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Victorian Landcare & CATCHMENT MANAGEMENT

ISSUE 32

Secrets of direct seeding

Bushfire preparation and recovery

National Landcare Awards

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Living with parks and forests means "living with fire"

Department of Sustainability and Environment

The Victorian Government's public land management agencies - the Department of Sustainability and Environment (DSE) and Parks Victoria - have increased resources to carry out fuel reduction burns on public land this spring.

Fuel reduction burning is a vital part of DSE's fire management strategy to protect public land from the adverse effects of bushfire.

These prescribed burns are designed to take advantage of favourable weather conditions to reduce fuels in strategic locations – particularly near townships.

Fuel reduction burning increases the chances for early fire suppression and provides a safer work environment for firefighters.

DSE takes a strategic approach to fuel reduction burning, with the most critical areas given priority. It also considers relevant environmental factors, and deploys local knowledge when conducting prescribed burns.

The program will inevitably result in smoke and DSE will work closely with the Environmental Protection Authority and Bureau of Meteorology to manage impacts on air quality and visibility. Similarly, the program may cause some localised traffic disruption.

DSE has already started burning in some areas and will continue its spring fuel reduction burning program during the next few months. Local media will be kept well informed.

For more information about the program and location and status of proposed burns contact your local DSE office, visit www.dse.vic.gov.au/fires or call the Victorian Bushfire Information Line on 1800 240 667.

The highly variable weather in spring makes it difficult to predict precisely which currently planned burns will actually be ignited. As a guide, fuel reduction burns are planned in many areas of the State, including around the following:

NORTH EAST
Tocumwal, Merrijig, Mansfield, Toolangi, Kinglake, Seymour, Maryville, Shelley, Tallangatta.

GIPPSLAND
Cann River, Foster, Nowa Nowa, Rawson, Marlo, Orbost, and Port Welshpool.

SOUTH WEST
Bacchus Marsh, Portland, Horsham, Ballarat, the Grampians, Little Desert National Park and the Otways and Wombat forest areas.

NORTH WEST
Bendigo, Underbool, Big Desert/Wyperfeld, Clunes, Mitiamo, Avoca, Echuca, Castlemaine, Maryborough, Cohuna, Rushworth, Heathcote, Redsdale, and Gilford

PORT PHILLIP
Toolangi State Forest, Langwarrin, the Dandenongs, Warburton, Bass Coast, and the Mornington Peninsula.

From the editors

Victoria won two categories in the prestigious National Landcare Awards announced at Parliament House in Canberra on 1 September 2004.

Landcare Australia's Chief Executive Brian Scarsbrick congratulated the winners and said that the Awards are a chance to stop, take a breath and congratulate some of the amazing heroes who otherwise might never get a thank you.

Forestry Group is a research winner

The Northern United Forestry Group (NUFG) won the Telstra Countrywide Landcare Research Award to recognise their research excellence.

According to Brian Scarsbrick the Research category is always hotly contested.

"This is a fabulous win by a group of landholders who are real pioneers. The NUFG has 27 families at its core and it meets monthly in Raywood. It is focused on establishing low rainfall farm forestry that works from a profit point of view and an environmental point of view. It's a delicate balance. They are getting it right.

"The group has recognised that Australia's natural wealth depends on our land and water. They are promoting commercial tree growing on farms and their strong farmer base is managing the whole system. Knowing you have to have the right trees in the right places and making sure there is good water quality, biodiversity and greenhouse benefits. I applaud that," Brian Scarsbrick said.

Woady Yaloak catchment winners

The Woady Yaloak Catchment Group won the Sensis Landcare Catchment Award for its pioneering work in managing the Woady Yaloak catchment, which is home to over 220 farming families and 1100 small block owners.

Representatives from the group were thrilled to receive the award in recognition of their efforts. The Woady Yaloak catchment area has a number of major environmental issues including pest plants and animals, as well as salinity, nutrients in the waterways and erosion.

Brian Scarsbrick said, "Landcare is about people power. When people band together they can make such an incredible difference and that's very much what the Woady Yaloak group is all about. They set a plan in motion to manage environmental issues and it's all been about viable businesses, looking after the local community and protecting local flora and fauna."

The Woady Yaloak Catchment Group has involved schools, local government, industry and private sponsors. More than $4 million has gone into the project – most of it from private landholders.

Send us your stories

We are always interested in hearing from our readers. If you have a story, a letter, a comment or a suggestion please don't hesitate to get in touch.

Mathew Guy, Carrie Tiffany and Joanne Webber

Best letter

We have been delighted with the response to our request for letters. Loretta Boland of Gundowring North wins the prize for the best letter in this issue. She will receive a copy of Chris Williams' excellent book, *Old Land, New Landscapes*.

The closing date for letters for the next issue is Friday 12 November. Letters should be sent to Carrie Tiffany at the address on page 2. They should include a name, address and telephone number and be less than 300 words. Letters may be edited for clarity and length.

The best letter in the next issue will win a copy of Mem Fox's latest children's book, *Where is the Green Sheep?* A great addition to the bookshelf or a present for the young Landcarer in the family.

Right: Michael Rowe from the Woady Yaloak Catchment Group, Federal Minister for Agriculture, Fisheries and Forestry Warren Truss, Gayle Sargeant from Sensis and Alice and Kevin Knight also from the Woady Yaloak Catchment Group receiving their award.

Federal Minister for Agriculture, Fisheries and Forestry Warren Truss with Ian Peters from Telstra Countrywide presenting the Research Award to Leanne and Ian Rankin from the Northern United Forestry Group.

Letters

Tubestock or direct seeding? The debate continues in this issue with two new stories on the benefits of direct seeding.

Dear Editors,

On our small property in north-east Victoria we have undertaken a tree planting project. This involved fencing out a couple of gullies and planting tubestock with the help of volunteers. We have found this method very labour intensive and due to drought conditions at the time the rate of success was not great. A large number of trees had to be replaced the following spring.

After reading Fergus Irving's article on direct seeding in the last issue of Landcare *I had a discussion with our local Landcare co-ordinator on the feasibility of direct seeding an area of shelterbelt/wildlife corridor on our property.*

With the support of Landcare groups in our region (Kiewa catchment), we would like to give direct seeding a trial. In order to do so, the following problems would need to be addressed:

- *The prospect of seed being washed away by heavy rainfall.*
- *Slugs and snails eating the young plants and ants carrying away and burying the seed.*
- *Seeds competing with deep-rooted pasture grasses – despite weed control measures being implemented.*

I would imagine that direct seeding can be used only in areas with relatively even and mostly cleared ground. Others with experience may like to address these issues in future articles. Perhaps someone may be willing to conduct a seminar or field day on direct seeding in our region sometime in the future.

