Newsletter

Number 45

December 2010

Stipa

Native Grasses Association Inc

Matted Flax Lily—Dainella amoena(?) regenerating where pines have been cleared from a roadside in SW Victoria

www.stipa.com.au

Central West catchment management authority

Together We're Making a Difference LACHLAN CATCHMENT MANAGEMENT AUTHORITY

Australian Government Department of Agriculture, Fisheries and Forestry National Landcare Program

VANGUARD BUSINESS SERVICES

CONTENTS

STIPA is not an acronym. The association was named after the *Stipa* genus of grasses, now *Austrostipa*. One of the *Stipas* is commonly known as spear grass. At its inception in 1997, the association aimed to spearhead a change in attitude to native grasses. As that change is occurring, Stipa continues to promote the use of native grasses to achieve profit from a healthy landscape.

Stipa Native Grasses Association (ABN 42 300 161 459)
www.stipa.com.au

Chief Executive Officer: Graeme Hand M: 0418 532 130 E: graeme.hand@bigpond.com
Project Officer/Administration: Kristine Mibus
150 Caroona Lane, Branxholme Vic 3302
T: 03 5578 6321 F: 03 5578 6370
E: kristine.mibus@bigpond.com

Chair: Annabel Walsh E: annabelwalsh@moorna.com.au
Treasurer: George Taylor E: gandktaylor@activ8.net.au

From the CEO

Graeme Hand

In this report:

- Annual General Meeting
- Update of New South Wales Communities in Landscape (CiL) project
- Update of Stipa Victorian volcanic plain native grass regeneration trials (CIL)
- Information Articles
- Conference Planning

AGM

Stipa's AGM was held via telephone hook up on the 29 of November at 7.30 pm. Although not greatly attended it was found the telephone hook up was effective and low cost.

Key motions were:

- Annabel Walsh was re elected as chair
- George Taylor was re elected as Treasurer and
- Sam Johnson resigned off the Executive committee to focus on other business interests.
- Graeme Hand was elected as secretary as required under the new constitution

Photo By Lucy Hand

- A vote was also held on the new constitution and the new constitution was approved.

New South Wales Communities in Landscapes (CIL) project

Some of the initial meetings have been held with the groups around southern New South Wales. These meetings have been held to assist farmers to develop management trial sites to determine if changing their grazing management would regenerate or increase native grasses on their properties, this technique has been written up in this and the previous newsletter and are available in the members section of the STIPA website.

Victorian Volcanic Plains Native Grass Regeneration trials

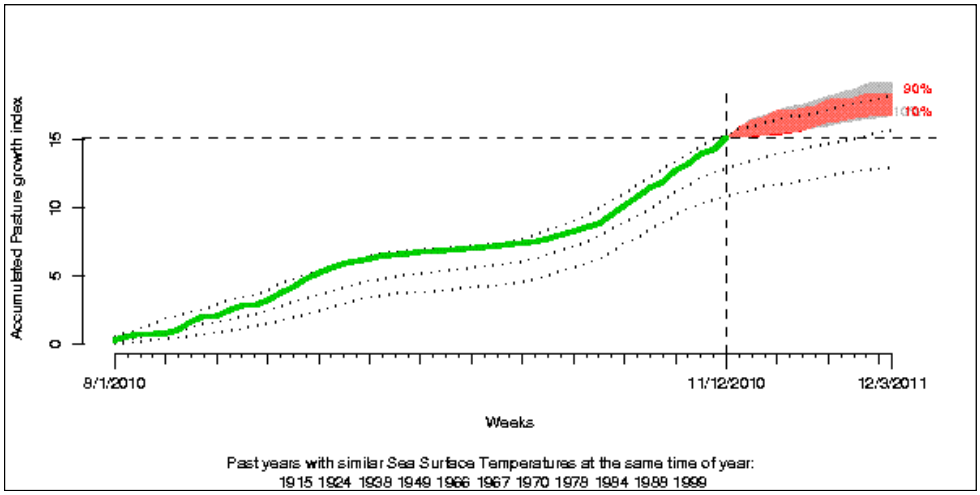
Stipa has received further funding to monitor the GHCMA South

West Victorian native grass regeneration trials. The season has been about average for rainfall but growth has been towards the best ever which has meant that the native grasses are later in seeding. This has pushed the monitoring back into January and February. I have been using the MLA Rainfall to pasture growth outlook tool to keep track of how the season is going (http://rainfall.mla.com.au/). Below is the accumulated growth for Hamilton research station

Rain is continuing to fall and although unwelcome for conventional cropping it is proving to be a good year for native grass regeneration.

Information Articles—focus on management

Several members of Stipa have started writing information articles as a way to highlight the environmental and business benefits of managing for native grass regeneration. The plan is to develop an ongoing series that are initially included in the STIPA newsletter then on the website and eventually to the public. How to use management to regenerate native grasslands was included in the August 2010 Newsletter No. 44.



Hamilton Victoria Research Station Accumulated Pasture Growth

The articles on management impact have been exciting to research and read. One of the strengths of STIPA is the focus on producing actual landscape change.

I think the Soil Data at Winona article will lead to a breakthrough in regenerative agriculture. The massive change based on different management shows that regenerative agriculture is the only known technique to turn around land degradation. The photo comparisons on page 20 are clear evidence that managing plants changes soil health.

