Court File No.: CV-14-21208

ONTARIO
SUPERIOR COURT OF JUSTICE

B E T W E E N :

SUN PARLOR HONEY LTD., and
1187607 ONTARIO LTD. (c.o.b. as MUNRO HONEY)

Plaintiffs

- and -

BAYER CROPSCIENCE INC., BAYER INC., BAYER AG, SYNGENTA CANADA INC. and SYNGENTA INTERNATIONAL AG

Defendants

Proceeding under the *Class Proceedings Act, 1992*

AMENDED STATEMENT OF CLAIM

TO THE DEFENDANTS:

A LEGAL PROCEEDING HAS BEEN COMMENCED AGAINST YOU by the plaintiffs. The claim made against you is set out in the statement of claim served with this notice of action.

IF YOU WISH TO DEFEND THIS PROCEEDING, you or an Ontario lawyer acting for you must prepare a statement of defence in Form 18A prescribed by the Rules of Civil Procedure, serve it on the plaintiffs' lawyer or, where the plaintiffs do not have a lawyer, serve it on the plaintiffs, and file it, with proof of service, in this court office, WITHIN TWENTY DAYS after this notice of action is served on you, if you are served in Ontario.

If you are served in another province or territory of Canada or in the United States of America, the period for serving and filing your statement of defence is forty days. If you are served outside Canada and the United States of America, the period is sixty days.

Instead of serving and filing a statement of defence, you may serve and file a notice of intent to defend in Form 18B prescribed by the Rules of Civil Procedure. This will entitle you to ten more days within which to serve and file your statement of defence.

IF YOU FAIL TO DEFEND THIS PROCEEDING, JUDGMENT MAY BE GIVEN AGAINST YOU IN YOUR ABSENCE AND WITHOUT FURTHER NOTICE TO YOU. IF YOU WISH TO DEFEND THIS PROCEEDING BUT ARE UNABLE TO PAY LEGAL FEES, LEGAL AID MAY BE AVAILABLE TO YOU BY CONTACTING A LOCAL LEGAL AID OFFICE.

IF YOU PAY THE PLAINTIFFS' CLAIM, and $5,000 for costs, within the time for serving and filing your statement of defence, you may move to have this proceeding dismissed by the court. If you believe the amount claimed for costs is excessive, you may pay the plaintiffs' claim and $400.00 for costs and have the costs assessed by the court.

Date: September 2, 2014
amended September 3, 2014

Issued by

Local Registrar

Address of court office: 245 Windsor Avenue
Windsor, ON N9A 1J2

TO: **Bayer CropScience Inc.**
160 Quarry Park Boulevard SE, Suite 200
Calgary, Alberta T2C 3G3
Canada

AND TO: **Bayer Inc.**
77 Belfield Road
Etobicoke, Ontario M9W 1G6
Canada

AND TO: **Bayer AG**
Postfach D-51368
Leverkusen, Germany

AND TO: **Syngenta Canada Inc.**
140 Research Lane
Guelph, Ontario N1G 4Z3
Canada

AND TO: **Syngenta International AG**
Schwarzwaldallee 215
4058 Basel
Switzerland

A. DEFINED TERMS

1. In this Statement of Claim, and in addition to terms defined elsewhere herein, capitalized terms have the meanings set out below:

(a) "**Arthropod**" means any invertebrate animals of the phylum *Arthropoda* that have jointed limbs, a segmented body, and an exoskeleton made of chitin. This group includes crustaceans, insects, arachnids, and centipedes;

(b) "**Bayer**" means the defendants, Bayer AG, Bayer CropScience Inc. and Bayer Inc.;

(c) "**Bee**" or "**Bees**" means flying insect(s), closely related to wasps and ants that are known for their role in pollination and for producing honey and beeswax. Bees are monophyletic lineage within the superfamily *Apoidea* and feed on pollen and nectar for an energy source, and use pollen primarily for protein and other nutrients, and store pollen, nectar and honey;

(d) "**Beekeeper**" means a person or entity who owns or is in possession of **Bees** or beekeeping equipment, but does not include a person who is in possession of new beekeeping equipment for the purpose of transportation, distribution or sale or who is a manufacturer of beekeeping equipment;

(e) "***CBCA***" means the *Canadian Business Corporations Act*, RSC 1985, c C-44;

(f) "**Class**" or "**Class Members**" means all **Beekeepers** who have owned or continue to own and operate honey producing, pollinating, and/or **Queen Bee** rearing businesses in ~~Ontario~~ Canada during the **Class Period**;

(g) "**Class Period**" means the period from January 1, 2006 to the date on which this action is certified as a class proceeding;

(h) "***CJA***" means the *Courts of Justice Act*, RSO 1990, c C.43, as amended;

(i) "***CPA***" means the *Class Proceedings Act*, 1992, SO 1992, c 6;

(j) "**Defendants**" means the defendants, **Bayer** and **Syngenta**;

(k) "**Health Canada**" means the Canadian Federal department responsible for helping Canadians maintain their health and includes the **PMRA**;

(l) "**Munro Honey**" means the plaintiff, 1187607 Ontario Ltd. (carrying on business as Munro Honey);

(m) "**Neonicotinoids**" means a class of insecticides products designed, manufactured, distributed and sold by the **Defendants** that contain imidacloprid, clothianidin and/or thiamethoxam;

(n) "***OBCA***" means the Ontario *Business Corporations Act*, RSO 1990, c B.16;

(o) "**OMAFRA**" means the Ontario Ministry of Agriculture, Food and Rural Affairs, and includes both the former Ministry of Agriculture and Food and the Ministry of Rural Affairs;

(p) "**Plaintiff(s)**" means the plaintiffs, **Sun Parlor** and/or **Munro Honey**;

(q) "**PMRA**" means Health Canada's Pest Management Regulatory Agency;

(r) **"Queen Bee"** means a Bee that is the single reproductive female in a hive or colony of honey Bees;

(s) "**Sun Parlor**" means the plaintiff, Sun Parlor Honey Ltd.;

(t) "**Syngenta**" means the defendants, Syngenta AG and Syngenta Canada Inc.;

(u) "**US EPA**" means the United States Environmental Protection Agency; and

(v) **"USDA"** means the United States Department of Agriculture.