We would also need to know from where we can beg, borrow, steal or hire a suitable treeseeder!

Loretta Boland, Gundowring North

Dear Editors,

I was interested to read the recent article about the barking owl study in north-east Victoria (Landcare, *Autumn 2004).*

We live at the foot of the Strathbogie Ranges near Bonnie Doon and I have heard the barking owl in the bush near us.

I always read the Landcare *magazine with interest to see what others are doing. Our local group is Ancona Valley Landcare and we were one of the first groups formed in Victoria. The revegetation of Brankeet Creek was our main focus back in 1988 and that has long been completed. Our valley is now unrecognisable from those early days of Landcare in Victoria as our community took on Landcare with a great passion. Today Landcare provides a community focus for us – and we are still planting trees.*

Heather Wood, Bonnie Doon

Dear Editors,

The philosophy of water *story in the last issue of* Landcare *quite succinctly captures the thoughts of Professor David Mitchell. His holistic approach to the subject of water management directs us to the ethical, ecological and economic aspects of this important issue.*

We are water creatures living on a water planet. About 74% of the earth's surface is covered in water and 97% of that water is found in the oceans. So if we exclude saltwater, we are playing with only 3% of the available water on the planet.

So far we have been trying to remedy past and current abuses of water usage in farming, factories and urban usage – and this is excellent.

Professor Mitchell suggests many ways to save water and use it efficiently, respecting both environment and economy. But perhaps his most pertinent suggestion is that we focus research funds on cost-effective means of desalination of seawater.

Many front-line scientific discoveries may hold the answers we seek in the quest for desalinisation, such as magnetic resonance and sonic vibration. It is research in new science that will be most economically effective in the medium to long term, in our determination to provide real answers for our children and our future.

Marie Barrett, Sale

Salt tolerant timber trial success

A research trial at Undera in northern Victoria is showing that Swamp Yate (*Eucalyptus occidentalis*) appears to be tolerant to high watertables.

According to DPI scientist Louise Mann the eight-year trial is showing some pleasing results.

"Swamp Yate has grown well in soils of up to 10,000 EC and is drought tolerant."

The trees, planted at a density of 2400 per hectare, were irrigated over four irrigation seasons between 1996 and 2000 with groundwater pumped to the plantation from about 600 metres away. The average EC of the groundwater over the seasons was 9200 EC units.

"The trees have performed very well considering the site conditions. They are healthy, they have dense leaf cover and show no signs of pest invasion or salt scald," Louise said.

River Red Gum (*Eucalyptus camaldulensis*) planted at the same site at the same time and similarly treated has not performed anywhere near as well.

"Drainage appears to be the key to success. If left unirrigated, salt accumulation in the root zone can be expected to reduce timber production and probably tree health in the future," Louise said.

Drainage under the trees at the trial site was achieved with tile drains, but could also be provided by a nearby groundwater pump.

Swamp Yate is a native of south-western WA. It is one of the hardest and straightest timbers in the world with no reported pests or diseases in Victoria.

"In its natural environment Swamp Yate can tolerate hot (38°C), dry conditions as well as winter frosts and can be found growing in flooded alluvial flats, close to salt lakes and on clay soil," Louise said.

Swamp Yate can also provide a source of quality firewood and honey production as well as environmental benefits such as offering a windbreak for livestock and for erosion control.

For further information on the project contact Louise Mann on 5833 5222.

Healthy Swamp Yate after eight years of salty conditions.

Landcare Forum reconvenes

The Victorian Landcare Forum was reconvened in July with over 150 people meeting to continue their conversations about how to make community Landcare even stronger. The event followed on from the success of the initial forum held in Bendigo in June.

Statewide Landcare Facilitator Mark Costello said that the energy, enthusiasm and commitment demonstrated at the forum shows that Landcare is alive and well.

"It was both encouraging and inspiring to see those involved in Landcare with different perspectives participating in such constructive discussions," Mark said.

The forum focused on 11 different opportunities that had been identified at Bendigo. These included partnerships and consultation with indigenous communities, raising the profile of Landcare, less red tape, junior Landcare, Local Government and Landcare as well as clarifying relationships and roles between local Landcare and the CMAs.

The forum gave participants an opportunity to discuss these opportunities with representatives from various agencies responsible for developing Landcare policy and organisations involved in providing Landcare resources and supporting activities.

A plenary session at the end of the day was also attended by the Minister for Environment, John Thwaites.

Mr Thwaites closed the day's proceedings and said that the Government's Landcare priorities included maintaining the movement's grass-roots foundations, linking sustainable farming with Landcare and encouraging children to get involved.

Mr Thwaites announced that the Bracks Government would invest $15.6 million in the DSE Victorian Landcare Program over the next three years and that Melbourne would host an international landcare conference in 2006.

The proceedings from both the Bendigo and Melbourne sessions of the 2004 Victorian Landcare Forum are currently being put together and will be distributed to participants in the near future.

For more information contact Mark Costello on 5430 4526.

What the participants said:

"It gave us a voice and the concept was very effective. The idea of extracting individual's suggestions/comments and then translating them into clear and understandable proposals is quite effective."

"We built on the solid foundations and the residual excitement of the Bendigo forum. If you hang out with quality people, you can expect to have a quality day."

"Well focused, well organised…informal time is highly valued for conversations which develop our Landcare culture."

"Being able to listen, to find common ground and to find some agreed actions is a great outcome."

A discussion on involving the indigenous community in Landcare at the forum.

Should Landcare lobby?

By John Laing

One of the issues canvassed at the 2004 Victorian Landcare Forum was politics. Does Landcare need to get political? Are Landcare principles an integral part of stakeholder decision-making processes? Have we got the rhetoric and the actions aligned properly, or do we need to be more proactive in encouraging stakeholders to think outside their own immediate area of concern? And how do we get action on issues that concern Landcarers?

When it comes to engagement of stakeholders in key planning and decision-making processes organisations like the VFF, Environment Victoria, Victorian National Parks Association and major agricultural industry groups including dairy, fruit and cropping all have peak bodies to represent their particular viewpoint, but Landcare doesn't.

Is the State Government integrating actions in order to achieve multiple benefits and the long-term goal of sustainable communities? Can the peak bodies that represent most of us be trusted to think outside their square, or is that asking something of them that they cannot deliver?

Landcare is a unique community initiative, but with most people employed in Landcare support being attached to Government funding Landcare generally does not have the independent voices capable of speaking out on many issues.

Issues like land clearing, indigenous Landcare, red tape, junior Landcare, corporate and Local Government involvement are all things that we need to be thinking about at a local level, but I bet while your head is down planting trees, hoeing weeds and the like, you are hoping somebody out there is beavering away dealing with these issues at a State and national level.

