

## “TOP 10” FOR PULSES PRE- SOWING

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Pulse growers need to be aware of some key, “Top 10”, issues before sowing:

- Match the crop and variety choice to paddock conditions and rotations.
- There are ways to minimise disease risk without compromising sowing time.
- Stubble presence is becoming increasingly important for moisture retention.
- Minimise viruses by managing crop canopy, avoiding bare soil, and controlling aphids.
- Know the potential weed burden and seed set from previous year, and plan accordingly.
- Lentils – early sowing is beneficial and virus testing of seed is important.
- Field Peas – seed test for PSbMV and bacterial blight.
- Beans – match the variety to sowing date, location and intended fungicide strategy.
- Chickpea – paddock selection is critical.
- Lupins – early sowing and virus testing of seed are important

Grower attitudes, management implications and key issues for pulses will vary widely depending on location and recent seasonal experiences.

**1. Which crop, variety and where:** Change to, or add, a newer variety. Seed prices will reflect commodity values and production costs. Grading of retained seed to increase its overall size may be needed after years with a dry finish.

- *Field Pea:* PBA Gunyah and PBA Twilight are available as ‘kasper types’. Both are earlier flowering and maturing than Kasper, and can be co-mingled with Kasper for marketing.
- *Chickpea:* PBA Slasher is a new desi chickpea that is an alternative to Genesis 509, similarly rated R for ascochyta resistance. Genesis 114 is the new large kabuli, and Genesis 079 the new short season, very small kabuli that compliment the small seeded kabuli variety Genesis 090 that is now finding market acceptance.
- *Lentil:* There are six newer lentil varieties with different agronomic requirements, disease resistances and maturities. They also broaden our market options and choices. All need to be grown in their appropriate areas and managed to suit. PBA Blitz and PBA Flash are two newer short season varieties. PBA Jumbo is a longer season variety to replace Aldinga. PBA Bounty is for areas with a sharp finish. Nipper red lentil and Boomer green lentil remain as good choices.
- *Bean:* PBA Kareema will be available as a new broad bean. Nura and Farah remain the recommended faba beans.
- *Lupin:* Jenabillup lupin is now available for most areas, but is particularly suited to the medium and high rainfall regions. It is not quite as vigorous and early-flowering and maturing as Mandelup. Luxor and Rosetta albus lupins continue to be available.
- *Vetch:* Rasina vetch has now established itself as an early flowering, more disease resistant type to replace Morava in lower rainfall areas. Seed production and yield should also be more reliable.

Which pulse species, variety, and location chosen will be based on risk, crop adaptation and rotation. Be aware of the different soil and climate requirements as well as

disease resistance profiles and agronomic requirements. Residual herbicide damage is a potential risk so check herbicide labels for plant-back periods based on rainfall, soil pH and use-age rate.

### 2. Diseases:

Cercospora in faba beans can be controlled early with either carbendazim or tebuconazole (APVMA permit). Sow field peas based on the “blackspot management guide” for WA, SA and Victoria.

[http://www.agric.wa.gov.au/PC\\_92083.html?s=1096241224,Topic=PC\\_91997](http://www.agric.wa.gov.au/PC_92083.html?s=1096241224,Topic=PC_91997)

Viruses can be managed, and in particular require source, crop and stubble management, along with minimisation of aphids and their nearby hosts (“green bridge”). See “Virus management in pulse crops” and virus links at [www.pulseaus.com.au](http://www.pulseaus.com.au). See also individual virus details at [www.new.dpi.vic.gov.au/notes/crops-and-pastures](http://www.new.dpi.vic.gov.au/notes/crops-and-pastures)

Pulse fungal risk does not disappear after a dry year, but increases after a wet year in which foliar disease was more wide-spread. Paddock selection is critical, while sowing time and canopy management are also important in disease management - and inexpensive to implement. See disease management guides and foliar fungicide options for each pulse crop at

[www.pulseaus.com.au/Search\\_Publication.aspx](http://www.pulseaus.com.au/Search_Publication.aspx) Note that seed testing for seed-borne disease and virus is advisable.

**3. Sowing:** Pulses sown early often perform best in drier years, particularly when sown into stubble, and in wider rows. Do not sow too early for the crop or district as the disease risk will increase in wetter years.

- Germination and vigour test all kept seed and calculate sowing rates to achieve optimum plant populations.
- Bare ground dries rapidly during summer, and in dry winters and spring.
- Precision inter-row sowing into standing cereal stubble has advantages for soil moisture and aphids.