Topics in this newsletter:

- How does management control pasture pests?
- Developing enclosures to monitor your management
- Can management increase soil carbon?
- Soil data at Winona—impact of 10years of regenerative management

Topics under development:

- How does animal impact effect native grass diversity?
- How does long recovery influence tiller density?
- How does management influence forbs/ wildflowers?

Let me know if you would like a topic covered

Conference Planning

It is planned to hold the next STIPA conference in spring 2011.

One of the suggestions has been to combine our conference with 2 other organisations that have a strong focus on soil health. STIPA would provide the “how to“ and outcomes part of the conference. Possible venues are around Canberra. Let me know your thoughts on this idea .

Photo below is of regenerative agriculture pioneer Joel Salatin presenting at Woodend, Vic. In December 2010

Communities in Landscapes in *New South Wales:*

Regenerative grazing management.

Stipa has been working with groups of farmers to help them explore the combination of grazing management and other techniques that enables the regeneration of perennial native grass on their property.

These native grasslands have proven to be resilient and profitable during variable seasons.

Through the Communities in Landscapes Project, which is based in the Central West, Lachlan and Murrumbidgee catchments in NSW, it is planned to run a series of workshops that allow you to develop the knowledge and skills to regenerate native grasslands, at a profit, on your farm.

These skills can then be used in the grassy box woodland to regenerate the critical grassland understorey.

Specific topics covered in the workshops will be:

- Grass plant physiology
- Monitoring soil and pasture health
- Trialing techniques in small areas so as to reduce the risk to your business
- Low cost weed management
- Native grass identification and value as stock feed
- Practical on farm advice where meetings are held on participants properties

Contact Graeme Hand if you would like more details graeme.hand@bigpond.com

Developing Enclosures

By Graeme Hand

Management

Using grazing management to produce massive biodiversity increase and regeneration of native grasslands requires a systematic process.

This process is described in different ways (Savory et al, 1999, Allan C., 2007) but tends to include the following steps

- Goal - description of landscape including biodiversity and function being managed towards
- Monitoring/ evidence of current grassland biodiversity and function
- Plan / trials to move the grassland towards goal
- Monitoring of progress
- Feedback and re-planning

This process allows the learning of practices beyond 'best practice' as current recommend best practice is reducing biodiversity and not regenerating native grassland.

Enclosure Design

An area to enclose animals is required so as to trial different stock densities and recoveries that will suit your farm.

- Low cost and simple
- Can use current infrastructure or can be fenced off corners of paddock
- Minimum of 2 sites is usually required on most farms
- Small areas so only tempted to graze as planned (10 m x 10m?)
- Secure so as to contain "yard" densities (>1000 dse/ha) for short periods of time

- Usually do not require stock water as animals only present for short periods of time (couple of hours)

- Easy to monitor

(Continued on page 8)

Monitoring

As a minimum photos across the paddock and a few of the ground surface are taken before and after (see photos after trampling for examples). Ground cover estimates, plant diversity and plant spacing increases the rate of regeneration .

Planning

Low stock densities sometimes produces grasslands with lower diversity than planned. Initially a trial at high density and long recovery say 12 months would be required to confirm that native grass regeneration is possible on your farm. It may help to read "Regenerating Native Grasslands" (Hand G., 2010)

References:

Savory A., Butterfield J., 1999, Holistic Management: A New Framework for Decision-Making, Island Press

Allan C., 2007, Adaptive management of natural resources, Proceedings of the 5th Australian Stream Management Conference, Australian rivers: making a difference. Charles Sturt University, Thurgoona, New South Wales

Hand, G., 2010, Regenerating Native Grasslands, STIPA Newsletter, Number 44, August 2010

Example of electric fenced trial area after grazing

Keep up to date with Stipa news and activities in between Newsletters

Visit the Stipa website in members section

www.stipa.com.au

Example of animal impact on bare area

Example of animal impact on heavily grassed area

STIPA Members Children's Creative Drawing Competition

Picture from Australian Grasses by Nancy T Burbridge Australian Natural Science Library

Stipa is holding a children's Drawing Competition

A prize will be awarded for the "Best Creative Native Grass Drawing"

The winning drawing will be placed on our membership website on display.

Forward Entry to STIPA at 150 Caroona Lane, Branxholme Vic 3302, before Monday February 28 2011

Please include a small caption which describes your drawing along with your Name, Age, Phone number & Address.

Hoary Sunray regenerating where pines have been cleared

Combining practices to improve native grassland regeneration.

As part of the Glenelg Hopkins CMA project I have been lucky to spend time working with Frank Carland Vicroads and Paul Gibson -Roy Melbourne University. Both Frank and Paul are passionate about regenerating native grasslands. We have been talking about combining techniques to hopefully develop a technique that surpasses all present native grassland regeneration techniques.

Frank Carland looking at regenerated Hoary Sunray an endangered forb

Can management increase soil carbon?

By Graeme Hand, 2010

Introduction:

Several STIPA members have increased soil carbon through practices that promote the regeneration of native grasslands (Seis pers. comm. 2010, Hand unpublished data). In this article CSIRO research – Landscape Function Analysis (LFA) is used to 'scientifically' confirm that this management increases total organic soil carbon (Tongway et al 2004).