The Australian Landcare Council (ALC) has a role to play in that it advises Australian Governments on Landcare issues. The ALC is justifiably proud of its ability to deal with both sides of politics and the fact that Landcare remains apolitical is a credit to them. But the ALC cannot and will not lobby.

South Australia and Tasmania have formed Landcare associations with a lobbying role. Does Victorian Landcare need to go down this road? These issues were discussed by a group of enthusiastic and committed Landcarers at the Bendigo and Melbourne components of the recent Victorian Landcare Forum.

A group of interested people was formed and have been communicating since the forum. Perhaps the main issue to be tackled at the moment is whether this 'Landcare on the loose' group can get organised. Given that we are spread across the State with a mixed bag of communication skills and technology, it will be a challenge.

The various discussion groups that formed at the 2004 Victorian Landcare Forum will continue to progress actions relating to their group's issues. Whether we need a peak body to co-ordinate and integrate these actions is up to us to decide. If you have any ideas or thoughts, now is not the time to be shy, your help is needed.

John Laing reports back at the recent Victorian Landcare Forum.

For further information contact John Laing on 5826 5363.

A discussion paper is in its infancy and can be accessed by going to www.landcare.net.au
Click the organisations tab and follow the links through the 'Landcare voice' section to the 'your input is needed' part. Please give your input.

A further history of direct seeding

I was interested to read the story in the last issue of the magazine on direct seeding by Fergus Irving and keen to add some background knowledge.

South Australians are the originators of modern direct seeding. Most, if not all, of the designers and builders of the scalping type direct seeders were shown the way by pioneer researchers such as Greg Dalton and Rod Burford. Greg Dalton is the author of *Direct Seeding of Trees and Shrubs, a manual for Australian conditions* and Rod is responsible for the Rodden 111 direct seeders.

Both Greg Dalton and Rod Burford were members of a skilled and dedicated team of researchers and field practitioners who provided the first key to large-scale low cost revegetation.

Greening Australia SA jumped into direct seeding when Neville Bonney joined. Neville is a direct seeding practitioner, the author of *What Seed is That?* and is a teacher and mentor to many. Neville Bonney's encyclopedic knowledge of native plants has enabled direct seeding of an increasing diversity of plants.

It was the South Australians who had the vision of a new way to repair our ravaged land and the will to pursue it. Their pioneering work inspired many others, including myself, to adapt direct seeding as our major revegetation tool. That direct seeding is now the major revegetation method used in south-eastern Australia is proof of the value of their work and the debt owed to them all. Acknowledging them is the least we can do. I for one dips me lid!

Dealing with the cynics

Most Australians who have heard of direct seeding fall mainly into two camps – those who know it won't work and those of us who grow millions of plants from direct seeding.

To the first group I will repeat the words of my friend and direct seeding expert Kerry Reid. Kerry has over a decade of experience in direct seeding. He conceived, planned and managed the 800 hectares of direct seeding along the Big Hill Range at Ravenswood.

When visiting Gippsland recently to talk about direct seeding he was met again with the response that it might work where you are, but it won't work here. Kerry Reid's response is that plants have been growing from seed for hundreds of millions of years!

The latest technology

One of the latest developments in direct seeding is the Burford type seeder. This is based on Rod Burford's original Rodden 111 design.

The Burford type seeders scalp, cultivate and sow a diversity of seeds at a precise rate, at the correct depth and apply smoke water in one pass.

In collaboration with Rod Burford I recently constructed the machine pictured. It has three seed boxes. Two of the boxes have precision seeding mechanisms capable of accurate calibration of the seeding rate. The rear seed box is a tumbling drum for sowing grass and saltbush seed.

The tank contains smoked water, sprayed on the seed and seedbed. The use of smoke water promotes germination and is now in common use by direct seeders throughout the Murray Darling Basin.

Dr Kingsley Dixon and his team in Western Australia have now isolated the one chemical responsible for germination.

The front hopper of the machine contains Wattle Grow inoculant. Acacia seed and inoculant are fed into the soil together. The use of inoculant can double the survival rate of acacia seedlings. Inoculated seedlings grow at two to five

David Millsom with the latest version of the Rodden/Burford type seeder with modifications. This machine prepares a seedbed, sows seed at a precise rate and appropriate depth and applies acacia inoculant and smoke water in one pass.

(Don't forget the South Australians!)

By David Millsom

Rod Arnold of Mystic Park with a specialised mounding seeder for saline and/or waterlogged sites. Rod direct seeded 50 acres of saltbush with this machine in 2002.

times the rate of uninoculated seedlings. Non-legume species gain increased growth and vigour from the nitrogen.

It is crucially important that local native species are used in direct seeding and that their seeds are treated correctly to assist and enable germination. Excellent weed control is always required.

Why do we fund seedlings?

Publicly funded works such as Landcare have a responsibility to use the most cost effective revegetation methods available and that is clearly direct seeding.

I believe that the use of 6-inch forestry tubes is obsolete methodology and they should not be funded by the public purse. When seedlings are funded they should be grown in the smallest containers possible to minimise the cost of growing and planting.

