

Further to: Submission on modified reassessment of certain OPC substances - APP202142

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Greetings hearing panel and EPA staff.

Firstly, thank you for the opportunity to present by phone link.

It is not the same as presenting in person but my message remains unchanged.

Let me start my presentation with a quote which took my breath away.

The greatest modern scientist Albert Einstein once prophetically remarked,

***“Mankind will not survive the honeybees’ disappearance for more than five years.”***

So I would like to begin my petition by saying that this application does not go far enough to protect our pollinator species and I hope that the burden of regret if this failing is not addressed, will not be fast in coming.

It is said that 60 to 80% of the world’s flowering plant species are “animal” pollinated, and 35% of crop production and 60% of crop plant species depend on “animal” pollinators.

Moreover it is believed that about **one third** of human nutrition is due to bee pollination.

This includes the majority of fruits and many vegetables.

It follows that NZ as a largely agrarian nation should be mindful to give the utmost protection to the health of these pollinators. This application does not do that and that needs to change.

If we continue to lose our pollinators, we may lose all the plants that they pollinate, all of the animals that eat those plants and so on up the food chain.

Which means a world without bees would struggle to sustain the global human population of 7 billion.

The loss of any bees/pollinators is therefore not acceptable.

This reinforces my recommendation that the EPA takes responsibility to look at widening its parameters to view bees in terms of the services they provide and the interconnectivity of these services in their wider community, and the importance to the ecosystem of the delivery of their services.

In ascertaining the wisdom of a release of products such as these OPCs the EPA would do well to consider them in the light of this cumulative effect on our at risk environment, its finely tuned fragile ecosystems, our ability as a human species to survive the loss of bees/pollinators.

I reiterate my statement in my earlier submission that we inhabit a “one off Planet Earth” which is under huge pressure with growing human populations, declining resources, desertification of once productive farmlands, loss of potable waters; all due to pollutants.

Referring to this pressure our Planet is under, Dr Malik Hussain, senior lecturer at Lincoln University recently stated the following as part of an editorial in a special edition of the *Advances in Food Technology and Nutritional Sciences*.

***“Issues in food safety and security can very rapidly translate into issues of social, economic and political instability.***

***While food and safety are nothing new, it is the scale and interconnectedness of the problem that makes the situation more serious now.***

***It is not just about food. The interconnectedness of the issue means that it is also a question of policy, regulation, political will, efficient supply chains and education.”***

It is of paramount importance that the EPA goes beyond policy into the realm of education, regulation and enforcement.

Studies have linked pesticide exposure to bee health decline. These studies add to a growing body of scientific literature and strengthen the case for removing pesticides toxic to bees from the market. Pesticides interfere with honey bee brains affecting their ability to navigate. Pesticides also prevent bumble bees from collecting enough food to produce new queens. OPCs have huge detrimental effect on our pollinators and thereby interrupt the food chain.

Without pollinators our food production is seriously at risk.

If OPC exposure had the same deadly effect on sheep or cattle as your research shows for bees, would the EPA staff have produced the same lame recommendations proposed for this application?

I think not as Federated Farmers would not for one minute tolerate, and their best lawyers and lobbyists would beat the war drums all the way to parliament.

Give our hard working bees on which so much depends at a minimum the same respect and status. Our survival depends on theirs.

They are integral to the survivability of our human species.

In China loss of natural pollinators already has the effect of humans needing to pollinate crops manually.

There are many recent studies adding to a growing body of scientific literature which strengthen the case for removing OPC pesticides toxic to bees and other pollinators from the market.

Sadly the EPA Application makes no attempt to consider this.

I urge you to take a stronger stance in this reassessment, a stance which will give greater certainty for the survival of our bee colonies and the “wild pollinators” on which we all dependent.

The problem around “loss” of a species is that there is no return from extinction. Prevention is always better than cure. We have a responsibility to unburden future generations.

Moreover most consumers would appreciate these toxins be kept out of the food chain.

I note in the staff report that some of the submitters' comments and arguments were considered out of scope.

The danger of these narrow short-sighted parameters is that the lack of interconnectivity or overlap between Government departments allows for gaps and unattended critical issues. For example the issue around education.

If it is not the function of the regulator to ensure that along with the release of these harmful toxins into our environment an accompanying education programme is rolled out, then who is responsible?

The EPA is the regulator, it has a function of guidance but why not enforcement or educator. Who can or will take on this much needed function to ensure that every user of OPCs is aware of the implications of its use, and the caution with which the OPCs need to be treated?

Who is ultimately responsible?

Your research shows the correlation between pesticide exposure and bee health decline. It is known that the effects cause significant problems for the health of individual honey bees as well as the overall health of honey bee colonies and their reproductive ability. These OPCs are the cause of high mortality among bee and other pollinator populations, even many weeks after application. Is this really acceptable? I think not.

The additional wording on labels will go nowhere near addressing the issues. Spraying these toxins only in the evenings will not solve the issue. 7 or 10 day withholding periods will not stop pollinator eventual disappearance.

Furthermore I would venture a guess that the use of the OPCs in home and garden is equal to the amount used commercially. This too is not acceptable. Most people think if it's off the shop shelf it is safe. Most people do not take time to read labels. My experience at retail outlets is that staff know little and are scathing at my obvious concern which is expressed in my questions about the products. This application does not address domestic (mis) use.

Yes, pesticide misuse can drive beekeepers out of business, but can affect native wild bees and other pollinators even more, because they have no interested humans to move or protect them.

This means that the overall use of the OPCs need to be considered, not just commercial interests protected.

It is absurd to perceive that as the health and balance of our planet declines to the detriment of all, the trend is deregulation as opposed to a tightening which might just help the survivability of our human species which many scientists identify to be fast heading towards the 6<sup>th</sup> extinction.

The EPA needs to give thought to the cumulative effect of the total amount of these available products.

How much of this stuff is imported into or produced in our country annually?

And what is its cumulative effect in our food chain, on the mortality of our pollinators, on the downstream reduction of our biodiversity, the interconnectivity of the action of the substance. This application needs to be considered in this more complete picture.

If the OPCs are not to be removed from the market then at least set more realistic stringent measures than those currently suggested. Realistic in the sense of our planets precarious situation.

I am certain there is more recent information available to the EPA out of the US and Europe that heavily supports my concern around the continued use of these OPC substances and Neonicotinoids which would back an EPA decision to discontinue the use of these products.

Considering this, that the EPA is now proposing to reintroduce restrictions on use which have been in place previously and not taking a firmer stance in line with recent findings is seriously and alarmingly lagging.

I recommend annual surveys of bee populations in coordination with the NBA to assess whether our bee populations are declining, and creating tools which allow for urgent and proactive response to any further decline.

Without education, regulation and enforcement, putting tools in place which will slow the careless killing of our pollinators, the prevailing ignorance will continue and the beneficial insects will continue to die.

Not only will this affect the viability of the beekeeping industry causing job losses and reduction of export dollars but will have the disturbing effect of diminishing our global responsibility and ability to feed ever-growing populations.

In the distraction of all the technical data presented, let us not forget that by your own research, the end result of this proposal is that an unacceptable proportion of bees and other pollinators will still suffer high mortality rates, and that downstream effects of the disruptive function of the OPC's will be felt as the ripple spreads.

While you consider your decision in this application I ask you to keep in mind Albert Einsteins' prophetic words.

***“Mankind will not survive the honeybees’ disappearance for more than five years.”***