

## Autumn Update Shapes Up for Success

Be sure to mark the Evergreen Autumn Update planned for March 20<sup>th</sup> on your calendar as it is shaping up to be an informative and stimulating day for anyone interested in perennial-based farming systems.

Those attending will learn about innovative perennial-based systems being put into practice at two locations. A field trip to Graham and Colin Johnson's property at Dandaragan will provide an opportunity to see integration of perennial legumes and grasses into a cropping system as well as a whole farm grazing management plan in action.

At Bibby Springs we will revisit the Department of Agriculture's perennial grass and legume trial, as well as paddock-scale sowings of perennial pasture and high value wool production. Those who attended the inaugural field day last October will see how these systems have fared over summer.

Five farmers growing perennials throughout the State will share their experiences during a lunchtime Farmer Forum. Stuart McAlpine of Buntine will share with us his experience of including perennials in a low rainfall cropping system while Phil Chalmers of Esperance will talk us through some perennial species suited to the south coast.

A Technical Forum will also provide an opportunity for attendees to learn about fertilising perennials to maximise animal production and to discover Evergreen Online, the new web-based discussion board for Evergreen members.

An opportunity for questions to a Speakers Panel will wrap up the day.

The Autumn Update will be held at the Badgingarra Community Centre, with registration kicking off from 8.00 to 8.30am (sharp)!

The cost to attend is \$15 for members and \$35 for non-members. Lunch is included in this price.



For further information please contact :

Alison Lullfitz at Evergreen Farming Administration  
on 9475 0753 or  
evergreen@consultag.com.au.

*October Field Day attendees view Department of Agriculture perennial grass and legume trial at Bibby Springs*

### Inside this issue:

From the President <i>David Monks</i>	2
Are Tropical Legumes Worth A Go? <i>Tim Wiley</i>	3
Internet Speeds Up Evergreen Learning <i>Ross Colliver</i>	4
Trials and Demonstrations in 2001 <i>Tim Wiley</i>	5
On the Road With the Tag Man <i>Brad Leeson</i>	7
A Successful Combination - Kikuyu & Strawberry Clover <i>David Monks</i>	7
Pasture Diversity Increases Production <i>Tim Wiley</i>	8
Peel Harvey Field Day <i>Phil Barrett-Lennard</i>	9
Agronomy of Sub Tropical Species <i>Phil Barrett-Lennard</i>	11

**2002  
EXECUTIVE COMMITTEE**

**President**

David Monks - Badgingarra  
Ph: (08) 9652 4004, fax 02  
[dmonks@bigpond.com](mailto:dmonks@bigpond.com)

**Committee**

Val Deutscher - Badgingarra  
Ph: (08) 9652 6020, fax 30  
[cowla@dingoblue.net.au](mailto:cowla@dingoblue.net.au)

Gary Peacock - Badgingarra  
Ph: (08) 9652 9030, fax 30

Tim Wiley - Jurien Bay  
Ph: (08) 9652 2225, fax 2190  
[twiley@agric.wa.gov.au](mailto:twiley@agric.wa.gov.au)

Bob Leeson - Lancelin  
Ph: (08) 9655 1785  
[leeson@bigpond.com](mailto:leeson@bigpond.com)

Joe Felber - Badgingarra  
Ph: (08) 9652 4025  
[felber@westnet.com.au](mailto:felber@westnet.com.au)

Phil Barrett-Lennard - Gingin  
Ph: (08) 95754013  
[pbl@iinet.net.au](mailto:pbl@iinet.net.au)

John Berkfield - Badgingarra  
[emudowns@wrcag.com.au](mailto:emudowns@wrcag.com.au)

**Administration**

Evergreen Farming Admin  
Suite 5, 110 Robinson Avenue  
BELMONT WA 6104  
Ph: (08) 9475 0753, fax 0322  
[evergreen@consultag.com.au](mailto:evergreen@consultag.com.au)

Visit us online at:

[www.evergreen.asn.au](http://www.evergreen.asn.au)

## From the President

DAVID MONKS, BADGINGARRA

Welcome to the first edition of Evergreen Farming.

It is an exciting time for us all as we aim to make our farming ventures more productive and sustainable. We now have over 100 members throughout WA and interstate and are off to a healthy start. Evergreen farming is perfectly positioned to secure research funding and satisfy farmers' needs to innovate across Australia.

