



**CANADIAN SEED TRADE ASSOCIATION**  
L'ASSOCIATION CANADIENNE DU COMMERCE DES SEMENCES

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**Turning Crisis into Opportunity**  
**Fostering Innovation in the Canadian Agriculture and Agri-Products Industry**

**Submission to**  
**Hon. Gerry Ritz**  
**Minister of Agriculture and Agri-Food and Minister For the Canadian Wheat Board**  
**By**  
**The Canadian Seed Trade Association**  
**November 27, 2007**

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## **There is a Looming Crisis in Agriculture**

There is a crisis brewing in much of Canadian agriculture. With current high grain and oilseed prices, one might be tempted to discount that statement, but a closer look at the industry reveals that there is a growing problem, that is quickly reaching crisis.

The crisis is one of competitiveness. Once thought to be the “breadbasket” of the world, Canada is falling behind its competitors as a producer and exporter of many cereal grains.

For example, Canada’s production of wheat other than durum has fallen 20% over the last 20 years (between 1987 and 2007). And exports have also fallen 20%. Barley production over the same period has dropped by 34%, with exports falling by over 70%. Over that time, yield gains in both crops have only increased slightly.<sup>1</sup>

While the challenges are most obvious in these areas, there are other very serious challenges to other segments of the industry, including the forage and garden seed sectors.

If these trends continue, the value added sector that relies on these industries will face challenges, and it will affect Canadian consumers.

The Canadian Seed Trade Association believes that these trends can be reversed with a concerted effort to foster innovation and facilitate competitiveness in Canadian agriculture.

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## **About the Canadian Seed Sector**

The Canadian seed industry makes a very important contribution to the agriculture sector and to the economies of Canada and its provinces. The industry generates more than \$770 million in sales annually and makes a strong contribution to Canada’s export balance. About 25% of the seed produced in Canada is exported to over 70 countries. Exports of Canadian seed in 2006 were valued at over \$340 million.

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<sup>1</sup> Canada: Grains and Oilseeds Outlook Market Analysis Division, AAFC <http://www.agr.gc.ca/mad-dam>

More importantly, seed is the driver of innovation in the agriculture and agri-products sectors. Plant breeding and research brings new technologies to farmers, and new attributes and quality to consumers.

For example:

- Innovation delivered through seed brought canola to Canadian agriculture and all of the food and feed benefits associated with it.
- Seed driven innovation has delivered crops that are increasingly resistant to diseases and pests. That, combined with herbicide tolerance reduces crop risks; lowers costs for farmers; and reduces the pesticide load on the environment
- Plant Breeding and research is improving food quality for consumers, delivering beneficial fatty acids and anti-oxidants to improve health.

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## About the Canadian Seed Trade Association

*CSTA's mission statement commits us to work with our value chain partners towards an environment that promotes innovation and benefits the entire value chain.*

*We welcome that the "Growing Forward" vision is for a profitable and innovative agriculture, agri-food and agri-based products industry.*

*Achieving our common vision will require decisive action in both the long and short terms.*

The Canadian Seed Trade Association brings together over 130 member companies who are engaged in all aspects of seed research, production and marketing, both domestically and internationally. Our membership ranges from those who market garden seed and herbs to large western grain handlers; and from small family-run businesses to large multi-national corporations. CSTA members work with seeds from 50 principal crops, including grains, oilseeds, special crops, forage and turf grasses, flowers, vegetables and fruits.

CSTA's direction and strategy comes from its members, who have also developed the CSTA Mission Statement:

*The Canadian Seed Trade Association (CSTA) is committed to fostering an environment conducive to researching, developing, distributing, and trading seed and associated technologies; with the goal of bettering the choices and successes of our members and their customers.*

Our mission statement commits us to work with our value chain partners towards an environment that promotes innovation and benefits the entire value chain. We are pleased that the Growing Forward vision for agriculture and agri-food also has its primary focus "a profitable and innovative agriculture, agri-food and agri-based products industry.."

CSTA submits that achieving our common vision will require a strong partnership between our sector and the government of Canada, and it will require decisive action in both the short and long terms.

