

ADVANCING ALBERTA'S CROPPING SECTOR TO 2025 AND BEYOND

November 13, 2018

Pest Management Regulatory Agency Publications Section Pest Management Regulatory Agency (PMRA) Health Canada 2720 Riverside Drive Ottawa, ON K1A 0K9 Address Locator: 6607D hc.pmra.publications-arla.sc@canada.ca

Re: Proposed Special Review Decisions: PSRD2018-01, *Special Review of Clothianidin Risk to Aquatic Invertebrates* and PSRD2018-02, *Special Review of Thiamethoxam Risk to Aquatic Invertebrates*

On behalf of our 20, 000 farmer members across Alberta, Team Alberta would like to take the opportunity to provide the producers perspective as part of the proposed special review decisions, stated above, related to the proposed cancellation of thiamethoxam and clothianidin end use products for outdoor agricultural use, including seed treatments, over a three to five year phase-out period.

Team Alberta is a collaboration between Alberta Barley, Alberta Canola, Alberta Pulse Growers and the Alberta Wheat Commission. We work collaboratively on issues of common interest to Alberta crop sector producers. This includes the role of neonicotinoid seed treatments as a critical tool used in the production of cereals, pulses and oilseeds across the prairies. Farmers rely on having access to innovative crop protection tools to compete in domestic and international markets, and to produce high quality food in an efficient and sustainable manner. As such, Alberta crop sector farmers are extremely concerned with a proposed ban on these products and would like to see alternatives to a complete ban carefully considered.

Environmental Perspective:

Today's farmers are on the cutting edge of technology, always adopting new practices that make their farming operation more efficient and in-turn more sustainable. Farmers are proud of their role as stewards who protect, preserve and improve land for generations to come. Alberta's cropping sector has long been part of the climate change solution. The voluntary and wide-spread adoption of conservation tillage has allowed Canadian farmers to significantly reduce wind and water erosion, improve soil health and increase the amount of CO2 that is effectively removed from the atmosphere and stored or 'sequestered' in the soil.

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This has resulted in crop productivity increasing at the twice the rate of increases of greenhouse gas emissions between 1990 and 2013. In 2000, for the first time in Canada's history, agricultural land sequestered more carbon than was emitted. Innovations such as neonicotinoids have a favourable environmental profile; for instance they provide the only effective way to manage wireworm in cereal crops. Cancellation of these products means that farmers have to result back to using tillage to manage wireworms, which deteriorates soil health and releases, previously sequestered CO2 into the atmosphere.

In canola and other crops the alternative to neonicotinoid seed treatments is the use of non-selective foliar treatments. According to research conducted by the Government of Alberta, seed treatments are proven to be more effective than previous products and other alternatives at controlling a broader range of pests, are much safer to use for both the applicator and the environment, and can be used as effectively in lower dosage and use rates.

Further, while the proposed decision of the PMRA to phase out clothianidin and thiamethoxam was <u>not</u> based on their risk to pollinators, bees are critical for crop pollination in Alberta. Alberta producers take pollinator health very seriously, as they would not be able to achieve high yields and be profitable without them. Further, honey produced in Alberta represents 43% of the Canadian total annual production, however, Alberta's commercial beekeepers have opposed the ban on neonicotinoids since throughout a decade of use, they view neonicotinoid seed treatments as an advancement of technology for the agricultural industry that is safer for Alberta's bee populations.

As part of the use of sustainable, best management practices, Alberta farmers employ integrated pest management strategies as a means of preventing and controlling pest outbreaks but also as a means of: ensuring a more efficient use of inputs (e.g. pesticides, fuel, water and time), and avoiding negative impacts on soil health and beneficial species that contribute to increasing yields and enhancing the quality of their crops.

The appended study conducted by the Government of Alberta entitled, "*Modelled Economic Impact of Neonicotinoid Policy*" (October 2018) also shows that neonicotinoids accounted for a very small percentage of total pesticides sold in Canada in 2016; however, are an integral part of an integrated pest management system for farmers. Farmers recognize the need for rotation of chemicals to manage pest resistance is essential and continuing to remove tools from the crop protection toolbox will limit the availability of viable alternatives to aid in integrated pest management. **As such, Alberta farmers would ask the PMRA to consider the cost-benefit of alternative products.**

When considering cancelling registration of a product or its uses, the PMRA must also consider the environmental and health impacts of the product's alternatives. To review a single chemistry in isolation of a normal integrated pest management strategy used on today's farms is unacceptable. This is inconsistent with what is expected of farmers, and with federal regulatory policy which sets out an approach that would look at all angles of cost-benefit analysis, both economic and environmental.