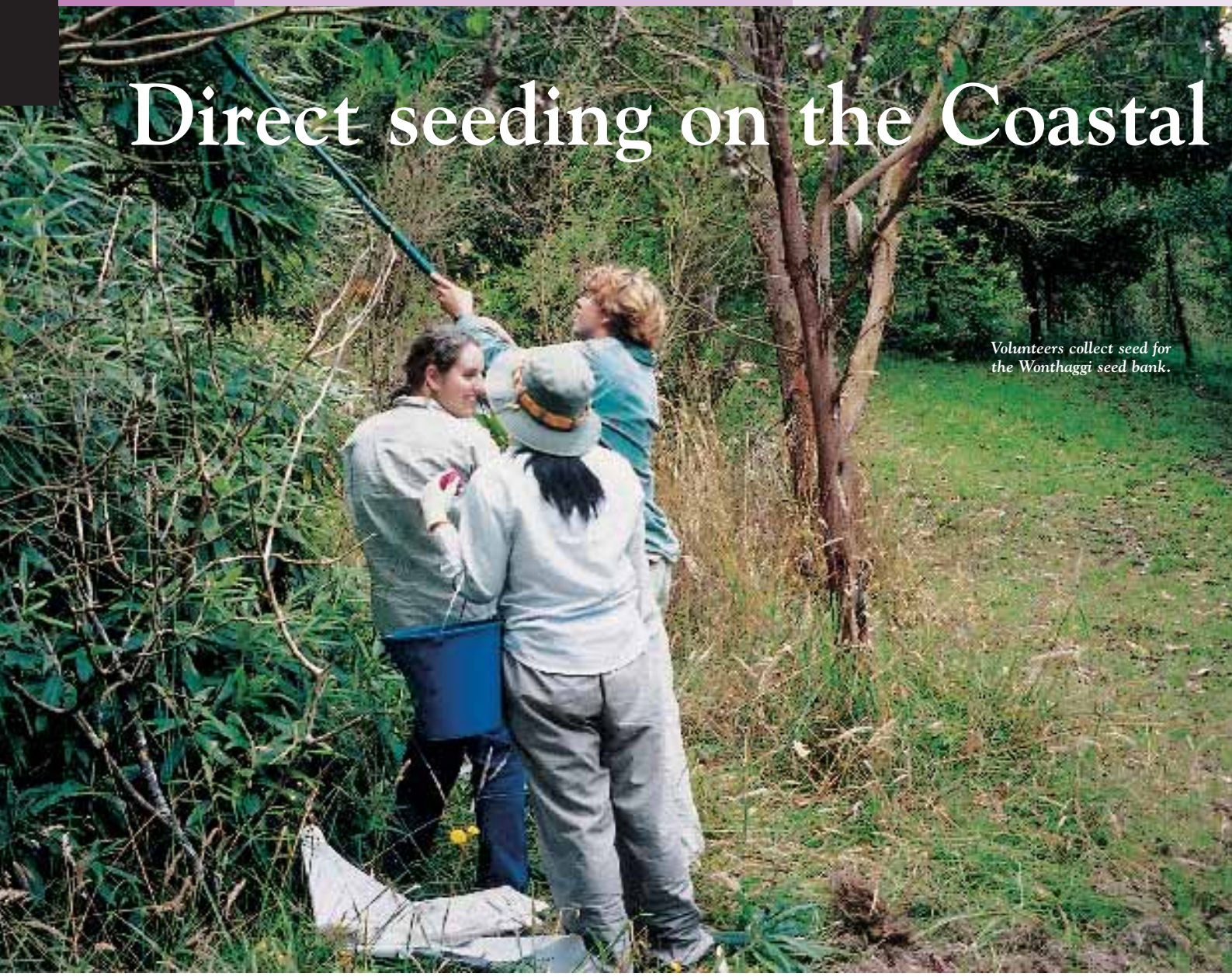
Direct seeding is the major revegetation tool in south-eastern Australia. It is low cost, increasingly reliable and able to revegetate on a scale impossible with nursery stock. Using specialised mounding seeders we are able to establish vegetation in saline soils that would kill nursery stock.

The willingness of funding bodies to hand out public money to fund obsolete and ineffective techniques is of ongoing concern to those of us who know there is a better way. My view is that if you are not direct seeding your revegetation you are being a fool to yourself and a burden to others – mainly the Australian taxpayer.

David Millsom is a direct seeding practitioner and adviser based at Pyramid Hill. For further information contact David on 5455 7164.

Direct seeding on David Millsom's property at Mt Hope. This is a grazing paddock direct seeded in 1995/96 and grazed every year since.

Direct seeding on the Coastal



Volunteers collect seed for the Wonthaggi seed bank.

Cape Paterson Coastal Plains Landcare (CPCPL) started seed collecting and direct seeding back in 1998. We established a seed bank located in Wonthaggi which is managed and run by a volunteer subcommittee and supplies seed to three local Landcare groups.

The seed bank functions from an unused shed in the town. Members have donated an igloo and refrigerator, purchased a small amount of basic equipment, built benches and collected old bed frames – now used as drying racks.

Seed is collected with permission from landowners and with permits where necessary. Upon collection it is recorded for species, collection site, volume and date.

Following the drying, sorting and weighing processes it is then stored in a refrigerator. A database of seed collected has been developed and this can be modified to provide a variety of information.

Volunteer seed collectors

Volunteers have fun collecting for the seed bank. They learn on the job one species at a time and it is marvellous to hear people confidently calling out the names of trees within a few weeks.

As part of their rehabilitation program people from the Mental Illness Fellowship of Victoria collected seed for three years – a wonderful contribution to their local community. This program continued with tube stock propagation, which was used to successfully plant out on public land.

Other volunteers include a local golfer who wants more exercise, people in public working programs and, occasionally, overseas visitors.

Education and planning

Our Project Officer Geoff Trease who is employed for half a day per week holds the reins lightly and never stops teaching. The management committee decided that if as many members as possible learn as much as possible about all aspects of seed collecting, drying and storing, together with ground preparation, seed composition and distribution we could revegetate our entire area.

Plains – it works!

Group News

By Beth Banks

Last year we started a planned approach to education. A yearly planner showing species, seed sites and collection times is growing. We are careful not to miss species. This year we are low on acacia seed as they popped unobserved. We have taken steps to avoid a repeat of this situation.

Future directions

No formal research has been carried out in this area but landowners have been recording their results and noting what the different years have produced. Last September's direct seed sites have been our most successful to date with germination in all species and growth three times that of tube stock.

It is clear to us that direct seeding is a successful method of revegetation but the landowners need assistance now with research and development to fine tune the process and perfect the winning formula.

Direct Seeding Field Day:

At Bill Berry's property, Berry's Road Wonthaggi on 17 October from 11am-3pm. Tour the seed bank, learn about seed collecting and view the planting process. This is a free event as we are keen to spread the word. Call 5672 2028 to make a booking.

Methodology

The site is given a number one haircut and sprayed with a broad-spectrum herbicide. The site is fenced before or after ploughing (requiring an excellent operator) using a mouldboard plough or Rippa. Both methods, by turning the soil, provide the low nutrient seedbed required for native seed germination. The seedbed is also clear of weed seed.

We use only indigenous seed. A minimum of 12 species is desirable in any direct seed; however, the sky is the limit. In the past we used 2 kg per hectare but recent results have shown 1.5 kg per hectare to be sufficient.

The seed combination is mixed with a bulking agent such as chicken crumble and is distributed by people power.

Avoiding problems

Soil types: It is important to recognise the different soil types on each site when making decisions on which species to use.

Dry season effects: The germination process becomes important during dry seasons. Eucalypts provide a good example. They germinate and set down a tap root like a dart deep into the ground, while the root systems of some of the smaller understorey plants are fairly shallow and can struggle in a dry season.

Wet seasons: The seeds can drown or wash away if the gradient on the furrow is very deep.