## Private Sector Investment in Seed Innovation

*Private seed companies will invest 56.1 million in research and development in 2007, almost doubling by 2012.*

CSTA recently surveyed its members to determine the current and projected level of investment in plant research and development in Canada. The survey shows that our member companies are substantial investors in seed driven innovation.

In 2007 CSTA's member companies will invest \$56.1 million in research and development. That is 6% of the total retail sales of these companies, and 26% of the total operating budget. Most of that investment will be in research and development on canola, corn and soybeans.

Additionally, these companies expect to almost double their investment within 5 years to \$106.4 million. Once again, the bulk of that investment will be in canola, corn and soybeans while the share of private sector investment held by other crops, including forages and cereals, continues to decline.

The table below shows the total investment and the share of the total by crop kind.

Annual Research Investment by Crop								
	1987		2001		2007		5 Year Projection	
	\$ million	% of Total	\$ million	% of Total	\$ million	% of Total	\$ million	% of Total
Canola	7.1	50	30.5	67.3	41.9	74.7	80.0	75.2
Soybeans	0.7	4.9	2.6	5.7	3.9	6.9	12.7	11.9
Corn	2.8	19.7	7.9	17.4	4.8	8.6	9.0	8.5
Cereals	1.5	10.6	2.3	5.1	3.3	5.9	2.7	2.5
Forages	0.3	2.1	0.8	1.8	0.5	0.9	0.5	0.5
Special Crops	0.1	0.7	0.4	0.9	0.1	0.2	0.1	0.1
Garden Seed	0.1	0.7	0	0	0	0	0	0
Other	1.6	11.3	0.8	1.8	1.6	2.8	1.4	1.3
<b>TOTAL</b>	<b>14.2</b>		<b>45.3</b>		<b>56.1</b>		<b>106.4</b>	

Source: CSTA member surveys

*The private sector is focusing its investments in three crop kinds, canola, soybeans and corn. The share of private sector investment in cereal crops, special crops and forages is declining, and private sector investment in garden seed is non-existent. There are clear reasons for this disparity, and there are clear solutions that can be found in partnership with the government of Canada.*

CSTA acknowledges that public sector breeding in cereal crops is strong, and appreciates that the federal government continues to make this investment. However It is very clear from the table above, that the private sector is focusing its investments in three crop kinds: canola, soybeans and corn. The share of private sector investment in cereal crops, special crops and forages is declining, and private sector investment in garden seed is non-existent.

This is already causing very substantial concerns in the value added sector in Canada. For example, the livestock sectors are very concerned with lack of new feed grain and forage varieties that will help them be competitive in the marketplace, and the ethanol industry in Canada is missing out on new varieties designed just for that industry.

CSTA submits that there are clear reasons for the disparities in the level of private sector investment. We also submit that there are steps that can be taken by the government of Canada, working in partnership with seed innovators, to find solutions.

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## **The Potential for Increased Prosperity**

*Plant science innovation has brought significant benefits to Canadian farmers, and end users. There is the potential to bring much more.*

It is possible to turn a potential crisis into prosperity, and it comes with innovation. Research and development in plant science, both by the public and private sectors, has brought advances to farmers and end users. The prospects for the future are even greater. The Grow Canada® Coalition estimates that within the next decade, there will be the potential for a global bio-economy driven by plant science innovation that will be worth \$500 billion. Working together in partnership with value chain stakeholders and regulators, Canada's industry could capture a substantial part of that.

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## **A Major Challenge – The Process for Change**

*One of the biggest challenges to innovation is Canada's process for regulatory change, which is cumbersome and slow to respond.*

The agriculture and agri-product marketplace is changing rapidly. Windows of opportunity open and close very quickly. However, the Canadian industry is at risk of repeating history and missing significant windows of opportunity. One of the biggest challenges to innovation is the Canadian process for regulatory change, which is cumbersome and slow to respond to the changing needs of industry innovators, farmers and end users.

CSTA submits that by addressing the following issues, government and industry will have taken a big step towards creating an environment that enables and promotes innovation.