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Risk Mitigation Strategies:

The PMRA expressed concerns with the effectiveness of the mitigation measures, such as buffer strips, as outlined in the proposed decision documents. As mentioned previously, farmers in Alberta have been continuously and voluntarily been adopting best management practices to mitigate any potential harm to the environment from their operations. In a 2018, *Environmentally Sustainable Agriculture Tracking Survey* conducted for Alberta Agriculture and Forestry, it shows that Alberta farmers have an adoption score of 79% for *maintaining buffer areas of grass/tress along edges of rivers, streams sloughs, wetland and ditches.* This is a figure that has been growing and demonstrates a commitment to mitigative practices. As such, in advance of the publication of proposed decisions and as part of the risk assessment process farmers, along with other stakeholders, would like the opportunity to discuss the potential for mitigation measures which includes consideration of the regionality and differences within farming practices across the country.

Economic Impact and Competitiveness:

Alberta farmers understand that the competitiveness and economic implications may not have been considered by the PMRA as part of this review process. This is of concern to our farmers who operate in a trade-exposed environment as price takers. Any costs incurred by farmers cannot be passed on to our customers. If farmers continue to lose access to valuable tools such as seed treatments while our competitors in other countries continue have access to them, pest-management will become more complex and costly. This increase in cost, coupled with a certain reduction in yields will have a negative impact on already narrow margins.

With over \$5.3 billion in farm cash receipts in 2017, the Alberta crop sector is an integral part of the Canadian economy. Alberta crop producers are concerned with numerous implications if clothianidin and thiamethoxam were phased out including: decreased yield, spread of pests, lack of alternatives, and effectiveness of alternatives, chemical pest resistance and more. Further to this a complete ban of neonicotinoids has a potential to force a number of Alberta crop producers to exit the industry due to a significant profitability reduction resulting from increased production costs, reduced yields and increased pest pressure¹. Economic implications could move beyond the agricultural sector, leading to decline in provincial GDP, loss of jobs and economic diversity.

In the study (October 2018) appended here, it shows that economic impacts could disproportionally impact Alberta crop producers compared to other Canadian jurisdictions, the competitive disadvantage of Alberta crop producers on global markets, and a potential for certain crops in Alberta to become completely unprofitable; therefore, excluded from crop rotations partially or completely.

The analysis in the study (October 2018) shows that the economic impact of banning these neonicotinoids insecticides in the <u>most likely scenario</u> will result in an annual revenue reduction of: \$148 - \$358 million for canola, \$51 million for wheat and \$73.5 million for pulses. Further, it demonstrates an increased cost of production of up to \$90 million for canola.

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¹ Modelling Economic Impact of Neonicotinoid Policy: The Case of Canola, Peas, Sugar Beets and Wheat in Alberta. October 2018.

Decreased contributions to the GDP of \$116 – 282 million for canola, \$39 million for wheat and \$60 million for pulses. Also job losses are predicted to be between 522–1264 in canola production, 175 in wheat and 267 in pulse production.

Again, Alberta crop producers urge the PMRA to operationalize its mandate to also consider the economic and competitive factors as part of the reviews. It seems that this mandate is clearly set out in the Pest Control Products Act and a requirement of the Cabinet Directive on Regulation. We understand that it is also consistent with other trading partners' approaches, such as the United States.

Alternatives:

Alberta farmers economic concerns are underscored by the fact that in many instances there are no registered alternatives to neonicotinoid seed treatments to combat specific pests. Where an alternative does exist, we have already highlighted that they can have economic, environmental and efficacy drawbacks not to mention potential implications on the applicator. Given Team Alberta's representation of multiple crop types, below is a commodity-specific breakdown of the availability of alternatives.

Cereal Crops (Wheat and Barley)

Neonicotinoids are the only control measure available to wheat and barley farmers for the control of wireworms. While specific data does not yet exist on the growth of wireworm populations in Alberta, entomologists and farmers agree that the severity of wireworm infestations are more persistent than other pests in cereal crops on the Prairies. Once a wireworm population is established is it is difficult to eradicate. Populations are unpredictable and can subside, only to re-emerge unexpectedly, often leaving farmers with no defense at all.

In 2004 the PMRA cancelled the use of Lindane which was used as an effective pesticide in eradicating wireworm. Neonicotinoid seed treatments do not eradicate, but rather suppress wireworm infestations long enough to aid in crop establishment. Losing yet another defense, should neonicotinoids be cancelled, will make the pest virtually uncontrollable as well as reduction in populations will not be possible.

Canola Crops

Clothianidin and thiamethoxam are used as seed treatments to control flea beetles on the vast majority of canola planted in Alberta. In the absence of a predictive model for flea beetle population progressions, it has been scientifically proven that using treated seed on most production acres is the only effective way of preventing widespread crop losses. As part of an effective Integrated Pest Management Strategy, clothiandin and thiamethoxam seed treatments have provided the Alberta canola industry with essential products to control flea beetles.

