



A Guide to
ROUNDUP READY[®]
SOYBEAN PATENT
EXPIRY

soybean



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INTRODUCTION

The introduction of Roundup Ready soybeans into the Canadian marketplace in the mid-1990's significantly changed the landscape of soybean production for Canadian farmers. Prior to their introduction, production costs for soybeans were higher; weed control was difficult and yields with conventional herbicide systems were significantly lower.

With the introduction of Roundup Ready technology to soybeans, the crop became tolerant to Roundup[®] agricultural herbicide, ushering in a new level of weed control, together with unprecedented crop safety and increased yield potential. Canadian farmers quickly adopted this technology, making the Roundup Ready system the standard for soybean production in Canada. Today, more than 60% of soybean acres in this country are planted using the Roundup Ready system and users of the technology report a 95% satisfaction rating.¹

In 2011, however, changes are coming to Roundup Ready soybean production in Canada, with the expiry of the original Roundup Ready soybean technology patent. These changes culminate in 2013, which represents the first opportunity for Canadian farmers to plant original Roundup Ready soybeans from saved seed. But what happens between 2011 and 2013? What are the opportunities and obligations? And, what does the future hold for soybean production in Canada with Roundup Ready and other production technologies? Answers to these and other related questions are addressed in this booklet – **A Guide to Roundup Ready Soybean Patent Expiry**. We encourage you to read and consult it as part of your planning and decision-making regarding the role of soybean technology in your farm or farm-related business.

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WHAT IS A PATENT?

According to the Canadian Intellectual Property Office, patents are 'government grants' that give inventors exclusive rights to their inventions. Simply put, a patent is a time-limited right that excludes others from making, using or selling an invention in the country that it is granted, during the life of the patent. As such, patents are recognized as incentives to encourage and foster development of products or processes that are novel, useful and inventive. Patents play a valuable role in agriculture and many other sectors as they contribute to our economy and society as a whole.

In Canada, patent protection exists for 20 years from the time the patent application is first filed. Over the course of the life of the patent, the inventor is required to make payments of 'maintenance fees' in order to keep the patent in force.²

THE ORIGINAL ROUNDUP READY (OR1) SOYBEAN PATENT

The original Roundup Ready soybean technology patent supported the development and commercialization of glyphosate tolerant soybeans. The Canadian patent for this trait is due to expire in August 2011, and will be the first widespread plant biotechnology trait to go off patent.

In the United States, this same trait technology remains under U.S. patent protection until 2014.

It is important to note that the next-generation Roundup Ready soybean technology (i.e. Genuity® Roundup Ready 2 Yield® soybeans) is protected by a different patent than the first-generation Roundup Ready trait. As such, the changes that affect the use of the ORI trait technology, when its patent expires in August 2011, do **not** apply to Genuity® Roundup Ready 2 Yield® soybeans.

Even though the Roundup Ready soybean technology patent expires in 2011, growers using this technology in 2011 will still be doing so during the life of the patent. Accordingly, they need to be aware that the patent law associated with this technology remains in effect and will continue to be enforced.

The vast majority of Canadian farmers respect patent law and continue to honour the terms and conditions of the Technology Stewardship Agreements they have signed. As it has done every year since the introduction of Roundup Ready soybean technology in Canada, Monsanto will continue to operate its Technology Protection Field Check Program as a way to help maintain a level playing field for all farmers using and benefitting from this technology.

Ongoing compliance with the terms and conditions of the Technology Stewardship Agreement is an important part of ensuring that farmers continue to have access to new products and technologies. It also helps keep farming fair for everyone.