October 26<sup>th</sup> 2001 saw our inaugural field day and official launch

of Evergreen Farming at Badgingarra. In January, Evergreen co-hosted another field day in the Peel-Harvey area along with the Department of Agriculture. Considerable interest was shown in both events with over 130 attendees at Badgingarra and 50 at Peel-Harvey. From Northampton to Esperance there is a hunger for new ideas. Both field days provided an opportunity for farmers and researchers to witness working and successful Evergreen systems. Members are now gaining the benefits of 10 years of costly research and farmer experience to incorporate into their own systems.

In the coming week, all members who have given us an email address will receive an invitation via email to the new Evergreen discussion board. I take this opportunity to welcome all members to make the most of this forum and to provide any comments or suggestions on this and the newsletter to us.

With the resignation of Phillip Panizza as President due to other commitments, I have become acting President, with Bob Leeson acting Vice President. I would like to thank Phillip for his time, energy and vision that went into establishing the organization.

I would like to thank the committee for their hard work in organising our events and other activities to date, and for the efforts they are currently putting into making sure our Autumn Update on March 20 is again an outstanding success.

I would also like to thank our major sponsor CSBP futurefarm for their support, without which we would have struggled to get this far.

In closing, our core business is communication and the sharing of ideas amongst members. The more members we have, the greater benefits for all. Please invite others to join.

I look forward to seeing as many of you as possible at the March Update in Badgingarra and welcome you again to Evergreen Farming. Enjoy the newsletter.



Photo courtesy of Farm Weekly

## \*\*Newsflash: Evergreen Approaches AWI\*\*

Evergreen Farming has submitted a funding proposal to Australian Wool Innovation (AWI). A successful submission will enable :

- Evergreen to test and demonstrate a wide range of perennial pasture species options across a wide range of soils and environments,
- Provide reliable sowing and establishment packages for adopting perennial-based systems
- Develop profitable pasture and crop options that maximize use of available summer moisture, and
- A suite of other outcomes resulting in far-reaching benefits to members and the farming community as a whole.

# Are Tropical legumes Worth a Go?

Tim Wily, Department of Agriculture WA, Jurien

Productive farming systems require a legume to drive both crops and pastures. Traditionally we have used annual legumes but there is growing interest in perennial legumes. Lucerne is one such perennial legume currently being tested extensively across WA. Members of Evergreen Farming and Department of Agriculture researchers have also been trialing some sub tropical perennial legumes in the West Midlands.

There are two small stands of tropical legumes that have persisted for 10 years in the West Midlands. Robin and Val Deutscher at Badgingarra have the tropical legume 'Siratro' growing with the perennial grass *Setaria* on a gravelly loam on the mid slope of a hill. This stand has been grazed commercially since 1991. Siratro is a climbing vine that creeps up around the tall *Setaria*. This mix will work well as long as a grazing rotation is used.

West Three Springs, Mingenew, Kalannie, Calingiri and New Norcia. Selection of species for the trial was based upon finding of Evergreen Farming members while on their Queensland study tour in 2000.

The trials were sown in September but there was no germination for 2 months. Some species began germinating over the summer, however, and it is thought there should be enough plants to evaluate their persistence. Poor germination was put down to the seed not being scarified prior to sowing. More work is required on understanding establishment but it should not be too difficult as the seeds are generally fairly large.

In these trials *Lotononis* and *Wynns Cassia* have germinated the best and are growing vigorously. *Wynns Cassia* has a reputation in Queensland for being very tough and surviving on sandier



Geoff Moore, Department of Agriculture and others inspect the tropical legume 'siratro' growing on Deutscher property, Badgingarra.

Another tropical legume, *Lotononis*, has survived since 1991 in a trial sown by Jesse Skoss at Eneabba. This site is sand over gravel just above a waterlogged valley floor. While the site has not been grazed until recently the *Lotononis* has been very productive each year. *Lotononis* seems to be capable of regenerating well from seed.

Last spring, Department of Agriculture researcher, Geoff Moore, included a range of tropical legumes in some 'alternative perennial legume' trial sites. Sites were sown at Bibby Springs,

soils. More species testing is planned by Evergreen for the coming year, including seed that Geoff Moore is hoping to get from breeding programs in the Eastern States.

