



## Grain Farmers of Ontario Comments

### **Pollinator Health: A Proposal for Enhancing Pollinator Health and Reducing the Use of Neonicotinoid Pesticides in Ontario. Submission to the EBR Posting # 012-3068**

#### **I. INTRODUCTION**

The new regulations for seed treatment proposed in the *Pollinator Health: A Proposal for Enhancing Pollinator Health and Reducing the Use of Neonicotinoid Pesticides in Ontario Discussion Paper* (Discussion Paper) present a number of significant concerns for the grain and oilseed farmers in Ontario and the agriculture community. These proposed regulations represent a departure from science based decision making to a precautionary approach. In doing so, they lack defensible evidence for positively impacting pollinator health and will result in significant negative impacts to the economy, farmer safety, and the environment. The proposed implementation of a prescriptive “proof of pest” approach to access neonicotinoid insect control is unworkable. We do not believe a third party verification approach is appropriate or warranted. If the government pursues a third-party verification, as described in the discussion document, there is currently no qualified certified body of professionals in Ontario that could deliver such a third party support.

We are extremely disappointed that the government has taken this approach. Despite never seeing the data to support the assertion that there is a direct correlation between bee mortalities and neonicotinoids beyond the acute exposure that farmers are already actively addressing, Grain Farmers of Ontario made a commitment to the Ontario government to keep working on solutions together with the government. We worked with individuals from the Ontario government to draft the terms of reference to start a Task Force to tackle these issues. We were committed to the process and ready to roll up our sleeves to find a solution. Weeks passed and no meetings were set. Then suddenly there is a Discussion Paper on the EBR proposing regulations for 80% reductions and a set of proposed regulations. The regulatory approach outlined in the Discussion Paper came as a shock to our farmer members as we had assurances from the top level of government that this approach would not be taken. We continued with the Task Force in the absence of government and will present our enhanced pollinator commitment to government in February 2015.

#### **The Grain Farmers of Ontario Ask the government**

- To conduct a thorough cost benefit analysis before proceeding with the approach outlined in the Pollinator Health Discussion Paper
- To return to a dialogue with the agriculture industry and the Pollinator Task Force to collaborate on real solutions that protect pollinators and the environment
- To abandon the goal to reduce neonicotinoids by 80% in Ontario and support an agri-industry led approach that will work for the complexities of both grain farming and bee keeping

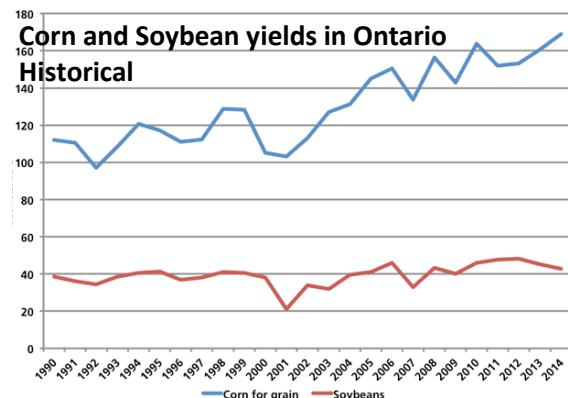
#### **Our commitment to government, pollinators, and the environment**

Grain Farmers of Ontario will continue its commitment to pollinators. We will be at the table with or without government to continuously improve our farmer member practices and commitments. We have put together a Pollinator Task Force and have consulted directly with over 900 farmer members at the January district meetings. We will provide feedback to government in February 2015.

## II THE IMPACT OF THE PROPOSED REGULATIONS

### FARMERS USE NEONICOTINOID SEED TREATMENT TO PROTECT THEIR CROPS FROM INSECT DAMAGE AND TO ACHIEVE CROP YIELDS THAT KEEP ONTARIO FARMERS COMPETITIVE

Farmers use insecticides to protect their crops from a variety of insects. Seed treatment is an effective tool in protecting crops from insect damage and disease. Seed treatment is applied to the seed at the manufacturing plant reducing the occupational exposure for farmers and providing lower volume delivery of the pesticide than other applications. Neonicotinoid seed treatment protects seedlings from insects living in the soil. To have a productive crop, corn and soybean plants need to establish roots and plant stands while warding off threats from insects and disease beneath the soil – something that cannot be achieved through other applications such as foliar sprays. Without access to seed treatments, farmers will be at a significant yield disadvantage to other farmers in North America and around the world.



