Neonics Need More Investigation, PMRA Update Report Concludes

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Canada's Pest Management Regulatory Agency will soon release a value assessment of the use of the pesticide class as a corn and soybean seed treatment

by SUSAN MANN

When it comes to neonicotinoid pesticides and their effect on bees, there is still a lot Health Canada's Pest Management Regulatory Agency needs to find out.

On Tuesday, PMRA released an 11-page report updating its re-evaluation of the neonicotinoids – imidacloprid, thiamethoxam, and clothianidin. Currently they're approved for use as seed treatments, soil applications and foliar sprays on grains and oilseeds, pulse crops, (such as peas and beans), fruits, vegetables, food and ornamental greenhouse crops, Christmas trees, turf, tree injections, outdoor residential areas and as pet care products. The neonicotinoids are being reevaluated because they have been implicated in bee deaths.

The PMRA is part of Health Canada and is responsible for pesticide regulation in Canada.

The PMRA's interim report is due out in late 2015, Health Canada spokesperson Sara Lauer says by email. Before that, the agency plans to release a consultation document that includes a detailed value assessment on the corn and soybean seed treatment that will be available on the pesticides and pest management portion of Health Canada's website. Stakeholders will be able to provide comments and additional information to help finalize the assessment, PMRA says in its update document, called Update on Neonicotinoid Pesticides and Bee Health.

Lauer says the consultation document will be released soon. PMRA says on its website pesticides must be determined to be of acceptable value to be approved for use in Canada. The value of a pest control product includes the product's actual or potential contribution to pest management. Other factors that weigh into the product's value include efficacy, effect on host organisms, health, safety and environmental benefits along with social and economic impact.

The PMRA started its re-evaluation in 2012 and is working on it with the United States Environmental Protection Agency and the California Department of Pesticide Regulation.

The PMRA released its report on the same day the Ontario government released a major discussion paper calling for an 80 per cent reduction in corn and soybean acreage in Ontario planted with neonicotinoid-treated seeds by 2017. Bryan Bossin, senior press and communications adviser to Ontario Agriculture, Food and Rural Affairs Minister Jeff Leal says by email the release of the two reports on the same day was "merely coincidental." PMRA "is a federal organization that operates independently of the provincial government."

In its update, PMRA notes:

- Although there is a relationship between reported bee mortalities and treated corn and soybean seed planting in Canada's intense corn growing regions of Ontario and Quebec, there doesn't appear to be any impact in other areas where neonicotinoids are used extensively, such as the canola growing regions of Western Canada. In Western Canada, the majority of canola seed is treated with neonicotinoids but beekeepers are not reporting adverse effects.

- More investigation is needed into the reported later season effects on bee colonies in intensive corn growing regions. Currently, PMRA does not have sufficient information to draw conclusions between these colony effects and potential neonicotinoid exposure.

- Current scientific information indicates pollinators can be affected by sub-lethal exposure to neonicotinoids but no conclusions can be drawn that actual environmental exposure from some uses are at levels that may result in effects.
- More research is needed on the contribution of all factors affecting bee health.

- Evidence indicates exposure to neonicotinoids during the corn and soybean planting period contributed to bee mortalities in 2012 and 2013 in the intensive corn-growing region of southern Ontario. The PMRA concluded dust generated during planting contributed to reported bee

mortalities in those years. Seventy per cent of dead bees collected from the corn and soybean planting events in 2012 and 2013 had neonicotinoids present while the majority of live bees did not have residue present.

- The number of incident reports associated with neonicotinoid use in 2014 is 70 per cent lower than in 2013. But despite Ontario farmers adopting risk mitigation measures to cut down on dust during planting, such as using the new fluency agent during planting and dust deflectors on equipment, the PMRA says "a direct correlation to the risk mitigation measures cannot be made because the cold, wet spring in southwestern Ontario meant corn was planted later and less intensively than in previous years, possibly influencing the reduction in the number of incidents." The cold spring meant there were differences in bee foraging activity and available forage "relative to the timing of corn planting." PMRA scientists are continuing to investigate the 2014 incidents and are analyzing samples for the presence of pesticides and bee viruses. The agency will release its update once the 2014 results are analyzed.

  What are farmers supposed to make of all this information? Halton Region cash crop farmer Peter Lambrick says neonicotinoid-treated seeds are important on his 650-acre operation. He says on his farm he knows the neonicotinoids work. "We have seen a reduction in pests that can affect our seed. It has also allowed us to plant a little earlier."

  Lambrick says the Ontario government's proposal to reduce the acreage planted with neonicotinoid-treated seeds by 80 per cent by 2017 will add costs to his operation. "I hope the (Ontario) government has research to back up that these figures are attainable."

  Cash crop and beef cow-calf farmer Craig Reid, who is chair of the farm-group coalition Farm Action Now, says certified crop advisers, provincial and federal government extension staff and seed sales people will need to help farmers navigate all of the new provincial requirements for neonicotinoid-treated seed use once they're in place. Reid, who is a certified crop adviser, agrees many of the proposed new requirements for added farmer training, documentation of pest reduction activities and third-party verification of the method used to determine pest risks will be time consuming.

  Meanwhile, two general farm groups have weighed in with their opinions about the proposed new Ontario regulations for neonicotinoid-treated seed sale and use in corn and soybeans.

  In a Nov. 25 commentary, the Christian Farmers Federation of Ontario says it supports the provincial government's commitment to working with stakeholders as it looks for input on pollinator health. The Christian federation "agrees that unprecedented, sustained high pollinator mortality levels warrant a response from all stakeholders to work in collaboration with government to minimize the impact on pollinators." But federation members also recognize there are circumstances "where neonicotinoid use is needed."

  Similarly, the National Farmers Union in a Nov. 26 press release welcomes the Ontario government's announcement to limit neonicotinoid use in the province. NFU – Ontario president and Region 3 coordinator Karen Eatwell says the proposal to increase training for farmers on integrated pest management "is an important step forward." **BF**