

Mike Stephens and Associates Newsletter April 2009

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Pasture recovery after fire

Andrew Speirs – aspeirs@msanda.com.au

A number of our clients and their farm businesses have been affected by bushfires this summer, and MS&A has decided the best way we can help, is to keep doing what we do best... provide practical information and advice. Here, agronomist Andrew Speirs takes a look at pasture management after a fire.

Fire intensity has the greatest bearing on what pasture survives a fire. The intensity of a fire depends conditions on the actual fire day and the amount of feed (dry material) available to be burnt. Pastures with very little standing dry feed will be less affected comparatively than pastures which have significant amounts of standing feed.

Fire intensity is generally ranked into three groups:

- “Cool-moderate” - which burns most dry plant material, with a significant amount of surface seed lost. Most perennial grasses and clovers survive in this situation. There will be some dry residue left unburnt.
- “Hot” - in this case all of the dry plant material is burnt. The majority of surface seed is burnt and young or weak perennial grasses are lost. The top soil is charred and becomes bare.
- “Very hot” - the soil is often sterilised. All plant material and seed on the surface is destroyed with the fire burning into the organic matter layer on the surface.

How are different species affected?

Annual Grasses

As these plants regenerate each year from seed, the intensity of the fire has a direct effect on how much seed survives and is available to germinate after the autumn break. The hotter the fire, the less seed survives. In situations where the surface is burnt bare, surviving seed may also be blown away.

Sub-clover

Sub-clover buries its seed so the damage caused by fire is reduced. Large reserves of hard seed (dormant seed) can accumulate in the soil over the years, which is very valuable after fire. It means that even though the surface seed has been lost there is still a good seed reserve in the soil to germinate.

Timing of the break will affect how well sub-clover recovers. As a guide the earlier the break, with good follow-up rains, the better the recovery. Where follow-up rains are poor, plants perform poorly and may die because the surface dries out faster without surface water.

Perennial Grasses

Young perennial pastures are the most vulnerable because they are yet to establish a strong root system with good carbohydrate (energy) reserves. The more dry residue present the more damage will occur.

Most well established perennial grasses will survive a cool-moderate burn. Naturally, species with protected growing points below the soil surface will do better. Results from various fires in Victoria show the most tolerant to least tolerant species to be: bent grass, phalaris, tall fescue, cock foot, and perennial ryegrass.

In a very hot burn the fire will generally kill all perennials. In a hot burn, more than 60% of perennial ryegrass is often lost.

Perennial Weeds

Wouldn't you know it, perennial weeds survive fire well, because of their well established, and often deep, root system.

Annual Broad Leaf Weeds

In situations where there were large numbers of seed before the fire and the burn has been cool-moderate, enough seed will survive for broadleaf weeds to become dominant after fire, especially in more run down pastures.

Soil fertility

The changes in soil fertility after fire vary. There is likely to be little change to available soil phosphorus levels and some potassium may be released if there was a significant amount of standing dry matter.

The main change can be in the available nitrogen, where the surface organic matter thatch has been lost which significantly lowers the amount of nitrogen made available from mineralization from organic matter. In this case pastures will be slower to recover, showing reduced vigor and yellowing of older leaves.

Where the fire has been cooler, paddocks with good soil fertility recover faster. This is because plants have higher energy reserves and there is more nutrients for them to draw on and reestablish.

How quickly will a paddock return to full carrying capacity?

Where there has been at least 50% survival of perennial grasses, the carrying capacity will be less than 30% for the first three months after the break. This will slowly build to 100% after eighteen months, assuming that weeds are controlled and the perennial pasture is allowed to build up leaf area. If the pasture is set stocked and heavily grazed, the pasture may well be grazed out and fail.

After hot burns perennial grass survival will vary. Wait until after the break to decide what to do. If the pasture has been affected by a very hot burn, it will need re-sowing. These areas could be used to grow quick feed, such as annual ryegrasses or forage oats, to help carry stock numbers while less affected pastures recover.

In the recovery phase for pastures, don't graze too heavily; control broad leaf weeds early, where they look to be overtaking the pasture; and allow as much seed set as possible in the first year.

Please feel free to call our Yendon office on (03) 5341 6100 and request another copy of this newsletter if you'd like to forward it to someone who may benefit from the content of this article. Sources: Pasture recovery after fire – Victorian DPI Ag 0203 & Pasture Recovery after fire – New South Wales DPI Ag fact (pg 237)

Planning is vital if you want to stay ahead

Andrew Carmichael* – acarmichael@msanda.com.au

“A man needs a plan!” – says the character played by Michael Caton in *The Castle*.
If you do not prepare, you often struggle to get the results you want.

Outside this, having a programmed approach early in the season assists with decision making and sourcing inputs. Once the crop or pasture is in the ground, the focus of your thinking can move from strategic to tactical but it still involves planning.

Plans are also meant to change. One thing that drives consultants ballistic is when you say “What did you do that for?” and the answer is, “Because it was in the plan”. A good and robust plan must involve stop:go triggers so plans can be adapted to suit the season.

A plan also needs to be clear and concise so all members of the team can use it. Even if one of your team members is a ‘rocket scientist’ and understands calculus, keep the language at a level that most people will understand.

A good plan should make the users think twice and act once; it is all about optimising inputs. Good plans are also records.

Often plans involve specific plans within plans – the layers may not be obvious (or important) to all users.

Herbicide planning

Managing weed population dynamics, herbicide selection, herbicide plant-back periods and cultural weed control are all strategies that can be complex if not thought through. A long-term plan detailing possible crop and herbicide rotations, is therefore necessary to avoid making reactionary herbicide decisions.

