

## CHECKLIST FOR NORTHERN GROWERS

Quick Check List	
Stored soil moisture depth adequate?	Yes
Saline or sodic soils avoided?	Yes
Phytophthora risk manageable?	Yes
Water-logging areas avoided?	Yes
Broadleaf weeds controllable?	Yes
No herbicide residues?	Yes
No chickpea stubbles from last year close?	Yes
Variety choice adequate and specific variety management package known?	Yes
Seed quality and seed fungicide dressing adequate?	Yes
Inoculation procedures adequate?	Yes
Sowing in an up and back row formation?	Yes
Fertilizer requirements met?	Yes
Adequate crop establishment achievable?	Yes
Monitoring crop at critical stages organized?	Yes
Ability to respond to crop management needs in timely way?	Yes
Boom spray set up for fungicides?	Yes
Desiccation considered as harvest aide?	Yes
Harvest and storage infra structure for grain at 14-16% moisture	Yes

Discuss these key issues with your advisor/agronomist when planning for your chickpea crop.

Additional information including Disease Management Strategies and Variety Management Packages (VMP) are available from the Pulse Australia website: [www.pulseaus.com.au](http://www.pulseaus.com.au)

## **PADDOCK SELECTION.**

### **1. Have you assessed depth of stored soil moisture in your paddocks?**

Soils with less than 1 metre of stored soil water may produce inconsistent or disappointing yields. The best guide to assessing soil water storage is to request your agronomist to put down several soil cores.

### **2. Are you avoiding country that is either saline or sodic.**

Chickpeas are extremely sensitive to both these conditions. Saline or sodic layers in the soil will severely limit root growth and water extraction from the soil.

### **3. Are the paddocks at risk from Phytophthora Root Rot?**

Avoid planting susceptible varieties such as Amethyst, Flipper<sup>®</sup> in country in which there has been even a low level of naturalized burr medic or native trefoil. Ensure there is at least a 3 – 4 year break between chickpea crops or Lucerne for the same reason.

### **4. Are the paddocks prone to water logging problems and poor drainage?**

Avoid excessively wet areas where free water does not drain away.

### **5. Are broad-leaved weeds likely to be a significant problem?**

Herbicide options for broad-leaved weed control are very limited. Growers will need to consider alternative control strategies if the standard treatment of post-plant pre-emergent Simazine is unlikely to provide adequate control ie:

- The use of Balance<sup>®</sup> (Do not apply to the variety Yorker<sup>®</sup>)
- Interrow cultivation
- Interrow shielded sprayer (glyphosate)
- Band spray Simazine + Prometryn (post plant)
- Directed post-emergence sprays of Broadstrike and/or Simazine

Avoid paddocks with severe Buckwheat and/or Wireweed.

### **6. Are herbicide residues likely to be a problem?**

- Tordon residues when double-cropping out of sorghum
- Sulfonylurea residues after wheat (Glean<sup>®</sup>/Logran<sup>®</sup>)
- Grazon<sup>®</sup> DS, Lontrel<sup>®</sup>, or Ally during the fallow period

Read the label for plant-backs based on rainfall requirements for herbicide residue breakdown, soil PH and rate of product used.

### **7. Is paddock greater than 1km from to last year's chickpea crops?**

Paddocks closer than 1km to last year's chickpea stubble should be considered as high risk from Ascochyta blight infection and need to be managed as such. Varieties with a higher Ascochyta resistance such as PBA HatTrick<sup>®</sup> should be considered, otherwise there is the need for programmed ascochyta spraying through the season. Refer to the Variety Management Package (VMP) for each variety.

Where possible place as great a distance as practical between this years and last year's chickpea paddocks.

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## **PLANTING.**

### **8. Is variety chosen suitable?**

In variety choice, consider yield and adaptation to the area, disease resistance, grain quality and marketability. Be aware of the specific management needs for the variety chosen through its Variety Management Package (VMP).

### **9. Have you organized good quality planting seed?**

- High germination (above 80%)
- High vigor (AA test)
- Large, graded seed
- Low risk from Ascochyta blight infection
- Evenly coated with seed dressing (P-Pickle<sup>®</sup> T, Thiraflo<sup>®</sup>, Thiragranz<sup>®</sup>)

### **10. Are your inoculation procedures adequate?**

Only purchase refrigerated (but not frozen) inoculum from a reputable supplier and treat seed within 8 hours of planting and plant into moist soil.

### **11. Is it possible to plant up and back on a row-crop configuration?**

There has been a major shift to row crop configurations using 50 to 100 cm row spacing. While there is sometimes a trade-off in terms of yield and lodging susceptibility at higher yield levels, these are normally more than offset by the advantages offered by ground rig access and zero or minimum tillage systems with stubble retention.

### **12. Have you assessed the need for phosphate and other fertilizers?**

Chickpeas are efficient at extracting soil phosphate and consistent responses are only likely where soil (P) levels are below 6 mg/kg. This critical level applies to high VAM situations ie: Fallow lengths of less than 6 months.

Higher rates of (P) and Zinc will be required in most long fallow situations (fallows longer than 10 months).

### **13. Can you ensure even crop establishment and development?**

Thin and uneven crops are difficult to manage (insects, desiccation and harvest) and often result in delayed maturity and a blow out in insecticide costs. Aim to plant at an even depth into good soil moisture.

## **IN-CROP MANAGEMENT.**

### **14. Do you have access to an experienced Agronomist to monitor at the critical stages? Are you able to do it yourself?**

- Ascochyta blight inspections (Especially 6-8 weeks post-plant)
- Heliopsis management from flowering onwards. (Aug – Oct)
- Botrytis grey mould inspections during September
- Timing of desiccant and harvest

### **15. Your response to crop management needs be timely?**

Delays in responding to the need to control insect, disease or weeds in a timely way can be very costly. Crop desiccation and harvest needs also to be timely.

### **16. Is your boom spray set-up adequate for fungicide application?**

- Nozzle selection to produce BCPC Fine – Medium Droplets.
- Higher pressure (over 350 kPa)
- Higher volume (at least 80 L/ha)

## **HARVEST MANAGEMENT**

### **17. Have you considered desiccation as an aid to early harvest management?**

Seek out information or guidance on the correct stage to desiccate the crop.

### **18. Do you have the on farm infrastructure to harvest chickpeas at 14-16% moisture?**

See the Chickpea – Harvest, Handling and Storage publication.

The receival moisture content for Chickpeas is 14%.

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Major projects funded by

 **Grains Research & Development Corporation**

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