Growing crops in the Great Lakes Basin means that lower cost competitors are a short drive away in the US. The law being proposed in the Discussion Paper will render farmers in Ontario in a non-competitive position.

### FARMERS HAVE A HISTORY OF COLLABORATION AND THE POLLINATOR ISSUE IS NO DIFFERENT

Grain Farmers of Ontario has had a long-history of collaboration with the government on a variety of issues. The issues facing pollinators are no different. Grain farmers across the province have been fully engaged in solutions aimed at protecting pollinators since the initial issue of pollinator health was raised in 2011. Grain farmers initiated our own multi-stakeholder investigation and instituted actions and technology to reduce risks to pollinators. Pollinator health has been a priority for Grain Farmers of Ontario (backgrounder for details) even before this was an issue identified by government. We have been sitting at the table with government and with the bee keeping community to generate solutions. The solutions generated in these forums have been adopted at an unprecedented rate (over 90% compliance by grain farmers). These solutions also have produced results – bee mortalities are down by 70% this year<sup>1</sup>.

There are still a number of technically sound solutions that can be implemented to improve pollinator health. If the regulations in the Discussion Paper are implemented as laid-out, it sends a message to farmers that the government has rejected this collaborative approach in favor of this high profile near-ban. The trust of government will be low among farmers and this lack of trust will have an impact on engaging farmers on solutions for this issue and future issues.

<sup>1</sup> PMRA BEE Mortality report

## FARMERS WILL SUFFER AND POLLINATORS WILL NOT BENEFIT

Farmers need to control insect pests to maintain viable enterprises. Without neonicotinoids, farmers would have to rely primarily on other options such as foliar or granular insecticides that are not effective for certain pests.<sup>2</sup>

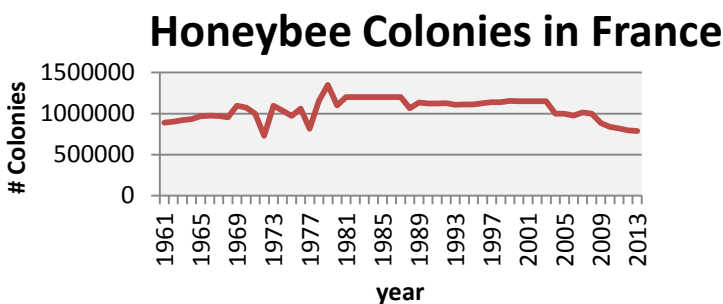
The proposed regulations in the Discussion Paper not only disregard the extensive commitment made to date by grain farmers in Ontario to protect pollinators, but they also create unnecessary duplication in the system of regulating agricultural seed that will harm the future of farmers in Ontario. Lack of regulatory harmonization can impose undue burden for Canadian farmers.<sup>3</sup>

The reduction target of 80% specifically imposed on neonicotinoid treated seed will cost farmers both at a micro and macro level. Farmers will be forced to reverse advancements in environmental stewardship (no-till/cover crops) if they cannot protect their crops from damage using neonicotinoid seed treatment. And, these regulations will drastically diminish the chances of accessing a replacement for neonicotinoids, as this regulatory approach sends a signal to investors that “Ontario is not the place to introduce new technologies”.

These proposed regulations will pit farmers against farmers by picking winners and losers across the countryside. The proposed regulations will interfere with the commercial contractual relationship between farmer and input-supplier, leaving no safety nets for farmers if a seed fails to germinate. Crop Insurance claims will increase forcing farms to operate below the margins required to be solvent.

