Weeds Forum Presentation
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Competitive Pastures for Improved Weed Management

What does flooding, drought and fire all have in common? They all damage the pasture, reduce the ground cover and reduce competition. What else reduces competition - ploughing, overgrazing and disease (eg kikuyu yellows) to name a few. These factors all favour weed invasion. We've all seen fireweed explosion after the flood, blady grass spreading after fire, thistles growing in kikuyu yellows patches and annual weeds in a newly sown pasture.

Too often the reaction to this weed invasion is to spray chemicals or slash. But is this the only solution? No! We are treating the symptoms and not the root of the problem.

Competition is a major tool as a strong healthy pasture competes against weeds, with the benefit of increased production and better erosion protection. Competition has the potential to save money while making you money.

So what makes a competitive pasture? It helps if the pasture species is suited to the environment – the ecosystem, the soil and the climate. For instance water couch (*Paspalum distichum*) is suited to the wet pasture systems of backswamp country. Kikuyu is suited to fertile soils with better moisture while carpet grass dominates on lower fertility country. Warm season species such as these are suited to the hot, summer dominant rainfall of the mid North Coast but temperate species such as phalaris and perennial rye struggle in this environment. Phalaris is also not suited to the coastal acid soil but was once recommended in the region. You don't see phalaris pastures on this part of the coast now.

Apart from being suited to the environment there are other features that make a pasture competitive. Natives are much better adapted to our low fertility. But for introduced pastures, good fertility, nutrients in balance and soil health are all important. Soil health includes having good soil structure as well as soil life.

A competitive pasture is usually a perennial pasture species as they provide more ground cover all year round. This is important as many pasture weeds need bare ground to establish.

But this is only part of the story! Pastures also need to be managed to help them be competitive.

The first part to management is understanding your pasture and weeds. When do the weeds germinate? For instance, fireweed's major germination is in autumn so bare ground at that time increases the chance of bad fireweed. What weed threshold is a problem? Again with fireweed, a few plants in the paddock may not be a problem but when it is so dense that it is inhibiting pasture growth it should be controlled. Does slashing kill the weeds or spread them? For instance, slashing GPG when the seed is mature will spread the weed. When do your pastures grow? How long do the pastures need to rest?

Grazing management is important. You need to match stock to pasture, leave residues when you graze to help regrowth and rest pasture at critical times. Pasture that is rotationally grazed and have rest periods, are able to rebuild energy stores for regrowth and for recovery from pests and diseases.

Chemical management is also vital. The right chemical used at the right time. For instance Flupropanate used on GPG in the middle of summer can damage the other pasture species in the paddock, but used in August/September has less affect on the competition. So aim to minimise reduction in competition when using chemicals.

Sowing management can involve sowing method, rates, timing and weed control to help manage the weed.

To sum up, prevention is better than cure and a strong healthy pasture is the key. To get there use adapted species, look after soil fertility and soil health, manage for strong pastures and keep good ground cover. Because competition by healthy pastures is your first weed management tool.