

Honourable Oneil Carlier, Minister of Agriculture and Forestry  
229 Legislature Building  
10800 - 97 Avenue  
Edmonton, Alberta  
Canada T5K 2B6

January 16<sup>th</sup>, 2018

Re: Alberta Agriculture and Forestry's Survey on Fusarium graminearum

Dear Minister Carlier,

On behalf of the Fusarium Industry-Led Working Group we are pleased to have the opportunity to provide comments as part of your Ministry's stakeholder consultation on Fusarium graminearum (Fg) policy in the province of Alberta.

The Working Group, which represents a number of organizations across Alberta's agri-food value chain, welcomed the opportunity to meet with you and Deputy Minister Bev Yee in Edmonton on August 30<sup>th</sup>, 2017, and to join our industry partners at the October 23<sup>rd</sup>, 2017, Roundtable - Moving Forward with Leadership in Fusarium Management. It is through our involvement in these and other forums that we have come to recognize a strong willingness on the part of government, crop commissions and industry to work collaboratively to advance Fg policies and practices with the aim of proactively managing this pest, with a view to minimizing its impact on production agriculture in the province.

As such, the Working Group believes this is the appropriate time to remove Fg from Alberta's Agricultural Pest Act. The application of a consistent, province-wide approach will be the most effective way for industry to elevate management systems; encourage meaningful research, investment and innovation; and allow Alberta agriculture and Alberta farmers to keep pace with other jurisdictions.

On behalf of the Working Group we thank you for your ongoing interest on this topic and for your commitment to take a science-based approach to Fg management in the province of Alberta. The Working Group supports the on-line consultation process which provides another opportunity for producers and related agriculture industry stakeholders to provide feedback as the Government moves forward with its plan to find improved management solutions for Fg in Alberta. As such, we have taken this opportunity to provide some additional comments in response to the survey questions included in the stakeholder survey. Please find them attached.

Should you have any questions about our submission, please feel free to contact: Ward Oatway, President of the Alberta Seed Growers Association: Phone: 403-318-9026, E-mail: oatwaysseedfarm@yahoo.ca or David Bishop, President of the Alberta Seed Processors Association: Phone: 403-382-9786, E-mail: dmbishopfarms@gmail.com.

Sincerely,



Ward Oatway  
President, Alberta Seed Growers Association



David Bishop  
President, Alberta Seed Processors Association



Bayer



The Working Group has organized its responses to this consultation according to the questions included in the Government's online survey:

**1. Please select one of the following options that best describes your business or affiliation.**

The Fusarium Industry-Led Working Group was established almost one year ago in March, 2017. Membership is diverse, representing a cross-section of the agri-food value chain whose members, customers or interests are impacted by *Fusarium graminearum* (Fg) in the province of Alberta. The Working Group's mandate is three-fold:

- a) The Working Group believes that the current regulatory environment curtails advancements in disease management and mitigation and as such is seeking policy change.
- b) The Working Group is committed to an extensive communication and education process that will assist farmers to effectively manage Fg.
- c) The Working Group encourages collaboration with the Government of Alberta to ensure ongoing public and private surveillance and research with the goal of building a proactive Fusarium Management Plan to give farmers the tools required to manage this disease.

**2. Based on the following map of Alberta, indicate your region.**

Working Group members represent the interests of many farmers who produce and/or process cereal grain across all five regions of the province of Alberta as well as the interests of organizations who supply them with the tools and resources to mitigate and manage Fg.

**3. *Fusarium graminearum* causes different management concerns for each region based on differences in the pest's distribution across Alberta. What are your main concerns related to the introduction or spread of *Fusarium graminearum* in your region or municipality?**

Fg was added to the Pest Act in 1999 as an exclusion (quarantine) measure to prevent its spread. The related management plan was established in 2002. Since then, Fg has steadily made its way throughout many parts of the province despite the Pest Act control measures. Diseases that have an air-blown spore element to them are typically uncontrollable via quarantine/exclusion approaches. It is also understood and recognized that there are farmers who are not aware of the rate at which Fg has spread across the province or its general prevalence and the impact this has had both in areas where Fg is found and not commonly found.

As a result, stakeholder responses to this question will likely reflect varied levels of knowledge of Fg. Some farmers are quite familiar with the pest and its prevalence in their respective region whereas some may not be aware of Fg at all. The way that a farmer manages the pest is also indicative of their *perception* of its prevalence in their region. This should be taken into consideration when interpreting stakeholder responses to the survey and compared against actual science-based evidence regarding the presence and prevalence of Fg.



The Working Group also feels that the options associated with this question were incomplete and did not address a concern faced by many farmers in areas of the province where Fg is commonly found and that is reflected in this option: *Fg is established in my area and I am currently managing it to the best of my ability but always looking for tools to improve the way I manage this pest.*

**4. From what you know of the situation how has the risk level of Fusarium graminearum changed in your area over the last 5 years?**

In 2002, Alberta put in place a Management Plan designed to prevent the establishment of Fg in the province. This plan was supported by regulatory authority. Despite these efforts, Fg has become established in the province and has, in fact, seen a general increase in levels across Alberta over the past several years both geographically and in intensity. As climate conditions continue to change and evolve, it is expected that this disease will become even more prevalent in the province.

