

Keeping you up-to-date with progress and developments in the EverGraze project

Issued quarterly, EverGraze Update welcomes your feedback, contributions and comments. It is produced by EverGraze, a Future Farm Industries CRC, MLA and AWI research and delivery partnership.

EverGraze is developing new grazing systems to increase profits and improve catchment health. With more perennials and better livestock, EverGraze aims to increase profitability of livestock enterprises by up to 50% while simultaneously improving natural resource outcomes of improved water management, perenniality, biodiversity and soil health. There are experimental sites in Western Australia, Victoria and New South Wales, with a network of Supporting Sites evaluating new ideas on farms.

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Supporting Sites

Evaluating impacts of summer perennials on ewe fertility

Nine producers in the Murrumbidgee CMA region of NSW are taking part in an innovative assessment of the effect of grazing lucerne or chicory immediately prior to mating in autumn on conception rates of merino ewes.

The Murrumbidgee CMA is funding the trial as part of the EverGraze Supporting Site network. Project Officer with the CMA Vivien Thomson is working with the Bookham Agricultural Bureau to compare conception rates of ewes grazing either lucerne or chicory for 10 days immediately prior to mating with a similar group of ewes that graze dry pastures prior to mating. All ewes will be joined as one mob while grazing dry pasture.

Vivien said that the Wagga Wagga Proof Site had evaluated the use of summer active perennials and found that synchronised ewes that grazed summer active perennials prior to

mating had 10-20% higher conception rates than those grazing on dry pasture. She said that the CMA is keen to encourage the use of deep rooted perennials in the region to reduce recharge.

“However, producers need to get a direct benefit from the lucerne and the conception rate response measured at the Proof Site is exciting” Vivien said. “We now want to see if the priming response occurs with unsynchronised ewes in larger mobs on commercial farms” she added.

Further information about the Murrumbidgee Supporting Sites can be obtained from Vivien by email at vivien.thomson@cma.nsw.gov.au

Improving native pastures east of Gunnedah

The Tambar Springs Producer group are setting up a Supporting Site to determine if changes in grazing management, fertiliser and addition of pasture legumes can improve the quality of native pastures in the area. Initially a Prograze group, the Tambar producers are now looking to an alliance with the Namoi CMA and EverGraze to find new ways to improve their grazing systems.

Namoi CMA Catchment Officer Simon Turpin said that the group was looking for both production and NRM benefits from the new pasture system.

“We expect the combination of fertiliser, legumes and controlled rotational grazing will lead to improved quality and proportion of desirable perennials and increased pasture production leading to greater animal output” Simon said.

In addition, the group believe that the new system will also provide better ground cover reducing erosion and improving water quality and soil health. Monitoring at the site will include proportion of desirable perennials and paddock production.

Further details of the Tambar Springs EverGraze Supporting Site can be obtained from Simon by email simon.turpin@cma.nsw.gov.au

Farmers trying Tall Fescue with beef cattle

The Hamilton Beef Profit Partnership group in conjunction with the Glenelg Hopkins CMA and Hamilton DPI staff are setting up an EverGraze Supporting Site south of Hamilton to compare the growth and productivity of lucerne and Tall Fescue with the perennial ryegrass pastures normally grown in the area.

DPI Beef Extension Officer with the group Emma Weatherly said that the group visited the EverGraze Proof Site at Hamilton and was impressed with the productivity being achieved but wanted to try the ideas in a more commercial setting.

Janet Angel from “Leameah” near Macarthur is hosting the Supporting Site and is looking for ways to provide high quality summer pasture to finish bulls prior to sale in autumn. Janet hopes the Tall Fescue will compliment an existing lucerne pasture sown about seven years ago.

The Tall Fescue will be sown in spring with white clover and chicory and over sown with subterranean clover in autumn 2008. Measurements on the site will include pasture persistence, composition and ground cover at critical times of the year. In addition, Janet will maintain a diary of stock grazing the paddocks and inputs to the stock or pastures.