B. THE CLAIM

2. The Plaintiffs claim on behalf of themselves and other similarly situated in Canada:

(a) an order certifying this action as a class proceeding pursuant to section 5(1) of the *CPA* and appointing the Plaintiffs as representative plaintiffs for the Class;

(b) on behalf of all Class Members, general and specific damages, jointly and severally, against the Defendants in the sum of ~~$289~~ 400 million (~~two hundred and eighty-nine~~ four hundred million dollars), or such other sum as this Honourable Court finds appropriate;

(c) on behalf of all Class Members, punitive damages, jointly and severally, against the Defendants in the amount of $50 million (fifty million dollars), or such other sum as this Honourable Court finds appropriate;

(d) an order directing a reference or such other directions as may be necessary to determine issues not determined at the trial of the common issues;

(e) pre-judgment and post-judgment interest pursuant to the *CJA*;

(f) costs of this action;

(g) the costs of notice and of administering the plan of distribution of the recovery in this action, pursuant to section 26(9) of the *CPA*, plus applicable taxes; and

(h) such further and other relief as this Honourable Court may deem just and appropriate in the circumstances.

C. NATURE OF THIS ACTION

> *"You will probably more than once have seen her fluttering about the bushes, in a deserted corner of your garden, without realising that you were carelessly watching the venerable ancestor to whom we probably owe most of our flowers and fruits (for it is actually estimated that more than a hundred thousand varieties of plants would disappear if the bees did not visit them), and possibly even our civilisation, for in these mysteries all things intertwine."*
>
> - Maurice Maeterlinck

3. Clothianidin, its parent compound, thiamethoxam, and its predecessor, imidacloprid, are three widely-used insecticides in a class of insecticides known as neonicotinoids. Neonicotinoids have been shown to adversely impact the survival, growth and health of Bees vital to ~~Ontario~~ Canada's agriculture.

4. The chronic effects of the use of the Neonicotinoids are felt by Canada's Beekeepers annually, and include: bee deaths; impaired reproduction; immune suppression; behavioral abnormalities resulting in hive loss; reduced honey production; impacts on the quality of honey; contamination of hive equipment; loss of Queen Bees; breeding stock; and difficulties fulfilling honey product or pollination contracts.

5. Foraging Bees are exposed to the active ingredients in Neonicotinoids in addition to Neonicotinoid degradates. The degradation components of the Neonicotinoids are equally or more toxic to Bees. For instance, thiamethoxam is known to degrade to clothianidin, which is more toxic to Bees than thiamethoxam. The stored pollen or nectar brought to the Bee hive containing a single Neonicotinoid active ingredient may later contain a mixture of both the active ingredient and the degradation products that form over time. This mixture poses a significant risk of colony impairment for hives using stored food sources during the fall and winter months.

6. The harm to the Class is ongoing due to the Defendants' continued production, marketing and sale of the Neonicotinoids. Beekeepers have suffered, and will continue to suffer, devastating economic hardships as a result of the continued use of Neonicotinoids.

D. THE PLAINTIFFS

Sun Parlor

7. The Plaintiff, Sun Parlor, is a family owned and operated business that has been in existence for approximately 89 years and currently employs three generations who are actively working in the production of honey. Sun Parlor is incorporated pursuant to the *OBCA* and operates its business from both Essex County and North Wellington County.

8. Sun Parlor is one of the largest honey producers and hive product distributors in the Province of Ontario. Its approximately 1,600 hives and 90 million Bees are capable of producing more than 300,000 pounds of purely-natural, award-winning, Canadian honey per year. Sun Parlor has an inventory of approximately 1,957 hives annually.

9. Between 2006 and 2013, Sun Parlor incurred losses of approximately $2,112,200 (two million one hundred thousand and two hundred dollars), consisting of $1,394,000 (one million three hundred and ninety-four dollars) in lost Bee hives and $718,200 (seven hundred and eighteen thousand and two hundred dollars) resulting from the loss of 139,400 pounds of honey at an average cost of $5.25 per pound.

Munro Honey

10. The Plaintiff, Munro Honey, is a family owned business that has been in operation for approximately 100 years. It is incorporated pursuant to the *OBCA* and operates its business from Alvinston, Ontario.

11. Munro Honey is also one of Ontario's largest producers and distributors of honey and hive products and is Ontario's first commercial meadery, producing international award-winning honey wines.

12. Between 2006 and 2013, Munro Honey incurred losses of approximately $3,001,712.50, consisting of $1,968,512.50 in lost Bee hives and $1,033,200.00 resulting from the loss of 196,800 pounds of honey at an average cost of $5.25 per pound.

The Class Members

13. Each of the Plaintiffs is a Class Member.

14. Class Members have been, and continue to be, injured by the Defendants' Neonicotinoids. The monetary damages to their businesses are significant, and include: the costs of replacing killed and weakened Bees, contaminated beeswax, comb and hives; reduced honey production and lost profits; costs associated with the purchase of honey to meet existing contracts; increased labour, equipment and supply expenditures; and costs and lost profits associated with the inability to perform contracted pollination services. These losses are not insured nor are they insurable.

