Pasture Management: Best management practices for spring lucerne establishment

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AusWest Seeds territory managers Greg Paul (left) and Daniel Clydsdale checking lucerne establishment and early vigour at a lucerne trial site in Aberdeen

Best management practices should be followed for spring lucerne establishment, irrespective of whether stands are irrigated or dryland, and the experience levels of managers and staff involved in the operations. Put any group of lucerne growers together and there will be a range of opinions and ideas around the critical factors for successful establishment and management. It is a long way from Chinchilla and Biloela in Queensland to Forbes in NSW and Echuca in Victoria. However the ultimate aim is a lucerne stand that will maximise both production and persistence.

Preparation should start well in advance and some critical factors to consider include; paddock selection, soil type, soil nutrients, irrigation layout and management, sowing time, variety selection, seeding rate, sowing depth, weed control, insect and disease control and stand management to maximise production and persistence.

Paddock selection and soil type

Use the best paddocks available for lucerne growing based on soil type, infiltration and drainage with preparation ensuring a good soil moisture profile. *Phytophthora* root rot, along with *Colletotrichum* crown rot are the two major diseases of lucerne in eastern Australia. There are no Lucerne varieties available that can withstand waterlogging, which is often associated with flooding. There is more flexibility with the sowing time of irrigated stands than dryland because water can be applied to assist with both germination and establishment.

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Rotation

Lucerne needs to be rotated with other crops to prevent carryover of diseases and insects such as white fringed weevil. Poor establishment cannot be improved by drilling more seed into established lucerne due to the phytotoxic nature of existing lucerne plants. High land values and the lack of other suitable soils on farms often leads to less than ideal break periods before replanting to lucerne.

Irrigation layout, drainage and management

An adequate water supply of suitable quality is needed along with good surface drainage to avoid waterlogging and ensure infiltration into the soil. Irrigation frequency may have to be altered depending on soil types, infiltration rates and the environment where the lucerne is being grown. Moisture stress can be avoided by scheduling irrigations. Flood irrigation fields should drain within 8 hours to prevent scald and ensure stand persistence. Irrigate before cutting and allow paddocks to dry sufficiently before machinery access. Do not flood irrigate straight after cutting. Irrigation equipment needs to be well maintained and with spray irrigation, ensure nozzles deliver adequate water and even coverage. Underground drip systems are the ultimate for efficient use of water and avoiding moisture stress.

Varieties, inoculation and seeding rates

Select varieties with the desired dormancy, best available disease and pest resistances and proven adaptation to your environment and management system. Seed quality is critical. Seed should be inoculated with the AL *Rhizobium* strain and seed fungicides applied to control seedling diseases such as *Pythium* root rot.

The Titan 7 and Titan 9 lucerne varieties are proving consistent and reliable performers for producing both quantity and quality and are adapted to a wide range of lucerne growing environments with their superior disease resistances.

Winter active varieties like Titan 7 (Dormancy 7) will provide longer stand life than highly winter active varieties like Titan 9 (Dormancy 9) when correctly managed. Seeding rates vary widely and range from 25-30kg/ha with full irrigation to 8-10 kg/ha with good dryland environments suitable for spring plantings.

Sowing depth, weed control and insect and disease management

Sowing depth is critical and should not be deeper than 10-15 mm. Appropriate weed control strategies should be developed and new sowings closely monitored for both insects and diseases. Cutting or grazing can be used to assist with disease management once stands are established.

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Stand management for production and persistence

Adequate stand densities are necessary, especially for irrigated hay production. Crown damage should be avoided with cutting or grazing (do not harvest or graze below 5 cm). Grazing should be minimised in hay stands and lucerne should be rotationally grazed. As a general rule, regrowth should not be cut until it reaches 20cm in height or 21 days after the previous cut.

For more information on spring lucerne establishment and the Titan lucerne range contact your local Stephen Pasture Seeds territory manager or call Stephen Pasture Seeds on 03 5335 8055.

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