. Reasons for this include not accounting for seed quality problems, seed distribution, and higher than expected mortality.
- An AAFRD study by T. Buss, et al. in 2000, plant densities of 75 plants/m<sup>2</sup> vs 32 to 43 plants/m<sup>2</sup>, resulted in a yield increase from 10 to 74%, 50% of the time. Bottom line, 7-8 plants/ft<sup>2</sup> improves the chance to optimize pea yields under variable growing conditions.
- Encourage growers to take the time to get a germination test done and do a proper 1000 KWT calculation to establish proper seeding rates. Calculate Seed Rates Using 1000 KWT: [http://www.agric.gov.ab.ca/agdex/100/100\\_22-1.html](http://www.agric.gov.ab.ca/agdex/100/100_22-1.html)

Links for seeding chickpeas and lentils:

[http://www.agr.gov.sk.ca/docs/crops/pulses/production\\_information/chickpea2002.asp?firstPick=Crops&secondpick=Pulses&thirdpick=Production%20Information#9](http://www.agr.gov.sk.ca/docs/crops/pulses/production_information/chickpea2002.asp?firstPick=Crops&secondpick=Pulses&thirdpick=Production%20Information#9)

[http://www.agr.gov.sk.ca/docs/crops/pulses/production\\_information/lentilsinSK2002.asp?firstPick=Crops&secondpick=Pulses&thirdpick=Production%20Information](http://www.agr.gov.sk.ca/docs/crops/pulses/production_information/lentilsinSK2002.asp?firstPick=Crops&secondpick=Pulses&thirdpick=Production%20Information)

### 2. Peas - Phosphorus Fertilization

- Do peas require phosphorus? While headlines in recent years suggested no, most researchers will suggest it's not that simple.
- To evaluate potential need, start with a soil test. If soil test levels show less than 30 lbs of phosphorus in the 0-6" depth, there is at least a 50% chance of seeing a yield response so applying 15 to 25 lbs of P is worthwhile. If the soil test levels are below 20 lbs of phosphorus, then an application of up to 30 lbs of P is warranted. Soils with over 30 lbs of P are less likely to respond to additional P although the application of 15 pounds may still be warranted to provide a maintenance level of P.
- Under cooler growing conditions, we generally expect a greater response.
- How much P with the seed? Initially, provincial guidelines suggested a maximum of 15 to 18 lbs of P could be placed in a narrow seed-row. In dry sandy soils, these restrictions are still valid, but in moist loam to clay loam soils, research has shown rates up to 30 lbs appear to be safe.

Field Pea Fertility - AAFRD

[http://www.agric.gov.ab.ca/agdex/100/142\\_532-2.html](http://www.agric.gov.ab.ca/agdex/100/142_532-2.html)