

New Zealand Beekeeping Incorporated

Proposal for the Canterbury Regional Pest Management Plan 2017 - 2037

Presentation Evidence for the ECAN Hearing on Friday 22nd September 2017

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1. New Zealand Beekeeping Incorporated is a national beekeeping organisation that represents the interests of its members some of whom operate their beekeeping business within the Environment Canterbury (ECAN) area. NZ Beekeeping wish to enlighten the decision maker's aspects of conflict with the present Regional Pest Management Plan ECAN manages for the community and ECAN's Vision Statement for biodiversity in Canterbury.

Both these documents appear on the ECAN website.

“ECAN Vision Statement

Our vision for biodiversity in Canterbury.

The Canterbury community values and cares for the region's biodiversity and accepts the shared responsibility to work together to ensure it is sustained and enhanced, both now and into the future. As a result, there is a full range of healthy ecosystems stretching from the mountains to the sea, reflecting the unique and diverse natural character of the Canterbury region. Our indigenous biodiversity is an integral part of our everyday lives and landscapes, it complements the productivity of our sustainable economy and working lands, and where appropriate, it supports sustainable harvest.”

We do not wish to debate the vision statement for biodiversity however we support the interaction between man, our natural environment and our modified environment that provides the existing environment that ECAN strives to maintain. In maintaining that environment we respect there is a complex method of setting rules and requirements that are generally accepted to provide for the sustainability of the regions resources without harming the environment. Somehow there is a democratic system that guides the process to ensure there are balanced decisions made regarding those rules and requirements of people and the community.

Whilst we are concerned about the impact invasive pest plants and pest animals have on the environment it does appear there is a focus on the community seeking to impose controls on some plants that other sections of the community value for the benefits they derive from the plants. We wish to make the decision makers aware of the benefits that are derived from some of the plants that have been identified as pests and are subject to regulated control.

The purpose of this submission is to alert ECAN it would be desirable for ECAN to be able to quantify both the costs and the benefits to the community of plants it considers should be part of any pest management plan.

NZ Beekeeping also seek to enquire the basis that determines a plant species to be placed on a pest management plan as it appears to be a random process based on prejudice.

2. Sustainability of Bees.

Since the introduction of Varroa in 2000 the survival of honey bees has been dependent on the efforts of the beekeepers to treat hives for Varroa. Bees have previously been self-sustaining within the environment because of their ability to store food within their beehive for the colony to utilise during times when there is no flowering plants that provide their food. In general there is sufficient carbohydrate (sugars) in the form of nectar or stored honey in a hive to sustain the hive. However bees also need protein for the development of bee 'brood' (young bees). This also comes from the flowers but in much smaller quantities.

The amount of stored pollen in beehives is significantly less than it was during the 1970's. This is to be expected considering the considerable changes in agricultural practices and the environment in that time. In a lot of cases the intensification of agriculture has been counterproductive to the sustainability of bees because there has been a general reduction in the number and density of the plants bees utilise. There was a time where a traditional farm was subdivided into paddocks often with gorse as a boundary fence and internal divisions. As we move toward monoculture we see a simple wire boundary fence and temporary electric fencing. The many miles of gorse fences that provided pollen have gone.

3. Sustainability of Beekeepers.

In every business endeavour there is a necessary component that keeps the business sustainable – Profit. The profitability of beekeeping relies on the performance of a number of beehives the beekeeper runs to collect honey or to provide a pollination service. Hives that are nutritionally stressed do not perform well and if that stress gets to the point the hive is unable to produce sufficient honey or revenue for the beekeeper the whole profitability of the venture is compromised. A downward spiral of increasing costs and poor returns eventually becomes a matter for beekeeper to address-to stay in business or change business focus. There can be no doubt the modified environment bees once flourished in has become increasingly hostile to bees. Beekeepers have responded to challenges and now supplementary feed bees with sugar syrup during times when nectar or stored honey is not available however there has not been a supplementary feed available at a reasonable price to provide a replacement for pollen that comes from some of the weed species that man has eradicated. In a number of cases beekeepers have abandoned keeping bees on land devoted to dairying because the land has become a non-productive desert for the production of honey. Our land of milk and honey has become a land of milk OR honey where it has become virtually impossible to have 2 profitable ventures on the same piece of ground.

Some farming requires bees for the pollination of crops. In the Canterbury area beekeepers are able to charge a pollination fee to service the farmer's needs. Conducting a pollination business also requires bees to build their numbers utilising pollen as a food source of young bees. It is becoming increasingly difficult to grow beehives to the required bee strength because of the reduction in available pollen.

4. The Value of Gorse.

For years there has been an attitude that demonises gorse plants and a lack of appreciation of the value gorse has as a plant. That gorse seeds were imported by our pioneering families as a beneficial plant has been lost by subsequent generations of prejudices. The native matagouri plant is no less 'obnoxious' as gorse yet it has been afforded some protection because of its 'indigenous' status – this is truly bizarre when one considers principles behind policy.

Gorse fences provide for stock management with grazing and it also provides shelter for stock from wind, rain and sun contributing to good animal welfare by the farmer. It would be true to say the lives of a lot of lambs and even newly shorn sheep have been 'saved' by being able to tuck into a gorse plant or fence during wet and stormy weather. Gorse is a 'colonising' species that provides a 'nursery' for forest species,

providing there is sufficient seed bank or native plants are planted then gorse can be part of a regenerating native bush or exotic forest establishment.

