

Mid Dome Wilding Trees Charitable Trust Newsletter

Chairman's update

Government Funding of \$1.2m



Ali Timms

The past year has seen some very significant news and developments which will place the Mid Dome Wilding Trees Charitable Trust in a strong position to meet its goal of eradicating wilding trees from Mid Dome.

The announcement of \$1.2m funding from the Government's budget for the Trust was a fantastic and very welcome surprise!

It's very encouraging to see that the Government recognises the good work the Trust has done to date and has confidence that the Mid Dome Eradication Programme is achievable and worth backing. And even more so during tight economic times with a Government focused on getting 'back in the black'.

This extra funding could not have come at a better time. After years of trials, testing and disappointments with various control methods, we finally have some proven and effective tools to use at Mid Dome.

At the Trust's August meeting we received a report on the visual evaluation of the aerial boom spraying of the "Lucifer brew" on the Jollies block which was carried out in January 2013. After 7 months the kill rate was more than 65% and in two years' time

it is expected that the kill rate will be greater than 85%. (This kill rate percentage is considered by experts to indicate a successful operation).

The Ground Basal Bark Application (GBBA) and Aerial Basal Bark Application (ABBA) are two other very efficient and effective methods of wilding control now being used extensively at Mid Dome.

We are in the second year of the joint Trust-Community Environment Fund Project, with each party donating \$100k per year over 3 years. This year's \$200k will be spent on aerial boom spraying of the Lucifer brew on the western and front faces of Mid Dome. In light of the additional funding and the availability of proven chemical combinations and methodologies, the Trust is currently reviewing and adapting its 12-Year Eradication Programme. (We are currently at the mid-point – it's been 6 years since we began the programme.)

The bi-annual Volunteer Days are also being revamped to bring on board a wider sector of the community-service clubs, corporates etc. These days are important not only for the work done clearing wildings but also for spreading the word about what an important issue they are.

We still face some funding gaps for the remainder of our programme but I am confident we can make a very strong case for grants from funding providers. But success breeds success and we have proven wilding control methods and chemical brews, attained a high national profile, and can count on strong support from the local community.

I'm really looking forward to a year where we make great gains at eradicating wildings from the Mid Dome landscape.



Lend a hand at Mid Dome

The Trust is holding its next volunteer work day at Mid Dome on 8 March 2014 and the aim is to attract new volunteers from around Southland who have not been on a work day before.

The work days provide a spectacular introduction to Southland's high country land and an opportunity to help deal with one of our most pressing environmental threats. Wilding pine trees spread like wildfire with their seeds blown by the wind. The unwanted forests this creates directly impacts on pastoral farming, biodiversity values and recreational opportunities.

Volunteer work days started in February 2001 and are normally held twice each year – one in November and one in March. Initially these were weekend events and were held in the Hen Roost Basin at the back of Cattle Flat Station. Since then the focus has moved over to the Mid Dome – Cupola Range accessed from the Jollies Pass.

Thousands of hours of volunteer time has been put into removing tens of thousands of young pine trees. The savings made by volunteers have been used to pay contractors to tackle trees in the more remote and difficult areas.

Volunteers always say how much they have enjoyed the experience after a day on the hill. Many are awestruck by the mountain landscapes they have never seen before. Most, although stiff and sore, say they feel they have done something really worthwhile for the environment. All leave knowing a lot more about the challenges posed by wilding trees and how the Trust is dealing with them.



Volunteers play an important role in helping to eradicate wilding trees from Mid Dome.

Commercial value of wilding pines

Many people look at the wilding pine control work at Mid Dome and ask why the trees can't be used to make money. There are a number of reasons why wilding trees there do not stack up as a commercial proposition.

The main wilding species on Mid Dome is *Pinus contorta*, also known as Lodgepole pine. While this species is used commercially elsewhere in the world it is not considered to be a prime tree crop in New Zealand compared to *Pinus radiata* or Douglas fir.

The variety planted at Mid Dome was chosen because of its hardiness and ability to survive on harsh sites. It is short in stature and generally has multiple trunks which results in a very poor form for timber use.