Ultimately, the regulations will make Ontario farmers less competitive, both domestically and internationally. This impact on competitiveness will have not only a direct impact on Ontario farmer's bottom-line, demonstrated by the experience in the European Union<sup>4</sup> and estimated at least \$630 million<sup>5</sup> for Ontario grain farmers, but rural municipalities<sup>6</sup> will suffer and Ontario's GDP will be impacted<sup>7</sup>.

The Country of France has had a ban on neonicotinoids since 2008 and the Country continues to have declines in honey bee colonies – clearly the ban on neonicotinoids has no beneficial impact on their Country's bee health.



<sup>2</sup> Conference board of Canada Seed of Success 2014

<sup>3</sup> Conference Board of Canada Seed of Success 2014

<sup>4</sup>: Close to 50 per cent of the crop was lost in some counties in the UK under first year of the EU moratorium on neonicotinoids

<sup>5</sup> Conference Board of Canada Seed of Success 2014

<sup>6</sup> Agriculture is the economic mainstay of hundreds of rural communities

<sup>7</sup> GDP impact minimum of \$440 million Conference Board of Canada – Seeds of Success 2014

## NEONICOTINOID SEED TREATMENT IS AN ESSENTIAL TOOL FOR FARMERS' ENVIRONMENTAL PRACTICES – NO-TILL AND GHG REDUCTIONS

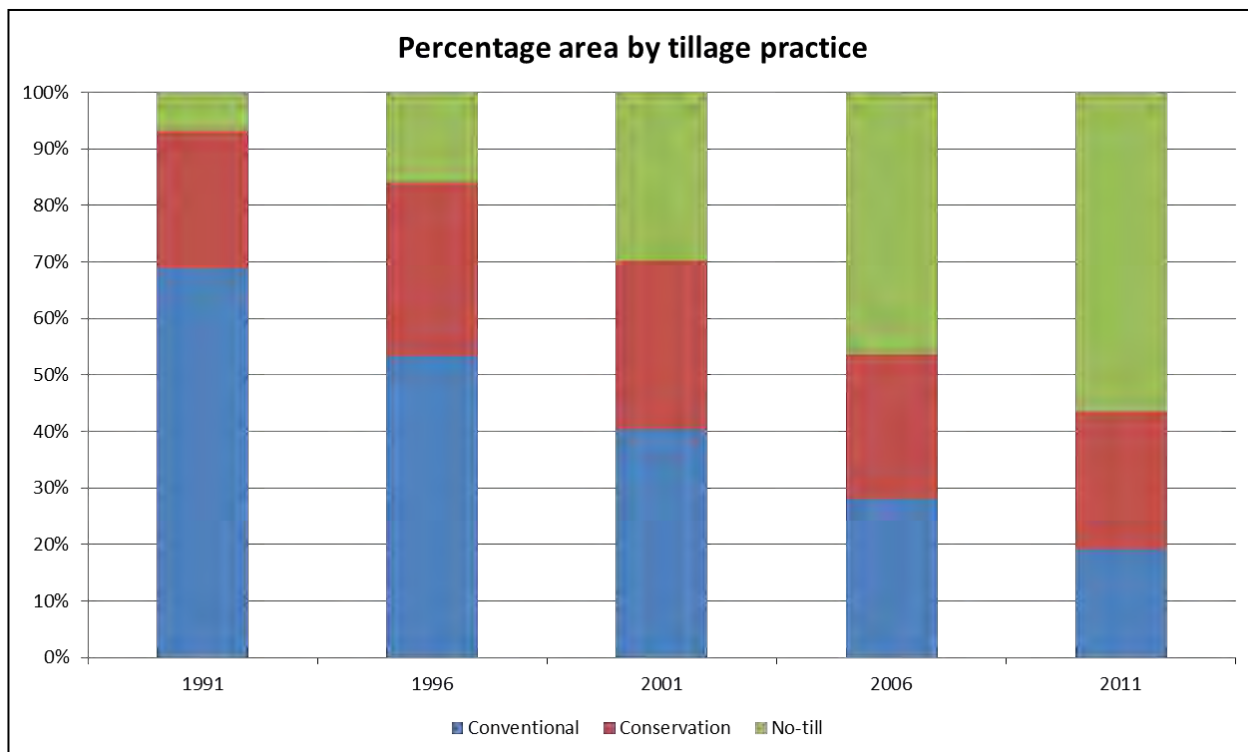
Seed treatment provides more benefits to Ontario growers and the environment than a simple impact on yield. Seed treatment is an important tool in No-Till practices. Conservation and no-till practices have been used on more than 50% of seeded areas in Ontario since 2001. These tillage practices are possible because of the soil pest control offered by neonicotinoid seed treatment