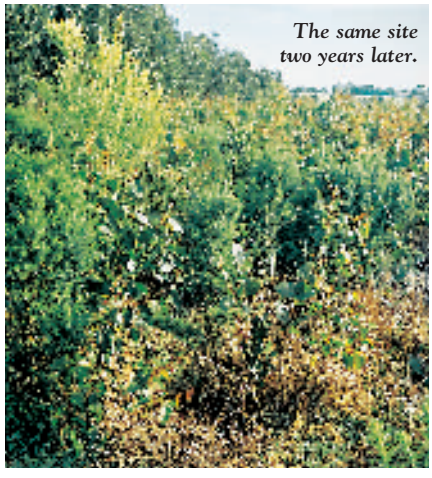
Success or failure? Six months after a spring direct seed the site was covered with weeds and the consensus was a failed site. However, eleven months after the planting signs of germination are visible. A failure with seed germination may occur if the seed is too old or it was picked when it was too ripe.

Weeds: Our landowners are committed to maintaining the site weed free. It has been found that a minimum of 10 metres wide is required for a direct seed site and this has been found to be a successful width to maintain weed control.

Timing: Spring is successful and with our autumn trial underway and looking good maybe weather conditions will play a greater part in the future.

For further information contact Beth Banks on 5672 2028.

Mouldboard ploughed to perfection. This site of 22 hectares was successfully direct seeded.



The same site two years later.

Kamarooka project targets

Andy Hay at his property at Kamarooka explains the site layout to NUFG member Brian Smith as a storm builds overhead.

An innovative farming project was launched on the northern plains in July. The project has been designed to demonstrate that perennial plantings hold the key to the future viability of salt-affected land.

The 40-hectare demonstration project is being established on the Hay family property at Kamarooka, between Raywood and Elmore. The site has been prepared for planting, a groundwater bore network has been installed, and 15,000 plants are being established this spring.

Funded by the Federal Natural Resources Innovation Grants Program, the project is an initiative of the Northern United Forestry Group (NUFG), which is made up of 36 families from the farming community north of Bendigo.

The project builds on the group's philosophy that it can be profitable for the farmer and beneficial for the environment to have trees and shrubs working for you in low-rainfall farming systems.

According to Milloo farmer and NUFG President Ian Rankin the project draws on significant local expertise and demonstrates the strong partnerships that exist in fostering innovative natural resource management in the region. The North Central CMA has joined the project to provide expertise in restoring a patch of remnant native vegetation adjacent to the site.

"The grant recognises that NUFG is willing to share its collective expertise with the local farming community to demonstrate that we don't have to abandon salt-affected land. Perennial salt-tolerant fodder shrubs along with the right mix of low-rainfall agroforestry species is a viable management option on the northern plains.

"Getting the plants in the ground is our priority over the next few months. After that there will be site management, monitoring and down the track NUFG members will form prune and thin the trees earmarked for high value wood products," Ian Rankin said.

The project will provide important local information on the economics of growing hardwood species on the northern plains, both in terms of returns for wood products and integrating tree growing into an existing cropping and grazing enterprise for environmental rewards.

The project enjoys strong support from the Hay family, the North Central CMA, Government agencies, local Governments, the East Loddon P-12 school and local Landcare groups including Kamarooka Landcare Group and the Bendigo Creek Floodplain Group, as well as the Federal Department of

salinity

Research Results

By Mal Brown

Agriculture, Forestry and Fisheries who provided the funding.

"We know there is a strong interest in growing trees for a range of benefits and the Northern United Forestry Group is keen to take a leadership role in providing access to a broad range of information, particularly local research results. The Kamarooka project will help us to do this," Ian Rankin said.

For further information contact Ian Rankin on 5488 2271.

From left, Ian MacBean from the North Central CMA, Dr Sharman Stone, Federal Member for Murray and Parliamentary Secretary to the Minister for Environment and Heritage, and Ian Rankin at the launch of the Kamarooka project.

The Kamarooka salinity story

Dryland salinity first became evident at Kamarooka in the mid-1950s. Prior to that time the watertable along the interface between the weathered bedrock systems and the plains had been rising in response to the clearing of native vegetation and the development of agriculture.

The change in land use created an increase in runoff and an increase in the volume of rainfall reaching the groundwater system. The increase in the volume of groundwater flow out of the bedrock system was beyond that which could be accommodated by the hydraulic barrier at the break of slope coinciding with the juncture with the Riverine Plains.

A build up of hydraulic pressures at this point saw groundwater pressures rise and this ultimately realised saline groundwater discharge at the land surface.

Changes in hydraulic conditions that realised salinity at Kamarooka were fuelled by a remarkably small change in the water balance. Indeed, the current area of groundwater discharge is easily accounted for by an increase in groundwater recharge (rainfall reaching the groundwater system) of just 20 millimetres per year throughout the catchment. This is only about 5% of the average annual rainfall.

This small increment in the water balance causing salinity was seen, several years ago, as good news because it seemed at the time that the aberration in the water balance could easily be redressed through alternative farming systems that made greater use of the rainfall.

Unfortunately, however, further research revealed that the groundwater system was so sluggish that even if the original water balance under native vegetation was restored several decades would be required before the existing hydraulic conditions would be overturned to the point where any tangible salinity benefits would be realised.

Sustained salinity and groundwater discharge after some eight years of low rainfall and little or no recharge to groundwater provides very strong supporting evidence for this condition.

Port Phillip and Westernport Landcare

Community Landcare volunteers from across the Port Phillip and Westernport region gathered at the Melbourne Museum in July for the Regional Landcare Awards presentation and celebration.

More than 250 adults and children attended the function, which was held to express appreciation for the efforts and achievements of the many volunteers to improve the region's natural environment.

The theme for the inaugural awards was 'Caring for Land, Water and Wildlife'. Popular Australian actor John Wood presented the framed award certificates and a voucher for $300 to the winners of each of the 10 award categories.

The awards provided a great opportunity to recognise outstanding volunteer efforts and showcase leading examples of volunteer-driven sustainable natural resource management.

Friends of Frog Hollow volunteers hard at work.

Fast results at Frog Hollow

Friends of Frog Hollow won the Community Group Caring for Public Land award. Although the group has been in existence for just 18 months its efforts to rehabilitate a natural floodplain and wetland in the Melbourne suburb of Endeavour Hills have been inspiring.

The group's 50 members, with assistance from other local volunteers, have planted more than 15,000 indigenous plants and spread more than 1200 cubic metres of mulch at the Frog Hollow Reserve.

Group President Stephen Hallet said the site has been degraded through timber harvesting, grazing and past agricultural pursuits.

"We are trying to put back what was taken," Stephen said.

Work at the site has been guided by a masterplan prepared by the City of Casey. As well as on-ground works, the group has also been active in the wider community through newsletters, an information leaflet, newspaper articles and guided tours.

School rewarded for years of effort

Darraweit Guim Primary School won the Youth Organisation Caring for Land award.

This small rural school of just 45 students has been involved in Landcare for the past 11 years. They have been involved in creating a bush tucker garden, trialling mulch, raising tubestock, releasing gorse spider mites, installing nesting boxes and platypus surveys.

