How to Grow Lucerne

Lucerne (Alfalfa) is a major forage crop both in New Zealand and around the world. Suited to irrigated and non irrigated land, Lucerne is a versatile & high yielding perennial crop with excellent forage quality aspects.

Establishment: Lucerne is best established during the spring months typically mid August through to late November. However early autumn sowings can also be successful. It’s important to select a paddock that is free draining and free of perennial weeds (i.e. couch, yarrow, browntop etc.) If these are present then they must be controlled prior to drilling your Lucerne stand. Planting Lucerne into a paddock that has had Lucerne in it 12 months prior will not work as Lucerne produces a chemical that inhibits both the germination and growth of same plant types this is called auto toxicity. Ideally you should allow your new establishing stand to flower before you first use the stand.

Fertility: A soil test should be done as soon as the paddock has been identified as a suitable paddock to sow Lucerne into. Use a deeper than normal (7.5 cm) soil testing probe to detect nutrient levels as Lucerne is a deep rooting plant.

The following base fertility levels are the most desirable:

- Soil pH: 6.0 to 6.4
- Olson P: 20-30
- Sulphate S: 10 – 12
- Mg: 8 – 10
- Aluminium: <15mg/kg
- Sodium: <6%
- CaMg: >2:1
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There are specific Lucerne drilling fertilisers available. Lucerne drilling fertiliser should include both molybdenum and boron in them. Rates per hectare will depend on your soil test results.

**Cultivation:** We recommend full cultivation as the best way to establish your Lucerne stand. This method gives optimum opportunity to correct any fertility issues and gives better weed control. Following the cultivation program you should have a seed bed that is firm, fine and moist. For weed control we suggest local advice should be sought well prior to sowing down your new stand. There is a wide range of pre and post emergence chemicals available in today’s market.

**Inoculation:** You can purchase your seed either as a bare seed option or coated. If bare seed is used you must use a specific Lucerne inoculent that is applied onto the seed soon before drilling. Some coated seed products have the inoculent included in the coat as well as a fungicide and molybdenum to give increased seedling survival. Specialty Seeds recommends the use of bare seed mixed with 10 kgs per hectare group AL Alosca granulated Lucerne inoculate.

**Sowing Rates & Depth:** Seeding rates of 11 - 15 kgs per hectare apply to either bare or coated seed. As Lucerne is a small seed it is best to sow at a shallow depth – either drilled close to the surface or dropped onto the soil. It should be covered with a roller or very light covering chain or mesh. Lucerne will not survive if drilled at below 25 mm.

**Pest control at Establishment:** Careful thought should be given to possible insect attack on the seedling Lucerne. During establishment aphids can pose a major problem. It’s very important to be able to recognize both these problems and their remedies. Either apply a granular insecticide during sowing, or monitor closely at seedling emergence for Lucerne aphid and control promptly.
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Weed control at establishment: It is critical to the success of your Lucerne stand to control all weeds during establishment. There is a wide range of products in today market suitable for this job. Weeds can be controlled either pre or post emerge.

Chemicals commonly used are pre emerge "Treflan" or similar and post emerge 6 - 8 weeks after sowing a mix of 2,4, DB and Preside for good results. We recommend that you discuss these options with your local chemical company representative prior to sowing down your new stand.

Cultivar Selection: There are three main types of Lucerne that classified according to their dormancy. Plant breeders worldwide are also using the new rating system for Lucerne. Under this new system 1 is the most winter dormant and 10 is the most winter active. You will see this new system used more often as time goes on.

Winter dormant: (Rating 1 to 4) Have little or no winter activity and have the potential to last the longest 8 years + if well managed. Usually show excellent disease resistance and normally the best quality as they have the highest leaf to stem ratio.

Semi winter dormant: (Rating 4 to 7) Will normally only produce 5- 10 % of their growth during winter. Have improved disease resistance and if well managed can last between 5 to 7 years.

Winter actives: (Rating 7 to 10) Can produce up to 20% of its growth during winter. Generally more susceptible to disease and therefore normally have a short stand life 4-6 years. Specialty Seeds will be happy to advice you on one of the many commercially available Lucerne cultivars.
Lucerne Maintenance: After the critical first year your Lucerne stand will live longer under a well managed system. A though understanding of fertiliser requirements, chemical weed / insect control and harvesting (silage or grazing) are all critical aspects of this.

Please don’t hesitate to contact Specialty Seeds if you have any questions or comments on this topic.