Introduction

This 2017 Technology Use Guide (TUG) provides a concise source of technical information about Monsanto Canada’s current portfolio of technology products, and sets forth the requirements and recommendations or Best Management Practices for the use of these products. Monsanto Technology Stewardship Agreement holders will be notified when significant changes occur to allow users to be familiar with the most recent information and required practices.

This technical guide is not a pesticide product label. It is intended to provide additional information and to highlight approved uses from certain product labels. Read and follow all precautions and use instructions in the label booklet and separately published supplemental labeling for the agricultural herbicide product you are using, as well as any other pesticide products. Nothing in this TUG should be construed as a substitute for reading all product labeling.
Stewardship Overview

A Message About Stewardship
Monsanto Canada, Inc. (Monsanto) is committed to enhancing grower productivity and profitability through the introduction of new agricultural biotechnology traits and other products. These new technologies bring enhanced value and benefits to growers, and growers assume responsibilities for proper management of these products. Growers planting seed with Monsanto biotech traits and/or seed treatments agree to implement the following stewardship practices, including, but not limited to:

- Reading, signing and complying with the Monsanto Technology Stewardship Agreement (TSA) and reading all annual license terms and updates before purchase or use of any seed containing a Monsanto trait.
- Reading and following the directions for use on all product labels.
- Reading and following the IRM requirements set forth in this Technology Use Guide (TUG) prior to planting; complying with the applicable Insect Resistance Management (IRM) practices for specific biotech traits as mandated by the Canadian Food Inspection Agency (CFIA).
- Using seed containing Monsanto technologies solely for planting a single commercial crop.
- Complying with any additional stewardship requirements, such as grain or feed use agreements, product marketing requirements, or geographic planting restrictions that Monsanto deems appropriate or necessary to implement for proper stewardship or regulatory compliance.
- Selling crops or materials containing biotech traits only to commodity handlers that confirm their acceptance, or using harvested crop/material on-farm.
- Not moving seed and material containing biotech traits across boundaries into nations where import is not permitted.
- Not selling, promoting and/or distributing where the product is not yet approved.

In addition, growers are encouraged to:

- Follow applicable stewardship recommendations as outlined in this TUG.
- Following the Herbicide Resistance Management Recommendations and Corn Rootworm Best Management Practices (BMPs) to help minimize the risk of resistance development.

Why is Stewardship Important?
- Signing a TSA provides growers with access to Monsanto’s germplasm and the biotech trait technologies therein, and provides limited warranties on Monsanto technology performance.
- Following IRM requirements guards against insect resistance to Bacillus thuringiensis (B.t.), enabling the long-term durability of these technologies, and meeting CFIA requirements.
- Utilizing biotech seed only for planting a single commercial crop helps preserve the effectiveness of biotech traits, and encourages investment for future biotech innovations, which further improves farming technology and productivity.

Crop or Material Handling Stewardship Statement

The following Excellence Through Stewardship statement applies to Roundup Ready® Corn 2, VT Double PRO® RIB Complete™ corn, Genuity® VT Triple PRO® RIB Complete™ corn, SmartStax® RIB Complete™ corn, Genuity® Roundup Ready® Sugarbeets, Genuity® Roundup Ready® Canola, Performance Series’ Sweet Corn, Roundup Ready 2 Stend® Soybeans, and Genuity® Roundup Ready 2 Yield® Soybeans:

**Monsanto Company is a member of Excellence Through Stewardship® (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 these products 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 commodity crop products.

The following Excellence Through Stewardship statement applies to HarvXtra™ Alfalfa with Roundup Ready® Technology:

**Forage Genetics International, LLC (“FGI”) is a member of Excellence Through Stewardship® (ETS).** FGI products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with FGI’s Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. 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. Growers should refer to biotradesatus.com for any updated information on import country approvals. Excellence Through Stewardship® is a registered trademark of Biotechnology Innovation Organization.

Please see the product specific sections of HarvXtra™ Alfalfa with Roundup Ready® Technology for important information including material handling on this product.
The Field Check Program

Monsanto’s Field Check Program aims to keep farming fair for everyone. When a grower goes against the terms of their TSA, it is unfair to the growers who honour their agreement with Monsanto. One of the terms of the TSA you have signed allows Monsanto to review your use of patented biotech seed technology for a prescribed period of time after the seed is purchased. Reviews are conducted through our Technology Protection Field Check Program. Monsanto's Field Check Program began in 1997 to help maintain a level playing field for all growers. Since then, Monsanto has conducted more than 15,000 Field Checks in Canada — all in an effort to make sure that growers who haven't paid for our patented technology are not benefitting unfairly.

Information about the Field Check Process

Our Field Check representatives are independent third-party professionals who are committed to conducting their checks with the utmost privacy and consideration. The Field Check representatives have been trained to complete your Field Check as conveniently and efficiently as possible. During our visit, the representative will review your receipts of seed, glyphosate, and dicamba purchases, as well as maps of your farmed land. As part of the Field Check, our representative will also take seed, plant and/or bin samples to ensure that your farmed acres are being managed according to the terms of the TSA you have signed. At the end of our Field Check Program, Monsanto will be in touch to review your Field Check results.