Farmers who are looking to sow perennial pastures may want to include some of these tropical legumes to test their suitability for WA. Seed can be sourced through normal seed suppliers but give them plenty of time to bring seed through the WA quarantine system. Also remember to order the appropriate rhizobium when you put your seed order in.



# Internet Speeds Up Evergreen Learning

Ross Colliver E-communication Facilitor

The Internet promises much more than it delivers. If you've ever walked away from your computer in disgust, having wasted hours trying to find something on the Internet, or having failed to get your browser working, or spent two hours clearing your email.... you know what I mean.

Over the last 8 months, Evergreen Farming has been part of a Farmbis project working out how farmers can get more value out of Internet communication. Ross Colliver, a facilitator of action research, has been working alongside the group, listening to what EGF wants to achieve, making suggestions, and helping sort out the difficulties encountered. We've put a lot in place:

1. A public website where basic information is stored and can be read or printed off. The website let's people know what Evergreen is about and gives them some of the knowledge EGF has developed.
2. A discussion site, for members only, where theres news of up-coming events, and discussion between members about varieties, establishment, pasture management issues and so on.
3. Training for EGF members in how to use email and the Internet.
4. EGF Committee now handles a lot of its business through email, and members with email are posted up-dates on work in progress and coming events.

The next big step is our first Virtual Field Day. Starting right after the 20<sup>th</sup> March Autumn Update, we're discussing photos on the site. What has happened over summer to trial sites planted in Spring 2001. What's working? What's been a miserable failure? At the discussion site, you will be able to ask questions of the farmers from those properties, and give your ideas if you've trialed the same varieties.

If you're already on email, you should now have an invitation to the discussion site run at Community Zero. If you haven't received your invitation, drop an email to:

**evergreen@consultag.com.au.**

And if you're not on the Net ... come on in, there's plenty of us out here!

*Ross will be demonstrating Evergreen Online at the Autumn Update on March 20.*



## Autumn Update

Wednesday 20th March 2002

*Badgingarra Community Centre*

Cost (inc. GST): \$15 members, \$35 non-members  
(includes lunch)

**8.00 am Registration**

**8.30 am Concurrent Session 1**

**11.45 am Lunch**

**12.15 pm Farmer Forum**

Five farmers share their experiences with implementing Evergreen systems throughout WA

**12.50 pm Technical Forum**

Brian Leach (CSBP)- Fertilising Perennials for Animal Production

Ross Colliver - Demonstration of Evergreen Online

**1.10 pm Concurrent Session 2**

**4.15 pm Speakers Panel**

**4.45 pm Drinks**

*Concurrent Sessions include*

*-Field Trip to Graham and Colin Johnston's property, Dandaragan, to look at integration of lucerne, tall wheat grass, summer perennial grasses and sorghum into a cropping system, as well as a whole farm grazing management plan.*

*-Field Trip to Bibby Springs looking at Department of Agriculture perennial grass and legume trials, paddock-scale sowing of perennial pasture & high value wool production.*

For more information please call Evergreen Administration on 9475 0753



# Feed When it Matters

Gary Peacock, Rosehill, West Badgingarra, WA

Prior to sowing with a mix of perennials species including Rhodes Grass, Blue & Green Panic, Setaria and Tall Wheat Grass in the spring of 2000, the paddock shown in the photo consisted of a poor annual pasture of some Sub Clover, but mainly Cape Weed, Silver Grass, Barley Grass, Erodium and Water Weeds. There were also several large areas of candlewick rushes and reeds. The paddock averaged approximately 4 to 5 DSE / ha for a 12 month period.



Since sowing the perennial pasture in 2000, the paddock has been grazed since April 2001. In June 2001 a mix of annual pasture species were sown over the paddock and a fertilizer application supplying 15 kg/ha of phosphorus, 36kg/ha nitrogen and some muriate of potash was applied.

A mixture of rotational grazing and set stocking has been utilized on the paddock with a number of different objectives:

- In April the paddock was used to take advantage of a seasonal flattening out of store stock prices. By having green grass at a time of the year when most graziers are running out of feed I was able to buy in woolly cull Merino hoggets at just under \$14/hd. The sheep were shorn, fattened and resold at an average sale price of \$33.00. They cut around 3 kg of wool. They were carried at a stocking rate of 10.8 DSE/ha.
- Again during the drought of winter 2001 I was able to buy droughted sheep from the central wheatbelt because I had quality feed on hand in the form of a perennial pasture. I purchased 388 merino ewes with 480 first cross lambs at foot for \$45.00. The ewes were shorn with 6.5 months of wool on them and cut 2.5 kg/hd. This sold in Sale F16 for \$4.31/kg and the ewes were then sold to the mutton trade for an average price of \$41.25. To date 435

lambs have been sold for an average price of \$60.80 with 53 still on hand.