TIMELINES – WHAT HAPPENS WHEN

With the expiry of the original Canadian Roundup Ready (ORI) soybean technology patent in August 2011, a number of opportunities and obligations are 'triggered' which will affect users of the ORI technology starting in 2011. These opportunities and obligations are outlined below and summarized in the table in the middle of this booklet:

In 2011: the ORI soybean trait patent expires in August 2011

In 2011: contract obligations to **not** save seed under the Technology Stewardship Agreement remain in effect

In 2011: because farmers will still be using patented technology during the life of the patent, seed may **not** be saved for planting in 2012

In 2012: a farmer may decide to buy certified ORI seed from a company holding a valid licence for ORI soybeans, without any contractual obligations or royalty payment to Monsanto

In 2012: a farmer may decide to save seed from the 2012 harvest for replanting in 2013, as long as the seed company from which they purchased the seed, for 2012 planting, does not have any contractual obligations preventing them from doing so

In 2013: a Canadian farmer may decide to plant ORI soybeans saved from his own seed

Through 2021: Monsanto will continue to provide full, global regulatory support for ORI soybean grain to allow harvested crops to be sold and processed domestically and internationally.

USE OF ORIGINAL ROUNDUP READY SOYBEAN TECHNOLOGY POST-PATENT

Information on page 5 outlines the opportunities and obligations for growers associated with accessing ORI soybean technology in the post-patent environment through the purchase, saving and/or replanting of ORI soybeans, from their own seed.

In addition, Monsanto, the holder of the ORI patent, made a number of other commitments to seed companies with existing ORI soybean licenses to support the continuing availability and use of this technology in the post-patent environment.

These include:

- supporting seed companies in the continued production and sale of ORI soybean varieties after 2011, if that is a decision they choose to make;
- **not** requiring seed company licensees to destroy or return seed to the patent holder upon expiry of their ORI soybean trait licenses;
- supporting seed companies that choose to work with the next-generation Genuity® Roundup Ready 2 Yield® soybean technology by not precluding them from selling varieties with the original ORI technology after patent expiry, should they choose to do so; and
- maintaining full, global regulatory support for the ORI soybean technology through 2021 in support of domestic and international sales and processing activities.

THE FUTURE

Flowing from the expiry of the ORI soybean trait patent are a number of other important considerations associated with the transition of this technology into the public domain. Chief among these is providing public access to this technology which, among other things, is designed to stimulate and motivate individuals and companies to invest in new technologies. The fact that Monsanto and other companies continue to invest in the development of new soybean traits that will benefit Canadian farmers demonstrates that the patent system provides an incentive for innovation.

At Monsanto, we continue to focus on providing farmers with the very best plant science technologies – technologies that will help them be successful. We believe the best way to help farmers be successful is by continuing to invest in research and development that leads to the introduction and commercialization of new, beneficial products and technologies. Our commitment to research and development is reflected in the almost \$2 million per day we invest in researching, identifying and bringing to market innovative technologies.

Our new Genuity® Roundup Ready 2 Yield® soybean technology is an excellent example of breakthrough soybean technology that offers significantly improved yield potential compared with original Roundup Ready soybeans. In fact, in the short time this technology has been commercially available, it has delivered results that traditionally would have taken years of breeding to accomplish. It will serve as the platform on which future Monsanto soybean trait technologies are developed.

In addition to the enhanced yield potential offered by the Genuity® Roundup Ready 2 Yield® technology platform, other aspects of our research program are focused on combining these benefits with other trait technologies including:

- dicamba tolerance for improved weed control;
- low saturate fat soybean oil (Vistive® Gold) that will meet growing consumer and food company demands for better oils; and
- Omega-3 soybeans which produce oils with heart healthy Omega-3 fatty acids that have traditionally been limited to other food sources.

FREQUENTLY ASKED QUESTIONS (FAQ)

Q: When does the original Roundup Ready (ORI) technology patent expire?

A: The Canadian ORI patent expires in August 2011.

Q: What are the implications of the ORI patent expiry for soybean growers?

A: With the expiry of the ORI patent, there are a number of new opportunities and obligations for soybean farmers related to the purchase, saving and/or replanting of ORI soybeans. Starting in 2012, a farmer may decide to purchase certified ORI seed from a seed company without contractual obligations or royalty payments. Starting in 2012, farmers will also have the option to save ORI seed from their 2012 harvest for replanting in 2013.

Q: Will I still have to participate in/am I still subject to the Technology Protection Field Check Program?