Monsanto Invests in the Field Check Program for Three Key Reasons:

- No business can survive without being paid for its product.
- Monsanto invested more than $1.5 billion last fiscal year researching new tools for growers. If only some growers are paying the required technology fees, our ability to invest in research and development to create new products decreases.
- When a grower decides to go against the terms of his or her Technology Stewardship Agreement by saving and re-using seed, it is unfair to the growers who choose to honour their agreements with Monsanto.

Selection for Field Check

Generally, the growers who are selected to participate in a Field Check have been randomly selected from the group of growers who have signed a TSA. Sometimes, a Field Check results when Monsanto is provided with information about growers who are not honouring the terms of their agreement or attempting to benefit unfairly from the use of patented technology. If you become aware of individuals who are utilizing Monsanto’s biotech traits in a manner that is not consistent with the terms and conditions of the TSA, you may call Monsanto's Technical Support line at 1-800-667-4944 or send a letter to:

Intellectual Property Protection
900 One Research Road
Winnipeg, Manitoba R3T 6E3

Monsanto treats any information of this nature as confidential. However, if the information provided becomes the subject of court proceedings, Monsanto would be required to disclose any correspondence that was relevant to the matter. You can choose to provide information about potential violations without revealing your identity or your location to remain anonymous.

2016 Results

In 2016, 25 Field Check representatives conducted Field Check visits with randomly selected customers across Canada. We found that the vast majority of our customers were following the terms and conditions of the TSA they signed. We have thanked those growers for their participation and compliance.

Non-Compliance

Unfortunately, we did find some instances of non-compliance with the TSA in the 2016 Field Check Program. Key examples include:

- Growers who refused to cooperate with the Field Check Program — In these cases, we allow the grower customer another chance to cooperate, failing which we take steps to terminate their TSA. A termination means this customer no longer has access to Monsanto's patented technology in any crop. In the few instances where we have had to terminate the TSA, we have notified individual retailers so they can ensure there are no future sales to this farm entity.

- Seed containing Monsanto's patented technology had been delivered to growers who had not signed a TSA – Any purchase and possession of seed containing Monsanto’s patented technology requires an executed TSA.

- Unfortunately we also discovered a small number of growers who were engaging in seed piracy by using saved seed on their farms. These growers acknowledged immediately that planting saved seed was wrong. Some of these matters arose from randomly selected files and others resulted from anonymous tips.

In these cases, cash payments were made by the growers to take the crops to harvest. Monsanto has made the public commitment that it will never profit because of a bad decision made by a customer. Every dollar that has been collected from a seed piracy settlement supplements Monsanto Canada’s existing corporate giving program that provides funds to charitable programs that benefit rural residents and rural communities across Canada.
An Important Note About Genuity® Roundup Ready 2 Yield® Soybean Technology

Just as the seed and traits offered to growers have continued to evolve and offer more benefits, Monsanto and its partners have developed new technology to detect these traits.

An example is Genuity® Roundup Ready 2 Yield® soybean technology, which is a newer technology and is covered by a different set of patents than first-generation Roundup Ready soybeans. As a result, changes that affected the use of original Roundup Ready technology when its patent expired do not apply to Genuity Roundup Ready 2 Yield soybeans. Although both technologies provide tolerance to glyphosate and may appear similar in the field, the traits have different molecular signatures.

Monsanto and EnviroLogix®, a leader in the development and manufacture of immunoassay test kits, have developed a field-friendly test to detect the Roundup Ready 2 Yield® trait in soybeans. The test can provide accurate detections in less than 20 minutes, and is being widely used by Field Check representatives supporting Monsanto’s Technology Protection Field Check Program. This is how Monsanto uses testing to continue to ensure farming is fair for everyone.

Crop or Material Handling Stewardship Statement for Original Roundup Ready® Soybeans Patent Status

The Canadian patents for the original Roundup Ready soybean technology (event 40-3-2) expired in 2011, and Monsanto no longer sells that product in Canada. This is the first widespread plant biotechnology trait to go off patent. Although the patents on the trait expired in 2011, growers may have purchased and planted that technology during the life of the patents. If seed was purchased prior to patent expiry, under the terms of the license which the seed was purchased, that seed and any resulting grain cannot legally be saved for planting.

Note: The next generation soybean technology (i.e. Genuity Roundup Ready 2 Yield soybeans) is covered by a different patent than the first-generation Roundup Ready trait technology. As a result, patent expiration of the original Roundup Ready technology does not apply to Genuity Roundup Ready 2 Yield soybeans.