- In November once again I bought in woolly merino wether lambs from a farmer who was unable to get them on to stubbles due to "unseasonal" early summer rains holding up his harvest. This summer rain was of course boosting the growth of my pasture. He had to reduce stock, which gave me an opportunity. The lambs are currently running on the pasture, growing wool and fattening. I estimate that they have probably increased in value from the \$28.50 purchase price to around \$55-60 with their wool.

In summary, the 42 ha paddock has averaged just on 10 DSE/ha since first undertaking grazing in April 2001. It still has in excess of 2.5 t/ha of dry matter on it and is growing as I write this. I believe that the stocking rate will increase as the perennial pasture becomes more established and we better utilise our sub soil moisture in the summer. This lowering of the water table will also make our winter annuals far more productive.

The paddock's year round cover makes it no longer prone to wind erosion and the deep-rooted perennial pasture is improving soil health. In addition, we are making a much better use of what can be our biggest problem - excess water.

As a consequence of successes so far, I sowed another 65 ha of perennial pasture as well as 50 ha of summer active annual (Millet) in spring of 2001. I have also earmarked another 50 - 75 ha of perennial species and between 50 - 100ha of summer annual for 2002.

## COMPOSITE BULLS

Red Angus x South Devon

Early maturing with milk, muscle & growth

\$2200

Philip Barrett-Lennard (08) 9575 4013

*"cattle that work"*

# Trials & Demonstrations in 2001

Tim Wilely, Department of Agriculture, Jurien

## **Trials**

Evergreen was involved in a number of trials and farmer demonstrations sown during 2001. Department of Agriculture Researcher, Geoff Moore, sowed perennial trials sites at Bibby Springs, West Three Springs, Mingenew, Kalannie, Calingiri and New Norcia with the assistance of Evergreen Farming, the Mingenew Irwin Group, the Liebe Group and Victoria Plains LCD. These sites include new species of sub tropical perennial legumes and grasses. The sites ranged from low lying wet areas to gravelly hilltops and a heavy clay. Geoff also established a number of additional sites at Bibby Springs including a large number of temperate perennial legumes.

Some species that are showing promise in these trials include:

- Tropical legumes – Lotononis and Wyna Cassia
- Tropical grasses - Rhodes, Setaria, Premier Digit grass, Signal grass Jumbo sorghum, Bambatsii Panic, and Jarrah grass
- Temperate perennials – a range of Lotus species, Dorycnium species, Galega, Melilotus, and lucerne

A number of Evergreen farmers were involved in the evaluation of pasture measurement data gathered using satellite imagery. Evergreen members also helped to organise sites at Badgingarra for CSIRO to test new equipment which will go into space shortly.

## **Farmer demonstrations**

About 80 farmers throughout the Northern Agricultural Region have sown paddock scale demonstrations of pure lucerne stands, fodder crops and mixed perennial grasses. Demonstrations ranged from less than 10 ha to 500 ha. The demonstrations covered a wide range of soil types and rainfall zones, from the high rainfall Gingin area to the very far northeast corner of the Wheatbelt at Yuna.

Evergreen has assisted a number of other farmer groups with selecting sites and species for these demonstrations. State Salinity Council funding enabled the Victoria Plains LCD and the Liebe Group to subsidise high water use pasture demonstrations. The Mingenew Irwin Group, northern Top Crop groups and the Lake Indoon Catchment Group were also involved in organizing the farmer demonstrations.

Dean Teague, seed wholesaler, gave invaluable assistance for the demonstrations by organising seed importation from the east. Seed was distributed through the grower groups and retailers such as Great Northern Rural. The Western Australian Lucerne Growers Association (WALGA) gave advice to farmers on establishing lucerne during on farm paddock inspections.