For further details about the Hamilton Beef Profit Partnership and the Supporting Site contact emma.weatherly@dpi.vic.gov.au

Proof Sites

Tamworth monitoring underway

The Tamworth Proof Site is actually 18 different farms where a range of livestock and pasture parameters will be measured.

The EverGraze Proof Site Leader Greg Lodge said one or two mobs of sheep have been

selected on each property and weights and fat scores assessed. Sheep and pasture measurements will be taken regularly as the sheep move from paddock to paddock across the farm

“The sheep selected range from self replacing flocks, to cross bred flocks and lamb traders. Pastures range from 100% native pasture to 100% forage cropping (forage and cow peas in summer), the site is covering a very wide range of enterprises,” said Greg Lodge.

The Proof Site team is also surveying livestock producers in the area, as well as public and private advisers who provide advice to producers in northern NSW.

“The surveys will help to establish attitudes within the sheep industry to type of pastures grown, the enterprises run, and how well feed requirements meet with pastures grown.

“The surveys will provide us with benchmark values for pasture and animal production, and the properties we monitor will provide the hard data as to how livestock match to forage and pasture resources”, Greg added.

The project will also undertake research on native perennial grass species, and are working to develop a tool to help producers self assess the changes in biodiversity on their farm.

Tamworth Site Leader Greg Lodge, T: (02) 6763 1176, E: greg.lodge@dpi.nsw.gov.au

Albury Wodonga native pasture research

The Albury Wodonga Proof Site team are setting up two experiments to determine cost effective ways to improve the use of native pastures in northern Victoria and southern NSW. The experiment near Chiltern in NE Victoria will test different combinations of grazing intensity and fertiliser to improve production and composition of native pastures. The site near Holbrook will test how grazing and resting separate areas of phalaris and native pastures can improve production and NRM values on both pasture types.

A field day will be held at the Chiltern experimental site on Tuesday 27th November 2007 to allow people to see the site and discuss treatments being imposed.

Chiltern Site: Meredith Mitchell, DPI Victoria, T: (02) 6030 4579 E: meredith.mitchell@dpi.vic.gov.au

Holbrook Site: Jim Virgona, CSU Wagga Wagga, T: (02) 6933 4174 E: jvirgona@csu.edu.au

Orange site treatment details

The Orange Proof Site represents the Upper Lachlan, Lachlan Slopes, Upper Macquarie and Mid Macquarie sub catchments and will test the hypothesis that high-intensity grazing of native pastures improves perenniality, animal production and farm profitability, while reducing groundwater recharge and having positive NRM outcomes (eg. biodiversity).

The research will also test integrating native pastures with other farm forage resources to improve whole-farm profitability and whether position in the landscape will have a greater influence on pasture productivity and NRM health than grazing system.

Measurements on the native pastures will include composition persistence, quality and quantity. Soil assessment will be for fertility (chemical, physical and biological) and moisture content. Animal measurements include wool quality and quantity, lamb growth rates and ewe body weight. From a biodiversity perspective, invertebrates will also be observed.

The Orange Proof Site is made up of two experiments. At Panuara, 25km SW of Orange the 40 hectare site is currently being evaluated with an EM survey, soil testing and pasture assessment to determine where the fencing will go.

The native pasture at Panuara is made up of microleana, red grass and danthonia, and the site is non-arable. This experiment looks at livestock production and landscape variability and will investigate different grazing systems and the effect landscape has on the system.

Grazing system	Paddocks in the trial
Low intensity	1 paddock
Medium intensity	4 paddock rotation

High intensity	20 paddock rotation
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CentrePlus ewes joined to White Suffolks will graze the Panuara site and lamb performance under the different grazing systems will be measured.

The second research site at Byng is a red grass dominant pasture. The experiment starting in spring will look at the impact of fertiliser and grazing system on pasture composition and production.

