Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario

Regulatory Amendments to Ontario Regulation 63/09 under the Pesticides Act to Reduce the Use of Neonicotinoid Insecticides

Submission to the Ministry of Environment and Climate Change: EBR Registry Number 012-3733

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RNAO response to *Regulatory Amendments to Ontario Regulation 63/09 under the Pesticides Act to Reduce the Use of Neonicotinoid Insecticides*

The Registered Nurses' Association of Ontario (RNAO) is the professional association representing registered nurses (RNs), nurse practitioners (NPs) and nursing students in all settings and roles across Ontario. It is the strong, credible voice leading the nursing profession to influence and promote healthy public policy. RNAO's mandate is to speak out on nursing and health issues, and that includes environmental determinants of health. Accordingly, we are pleased to respond to the government proposals to amend the regulation of neonicotinoid ("neonics") pesticides, as posted to the Environmental Registry under EBR Registry Number 012-3733.

Neonicotinoids. Neonics are insecticides. They work by attacking nerve receptors in insects. They are toxic to animals, but more toxic to insects than to mammals. Lethal and sub-lethal exposures are both problematic. We know that sub-lethal exposures can compromise the health of pollinators, which makes them susceptible to diseases and parasites. Neonics are water soluble, which means they can readily move into bodies of water. They are also persistent, which means they can, over time, continue to compromise animal and insect health. Biodiversity suffers not only due to the direct effects on vertebrates and invertebrates; the removal of many pollinators from the environment affects the success of plants and removes a substantial source of sustenance from creatures further up the food chain. RNAO is particularly concerned with the widespread preventive use of neonics without a requirement to investigate whether insects of concern are even present in numbers that could affect crops. Moreover, routine preventive use of pesticides preempts consideration of agricultural approaches that work with the environment rather than in conflict with it.

There is considerable evidence that neonics can harm pollinators and other invertebrates and vertebrates. The research has been summarized by the *Task Force on Systemic Pesticides,* which examined more than 800 peer-reviewed scientific papers on the topic over the past 20 years and published its conclusions in 2014 (see appendix).[1] The Environmental Commissioner of Ontario has provided a brief summary of science on neonicotinoids (see appendix).[2] Both conclude that neonics harm pollinators and that action is necessary. An April 2015 report by the European Academies Science Advisory Council concurs, with its Expert Group concluding that preventive use of neonics has "severe negative effects on non-target organisms that provide ecosystem services including pollination and natural pest control." It cites clear evidence of sublethal effects from very low levels of neonics over time, and concludes that prophylactic use of neonics is inconsistent with the principles of integrated pest management.[3] In the face of the evidence and the concern that use of neonics adds to the toxic load we all carry, a precautionary approach is warranted. The onus to prove safety and effectiveness ought to rest with the proponent of a given toxic. The evidence on adverse effects was sufficiently compelling that the European Commission voted to restrict the use of the three neonics

listed above for two years.[4 5 6] This happened after the European Food Safety Authority identified that neonics represented significant risks to bees.[7]

RNAO has been advocating with other health and environment organizations for action on neonics for some time,[8 9] and we welcomed the government's proposal to protect pollinator health, as posted in January 2015.[10] Ontario is to be congratulated for being the first jurisdiction in Canada to seek to reduce neonic use as a pollinator protection measure. Ninety seven per cent of respondents to the pollinator health posting supported restrictions on neonics.[11] The research shows that pollinator populations are in decline and neonics contribute to the problem. We were very pleased that the government proposed strong action in its January posting, with a goal of reducing over-winter mortality of honey bees to 15 per cent by 2020 and reducing the number of acres of corn and soybean crops using seed coated with three specified neonics (imidacloprid, thiamethoxam, and clothianidin) by 2017. For us, that was a very important and laudable step forward. The 2017 acreage goal was repeated in documentation related to EBR Registry Number 012-3733,[12] but the 2020 mortality target was not. We expect the government will keep this goal as well. The regulatory proposal was a step forward, but we continue to call for a full ban on all uses of neonics, to better protect the environment.

Neonics are an important issue for RNs, NPs and nursing students because of the extent of their usage and their potential impact. They are very widely used. For example, about 60 per cent of Ontario soybean crops use neonic-treated seed, as do 99 per cent of corn crops. These two crops account for 2.5 million and 2.4 million acres respectively of the total of 7 million acres of Ontario field crops.[13] The two crops thus account for 70 per cent of all Ontario field crop acreage. It means that over 55 per cent of all of Ontario's field crop acreage is planted using neonic-treated seed due to corn and soybeans alone -- about 3.9 million acres (about 2.2 times the size of the Greater Toronto and Hamilton Area);[14] that is a huge volume of land under pesticides. When we combine that with the 2014 over-winter losses of honey bee hives of 58 per cent,[15] and the fact that honey bees alone pollinate about $897 million worth of Ontario's crops,[16] there is a very significant threat to our food supply. And of course that is a huge volume of pesticides to routinely use for prophylactic purposes, adding to the environmental toxic load.

Proposed Regulatory Changes

As noted in the government's January pollinator health proposal, it is already working with agricultural partners to reduce neonic use. It is also supporting farmers with relevant research and financial support. It makes sense to continue that collaboration and support. The January proposal included the following suite of activity:

- reducing pesticide exposure
- protecting and enhancing pollinator habitat and nutrition

- monitoring and research on disease, pests and genetics, and
- adaptation to climate change and weather challenges through diversification and increase of pollinator populations

Regulating the use of neonics is the key step, and we congratulate the government for moving in a timely fashion to do so with its current regulatory proposal. It is proposing "new regulatory requirements to reduce the number of acres planted with neonicotinoid-treated corn and soybean seed by 80 per cent by 2017." It is very helpful to have this explicit target. As with the January announcement, the regulation would apply to three specified neonics: imidacloprid, thiamethoxam, and clothianidin, which would be placed in a new Class 12 of pesticides under the Pesticides Act. Vendors would be required to have training in Class 12 pesticides, and purchasers would have to do pest assessments or have them performed.

RNAO asks the government to go further and issue a complete ban on all uses of all neonics. The government must also structure its controls so that environmental exposures to neonics in any form drop dramatically. It would not help if an 80 per cent drop in use of neonic-coated seeds is accompanied by sharp increases in foliar spraying of neonics. RNAO also wants assurances that the controls must prevent neonics from being replaced by even more toxic pesticides.

RNAO Recommendations

1. Reaffirm the goal of a reduction in over-winter honey bee mortality to 15 per cent by 2020.
2. Include in Class 12 all pesticide-treated seeds and all pesticides that are or could be used to treat seeds.
3. Make the usage target an 80 per cent reduction in all neonics by 2017.
4. Ensure that section 101 amendments require vendors of treated seeds to also advertise and make available seeds that are untreated by any pesticide.
5. Require annual third-party pest assessments by professional pest advisors by the 2017 growing season, for growers seeking to use pesticide-treated seeds.
6. Report publicly on an annual basis the following data:
    a. number of acres using neonicotinoid seeds; the number of acres using seed treated by other pesticides; and the number of acres using untreated seeds.
    b. volume of seeds treated by neonicotinoids; volume of seeds treated by other pesticides; and volume of untreated seeds

7. Commit to a full ban on all uses of all neonics as the next step forward, and to be achieved by 2020.

8. Ensure that any reduction in neonics does not trigger an increase in the use of other pesticides that could offset some or all of the environmental benefit of the neonic reduction.

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[15] Ontario Ministry of Agriculture, Food and Rural Affairs, op. cit. 1,3.

[16] Ibid, 2.