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## **Variety Registration**

*There is a clear connection between the level of private sector investment in research and development and the flexibility and agility of crop variety registration procedures and policies.*

A clear connection can be drawn between the level of private sector investment and the variety registration system.

- Where seed innovators are not subjected to variety registration, the level of private sector investment and development of new varieties is high. Corn is not included in the variety registration system. Instead the industry maintains a comprehensive and detailed listing of corn hybrids, developed to capture market opportunities for farmers and end users.
- Where the system for recommending varieties for registration has had a strong connection to the value chain, new variety development is increasing and investment is strong. A good example is canola, where the Western Canada Canola, Rapeseed Recommending Committee has worked with the Canola Council of Canada to assess and anticipate changes in market and industry needs, and has worked within its mandate to accommodate.
- Similarly, a strong connection to the value chain drives innovation in soybeans, as does the fact that most soybean innovators are also corn innovators and that has resulted in variety registration recommending committees that are more flexible and forward looking.

Conversely, where recommending committees are under-resourced, and encumbered by other regulatory requirements, they are less able to adapt and, we would submit, are less willing to move away from procedures and policies that were established decades ago.

- A good example can be found in western wheat. The opportunities presented by the growing bio-economy are enormous, but very few new western wheat varieties have been registered in the last few years. In fact, according to SeCan, no new varieties of red winter wheat have been registered in western Canada in five years. As shown in the table above, private sector investment in cereals has dropped from over 10% in 1987 to an anticipated 2.5% by 2012.
- Another example can be found in the forage industry. In many cases variety registration of forage species requires testing and support of recommending committees, where committees are substantially under-resourced, or in some cases don't even exist. As a consequence, the share of private sector investment for forage research will be less than 1%.

*Despite the recommendations of various reviews over the last two decades, no changes have been made to Canada's system of variety registration since the late 1980s.*

*Crop producers and the value added sector will benefit greatly if plant developers are able to bring them new varieties in a more timely fashion.*

*We strongly urge you to make it a very high priority to move amendments to the variety registration system through the regulatory system..*

Numerous reviews, beginning in the mid-1980s have recognized the need to modernize Canada's system of variety registration. However, despite consistent recommendations for a more flexible registration system, starting with the "FAAR" report in 1998, no changes have been made.

We are aware that proposals developed by the CFIA, in consultation with the seed industry and others, are ready to move forward. Producers and the value added sector will benefit greatly if plant developers are able to bring them new varieties with beneficial attributes in a more timely fashion

We strongly urge you to make it a very high priority to move these amendments through the regulatory process. .

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### ***Kernel Visual Distinguishability***

*CSTA encourages the government to fully commit to 2010 to eliminate KVD requirements for western wheat.*

*We urge the CGC and the government to fully consider the contribution that the seed certification system can make to the plan to eliminate KVD.*

The CSTA acknowledges and welcomes the announcement by the Canadian Grain Commission (CGC) that it will end Kernel Visual Distinguishability (KVD) requirements for "minor wheat classes" effective August 1, 2008. We believe this is a small step to removing a very substantial barrier to innovation in western Canada.

We also support that the government has directed the CGC to develop a plan to completely eliminate KVD requirements by 2010. We urge you to fully commit to that date.

We encourage the CGC and your department to strongly consider the contribution that seed certification process can make to the plan to replace KVD. This system already exists, is low cost, and as part of identity preserved systems, and as a component of producer affidavits, would help to assure variety identification.

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## ***Intellectual Property Protection***

*Where there is a strong recognition of the link between intellectual property protection and investment in new technology, private sector investment is growing. However where that recognition does not exist, private sector investment is declining.*

*Canada does not have the same access to intellectual property protection tools as do our major export competitors.*

*We urge you to move this issue forward by:*

- *Taking Canada to membership in the 1991 UPOV convention with all of the provisions of that*

As with variety registration, a clear link can be made between private sector investment in research and development, and intellectual property protection.

The crops with the highest share of private sector R&D investment – canola, corn and soybeans – have one thing in common. The link between intellectual property protection and investment in new technologies is well recognized and accepted by most producers. Up to and sometimes beyond 90% of the producers of these crops purchase new seed every year and enter into contracts and technology use agreements to do so. They do this to capture the benefits of new technology – the results of research and development.