Despite the efforts of the seed and agricultural industry, the spread of fusarium continues (see Table 1).

Table 1. *Fusarium graminearum* survey results for Alberta, 1995-2016.

	95-97	01-03	2007	10-11	2015	2016*
# Fields surveyed	348	511	740	907	910	~950
#counties represented	n.d	54	54	48	58	64
# counties positive	0	9	2	13	22	26
% Positive (total)	0	6.8	0.05	11.1	14.7	26.5
% Positive (Wheat heads)	0	n.a.	0.05	13.6	10.8	24.1
% Positive (Wheat stubble)	n.a.	2.9	n.a.	6.0	27.8	TBD
% Positive (Corn)	n.a.	33.8	n.a.	48.9	74.3	85.3

As outlined in the response to question 3, it is important to keep in mind that not all farmers are aware of the rate at which Fg is spreading across the province and/or have the impression that it’s not an issue in their region/municipality because the province has a zero tolerance policy.

**5. Please select your level of adoption of the following practices for Fusarium graminearum in your operations.**

Removing Fusarium from the Pest Act will allow the industry to elevate management systems with enhanced transparency. Once a pathogen, spread predominately by air-borne spores, is resident in an area, it is critical to utilize a total management system, and not a single defense mechanism, such as disease-free seed.



Effective Fg control and management requires a robust suite of policies and practices including those outlined in the response options associated with question 5. Healthy crop rotations, variety selection for Fg resistance, seed testing, seed treatment as well as the use of Fg free seed are all critically important. In addition to these measures, it should also be noted, however, that the survey neglects to include certain other management options (e.g. foliar fungicide application) as a possible management technique.

Education and extension as it relates to the control and management of Fg is also required to ensure that farmers are not only aware of practices, but that they have a realistic understanding of Fg prevalence in their region as well as how easily the pest is spread, so they can employ the most effective practices for their situation.

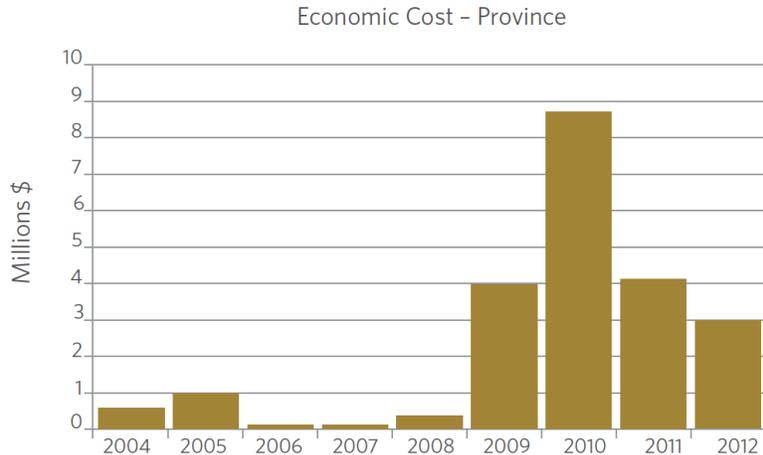
**6. Which of the following improvements to management practices are the most needed to help manage fusarium in the future?**

As was shared by Dr. Kelly Turkington at the Minister's Roundtable on October 23<sup>rd</sup>, 2017 in Leduc, and supported by comments made by Deputy Minister Yee in the Working Group's August 30<sup>th</sup> meeting in Edmonton, effective Fg management requires a broad suite of practices including all of those listed in the response options for question #6.

**7. What potential benefits could arise for your operation or business if Fusarium graminearum is removed as a declared pest under the Pest and Nuisance Control Regulation?**

The current zero tolerance policy puts Alberta farmers at a competitive disadvantage in relation to farmers in other provinces when it comes to access to new resistant varieties, industry dollars invested in research and development, and inter-provincial commerce. The current policy has also resulted in significant costs to seed developers and growers. According to a paper entitled "Farm-Level and Regional Economic Impact of Fusarium in Alberta" released in May of 2015 by AAF, economic losses for individual farmers in Alberta due to fusarium could range from \$48 to \$87/acre based upon mean grain pricing in 2012. This paper indicates that economic losses for the whole province from 2004-2012 were estimated at \$21 million. Losses to the seed sector relating to entire seed lots that cannot be sold as seed due to presence of the fusarium pathogen were not included. Hence, it is important for government and industry to elevate the management of this disease to mitigate further economic losses.