Key Points:

- Management that regenerates native grasslands improves nutrient cycling
- Nutrient cycling has been proven by CSIRO to be a moderately accurate way of verifying soil carbon
- Nutrient cycling is a low cost, method of predicting rapid broad scale soil carbon
-

Regenerating native grasslands:

Management that regenerates native grasslands relies on increasing ground cover, increasing perennial grasses and promoting composting/ decomposition of litter. (Hand, 2010).

This management increases nutrient cycling which is one of the indices for LFA. Nutrient Cycling is defined as *"how efficiently organic matter is cycled back into the soil"*

The indicators that are used to predict nutrient cycling are:

- perennial basal, shrub and tree canopy cover
- litter cover, origin and decomposition
- cryptogam cover
- surface roughness

On page 15 there are 2 photos taken both before and after management to increase grassland regeneration.

It is obvious that there has been a significant increase in nutrient cycling due to this management change. (Planned grazing only – no inputs)

Monitoring indicates an approximate increase in nutrient cycling from 14 to 46. Correlations would need to be carried out to confirm what this means for soil carbon in this environment but a minimum change of 1% to 2% increase in total organic carbon would be expected based on results from other sites.

Nutrient Cycling related to soil carbon:

Within the LFA manual graphs (see page 16) are presented to check that this method is a valid technique for assessing land function.

"For the generated indices of stability, infiltration and nutrient cycling to be meaningful they need to be verified against established scientific measurements. This has been done at a number of sites in both the rangelands and on mine sites. A limited number of correlations are presented here to illustrate the validity of the method to provide reliable and useful information that has scientific backing. Further data is available at the website" (Tongway et al 2004).

Stipa member monitoring land function in CW NSW

David Tongway training CiL partners in LFA

Before – capeweed, bare ground & thistles

After – combination of native & introduced perennial grasses with litter covered soil surface

The graphs related to nutrient cycling follow

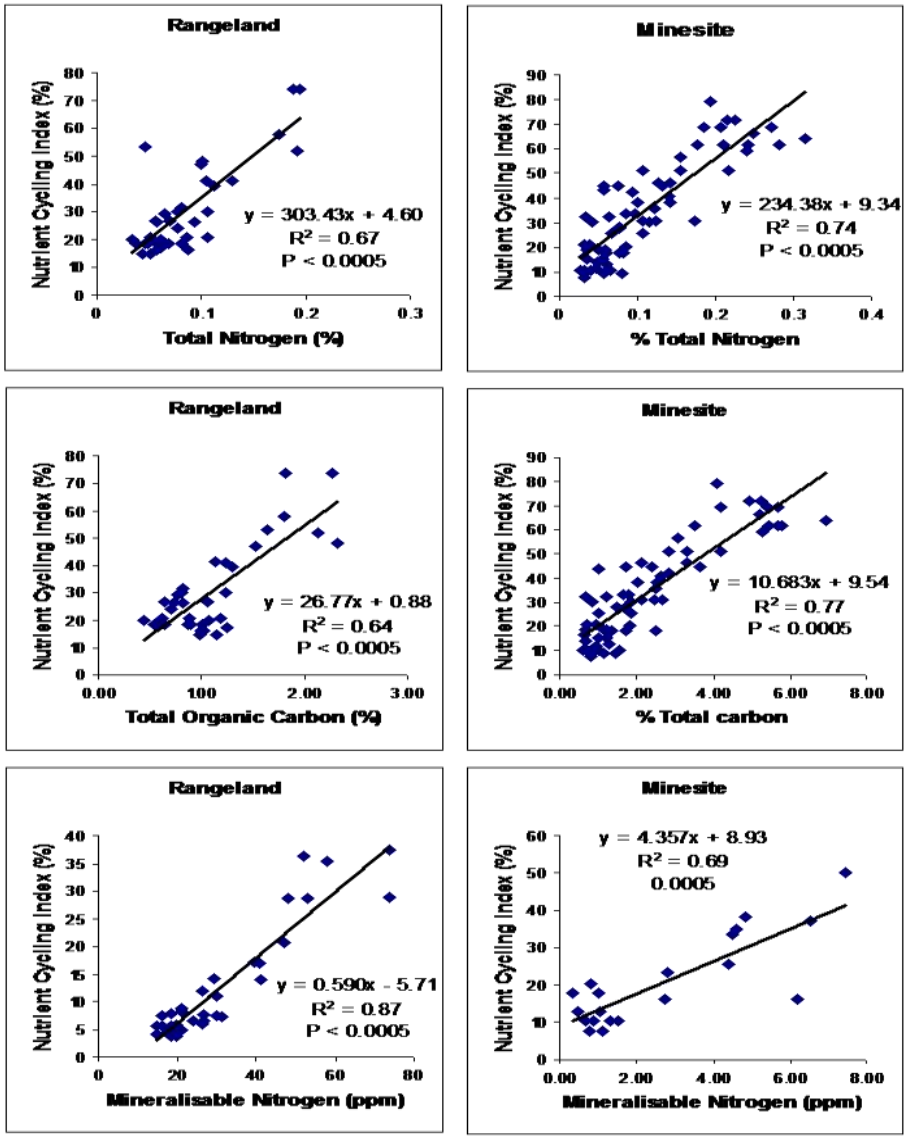


Figure 38. Showing the relationship between measured nutrient pool sizes for total carbon, total nitrogen and mineralisable nitrogen and the assessed nutrient cycling index for rangelands and a rehabilitated mine site.

