



Pulse Agronomy Network~ Partnership in Industry

April 1, 2004- All Pulse Bulletin #6

1. Peas - Seeding rates and plant stands

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- The target stand for field pea is 7-8 established plants/ft². Farmer and agronomist accounts of the highest yielding large scale pea fields in Alberta have had a minimum of 7 plants/ft² and many were 8 plants/ft² or greater.
- Field pea does not have a high degree of plasticity. That is, the field pea plant will not branch or tiller enough to compensate for fewer plants like canola or cereals. Farmers attempting to save costs by lowering seeding rates will have fields with low plant stands and lower yield.
- Research in Saskatchewan on seeding rates indicated higher seeding rates (> 5 plants/ft²) did not increase yield. However, this work was conducted with high quality seed (high germination, high vigor and low disease), under weed free conditions and under lower rainfall. This research may not be applicable to real on farm conditions as lower seeding rates can lead to higher weed pressures in Alberta.
- European farmers routinely aim for a minimum of 9 plants/ft². Farmers growing processing pea under irrigation have target plant populations of 10-13 plants/ft². Ensure that under normal spring time conditions farmers target a minimum of 7-8 plants/ft².
- Very little research in Western Canada with higher than the suggested target plant population of 7-8 plants/ft² has been done. Higher seeding rates may increase the competitiveness of the field pea crop with weeds, but this may be offset with a higher number of plants competing for water, nutrients and sunlight. This research work needs to be revisited with current varieties of field pea.
- Calculating seeding rates with the actual seed lot on the farm is critical to obtaining the optimum plant stand. Seed size, sometimes referred to as 1000 kwt (weight in grams of 1000 seeds), varies not only between varieties but within the same variety by as much as 25%. In other words, your plant population may be lower or higher by as much as 25% with the same variety.
- The quick way to obtain a 1000 kwt of your seed lot is to count out 100 seeds, take the weight in grams and multiple by 10. Repeat this 3 times and take the average of your 3 counts.
- The 1000 kwt can be plugged into the seeding rate calculator on Alberta Agriculture Food and Rural Development's "Ropin the Web" site at:
http://www.agric.gov.ab.ca/agdex/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/lentilsinSK2002.asp?firstPick=Crops&secondpick=Pulses&thirdpick=Production%20Information