E. THE DEFENDANTS

Bayer

15. Bayer AG is a chemical and pharmaceutical company that was founded in 1863. Bayer AG is headquartered in Germany and its primary areas of business include human and veterinary pharmaceuticals, consumer health care products, agricultural chemicals, biotechnology products and high value polymers. Bayer AG's operations are divided into three subgroups: Bayer HealthCare; Bayer MaterialScience; and Bayer CropScience. Bayer AG has numerous research and development facilities and production sites worldwide.

16. Bayer AG developed and designed Neonicotinoid pesticides that were, and are, manufactured, distributed and sold by Bayer Inc. and Bayer CropScience Inc. in Ontario by agreement with and for the benefit of Bayer AG..

17. Bayer Inc. is the Canadian subsidiary of Bayer AG and is responsible for Bayer AG's Canadian operations. Bayer Inc. is incorporated pursuant to the *CBCA* and is headquartered in Etobicoke, Ontario

18. On January 1, 2013, 4118235 Bayer CropScience Inc. and 3523501 Codena Inc. amalgamated to form Bayer CropScience Inc. Bayer CropScience Inc. is a fully consolidated and wholly owned subsidiary of Bayer AG. It is incorporated pursuant to the *CBCA* and is headquartered in Calgary, Alberta.

19. 3523501 Codena Inc. was incorporated in January 2001 pursuant to the *CBCA* and was headquartered in St-Charles-Sur-Richelieu, Québec.

20. 4118235 Bayer CropScience Inc. was incorporated in October 2002 pursuant to the *CBCA* and was headquartered in Calgary, Alberta.

21. During the Class Period, Bayer AG reported financial results on a consolidated basis for itself and all of its subsidiaries. Its financial statements therefore incorporated the financial results accrued by Bayer Inc. Bayer CropScience Inc. During the Class Period, its consolidated annual sales and net income were as follows:

Bayer AG		
	Sales (€ millions)	**Net Income (€ millions)**
2006	28,956	1,683
2007	32,385	4,711
2008	32,918	1,719
2009	31,168	1,359
2010	35,088	1,301
2011	36,528	2,470
2012	39,760	2,446
2013	40,157	3,189

Syngenta

22. Syngenta AG is a global agribusiness, agrochemical and biotechnology stock corporation. It is headquartered in Switzerland and has numerous research and development facilities and production sites worldwide.

23. Syngenta AG developed and designed Neonicotinoid pesticides that were, and are, manufactured, distributed and sold by Syngenta Canada Inc. in Ontario by agreement with, and for the benefit of, Syngenta AG.

24. On January 1, 2012, 531201 Syngenta Seeds Canada, Inc. and 3850617 Syngenta Crop Protection Canada, Inc. amalgamated to form Syngenta Canada Inc. Syngenta Canada Inc. is an indirect wholly owned subsidiary of Syngenta AG. It is incorporated pursuant to the *CBCA* and is headquartered in Guelph, Ontario.

25. 531201 Syngenta Seeds Canada, Inc. was incorporated in March 2001 pursuant to the *CBCA* and was headquartered in Arva, Ontario.

26. 3850617 Syngenta Crop Protection Canada, Inc. was incorporated in January 2001 pursuant to the *CBCA* and was headquartered in Guelph, Ontario.

27. During the Class Period, Syngenta AG reported financial results on a consolidated basis for itself and all of its subsidiaries, including Syngenta Canada. During the Class Period, Syngenta's reported annual sales and net income were as follows:

Syngenta AG		
	Sales (US$ millions)	**Net Income* (US$ millions)**
2006	8,046	637 (stated as 667 in the 2010 Annual Report)
2007	9,240	1,111 (stated as 1,135 in the 2011 and 2010 Annual Reports; stated as 1,114 in the 2008 Annual Report)
2008	11,624	1,385 (stated as 1,399 in the 2012, 2011 and 2010 Annual Reports)
2009	10,992	1,374 (stated as 1,397 in the 2013 Annual Report; stated as 1,411 in the 2012, 2011 and 2010 Annual Reports)
2010	11,641	1,402 (stated as 1,378 in the 2013 Annual Report)
2011	13,268	1,600 (stated as 1,570 in the 2013 Annual Report)
2012	14,202	1,875 (stated as 1,850 in the 2013 Annual Report)
2013	14,668	1,649

* Syngenta's 2006, 2007 and 2008 Annual Reports appear to term "net income" as "profit for the period".

F. THE NEONICOTINOIDS

Imidacloprid

28. Imidacloprid is manufactured by Bayer and is present throughout agricultural land in Canada in a range of soil, seed or foliar application crop protection products to control Arthropod pests, such as aphids, thrips, whiteflies, turf insects, soil insects and some beetles.

29. Imidacloprid was first registered by the PMRA in 1995 for control of the Colorado potato beetle. It has since been approved for use on an extensive range of field crops, root and tuber vegetables, tree fruits and legumes such as corn, cauliflower, artichokes and strawberries, among others.

30. Imidacloprid persists in soils and is found to have a half-life of approximately 1,000 days (just under 3 years) depending on soil type and environmental conditions. In water, imidacloprid can have a half-life of more than a year depending on environmental conditions.

31. Imidacloprid is highly mobile in plants and, when used as a seed dressing, migrates from stem to leaf tips and, eventually, into male flowers. This type of migration and uptake results in imidacloprid residues in the pollen and nectar of numerous flowering crop plants.

Clothianidin

32. Clothianidin is manufactured by Bayer and is present in a range of crop protection products used throughout Canada. Clothianidin is a successor product to imidacloprid.