Conversely, those crops where private sector investment is declining also have things in common. Farmers seem less willing to contribute to research and development by buying new seed regularly, choosing to save seed from one year to the next. This situation could be viewed in two different ways:

1. Farmers don't see the benefits of buying new seed because new technology is not being delivered; or
2. New technology is not being delivered because the resources for investment are not being captured through seed sales.

However one characterizes the situation, the impact is the same, lower available resources to invest in innovation.

- A very good example of the impact of the intellectual property protection environment can be found in Garden Seed. Two decades ago, the private sector was making some investments in research and development in vegetables and ornamentals for gardens. However, Canadian innovators did not have access to large markets because of international “national treatment” provisions, where only countries with Plant Breeders’ Rights legislations in place could have access to many large international markets.

By the time Canada put in place Plant Breeders’ Rights legislation, the market opportunity had been captured by large centres of excellence in California, the Netherlands and Japan. There is no longer any commercial investment in garden seed plant breeding.

Canada’s Intellectual Property Protection Tool Box is not as full as those of our competitors. For example:

- Canada is among the 24 members of the International Union for the Protection of New Varieties of Plants (UPOV) that still operates under the 1978 convention. Our major export competition, the United States, Australia and most of Europe, subscribe to the 1991 convention which recognizes the legitimate interests of the breeder, and better defines farmer and breeder exceptions, among other improvements.
- CSTA was part of a Minister’s Advisory Committee on Plant Breeders’ Rights, which developed a report over a year ago. It is our understanding that this report has not yet been submitted to you. While that report recommends that Canada become part of the 1991 UPOV convention, it is also very important that the implementing legislation take measures to recognize the legitimate

*convention, including recognition of the legitimate rights of the breeder*

- *Providing plant developers with the ability to patent plant varieties as is the case in the United States.*
- *Exploring the possibility of stepped up enforcement of existing intellectual property protection measures*
- *Bringing all legislation and regulation in line with the Seeds Act to protect variety names*

rights of plant breeders.

- Unlike the United States and Australia, Canadian plant developers cannot make use of patents to protect plant varieties.
  - Documentation and policy proposals associated with both “Growing Forward” and with the government’s Science and Technology strategy clearly recognize the value of patent protection as a means of generating investment in innovation. We hope that this will be given thorough consideration as policy under “Growing Forward” is developed.
- Enforcement of existing Intellectual Property protection tools such as Seeds Act provisions and Plant Breeders’ Rights is light to non-existent.
  - The Seeds Act serves as a type of Intellectual Property protection tool itself, because it states that seed cannot be sold by variety name unless it is of pedigreed grade. In addition to the fact that this provision is not consistently enforced, it is also not reflected throughout other Acts, both federal and provincial (eg. Grain Act, Crop Insurance Legislation) which freely allow the use of variety names.

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### ***An Immediate Need – Export Facilitation***

Another example where the regulatory process is not keeping pace with changes in the marketplace is the process for seed export certifications. This situation is currently costing opportunities and putting Canada’s reputation as a reliable exporter at risk..

Currently, seed can only be exported if it is accompanied by an export certificate that is issued by the CFIA using CFIA laboratories and personnel. Reduced resources at CFIA means that the work required to satisfy the conditions to issue an export certificate cannot always be done in a timely manner.

To reduce the drain on CFIA resources, the CFIA and the Canadian Seed Institute piloted an Authorized Exporter program almost five years ago, to accredit private labs and seed establishments to do the sampling and testing required for export certificates.

Despite the success of the pilot, that program has not yet been made available and the demand for export certificates has taxed CFIA inspectors beyond their ability to respond. It is our information that it is currently taking up to 6 weeks for an export certificate to be issued.

*It is absolutely essential that the CFIA be given the direction to move immediately to implement the Authorized Exporter Program.*

*We also urge you to direct the CFIA to implement measures in the immediate term to clear the backlog in the system, and facilitate export of seed.*

This delay means that Canadian seed exporters are losing immediate sales and incurring demurrage and other charges for delayed shipments. In addition, the uncertainty in the current system means that exporters are not able to capture opportunities as they arise. This is putting Canada's reputation as a reliable source of quality seed for export at risk. We submit that had the AE program been implemented immediately following the successful completion of the pilot project, seed exporters would not be in this current situation.