No-Till farming provides many benefits including less soil erosion, reduced fuel and labor requirements, and reductions in greenhouse gas emissions.

Soils can be a source or sink for CO<sub>2</sub> emissions depending on the soil management practices that are used. Tillage is one of the primary agronomic activities believed to reduce soil organic carbon (SOC).

There are three main types of tillage: conventional tillage, conservation tillage, and no-till (or zero-till). Each is defined by the amount of crop residue left on the surface after the crop has been harvested. Conservation tillage practices help to capture CO<sub>2</sub> from the atmosphere, trap it in the form of organic matter, and return it to the soil thus helping to reduce greenhouse gas emissions. They also reduce greenhouse gas emissions through decreased use of fossil fuels in field preparation.

A recent lifecycle analysis by Manitoba Agriculture estimates that a typical wheat operation of 3,000 acres generated 28% more GHG under conventional tillage than under no-till.



**Percentage area prepared for seeding by different tillage practices across Canada**

## FARMER HEALTH WILL BE COMPROMISED WITHOUT ACCESS TO SEED TREATMENT

As the Discussion Paper acknowledges, seed treatment technology is efficient, effective, and protects young seedlings from damage. Prior to the advent of seed treatment technology, occupational exposure for farmers was a real issue. Seed treatment today is applied at the manufacturing plant thereby reducing occupational hazards for farmers. Neonicotinoid seed treatment technology is not only beneficial for targeting the pest threat and reducing exposure to non-target species, it is also a healthier application for farmers than broadcast spray.

In fact, the total area covered with treatment in an average corn crop is less than 25 square feet per acre versus 43,560 square feet if using a foliar spray.

## LACK OF TRANSPARENCY, PROCESS, AND METRICS PUTS ONTARIO AT A DISADVANTAGE

The Discussion Paper refers to mounting science but only references a single body of work from IUCN. There is a lack of transparency in the process for which the government has determined the mounting science and determined the 80% reduction number. Despite requests to see the data and process used for the evaluation of the risks, to date we have not seen the government's data to support that an 80% reduction of neonicotinoid treated seed will reduce overwintering bee losses. In fact, we have not even seen the evidence that neonicotinoid seed treatment is directly accountable for over wintering mortalities of bees. The approach in the Discussion Paper is arbitrary and the lack of data transparency is not consistent with the "open government" commitment of the Ontario government.

## THERE IS A LACK OF RIGOR IN DATA FOR POLLINATORS AND FARMERS NEED MORE TIME TO HAVE ROBUST DATA ON PEST THREATS

There is a need for more robust data for pollinators, biodiversity, honey bee health, and for grain and oilseed pest thresholds before major regulatory measures should be taken.

## HONEY BEE DATA

The data used to determine the health of honey bees in Ontario lacks the rigor required to establish policy – especially when the impacts on grain farming are so great and the evidence of the contribution to bee health is not evident.