33. Clothianidin was first conditionally registered by the PMRA in 2003 and is commercially used as a seed treatment on corn, canola, rice, and turf, on row crops such as grapes and strawberries as well on as some tree crops. It is also used on barley (winter, seed), durum wheat (seed), oats (winter, seed), rye (seed), triticale (seed), wheat (winter, seed), forage maize, grain maize, sweetcorn, fodder beet (seed), and sugar beet (seed).

34. Clothianidin is both persistent and systemic. It persists in soils throughout agricultural land in Canada and is found to have a half-life ranging from 148 to 1,155 days (approximately 5 months to over 3 years) depending on soil type and environmental conditions. It has been found that in water clothianidin can have a half-life of 33 days depending on environmental conditions.

35. Clothianidin is also highly mobile in plants and, when used as a seed dressing, migrates from stem to leaf tips and, eventually, into male flowers. This migration and uptake leads to clothianidin presence in the pollen and nectar of numerous flowering crop plants.

Thiamethoxam

36. Thiamethoxam is manufactured by Bayer and Syngenta and is present in a range of crop protection products used throughout Canada. Thiamethoxam is a successor product to clothianidin.

37. Thiamethoxam was first registered by the PMRA in 2004 and is used to protect field crops, vegetable crops, stone fruit, turf and ornamentals, as well as for other agricultural purposes. It is also approved for use on potato, potato (seed crop), house plants, house plants (container-grown), ornamental garden plants (indoor container-grown), apple, pear, fodder beet (seed), and sugar beet (seed).

38. Thiamethoxam is found to have a half-life of 229 days depending on soil type and environmental conditions. It has been found that in water thiamethoxam can have a half-life of 6,080 days (approximately 16 and a half years) depending on environmental conditions.

39. Thiamethoxam is a systemic insecticide and is highly mobile in plants. When used as a seed dressing, thiamethoxam migrates from stem to leaf tips and, eventually, into male flowers. Thiamethoxam is known to degrade to metabolite clothianidin in soil throughout agricultural land in Canada.

G. IMPACT OF NEONICOTINOIDS ON BEES

40. Neonicotinoids are a class of neuro-active, nicotine-based insecticides developed in 1991 and brought into commercial use in mid-1992. Products containing neonicotinoids may be applied at the plant root, as seed coating or seed drench or sprayed onto crop foliage.

41. Unlike other pesticides that remain on the surface of the treated foliage, systemic insecticides, such as the Neonicotinoids, are taken up by the plant and transported to all of its tissues including its leaves, flowers, roots and stems, as well as its pollen and nectar.

42. Neonicotinoids interfere with the nicotinic receptor in the central nervous system of insects, which causes tremors, paralysis and death, at extremely low doses.

43. Neonicotinoids are considered systemic chemicals that work their way from the seed through the plant and attack the nervous system of any insect that comes into contact with the plant, resulting in long term damage to beneficial insects such as Bees.

44. When Bees forage on pollen or nectar from treated crops, consume guttation droplets or are otherwise exposed to small levels of the Neonicotinoids, paralysis and death can result along with a bioaccumulation of the Neonicotinoids in the bee hive.

45. Neonicotinoids remain active in the plant for many months, or years. Neonicotinoids remain toxic even at very low doses and have a higher persistence in soil and water than other conventional insecticides, remaining *in situ* for months on average, increasing the risk of cumulative toxic loading effects, especially with repeated applications. This chronic persistence results in the sustained exposure of non-target organisms, such as Bees.

46. Over the past decade, use of the Neonicotinoids has resulted in: mass die-offs in the Bee population, Bee reproductive failures, difficulties rearing Queen Bees, and a decrease in the quality and quantity of honey produced.

47. Bees are social insects that rely heavily on memory, cognition and communication to coordinate the activities that are essential for their survival. Chronic ingestion of the Neonicotinoids damages foraging behaviour, overall mobility and ability to communicate. The Neonicotinoids also have numerous other effects on Bees, such as causing a premature shift in hive roles and impairing medium-term olfactory memory and associative learning abilities that foraging Bees rely on to find their way back to the hive.

48. Neonicotinoids are among the most widely used insecticides in Canada and pose serious risks to the Bee population primarily because of their persistence in crops and soil, and their potency at low concentrations. These properties, coupled with the Neonicotinoids' widespread use in many cropping systems and presence in pollen and nectar, result in a chronic, continuing and lethal exposure to the Bee population.

49. The connection between the sale and use of Neonicotinoids as described herein, and the impact of those substances on Bees as pleaded herein was concealed and/or denied by the Defendants. Only since the fall of 2012 has information come to light linking Neonicotinoids with the adverse effects pleaded herein.

H. BAYER'S DEVELOPMENT, DESIGN, DISTRIBUTION AND SALE OF THE NEONICOTINOIDS

50. The PMRA has issued conditional approvals for the following products containing the Neonicotinoids produced by Bayer: Poncho 600 FS; Confidor 200 SL; Prosper EverGol; Poncho 600 Seed Treatment Insecticide; Poncho FS Seed Treatment Insecticide; Prosper FX Flowable

Insecticide and Fungicide Seed Treatment; Prosper T200 Flowable Insecticide and Fungicide Seed Treatment; and Titan ST Insecticide.