Agronomic and Weed Resistance Management Stewardship

While the patent on original Roundup Ready soybeans has expired and the product is no longer sold by Monsanto, the basic agronomic stewardships requirements for a user of that technology remain. These agronomic stewardship requirements are the same as for Roundup Ready 2 Yield soybeans with the following key exceptions:

- Roundup brand or other agricultural glyphosate herbicides must be federally approved in your specific Province for application on original Roundup Ready soybeans. Application rates over original Roundup Ready soybeans are different than those for use on Roundup Ready 2 Yield soybeans. For complete information on approved application always read and follow the specific herbicide label.
- Report any incidence of less than expected herbicide tolerance or other seed product performance inquiry to your seed retailer.

Coexistence

Coexistence in agricultural production systems and supply chains is well established and well understood. Different agricultural systems have coexisted successfully for many years around the world. Standards and best practices were established decades ago and have continually evolved to deliver high purity seed and grain to support production, distribution, and trade of products from different agricultural systems. For example, production of similar commodities such as field corn, sweet corn, and popcorn has occurred successfully and in close proximity for many years. Another example is the successful coexistence of canola varieties with low erucic acid content for food use and rapeseed varieties with high erucic acid content for industrial uses.

The introduction of biotech crops generated renewed discussion of coexistence of biotech cropping systems with conventional cropping systems and organic production. These discussions have focused on the potential marketing impact of the introduction of biotech products on other systems. The health and safety of biotech products are not an issue because their food, feed, and environmental safety are demonstrated before they are allowed to enter the agricultural production system and supply chain.

The coexistence of conventional, organic, and biotech crops has been the subject of several studies and reports. These reports conclude that coexistence among biotech and non-biotech crops is readily achievable and is occurring. They recommend that coexistence strategies be developed on a case-by-case basis considering the diversity of products currently in the market and under development, the agronomic and biological differences in the crops themselves, and variations in regional farming practices and infrastructure. Any coexistence strategy is designed to meet market requirements and should be developed using current science-based industry standards and management practices. Those strategies must be flexible, facilitate options and choice for the grower and the food and feed supply chain, and must be capable of being modified as changes in markets and products warrant.

Successful coexistence of all agricultural systems depends on communication, cooperation, flexibility, and mutual respect for each system among growers. Agriculture has a history of innovation and change, and growers have always adapted to new approaches or challenges by utilizing appropriate strategies, farm management practices, and new technologies.
The responsibility for implementing practices to satisfy specific marketing standards or certification lies with the grower who is growing a crop to satisfy a particular market. That grower is inherently agreeing to employ those practices appropriate to ensure the integrity and marketability of his or her crop. This is true whether the goal is high-oil corn, white or sweet corn, or organically produced yellow corn for animal feed. In each case, the grower is seeking to produce a crop that is supported by a special market price and consequently assumes responsibility for satisfying market specifications to receive that premium. That said, each grower needs to be aware of the planting intentions of his or her neighbour in order to gauge the need for appropriate best management practices.


### Identity Preserved Production

Some growers may choose to preserve the identity of their crops to meet specific markets. Examples of Identity Preservation (IP) crops include production of seed, white, waxy, or sweet corn, specialty oil or protein crops, food grade crops, and any other crop that meets specialty needs, including organic and non-genetically enhanced specifications. Growers of these crops assume the responsibility and receive the benefit for ensuring that their crop meets mutually agreed-upon contract specifications.

Based on historical experience with a broad range of IP crops, the industry has developed generally accepted IP agricultural practices. These practices are intended to manage IP production to meet quality specifications, and are established for a broad range of IP needs. The accepted practice with IP crops is that each IP grower has a responsibility to implement any necessary processes. These processes may include sourcing seed appropriate for IP specifications, field management practices such as adequate isolation distances, buffers between crops, border rows, planned differences in maturity between adjacent fields that might cross-pollinate, and harvest and handling practices designed to prevent mixing and to maintain product integrity and quality. These extra steps associated with IP crop production are generally accompanied by incremental increases in cost of production and consequently of the goods sold.

### General Recommendations for Management of Pollen Flow and Mechanical Mixing

For all crop hybrids or varieties that growers wish to identity preserve, or otherwise keep separated, they should take steps to prevent mechanical mixing. Growers should make sure all seed storage areas, transportation vehicles, and planter boxes are cleaned thoroughly both prior to and subsequent to the storage, transportation, or planting of the crop. Growers should also make sure all combines, harvesters, and transportation vehicles used at harvest are cleaned thoroughly both prior to and subsequent to their use in connection with the harvest of the material produced from the crop. Growers should also make sure all harvested material is stored in clean storage areas where the identity of the material can be preserved.

Self-pollinated crops, such as soybeans, do not present a risk of mixing by cross-pollination. If the intent is to use or market the product of a self-pollinated crop separately from general commodity use, growers should plant fields at a sufficient distance away from other crops to prevent mechanical mixture during harvest.

Growers planting cross-pollinated crops, such as corn, alfalfa, or canola, who desire to preserve the identity of these crops or to minimize the potential for these crops to outcross with adjacent fields of the same crop kind, should use the same generally accepted practices to manage mixing that are used in any of the currently grown identity-preserved crops of similar crop kind.

