CANADIAN CANOLA GROWERS ASSOCIATION

Helping Farmers Succeed

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Re: Consultation Regarding the Draft Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life: Neonicotinoid Insecticides

Dear Ms. James,

The Canadian Canola Growers Association (CCGA) respectfully submits these written comments on the Canadian Council of Ministers of the Environment's (CCME) Draft Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life: Neonicotinoid Insecticides (the Draft Guidelines). While we note several areas of possible improvement within the Guidelines, our overall analysis finds them fit for their purpose.

CCGA represents 43,000 canola farmers from Ontario to British Columbia on national and international issues, policies, and programs that impact farm profitability. Canola is a Canadian-made crop developed by researchers at the University of Manitoba and Agriculture and Agri-Food Canada in the 1970s. It is now the most widely planted crop in Canada, on a fifth of all Canadian cropland.

A science-based regulatory process is the foundation upon which the Canadian canola industry, which contributes $26.7 billion to the Canadian economy annually and supports 250,000 jobs across the country, was built. Canadians expect their governments to make decisions to help protect their safety and the environment. It is critical for a body such as CCME to make guidelines that are grounded in science and supported by strong scientific evidence.

Canola farmers rely on various levels of government that must have access to adequate information and resources to undertake their mandates and prevent unacceptable risks to people, animals, and the environment related to the use of pest control products. Farmers depend on the water quality guidelines to ensure the pest management products used on their farms are safe for their own use, others, and the environment. A system of guidelines that is predicable, transparent and science-based, providing an environment for companies developing crop inputs to do business in Canada, and providing confidence in our export markets that the products used are safe is essential to our industry.

Canola and Neonicotinoid Seed Treatments

Clothianidin and thiamethoxam are currently used as seed treatments to control flea beetles on the vast majority of canola planted in Canada, during emergence and establishment in the weeks following planting of the crop. The crop is particularly vulnerable to yield loss at this stage. In the absence of a predictive model for flea beetle population, despite repeated investments in research aimed at developing the same, it has been demonstrated scientifically that using treated seed on most production acres is the most effective, targeted means of preventing widespread crop losses, with the least unintended consequences. As part of an effective Integrated Pest Management Strategy (IPM), clothianidin and thiamethoxam seed treatments have provided Canadian canola growers with an essential product to control flea beetles.

Within an IPM framework insecticide applications are reserved for situations where monitoring shows that pest populations have reached levels of economic concern. Only in specific instances can prophylactic use of pesticides be justified within an IPM framework (i.e. widespread utilization of neonicotinoid treated seed at planting). Experts have determined that this use of pesticides is justified when the following four conditions are satisfied:

1. Rescue treatments cannot keep pests under the economic injury level;
2. Target pests have a high probability of causing economic damage;
3. Pest(s) are widespread in their distribution and there is no practical or quantifiable way of determining where and when they will appear. The canola industry, in collaboration with academic and government scientists, has spent over $2.0 million in research funding to develop predictive models without success;
4. Alternative control treatments are less efficacious and introduce a greater economic burden which includes (i) crop loss, (ii) increased input costs as well as (iii) negative

impact on non-target organisms.

Control of flea beetles in canola using neonicotinoid insecticides meets all 4 conditions described above.

Absent clothianidin and thiamethoxam, canola farmers would suffer dramatic consequences due to their inability to effectively manage flea beetles, and drastically limit the diversity of tools they can rely on to protect their crops. Current alternatives to clothianidin and thiamethoxam are limited to foliar applications of a non-specific chemical family. Less effective than seed treatments, foliar applications require growers to increase fuel and maintenance costs associated with spraying, spend extra time and vigilance scouting for pest outbreaks, incur increased yield and quality losses (due to greater crop damage from reduced efficacy) and potentially cause greater ecological damage to non-target beneficial insects such as bees and other natural pollinators. These applications also increase the risk of pest resistance to the products, due to the use of only one control option.

