

Neonicotinoids Update in Canada

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Starting Point: *Neonicotinoids, Bees, Birds and Beneficial Insects*. April 2014. *Common Sense Pest Control Quarterly*, William Quarles. vol. XXVII, no 1-4, special issue.

I learnt a lot about neonics reading this article and related the info to Canada:

- Neonics are used in field crops, orchards, parks, landscapes, backyard gardens, on ornamentals, lawns, pets, and in structural pest control (for instance cockroaches ants ants) in Canada as well as the U.S.. It is also licensed for house fly control in Canada.

- Neonics allow growers to ignore good farming methods and Integrated Pest Management approaches in favour of systemic protection. They are totally incompatible with the use of predatory insects such as ladybugs, green lacewings and parasitic wasps that control may insect pests as they significantly increase their mortality.

- 6 currently registered in U.S.: *imidacloprid, clothianidin, thiamethoxam, acetamiprid, dinotefuran, and thiacloprid*.

In Canada: 5 registered, most being *imidacloprid, thiamethoxam, clothianidin* with a few uses for *acetamiprid, and thiacloprid*.

- Exposure is greater for soil treatment such as turf. Amounts used on ornamentals lead to residues 12-16 times greater than found on crop plants.

- Foliar sprays during flowering could have disastrous results. Up to 147 ppb of neonics have been found in pollen of flowering pumpkins, and concentration in nectar was up to 11 ppb

- Toxicity is cumulative and 1 experiment showed 50% mortality when adult bees were fed 0.1 to 10 ppb imidacloprid for 10 days.

Details of registered Canadian products (1)

Imidacloprid (May 11, 2014)

27 domestic products including 26 for control of ticks and fleas on dogs and cats, 1 for control of white grub in residential turfgrass (*Merit*),

28 commercial products. Most (19) licensed for field crops including canola, corn, soy, all peas, vegetable and fruit crops and potato seed treatment (includes ADMIRE 240 FLOWABLE SYSTEMIC INSECTICIDE for use on all kinds of vegetables, ornamental crops such as chrysanthemums, and even medicinal herbs such as ginseng), 2 for greenhouses and nurseries, 2 for building pest control

(cockroaches, ants) 1 for deciduous and coniferous trees ([CONFIDOR 200 SL](#)), 4 in turfgrass and sod farms ([QUALI-PRO IMIDACLOPRID 0.5 GRANULAR INSECTICIDE](#), [QUALI-PRO IMIDACLOPRID 75 WSP INSECTICIDE](#), [MERIT GRANULAR](#), [MERIT SOLUPACK INSECTICIDE](#)).

Clothianidin

0 domestic products

12 commercial. 9 for field crops (including [CLUTCH 50 WDG INSECTICIDE](#) also licensed for orchards and vegetables, 2 ([ARENA 50 WDG INSECTICIDE](#) on turfgrass including residential sod farms and golf courses, [CLOTHIANIDIN INSECTICIDE](#) for turfgrass use as well as orchard, vegetable and fruits including strawberry) 2 on orchards ([CLUTCH 50 WDG INSECTICIDE](#), [CLOTHIANIDIN INSECTICIDE](#)- same as above) and 2 for vegetables ([CLUTCH 50 WDG INSECTICIDE](#), [SEPRESTO 75 WS](#)) including most of those pollinated by bees like melons.

Thiamethoxam

Domestic: 2 for indoor and outdoor control of sugar feeding ants which invade structures. [OPTIGARD ANT GEL BAIT INSECTICIDE](#)

Commercial: 21 including 12 specifically for seed treatment, 2 fly bait ([AGITA \(TM\) FLY BAIT](#)- Bait should be scattered once per day over fly feeding areas and places where flies are known to congregate to provide initial knockdown and reduction of house fly populations. Bait may also be used in hanging or stationary tamper-resistant bait boxes in locations not accessible to children, pets, domestic animals or wildlife, [AGITA 10 WG For the control of house flies \(Musca domestica\) in animal housing, Kills Litter Beetles \(Darkling Beetles\) in poultry housing on contact, Thiamethoxam Paint/Spray – Fly Bait, Water Dispersible Granule Insecticide In Agricultural Buildings](#))

2 for greenhouses ([FLAGSHIP INSECTICIDE](#) [MAINSPRING INSECTICIDE](#)), 3 for ornamentals ([FLAGSHIP INSECTICIDE](#) For control of insect pests on outdoor ornamentals, greenhouse peppers and Viburnum in outdoor nurseries and landscapes; [MAINSPRING INSECTICIDE](#) Broad spectrum insecticide for control of listed insect pests in greenhouse and outdoor ornamentals. [ACTARA 25WG INSECTICIDE](#) for fruits, vegetables and outdoor ornamentals) and 1 more specifically for leafy, Brassica, fruiting and cucurbit vegetables and potatoes ([MINECTO DUO 40WG](#))

Acetamiprid

Domestic: 1 foliar spray for flowers and ornamentals ([ACETAMIPRID RTU INSECTICIDE](#))

Commercial: ornamental use, aphids on Christmas trees, peppers and tomatoes ([TRISTAR 70 WSP INSECTICIDE](#)), [ASSAIL 70 WP INSECTICIDE](#) for all vegetables, orchard fruit, grapes, and 1 as seed treatment for mustard type plants.

Dinotefuran 0 domestic and commercial

Thiacloprid

Domestic: 0

Commercial: 1 [CALYPSO 480 SC INSECTICIDE](#) for pome fruits.

Reference:

1. <http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php> each pesticide was searched individually on the PMRA label search site