The school has developed a strong partnership with the Upper Maribyrnong Catchment Group. Students from the school have also made platypus presentations to other primary schools and the River Health Conference.

Principal Rob Rindzevicius said the award was a recognition of many years of effort.

WACMAC works together

WACMAC Landcare, incorporating the Whittlesea Agricultural Society, Arthur's Creek District Landcare Group, Merriang

Awards

Landcare Group and Cottles Bridge Landcare Group, won the Community Group Caring for Private Land award.

WACMAC's partners include The Centre, a community education provider, with whom it has pooled resources and expertise to provide a range of education opportunities for landholders in Melbourne's northern rural fringe.

Community education events on salinity, erosion, sustainable land management, farm dam failure, revegetation, weed control, waterway protection, farm forestry and property management planning have been well received in the area.

Each of the regional award winners will be nominated in the corresponding category at the Victorian Landcare Awards in 2005.

According to Regional Landcare Co-ordinator Doug Evans the awards function gave everybody an opportunity to connect with others doing similar things across the region.

"It was also a way of saying thanks and giving a bit of recognition and acknowledgment to all the volunteers and groups involved," he said.

Leon Costermans receiving his Landcare award from actor John Wood.

Students from Darraweit Guim Primary School with Geoff Williams from the Australian Platypus Conservancy releasing a trapped and assessed platypus back into Deep Creek.

Launch of success stories booklet

The awards was also the venue for the launch of a new booklet *Stories of community Landcare success: Port Phillip and Westernport Region 2004*. The booklet is a compilation of 53 success stories as told in the words of the groups that contributed them.

According to Doug Evans the booklet provides a snapshot of community Landcare activity in the region.

"*Stories of community Landcare success* illustrates the diverse nature of the region's groups, the activities they undertake and the issues they address. Hopefully these stories will inspire, motivate and build the confidence of groups and individuals to achieve further success in their efforts at caring for land, water and wildlife," Doug Evans said.

Award winners

Individual Caring for Public Land
Kaye Proudley. Friends of Belvedere Bushland Reserve.

Individual Caring for Private Land
Irene Pearey. Macclesfield Landcare Group.

Caring for Waterways
Kananook Creek Association.

Caring for Biodiversity
Mullum Mullum Bushcare Group.

Primary Producer Caring for Land
Bob and Anne Davie, Phillip Island.

Local Government Caring for Land
Melton Shire Council.

Youth Organisation Caring for Land
Darraweit Guim Primary School.

Community Group Caring for Public Land Friends of Frog Hollow.

Community Group Preparing for Private Land WACMAC Landcare.

Caring for Community Groups
Leon Costermans. Frankston Environmental Friends Network.

"These plants are cool"

By Steve Meacher

Learning how to use the Hamilton Tree Planter.

Once again the Natural Resources Conservation League (NRCL) has successfully co-ordinated Arbor Week with thousands of indigenous trees, shrubs and grasses planted at several sites around the State during May.

The week's activities were launched at Healesville Primary School when Wurundjeri elder Joy Murphy Wandin extended an Aboriginal welcome to the land.

Healesville Primary School suffered a major fire several years ago and is now nearing the end of a prolonged period of rebuilding. Like a forest of eucalypts, it had regrown out of the ashes and was ready to replace some of the plants lost during the fire. Almost 400 students participated in the day's activities, including representatives of other schools in the local cluster.

The NRCL provided over 1400 indigenous seedlings including 12 black she-oaks to be planted in memory of Sir Rupert Hamer, the former Victorian Premier and patron of NRCL.

The planting activities were supervised by members of Healesville Environment Watch, Greening Australia and the Green Corps. By the time the school rebuilding program is complete the new plants will be well established and in years to come they will develop into magnificent gardens to be enjoyed and utilised by students, teachers and local wildlife.

Students planting out at Healesville Primary School.

In addition to the plantings the children were kept productively and enjoyably occupied throughout the day with terracotta pot decorating provided by Bunnings, campfire safety (DSE), Earth education (Greening Australia and The Shire of Yarra Ranges), living water activities (Gould League), animals and habitats (Healesville Sanctuary) and an Earth walk (Vox Bandicoot).

At the end of a very active, productive and enjoyable day each child left with a native shrub to take home, to encourage them to practise their new skills in their own gardens. One comment overheard as children left was, "These plants are cool!"

Other activities at schools during the week included Launching Place Primary School visiting Toolangi State Forest to plant out 1100 seedlings, Birmingham Primary School in Lilydale had a day of planting led by Greening Australia and plantings also took place at Bentleigh West Primary School and Sunshine Heights Primary School.

The Royal Botanic Garden at Cranbourne commenced a major new planting of 39,000 plants over 24 weeks and Brimbank City Council conducted the first of 25 planned planting days. In north-east Victoria tours of areas ravaged by the 2002/03 fires were conducted by the Fire Recovery Education staff of the DSE.

Planning for Arbor Week 2005 is already underway, with exciting ideas to get even more schools and communities involved across the State.

For further information contact Steve Meacher on 5962 9314.

In brief

The catchment resources caravan available for loan to schools in the Corangamite catchment.

Efficient irrigation workshops

The DPI Water for Growth program is offering irrigation management courses for landholders in the North East and Goulburn Broken (dryland) catchments.

The course provides both theory and field practice to give confidence to landholders in applying efficient irrigation practices to their situation, in particular stream flow management areas. Past landholders have reported savings in time, money, maintenance, labour, feed, water and environmental improvements after completing the course.

Limited rebates are also available to assist irrigators in purchasing soil moisture monitoring equipment, converting flood irrigation systems to pressure irrigation systems, improved efficiencies in flood irrigation and the development of an irrigation drainage and environmental plan.

For further information contact the DPI Ovens office on 5731 1222.

Catch the catchment caravan

To assist teachers in taking on units of work with an environmental focus a catchment caravan is available for loan through the Victorian Landcare Centre at Creswick.

This free resource comprises numerous tubs full of books, both fiction and non-fiction, teacher resources, maps and equipment useful for running lessons both in and outside of the classroom.

Materials are provided on flora and fauna, land and soil, issues and threats, and water. The resource is aimed at both primary and secondary level students.

Schools within the Corangamite catchment are encouraged to borrow this mobile resource. Contact the Victorian Landcare Centre on 5345 2200 for further details.

Bogong High Plains Alliance

The ferocity of the fires on top of over 100 years of grazing left the fragile alpine mossbeds in a critical state.

In 2003 the Bogong High Plains Alliance successfully obtained grants to rehabilitate and restore some important mossbeds on the burnt high plains. This work started last summer (2004) and will continue this summer.