I. SYNGENTA'S DEVELOPMENT, DESIGN, DISTRIBUTION AND SALE OF THE NEONICOTINOIDS

51. The PMRA has issued conditional approvals for the following products containing the Neonicotinoids produced by Syngenta: Actara 25 WG Insecticide; Actara 240SC Insecticide; Cruiser 5SF Seed Treatment; Cruiser 250FS Seed Treatment; Cruiser Maxx Beans; Helix Colourless Seed Treatment; Helix Liquid Seed Treatment; Cruiser Maxx Cereals Seed Treatment; Cruiser Maxx Cereals Commercial Seed Treatment; Endigo Insecticide; Flagship Insecticide; Helix Liquid Seed Treatment; and Helix Xtra Seed Treatment.

J. PMRA'S CONDITIONAL REGISTRATIONS OF NEONICOTINOIDS

52. PMRA's conditional registrations and their renewal are meant to be time limited exceptions to the normal requirement that before a pest control product may be sold or used in Canada it must possess a full registration based on meeting all statutory information requirements. The conditional registration itself acknowledges that *"clothianidin is highly toxic to bees ..."*

53. The PMRA, likely as a result of the concerns expressed with the impacts of the neonicotinoids on Bees, has initiated a re-evaluation of clothianidin and other neonicotinoids that will focus on potential effects on pollinators and will include consideration of all new scientific measures. This re-evaluation is not expected to be completed before 2017 or 2018.

K. NEGLIGENCE

54. The Defendants are liable in negligence.

55. Bayer AG and Syngenta AG were negligent in their design and development of the Neonicotinoid pesticides.

56. Bayer Inc., Bayer CropScience Inc. and Syngenta Canada Inc. were, and continue to be, negligent in their distribution and sale of the Neonicotinoid pesticides.

57. The Defendants were, and continue to be, negligent in permitting or failing to prevent the damages caused by the Neonicotinoids to the Beekeepers.

58. The Defendants knew or ought to have known at all material times that the Neonicotinoids would cause damage to the property of the Plaintiffs and the other Class Members.

59. The Plaintiffs and Class Members plead that the harm to the Beekeepers was reasonably foreseeable to the Defendants as a result of the following facts, all of which were known to the Defendants:

Global Response to Neonicotinoids

(a) The international regulatory community has repeatedly expressed concern about the continued use of Neonicotinoids and their impact on the Bee population.

(b) In 2009, a group of European scientists from several disciplines convened as a result of the growing scientific concern over the rapid decline in Arthropod populations across Europe. Reviewing existing studies, field observations and circumstantial evidence, this group concluded that a new generation of pesticides being the persistent, systemic and neurotoxic Neonicotinoids, introduced in the mid-1990's, may be considered as one of the main causes of the escalation in the decline of the Arthropod populations. To investigate this theory, the Task Force on Systemic Pesticides ("Task Force") was established to engage in an analysis of all the available scientific studies of the effects of systemic pesticides on biodiversity and the ecosystem with a focus on pollinators and other non-target species.

(c) The Task Force reviewed all of the relevant information from studies all over the world, representing approximately eight hundred (800) peer reviewed reports,

relating to the use and impact of Neonicotinoids. The key findings of the Task Force are set out in the Worldwide Integrated Assessment on Systemic Pesticides and include, among others:

- Neonicotinoids persist, particularly in soils, for months and some cases years, and accumulate. This increases their toxicity by increasing the duration of exposure of non-target species;

- the metabolites (degradates that are produced by metabolism of the active ingredient by animals, plants and microorganisms such as soil bacteria and fungi) of Neonicotinoids are often as or more toxic than the active ingredients;

- the classic measurements used to assess the toxicity of a pesticide (short-term lab toxicity results) are not effective for systemic pesticides and conceal their true impact. They typically measure direct acute effects rather than chronic effects via multiple routes of exposure. In the case of acute effects alone, some Neonicotinoids are at least 5,000 to 10,000 times more toxic to bees than DDT;

- the evidence is clear that Neonicotinoids pose a serious risk of harm to honey bees and other pollinators; and

- the most affected group of species include insect pollinators such as bees and butterflies that are exposed to contamination through all four routes with high exposure through air and plants and medium exposure through water. The assessment found that both individuals and populations can be adversely affected by low or acute exposure making them highly vulnerable. Pollinators exposed to contaminated pollen, nectar and water are harmed at field realistic concentrations.

(d) The Task Force concluded that the present scale use of Neonicotinoids is not sustainable and that continued use can only accelerate the global decline of important invertebrates, and risk reductions in the level, diversity, security and stability of the ecosystem.

(e) The Permanent Peoples' Tribunal (the "Tribunal") is an international opinion tribunal that is independent of state authorities. Over the course of four days, from December 3rd to 6th, 2011, the Tribunal convened in India to hear cases that were brought against six multinational agrochemical companies, which included the Defendants. One of the cases brought before the Tribunal from the United

Kingdom and Europe focused on the widespread death of bees in Europe and North America linked to Bayer's Neonicotinoid insecticides.

(f) On December 6th, 2011, the Tribunal reached its verdict and found that the "testimonies of witnesses convincingly showed that "… the extinction of bees has already occurred to a large extent in many places of the world (in the USA, in Europe, in Argentina and elsewhere)…". The Tribunal declared that on all the evidence presented before it "the six [transnational corporations were] *prima facie* responsible for gross widespread and systemic violations of the right to health and life, economic, social and cultural rights…". The Tribunal further declared that "their systemic acts of corporate governance have caused avoidable catastrophic risks, increasing the prospects of extinction of biodiversity, including species whose continued existence is necessary for reproduction of human life".

(g) The European Food Safety Authority ("EFSA") issued reports in 2013 confirming that neonicotinoids present acute risks to honey bee survival. A "high acute risk" to honey bees was identified from exposure via dust drip for authorized uses in cereals, cotton, maize and oilseed rape. A "high acute risk" was also identified for exposure to the residues in nectar and/or pollen for authorized uses in cotton, oilseed rape and sunflowers. The EFSA also identified other risks and major data gaps in the studies previously undertaken.