Most of the demonstrations have had successful establishment. Key findings were:

### Weed Control

- Weed control is essential when sowing any perennial. Established weeds and pasture must be killed totally before sowing
- Weeds that germinate after the perennials are sown are not as competitive
- There was an unusual amount of rye grass germinating late

in spring this season

- Weed control is essential for lucerne establishment

### Establishment

- No till seeders with knife points and press wheels gave the best establishment. Triple disc drills have not been as successful with perennial grass seeds as they are with annual legumes
- Early sowing (ie July to early September) of the sub tropical grasses gave no advantage, as the soil was too cold for germination
- Wet areas in paddocks gave the worst establishment. The reason for this is unclear. It could be due the wet areas staying cooler due to evaporation, or possibly the accumulation of salt on the soil surface as a result of evaporation
- Establishment in the eastern wheatbelt's low rainfall areas has been as good as in high rainfall areas. In fact, production over the first summer was often better as they had more summer rain than near the coast
- Sorghum and millet establishes well on most soil types and has given excellent production where there is shallow water tables or summer rain
- Millet should only be sown at low rates (<4 kg/ha) when used as a cover crop for other perennials
- A small number of sites have had no establishment, the reasons for which are unclear
- Lucerne will grow on most soil types
- Sowing mixtures of grass seeds gives very diverse pastures. Generally the pasture composition has reflected the seed mix
- New grass species such as Premier Digit grass and Signal grass are doing well so far
- Rhodes grass is doing well on salty areas once the plants become established
- On exposed and very sandy soils a low rate of millet helps to reduce wind erosion

### Pests

- Aphids, Red Legs and a range of caterpillars caused some damage to lucerne
- A number of sites were attacked by the 'weed web worm', which hides below the ground during the day. This problem can be found by looking for a web around the base of the plant
- Rutherglen bugs will kill lucerne seedling in late spring and summer. Rutherglen bugs can also be difficult to find as they hide underneath leaves
- Grasshoppers caused little damage to the subtropical grasses, but severely grazed Tall Wheat Grass
- Kangaroos are the major pest of new perennial grass pastures

### Grazing

- Large numbers of stock are required to properly graze the very productive fodder crops
- Sites with shallow water tables, or summer rain, were capable of fairly heavy grazing by the New Year
- On drier sites grazing at low stocking rates in January has caused little damage to the stand and helped to control

## On the Road with the Tag Man

BRAD LEESON, TAGASASTE SEEDING SPECIALIST

*In December I viewed Tag plantings from near Kalbarri in the north, to Yuna in the north-east, through the Great Mid West and out to Dowerin in the east.*

### Some General Observations

Overall its been a kind season for Tag establishment compared to the 2000 season. In 2000 the season showed once again that insect control and pest control (stock, rabbits & kangaroos) are still major factors in the survival of new plants.

Main problems seen in the 2001 season were locusts out east and wingless grasshoppers in the mid west. Some spraying for red-legged earth mite also took place as a precaution.

Some exceptional growth rates were seen in some new areas of Tag planting up near East Binu, with some plants reaching up to half a metre in height after 3 months, and over one metre after 7 months. One farmer trimmed his Tag in December using his header.

A Tag root was excavated at one property that was over one metre long after 3 months. Does this show a past history of fertilisers that have moved in the soil profile below the annual root zones? Is it the general advantageous climate? Or maybe the beautiful yellow Sand Plain?

We will follow this years seeding program with great interest.

The trip to Kalbarri brought me back to reality. The Tag here is 2 km from the coast, planted in high Alkaline sand with plants struggling to survive in the December heat. Plants were between 2 and 6 inches high. Stay tuned for my next article to see if they have survived the summer.

The plantings from Dongara through Mingenew further south are all pretty even. One farmer is considering the possibility of some mice damage to some Tag. I've seen this occur occasionally in the past - where the stems are still green but the leaves have been stripped. I will let you know my thoughts once I've seen the affected area in March.

### A Tip from the Tag Man

If you plan to seed Tag this season, NOW is the time to be controlling those pests like rabbits and roos. Also clear those paddocks up – get rid of the wattles etc – it makes for a lot easier management in the long term.

Stay tuned for an update in our next newsletter following my next Magical Mystery Tour in March.

