

Innovative

July 2002 Issue 7



Information You Can Use

Farmer

IDEAS, ISSUES & ADVICE

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Photo courtesy of Rural Fire Services Library

Reduce Fuel to Reduce Fire

Bush fires may be an inevitable part of Australian life but there are plenty of measures farmers can take to prevent it totally destroying their properties.

Speaking at an Innovative Farming seminar in May, NSW Rural Fire Service superintendent Terry Jackson explained the first step to prevent bushfire is to reduce the fuel that feeds it.

Fire Breaks

Fire (fuel) breaks should be created before

the bush fire season starts, to minimise the chance of fire spreading. Placement of breaks is critical. For example, it is a good idea to locate ploughed breaks alongside farm roads (this helps to increase the width of the firebreak) and around paddocks in high fire danger areas.

Planting a windrow of fire resistant trees can also be a successful ember screen to stop spot fires. During fire danger periods create a 10-15m strip under trees used as a wind break by grazing grass very short so fire

(continued on p. 2)

Reduce Fuel to Reduce Fire (continued from p.1)



Superintendent in charge of the Hornsby Kuring-gai district in Sydney, Terry Jackson has thirty-three years experience with the NSW Rural Fire Service. Twenty-two of these years have been on a fulltime basis.

doesn't travel through.

Topography has a big effect on how a fire will perform so farmers should work out how to use the terrain to their advantage. For example, fire moves faster uphill than downhill so an area that is heavily grazed at the bottom of a hill near a creek could be a good fire safe area for stock.

"Look at which hills stay in shadow the longest and hold the moisture all year round. Even in summer, south, south east and south west slopes take the longest to dry out."

Emergency Gates

The next question to answer is 'how are you going to get your stock there?'

"Fire will govern where animals go when being driven by the fire, which isn't necessarily where the gates are. They can get pushed into paddock corners and get trapped because there is no way out. Think about strategically placing Queensland gates so you can quickly run around and open them to free movement of stock ahead of the fire."

The NSW Rural Fire Service moves big contingents of city fire fighters to country areas. Not realising the value of fences, they may cut through them to gain access to properties. Again, locating Queensland gates at natural entry points is a good idea to protect fences.

Protecting Buildings

When locating new sheds, face the opening to the east or south as fires are not as common from these aspects. If possible make sure they can be completely shut so embers can't blow in and set fire to oil soaked floors, chaff bags or other flammables.

Plant a single row of windbreak trees on the north and west aspects of the house paddock to protect the house from embers. They will also provide shade in the hottest part of the day protecting the moisture levels of gardens and grass.

Choose a tree variety that has a dense leaf pattern and high moisture content. The trees should grow at least 10 metres tall to catch highflying embers. Don't plant pine trees. They are high in moisture but the needles dry out quickly and flare with high intensity.

Houses can be threatened by ember attack and radiated heat as well as direct flame. Prevent ember attack by building on concrete slabs or at least keeping the area under the house clear of 'stuff' like firewood.

Growing trees next to buildings is also discouraged. They should be far enough away from the house to prevent the effects from radiated heat or direct flame should they catch fire.

"They may be cool foliage in the summer but in a fire they create high fire intensity next to weatherboards, fibrolite or glass and can set dust alight in the wall cavity. It can be ten minutes before anyone knows this has happened." ■

FURTHER INFO

NSW Rural Fire Service website:

- Fire Protection for New and Existing Rural Properties
www.bushfire.nsw.gov.au/commUnityfiresafety/protectrural.htm
- NSW Rural Fire Service Publications
www.bushfire.nsw.gov.au/commUnityfiresafety/publications.htm

Innovative Farming website:

- Fire Drill - How to prepare the house when the fire is a couple of kilometers away.
www.innovativefarming.com - in the newsletter section

Managing the Manager Seminar

If you have a question you would like Tom and Graeme to address please email it to info@innovativefarming.com by 31 July.

Committed to providing farmers with 'information you can use', the Innovative Farming team has invited *Innovative Farmer* contributors and farm managers Tom Carey and Graeme Walker to speak at a 'Managing the Manager' seminar in Sydney on Tuesday 6 August. Their brief is to share their first hand experiences on how to maintain a productive working relationship between farm owners and managers.

Tom and Graeme say in their experience problems often occur because of differing levels of knowledge and planning input by owners and managers. Working on common goals using pre-discussed strategies can help prevent conflict.