Failing to control summer weeds or delayed in-crop weed control reduces moisture availability. Dry sowing can generally work well for pulses, provided there is adequate subsoil moisture to give growers confidence. Disease risk is higher with early sowings but is manageable. Frost risk can be perceived to be more severe with early sowing, or in drier conditions. See "Managing pulses to minimise frost damage" at [www.pulseaus.com.au](http://www.pulseaus.com.au).

**4. Weed control:** Weed burden depends on past control and how effectively weed seed set was prevented last year. Many herbicides used in pulses need to be applied prior to crop emergence. Dry or frosty conditions can influence herbicide timing and efficacy. Delayed control of summer weeds or in-crop weeds has a major impact on moisture retained.

**5. Insects:** Regularly monitor for and control mites, cutworm and early aphid flights. Gaucho350 SD seed dressing can assist in early aphid and virus protection, particularly when sowing early. Minimising aphid presence will be important in virus control. Locust presence may influence sowing date or require early crop protection.

**6. Lentil keys:** Excessive delays in sowing lentils to minimise disease and/or frost risk has impacted in recent years. Dry springs have meant lack of harvest height with sowing delays. Standing stubble can improve pulse standability and harvest height. Disease protection may become necessary in a wetter season, and must start before canopy closure. Varieties available suit a wider range of situations, but do not extend to broad soil type limitations that restrict where lentils can grow.

**7. Field Pea tips:** Field peas handle drier conditions well, but can be susceptible to frost damage. They make very good quality hay in cases where they fail to pod.

- Seed testing is important for Bacterial blight and Pea Seed borne Mosaic Virus (PSbMV) because both are seed borne
- PBA Gonyah and PBA Twilight present increased yield and sowing date options for most areas.
- Sturt field peas show better field tolerance to frost than other varieties and types, but they can still lose yield to frost.
- Morgan is being more widely grown as a forage field pea, as is Sturt as a dual purpose forage or grain crop.

**8. Bean points:** Early sowing is more feasible with the newer varieties, enabling yield benefits and increased pod height without creating a major disease risk. Disease risk is higher and occurs earlier with early sowing so must be managed.

- Pollination by bees and native insects can benefit bean yields. Bees must be properly placed and managed to maximise the benefit.

- Early sowing can lead to lodging or poor early pod set in some better rainfall areas.
- The short height of Nura makes it generally less suitable for late sowing or low rainfall areas.
- Ascochyta seed staining in beans must be prevented if staying with the old variety Fiesta.
- Cercospora requires correct identification and early control – tebuconazole or carbendazim are effective.
- Granular inoculants have proven their value in beans on acidic soils and dry soils.

Beans suit dry sowing. Delayed sowing of beans to get additional weed knockdown does reduce yield potential. Avoid sowing into high weed seed numbers unless wide rows with inter-row spraying is planned.

**9. Chickpea success:** Yields and prices are attracting great interest in growing chickpeas.

- Desi and small kabulis are well suited to the medium and higher rainfall zones. PBA Slasher is a quality desi with ascochyta resistance as an alternative to Genesis 090 small kabuli.
- Large seeded kabulis need an extended growing season. Genesis 114 and Almaz require more fungicide applications than the resistant varieties like Genesis 090 and PBA Slasher.
- Do not sow chickpeas too early to ensure that flowering and pod set is under warmer conditions (>15<sup>o</sup> average).

Crop topping of chickpeas for control of herbicide resistant ryegrass is not possible, hence paddock selection is critical. Genesis 079 may be an exception, but not in all seasons. Correct identification of disorder 'symptoms' in chickpeas is important. Nodulation difficulties, herbicide damage (including Balance<sup>®</sup>), moisture stress, phoma, root rots and viruses can often be mis-diagnosed as ascochyta. A reduced herbicide rate on sandier soils is required, so read the label.

**10. Lupin issues:** Early sowing is highly beneficial in lupins, particularly in high rainfall, cold southern areas. New inoculants, including granular, can give growers more confidence in sowing lupins dry should it be needed.

- CMV and AMV seed testing is advisable before sowing lupins.
- Lupin growers in SA can test their sowing seed to assist in gaining anthracnose free status.

All retained albus lupin seed should be tested for bitter seed contaminants. Do not grow older albus lupins close to the new variety to avoid cross pollination or contamination.

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