There are a number of discrepancies and limitations in the current approach to measuring mortality that need to be addressed. First and foremost, it is important to develop standardized criteria by which overwintering losses are measured. Within Canada there are differences in how a dead or unproductive hive is defined. For example, Canadian Association of Apiarists (CAPA) uses a definition of fewer than 3 frames of bees as their standard while the Province of Ontario uses a definition of less than 4 frames of bees in the winter loss survey.<sup>8</sup> Since the general condition of the colony going in to winter has also long been acknowledged to play a significant role in overwintering, it is also important to standardize the definition of a viable hive in the fall in order to ensure only those hives strong enough to survive winter are retained.

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The support for the Discussion Paper’s approach appears to be based on the definition of 4 frames of bees in the winter loss survey, yet Agricorp<sup>9</sup> uses the CAPA definition of 3 frames for the provinces Beekeeper Financial Assistance Program. This discrepancy alone identifies the need for some standardization and rigor before proceeding with a regulatory approach that impacts grain and oilseed farmers.

Add on the data from Stats Canada that shows a thriving bee health story and the conclusion is that bee health data requires both standardization and rigor before any regulations should be based on this data.

<b>Honey Production in Ontario</b>	<b>2013</b>	<b>2014</b>	<b>Increase</b>
<b>Beekeepers</b>	3155	3262	3%
<b>Colonies</b>	97500	112800	16%
<b>Production of honey, total (pounds x 1,000)</b>	6363	8192	29%
<b>Value of honey, total (dollars x 1,000)</b>	\$20,362	\$30,310	49%

**POLLINATOR DATA**

A robust set of data to determine the health of native pollinators in Ontario is not currently available.

**GRAIN AND OILSEED PEST THRESHOLDS**

There is a mythology that grain farmers can determine their pest threats in early fall for the spring planting season. This lack of understanding of the decisions that go into the planting of crops is evident in the prescriptive approach of the proposed regulations. The truth is that farmers make many decisions on what to plant, when to plant, and how to plant and each of these decisions is based on a set of risk assessments..

Grain Farmers of Ontario commissioned data to determine a “pest predictor tool”. The assumptions within this tool need to be tested over a period of time to ensure that this tool can be relied on to make bankable decisions by the farmer. Currently the study is in year-one of testing and Grain Farmers of Ontario has put further investment into this tool on-hold in light of the Government’s approach outlined in the Discussion Paper.

**FUTURE INVESTMENTS IN ONTARIO ARE THREATENED BY NON-EVIDENCED BASED DECISIONS THAT INVOKE THE PRECAUTIONARY PRINCIPAL**

Agriculture input suppliers have indicated that their companies are already curtailing plans for developing new products for Ontario due to the lack of a predictable regulatory environment in Ontario. This trepidation by technology developers to invest in Ontario is simple; the investment required to bring a new product to market is too great to risk in a region that will make arbitrary decisions to remove market access. Agriculture technology is continuously improving, for farmers, for bee keepers, and for the environment. If Ontario continues to discourage investments in Ontario, technology advancements will be reversed and Ontario’s agricultural community will not be able to access new tools that allow Ontario’s agri-sector to remain competitive and improve environmental practices. This “precautionary principal”

<sup>9</sup> The CAPA definition of a non-productive hive is used by Agricorp when assessing compensation under the provincial Beekeeper Financial Assistance Program: <http://www.agricorp.com/en-ca/Programs/BeekeepersFinancialAssistanceProgram/Pages/Overview.aspx>

approach sends a signal to potential investors, beyond those only in the agriculture business, that Ontario is not a place to do business.

## THE GOVERNMENT'S APPROACH EXACERBATES ONTARIO'S URBAN/RURAL DIVIDE AND WILL DIVERT ATTENTION FROM REAL SOLUTIONS FOR POLLINATOR HEALTH

The disproportionate approach of the Discussion Paper on neonicotinoid seed treatment to address pollinator health alienates rural Ontario and diverts attention from real solutions for pollinators. The proposed regulations combined with the comments from representatives of the government surrounding the issues related to pollinators have contributed further to the ever-present urban rural divide putting at risk "One Ontario". The comments in the media that suggest that neonicotinoids are more toxic than DDT and the comments that raise a concern for the safety of Ontario's drinking water resulting from the use of neonicotinoids are inappropriate and paint an untrue picture. Health Canada has been explicit in stating that neonicotinoids do not present a human health risk and to say otherwise is simply irresponsible. The results of the proposed regulations combined with misleading statements undermine the regulatory system in place to protect human health and the environment, which is essential for consumer trust<sup>10</sup>.