A: Yes. Even though the Roundup Ready soybean technology patent expires in 2011, farmers using this technology in 2011 will still be doing so during the life of the patent. Accordingly, they need to be aware that the patent law associated with this technology remains in effect and will continue to be enforced. The Technology Protection Field Check Program will also continue for Genuity® Roundup Ready 2 Yield® soybeans and other technologies.

As it has done every year since the introduction of Roundup Ready soybean technology in Canada, Monsanto will continue to operate its Technology Protection Field Check Program as a way to help maintain a level playing field for all farmers using

and benefitting from this technology. Ongoing compliance with the terms and conditions of the Technology Stewardship Agreement is an important part of ensuring that farmers continue to have access to new products and technologies and helps keep farming fair for everyone.

Q: What are the implications of the ORI patent expiry for seed company licensees of the technology?

A: Seed company licensees will be able to continue to sell ORI soybeans after 2011. They will **not** be required to destroy or return seed to the patent holder, due to the expiration of their original ORI soybean trait licences. Seed company licensees working with the next-generation Genuity® Roundup Ready 2 Yield® soybean technology will also be able to continue to sell varieties with ORI technology after the patent expires, should they choose to do so.

Q: Can I still purchase new ORI soybeans after the patent expires?

A: Yes. Seed company licensees with a current ORI soybean license will be able to continue to produce and sell ORI soybean varieties after 2011.

Q: Are Genuity® Roundup Ready 2 Yield® soybeans covered by the same patent?

A: No. Genuity® Roundup Ready 2 Yield® soybeans are a new and different technology than original ORI soybeans. Accordingly, the changes that affect the use of the ORI trait technology when the patent for it expires in August 2011, do not apply to Genuity® Roundup Ready 2 Yield® soybeans.

As a new and different technology that remains under patent protection, Genuity® Roundup Ready 2 Yield® soybeans will continue to be sold in Canada to farmers who sign a Technology Stewardship Agreement (TSA). In accordance with patent provisions and the terms of the TSA, users of this technology may also be randomly selected to participate in Monsanto's on-farm Technology Field Check Program.

Q: Are there plans to replace the ORI technology with new and improved technology?

A: Yes. This has already happened. One of the objectives and outcomes of the patent system is to stimulate and motivate individuals and companies to invest in new technologies. In the case of soybeans specifically, Monsanto and other companies continue to invest in the development of new soybean traits that will benefit Canadian farmers. The recent introduction of Genuity® Roundup Ready 2 Yield® soybeans with significantly improved yield potential is an excellent example of new technology that benefits Canadian farmers.

Additional Information

1 Brand Health and Image Study. Stratus Agri Marketing Inc., 2006.

2 Source: Canadian Intellectual Property Office website (www.cipo.ic.gc.ca).

Monsanto Company is a member of Excellence Through StewardshipSM (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through StewardshipSM is a service mark of Excellence Through Stewardship.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready[®] crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup[®] brand agricultural herbicides. Roundup[®] brand agricultural herbicides will kill crops that are not tolerant to glyphosate. CustomCare and Design[®], Monsanto and Vine Design[®], Roundup[®], Roundup Original[®], Roundup Ready[®], Roundup Ready 2 Yield[®], and Vistive[®] are registered trademarks of Monsanto Technology LLC, Monsanto Canada, Inc. licensee. ©2010 Monsanto Canada, Inc. (TR2036-1-BIL-11/10)

For more information go to
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Table: Original Roundup Ready Soybean Patent Expiry Milestones

2011	2012	2013	2014	2021
<ul style="list-style-type: none"> Canadian ORI soybean patent expires Technology Stewardship Agreement provisions remain in effect (i.e. no saved seed) 	<ul style="list-style-type: none"> Option to purchase ORI certified seed from seed company (without contractual obligations or royalty payment) Option to save ORI seed from harvest for replanting in 2013 	<ul style="list-style-type: none"> Option to plant ORI soybeans saved from own seed 	<ul style="list-style-type: none"> ORI soybean patent expires in United States 	<ul style="list-style-type: none"> Monsanto continues to provide full regulatory support of ORI grain for selling and processing



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