Members of the Alliance used techniques developed over the past 15 years. Rehabilitation techniques which are both economical and effective have been developed through previous works at the Rocky Valley Pinch Pit (near the Falls Creek ski resort) where 10 years of effort has transformed a lunar landscape into a functioning alpine ecosystem and on the Wellington Plains where research and restoration work on mossbeds occurred after the 1998 Caledonia fires.

The work of the Alliance has involved a high level of dedication and skill. More on this inspiring story in the next issue.

Take the Tree Totaller challenge

A new internet-based greenhouse calculator was launched in Melbourne during June. Developed by not for profit organisation Green*fleet* Australia, the Tree Totaller will calculate the annual greenhouse emissions from cars, air travel and home/office energy use.

Individuals and organisations then have an opportunity to offset (or neutralise) all or part of their greenhouse emissions through Green*fleet's* national tree planting program. All payments are tax-deductible.

One of Australia's top scientists, Dr Graeme Pearman, says the calculator helps identify for each individual or household just how much they are contributing to the problem, where the major emissions come from in their daily lives and what options they have available to play a personal part in the challenge of emissions reductions.

To calculate your emissions visit www.greenfleet.com.au

TreeProject spreads the seed

from the city to the bush

Group News

By De Gregner

TreeProject is a non-profit organisation that co-ordinates the activities of hundreds of urban volunteers who grow seedlings and plant trees for landholders. The service has been in operation for 15 years and has played an important role in bringing the rural and urban community together to restore native vegetation in Victoria.

According to Karoline Kline from the North Harcourt/Sedgewick Landcare Group TreeProject's volunteer growers are making the job of getting trees back on to bare paddocks much easier for local landholders.

Karoline and her husband Peter moved out to the countryside a couple of years ago. They immediately joined the local Landcare group who gave them a TreeProject order form.

"Our lives are very busy so any help is useful. TreeProject were able to provide us with a great number of local provenance indigenous seedlings at low cost," Karoline said.

According to Karoline the seedlings were of very good quality. The Landcare group ordered 3400 seedlings made up of 21 different indigenous species. The seedlings were grown by 10 TreeProject volunteer growers and plants were distributed to 15 Landcare group members.

"When the seedlings were ready," said Karoline, "TreeProject volunteer growers Andrew and Celia McKenzie made their way up from Melbourne to help plant the trees on our property. Since then good rain has fallen so they got a perfect start."

Apart from the environmental, economic and aesthetic benefits the trees will bring, TreeProject has an important social role. Contacts between rural and urban people are forged and friendships and understandings are reached.

Karoline Kline said the whole experience was positive.

"I'd like to extend my thanks to the TreeProject volunteers. Their help was invaluable and the organisation of the group is impressive. We'll certainly be back for more."

TreeProject volunteer Celia McKenzie helps landholder Peter Kline plant some seedlings.

Volunteer work allows TreeProject to subsidise the cost of seedling propagation and pass these savings on to the landholder. Five hundred seedlings costs $125 plus $20 for local provenance indigenous seed if you do not supply your own. Orders for next year's planting season will be accepted up until the end of October.

To obtain an order form visit the website at www.treeproject.asn.au or contact TreeProject on 9650 9477.

The Rossers look back on the fires

By Margrit Beemster

The photographs of blackened farmland, burnt bush and smoke-filled skies seem far removed from the healthy regrowth, green winter paddocks and recovering bushland.

"It's difficult to look back," admits Barbara Rosser as she and her husband Ian show pictures of the damage caused by the bushfires in January last year.

But the Rossers have moved on. They have cleaned up much of the debris left by the fire that burnt out nearly all their land and 8 kilometres of fencing, and taken up the Government offer of financial assistance to build 3.5 kilometres of wild dog fences.

Today their 80-hectare organic farm – a non-hybrid seed business in the Buckland Valley – is recovering from the fire that came perilously close to their home.

When you consider the Rossers property is ringed by Mt Buffalo National Park and is set in heavy timber country the fact that their house and outbuildings escaped damage could be deemed miraculous.

However, the Rossers had done their homework. They built and positioned their mud brick house 19 years ago with the aim of making it as fire-safe as possible. They sited a dam to the south-west, put sprinklers on the roof and planted deciduous trees around the house.

At the time the fires hit, Ian, Barbara and youngest son Adam were on their own.

"We had done all our fire prevention work and felt we would be safe," says Barbara.

While they lost none of their cattle the cows that were in calf at the time suffered from stress and there were problems with calves later on.

Both Wiltshire Horn rams were burnt and one had to be put down the following day on the advice of Trevor Makim from DPI.

"Trevor was excellent. We discussed our options with him, which included getting rid of excess sheep as we didn't have any feed. He was also able to link us up with the emergency fodder provided by the VFF so we had feed for the cattle," Ian says.

With DPI funding Ian has put in a 1200-metre wild dog fence along the bottom of the property. Care of Remnant Incentive Scheme funding helped with a further 800-metre fence built off the boundary to protect ferny gullies to the south.

"Without financial help we would never have been able to do it," says Ian who has been fencing almost constantly for the past 18 months.

Rotary also helped with money that went towards building internal fences and buying stock feed.

"We're not the kind to ask for help, particularly when there were others much worse off than we were but every bit that came we have really appreciated," says Ian.

A DPI agronomic adviser has also come out to the farm and done a soil test and there is help for whole farm planning. An agreement has been reached with DPI for assistance with weed control even though, as organic farmers, the Rossers intend to use alternative methods to chemical spraying.

Ian and Barbara Rosser outside their mud brick house. The house survived the fire but the farm suffered extensive damage.

Fire safety and the

By Helen Bull

Rather than removing fine fuels near waterways consider how you could isolate the fire hazard from the assets you are aiming to protect.

Wildfire safety is a concern for most rural Victorians. So is protecting the environment we live in. Achieving both objectives can, at times, be challenging. However, with good planning it is generally possible to achieve both.

This article identifies some of the things that you can do to help protect environmental assets on your property, while protecting yourself, your family and your property from the effects of wildfire.

Develop a plan

The CFA's Living in the Bush Bushfire Survival Plan Workbook can help you design a fire safety plan that suits the needs of your family and your property. Use this workbook to design more environmentally friendly ways of managing your fire safety.

Identify the environmental assets that you would like to protect from fire or fuel reduction. These may include waterways, erodable soils, shrubs that provide screening or bird habitats, hollow trees that provide nesting sites, rare species or bushland that you have regenerated.

It may not always be possible to protect these assets, but by including them in your planning you may be able to find other ways of dealing with fire safety issues.