There will be 3 levels of grazing intensity and half of each plot will have fertiliser applied:

Low intensity	Grazed 100% of the time, 5 DSE / ha stocking intensity
Medium intensity	Grazed 25% of the time, 20 DSE / ha stocking intensity
High intensity	Grazed 5% of the time, 100 DSE stocking intensity

Orange Proof Site team leader is Warwick Badgery, T: (02) 6391 3814, E: warwick.badgery@dpi.nsw.gov.au

Latest results

Albany - lamb mortalities low this year

Last year 34% of all lambs born died resulting in a marking percentage of 119%. This year losses have been far lower with only 15% of lambs dying and a marking percentage of 125%. So why the difference? Causes of death are shown below.

Reason for lamb mortalities	2006	2007
Mismothered	61%	25%
Dystocia (birthing difficulties)	17%	26%
Stillborn	8%	6%
Killed by fox	3%	11%
Ewe died	2%	-
Aborted	-	6%
Unknown	9%	26%

Mismothering was much higher last year due to poor rainfall, low pasture availability and the need supplement twin bearing ewes during lambing. This year pasture growth was again poor due to the dry conditions. However, ewes were fed in a feedlot to save sufficient pasture for lambing without the need for supplement. This tactic resulted in a lower incidence of mismothering.

For further information about the Albany EverGraze site contact psanford@agric.wa.gov.au

Wagga Wagga – summer perennials boost ovulation

Interim results from two years research at Wagga suggest that farmers could boost ovulation rates in ewes by up to 20% simply by grazing summer-active perennials pre-joining. The Wagga Proof site has increased ovulation rates by grazing synchronised merino ewes on lucerne or chicory for nine days prior to ovulation, compared with dry phalaris or dry phalaris plus lupin grain. This was despite the drought of 2006 and low levels of green herbage available in the lucerne or chicory pastures. The measurements were undertaken in late summer early autumn each year.

The team now want to know whether the same response can be achieved by farmers using unsynchronised ewes. The Murrumbidgee CMA is working with the Wagga team and setting

up on-farm comparisons of ovulation rates of ewes grazing dry pastures compared to summer active perennials (See Supporting Site details this issue)

Ovulation rates of ewes at the Wagga Proof Site are shown below:

	2006	2007
Chicory	1.45	1.38
Lucerne	1.60	1.25
Phalaris + 500 g/day Lupin grain	1.35	1.32
Phalaris	1.45	1.13

For further information about the Wagga Wagga EverGraze Proof Site, contact Michael Friend mfriend@csu.edu.au

Hamilton - lucerne surprises researchers

The growth rate of lucerne (SARDI 7) at the Hamilton EverGraze site has surprised the local researchers. Normally lucerne is seen as a spring and summer grower but results over the last 2 winter's show it has performed nearly as well as perennial ryegrass sub clover pastures from the autumn break through until spring.

Growth rates of the different pasture species over autumn winter for the last 2 years are shown below:

Pasture type	Growth kg DM/ha/d winter 2006	Growth kg DM/ha/d winter 2007
Lucerne/sub clover	52	45
Perennial ryegrass sub clover	41	65
Tall Fescue/sub clover	48	43
Chicory Sub clover	24	25
Kikuyu/sub clover	30	53

Agronomist with the Hamilton EverGraze site Steve Clark said that he was surprised with the high growth rate of the lucerne in winter.

"SARDI 7 is a new cultivar selected for reasonable winter growth rates. To ensure good productivity, the site received 5 t/ha lime at establishment and is rotationally grazed to ensure a good recovery period after grazing" he said.

In addition, the lucerne survived well through the drought whereas the ryegrass pastures lost over 50% of plants.

Further information about lucerne at the Hamilton site contact: E: steve.clark@dpi.vicv.gov.au

Calendar and Events

Wagga Wagga Proof Site:

Field Day - 19 October 2007, 10am-2pm. More information from Jim Meckiff, T: (02) 69424957 or E: jim.meckiff@dpi.nsw.gov.au

Albury Wodonga Proof Site:

Field Day – 27 November, 10am - 12 noon - site opening and introduction to the Albury Wodonga proof site at the Chiltern EverGraze experimental site, Barambogie Rd, Chiltern, contact: Meredith Mitchell meredith.mitchell@dpi.vic.gov.au

Watch for EverGraze articles featuring in the next MLA Feedback and Kondinin Group's Farming Ahead.



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