"It should be discussed who is responsible for what. It also needs to be clearly recognised that both parties bring their own special skills, all of which are integral to the success of the operation," says Tom.

"Simple things, like involving the manager in the budget process can avoid angst from both sides. And above all both parties need to understand and respect why the other is there in the first place".

Tom runs a contract farm management business, Woolaway Farm Management, in the central and southern Tablelands of NSW. He manages a number of places using permanent and casual staff as well as contractors.

Tom is predominantly involved in commercial beef cattle, both fattening and breeding as well as fine to medium merino wool production and fat lambs. He runs more than 1500 breeding cows and more than 30,000 sheep.

Graeme runs Australian Cattle Management--a company he established in 1995 to provide consulting and artificial breeding services to farmers. The Scone-based business has since expanded to include implementation of on-farm quality assurance programs, occupational health and safety advice and contract grazing. With a background in corporate agriculture, Graeme also manages corporate and investor properties across NSW. ■

To register for this seminar phone 02 9459 3320 or visit www.innovativefarming.com

Managing the Manager Seminar



Love the farm but the manager gives you a headache?

Farm managers **Tom Carey** and **Graeme Walker** will discuss:

- how to get the manager to take your ideas seriously
- what should managers do and what you should do yourself?
- who should decide whether to spend money on fertiliser?
- how to tell if the drench is being swallowed by sheep or being sold in the pub?

Date : Tue 6 Aug, 2002

Time: 6-8pm

Venue: City
Tattersalls Club,
198 Pitt St,
Sydney

Price: \$20
(includes light
refreshments)

To register for this seminar or find out about other events for city resident farmers phone 02 9459 3320 or visit www.innovativefarming.com

Alternative Power Options



Gareth Cole is principal architect with GCA Architects and president of the Ecological Architects Association.

He has designed over 500 buildings including residential, commercial and institutional work. These projects have incorporated passive solar, energy efficient and environmentally friendly principles.

Contact Gareth by calling 02 9484 5533 or e-mail ecoarch@talent.com.au

In the second part of a three part series, Sydney-based architect Gareth Cole looks at alternative power resources property owners may be able to harness.

Most clients I meet ask me about solar power and in the next breath say "we would like a solar panel just like the people next door as they have a solar panel on their roof." In most cases the solar panel is a thermal heater ie: it heats water and is known as a solar hot water unit. It is dedicated to heating water for the house only.

Don't get confused with solar pool heaters that are also mounted on the roof. Pool heating is usually strips of black tubing stretched across a roof. This form of collector is only used for heating water for the swimming pool.

Sun

What we really need to generate energy for a house is a solar power module or photovoltaic module. These modules are usually installed

on the roof to generate energy from the sun. The greater the power demand for the house the greater the number of solar modules required.

Solar modules should be installed facing due north and at an angle of elevation approximating the latitude of the location. If maximum output from the array is required, it should be installed on a frame which can be adjusted twice per year (raise for winter and lower for summer).

An accredited renewable energy system designer can offer advice regarding the best location for any proposed solar array.

Wind

If there is plenty of wind continuously blowing across your site consider installing a wind generator. To assess this accurately, you really need to rely on recorded data taken over one year (ideally data should be assessed over a five year period). In this way you will be able to determine if there

is enough regular wind to justify the installation of a wind generator. You need to be able to estimate the average monthly output of a wind generator to determine its contribution to your power demand.

Like solar panels, wind generators need to be positioned correctly. I saw one system that was in a high wind area but was installed only 1.5 metres above ground level. The owner said it was 'no good'. I explained to him that he must have a stand that will position the generator above the tree line, so he built a tower about 11 metres high and put the wind generator on top. The wind speed and consistency were amazing and gave him all the power he required.

When used in high wind speed areas, wind generators can produce noise, eg. a 10kW generator at maximum output will produce noise equal to a car passing 100 metres away.

FURTHER INFO

Sustainable Energy Industry Association of Australia
www.seia.com.au

Quirk's Victory Light Co. Pty. Ltd.
Ph 02 9700 0960 or quirks@one.net.au

Gareth's website ecolifestyles.com has a chart to help calculate the cost of your power demand.



Renewable energy stored in high-cycle batteries.



North facing solar modules on the roof collect energy.