Then of course gorse is an invaluable flowering plant for bees. It provides no nectar but does provide high quality pollen during its extended flowering period. Gorse has two flowering periods, one in the spring the other in the autumn making it the perfect plant for providing the pollen needs of bees. The writer of this submission can remember beekeeping in the Ashburton area when frames of pollen had to be removed from hives because the hives suffered from 'pollen congestion' and were unable to expand their broodnest with bee brood. Now days it is not uncommon to see hives completely devoid of pollen to the extent bees are cannibalising any brood that exists in the beehive as a last ditch effort to keep the beehive going.

We are not able to quantify the loss of gorse fences or other pollen sources that have occurred over time, and it disappoints us the lack of information that could have been provided by the 'Trees for Bees' project had there been a different focus for the project. The Sustainable Farming Fund have supported an initiative called 'trees for bees' as a response to dwindling pollen supplies beekeepers have identified. Over \$1m has been provided to this initiative and it has not provided any baseline information of the pollen resources in different areas of ECAN area nor has it shown any changes that have occurred during the time the project has been operating. It has simply provided information about trees that provide pollen and the growing conditions the plants prefer. Information such as - flax pollen has a protein of 28%, but that type of information is rather useless if gorse fences are simply replaced by wire. If a farmer was considering planting a replacement for a gorse fence then it would be simpler and more beneficial to retain the gorse fence.

5. Other Submissions.

Within the community some will highlight the benefits of some plants while others see the same plant as a pest species. Bees have value in the community and Beekeepers have a duty to promote the beneficial aspects of plants that will provide for the sustainability of bees and beekeeping within their environment. It could also be established that bees perform an important role in the pollination of farmed crops, thus bees are an essential part of the farming system with an acknowledgement that some plants that maybe considered weeds also contribute beneficially to bees sustainability.

6. Velvetleaf.

There has been a submission for the inclusion of velvetleaf in the regional pest management plan. Perhaps we can highlight further information regarding velvetleaf that may be relevant. Velvetleaf has been used as a cultivated crop in China where the stem fibres have been used to produce paper, sacking, netting and coarse cloth or were blended with silk to make satin and brocades. It was imported into NZ in 1948 ¹ as a species for fibre production. It seems incredible that a plant, described as the world's worst weed, did not somehow become yet another species to be widespread throughout New Zealand as a result of the farming practices used over half a century ago. Whilst we may be concerned at biosecurity incursions a true evaluation of the species should be considered before inclusion into the RPMP. In the case of velvetleaf it is possible commercial opportunities may be available to utilise this plant. Many of our farmed plants, such as plants from the brassica family, have escaped into the environment and can be seen growing along roadsides and are also beneficial for bees.

7. Russell Lupins.

There has been a submission against the inclusion of russell lupins into the RPMP on account they provide valuable stock food in a very harsh environment. They also act as a soil binding agent and fix nitrogen in the soil. As beekeepers we do not consider this plant as a beneficial species for honey bees however bumble bees utilise this species and areas with large numbers of wild lupin plants such as the Mackenzie

Country, also have significant self-sustaining populations of bumble bees including species of bumble bees that have become extinct in Britain where our bumble bees originated from.

8. Conclusion.

We trust we have provided the decision makers that gorse, and many other flowering species under the RPMP are considered by beekeepers as beneficial plants. We consider there is considerable conflict within the policy directions of ECAN in providing biodiversity, pest management and sustainability. There is also conflict of opinion between different groups regarding what should be classed as a pest and what is classed as a beneficial species.

With respect to Gorse control –it appears ‘voluntary’ control or a desire to ‘develop’ the land for intensified agricultural use, has probably contributed to a reduction of gorse fences in ECAN area. We do not believe the RPMP allows the opportunity for those that desire to utilise the benefits of gorse as they see fit. For those areas of ‘marginal’ farmland such as hill country that has been colonised by gorse it appears the cost of control of the gorse is greater than the production capacity of the land. Perhaps the owner of such land is better to decide if there needs to be a clearance of gorse or a repurposing of land for a different use such as providing food for bees or a nursery for a forest either native or exotic. It appears to be simply a waste of resources to maintain this land as grazing land where the costs (profitability) outweigh the value of the production.

We consider there needs to be some consideration of the benefits of all the plants that have been placed under control by ECAN when proposing that plants are categorised as pest plants. From time to time there could be a review of plants that are considered pest plants to see if they are sufficiently controlled without further need to be included in the RPMP.

9. Recommendation.

We would like to recommend that Gorse is removed from the list of plants that is not allowed to be propagated. This would allow for the benefits of gorse to be utilised for the beneficial aspects of the plant if the owners of land desire. We consider this is unlikely to result in the ‘spread of an invasive species’ as the use of gorse is likely to be ‘voluntarily’ restricted to fence lines and areas of unproductive land that would otherwise be classed as ‘waste areas’. Waste areas provide for the biodiversity of the area because it provides habitat for many species that have been displaced by modern agriculture.

We support the provision for an exemption from the RPMP for gorse and broom to be utilised for beekeeping (Rule 6.4.14). We consider this exemption should also allow farmers to stop control on land that has been shown to more expensive than the productive capacity of the land.

References:

1. T.K. James and J.M. Cooper AgResearch, Ruakura Research Centre, Private Bag 3123, Hamilton 3240, New Zealand. Control of the recently-introduced weed butterprint [or velvetleaf] (*Abutilon theophrasti*) in maize.
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“The first recorded incidence of it in New Zealand was when MAF imported it as a species for fibre production in 1948 (Herbarium voucher, Allan Herbarium, Lincoln, New Zealand), but since then is has been accidently imported with soya bean seed and as a contaminant of other grains, although none of these introductions are known to have established.”