Source: LFA Manual © CSIRO Australia 2004

Low cost, relatively accurate method of predicting soil carbon

Previous work has show that LFA is a moderate to strong predictor of soil carbon within sites (Tongway et al 2003). This appears to be confirmed by as yet unpublished results from Sydney University a partner in the Communities in Landscapes project. Funded by the Federal Government Caring for our Country Programme

The Communities in Landscapes Innovators benchmarking study shows Nutrient Cycling index higher than comparison in all 10 sites and on the 4 sites where soil samples were taken this corresponds to higher soil C levels, at least in the top 0-5 cm. Where innovator's management has been going for longer time and has resulted in bigger difference in perenniality, this soil C increase goes deeper.

So, if grazing management leads to increase in perennials and those perennials are long-lived and producing decomposing litter and minimal bare ground, this will increase Nutrient Cycling as measured by LFA, which indicates that Soil Carbon has probably increased as well. It is reasonable to assume that, the bigger the increase in Nutrient Cycling over time, the bigger the increase in soil carbon.

Because soil is so variable, soil tests are unreliable unless sampling is done properly. As LFA is done over a larger area it is less dependent on soil variability. If LFA transect captures paddock variability it is arguably a more reliable way to generate evidence for increase in soil carbon.

Since it can be done by landholder at no cost (apart from time taken to learn and do each LFA) and soil tests need to be scientifically sampled and analysed and as a result are more costly, LFA seems to be a good way to go for landholders to monitor the impact of their management on soil carbon (amongst other things...) on a regular basis (say 2 times per year) with properly done soil tests say every 5 years.

(Ampt P., pers. comm., 2010)

If you would like more details please contact Graeme

References:

Tongway, D. & Hindley, N., 2004, *Ecosystem Function Analysis, Landscape function analysis: a systems approach to assessing rangeland condition,* CSIRO Sustainable Ecosystems.

Tongway, D. & Hindley, N., 2003*, Indicators of Ecosystem Rehabilitation Success, CSIRO* Sustainable Ecosystems*.*

Hand G., 2010 Regenerating native grasslands, STIPA Newsletter, Number 44, August 2010

"Winona" Soil Data

The data on page 19 is based on samples from two paddocks 15 meters apart. The photos (page 20) and samples were taken 7th October 2010. The soil on the left is on Colin Seis property "Winona" the other sample is on the adjoining property (fence line comparison).

The difference in perennial grasses, soil health and soil nutrients is the result of a change in land management over a 10 year period.

Detailed management differences:

- The Winona adjoining paddock management is "pasture cropped" and "time controlled grazed" - based on perennial grass recovery.
- The adjoining paddock management is set stock grazing and traditional sowing of crops by ploughing, scarifying and cultivating pre sowing.
- The number of sheep run on the area is 8 DSE/ha on Winona and 3.7 DSE/ha on the adjoining property.
- The cropping frequency is the same for both paddocks, with crops sown 3 times during the last 10 years.
- The only fertiliser applied on the paddocks during the last 10 years has been with the crops. 40 kg/ha DAP on Winona and 60 kg/ha DAP on adjoining property.
- No lime has been applied to either property.

Impact of management on nutrients:

The list following shows the percentage increase of the Winona soil relative to the paired paddock. Results are for both available and total nutrients over a 500 mm soil profile.

Table comparing Winona with adjoining paddock

Nutrient	Available	Total
Ca	234%	270%
Mg	110%	152%
Zn	250%	195%
Cu	185%	215%
B	150%	161%
Si	116%	113%
N	103%	151%
P	102%	155%
K	198%	150%
S	92%	159%
Fe	87%	130%
Na	45%	88%
Al	28%	140%

There has been a reduction in available Sulphur, Iron, Sodium and Aluminum.

Impact of management on land and soil health:

- Winona's paddock is dominated by native perennial grass species (82.9%).
- The adjoining paddock is dominated by annual introduced species (88.1%).
- Soil microbial counts showed that the Winona soil had significantly higher microbial counts of Fungi and actinomycetes bacteria.

For further details on these results or management contact Colin email colin@winona.net.au or (02) 6375-9256

Winona paddock

Pasture cropped & time control grazed

Adjoining paddock

Traditional cropping and set stocked

How can management control pasture pests?

By Graeme Hand, 2010

Introduction:

Farmers have shown that adopting practices that regenerate native grasslands naturally produces the conditions that control and suppress pasture pests. It can be shown that this suppression is, in part, a function of increasing indigenous fungi in the rhizosphere of perennial grasses. Inoculation of these indigenous fungi was generally not required.

