



Albus lupins

Albus lupin production in Australia was dominated by Western Australia until the widespread devastation caused by the disease anthracnose in 1996. Production was banned in 1997 and 1998. In 1999 lack of varietal resistance to the disease and the presence of anthracnose susceptible sand plain lupins will limit production.

NSW growers have an excellent opportunity to fill the market gap. Human consumption albus lupins will benefit farmers by providing a profitable break crop to extend rotations and reduce canola frequency.

Anthrachnose has not yet been found on commercial lupin crops in NSW. However, the disease has been found on ornamental lupins in town gardens and a recreational alpine area. To safeguard our lupin industry against anthracnose:

- do not sow seed from Western Australia or South Australia;
- remove ornamental lupins from gardens.

Management guidelines

Paddock selection

Select a paddock that has:

- good drainage—albus lupins are very susceptible to root rot;
- pH (CaCl₂) greater than 5.0;
- not grown narrow-leafed or albus lupins before, or at least not in the last four years. The fungus that causes brown leaf spot in narrow-leafed lupins causes pleiochaeta root rot in albus lupins.

Varieties

Albus lupins have a higher yield potential than narrow-leafed varieties, particularly in high rainfall areas and where disease pressure is low. They are immune to cucumber mosaic virus, and have good resistance to phomopsis stem infection. Kiev Mutant and Ultra are older, standard varieties. Magna is a new variety which has larger seed for



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specialised markets and is more suited to long season environments. Buyback contracts are available. Minibean is another new variety with small seed (15% smaller than Kiev Mutant) with contracts available as for Kiev Mutant. Both Magna and Minibean are protected by Plant Breeders Rights.

Sowing

Do a germination test and estimate seed size to determine sowing rate. Aim to establish 30–35 plants/m². As a guide, sowing rates range from 120 kg/ha to 180 kg/ha.

Sow at the same time as narrow-leafed lupins. High rainfall areas—late April to mid May; low rainfall areas—mid to late April. Provided certain guidelines are followed, albus may be dry sown to ensure timely establishment (refer to Pulse Point 6 *Dry sowing*).

Check that the large albus seed can flow through your combine when inoculated. The smaller seeded variety, Minibean, has been released to solve this problem.

Albus can be direct drilled into cereal stubble using narrow points or triple discs. Aim to sow up to 5 cm deep. If sowing is too deep (e.g. chasing moisture) the large cotyledons will be unable to emerge.

Seed treatment

Use lupin (Group G) inoculum. Allow inoculant to dry before sowing to prevent blockages caused by the large flat seed. In-furrow spray inoculation

is very effective.

Where the paddock has had any type of lupin crop during the past five years, fungicidal seed treatment for pleiochaeta root rot is recommended.

Nutrition

Phosphorus should be applied at 15–20 kg/ha, as for cereals. Sulfur may be supplied in a fertiliser blend, although yield advantages are rarely demonstrated in trials. A starter application of nitrogen is neither necessary nor is it detrimental. Molybdenum should be considered, to improve nodulation on low pH soils.

Weed control

Numerous herbicides, both pre-emergent and post-emergent, are available for effective control of grass and broadleaf weeds, including the problem weeds, silver grass and wild radish.



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Control of heliolith is essential to ensure quality standards are achieved.

Insect control

Albus lupins are vulnerable to insect damage at the seedling stage. Control of redlegged earth mite, blue oat mite and lucerne flea may be necessary.

Albus lupins are particularly susceptible

to heliolith damage and must be monitored for grubs from flowering onwards. In order to meet receival standards for human consumption grade, the spray threshold is one grub per 10 sweeps. Always include an aerial heliolith control spray in your budget and spray when grubs are small. Monitor after spraying to ensure control has been effective.

Windrowing

Windrowing is not required, but may be useful where weed seed contamination may be a problem, or as part of an integrated program to combat herbicide resistant weeds. The benefits of windrowing in reducing seed loss at harvest has not been quantified. It is being commercially trialled in tall, bulky crops.

Harvest, storage and markets

Harvest as soon as the crop is ripe, at 13% moisture, to minimise yield loss from pod shattering and reduce header damage to seed.

Keep drum speed below 500 rpm and the concave open. Allowing some trash to enter is better than thrashing too hard to get a spotless sample with more damaged seed.

Albus lupins for human consumption must meet strict market specifications as defined by the National Agricultural Commodities Marketing Association (NACMA) standards.

NACMA

Minimum export standard for farmer dressed albus lupins

Foreign material less than 3%

including narrow-leaved lupins

Defective material less than 5%

including shrivelled, green immature, discoloured, insect damaged and decoated albus lupins.

Albus lupins can be easily stored as long as the moisture content is 13% or below.

The export market for albus lupins is relatively small—currently 30,000–40,000 t. Take out a Guaranteed Minimum Price contract early in the season as an effective risk management tool to ensure you achieve your minimum target price.

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NSW Agriculture 1999
ISSN 1441-2233

DISCLAIMER

The information contained in this publication is based on knowledge and understanding at the time of writing in May 1999. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up-to-date and to check currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser.

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Pulse Points are produced as part of the GRDC project DAN342SR, 'Pulse management in southern NSW'.

Further information

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Other publications

Pulse Point 3 *Calculating your seeding rate*

Pulse Point 6 *Dry sowing*

Pulse Point 2 *Germination testing*

Lupin update 1999

Winter crop variety sowing guide

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