ZERO GRASS TRIALS:

PASTURE SOLUTIONS THAT ARE GOOD FOR COWS, BUSINESS AND THE ENVIRONMENT

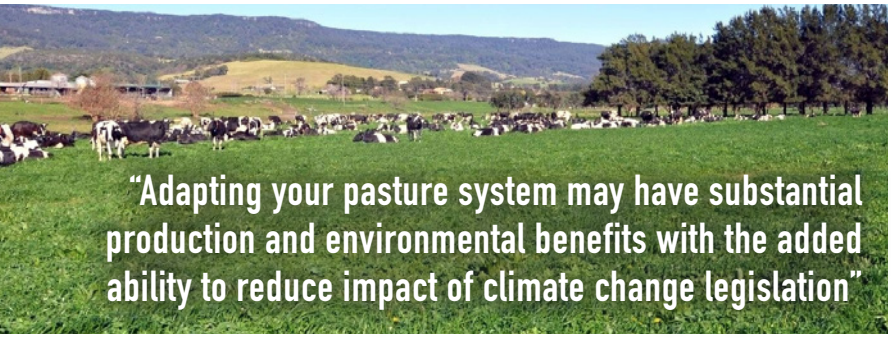
BACKGROUND

Traditionally dairies located on the NSW coast use a pasture base of kikuyu-ryegrass rotation. The benefit of these grasses is that they produce forage for most of the year, and are wet weather, drought and weed resilient. However, this system is constrained by a need for re-sowing annually and high nitrogen dependency with variable yields and feed quality.

In March 2012 as part of a Clearing the Carbon Confusion field day, Dairy Consultant, Dr Neil Moss spoke about some innovative pasture solutions using the successes in the pasture research program at Lemon Grove Research Farm. This research is being undertaken by the multi-award winning Clover Hill Dairies in Jamberoo in partnership with SBScibus. Clover Hill Dairies has dedicated 12 hectares to trialing, comparing and quantifying new dairy pasture systems with traditional grass based systems. This has been made possible through research funding under the Australian Government's "Caring for our Country" program. The research commenced in early 2011.

The dairy business was keen to:

- Reduce dependence on high nitrogen use pastures, given the soaring prices of nitrogen fertilizers and impact on footprint of nitrogen fertilisers
- Reduce feed gaps being experienced in early summer and autumn which also allow them to take advantage of higher milk prices in Autumn and Winter
- Improve low quality forages in summer
- Lift milk production from pasture
- Utilise moisture and nutrients from deeper in the soil



"Adapting your pasture system may have substantial production and environmental benefits with the added ability to reduce impact of climate change legislation"

CLEARING THE CARBON CONFUSION FIELD DAY

WHAT Field Day

WHERE Lemon Grove Research Farm Jamberoo, NSW

WHEN March 2012

SPEAKER Dr Neil Moss, Dairy Consultant SBScibus

KEY FINDINGS

Legumes and herbs are a viable alternative. Lemon Grove Research Farm used oats followed by a legume/herb pasture, resulting in:

- Reduced requirement for Nitrogen,
- Deeper soil moisture and Nitrogen extraction because many are tap rooted.
- Lemon Grove Research Farm appears to have a resilient pasture system that is giving as much feed in 2012 as the traditional kikuyu based pasture system had commonly utilised in coastal NSW.
- The feed quality is dramatically improved and most importantly, nitrogen fertiliser usage has dropped by over 50% at this stage.
- Effects of other soil pests such as stem root nematode need to be evaluated
- Weeds can still be a challenge!

LESSONS LEARNED

- Need to control broad leaf weeds in oats in Year 1.
- Need to be careful not to be too aggressive with over sowing annual ryegrasses. There is a risk of lost clover and legume plants in winter and spring if rye too dominant
- Need to control grass weeds better in summer 1 and 2. Need to be prepared to take annual rye out in late November.
- Need to be careful with N use and grazing management of ryegrasses when oversown due to risk of shading and competition.
- Water-logging is a major risk—drainage in critical.
- Need to improve effluent application.

SOWING METHODS

- Knockdown herbicides in summer prior to crop- prefer 2 sprays.
- Remove trash if necessary.
- Direct drill forage oats in late February.
- Control broadleaf weeds, graze, fertilise
  - Targeted →3 grazings before spraying out again in late winter.
- Spray out late winter.
- Sow pasture mix in Late July/August.

SOWING

- Direct drill with disc seeder in early August.
- Consider use of aeration in tighter/more compacted soils
- Mix used:
  - 8.5kg/ha Stamina GT6 Lucerne
  - 4kg/ha Bulldog red clover
  - 1.5kg/ha Kopu II white clover
  - 1.5kg/ha Will ladino white clover
  - 2kg/ha Tonic Plantain
  - 2.5kg/ha Puna Chicory.
- First grazing in 10-12 weeks then every 4-5 weeks thereafter.

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MORE INFORMATION

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