Canola growers have set ambitious sustainability targets for 2025. These objectives will see our farmers use less fuel, less land, improve soil and water quality and increase biodiversity. We are concerned that the Pest Management Regulatory Agency's (PMRA) proposed decisions to cancel the use of clothianidin and thiamethoxam will jeopardize our ability to meet these sustainability targets. The introduction of clothianidin and thiamethoxam has allowed canola farmers to drastically reduce the use of non-selective pesticides. The value of using targeted products has created a unique ecosystem, allowing over 2,000 species of beneficial insects, including native and domesticated pollinators, to flourish in and around the canola canopy. Increased use of foliar pesticides could have significant impacts on the ecosystem canola growers have carefully managed and cared for, over several decades.

Impact on competitiveness of the sector

Canola farmers are well positioned to help Canada meet its agri-food export target of $85 billion by 2025. With more than 90% of the canola produced in Canada exported to markets around the world, competitiveness, including alignment with export markets, is critical to producers' continued success.

Over several decades canola farmers have maintained a relatively stable acreage. Land-use per tonne of canola production has decreased 31% over a 20-year period. By 2025, canola farmers plan to further decrease land usage requirements by an additional 40%. Clothianidin

and thiamethoxam have been a key component of this success.

Flea beetles are the most economically damaging insect pests of canola on the Canadian prairies. Prior to introduction of neonicotinoid seed treatments, yield losses due to flea beetles were in the range of 8%–10% per annum and resulted in $130–300 million per annum in lost farm income.

Without neonics, millions of additional acres of new land would need to be brought into production to compensate for efficiency and quality loses in crop production. The process of bringing new land into production would result in large-scale greenhouse gas emissions as land is cleared and soils are cultivated. Canola farmers have set a goal of sequestering an additional 5 million tonnes of greenhouse gas emissions in western Canadian cropland by 2025. Clothianidin and thiamethoxam will be key to achieving this goal. Absent seed treatments, growers would have to increase tillage rates, therefore jeopardizing the ability to maintain the greenhouse gas sequestration levels achieved to date.

Risk Mitigation and Stewardship

Canola farmers are committed to mitigating possible risks posed by clothianidin and thiamethoxam to aquatic ecosystems. For over 3 years CCGA has been engaged in a variety of water quality monitoring exercises along with industry partners, including undertaking a water quality monitoring study at 17 wetlands across Western Canada, in 2019. From the end of May to the second week of July, weekly sampling showed acute and chronic detection levels consistently below any level of concern identified by PMRA in PSRD2018-01, PSRD2018-02, as well as the Draft Guidelines currently being consulted on by the CCME.

While we have been encouraged by these exceptionally low detection levels, our pursuit of sustainable crop production for farmers asks the question if more can be done. The findings associated with our 2019 study indicate that wherever possible, growers should endeavour not to seed into damp areas adjacent to wetlands, maintain natural vegetative buffers around wetlands, and look to prevent disturbing soils directly bordering wetlands (i.e. within 0.5 m) during planting season, helping to prevent spring runoff into aquatic ecosystems.

In line with our commitments to biodiversity and sustainable crop production, communicating these best practices has been a cornerstone of our outreach over the last 6 months and will continue to be a focus area of great importance for some time.

Best Available Science

Ensuring that all relevant data have been considered, and that proper consultations have taken place with key stakeholders, will strengthen confidence in the CCME and its guidelines.

The absence of a variety of available mesocosm studies from the Draft Guidelines is concerning to our organization. The Draft Guidelines will not be applied to policy situations that exist only in labs. This should be reflected by the inclusion of studies that have taken place outside of labs.

Additionally, in developing short-term and long-term toxicity guidelines for neonics it is imperative to use only single sample values in deriving short-term guidelines, and use studies that provide chronic exposure values in the determination of long-term guidelines. This has not been done consistently throughout the Draft Guidelines. It is our submission that it is unscientific to apply acute events to the development of chronic guidelines.

Finally, including studies that consider the effects of a formulated product rather than only a technical product will increase the number of data points available for determining short and long-term guidelines. This will increase the confidence of the Draft Guidelines' SSD curves, and be more indicative of what transpires in agroecosystems.

Thank you for consideration of this submission. Canola growers are committed to the highest standard of human health and environmental safety. We believe strongly that the Draft Guidelines need to reference the best available science, keeping in mind risk mitigation and stewardship efforts currently being undertaken by canola growers.

Sincerely,

original signed by

Rick White
President and CEO
Canadian Canola Growers Association