It is generally recognized in the industry that a certain amount of incidental, trace level pollen movement occurs, and it is not possible to achieve 100% purity of seed or grain in any crop production system. A number of factors can influence the occurrence and extent of pollen movement. As stewards of technology, growers are expected to consider these factors and talk with their neighbours about their cropping intentions.

Growers should take into account the following factors that can affect the occurrence and extent of cross-pollination to or from other fields. Information that is more specific to the crop and region may be available from provincial extension offices.

- **Cross-pollination is limited.** Some plants are incapable of cross-pollinating; while others like alfalfa require cross-pollination to produce seed. Importantly, cross-pollination only occurs within the same crop kind, like corn to corn.

- **The amount of pollen produced within the field can vary.** The pollen produced by the crop within a given field, known as pollen load, is typically high enough to pollinate all of the plants in the field. Therefore, most of the pollen that may enter from other fields falls on plants that have already been pollinated with pollen that originated from plants within the field. In crops such as alfalfa, the hay cutting management schedule significantly limits or eliminates bloom, and thereby restricts the potential for pollen and/or viable seed formation.
The existence and degree of overlap in the pollination period of crops in adjacent fields varies. This will vary depending on the maturity of crops, planting dates, and the weather. For corn, the typical pollen shed period lasts from 5 to 10 days for a particular field. Therefore, viable pollen from neighboring fields must be present when silks are receptive in the recipient field during this brief period to produce any grain with traits introduced by the out-of-field pollen.

Distance between fields of different varieties or hybrids of the same crop. The greater the distance between fields the less likely their pollen will remain viable and have an opportunity to mix and produce an outcross. For wind-pollinated crops, most cross-pollination occurs within the outer-most few rows of the field. In fact, many white and waxy corn production contracts ask the grower to remove the outer 12 rows (10 m) of the field in order to remove most of the impurities that could result from cross-pollination with nearby yellow dent corn. Furthermore, research has also shown that as fields become further separated, the incidence of wind modulated cross-pollination drops rapidly. Essentially, the in-field pollen has an advantage over the pollen coming from other fields because of its volume and proximity.

The distance pollen moves. How far pollen can travel depends on many environmental factors including weather during pollination, especially wind direction and velocity, temperature, and humidity. For bee pollinated crops, the grower's choice of pollinator species and apiary management practice may reduce field-to-field pollination potential. All these factors will vary from season to season and some factors from day to day and from location to location.

For wind-pollinated crops, the orientation and width of the adjacent field in relation to the dominant wind direction. Fields oriented upwind during pollination will show dramatically lower cross-pollination for wind-pollinated crops, like corn, compared to fields located downwind.

**Weed Management**

Monsanto is committed to the proper use and long-term effectiveness of its proprietary herbicide brands through a four-part stewardship program: developing appropriate weed control recommendations; continuing research to refine and update recommendations; education on the importance of effective weed management; and responding to weed control inquiries through a product performance evaluation program.

As leaders in the development and stewardship of Roundup® agricultural herbicides, the Roundup Ready® Xtend Crop System, and other products, Monsanto invests significantly in research conducted in conjunction with academic scientists, extension specialists, and crop consultants, that includes an evaluation of the factors that can contribute to the development of herbicide resistance and how to properly manage weeds to delay the selection of herbicide resistance. Visit Monsanto Crop Management Solutions (www.monsantocms.ca) for practical, best practices-based information on reducing the risk for development of dicamba or glyphosate-resistant weeds and for managing the risk on a field-by-field basis. For more information visit www.monsantocms.ca.

In addition, visit wssa.net to access herbicide resistance training lessons that provide in-depth educational information.

**Group Number**

Glyphosate, the active ingredient in products such as Roundup WeatherMAX® and Roundup Transorb® HC, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Using the same system, glufosinate, the active ingredient in Liberty® brand herbicides, is a Group 10 herbicide, and dicamba, the active ingredient in products such as XtendiMax® with VaporGrip™ Technology, is a Group 4 herbicide. Any weed population that contain plants naturally resistant to any herbicide group. Such resistant weed plants may not be effectively managed when using a herbicide that the weed plant is resistant to, but may be effectively managed utilizing another herbicide alone or in mixtures from different herbicide groups and/or by using cultural or mechanical practices. Consult your local company representative, provincial extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

**Agronomic Principles**

Most crops are very sensitive to early season weed competition that impacts yield. Weed control systems must provide growers the opportunity to control weeds before they become competitive. Failure to control weeds with the right rate, at the right time and with the right product, can lead to increased weed competition, weed escapes, the potential for selecting for weed resistance and possible decreased yields. Use diverse weed management practices appropriate for the crop system, including multiple herbicide modes of action alone or in tank mixes, based on the weed spectrum in the field and according to label directions.