Furthermore, once Fg is detected, significant extra efforts are required to address the situation, including extra handling which can further damage seed quality. New and additional logistical, transportation, storage and planning activities may also be required by various players in the distribution channel in these circumstances and have real costs attached to them. Perhaps more importantly, the current zero tolerance policy ultimately has the effect of restricting access, in terms of quantity and/or varieties available to farmers in Alberta. In practical terms, this policy also results in increased cost to seed producers and others which are typically passed on to the farmer. This is supported by an analysis of Canadian Seed Trade Association (CSTA) member companies conducted in 2014 indicating that retail prices for wheat seed in Alberta range from 12% to 19% higher than in Saskatchewan or Manitoba.

Removing a serious pest from the Pest Act may seem counterintuitive when the overarching goal is to mitigate the effects of the disease. However, the current zero-tolerance policy was implemented when Fusarium was not present in Alberta. With its spread, the zero-tolerance approach no longer reflects reality. Additionally, the zero-tolerance regulation curtails advancements in disease management and mitigation in several areas:

- New crop varieties that may have better tolerance to the pathogen have issues being imported into Alberta since much of the seed may contain low levels of the pathogen.
- The practise of heat-treating breeder seed to destroy the pathogen on new seed varieties is costly, time consuming and possibly linked to negative effects on seed quality.
- Alberta-based in-field research of control systems is essentially non-existent because the pest is regulated.
- Focus on seed infection levels distracts from the suite of best management practises that should be utilized by every Alberta farmer.



**8. What potential issues could arise for your operation or business if *Fusarium graminearum* is removed as a declared pest under the Pest and Nuisance Control Regulation?**

Not all farmers responding to the survey may be aware of the impact that Alberta's zero tolerance policy has had with respect to hindering the advancement of disease management and mitigation.

If Fg were removed from the Pest Act, the Government of Alberta along with agriculture sector partners would have to remain vigilant to ensure that monitoring and management of the disease remains a top priority. The use of existing as well as the development of new management tools, along with education and extension programs and initiatives aimed at sharing new developments would be essential. Removing Fg from the Pest Act cannot be viewed as acknowledgment that Fg is no longer an issue or a priority but rather, that removal allows for the advancement of a broader suite of management tools.

**9. Alberta Agriculture has dedicated resources to various programs and services, including *Fusarium graminearum* surveillance, the Alberta *Fusarium graminearum* Management Plan, and information and education to help manage *Fusarium graminearum*. Please indicate how much you have used the following management tools.**

The resources, programs and services listed in the response options to this question are all valuable and the Working Group is interested to learn which ones are more readily accessed by Alberta farmers. As we look to the future of Fg related policies and practices in Alberta it would behoove us as a sector to determine ways in which these resources could be updated and improved upon. Feedback from farmers should complement an analysis of how other jurisdictions have designed and delivered Fg related education and extension.

Some members of the Working Group have been involved in the design and delivery of education and awareness initiatives including:

- Alberta Wheat Commission launched the Fusarium Risk tool that helps producers assess whether environmental conditions favor disease development.
- Alberta Seed Processors launched its "SEED SMART" program which promotes the use of seed testing as a plant health and disease surveillance measure.
- Ad Hoc group members have shown industry leadership in hosting producer information sessions on fusarium management.
- There are tools and technologies (e.g. seed treatments) available as part of a suite of Best Management Practices to help effectively manage and mitigate the threat of this pest.

The Working Group is committed to collaborating with government and industry partners to design and deliver an extensive education process that will assist farmers in effectively managing Fg. We are also committed to



ensuring ongoing public and private surveillance and research with the goal of building a proactive Fusarium Management Plan to give farmers the tools required to mitigate this disease.

**10. Please indicate how much you have used the following communications and information materials.**

Again, the Working Group is keen to learn from the survey results, which communication and information materials and methods have been most effective at reaching Alberta farmers. Members of the Working Group are well positioned to disseminate information directly to farmers and would be willing work with the government to not only enhance the content of these resources, where required, but work to help ensure that farmers are aware of the information that is available to them.

**11. What suggestions do you have for Alberta Agriculture and Forestry to improve its role and better support the province's management of Fusarium graminearum?**

The Working Group was encouraged by Deputy Minister Yee's remarks at the October 23<sup>rd</sup> Roundtable - Moving Forward with Leadership in Fusarium Management where she reflected on the comments shared by industry partners at the half-day session and suggested that:

- The Government and therefore the consultations that follow should be aimed at determining long-term solutions that take advantage of all of the tools available to us, leveraging the skills and talents of those seated at the "Roundtable."
- To date the regulatory framework has been focused on prevention, but as we move forward, we need to look at proactive management.
- To be most effective, we need government, industry and municipalities to work together.

The Working Group shares this view and would like to commend Alberta Agriculture and Forestry for their leadership on this file. We believe that it was clear at the October 23<sup>rd</sup> Roundtable that the industry is not only prepared to move forward with change on this front, but that we are willing to do so in a cooperative and collaborative manner. We look forward to joining our industry partners once again at the next Minister's Roundtable where we will learn the results of the stakeholder survey and discuss how collectively we can work to advance Fg policy and practice in Alberta.

