

# GROWING LUCERNE

*With Marg & Rob Agnew*

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## Summary

- Lucerne is a deep-rooting, temperate perennial that provides great feed for sheep stock.
- Early, careful preparation is key to crop establishment, which if done right, can give your lucerne up to ten years of life.
- Lucerne represents a productive tool to address waterlogging, salinity and climate variability.


Marg & Rob Agnew have been farming east of Esperance for decades. They started by clearing virgin bush, and found that not long after, salinity was becoming a real threat to their land. The Agnew's began by planting Kikuyu to control water and wind erosion on their slopes and in their paddocks which had been a remarkable success. The only problem was the sheep just didn't want to graze it...

In the 1990s the Department of Primary Industries and Regional Development conducted trials on a new perennial crop, Lucerne (*Medicago sativa*), a deep-rooting, temperate legume that was well adapted to southern WA (DPIRD, 2018). Lucerne was proposed as a solution to waterlogging and salinity, thanks to its deep tap roots, and was praised on the high-quality green feed it produced (DPIRD, 2018).

While the Kikuyu was controlling the erosion, the Agnew's used Lucerne to manage their saline paddocks, and provide feed to their sheep. Marg & Rob now have a lot to say for the perennial's resilience and quality.

## THE KEY TO SUCCESS: ESTABLISHMENT

Lucerne is a weak seedling, it can't compete with insects, wind, or weeds during its first 6 weeks of establishment. This means that careful preparation is the key to a successful crop. The Agnew's begin preparation two years ahead of planting, approaching it much like growing annual crops, and choosing sites specifically in recharge zones. They removed the existing lucerne stand with Knockdown once in spring and twice in the following Autumn.



As lucerne's quality does deteriorate with time, after 5 – 10 years, the existing poor-quality crop does need to be removed, and re-established. Although not a favoured approach, creating a sterile paddock for the seedlings is necessary, and ensures the long-term return on investment.

Oaten hay is planted afterwards, acting as a cleaning crop, and reducing weed burden on the paddocks. Soil testing is always conducted to determine what fertilizers, nutrients and ameliorants are needed to establish the crop. Lucerne prefers a pH of 5 – 8 and Marg and Rob have also found Potash needs to be applied to the soil annually.

Marg & Rob sow in July - August, preferably with a rainfall event. A high seed rate (8kg/ha) is necessary to overcome their non-wetting soils. The next 6 weeks is critical, as the crop is highly susceptible to insect attacks. The Agnew's use markers on germinating seedlings to monitor this.

*"Rushing to graze the crop right away is a big mistake."*

The Agnew's wait 6 – 10 months before they are confident to graze and even then, they prefer light grazing for the first day. While the lucerne provides a healthy source of feed for the stock, it's also great to include a bit of hay in their diet for roughage, and the sheep love it!

In the drier summers, the sheep would only graze one section of the paddock, closest to the water and shade, so the Agnew's have found that rotationally grazing the paddock using electric mobile fencing to be extremely effective in ensuring an even coverage. With grazing, the Agnew's continue to manage insect attacks. Their most effective solution?

*"Get the mob in the paddock and graze it!"*



## How do you Know When it's Ready to Graze?

Pull on the base of a plant approximately 10cm tall. If it stays in the ground, it's tap root is established & it's okay to graze.

### REAPING THE REWARDS

The long term rewards from lucerne is in its benefits to your land. Lucerne is an extremely resilient crop; it responds very well in low rainfall and drought conditions. This is a trend the Agnew's are observing more and more in their region with the last three summers in the south east being very dry.

Marg & Rob have noticed that *"25% of the annual rainfall has not occurred outside of the growing season across Esperance"*, making water availability, in an already saline environment a growing concern. Climate variability is a significant threat to a sustainable agricultural future. With an average temperature increase of 0.5–1.2°C and a 6% reduction in rainfall projected for the Southwest of WA by 2030 (DPIRD, 2021). Lucerne may be ideal for building a resilient farming enterprise and the Agnew's are testimony to this,

*"Autumn was very dry... with just the mornings dew, the lucerne responded."*

Not only can lucerne withstand the drying climate the Esperance region is now experiencing, but it also plays a vital role in combatting waterlogging and salinity in paddocks.

By planting the crop in recharge zones, lucerne captures the rain where it falls, preventing water from sitting in the subsurface soil, eroding hill sides, and allowing salinity to creep into a shallow water table. Coupled with its 2m long tap root, keeping the groundwater table from rising is just another of its fantastic functions.

*"Lucerne is a fantastic resource."* It makes the most of the low rainfall the Agnew's are receiving and has reclaimed their country from salinity while making for some seriously happy livestock. The Agnew's take away message?

*"Treat lucerne with respect, kindness and care, and it will repay you handsomely."*

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