Increasing soil fungi requires eliminating practices such as:

- bare ground between plants
- ploughing
- fungicides, insecticides & herbicides
- nitrogen fertilizer
- high single doses of water soluble phosphorous fertilizer

Combined with practices that produce healthy perennial grassland such as:

- grazing management that includes recovery e.g. planned grazing
- pasture cropping
- inputs that promote composting, nutrient cycling and biological activity

Definitions:

- Pasture pests discussed are red headed cockchafers (*Adoryphorus couloni)*, common Corbie (*Oncopera intricate)* and winter Corbie (*Oncopera rufobrunnea),* (Corbies are pasture pests in Tasmania)
- Rhizosphere - the zone that surrounds the roots of plants.. (Websters Dictionary On line)
- An entomopathogenic fungus is a fungus that can act as a parasite of insects and reduces or seriously disables them. (Websters Dictionary On line)

Farmer experience:

It is clear that for farmers that have focused their management on regenerating native grasses that pasture pests are no longer a problem and produce little damage. (Johnson C&S, 2010 pers. comm.; Isles G, 2010 pers. comm., Harvey E, 2010 pers. Comm. Seis C, 2010 pers. Comm.).

As STIPA members know the soils surface conditions that promote the regeneration of perennial native grasslands and grassland function also create an increase in fungal biomass. This increase in fungal biomass is required to increase soil function and soil health. (Tongway & Hindley 2004, McDonald et al, 2010, Hand, 2010).

Native Grasses

The inherent resilience of native grasses to pasture pests has been studied and reported and will not be discussed in detail here.

"Native grasses, like wallaby grasses and weeping grass, are productive, highly palatable and responsive to increased soil fertility. They are resilient to pasture pests, such as corbies (Oncopera spp.) and pasture cockchafers (Aphodius spp.)" (Mokany, K, et al, 2006)

Current advice:

Current advice is to reduce habitat for pasture pests by reducing ground cover, litter and pasture mass *(Berg G., 2008).* This practice has proven to be unsuccessful over time as it depletes the ability of soils to suppress pasture pests while increasing erosion, weakening root systems and increasing resowing costs.

Role of entomopathogenic fungus:

The role and mechanism of control is acknowledged and understood in the scientific literature. The evidence of this understanding is the application of indigenous fungi to pastures to control pasture pests.

"Recently an indigenous fungus, Metarhizium anisopliae, has been commercialised as a biological control agent in a product called "BiogreenTM Granules". Good control has been recorded following field application of the granules to pastures, which can be direct-drilled into existing pastures, or

sown with new pastures." (Heap J., 1998)

As this method does not address the cause of the naturally occurring fungus not being present at sufficient numbers this approach will not be sustainable.

"Under natural conditions entomopathogenic fungi are the most important mortality factor of natural insect populations and is safe for non target organisms (Ghanbary, 2009)

Other fungi are known to be more effective at controlling insects but are hard to produce and commercialise as they require living hosts *(Ghanbary, 2009).*

In well managed healthy grassland, with living hosts, many of these fungi are present *(Ghanbary, 2009).* Long term, low cost control of pasture pests appears to be favoured by producing diverse, healthy, fully functioning, long lived perennial grasslands.

The link between insect control and the rhizosphere is poorly understood but as many pasture pest insects have a stage of development within the soil then contact at this stage appears to be clear.

A field trial conducted in 2000 with a strain expressing the gfp gene as a marker unexpectedly identified the rhizosphere (the root–soil interface) as the site where insects and pathogen most likely interact (St. Leger, R.J. 2008).

Soil Fungi:

Practices that reduce soil fungi such as bare ground, ploughing, fungicides, herbicides, resowing, nitrogen fertiliser and high single doses of water soluble fertiliser inhibit the predators, parasites and weaken root zones so as to favour pasture pests. Each of these practices is discussed below.

Bare ground between plants

Soil fungi are sensitive to temperature fluctuations and ultra violet light and require moisture and substantial amounts of nutrient cycling. Bare ground between plants inhibits or eliminates these conditions. Habitats other than crops and low diversity pastures are also important *(Meyling et al, 2007)*.

Ploughing

"Soil fungi, in particular, don't like being disturbed. Ploughing smashes up the fungal hyphae, so you have to start again." (Williams J., 2010)

Fungicides insecticides and herbicides

The lack of long term success in controlling pests with biocides has been widely discussed with chemical resistance eventually appearing in populations as well as the unintended consequences of reducing predator's populations. Some research confirms that soil fungi are reduced by herbicide use *(Whitelaw-Weckert et al, 2004)* and other research into the specific fungi that target pasture pests suggest that there may be an affect.

Chemical insecticides, herbicides and fungicides are usually applied in conventional farming practices. These compounds, especially fungicides applied against plant pathogens, might also negatively affect the populations of entomopathogenic fungi with reduced pest regulation potential as a consequence. (Meyling N. V., Eilenberg J., 2007)

Nitrogen fertiliser

The negative impact of nitrogen fertilizer on fungi and reducing organic matter has been studied and confirmed many times.

"Fungal and bacterial biomass and ergosterol, showed a negative relationship with N application rate, and correlated positively with organic matter percentage. In old pastures, fungal biomass and ergosterol were higher than in younger pastures"

.....We conclude that the changes in fungal and bacterial biomass were driven by changes in organic matter quality and quantity. The negative relationship we found between N application rate and fungal biomass adds to earlier work and confirms the presence of this relationship in pastures with relatively small differences in management intensities. Earlier studies on shifts in fungal biomass focused on ex-agricultural fields or restoration projects. Here we show that fungal biomass is also higher in older agricultural pastures. (Franciska et al, 2007

Water soluble phosphorous fertilizer

The following quote covers most of the practices discussed that need to be eliminated to promote soil fungi.

