



STAMFORD SIX



While this has the ring of a cabal of conspirators cuffed together in the dock, or politicians fallen foul of some obscure constitutional clause, the Stamford Six is actually a group of progressive landholders banding together with a DCQ led collaboration to replace their Prickly Acacia control program with something even more forward looking.

The Stamford Six share a common goal to integrate the best information about eradication, weed seed spread prevention, protecting clean areas, pasture management and climate information into a property management plan that looks beyond weeds to enterprise profitability and drought resilience.

The Stamford Six are pioneering a template for the integration of the science of pasture and weeds with unground Prickly Acacia control, allowing individual landholders to manage the process in a way that best suits their property.

Because the properties in question straddle the boundary of the DCQ and Southern Gulf NRM regions, the Stamford Six's successes in integrating Prickly Acacia control into core property management, will flow downstream in both directions – on the one hand, preventing the further spread of weed seeds and protecting Prickly Acacia control investments made by landholders, DCQ and governments; on the other, causing the further spread of new ideas and ways of doing things.

They are getting technical expertise from QDAF's David Phelps and Jane Ticknell on pasture management and utilisation timing to reduce weed seed spread and maximise profitability, from BQ's Wayne Vogler on the science and practical management of Prickly Acacia, and from DCQ on how to measure and record the changes brought about over time.

Apart from the Department of Agriculture and Fisheries (QDAF), Biosecurity Queensland's Charters Tower Tropical Weed Research Centre (BQ), others collaborating with DCQ to help the Stamford Six realise their dream, are Southern Gulf NRM, Walker Warrianna Landcare Group, Lower Wokingham Landcare Group and Flinders Shire Council.

The Stamford Six collaboration is part of DCQ's PACT program funded by the Australian Government and onground activities funded by the Queensland Government's QNRM04 program.

CLOVER CLUSTER



Like all overnight success stories, the Clover Hills Cluster Group has been some time in the making. In 2015, five progressive graziers near Barcaldine got together to do something about the feral animals that were decimating their stock and the excessive kangaroos that were preventing them from sustainably managing their pastures.

The prohibitively high cost of the high netting fencing required to control these animals drove them to combine their resources and constructed a single fence around their combined 33,500 hectares of grazing land. If they could control wild dog predation and the grazing impact of excessive kangaroos, then they would be able to rest country, restoring balance to their pastures and profitability to their sheep flocks.

The result was lambing percentages up from 5% to 90%, roo numbers down to a manageable level, increase in ground cover and improved habitat for small birds, mammals and reptiles. The reduction in roo numbers alone has delivered an estimated dividend of nearly \$100,000 per property.

And in recognition of this overnight success, the Clover Hills Cluster Group has been awarded the Australian Government Innovation in Agriculture and Land Management Award at the recent Queensland State Landcare Awards – fantastic recognition for a group of hardworking, forward-thinking landholders who were in the vanguard of using exclusion fencing to enable sustainable management of their natural resources while improving enterprise viability.

GIDGEE V GRASS



Our three year trial on improving pasture productivity following Gidgee thinning has shown some fairly clear results. Importantly, it demonstrated that, with an appropriate control method and prolonged pasture management, it's possible to improve the pasture condition of land which has been degraded by Gidgee encroachment or thickening.

Both mechanical and chemical clearing demonstrated the ability to kill large percentages of Gidgee for a very similar price. These methods are equally suitable for meeting the rules of the Self Assessable Code under the Vegetation Management Act for managing the encroachment of Gidgee, but need careful planning and application to meet the requirements of regulations for dealing with Gidgee thickening.

The trials clearly showed that the control technique is the first step on a management journey to restore pasture productivity. Our trial site at Auteuil (between Aramac and Barcaldine) showed a recovery in grass biomass from less than 100 kg/ha to over 1700 kg/ha.

While mechanical clearing makes the biggest difference to paddock accessibility for mustering, chemical clearing retains the skeletal remains of the trees which provide a modicum of shade cover for stock.

Whichever clearing method is used, grazing management is crucial to timely rehabilitation of the grassland. Our experience at Auteuil indicates that wet season spelling, where stock are excluded for six to eight weeks to allow grass species to establish and set seed, could shorten pasture recovery time from five years to two years.

If the recovering area is grazed too soon, before the pasture species have properly established and seeded, not only is the pasture recovery postponed, so is the return on investment.

BULLETS AND BULLOCKS



Our Landcare Facilitator, Doug Allpass, and our Special Projects Officer, Natalie Pearce, recently conducted a supply run through the Channel Country to restock the ordinance bunkers of properties on the front line of the war on feral pigs.

It wasn't only about dropping off ammunition for the pig shooters and collecting the record sheets of how many had been shot or seen and where they were running, it was a great chance for Doug and Natalie to talk to these isolated landholders about seasonal and stock conditions, Landcare, cluster fencing and funding opportunities for weed control.

These hardy westerners who spend most of their time hundreds of kilometres from their nearest fellows, have a thirst for a fresh face, someone different to talk to and a personal interpretation of what's happening in the outside world.