**Weed Management Recommendations**

Proactively implementing diversified weed control strategies to help minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different mechanisms of action and overlapping weed spectrums with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and following label use directions is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in reducing the spread of weed seed.

In Roundup Ready technology and Roundup Ready Xtend Crop System it is also important to start with a clean field, using either a burndown tank mix with glyphosate, foundation residual herbicide
application and/or tillage, and to optimize herbicide performance by controlling weeds early when they are small and actively growing.

In summary,

- Start with a clean field, free of weeds
- Use a diverse set of weed control tools, including broad spectrum residual herbicides or mixtures that use different mechanisms of action
- Add other products, at the right rate and timing for the weed, to Monsanto agricultural herbicides when needed
- Control weed escapes and remove weeds before they set seed

**Dicamba- or Glyphosate-Resistant Weeds**

Monsanto actively investigates and studies new claims of potential dicamba- or glyphosate-resistant weeds and weed control complaints related to Monsanto technology. Report any incidence of repeated non-performance of dicamba or glyphosate agricultural herbicides on a particular weed to the appropriate company representative, local retailer or provincial extension agent. For Monsanto branded herbicides, you may call the Monsanto Technical Support line at 1-800-667-4944. If dicamba- or glyphosate-resistant weed biotypes are confirmed, Monsanto provides recommended control measures, which may include additional herbicides, tank-mixes or cultural practices. Monsanto actively communicates all this information to growers through multiple channels, including the herbicide label, [www.weedscience.org](http://www.weedscience.org), supplemental labeling, this TUG, media and written communications, Monsanto’s website ([www.monsantocms.ca](http://www.monsantocms.ca)), and grower meetings.

Growers must be aware of, and proactively manage for, dicamba- and glyphosate-resistant weeds in planning their weed control program. If a weed is known to be resistant to dicamba or glyphosate, then a resistant population of that weed is by definition no longer controlled with labeled rates of dicamba or glyphosate respectively. Roundup WeatherMAX®, Roundup Transorb® HC and Roundup Xtend™ with VaporGrip” Technology are not warranted to cover the failure to control glyphosate-resistant weed populations; Roundup Xtend™ with VaporGrip” Technology and XtendiMax® with VaporGrip” Technology are not warranted to cover the failure to control dicamba-resistant weed populations.

**Herbicide-Tolerant Volunteer Plants**

Volunteer plants from the previous crop can compete with a new rotational crop for nutrients, moisture, and negatively impact crop management much the same as weeds, and also need to be managed. The impact and persistence of volunteers from a previous crop will depend on many factors including the biology of the volunteer crop type, the competitiveness of the rotational crop, field management practices employed by the grower and environmental conditions. With the introduction of herbicide tolerance traits into different crop types, growers need to be aware that volunteer plants from these herbicide tolerant crops will not be controlled in a rotational crop where that same herbicide is utilized. For example, volunteer corn from a previous crop containing Roundup Ready technology will not be controlled by Roundup WeatherMAX applied to a rotational Roundup Ready 2 Yield soybean crop. Additionally, volunteers from herbicide tolerant crop can be present over many years depending on the persistence of the seed in the soil or can move to other fields on equipment, by wildlife, wind, water or low level presence in seed. Growers should plan to utilize herbicides (alone or as a tank mix) in the rotational crop (as a burn down, residual or over the top) that will control volunteers and are not utilized as part of an herbicide tolerance system in that volunteer crop type. For the current control recommendations for dicamba- or glyphosate resistant volunteers, refer to [monsantocms.ca](http://monsantocms.ca) or call Monsanto’s Technical Support line at 1-800-667-4944.

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Read and follow all product labeling before making in-crop or other applications of Monsanto branded glyphosate agricultural herbicides, Monsanto branded dicamba agricultural herbicides or using any other pesticide. For supplemental labels or fact sheets for Monsanto products, call 1-800-667-4944. Monsanto does not restrict your ability to use any herbicide so long as the product is specifically registered and labeled for in-crop use on the applicable crop. Read the product label or contact the product manufacturer if you have questions about PMRA or provincial scheduling for in-crop use.

MONSANTO DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, INCLUDING BUT NOT LIMITED TO THOSE THAT ARE LABELED FOR USE ON CROPS CONTAINING MONSANTO TECHNOLOGIES. MONSANTO SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF THESE PRODUCTS IN CROPS CONTAINING MONSANTO TECHNOLOGIES. ALL QUESTIONS AND COMPLAINTS ARISING FROM THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, OR THE PERFORMANCE OF MONSANTO TECHNOLOGY IN CONNECTION WITH THE USE OF SUCH PRODUCTS, SHOULD BE DIRECTED TO THOSE COMPANIES.
Tank-Mixtures and Surfactant/Adjuvant Use with Monsanto Agricultural Herbicides

Tank-mixtures of Roundup WeatherMAX®, Roundup Transorb® HC, Roundup Xtend™ with VaporGrip® Technology, or XtendiMax® with VaporGrip® Technology with insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control, crop injury, reduced pest control or antagonism. Refer to the product label, supplemental labeling or fact sheets published separately by Monsanto for specific agricultural herbicides tank-mix recommendations. The addition of surfactants or additives containing surfactants to glyphosate spray solutions may increase the potential for crop injury. When using Roundup WeatherMAX, Roundup Transorb HC, or Roundup Xtend with VaporGrip Technology, herbicides, NO additional surfactant is needed for optimal performance for applications in Roundup Ready crops.