"Mycorrhizal fungi and associative bacteria are very strongly inhibited by excessive soil disturbance and the high levels of water-soluble phosphorus and nitrogen commonly used in modern agriculture (Reduceham 1994, Leake et al. 2004). Where soils have been subjected to cultivation and/or the application of MAP, DAP, superphosphate, urea or anhydrous ammonia, the suppressed mycorrhizal colonisation of plant roots significantly reduces carbon flow" (Jones C., 2010)

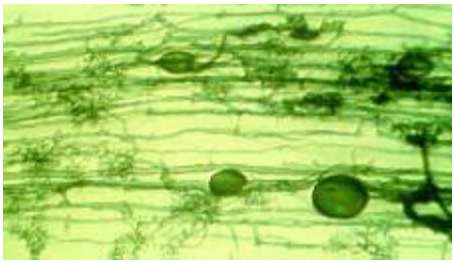


Photo of colonization of a root by endomycorrhizal fungus

www.mycolog.com/chapter17.htm

Positive actions

Actions that produce positive control of pasture pests are those that also favour the regeneration of native grasslands. These conditions can be summarised as covered soils, which are continually being pulsed to cycle carbon. Litter on the soil surface that is actively composting / decomposing is a key indicator (Tongway & Hindley 2004, McDonald et al, 2010, Hand, 2010).

Photo of composting litter in a grassland

Photo Graeme Hand

Crossword

Christine McRae (Part 1)

Across

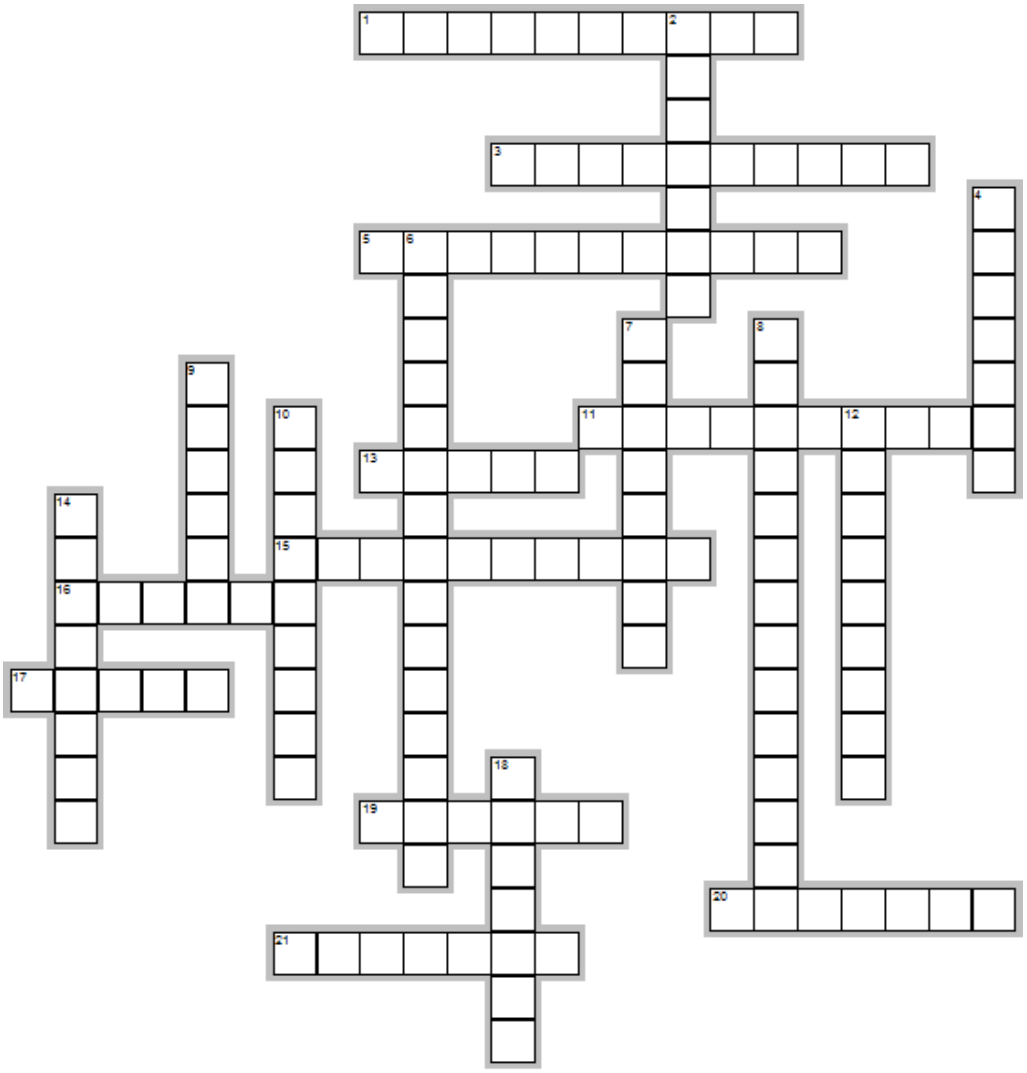
1. Bent, like a knee
3. The Kikuyu genus
5. A grass genus named after R.D.B. (Wal) Whalley
11. In which country will the 9th International Rangelands Conference be held in 2011
13. The noded of grass stems (culms) are not hollow, they are
15. Soil pH is a measure of acidity or _ _ _ _ _ _ _ _ _ _
16. Red Brome; Bromus _ _ _ _ _ _
17. The first Stipa CEO, Daryl _ _ _ _ _
19. A common name for Setaria species, _ _ _ _ _ _ grass
20. Toothed
21. Related to the soil