Populations of grass weeds such as ryegrass and barley grass can be effectively manipulated in the years leading up to a cropping phase. In particular, reduction of ryegrass numbers via non-selective herbicides during the pasture phase is a key strategy for managing herbicide resistance, as well as managing broad leaf weeds prior to the cropping phase. Improving these pasture weed management decisions can have positive effects on herbicide and root disease.

Crop rotation planning

Crop rotation is an important cultural control strategy for managing soil and stubble borne diseases. Developing detailed paddock plans, which take into account disease biology and interactions with management, climate and crop choice, is an effective method for managing against disease risk.

Risk management

An aspect of farming often overlooked is that if you do not have it you cannot sell it. Planning needs to tailor for production and selling risks. The planning process must be tailored to address risk factors on an individual basis. Although some factors are uniform, there is variability in crop variety sown, spray equipment, time availability and the resources available to monitor the crop.

Planning may also identify less obvious risks such as crop yield being adversely impacted by the interaction between rhizoctonia and persistent chemicals such as sulphonylureas.

Financial planning

Development of a crop plan also assists financial management by providing a more accurate estimate of expected costs than simply using the profit and loss data from the previous year. For example, changes to crop choice, fertiliser selection and rate, pre-emergent herbicide usage and the need for aerial chemical applications have a significant effect on cash flow and the over-all cost structure of a business.

Identifying the costs associated with these decisions provides a means of anticipating future cash flow requirements and presents a level of professionalism that finance providers appreciate. Additionally, by applying costs to each enterprise you are able to calculate an estimated cost of production for each enterprise, and drive ongoing management decisions.

Planning helps the farmer and the ag supplier. Real savings are on offer when you purchase in advance and in bulk. Discounts of up to 10% are not uncommon compared with buying supplies on an as-needed basis.

Farmers who plan and have a programmed approach to spraying, can often also avoid the need for 'blockbuster' pre-mixes and a 'putting out fires' response to a problem. When you plan, these events happen less often.

In addition, more and more farmers are using contractors – planned operations in larger contiguous blocks attract those people and can lead to operational discounts. The other counter-intuitive aspect about good planning is that it makes it easier to change your plans.

Planning needs to be carried out in conjunction with an experienced local agronomist who knows your business, your capabilities and practical constraints.

Andrew Carmichael is based in Narrandera and skilled across agronomy, business planning and financial analysis. He is available now to help clients put together a crop plan with an eye to developing a pre-June tax plan for their accountants.

Call Andrew on 0428 297 353 or email acarmichael@msanda.com.au to arrange a time to put your crop plan together.

Letter from New Zealand – Pita Alexander (NZ Accountant with Specialised Farm Accountancy Practice)

Pita has addressed 90 odd conferences and seminars in Australia over the last 15 years, with Mike Stephens having been at the very first at Hall's Gap which he remembers well.

Some years ago I spent three years trouble shooting for banks, stock firms and other farm landing institutions where their farming clients had got themselves into severe financial strife – what did I learn from all of that in a New Zealand context that may be of interest to you:

- Our New Zealand sheep and beef farmers have had three very unsound years ended 30 June 2008 and there is no other way to describe this – the major problem was an insufficient lamb price – the average was in the \$50 - \$58 per head bracket which is \$25 - \$35 per head too low – the current season is looking much better but we are coming off a low base - New Zealand has about six million less lambs to sell than in earlier years that must be helping.
- Many New Zealand dairy farming couples for the last two years here have been acting as though they are bullet proof but not now – at a payout of \$4.50 - \$5.10 per kilogram of milk

solids this is for many couples going to be below or right on their cost of production per kilogram of milk solids.

- Our vineyard sector is going to have more wine than they can sell well – our shearing and woolshed costs are now getting close to 50% of the gross wool income – education costs all of a sudden are starting to look hard – cash is king and survival is the key point on the agenda – but we have had no fires so we cannot even vaguely complain.
- For every imprudent borrower there is an imprudent lender – it is often very convenient to overlook this point.
- If you are in a situation where things are getting serious then panic early – panicking later is just bad timing and will be costly.
- Only wage war on one front at a time – so easy to say but crucial that you implement it.
- Getting your direction right is much more important than your speed.
- At the bottom of their business cycle, a farming couple are much better listeners than they were at the top of their cycle.
- If your spouse does not like your business plan then pause and regroup – teams like elephants don't gallop particularly if they don't like the plan.
- Even though you might not like your Accountant or Bank Manager – communicate with them early and hard – the fact you may not like them may mean that they are good at their job and speak truth.
- Remember the letters – Cimitym – which stands for “Cash flow is more important than your mother.”
- More than ever the long term farming stayers need to have a passion for agriculture – I struck this many times in my troubleshooting years.
- Never forget that Income Tax is not a problem - Income Tax is almost invariably involved with the solution.
- Balance that cash flow budget realistically at almost any cost – minimising losses in a down turn is just as important as maximising profits when times are better.
- Most of our clients have had plenty of practice in dealing with the down cycles – it is no fun – it is hard on families and it is usually time consuming – but if it was easy to be in business, everybody would be in business.
- When you are doing well farming wise, financial wise or business wise then tell nobody – the tall poppy syndrome I am afraid is alive and breeding.
- When you get a chance – and you will – then build your financial reserves – you and I need probably 10% - 20% of our gross farm income off farm as a financial buffer – it cannot come ahead of fertiliser or debt reduction or family or education but burn the point into your memory banks.

P S ALEXANDER



Mike Stephens & Associates Pty Ltd

96 Harbours Road

Yendon Vic 3352

p (03) 5341 6100

f (03) 5341 7630

msanda@msanda.com.au