## THE GOVERNMENT'S DISREGARD FOR EFFORTS MADE BY FARMERS CREATES A CHASM IN THE RELATIONSHIP BETWEEN BEE KEEPERS AND FARMERS

Today, many grain farmers across the province provide space on their land for beekeepers to raise their bees. The government's disregard for grain and oilseed farmer's efforts to protect pollinators, in lieu of an overly prescriptive regulatory approach described in the Discussion Paper, has already had an impact on relationships between beekeepers and individual farmers. If these regulations are put in place, these relationships are bound to be further strained as the grain farmer who is hosting a beekeeper will have to ask him or herself the question – "Am I increasing my farm liability by providing land to beekeepers?"

## II. BACKGROUND

### WHO WE ARE AND OUR COMMITMENT TO POLLINATORS

Ontario is the corn and soybean capital of Canada and home to Canada's largest bio-refineries. Ontario's grain farmers provide safe food and energy to Ontarians and the world. Grain Farmers of Ontario represents 28 thousand corn, soybean, and wheat farmers, contributing \$9 billion to the Ontario economy and an important part of Ontario's \$34 billion dollar industry.

Protecting pollinators has been a priority for Grain Farmers of Ontario. The issues facing pollinators are a regular on the agenda of every Grain Farmers of Ontario board meeting. Individual board members and farmer members have committed endless hours to multi-stakeholder working groups and significant resources have been allocated to related research projects.

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<sup>10</sup> Grant Bulter & Stuckley All Together Now



Grain Farmers of Ontario has actively adopted measures, in a short period of time, to protect pollinators and we have been at the table with government to continue to look for new ways to reduce risk, including:

- New fluency agent and talc replacement
- Safer planting procedures
- Awareness campaigns
- Research to help farmers with Integrated Pest Management decisions
- Dust Deflector research and promotion of the installation of deflectors with farmers
- Bee Hive locator SmartPhone App

Grain Farmers of Ontario is a founding member of the recently announced National Roundtable on Bee Health (NRBH) (see appendix for outline of NRBH Plan). This Roundtable is devising a National approach to pollinator health and the participants are responsible for a number of initiatives that will help pollinators prosper.

## WHY THE PROPOSED REGULATIONS ARE UNWORKABLE AND THE COSTS

### In the absence of a cost benefit analysis, we don't know the full magnitude of the costs to industry.

The proposed regulations do not take into account the complexity of the business of growing crops and the risks associated with agricultural businesses. Agriculture is a complex business, dependent on a

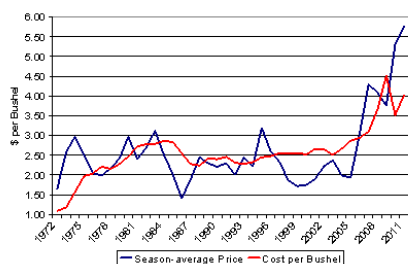


Fig. 1. Average price distribution (see 48) and production cost (see 15) per bushel of corn in the United States.

variety of interrelated variables. Grain farmers are price takers, unable to pass the costs of regulations on through the value chain. Farmers are constantly balancing risks from Mother Nature (including weather, insects, weeds, soil composition, etc.) and price fluctuations from commodity markets (influenced by geopolitical market influences and supply/demand scenarios). There is also a complex relationship with input suppliers. The proposed regulations don't take into account these complexities, create liability concerns, interfere with commercial transactions, and will shake the very foundation of the industry ultimately causing harm to farms and farm

communities.

The Discussion Paper does not address crop loss liability and does not take into consideration the *re-plant guarantee* offered by seed dealers to farmers.

