Pesticide actions run contrary to science

First, congratulations to King Township for becoming Canada's 9th Bee City involving an embryonic program to create pollinator habitat across the township. May the program grow and thrive!

Then, I read about beekeeper, Andre Flys, and his bitter disappointment at the federal government's reversal of an earlier ban on the use of neonicotinoid pesticides, which are killing bees and other pollinators (?Local beekeeper notes Liberal reversal on neonicotinoid pesticides,? Jan 25, King Weekly Sentinel).

Canada's Pesticide Management Regulatory Agency (PMRA) admits neonicotinoids are ?linked to harmful effects on pollinators,? then switches the channel to habitat loss, viruses and pests. While true that habitat loss is a huge and growing problem in Canada, encouraged by political expediency at all levels of government, it is the mandate of the PMRA to focus squarely on the detrimental effects of neonicotinoids.

How can anyone trust the PMRA when its own website provides the following legal disclaimer: ?The PMRA does not provide any guarantee of assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.?

The PMRA resembles a revolving door between industry and government, serving industry interests primarily.

On Jan. 26, 2016, Julie Gelfand, Canada's Commissioner of the Environment and Sustainable Development criticized the PMRA, saying ?the agency failed to cancel approval for pesticides that it determined as posing unacceptable risks, allowing them to remain on the market for up to 11 years to give companies time to eliminate their inventories or to let customers find alternatives.?

Eliminate company inventories of unacceptable risky pesticides ... by selling them for use? Now, the PMRA is allowing this disgraceful and unhealthy situation to continue.

Ms. Gelfand said nine pesticides remained conditionally registered by the PMRA ? meaning the manufacturer had not submitted the required proof that they were safe ? for more than a decade. Eight of these were neonicotinoid products.

?These products continue to be used extensively in Canada despite widespread concern that they may pose a threat to bees, other pollinators and broader ecosystems,? she said.

According to the Ministry of Agriculture, Food and Rural Affairs, neonicotinoids were first registered for use on corn in 2001. Now, the pesticides are found in 99% of the corn crop, 65% of soybeans, 25-33% of cereals, 95% of dry beans and 100% of canola where they help control risks like wireworm, grubs, corn rootworm and con flea beetles.

Intensive, large-scale agricultural production certainly presents some challenges and blindspots, typical of the human desire to mass-produce a product to reap big gains, without considering the potential deleterious consequences to the environment and natural food web, including keystone species, such as pollinators who ensure various crops and flowers are pollinated to produce a bounty of food. Eliminate the pollinators ? and then what?

UK studies already identified a problem with seeds to which this systemic pesticide is applied as a coating. Neonicotinoids are described as neuroactive, implying a neurotoxic effect on target insects (though bees and butterflies were never the intended target). The same research showed this pesticide is persistent so it accumulates in soil.

Here's the problem, using corn as an example. When the corn seed develops into a mature plant, the pesticide is present systemically throughout the entire plant to affect unwanted targeted insects, such as corn rootworm larvae that feed on corn roots, while the adults feed primarily on corn silk, pollen and exposed kernels. Yet, the nectar and pollen are also collected by bees to feed to their own larvae.

Bees may prefer to collect pollen from various wildflowers and blooms, but when a vast monoculture of corn replaces wildflowers, the bees have no choice but to collect ?treated? corn pollen. This neurotoxin binds to receptor cells in the insect brain, causing the bees to become disoriented and forgetful, mimicking the symptoms of dementia.

According to some studies, neonicotinoids are supposed to bind more selectively to insect acetylcholine receptors when compared to equivalent mammalian brain receptors. Acetylcholine plays a key role in memory and learning. What if a person, or child, consumes a steady diet of neonicotinoid-treated agricultural products? Should the government of Canada gamble on a pesticide definitively linked to the equivalent of dementia in bees? There is enough public information available about dementia that ought to make it imperative to ban the use of neonicotinoids, based upon the Precautionary Principle.

In March 2017, the Save the Oak Ridges Moraine Coalition reported: ?Health Canada found imidacloprid in water at concentrations 290 times above the level of acceptable risk.? Imidacloprid is one pesticide in the neonicotinoid class, and now we know its

widespread use has led to contamination of waterways.
The EU brought in a temporary ban on neonicotinoids in 2013, but it is poised to introduce a sweeping ban. In January 2017, the United Nations' Report of the Special Rapporteur on the Right to Food outlined the harm caused by pesticides, arguing it was a myth that pesticide use was needed to feed the world, saying, ?Given the failure of the pesticide industry to address, or even acknowledge, the ecological disaster caused by neonicotinoid pesticides, we agree that there is an urgent need for a new global convention.?
Canada signed a comprehensive trade agreement with the EU last year. Will the EU be buying Canada's neonicotinoid-laced foods? Who on earth is in charge here?

Vicki Hotte
7th Concession, King