Down

2. Ear like projections often present at the top of the leaf sheath
4. Flatweed
6. Revised name for the Australian Danthonia genus
7. A breadknife tussock from South America
8. The saltbush family
9. Where was Stipa's 2007 conference held
10. K?
12. 3-angled, triangular in cross-section
14. The veins in grass leaves are _ _ _ _ _ _ _ _ to each other
18. Without a stalk

Crossword

Christine McRae (Part 1)



Solution over page

Crossword

Christine McRae (Part 2)

Across

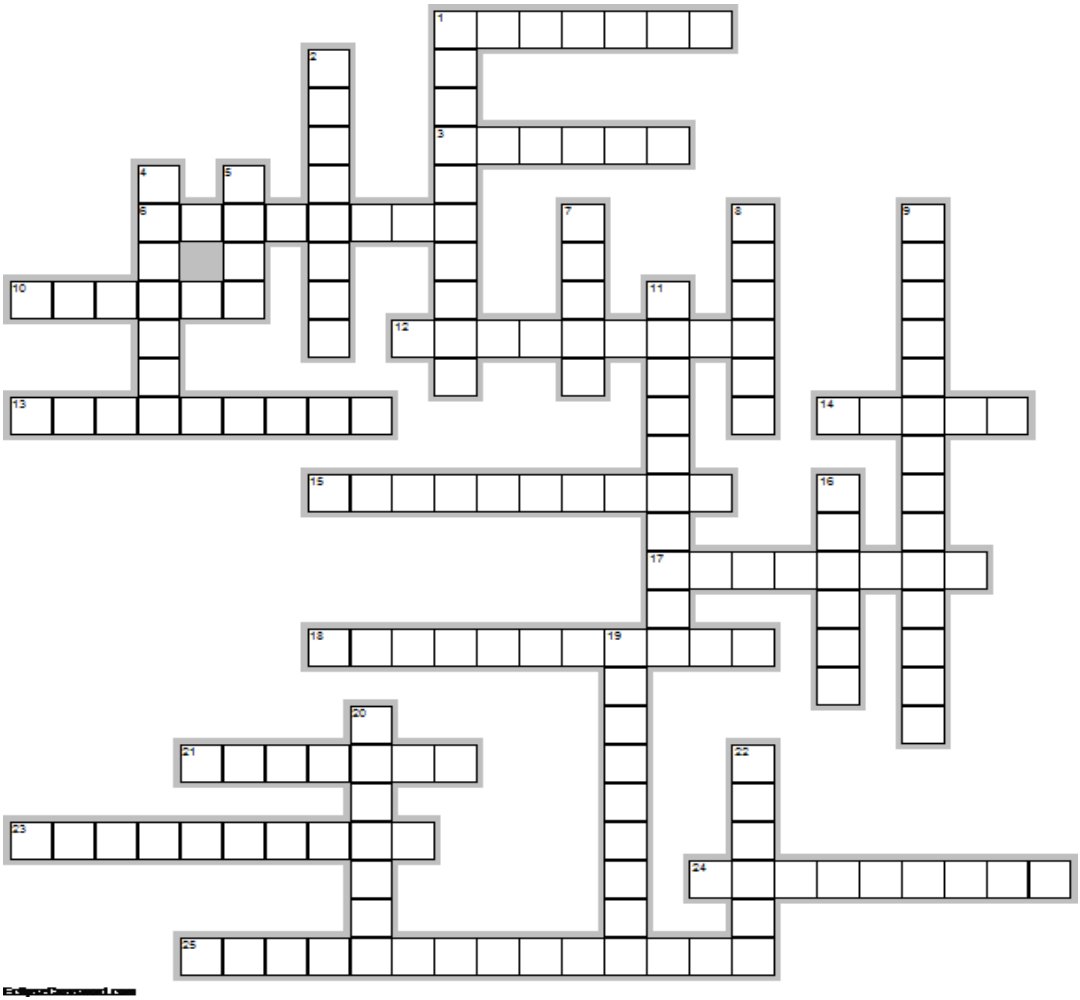
1. _ _ _ _ _ _ _ needle grass, Nassella neesiana
3. Acid sulphate soils contain iron _ _ _ _ _ _
6. Stiff and needle shaped
10. Sticky
12. An earlier name for the grass family
13. A smelly grass; stinking ?
14. _ _ _ _ _ grass (Agrostis avenacea) one of the few annual Australian native grasses, refers to its mode of dispersal
15. This micronutrient helps bacteria in leguminous nodules fix atmospheric nitrogen
17. The other native Themeda species in NSW
18. Zone of influence surrounding a plant root
21. Arranged in 3's
23. Yellow Box, Eucalyptus ?
24. An exotic annual grass named after a tasty crustacean
25. Also known as trace elements