*Brad has been contract seeding with Bob Wilson of Tagasaste Seeding Specialists for nine years throughout the Mid-West of WA. He has discussed successes and challenges with many farmers in the area and is always happy to pass on his knowledge to others. Brad can be contacted on (08) 9655 2093 or after hours on mobile 0427 850 283 for queries or if you would like some seeding done.*

## A Successful Combination – Kikuyu and Strawberry Clover

David Monks, Adelong, Bibby Springs, WA

Kikuyu was established over twenty years ago on two paddocks with excellent subsoil moisture. Since then, Strawberry Clover was introduced to provide a nitrogen source and fertilizer application was increased to 200 kg/ha per annum. Every 2 years, reeds have been controlled by Glyphosphate application to ensure ease of management. The Kikuyu and Strawberry Clover pasture has spread up to 5 metres each year on grey sand and now covers most of one paddock and approximately 60% of the other.

Traditionally, the two paddocks had run approximately 1800 merino weaners rotationally grazed with electric fences on the total 80 ha area (equating to 22.5 DSE/ha). During 1999, I decided to increase the fertilizer application to 500 kg/ha (300 in autumn and 200 in spring) and then try to run all the merino weaners on 33 ha. This would free the other 47 ha paddock for prime lamb production, as a green pick was required to achieve target body-weights.

1999 was an exceptional rainfall year with a total of 831 mm. The spring production was so great that 10 ha of the paddock were cut for silage (at approximately 4t/ha) prior to the lambs being weaned into it, to ensure the pasture was used and not wasted. The weaners grew well and due to a wet summer period, the pasture stayed in front of the sheep. I achieved a stocking rate of 56 DSE/ha and cut 160 kg of greasy wool/ha for a gross of approximately \$1,760/ha at an average of \$11/kg greasy. This set a benchmark, which I try to achieve each year.

Fertilizer applications have been reduced based on above adequate levels indicated by soil test results. Due to the rotational grazing and massive stocking rate, the soil structure and organic carbon (increased from 0.5 to 2.8%) are improving and now large numbers of field mushrooms are found in spring where they never grew before.

Stocking rates are continuing at these intensities, although in dry years, additional areas of up to 10 ha are brought into the rotation to provide sufficient feed. Grazing management improvement is continuing and additional pasture species are being introduced. The paddocks are the most valuable on the farm and hence are managed accordingly.

Fill this  
space...

**If you wish to advertise in our newsletter  
please contact:**

Evergreen Administration  
Suite 5/110 Robinson Avenue  
BELMONT WA 6104  
Ph: (08) 9475 0753  
Fax: (08) 9475 0322  
Email: evergreen@consultag.com.au



## Pasture Diversity Increases Production

Tim Wiley, Department of Agriculture WA, Jurien Bay

A long-term study in America has shown that the more species in a pasture, the more productive it becomes. The benefits of biodiversity increased as the pasture got older. It was also found that more biodiverse pastures were less affected by drought.

The study ran over 7 years and looked at both the above ground and below ground dry matter production. David Tilman et al (Science, Vol 294, 2001) sowed pasture plots that had 1, 2, 4, 8 or 16 different species. The plots were 9 x 9 m and treatments were replicated. There were 18 different species used in the experiment. The different numbers of species per plot and different combinations of species gave a total of 168 plots. The pasture species sown were all perennials and included a range of warm season grasses (C4), cool season grasses (C3), legumes, forbes and woody species.

The trial is at Cedar Creek in Minnesota and forms part of a Long Term Ecological Research project running since 1982. The site has sandy soils and an average rainfall of 660 mls spread evenly over the year. It has mild summers and very cold winters.

By the end of the 7 year experiment the more diverse plots were the most productive. On average the 16 species plots were 2.7 t/ha more productive than the plots with only one species.

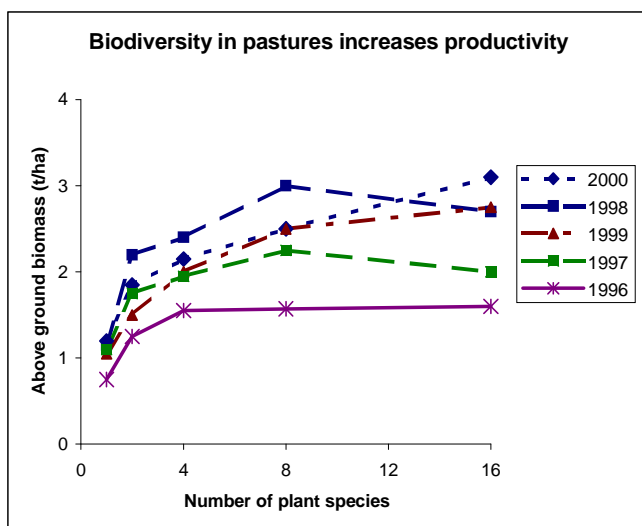
Half of the various combinations of the 16 species plots were more productive than the best monoculture plot.