A major cost component of harvesting timber is the logging and transport costs. The terrain at Mid Dome is steep and rugged and there is no existing road access to the forest sites that could be used to haul timber. The cost of establishing this infrastructure would be considerable and would probably exceed any revenue generated from production. Furthermore to be viable a forest must be close to a local market and/or an export port. Mid Dome is about as far as it is possible to get in New Zealand from a coastal port. Even firewood contractors have looked at Mid Dome but have abandoned the idea for these reasons.

Some forestry companies in New Zealand have harvested better quality *Pinus contorta* from production forests but this is only achieved on a break-even basis. The efforts of local children to sell wilding pines as Christmas trees only lasted for one season.



Pinus contorta – Lodgepole pine

Use of chemicals – the new brews

In the last five years there have been some exciting new developments with the use of herbicides for wilding tree control. Traditional methods like chainsaws and scrub bars would never be able to get on top of the major wilding spread problems, so new, faster and cheaper tools were required to enable tight budgets to go further.

The new herbicide tools have been developed by DOC with assistance from SCION, and are operational. They have been tested and refined in wilding programmes at Queenstown, Twizel and Mid Dome. Further testing and refinement will continue as they are used.

The critical factor with the new herbicide tools is the use of an oil which helps the herbicide stick to the foliage and stems, and breaks down the plants' 'waxy' defence barriers, allowing the chemicals to get into the tree to do their work. It can take two years to kill the tree completely. Spraying should occur mid-summer when growth is greatest so the chemicals are transported throughout the entire tree. It is necessary to get the right amount of spray onto the tree for the maximum coverage of needles and stems. Helicopters are used to apply the herbicide, and aerial spraying can be carried out for \$1500 - \$2000/ha.

Another new herbicide delivery method, basal bark application, has been developed for smaller trees (up to 3m tall) in scattered infestations. This involves directly treating the trunk of the tree with a small amount of a more concentrated herbicide mixture. This can be done either on the ground using a back pack sprayer, or by air from a helicopter where an operator 'squirts' the chemical on the tree using a 'lance'. The chemical applied to the trunk or stem is slowly absorbed through the bark rather than through the leaves. Again, it can take up to two years to completely kill the tree.

Basal bark application is faster than using a chainsaw to cut trees. A ground operator on foot carries a spray pack and treats the lower trunk rather than having to stop and cut each one. The basal bark method, when used aerially, replaces 'skid hopping' which involved chainsaw operators to be ferried by helicopter and dropped off to cut isolated trees, then picked up and moved to the next. This operation required very experienced operators because of the high health and safety risks. Now a pilot and lance operator can spray individual trees without landing, increasing productivity by up to 10 times that of skid hopping. This means wilding tree funding can go further.

Public meeting and field day

The Mid Dome Wilding Trees Charitable Trust is holding a public meeting and field day at Mid Dome on Monday, 25 November from 1.00 pm - 3.00 pm.

This will begin at the Five River's Café car park and will move to the observation point at the Jollies Pass. There will be a field demonstration of new wilding pine control methods at the Jollies.

The aim of the meeting is to bring the local Mid Dome community up-to-date with the Trust's programme and to explain what is planned for the next few years.

In particular, the new funding will enable the increased use of aerial and ground herbicide application. New chemical mixes have been developed at Queenstown, Twizel and Mid Dome and these are able to cost effectively control the dense infestations of wilding pines on high and steep land which have been very expensive to remove using chainsaws.

Staff from the Department of Conservation will demonstrate the use of Ground Basal Bark Application using a back pack spray unit to treat individual small trees. This will largely replace the use of mechanical cutting of light and scattered infestations.

Representatives from the Wakatipu Wilding Conifers Group have been invited to attend to update their activities in the Queenstown area.



Using the Ground Basal Bark Application spraying technique.

Acknowledgements

The Mid Dome Wilding Trees Charitable Trust would like to acknowledge all those who have supported them through the volunteer days, supply of donations in kind, annual financial contributions from our funding partners and the private organisations that have also given support.

Contact us

If you have stories you would like to share or have any feedback about this newsletter, contact David Miller, Mid Dome Project Manager on 03 211 2400 or email dmiller@doc.govt.nz