## INDUSTRY STRUCTURE WILL BE SERIOUSLY IMPACTED WHICH WILL HAVE DETERMINAL EFFECTS ON LOCAL MUNICIPALITIES

Currently over 60% of seed is sold through small businesses, mostly farm dealers who sell the seed to their neighbors in a set geographic distribution area. As the proposal is written today, all seed dealers would need to have a vendor's pesticide license and warehousing facility. This is not the case today. The costs associated with this would result in the elimination of most, if not all, small businesses selling seed and completely restructure the seed industry distribution dynamic in Ontario. For those already in the full retail industry, it would result in the need to build additional certified warehouse space which would cost 10's of millions of dollars across the province and ultimately impact rural municipalities across Ontario.



## YIELD LOSS AND INCREASED COST INCREASE WILL RESULT IN FARMERS EXITING THE MARKET AND REDUCED ACREAGE

The Discussion Paper lacks a regulatory impact assessment. There are a number of areas that need to be examined by the Ontario government before proceeding with regulations in the absence of a cost benefit analysis. The cost to farm businesses, the cost to the agriculture retailers, the cost to the downstream food and energy producers, as well as the impact on rural municipalities all need to be considered in this analysis. The Conference Board of Canada estimates that farming without neonicotinoids would result in a \$630 million dollar loss of income for Ontario grain farmers. The Conference Board also noted that restrictions of seed treatment would result in increased costs and reduce crop yields, causing farmers to exit the market or reduce acreage. This data only represents one piece of the economic impact. The proposed arbitrary reduction targets will harm farmers, rural municipalities, and Ontario's economy.

Currently there are no mechanisms to compensate farmers for yield loss from insect damage if neonicotinoids are not used to protect crops. Production insurance is insurance for loss, not meant provide income stabilization from the losses experienced from insect damage. Increasing yields are the way that farmers have historically weathered commodity market fluctuations. Crop Insurance only provides payouts at "average yield" rates; therefore, over time would not be a mechanism for providing financial support to farmers for their loss from insect damage from growing corn and soybeans without the protection of neonicotinoids. Currently crop insurance would not cover any loss from insect damage as the first test of crop insurance is: "has the farmer taken all steps required to mitigate loss".

## THE EUROPEAN EXPERIENCE SHOWS THAT FARMERS ARE AT RISK WITHOUT NEONICS

It is difficult to make a direct comparison of Ontario farming to Europe as a whole. For example, seventy percent of the use of neonicotinoids is through foliar applications in Europe (not seed treatments). Further, the practice of no-till is far less common in Europe than in Ontario and the percentage of corn and soybean production is higher in Ontario than in Europe. However, the experience in Europe under the moratorium does provide useful evidence on the impact on farmers without access to neonicotinoid seed treatment. The EU experience has shown declines in yield and devastation of crops (see appendix II for a description of this experience).

## IV THE DISCUSSION PAPER QUESTIONS

1. Four key stressors related to pollinator health have been identified. From your perspective, are there any other key pollinator health issues that need to be addressed in order to meet the overwinter mortality target of 15 per cent?
  - a. Pollinator Habitat and Nutrition,
  - b. Pesticide Exposure,
  - c. Diseases, Pests, Genetics,
  - d. Climate Change, and Weather.

**GFO ANSWER:** There is no data to support that a 15% target of overwintering is desirable either for pollinators or honey bees. We have no further suggestions for potential stressors; however, we do have great concerns about how these stressors are evaluated.

2. Looking at the four areas, what are some actions or activities that industry, individuals, organizations, government, and others could take to improve pollinator health?

**GFO ANSWER:** A Multi-Stakeholder Task Force has been formed and will report back to government with further suggestions in February 2015.

3. How can we improve our outreach and education on the importance of pollinators?

**GFO ANSWER:** Grain Farmers of Ontario has a number of communications vehicles that we use to contact our 28 thousand members and we would be happy to help the government communicate the importance of pollinators to our members.