The addition of surfactants or additives containing surfactants to dicamba spray solutions may increase the potential for crop injury. When using XtendiMax with VaporGrip Technology or Roundup Xtend with VaporGrip Technology, herbicides, NO additional surfactant is needed for optimal performance for applications in Roundup Ready Xtend Crop Systems.

A complete list of labels can be located at www.monsanto.ca, www.Roundup.ca or http://pr-rp.hc-sc.gc.ca/l-s-re/index-eng.php. Approved labels, including supplemental labeling, for Monsanto agricultural herbicides must be in the possession of the user at the time of pesticide application. Read and follow all pesticide product label directions.

Treated Seed Requirements and Best Management Practices

The use of seed applied technologies by farmers is an effective tool to provide the necessary protection of seeds for a strong, healthy start. Seed treatments deliver a precise application that shields seeds from the insects and diseases that exist in the soil during those early developmental stages.

Growers must follow all seed treatment label, bag and tag requirements. If a grower chooses to use a seed flow lubricant to aid in planting, the Canada Pest Management Regulatory Agency (PMRA) requires that only a dust-reducing fluency agent is used and specifically talc may not be used as a seed flow lubricant. If used, carefully follow use directions for seed flow lubricant.

Below are some recommended best management practices regarding the handling and planting of treated seeds to reduce exposure and potential risks to people, pollinators (bees), and the environment.

- Avoid off-site movement of dust from treated seeds during planting or when opening seed containers by observing wind speed and direction.
- During planting, be aware of the presence of honeybee hives, or crops or weeds in the flowering stage within or adjacent to the field, which could attract pollinators. Fill the planter at least 10 meters inside the field to be planted.
- Avoid shaking the bottom of the treated seed bag when filling the planter. This reduces the release of dust that could have accumulated during transport.
- For pneumatic planters, direct air exhaust downward towards the soil surface if possible to decrease the potential for dust drift.
- Properly dispose of any spilled treated seed to minimize exposure to people, livestock, wildlife and the environment.
- Return leftover treated seed to its original containers if seed is intended for storage and use at a later date.
- Note that there is zero tolerance for treated seed kernels in the commodity grain channel when the seed tag states that the treated seed is not to be used for food, feed, or oil purposes.

For additional information to help minimize the dust generated during planting, refer to the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators or the CropLife Canada website at www.croplife.ca.

Requirements for Ontario for 2017

Corn and soybean growers in Ontario who intend to plant neonicotinoid insecticide treated seed* in 2017 will have to complete Ontario government IPM training, pest assessment report and IPM Written Declaration Form. For further details on Ontario government neonicotinoid regulation refer to www.ontario.ca/page/neonicotinoid-regulations.

Monsanto BioAg Products

Monsanto BioAg products offer leading biological solutions for agriculture. For more information, talk to your local retailer or discover more at monsantobioag.com.

Establishing Healthy Pollinator Habitat

Pollinators are essential to agricultural systems. By providing high-quality habitat for pollinators such as bees and monarch butterflies, you provide benefits to your farm by increasing the diversity of pollinators in your area and improving soil health. All of these benefits add up to a productive and sustainable farmscape.

Consider establishing a diverse habitat that has a mixture of wildflowers, milkweed and other beneficial plants to supply nutrition and breeding areas for a variety of pollinators, including bees, butterflies and birds. Plant this habitat in sites such as field borders, pivot corners, conservation lands, ditches, and buffers.

Every region is different. To get started, visit www.beesmatter.ca or reach out to your local ag extension office.

Honey Bee Health Information

From time to time claims circulate that insect protected GMO crops harm bees. The insecticidal proteins produced by the currently available insect protected crops are derived from a common soil bacterium and Monsanto screens all of the proteins we use for toxicity

*Note - Sweet corn and seed planted for the purposes of pedigreed seed increases are exempt.
to honey bees. None of the proteins have provided any evidence of harm in either short or long term testing with both adult and larval honey bees. Likewise, there are no credible reports of harm caused by insect protected GMO crops on honey bees.

Overwinter losses of honey bee colonies are an on-going concern in some regions. There are many possible causes but parasites such as the Varroa mite, diseases, the pesticides used to control mites and diseases, poor nutrition, transportation stress and pesticides including neonicotinoid insecticides are often cited.