The researchers also tested the benefits of having a range of species from different 'functional groups'. Functional groups are those that include species that have similar life cycles, functions and growth patterns. Functional groups could be 'summer active grasses' or 'annual legumes'. Having a mix of functional groups in a pasture increased productivity, as they were not competing directly against each other all the time. This principle has been seen in the West Midlands where winter clovers grow very well with summer active grasses that are dormant in winter.

The advantage of having more species in a pasture increased over time. The benefits of biodiversity were not as large after 4 years as they were after 7 years.

While Minnesota is a long way from WA there seems no reason that the principles should not apply here. That is that long term pastures should contain as many species as possible in order to maximize their productivity.

*Joe Felber in his 21 species pasture, Badgingarra*





# Peel-Harvey Field Day

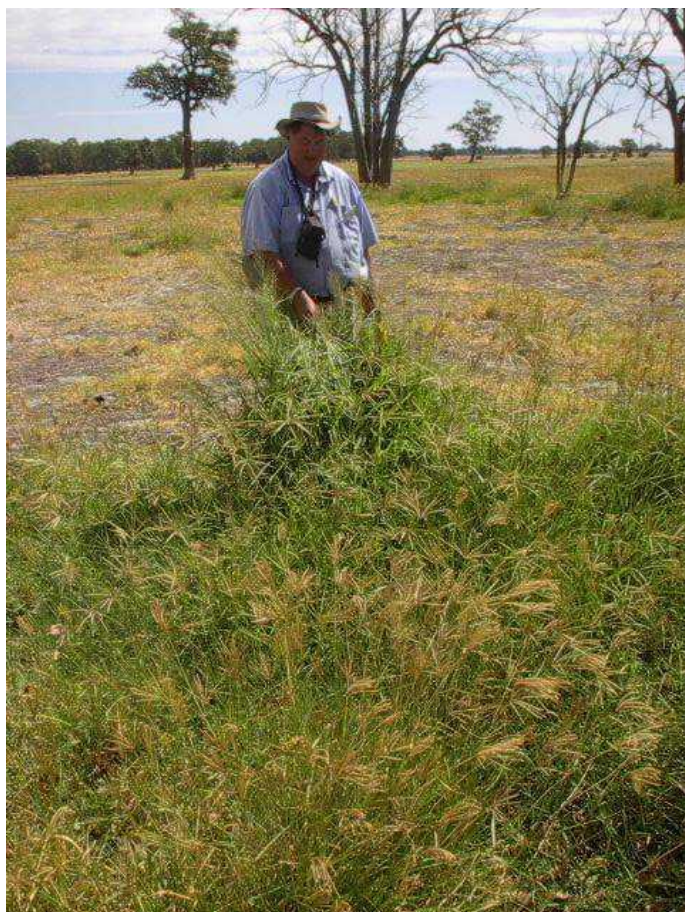
Phil Barrett-Lennard, Gingin


The Department of Agriculture and Evergreen Farming hosted a successful Perennial Pastures Field Day in the Peel-Harvey region on Thursday 31 January. The 50 strong crowd inspected 4 diverse sites from Byford to Waroona, all supporting excellent stands of Rhodes grass. These were established in the springs of 2000 and 2001 with support from Ken Angell, Department of Agriculture, Midland. Ken's work with sub-tropical grasses on the coastal plain is documented in his latest Farmnote (No. 68/2001) titled "Summer Growing Perennial Grasses in the Central Swan Coastal Plain and Hills Region". Copies are available from the Midland office, Ph. 9274 5355.



Top right: Checking water table levels below Rhodes Grass pasture at Oakford.

Below: Ken Angell in an impressive patch of Rhodes Grass & Green Panic at Waroona





**To join fill in or fax or post to:**  
**Evergreen Farming Inc.**  
**Administration**  
**Suite 5/110 Robinson Avenue**  
**BELMONT WA 6104**  
**Ph: (08) 9475 0753**  
**Fax: (08) 9475 0322**  
**ABN: 91 212 798 767**

## MEMBERSHIP APPLICATION

**Membership Fees**  
(includes GST)

Please tick appropriate box

<input type="checkbox"/> \$110.00	WA Membership
<input type="checkbox"/> \$220.00	Consultant
<input type="checkbox"/> \$330.00	Corporate Membership
<input type="checkbox"/> \$ 80.00	Outside WA

**Personal Details**

SURNAME: ..... INITIALS: .....