4. What are the benefits of improving pollinator health?

**GFO ANSWER:** Ontario needs a benchmark to determine the current state of pollinator health. The government should conduct an audit of the habitat that currently exists.

#### Reducing NNI Use Regulatory Proposal

1. Overall, what are the positive and negative impacts of this proposed regulation?

**GFO ANSWER:** There are a number of negative impacts of the proposed regulations as outline in the body of this submission.

2. Is this regulatory proposal sufficient to reduce the acreage of NNI-treated corn and soybean seed by 80 per cent by 2017? Do you have any other suggestions?

**GFO ANSWER:** The benefits of reducing NNI-treated seed and the health of pollinators are not clear.

3. Are there any alternative conditions of use for NNI-treated corn and soybean seed that should be considered? If so, please describe.

#### **GFO ANSWER:**

4. Are there alternative management practices or rules for use that could minimize immediate and long-term exposure of pollinators to NNIs that should be included in the regulation? If so, please describe.

**GFO ANSWER:** Bee keepers should be required to disclose the location of their hives. There are a number of improvements and advancements in seed treatment technology that are being introduced into the marketplace to reduce exposure.

5. Are there other factors such as environmental considerations that could be incorporated into the decision of the need to use NNI insecticides?

**GFO ANSWER:** Without neonicotinoid seed treatment many farmers will not be able to continue with the environmental practices of cover crops and no-till, which provide environmental benefits.

6. Are there any related geographic considerations that could be incorporated into the regulatory proposal?

**GFO ANSWER:** Each geographical region in Ontario is different and should be considered in the impact of these regulations.

7. What qualifications would be appropriate for third parties to support this regulatory proposal?

**GFO ANSWER:** We do not believe a third party verification approach is appropriate or warranted. If the government pursues a third party verification, as described in the discussion document, there is currently no qualified certified body of professionals in Ontario that could deliver such a third party support.

## **V. THE GOVERNMENT HAS AN OBLIGATION TO CONDUCT A REGULATORY IMPACT ASSESSMENT BEFORE PROCEEDING WITH THE PROPOSED REGULATIONS ON SEED TREATMENT & SPECIFIC RESTRICTIONS ON NEONICOTINOIDS**

1. That the government of Ontario do a full cost benefit analysis of the proposed regulations for all seed treatment, and specifically to reduce neonicotinoids, to address:
  - a. The economic and environmental impact of imposing seed treatment regulations on farmers, agriculture retailers, and municipalities
  - b. The economic and environmental impact of imposing specific regulations on neonicotinoid seed treatment
  - c. The benefits to pollinators from these proposed seed treatment regulations
  - d. The benefits to kept honey bees of these proposed seed treatment regulations
  - e. The implications of these proposed regulations on the competitiveness of grain farmers in Ontario
2. That the government disclose all environmental data to support the assertions that neonicotinoid exposure cannot be managed by practices versus reductions
3. That the government consider the results of these cost/benefit analysis and compare them with a joint agri-industry led approach to determine the most cost-effective course of action that will improve bee health
4. That the government compile data on real-time scenarios of the impact of similar restrictions, with comparable cropping to that of Ontario corn and soybean growers, imposed on farmers in the EU
5. That the government analyse the specific implications on other policy objectives including the impact on fertilizers and greenhouse gas reductions in the absence of no-till practices in corn and soybean farming
6. That the government analyse the impact of these regulations on the Ontario GDP
7. That the government examine the impact on occupational exposure to pesticides as a result of these proposed regulations and the requirement to use alternate products
8. That the government clearly disclose data on natural pollinators and distinguish its goals for bees that are managed from goals aimed at improving natural pollinators
9. That the government provide the data on the current state of natural pollinator health that shows there is a concern for the overall health of each species

## **VI APPENDIX – ATTACHED DOCUMENTS**

1. Seeds of Success; Conference Board of Canada; 2014
2. Article: Farming without Neonics – A UK Story
3. National Roundtable on Bee Health Strategic Plan