It is absolutely essential that the CFIA be given the direction to move immediately to implement the Authorized Exporter Program.

We also urge you to direct the CFIA to implement measures in the immediate term to clear the backlog in the system, and facilitate export of seed.

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## **A Major Challenge - Funding Innovation**

*The main source of revenue for investment in private research and development is the sale of certified seed.*

In addition to putting in place a regulatory environment that enables and promotes innovation, it is important to ensure that investment in encouraged in other ways.

CSTA's research has demonstrated that the private sector is a strong investor in innovation. The government of Canada is committed to a strong investment in public sector research. However, for both, the level of investment is dependant on the funds available. The main source of revenue for investment in private research and development is the sale of certified seed.

The following table shows very clearly that where the use of certified seed is high, investment is also high. Where farmers choose not to purchase certified seed, investment is lower.

**Certified Seed Sales Vs. Private Sector Investment**

	<b>% of Seed used that is certified</b>	<b>% Investment 2007</b>	<b>% Investment 2012</b>
Canola	92	74	75
Corn	98	9	9
Soybeans	75	7	12
Cereals	19	6	2

*Only about 30% of Canadian producers are currently carrying the costs of innovation.*

*CSTA supports programs to share the costs of innovation, including a tax incentive on certified seed and incentives through existing government programs.*

In fact, surveys indicated that, on average, about 30% of the seed used on Canadian farms is certified. That means that about 30% of crop farmers are funding private sector innovation, where the whole of society benefits.

CSTA supports the development of policies and programs that will spread the costs of innovation amongst those who benefit. We have developed and gained support for a tax incentive that would be paid to farmers who purchase certified seed. Under this proposal, farmers who purchase certified seed would be able to claim 155% of the cost of the seed to their expenses for income tax purposes. This would give producers access to all of the benefits of certified seed, such as access to new genetics, and assurance of purity and quality, at essentially the same cost as saving seed. It will increase the investment in innovation and share the cost of that investment throughout the Canadian tax base.

CSTA also supports the provision of incentives through other government programming such as production and income insurance. By providing discounts in premiums for these programs, government would be recognizing the reduced risks associated with planting certified seed, while at the same time helping to increase the investment in innovation.

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## Conclusion - Turning Crisis into Opportunity

This submission has laid out the risks to the Canadian agriculture and agri-products industry of not taking decisive steps to foster innovation.

It has also made it clear that the opportunities for Canadian agriculture and agri-products are almost without limit, and the potential benefits for all stakeholders in the value chain are tremendous. Canadian innovators, both public and private, can make a very substantial contribution to capturing those benefits, but it can only be done in partnership with our government.

We look forward to working with you, your department and with the Regulators that report to you, to turn crisis into opportunity by creating a regulatory and investment climate that will foster innovation for all of the participants in the value chain.

CSTA urges you to undertake the following measures:

1. Place a high priority on moving proposed changes to the variety registration system through the regulatory process to implement a system that is more flexible and responsive to market needs
2. Direct the Canadian Food Inspection Agency to take immediate steps to implement the Authorized Exporter program that was piloted by the CFIA, the seed industry and the Canadian Seed Institute.
3. Take steps to bring Canada's intellectual property protection provisions into line with those of our competitors by:
  - Bringing Canadian Plant Breeders' Rights legislation into conformity with the 1991 UPOV convention, including a clear recognition of the legitimate rights of the breeder
  - Providing Canadian plant developers with the ability to patent plant varieties as it the case in the United States
  - Exploring the possibility of stepped up enforcement of existing intellectual property protection measures
  - Bringing all legislation and regulation in line with the Seeds Act to protect variety names.
4. Work with the industry to put in place incentives to foster innovation, and share its costs, both as stand alone programs such as CSTA's certified seed tax incentive proposal, and through existing programs such as production and income insurance.