Lupin Logic

Grain and other field crop research

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Albus lupin warning

A limited human consumption market opportunity presently exists for WA Albus Lupins at 8000 to 10,000 mt.

With WA production set to expand beyond this level in 1994, those growers basing this expansion on receiving current prices may be disappointed. Parity with the angustifolius lupin price will however exist for excess tonnages.

Market outlook

The international lupin market is currently supporting prices equivalent to the 1992/93 average level, but this is expected to decline over the next nine months. Additionally, a number of uncertainties exist for the European lupin markets, including the impact of reform to the Common Agricultural Policy (CAP) and changes to the EC import tariff.

US soybean production has been significantly reduced by floods in the midwest, which in turn has reduced world vegetable protein supplies. This factor enabled strong prices to be obtained for late 1992/93 season lupin sales. While these values have since moderated, expectations of further price reductions in future months are motivating an aggressive forward selling program.

The combination of CAP reforms which will reduce the vegetable protein import demand into Europe and expectations of large plantings in South America, are combining to reduce future price expectations. The CAP reforms are effectively reducing EC internal feed grain prices, which in turn lower the price competitiveness of imported substitutes including lupins. The other uncertainty mentioned, namely, an increase in the EC tariff on lupins, has the potential to reduce EC lupin prices by up to $15 per tonne. Unfortunately the EC, CAP reforms and import tariff alternations (if implemented) are long term factors which will cause lupin values to isolate at lower levels in the future.

The current Grain Pool lupin return estimate after allowing for these major factors, and others, is around $175-180 per tonne gross, including a first payment of $150 per tonne gross.

Seed quality testing

Farmers who don't get their lupin seed tested for seed quality and freedom from Cucumber Mosaic Virus (CMV) are playing Russian roulette with the potential yield of the 1994 lupin crop.
 replies as follows:

"If a lupin crop is to be grown after pasture (no WA blue lupins), pasture topping is essential the year before crop establishment to reduce weeds, especially broad-leaved weeds. These paddocks are then grazed after topping, to further reduce trash and weed seeds, stock being removed if 10% of the land becomes bare of vegetation. Paddock in cereals before cropping to lupins will have been kept weed free.

I would modify a combine to furrow sow the pasture paddocks and a culti-trash to furrow sow the cereal stubble. The seeders are modified in such a way as to furrow sow on 36 cm spacings with provision for the fertiliser to be banding under the seed and a presswheel following behind to improve the furrow and firm the seedbed. For a 3–5 cm presswheel I would use a load of 60 kg per row.

Paul took on board Fred's ideas and developed them further. Recently I asked Paul what would be his best bet system for establishing a lupin crop on a non wetting soil. He replied as follows:

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Furrow seeding

Dr Paul Blackwell and his research team are working Statewide to develop better systems of crop establishment on non wetting soils. The most cost effective approach to this problem was inspired by Gillingarra farmer, Fred Rodgers, who introduced Paul to wide furrow sowing techniques.

Wide furrow sowing is a system of crop establishment which utilises the non wettability of the soil to harvest water. Wide furrows also assist sowing onto moisture (see diagram).

Furrow sowing is done either round and round or on the contour for sloping paddocks to minimise water erosion down the furrow.

Simazine applied to the dry seed bed is incorporated with a prickie chain before seeding.

If there has been no summer rain or moisture is deeper than 30 cm, I would suggest starting the 10 April, 50 ha is sown per week into dry soil.

With 25 mm or more rain, you can plant into moisture and larger areas can be more confidently sown from mid April onwards, especially if there has been significant summer rain.

Seeding depth should lie between 2.5–5 cm. With variable seeding depth there is less risk of losing the entire crop to drought, wind erosion or it being planted too deep because of the furrows filling in with any heavy rain. Seeding speed should be kept as low as possible to preserve the furrow and pasture clods during the one pass seeding operation.

All other sound agronomic practices at seeding such as using quality seed, seed treatments, correct seeding rates, soil testing for fertiliser usage and controlling early insect problems are the same as for crops grown on soils without non-wetting problems.

For post plant grass weed control my best bet would be to let the grass weeds grow to increase ground cover in the early part of the season, and then kill them with a selective herbicide later on when the lupin plants were providing adequate ground cover to prevent erosion and brown leaf spot spore splash.

Post plant broad-leaf weed control is still being researched, and we still do not have robust recommendations.

Radish is best controlled by using 20 mL of Brodal® when the radish is at the cotyledon stage. Brodal® at recommended rates has often resulted in crop damage resulting from it washing into the furrows. When the lupins have at least six true leaves, 1 L of simazine or low rates of Brodal® can be used immediately after rain onto wet soil ridges to give follow up weed control. I stress that broad-leaf post emergence weed control in furrow sown lupins is still open to question.

To reduce the potential problem of simazine carryover in dry soil ridges I would open the ridges by crash grazing or a prickie harrow.

I recommend that anyone considering wide furrow seeding should talk to Chris Gillam, Dongara; Tim Officer, Coorow; Fred Rodgers, Moora; or Robie Craven, Badgingarra who are all using this method."