Presentation to
The House of Commons Standing Committee on Agriculture and Agri-Food Regarding Agricultural Biotechnology in Canada by the Canadian Canola Growers Association
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Introduction

The history of the Canola industry in Canada is a story of innovation and rapid adoption of new technology, which improved profitability, competitiveness and the overall well-being of the entire value chain, beginning with farmers.

As the grower group representing 50,000 canola producers, the Canadian Canola Growers' Association would like tell members of this committee about our sector, how biotechnology has changed it for the better, and how biotechnology will continue to be an essential tool for supporting innovation and competitiveness of Canadian canola farmers.

To understand this, you first need to appreciate that the Canadian canola industry is a young industry. The crop was only introduced in 1974 as a variant of rapeseed, which offered a different oil profile that made canola a safe and healthy human food option. Since then the industry has grown exponentially. It is now the second largest crop in terms of acreage, behind only wheat, and the largest single source of cash receipts from field crops for Canadian farmers. Many analysts predict that canola will take its place as the most seeded crop in Canada this spring.

On average, canola has generated 19% of Canada's farm cash receipts since 2006, and in 2010 reached its highest contribution at $5.6 billion. In addition to that there is, of course, the additional value to the Canadian economy that comes from processing ventures like oilseed crushing plants. The entire canola industry contributes about $14 billion to the Canadian economy. Much of this activity and value is in Western Canada, but we would like to note that canola generates $1.3 billion dollars of economic activity in Ontario and Quebec annually.

In large part, the growth that our sector has enjoyed over the past 25 years can be attributed to the willingness of the industry to collaboratively develop technology and systems. Biotechnology in canola has proven to be no exception to this general rule.

Biotechnology in Canola

If committee members are looking for a real-life example of how biotechnology development and adoption works, the single best example that they will find in Canada is the canola industry, where canola varieties that have been genetically modified to provide herbicide tolerance dominate the market.

In 2009, approximately 93 per cent of the canola grown in Canada was genetically modified. In agriculture, that's an astounding rate of adoption for a technology that’s less than 15 years old. Why it's been adopted is an instructive lesson in how individual farmers make decisions that work for their own businesses.

Simply put, nobody ordered Canadian farmers to grow herbicide-tolerant canola varieties. They made that choice themselves because they quickly realized the technology worked and it solved a basic biological problem that hampered canola production – weed control.

As a broadleaf crop, there were few options to control broadleaf weeds within a canola field. The options were frequently expensive or difficult to apply, or both. With the arrival of the first herbicide-tolerant system, a much cheaper, simpler and more reliable method had arrived and farmers voted with their wallets.

It simplified the growing season logistics for many farms, eliminating a separate application operation in the spring. It controlled both grassy and broadleaf weeds in a single pass. And a 2010 study from the University of Saskatchewan reported that growers found a total economic benefit of $26 per acre, with $15 per acre in carryover benefits due to a savings in weed control costs the year after growing canola, as well as an $11 per acre direct benefit to their farm.

Herbicide-tolerant canola’s arrival also coincided with the widespread adoption of zero tillage systems, which had been under largely independent farm-level development within the region since the mid-1970s. This again was farmers responding to a biological challenge – soil conservation – with a system that proved to be an economic winner. It mimicked the native grasslands by leaving soil structure intact after each harvest. Each spring a harrow bar spread the straw, a chemical application killed weeds, then an air seeder sowed and fertilized the crop in a single application, eliminating multiple tillage operations.

The two innovations arriving at the same time helped to reinforce the effect of both. Both were cheaper, simpler and more ecologically sound. Conservation tillage reversed the loss of soil structure and carbon for the first time since the development of agriculture. Herbicide-tolerant canola substantially reduced chemical use for the first time in the history of modern agriculture. Both have made Prairie canola growers economically more successful.

Further Innovation

Biotechnology will play a key role in human development over the next century, and nowhere more than agriculture.

Human population is growing. Economic development continues to dramatically improve the standard of living for some of our poorest population, driving new demand for finite resources. Agricultural production requires resources, and developing technologies and production systems that reduce the reliance of farmers on these resources is a clear path forward.

It is in everyone's interest to make agricultural production as efficient as possible. By doing so we will increase the sustainability of the industry, reduce greenhouse gas emissions, further reduce our pesticide use, address climate change challenges and make Canadian farmers more competitive.