Down

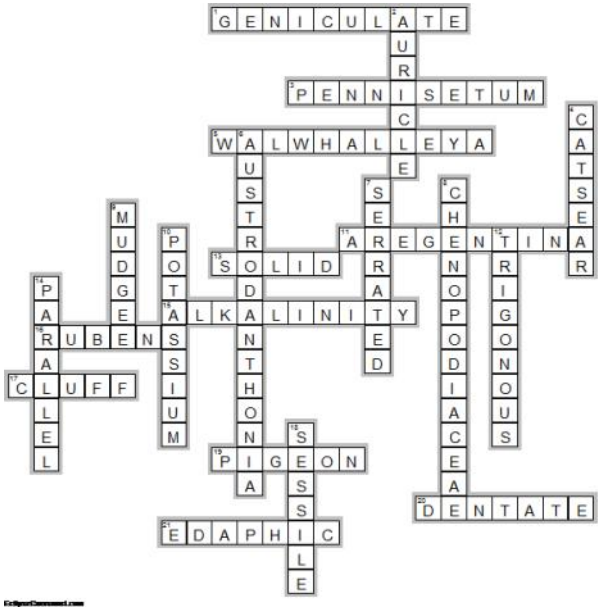
1. A wiry daisy
2. Bent alternately in opposite directions (zig-zag)
4. Shaped like a sickle
5. Grasses are _ _ _ _ pollinated
7. Don't _ _ _ _ _, a hairy perennial Australian native grass
8. Elongated and more or less circular in cross section
9. Grasses, Lillies, Sedges, Orchids etc.
11. Veins not parallel; forming a network
16. _ _ _ _ _ _ Box Woodlands are the focus of the Communities in Landscapes project
19. A plant adapted for growing in saline conditions
20. _ _ _ _ _ _ _ summer grass is spread readily by grazing cattle
22. Vulpia _ _ _ _ _ _, rat's tail fescue

Crossword

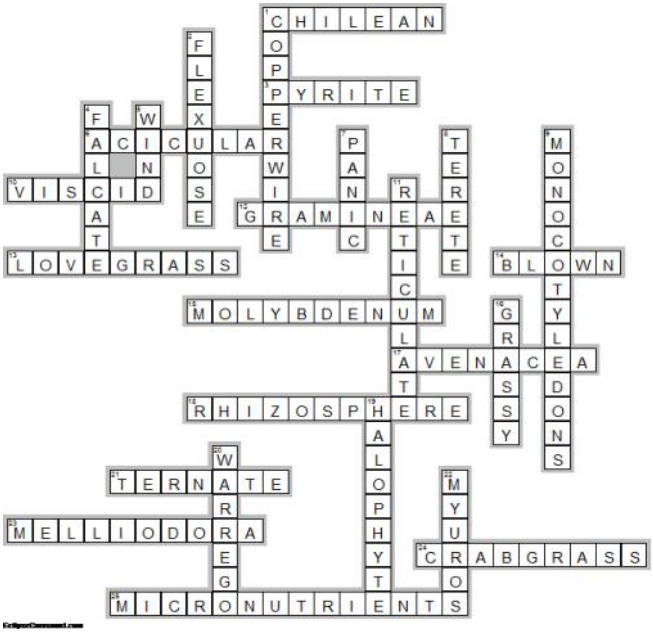
Christine McRae (Part 2)



Crossword solution Part 1



Crossword solution Part 2



Membership renewals

Please note

Stipa is changing the way they renew memberships. We will endeavour to mail out your renewal tax invoice one month prior to your expiry date. If you would like to renew please mail us a cheque or EFT your membership.

Please remember to make reference on all EFTs and return cheques your INVOICE NUMBER (found on the top of your Stipa tax invoice).

Stipa caps for sale

$12 + postage

Contact Stipa for more information

0418 532 130

Attention all members

To ensure that you continue to receive Stipa newsletters and updates, please remember to advise us of any change of address.

Also if you wish to receive emails about forthcoming events and other matters of interest, it is important that we have your correct email address.

Contact Stipa

Ph: 03 5578 6321 Fax: 03 5578 6370

Email: graeme.hand@bigpond.com

Native Grasses Association Inc.
ABN: 42 300 161 459

Stipa promotes and proves the profitable management of native grasses by motivated people in healthy landscapes.

MEMBERSHIPAPPLICATION/RENEWAL

Name: .....

Company or trading name: .....

Address: .....

.....

Town: ..... State: ..... Postcode: .....

Phone: ..... Mobile: .....

Email: .....

Annual membership (please select one – note that subscriptions include GST):

☐ ACT & NSW $75 ☐ Interstate $45 ☐ Student $30 ☐ Corporate $500

Payment options (please select one):

☐ **Cheque/money order** (to Stipa Native Grasses Association Inc.) for $..... is enclosed.

☐ **Direct deposit:** Deposit of $..... made on ..... (date).

Stipa Native Grasses Association account at Westpac BSB: 032 647 Account: 108 924

Please include your surname in the reference field to help us match your payment to your membership.

Send your completed membership form (with your payment, if applicable) to:
Stipa Native Grasses Association, 150 Caroona Lane, Branxholme Vic 3302

For more information contact Stipa CEO Graeme Hand on 0418 532 130, fax 03 5578 6370 or email graeme.hand@bigpond.com

---

Stipa Native Grasses Association aims to:
• promote native grass as pasture and for conservation • educate the community about native grasses • document pasture systems using native grass • distribute information to agencies and landholders • network with other groups with complementary activities.

July 2010