Monsanto has many efforts underway to improve honey bee health:
- Our Honey Bee Advisory Council helps guide our honey bee health research and development efforts;
- We are working to develop a product targeted to address Varroa mites;
- We established robust seed treatment insecticide stewardship plans to manage risks to beneficial insects such as bees; and
- We actively support collaborations with all levels of the honey bee industry, PMRA, university researchers, people engaged in pollinator dependent agriculture as well as canola, corn and soybean growers to identify ways to improve honey bee health.

**Commitment to Steward Insect-Protected Traits**

Monsanto is committed to the success of our grower customers by providing practical, flexible and cost-effective solutions that address on-farm challenges, contribute to grower choice and provide economic benefits to our customers. To ensure insect-protected B.t. traits remain a viable tool for growers, we are committed to ongoing conversations with the corn industry on the following IRM efforts to establish the most comprehensive approach to the stewardship of corn insect-protected traits.

Monsanto's ongoing IRM efforts:
- Continually working to increase overall awareness of the need for, and adoption of, strong IRM programs through retailers selling Monsanto insect protected products, as well as the academic community.
- Carefully evaluating the need for — and practicality of — updating our Best Management Practices or agronomic recommendations as new scientific data becomes available. Updates may include information tailored to local growing conditions, refuge compliance, scouting techniques, the addition of soil-applied insecticides, maturity and harvest schedules, soil management practices, crop rotation, and adoption of products with multiple modes of action.
- Expanding our offering of multi-trait corn hybrids that provide multiple modes of action and increase protection for growers. We encourage growers to begin trying these seeds with greater protection as the product line expands in their area.
- Researching and developing other genes in our pipeline so that we can continue to deliver products with new and increased modes of action.
- Conducting thorough, generational studies on sample insect populations as appropriate to determine if stable and inherited resistance is present.
- Monitoring and studying the occasional performance issues in fields with very high insect population densities that exceed control thresholds.

Resistance naturally evolves to many pest control tactics. The risk of insect pests evolving resistance is real, but may be reduced with proper planning. The best way to preserve the benefits and insect protection of B.t. technology is to develop and implement an IRM plan.

**Insect Resistance Management (IRM) Requirements**

An effective IRM program is a vital part of responsible product stewardship for insect-protected biotech products. Monsanto is committed to implementing an effective IRM program for all its insect-protected technologies in all countries where they are commercialized. Such programs strike a balance among available knowledge, practicality, and grower acceptance and implementation of the plan.

In Canada, the CFIA requires that Monsanto implement, and growers who purchase insect-protected technologies follow, an IRM plan. IRM programs for B.t. traits are based upon an assessment of the biology of the major target pests, grower needs and practices, and appropriate pest management practices. These mandatory regulatory programs have been developed and updated through broad cooperation with stakeholders, as represented by the Canadian Corn Pest Coalition (CCPC). More information on CCPC can be found at [www.cornpest.ca](http://www.cornpest.ca).

These programs contain several important elements. One key component of an IRM plan is a refuge. A refuge is simply a portion of the relevant crop that does not contain a B.t. technology for the insect pests targeted by the planted biotechnologies. The lack of exposure to B.t. proteins allows susceptible insects emerging from the refuge to mate with the rare resistant insects that may emerge from the B.t. crop. Susceptibility to B.t. technology would then be passed on to their offspring, helping to preserve the long-term effectiveness of that and possibly other B.t. technologies.

Monsanto is committed to the preservation of B.t. technologies. Please do your part to preserve B.t. technologies by implementing the correct IRM plan on your farm. Failure to follow IRM requirements and to plant a proper refuge may result in the loss of a grower's access to Monsanto B.t. technologies.

**Compliance Monitoring Program**

The CFIA requires Monsanto to take corrective measures in response to a finding of grower IRM non-compliance. As mandated by the CFIA, Monsanto or an approved agent of Monsanto must monitor refuge management requirements. The TSA signed by the grower
requires that upon request by Monsanto or its approved agent, a grower must provide the location of all fields planted with Monsanto B.t. technologies and the locations of all associated refuge required areas. The grower must cooperate fully with any field inspections, and allow Monsanto or an agent of Monsanto to inspect all fields and refuge areas to ensure an approved insect resistance management program has been followed. All inspections will be performed at a reasonable time and arranged in advance with the grower so that the grower can be present.

Failure to follow IRM requirements and properly plant a refuge may result in the loss of access to B.t. technologies. Please do your part to ensure these technologies are preserved by fully cooperating in refuge management. Continued availability of B.t. technologies depends on grower compliance with CFIA registration conditions. With an effective IRM plan in place, growers will continue to benefit from the effective and consistent insect protection and top-yield potential found in crops containing these technologies.

Questions? We’re Here to Help.
Monsanto works to develop and implement IRM programs that strike a balance between available knowledge and practicality, with grower acceptance and implementation of the plan as critical components. Refuge requirements vary by the type of product being planted and the location of planting. Growers must plant the amount of refuge acres for a product that is required. Please contact your seed dealer with any questions and/or call 1-800-667-4944.