PREFERRED FIRST NAME: .....

POSTAL ADDRESS: .....

..... POSTCODE: .....

PHONE:(.....) ..... FAX:(.....) .....

E-MAIL: .....

COMPUTER SOFTWARE (please circle):  
 Windows 95 Windows 97-99 Windows 2000 Apple Macintosh

**Payment Details**

CHEQUE (Please make payable to Evergreen Farming Inc.)

VISA     MASTERCARD     BANKCARD

CARDHOLDER'S NAME :.....

CARD NUMBER: \_\_\_\_\_

EXPIRY DATE: ..... / ..... AMOUNT: \$ .....

CARDHOLDER'S SIGNATURE: .....



# AGRONOMY OF SUB TROPICAL SPECIES

Phil Barrett-Lennard, Gingin

<p>Common Name: Rhodes Grass            Botanical Name: <i>Chloris gayana</i>            Cultivars: Katambora, Callide, Pioneer, Finecut, Topcut            Appearance: Stoloniferous            Palatability: good but can become rank            Soil types: all soil types including deep sand            Drought tolerance: excellent            Salinity tolerance: good            Waterlogging tolerance: poor            Frost tolerance: damaged by frost but regrows            Regeneration: spreads rapidly by runners            Harvestability: needs specialist suction / brush harvester            Comments: Widely adapted and easy to establish</p>	<p>Common Name: Bambatsi Panic, Makarikari Grass            Botanical Name: <i>Panicum coloratum</i>            Cultivars: Bambatsi            Appearance: Bunch grass that is blue/grey in colour            Palatability: excellent            Soil types: prefers heavier soil types            Drought tolerance: excellent            Salinity tolerance: good            Waterlogging tolerance: good            Frost tolerance: good            Regeneration: will re-generate from seed            Harvestability: good but uneven seed ripening is a problem            Comments: grown with lucerne in NSW and QL</p>
<p>Common Name: Green Panic, Gatton Panic            Botanical Name: <i>Panicum maximum</i>            Cultivars: Petrie (green), Gatton            Appearance: Bunch grass with soft, fine leaves            Palatability: excellent            Soil types: all soil types including deep sand            Drought tolerance: excellent            Salinity tolerance: poor            Waterlogging tolerance: poor            Frost tolerance: damaged by frost but regrows            Regeneration: re-generates well from seed            Harvestability: good but uneven seed ripening is a problem            Comments: Queenslanders prefer Gatton over Green</p>	<p>Common Name: Setaria            Botanical Name: <i>Setaria sphacelata</i>            Cultivars: Solander, Kazungula, Nandi, Narok, Splenda            Appearance: Bunch grass with tall, course stems            Palatability: excellent but stems become rank            Soil types: all soil types but prefers heavier soils            Drought tolerance: average            Salinity tolerance: poor            Waterlogging tolerance: good            Frost tolerance: excellent            Regeneration: will re-generate from seed            Harvestability: OK            Comments: widely grown in North Coastal NSW</p>
<p>Common Name: Premier Digit Grass, Smuts Finger Grass            Botanical Name: <i>Digitaria eriantha</i>            Cultivars: Premier, Apollo            Appearance: Bunch grass with seed head like Rhodes Grass            Palatability: good            Soil types: all soil types, especially lighter soils            Drought tolerance: excellent            Salinity tolerance: poor            Waterlogging tolerance: poor            Frost tolerance: damaged by frost but re-grows            Regeneration: unknown            Harvestability: unknown            Comments: Highly regarded in NSW and QLD</p>	<p>Common Name: Kikuyu            Botanical Name: <i>Pennisetum clandestinum</i>            Cultivars: Whittet, Crofts, Noonan            Appearance: Short and dense with above and below ground runners            Palatability: excellent but can become rank            Soil types: all soil types            Drought tolerance: good            Salinity tolerance: OK            Waterlogging tolerance: excellent            Frost tolerance: damaged by frost but regrows            Regeneration: spreads rapidly by seed and runners            Harvestability: forget it - patented technology            Comments: Very productive on the south coast</p>