(h) The European Commission, based on the findings of the EFSA, has restricted the sale and use of neonicotinoid insecticides, specifically products containing clothianidin, imidacloprid and thiamethoxam. This restriction entered into force on December 1, 2013 and will be reviewed within two years. The restriction applies to the use of neonicotinoids for seed treatment, soil application (granules) and foliar treatment on plants and cereals (with the exception of winter cereals) that are attractive to bees.

Japan's Response to Neonicotinoids

(i) In 2013, Japan refused to accept containers of Canadian buckwheat that was grown in 2012 on the grounds that it exceeded Japan's maximum residue limit for

thiamethoxam. The buckwheat farmers did not apply thiamethoxam to their crops and believe that the contamination may have resulted from residues subsisting in the soil from previously-treated crops.

France's Response to Neonicotinoids

(j) Since 1999, France has banned the use of Bayer's imidacloprid, sold under the name Gaucho in France, and used as a seed dressing for sunflowers, after one-third of French honey bees died following its widespread use.

(k) In 2003, the Comité Scientifique et Technique, a team of expert scientists appointed by the French Minister of Agriculture, concluded that imidacloprid poses a significant risk to bees. In 2004, the Minister of Agriculture suspended the use of imidacloprid as a seed treatment for maize (corn).

(l) In 2008, Bayer's registration application for clothianidin was rejected by the French authorities.

Germany's Response to Neonicotinoids

(m) In 2008, the German Federal Office of Consumer Protection and Food Safety suspended the registrations of eight pesticide seed treatment products used on rapeseed oil and sweetcorn. The ban occurred following reports, in May 2008, from German beekeepers in the Baden-Württemberg region that two-thirds of their bees died and that some beekeepers lost all of their hives as a result of the use of clothianidin. The tests conducted on the dead bees showed that ninety-nine percent (99%) of those examined had a buildup of clothianidin.

Italy's Response to Neonicotinoids

(n) In 2008, Italy's agricultural ministry, relying on the precautionary principle, suspended the use of pesticides containing neonicotinoids for the coating of any plant seeds.

United States of America's Response to Neonicotinoids

(o) In 1995, beekeepers in North Dakota lost thousands of honey bee colonies during a period when oilseed rape in the area was treated with imidacloprid. The loss of colonies represented approximately one-third of the honey bees in the area.

(p) In February 2003, the US EPA issued a Risk Assessment for clothianidin seed treatment for corn and canola. At that time, US EPA scientists raised serious concerns about neonicotinoids and requested field testing to evaluate potential environmental hazards including harm to pollinators.

(q) The US EPA, in its "Pesticide Fact Sheet", issued May 30, 2003, granting the conditional registration of clothianidin, produced by Bayer Corporation, the US subsidiary to Bayer AG, stated that "[c]lothianidin has the potential for toxic chronic exposure to honey bees, as well as other non-target pollinators, through the translocation of clothianidin residues in nectar and pollen."

(r) In a memorandum dated November 2, 2010, the US EPA stated that clothianidin's major risk concern is to non-target insects such as honey bees and that "[a]cute toxicity studies to honey bees show that clothianidin is a neonicotinoid insecticide that is both persistent and systemic on an oral basis."

(s) In January 2012, the USDA Agricultural Research Station published a study finding that injury to honey bees from neonicotinoids also makes them more vulnerable to highly-damaging parasites.

(t) The US EPA's "Clothianidin Summary Document Registration Review: Initial Docket December 2013", outlined the key findings of the most recent ecological risk assessment and states: "…in the 2010 assessment, information from standard tests, field studies, and incident reports suggest the potential for long-term toxic risks to honey bees…"

Canada's Response to Neonicotinoids

(u) In Canada, the federal government, through the PMRA, is responsible for the registration of pesticides.

(v) Since 2009, approximately eighty (80) Pesticide Incident Reports, and hundreds of complaints, relating to Bee deaths in Ontario and Québec have been filed with the PMRA. Four of these reports appear to have been formally evaluated by Health Canada, however only three of these evaluations are publicly available.

(w) "Pesticide Incident Report 2010-3100" concerned an abnormally high number of "dead or paralyzed/agonizing" Bees observed by a Beekeeper in Coteau-du-Lac, Québec on May 15, 2010. Tests by the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec ("MAPAQ") detected residues of clothianidin and thiomethoxam in the dead Bees, which Health Canada used to confirm that exposure to these pesticides occurred. The incident was classified as "Environment Moderate". Health Canada concluded:

> …[I]t is **highly probable** that exposure to clothianidin and/or thiamethoxam *caused* the bee mortality in Coteau-du-Lac. Even though it is not clear how the bees were exposed to clothianidin and thiamethoxam in this incident, *this conclusion is supported by the fact that clothianidin and thiamethoxam are known to be highly toxic to bees* and these were the only pesticides found in the dead bees. In addition, no pesticide residues were found in control bees which were collected from a healthy hive in another location.
>
> [bolded emphasis in original; italicized emphasis added]

(x) "Pesticide Incident Report 2010-3391" concerned an "abnormally high bee mortality" observed by a Beekeeper in St-Dominique, Québec in May 2010. The Bees were sent for testing by the MAPAQ, and the incident was classified as "Environment Moderate". Health Canada concluded:

> …[I]t is **highly probable** that exposure to clothianidin *caused* the bee mortality in St-Dominique. Even though it is not clear how the bees were exposed to clothianidin in this incident, this conclusion is supported by the fact that *clothianidin is known to be highly toxic to bees* and was the only pesticide found in the dead bees.
>
> [bolded emphasis in original; italicized emphasis added]