Water

Maybe your house is next to a river or creek. If the creek is constantly running then we can use a Pelton Wheel to

a pole and you may require three poles. This cost does not include transformers which are extra. Once you have these costs you will be

'back-up' in the event of mains failure. Any excess power generated will be exported back into the grid and, by arrangement with

" ...we find homeowners generally use more energy than the alternative systems they intend installing on their homes."

produce power for the house. It can be submerged and will provide a good power source.

able to compare them with alternative systems that are available.

the electricity utility, the dollar value of this exported power is credited against your power bill. In this way your power bills can be reduced if you are producing more power than you are using. These systems need careful consideration as we find homeowners generally use more energy than the alternative systems they intend installing on their homes. ■

Grid Power

If your property is situated close to the road and to an electrical power pole then Grid Power is an important alternative. Ring your local electricity provider and ask them if they can give you a price as this may be more cost effective than a remote system or they may supply you with Green Power accredited energy for the power connection to your house. Generally the electricity company will charge per pole. Sometimes it can be as much as \$5,000

Grid-connected Renewable Energy

If your property is close to an electrical pole/grid, consider the cost of putting on grid-connected renewable energy. This is a system where you have a standard grid connection from the grid to your property but you have the input from a renewable energy source e.g. solar modules or a wind generator. The power you generate will be fed directly into the house while you are using power or it can be stored in batteries to provide

HOW MUCH POWER WILL I NEED?

Visit the newsletter section on the Innovative Farming website www.innovativefarming.com

OH&S Regs Commence September



Graeme Walker has managed stud and commercial cattle operations in Victoria, NSW and WA for over 15 years.

He now runs a farm management consulting company from Scone specialising in cattle production.

Contact Graeme by calling 02 6545 1456 or e-mail austcattle@hunterlink.net.au

Farms and their environment are by nature places of great risk for death and injury.

Farming ranks number two for workplace injury and death with a death recorded on farms every two to three days. It is estimated only 15% of farm injuries are reported and near misses are an incalculable statistic.

Farms are unique as they are worksites, places of residence and places to unwind which all add greatly to the risk of accident. However, this shouldn't mean that injury and death are accepted as being part of the environment and the problem is too hard to address.

As owners and managers of farms we have a 'duty of care' to provide a safe working environment for all workers, managers, visitors and in particular children. This duty of care has been highlighted in the changes to the Occupational, Health and Safety (OH&S) Regulations 2001 in New South Wales which includes farms as worksites. The implementation of the new regulations commences from September 2002 and farms, like all other industries, are expected to comply.

As an owner and employer you must:

- Provide and maintain as far as practicable a safe

and healthy working environment

- Maintain work areas, machinery and equipment in a safe condition
- Organise safe working systems
- Ensure safe use, handling, storage and transport of hazardous substances (farm chemicals etc)
- Assess health and safety risk to employees, contractors and others in the workplace

"The implementation of the new regulations commences from September 2002 and farms, like all other industries, are expected to comply."

- Provide adequate information, instruction, training and supervision to employees.

The responsibility of employees is to take reasonable care of the health and safety of others. They must co-operate with employers in their efforts to comply with OH&S requirements.

These changes impact greatly on farming which has a number of contributing factors that are difficult to control. These factors include livestock, climate and environment, working in isolation, reliance on casual labour and family homes being located on the

worksite. The other difficulty is changing a culture that has been prepared to take risks and where near miss incidents and minor injuries have been the result of good luck not good management.

As owners and managers we now have to look at another area of management on the farm and those steps are to complete a risk assessment of activities on the farm, plant and machinery, and working areas. Develop a safety action plan to deal with the findings from the

risk assessment and keep good records of your safety management. There is also a need to ensure that employees and contractors are capable of doing the required tasks and are aware of the farms' OH&S requirements. Staff have an obligation to report any hazards, so good lines of communication are essential.

There is a managing Farm Safety workshop available which qualifies for FarmBis funding. If you require further details please contact me.

The greatest risk you will take with farm safety is to do nothing. ■

FEEDBACK

Do you have any subjects you'd like Graeme to write about?

Send your requests to feedback@innovativefarming.com or fax to 02 9956 5089.

Fact Sheets Go Electronic



Tom Carey has managed livestock & pasture on a professional basis in the NSW Southern Tablelands for over 10 years.

He now runs a contract farm management business based in the Bathurst/Oberon area.

Contact Tom by calling 0407 710 009 or e-mail tomdcarey@hotmail.com

As computers become more commonplace in farm offices, publishers of agricultural information are responding and recasting their traditional paper publications as computer programs.