Recent rain across most of the area saw plenty of surface water meaning the feral pigs were scattered to all parts, making them hard to find; the upside was the cattle were revelling in the fresh feed and the mustering horses had a spring in their steps.

PILL POPPING



Pill popping is a uniquely human activity. We do it for many reasons: to numb, to stimulate, to forget, to desensitise, to alleviate pain, and to relax. We do it in response to stress, pain, sleeplessness, sleepiness, anxiety, disease, injury, stimulation or simply for recreation.

We pop vitamins, minerals, supplements, painkillers, medication, uppers and downers... from biotin to thiamin, calcium to magnesium, arnica to echinacea, alprazolam to diazepam, benzodiazepine to psilocybin... have we got a pill for you.

Not to be left out, DCQ has joined the pill popping brigade, but entirely different pills for entirely different reasons. Last year we started popping Di-Bak Parkinsonia pills, soluble capsules full of deadly, species-specific fungi, into the trunks of Parkinsonia trees... wildly successful if you get a kick out of killing invasive plants that destroy native habitat and pastures.

And like any good pill popper, our weed blokes are never satisfied with the status quo... once the euphoria of the magic Parky pill started to wear off, they went searching for their next pep pill. They didn't have to look far: Di-Bak G was sitting right there on the BioHerbicides Australia shelf alongside Di-Bak Parkinsonia.

Di-Bak G is a soluble capsule filled with glyphosate, commonly known as Roundup weedkiller, and we're now trialling it on our obsession, Prickly Acacia.

Prickly Acacia was brought to Australia from Pakistan as a shade and ornamental tree in the 1890s. By 1926, the State Government was urging graziers to plant it on the open Mitchell Grass Downs to provide shade and fodder for livestock. Three decades later it was declared a noxious weed.

By 1996, 100 years after it first came to these shores, Prickly Acacia infestations affected over six million hectares of prime grazing land; 20 years later, that had more than tripled to 22 million hectares. It costs, conservatively, \$9 million per year in control and a further \$24 million per year in lost production. That's a whopping total of \$33 million per year cost to the grazing industry of the Mitchell Grass grasslands of western Queensland.

On top of that, according to the Federal Government, weeds cost the environment at least as much as they cost agriculture... successful control is worth a dividend of \$66 million per year! No wonder DCQ is obsessed with its control!

The Holy Grail of Prickly Acacia eradication is cost-effective control. We've achieved this with homogenous infestations, from the scattered to the ultra dense, by using residual herbicide and a variety of delivery methods from hand, to mechanical spreaders, to drones – costs slashed by 92%.

We've also achieved it where there are native trees. Our recent advances in misting techniques has us revolutionising Prickly Acacia control amongst native trees – we've perfected misting chemicals, ratios and droplet sizes that don't affect native trees, only Prickly Acacia. That is not to say we have overcome all challenges, or can't find additional efficiencies on top of the 800% increase to date.

Currently, the biggest block to further efficiencies in many areas along creeks with native vegetation is the large Prickly Acacia trees that prevent access for the mister... we can't get close enough with the mister to be effective, and we can't use cheaply applied residual herbicide because it would kill the native trees. On these streamlines, we need to crack the code for getting rid of the large Prickly Acacia trees in a cost-effective manner, to then allow the misters to do their work on the smaller stuff in amongst the native vegetation.

Enter Di-Bak G: little pills with a big hit. Safe and easy to use, Di-Bak G capsules can be applied by hand with the aid of a cordless drill, or by a patented applicator that automates the process.

The rule of thumb is one pill for every 100 millimetres of trunk circumference. So, a hole is drilled every 100 millimetres around the trunk, as close to the ground as practical, and a single capsule sealed into each hole with a plastic plug. Moisture in the plant then dissolves the capsule, releasing the glyphosate which is conveyed by the plant's vascular system to the leaves where it causes a shutdown of photosynthesis, and death.

The beauty of the Di-Bak G system is, there is no accessible chemical – BioHerbicides Australia's unique formulation of dry glyphosate is sealed inside the soluble capsule... no free chemical, no chemical contact with skin, no chance of spilt chemical, no chance of chemical drift, and no chance of accidentally killing nearby trees.

So, we have the theory – get rid of the big Prickly Acacia trees so we can get the cost-effective mister in close for the small ones – and we have the tool – Di-Bak G – we now need to prove it works in a more cost-effective, efficient and safe manner than the alternative hand spraying, which is where our trials come in.

With the help of Winton's RESQ staff, our on ground team has just popped 2,000 pills into Prickly Acacia trees with enthusiasm, if not gay abandon. Each treated tree was recorded on our Fulcrum App so we can monitor progress over time and ensure we are getting a good kill rate. By the time Di-Bak G is registered for commercial use, early next year, we hope to know whether these little pills with the power punch will unlock another major reduction in Prickly Acacia control costs for the landholders of the west.

The Di-Bak G trials are being conducted under our federally funded Weed Outlier program, which aims to eradicate small populations of Weeds of National Significance (WoNS) outside of existing containment lines.

Pill popping has never been so much fun! Turning ideas into reality has never had so much impact!