(y) "Pesticide Incident Report 2011-4412" concerned Bee mortality observed by a Beekeeper in the Montérégie region of Québec, which was first noticed on June 1, 2011. The affected hives "were surrounded by agricultural fields in which corn and soybean are grown and the incident occurred during the sowing of corn and soybean seeds". Testing by the MAPAQ detected residues of clothianidin, thiamethoxam, fenitrothion, and atrazine in the dead Bees. Fenitrothion is no longer registered for use in Canada. The incident was classified as "Environment Major". Health Canada concluded:

> …[I]t is **highly probable** that exposure to clothianidin and/or thiamethoxam and/or fenitrothion *caused* the bee mortality in this incident. Even though it is not clear how the bees were exposed to these compounds in this incident, this conclusion is supported by the fact that residues of clothianidin, thiamethoxam and fenitrothion were found in dead bees and that these compounds are known to be highly toxic to bees. *In addition, clothianidin and/or thiamethoxam were detected in other incidents where high bee mortality was observed*.
>
> It is unlikely that atrazine contributed to the bee mortality observed in this incident, as this pesticide is not known to be hazardous to bees.
>
> [bolded emphasis in original; italicized emphasis added]

(z) In response to this, the fourth, incident concerning Bee mortality and clothianidin and thiomethoxam, Health Canada added that:

> A trend analysis will therefore be initiated by the PMRA to further its understanding of the issue. In addition, as clothianidin and thiamethoxam are conditionally registered, all incidents involving these compounds will be considered during the evaluation for full registration along with other requested data. It should finally be noted that pollinator issues are identified as a PMRA priority. Within this context, the PMRA is working with federal, provincial and international partners as well as other stakeholders including industry to improve risk mitigation measures for pollinators.

(aa) In the spring of 2013, Health Canada, with support from the Ontario Ministry of the Environment and OMAFRA, released a report titled, "Evaluation of Canadian Bee Mortalities that Coincided with Corn Planting in Spring 2012". This evaluation noted the "significant number of honey bee mortality reports from the provinces of Alberta, Manitoba, Saskatchewan, Nova Scotia, Quebec and Ontario", but observed that the "majority of reports were from southern Ontario, involving over 40 beekeepers and 240 different bee yard locations", particularly in corn growing regions. Residue analysis was conducted by the PMRA and MAPAQ:

> Clothianidin was detected in approximately 70% of the samples analyzed in Ontario and clothianidin and thiamethoxam were detected in the samples analyzed from Quebec. On a bee yard basis, these residues were detected in approximately 80% of the bee yards where dead bee samples were collected and analysed. Samples of unaffected bees were also analysed and clothianidin was only detected in one sample at very low levels. Corn seed in Ontario and Quebec is treated in approximately equal quantities with either clothianidin or thiamethoxam. Since thiamethoxam is converted to clothianidin, the detection of clothianidin in dead bees could indicate exposure to either clothianidin or thiamethoxam.
>
> …
>
> The information evaluated suggests that planting of corn seeds treated with the nitroguanidine insecticides clothianidin and/or thiamethoxam contributed to the majority of the bee mortalities that occurred in corn growing regions of Ontario and Quebec in Spring 2012. The likely route of exposure was insecticide contaminated dust generated during the planting of treated corn seed. …

(bb) A similar Health Canada evaluation titled, "Evaluation of Canadian Bee Mortalities in 2013 Related to Neonicotinoid Pesticides" ("Evaluation"), the interim results of which were published in September 2013, found that "approximately 75% of the dead bee samples had detectable residues of neonicotinoid insecticides used to treat corn and soybean seed" and that "[c]lothianidin and/or thiamethoxam were detected in >90% of the comb pollen

samples from affected yards and were also detected in some water, soil, and comb honey samples".

(cc) The Evaluation also found that "[s]ome beekeepers have reported that they have noticed mortalities in their hives for years, but they had not made the link to pesticides being the cause until the acute kills that were observed in 2012". The Evaluation concluded that "current agricultural practices related to the use of neonicotinoid-treated corn and soybean seed are not sustainable due to their impact on bees and other pollinators".

(dd) In late 2013, Canada's Standing Senate Committee on Agriculture and Forestry commenced hearings on "the importance of bees and bee health in the production of honey, food and seed in Canada" with emphasis on the use of neonicotinoid pesticides and pollinator exposure and protection. These hearings are set to conclude with a final report to be issued in the fall of 2014.

- Rod Scarlett, Executive Director of the Canadian Honey Council, has testified that "it has been very difficult, particularly in Ontario and Quebec, to buy non-treated seed";

- Scott Kirby, Director of Product Assessment with the PMRA has testified that there are "clear linkages" and a "direct relationship" between neonicotinoid use and the 2012 and 2013 bee mortalities observed in Ontario and Quebec; and further stated that double-blind equivalent studies have shown that neonicotinoids are fatal to bees.

(ee) In 2013, OMAFRA released a presentation titled, "Neonicotinoids and Field Crop Production in Ontario". This presentation stated that neonicotinoids are now used on:

(i) 100% of canola acreage;

(ii) 99% of corn crop acreage;

(iii) 95% of dry bean acreage;

(iv) 65% of soybean crop acreage; and

(v) 25-33% of cereals acreage.

(ff) OMAFRA Field Crop Entomologist and presenter, Tracey Baute, subsequently stated: "It is time to start using these insecticide seed treatments only when necessary. Not every acre in the province needs protection from wireworm and grubs. Only 10 to 20% of the acres are at risk of these two pests, particularly those fields with sandy or silty soils".