Cancelling all outdoor uses of clothianidin and thiamethoxam, as proposed, would have dramatic consequences on canola growers' ability to effectively control flea beetles, drastically limiting the diversity of tools they can rely on to protect their crops. Current alternatives to clothianidin and thiamethoxam include foliar applications, which are less effective than targeted seed treatments.

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Application of foliar crop protection products means increased fuel and maintenance costs for growers, as well as extra vigilance and time spent scouting for pest outbreaks, and increased risk of pests developing resistance to limited control options. Phase out of these tools will further result in increased frequency of foliar insecticide application, which is never the first choice of growers who seek the most targeted and less invasive pest control options.

Pulse Crops

As for alternatives for pulses and soybeans there are very few options. Growers utilize integrated management practices to minimize the use of insecticides but there are still situations that warrant protection or control. Certain field pests remain below ground and seed treatments are the only means to provide some protection. Wireworms are a good example where foliar applications are ineffective and there are no other control options outside of the neonicotinoid seed treatments. Pea leaf weevil is another such insect where the foliar alternative is ineffective and ecologically much more impactful. All foliar alternatives carry an increased risk to applicators and are a method of last resort for pulse and soybean growers.

Seed treatments are used for a very targeted approach to reducing insect damage when the risk of damage is high. Not all pulse and soybean growers use insecticide seed treatments as only certain situations have risks high enough to warrant potential control measures. Foliar applications in crop is also field or site specific and used only as a last resort when other pest management practices have failed or when pest outbreaks occur and control is warranted. Foliar applications of neonicotinoid insecticides is very low in pulses and soybeans as there are other control products available. However, there are no other insecticide options for seed treatments in pulses and soybeans with suppression or control of the specific pests currently afforded by neonicotinoid seed treatments.

Given these inadequacies or lack thereof alternatives, Alberta farmers would again, ask the PMRA to consider the cost-benefit and availability of alternative products in their final decision respecting these important products.

Scientific Process:

Beyond the immediate threat of losing these two important active ingredients, there is an urgent need to address major faults with the PMRA's approach to re-evaluations. It seems that decisions are being proposed based on overly conservative assumptions to satisfy a strict review timetable rather on real life information that reflects what is happening in the field. These assumptions put Alberta producers at risk of losing valuable tools to address disease and insect pressure.

It was Alberta producer dollars that funded Alberta water-monitoring data that was submitted to the PMRA. It was our understanding that the PMRA chose to give less weight to this data because 2017 was considered to be an exceptionally dry year. The rationale for this decision is unclear. Large parts of Western Canada have experienced water conditions ranging from moderate to severe drought for the past several decades, and pre-dating the introduction of clothianidin and thiamethoxam in Western Canada.

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To therefore state that 2017 sampling data should be given less weight because it was an exceptionally dry year, implies that there are other, wetter conditions that neonicotinoids could, or should interact with. Evidently, this has never been the case. Alberta farmers ask that the PMRA consider actual climate conditions in Alberta, in which clothianidin and thiamethoxam have always existed.

Further, we understand that the proposed special review decision for thiamethoxam confirms that the chronic end points for spring wheat and barley were below the PMRA Level of Concern during the Tier 1 risk assessment. However, rather than excluding these uses from further analysis, as is commonly followed in a tiered approach to estimating risk, additional analysis was done. It is our view that based on the tiered approach to assessment risk, that all uses that were below the Level of Concern in the Tier 1 risk assessment should not be proposed for cancellation.

Alberta farmers support the important role that PMRA plays in protecting human health and the environment in order to maintain confidence in our customers here in Canada and abroad. Nonetheless, more time is needed to determine if the risk assessment on clothianidin and thiamethoxam could be more complete, and whether risk mitigation approaches can provide solutions. Our livelihood as farmers and the sustainability of the Alberta crop sector depend on the outcome of this proposed ban. We urge the PMRA to reconsider this decision and heed industry wide recommendations to improve the decision making process in the long term while expanding the mandate upon which those decisions are made.

Sincerely,

Jason Lenz, Alberta Barley Chair

D'Arcy Hilgartner, Alberta Pulse Growers Chair

Renn Breitkreuz, Alberta Canola Chair

Kevin Bender, Alberta Wheat Commission Chair

CC: Executive Director, Pest Management Regulatory Agency - Richard Aucoin Minister of Health – Hon. Ginette Petipas Taylor Minister of Agriculture and Agri-Food Canada – Hon. Lawrence MacAulay Minister of Agriculture and Forestry Alberta – Hon. Oneil Carlier MP Randy Boissonnault – Edmonton Centre

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