A great example of this trend is Prime Notes—a CD ROM containing fact sheets and research summaries from all departments of primary industries and agriculture Australia-wide, along with the GRDC, Meat and Livestock Australia, the Kondinin Group and a range of Cooperative Research Centres.

Now up to version II, Prime Notes is published twice yearly by the Queensland Government Department of Primary Industries and is continually being updated by the contributing agencies. This ensures users receive the latest agricultural information to assist with farm enterprise planning and decision-making.

“...it's always beneficial to see how other people are doing things. You might just be able to apply one of their concepts to one of your own enterprises!”

The 5194 documents are organised into 11 categories including animals, aquaculture, engineering, environment, farm business, field crops, horticulture, land and soil, pastures, vegetation and water. Each category is divided into many more subcategories.

For example, the animals category is broken down to a further 14 sub categories ranging from beef to bees, poultry, pigs to sheep as well as including some more obscure categories such as game birds and reptiles. If we then look at the beef sub category we see that it is further broken down to a number of subjects from breeding to nutrition to marketing. Enter the breeding sub category and we are able to view 61 relevant documents.

There are a swag of publications on ebv's (estimated breeding values), breedplan and understanding genetics which all seem a bit overwhelming until you acquire a reasonable level of knowledge. Here is a very convenient way to swat up.

All the other categories are similarly broken down and contain information on topics as diverse as growing chicory, beef gross margins, calculating tractor and machinery costs, a comparison of cattle crushes, designing loading ramps, an evaluation of sheep jetting races, a comparison of quad motor bikes and rabbit warren destruction. A key word search facility makes retrieval of information fast and easy.

The fact that it is a collection of information from all over Australia could be the one negative because not all farmers have a yearning to learn about irrigating peanuts at Kingaroy. However it can also be a positive

because it's always beneficial to see how other people are doing things. You might just be able to apply one of their concepts to one of your own enterprises!

Prime Notes is well set out so someone with very limited computer literacy would master in no time. First time users are guided by an introductory video embedded in the start up screen which shows them how to access the information contained on the CD.

These features perhaps explain why the project team for the PrimeWare product range (which includes Prime Notes) was awarded first, second and third prizes in an Australian farm software competition conducted by the Royal Agricultural Society of NSW. ■

>> GET IT

Prime Notes can be bought online from Primary Industries and Resources South Australia. www.pir.sa.gov.au/resources/ A demonstration version can also be downloaded from the site.

FEEDBACK

Would you like Tom's opinion on a particular agricultural software product or website?

To make a request, e-mail feedback@innovativefarming.com or send a fax to 02 9956 5089.



Recycled Organics Trial

Twelve vineyards throughout NSW have formally expressed interest in participating in a program trialling the use of recycled organic products to determine the impact on soil structure and plant health.

The program, which is being organised by the recycled organics business network CORE, will involve trialling a coarse mulch and a soil conditioner on 150m of vine row per property. It is expected to start in Spring and last about three years.

It is just one of a number of initiatives CORE is undertaking to create more demand for recycled organics in agriculture—a sector which is lagging behind others even though many Australian soils are starved of carbon.

CORE chief executive Chris Rochfort explains:

"The agriculture market segment is lagging well behind forecasts despite the links between agriculture and soil degradation, productivity losses and salinity. We are promoting carbon-based agriculture using multi-stream organic materials to improve soil condition."

The results of the trial will be used to help commercialise the products by giving scientific basis to what is mostly anecdotal evidence about the benefits of using products containing recycled organic products.

Based on the market growth up to 1998 it is forecasted that it will be 2016 at the earliest before demand for recycled organic products equals supply across all segments including intensive agriculture, environmental rehabilitation and bio remediation.

This forecast worries governments which have waste reduction targets they need to meet. It is also a cause for concern for processors which is why CORE is taking action now to increase the size of the recycled organics market by championing the development of commercially focused organics-related initiatives.

"We need to increase understanding and practical use of products containing recycled organics among agricultural growers especially when it comes to more efficient use of water and nutrients in horticulture. Individual companies need help breaking into new markets."

Recycled organic products include a range of composts and mulches made from urban compostable organics and rural industry wastes such as orchard prunings, grape marc, wool washings, animal manures, forestry wastes.

For more information on CORE visit www.corebusinessnet.com ■



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ON THE WEB

The Innovative Farming website is an excellent resource for farmers who are looking for new answers to old problems. You can access back copies of the newsletter and follow links to related sites.

NEXT ISSUE OCTOBER



Early vineyard trials with recycled organics.