(gg) On May 27, 2014, the Council for Prince Edward County ("County") passed a resolution that the County would immediately discontinue the use of neonicotinoid products on municipal property. The County also resolved to, among other things:

- call on the provincial and federal governments to declare a moratorium surrounding the use of neonicotinoid crop treatments, as soon as possible, pending further study;
- circulate its resolution to "other municipalities through the Association of Municipalities of Ontario, to request their support on this serious issue";
- forward its resolution to "The Right Honourable Stephen Harper, The Honourable Gerry Ritz, Federal Minister of Agriculture and Agri-Food, The Honourable Rona Ambrose, Federal Minister of Health, Federal MP Daryl Kramp, Federal Opposition Members at this time, and the Premier of Ontario, Provincial Minister of Agriculture and local Provincial Member of Parliament immediately after the Provincial election"; and
- "[u]ntil such time as a moratorium is enacted where an agronomic assessment shows particular fields to be at minimal risk of damage from soil insects…urge farmers to order seed not treated with insecticide for the 2015 growing season, and…urge seed companies to make adequate supplies available".

(hh) On July 7, 2014, King Township passed a resolution supporting the actions taken by the County, confirming its commitment to the non-use of neonicotinoid products on any municipally owned properties.

60. The Plaintiffs plead that the Defendants owed them and the other Class Members the following duties of care and other duties:

(a) to take reasonable steps to avoid harm and/or damage to the property of the Plaintiffs and the other Class Members;

(b) to conduct appropriate testing and monitoring and properly research the impact of Neonicotinoids on the Bee population prior to the registration and sale of the Neonicotinoids in Canada;

(c) to monitor, investigate, evaluate and follow up on adverse events associated with use of the Neonicotinoids;

(d) upon discovering that the Neonicotinoids resulted in death to Bees and are prone to persistence in the environment, promptly to remove the Neonicotinoids from the marketplace, disclose the harm to the Plaintiffs and Class Members, and take other appropriate remedial actions; and

(e) to act in good faith towards the Plaintiffs and Class Members and users of the Neonicotinoids in Canada.

61. The Defendants negligently breached, and continue to breach, these duties by:

(a) encouraging the indiscriminate use of Neonicotinoids far beyond what was reasonable or necessary, purely for their own economic gain;

(b) marketing such products in a manner which was intended to and did have the effect of rendering the Neonicotinoids ubiquitous and inescapable for Bees, resulting inevitably in devastation of the Bee population and resulting in damages to the Beekeepers;

(c) designing and developing products the use of which results in the significant adverse effects pleaded herein;

(d) failing, after becoming aware of the problems with the use of Neonicotinoids and their impacts on the Bee population and to Beekeepers, to seek to suspend the registration of the Neonicotinoids, publicize the problems, and cease or limit manufacturing and distribution of the Neonicotinoids after the Defendants knew or ought to have known of the problems with the use of the Neonicotinoids and their impacts on the Bee population and Beekeepers;

(e) failing to adequately study and test Neonicotinoids in a manner that would fully disclose the magnitude of their risks to the Bee population and Beekeepers;

(f) failing to provide to the PMRA and other regulatory agencies, on a timely basis, complete and accurate information on Neonicotinoids and Bee exposure as it became available;

(g) misrepresenting the state of research, opinion and scientific literature pertaining to the purported risks associated with the use of the Neonicotinoids to the Bee population and Beekeepers, including but not limited to instances where these misrepresentations were unreasonable in the face of the risks that were or ought to have been known to the Defendants;

(h) actively encouraging, or failing to take effective steps to discourage, the use of the Neonicotinoids;

(i) failing to institute an effective products recall upon discovering of the harm of the Neonicotinoids to the Bee population and Beekeepers or potential harm to Bees and Beekeepers;

(j) making false, misleading and deceptive representations relating to the use and possible impacts of Neonicotinoids and making false, misleading and deceptive representations regarding the risk to Bees and Beekeepers in order to preserve their interest in the lucrative business of selling Neonicotinoids; and

(k) breaching other duties of care to the Plaintiffs and Class Members, the details of which are known only to the Defendants.

62. The Plaintiffs and Class Members owned Bees that died or were harmed and/or owned hive products that were contaminated or otherwise damaged as a direct result of Bee exposure to the Neonicotinoids.

63. The damages suffered by the Plaintiffs and Class Members would not have occurred but for the negligence of the Defendants.

64. In the circumstances of this case, the Defendants applied callous and reckless disregard for the property of the Plaintiffs and Class Members.

65. Due in part to the fact that the resources of the Defendants vastly exceed the damages their negligence has caused to the Plaintiffs and Class Members, the imposition of a duty of care upon the Defendants would not expose them to indeterminate liability.

L. DAMAGES

66. The Plaintiffs and Class Members claim damages for past, present and future pecuniary losses.

67. The Plaintiffs and Class Members also claim punitive, aggravated and exemplary damages for the reckless and unlawful conduct of the Defendants.

M. RELEVANT LEGISLATION AND PLACE OF TRIAL

68. The Plaintiffs and Class Members plead and rely upon the provisions of the *CJA*, *CPA*, *Negligence Act*, RSO 1990, c N.1, *Pest Control Products Act*, SC 2002, c 28, *Pesticides Act*, RSO 1990, c P.11, *Environmental Protection Act*, RSO 1990, c E.19, *Canadian Environmental Protection Act, 1999,* SC 1999, c 33, and the *Bees Act*, RSO 1990, c B.6.

69. The Plaintiffs propose that this action be tried in the City of Windsor, in the Province of Ontario, as a proceeding under the *CPA*.

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