Protecting your house

In a wildfire, embers from burning bark, grass, twigs or leaves may land and ignite new fires before the main fire front reaches your house. Research has shown that houses burn down mainly because of embers. So focus on this first.

Even minor changes to houses will greatly improve their chances of surviving a fire. Identify what you can do to protect your assets from ember attack. In particular, make sure that embers cannot enter the house, the ceiling cavity or the underfloor area. Being there to put out embers will also greatly improve the chance of house survival.

Property design

Fires generally travel under a north-westerly wind (or after a change, from the south-west). Design your property to locate low fuel areas such as driveways, pools or heavily grazed paddocks to the north and west of your house and other assets you want to protect, such as sheds or valuable stock. Ensure good access to water for firefighting.

Reduce fine fuels

All vegetation provides fuel for a fire. However, it is the fine fuels (those less than six millimetres in diameter) that contribute most to fire intensity and speed. Reducing fine fuel loads or constructing well-designed firebreaks may help to protect your assets from an intense fire. However, remember that vegetation management alone is not enough to assist in house survival as ember attack may last many hours after a fire has passed and many homes are lost during this period.

Protect trees with hollows by reducing fine fuels around them.

environment

Environmentally sensitive fire safety tips

- Check with your local council to make sure you understand any council controls on the clearance of native vegetation.
- You must always obtain the permission of the road manager (either council or VicRoads) for any management works, including fire management or revegetation on roadsides. This will enable the fire manager to consider both strategic fire safety and environmental issues.
- Will your fuel reduction be effective in slowing or stopping a fire? If it won't, it may be causing unnecessary environmental disturbance. For example, slashing or ploughing a break between trees is unlikely to be effective in slowing a fire except in very low fire danger conditions and may only damage the trees.
- Design any new shelterbelts or broader plantings or revegetation with fire protection in mind. Shelterbelts may help protect assets from wildfire by reducing wind speeds and filtering embers. Good design and maintenance is critical. Break up your plantings to ensure you don't create a wick of fuel that may funnel a fire towards assets. Plan access for firefighters and carry out grass control after planting. Seek the advice of your Municipal Fire Prevention Officer if you are planning to plant or revegetate extensive areas.
- Protect streamside vegetation and wetlands to help protect water quality and habitat. These sites may be damp and may not present a fire hazard. If fuel levels are of concern, rather than fuel-reducing in the streamside or wetland zone, consider how you could isolate the fire hazard from the assets you are aiming to protect.
- Reduce fine fuels around trees to reduce the risk of fires burning into the crowns and creation of embers.
- Minimise disturbance to the soil. Graded or ploughed breaks can encourage weed growth and cause soil erosion. Consider other ways of creating low-fuel areas such as grazing, slashing or burning.
- Protect hollow trees and logs. These are important habitats for many species and if they burn can create problems for firefighters. Plan your fuel reduction to minimise the chance of them catching fire. If placing logs for habitats, locate them away from firebreaks or potential fire control lines.
- Weeds often have high fuel loads and can contribute significantly to fire risks. Remove these first. Do not plant species which are environmental weeds.
- Do not rely upon plants being 'fire retardant'. In high intensity fires all plants will burn.
- Learn more about the fire needs of your vegetation. Australian vegetation has evolved with fire and most is dependent upon fire (or similar disturbance) for regeneration and maintenance of biodiversity. By burning in appropriate cycles you can obtain both fuel reduction and ecological benefits. The DSE website provides some information on this topic.

If you have any additional ideas or examples you would like to share with others contact Helen Bull at the CFA on 9262 8452.

Neil Paulet's year

There is a constant weariness about Tallangatta Valley farmer Neil Paulet. The weariness is understandable when you consider the workload and the pressures he has been under since his property was burnt out in last January's bushfires.

Like other farmers in the valley, he had about two weeks to prepare for the fire which came within 50 metres of his house after it had swung round to the west following a wind change. Neil's wife Janice and children James and John were away in Gippsland when the fire struck.

Even with some friends to help and the fire pump handy there was nothing he could do to prevent his fences and pastures from being burnt. Around 15 kilometres of fencing including internal fences were either burnt or disabled in some way.

"It was a lot of hard work to get the fences up in the first place," says Neil who bought the unimproved farm with Janice in 1988 to run goats and cattle.

"I'd been chipping away at it for years."

Neil had about 100 hectares of pasture burnt in the fire and lost much of his bush country where he had grazed his goats. Before the fire he ran a herd of 450 Cashmere-Boers crosses. Now the herd is down to 120.

"When the bush got burnt out I sold a lot and the wild dogs got the rest," says Neil who has had assistance under the DPI Bushfire Recovery Program to replace about 2 kilometres of electric wild dog fence where his property borders Crown land.

Neil Paulet with new fencing on his Tallangatta Valley property.

# of fencing

By Margrit Beemster

He is hoping to receive some financial assistance to replace and repair electric fencing on boundaries that aren't adjacent to Crown land under the Land Protection Incentive Scheme.

Neil also hopes to receive financial assistance from the Care of Remnant Incentive Scheme for some boundary fencing he has replaced to exclude some country from grazing.

Other assistance includes help from DSE with repairing bulldozer containment lines, cleaning up boundaries and assistance with freight costs for feed. Under the Bushfire Environmental Recovery Program two dams which filled with silt in the rains after the fires have been cleaned out and funding has been provided for replacement trees and fencing on Tallangatta Creek.

DPI has provided an agronomist to do a soil test and Neil has applied for a weed control grant and plans to do an enterprise analysis. Towong Shire arranged two Conservation Volunteers Australia team visits to help with fencing, there's been a voucher from the Country Women's Association, and a Bushfire Recovery Grant.

Towong's sister city, Manningham City Council and Tallangatta Rotary also spent a day fencing as well as donating some posts.

"A few special people really put themselves out for us too," says Neil.

Some of his neighbours helped to repair boundary fences on their own initiative which was really appreciated.

Neil says there has been a lot of extra bills and indirect costs because of the fires so all of the assistance has been welcome. He intends to use any further financial assistance to bring in a spraying contractor to spray his blackberries.

The Paulets ran over 400 goats on their property before the fires. Now they are down to 120.

"I haven't had time to do the normal work on the farm for two years," says Neil.

Most of his time has been spent replacing and repairing fences and cleaning up the damage from the fire. He had to give up a part-time job as Landcare co-ordinator for the Wise's Creek and Talgarno Landcare Groups due to the extra work on the farm as a result of the fires and the drought.

While Neil is grateful for the financial assistance he has received he says there is a number of local people who missed out on assistance because their properties weren't directly affected by fire.

"Some of those people lost far more money in terms of lost income than others who were more directly affected. They were supporting the firefighting effort 12 hours a day for four to six weeks.

"We can never thank the people who helped us enough."

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