Today researchers are seeking frost tolerance, drought tolerance, nitrogen efficiency, and a host of other traits. Each one represents a quantum leap forward for farmers around the globe and as few barriers as possible should be place in front of their development.

As these traits are in development, we continue to realize the efficiency gains of the first generation of canola biotechnology and conservation agriculture. The commercial farms in the region are widely recognized as among the most environmentally sustainable in the world by independent bodies. Consider just a single effect that this twin adoption had on Prairie agriculture: they all but completely eliminated summer fallow from the region. That practice saw roughly one-third of the acres tilled but not planted, to conserve moisture and kill weeds, every year. Just that single change alone made Prairie farms one-third more efficient, without even considering the acknowledged economic merits of the system.

Canola growers are proud of this record of success. We think its ample evidence of a system that is working well. It's driven by good science, biology and economics. In fact, it functions so well that we wouldn't recommend any major changes.

Science–Based

The current Canadian system of science-based regulatory approval is a critical component of the thriving canola industry. It is rigorous, but is based on a predictable process with clear measurements. This fosters an investment-friendly atmosphere that is vital to canola's continued success.

In no small part this is why we've seen investment in canola at all. It's a big crop by Canadian standards, but the lion's share of development dollars globally are flowing into far larger crops – soybeans, corn, rice and cotton. Canada's reliance on clear-cut science has kept us in the game.

If the regulatory process were to be amended to include non-science criteria, we anticipate severe consequences for the canola industry. The potential for intervention in the process would significantly increase, creating new levels of risk for investors developing new canola technology. Most likely those investors would simply move their dollars to a more welcoming climate and invest in soybean or oil palm research.

This would then increase the risk level intolerably for canola producers, as new traits were developed for other competing crops. As farmers in other regions with a better investment climate receive the benefit of drought and stress tolerance to combat climate change, nitrogen use efficiency to reduce fertilizer costs, and enhanced pest resistance to protect crops, we'll be left on the outside looking in, growing ever less efficient as compared to our competitors.

Market Access

Since the adoption of genetically modified (GM) canola in 1996, we have continued to expand export markets. Over the decade of 1998-2008, Canadian canola exports grew by 40% from 3.9 million tonnes to 5.6 million tonnes. Looking forward, the industry is targeting an export goal of 15 million tonnes of sustainable production by 2015. Half of that is expected to be exported as raw seed, and by the time oil and other processed products are added, the export component will climb to upwards to 85%.

Those targets speak to our confidence in the ability to grow our markets for GM canola, and its acceptance by our major customers. There have been some export barriers thrown up – the EU being the notable example – but we strongly believe the primary motivation to be the protection of their domestic canola industry.

This demonstrates that fair and open market access remains a fundamental challenge, but does not suggest that we should alter our biotechnology policy in response. Rather it highlights the need to address the underlying issue to eliminate the potential to abuse it as a non-tariff trade barrier.

The best path forward here will be to work proactively within established international structures such as CODEX to develop low-level presence or LLP policies to ensure that extremely low level presence does not disrupt normal trade.

Research Options

The canola industry has benefitted from strong investments in research by both private and public sectors. Through check off dollars, farmers continue to invest directly into canola research, while the Government's commitment to the Canola Cluster has made a very important contribution to challenges facing our industry. In addition, canola is one of the few Canadian crops that benefits from substantial research investments by the private sector, especially in the area of seed development.

We believe that future canola industry research should primarily be directed by the industry. Our past track record supports this notion, as the industry's overall development has followed this pattern.

Industry-directed research addresses key issues with clear-cut measures, such as market-acceptance, efficiency and profitability. It is more nimble and responsive, and it addresses real-world problems in a tangible way. After safety issues are carefully tested and evaluated by scientific trial, it is ultimately approved or rejected by farmers by similar measures. If it makes farms more efficient or profitable, it will thrive.

Conclusion

Frequently when making these sorts of presentations to this committee, we find ourselves calling for change to address a shortfall. In this case, however, we find ourselves calling for the affirmation of the current situation. It works. It works well. It has made Canada a leader and given us a competitive edge in science, research and agriculture. It has made our farmers the most efficient and sustainable growers of field crops in the world. If we want to maintain and promote this record, we should support the framework that allowed it to develop.

Science and technology, including biotechnology, will be an essential platform upon which we find new innovations, build competiveness and ultimately find solutions to some of the world's most difficult challenges.

Respectfully Submitted by,
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