If growers observe performance problems for targeted insect pests, they should contact their local Monsanto representative, retailer, or Monsanto’s Technical Support line at 1-800-667-4944.

Integrated Pest Management (IPM) Recommendations

Integrated Pest Management (IPM) describes an effective and environmentally sustainable approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information is used to manage pests in a manner that is least impactful to people, property and the environment.

Sustainable Agriculture
Monsanto B.t. corn products are highly compatible with the goals of IPM and sustainable agriculture. Sustainability of corn agricultural systems is enhanced when growers follow recommended IPM practices, including cultural and biological control tactics, pest sampling and appropriate use of pest thresholds for management practices. These latter measures are not only important for non-B.t. refuge acres, but are equally important for detecting and controlling non-target pests that exceed established thresholds on B.t. crops.

Pests Not Controlled
Specific B.t. corn products offer control against several of the key lepidopteran and coleopteran insect pests, but will not control all insect pests in corn. Therefore, it is important to understand that, in some cases, severe infestations of target and/or non-target insects may require additional control measures/treatment. Fields should be scouted regularly, especially during periods of heavy or sustained pest presence. Consult local IPM monitoring guidelines to identify insects that should be routinely monitored, and for recommended controls and thresholds. When insecticide treatments are required, select products that have the least impact on beneficial insects.

Consult your local crop adviser or extension specialist for the most up-to-date information.

Monitoring Pests
Carefully monitor fields for all pests to determine the need for remedial insecticide treatments. For target pests, scouting techniques and supplemental treatment decisions should take into account the fact that larvae must hatch and feed before they will be affected by the B.t. protein(s). Fields should be scouted regularly, following periods of heavy or sustained egg lay, especially during bloom or flowering, to determine if significant larval survival has occurred.

Preventing Pest Adaptation
Use the best agronomic management practices, in conjunction with the appropriate seed product, to help obtain the greatest yield benefits. Use seed products, seeding rates and planting technologies appropriate for each specific crop and geographical area. As much as possible, manage the crop to avoid plant stress.

• Use proper crop rotation practices and products to control pests and make it more difficult for pests to adapt. In areas where crop rotation is not practiced, or where rotation occurs but high pest populations are observed, the use of products with multiple modes of action, such as SmartStax® RIB Complete®, is strongly recommended.

• Employ appropriate scouting techniques and treatment decisions to preserve beneficial insects that can provide additional insect pest control.

• Manage for appropriate maturity and harvest schedules. Destroy crop residue immediately after harvest to avoid regrowth and minimize selection for insect resistance in late-season infestations.

• Use soil management practices that encourage destruction of over-wintering pests.
An IPM Checklist

- Employ appropriate scouting techniques and treatment decisions.
- Select insecticide treatments that have minimal negative impact on beneficial insects whenever possible; these insects are conserved by B.t.-protected crops and can contribute to insect pest control.
- Rotate insecticide mode of action to help reduce the risk of insect pests developing chemical resistance.
- Select cultivars well-adapted to your setting, giving appropriate attention to impact of crop maturity and timing of harvest on pest severity.

- Use recommended cultural control methods to reduce pest overwintering; destroy crop promptly after harvest and use other soil management practices to reduce overwintering insects.
- If growers observe performance problems for targeted insect pests, they should contact their local Monsanto representative, retailer, or Monsanto’s Technical Support line at 1-800-667-4944.
Corn Rootworm (CRW) Best Management Practices

Monsanto has implemented a comprehensive program for management of corn rootworm, including a series of best management practices (BMPs), to better assist growers on every field where growers reported unexpected damage. We encourage growers to follow recommended integrated pest management (IPM) practices, including cultural control tactics, scouting and the appropriate use of pest thresholds and sampling.

If you are not seeing high corn rootworm pressure in a field and you are planting a single mode of action product such as Genuity® VT Triple PRO®, we recommend updating your IPM program to include regular scouting to assess if the addition of an insecticide or other IPM practice is necessary.

These BMPs provide practical solutions to reduce rootworm populations, limit rootworm damage and enable insect resistance management.

ADULT CRW MANAGEMENT CONSIDERATIONS

- Scout fields for CRW adults during silking stage (typically July and August) as adult CRW beetles feed on corn silks and may reduce yield
- Foliar sprays may be an option if CRW beetle populations reach an economic threshold for damage (=1 beetle per plant)\(^1\)
- Follow university extension service or local crop consultant recommendations for products, rates, and proper timing of adult spray applications for reducing CRW beetle populations
- Multiple sprays may be necessary

LARVAL CRW MANAGEMENT CONSIDERATIONS

- The application of an insecticide to the soil surface, in furrows, and/or incorporated into the soil (referred to as “soil applied insecticide,” “soil insecticide” or “SAI”) is not recommended for control of CRW in B.t. -traited corn hybrids(s) except under limited circumstances
- Consult with extension, crop consultants or other local experts for recommendations when considering a combination of CRW traits and soil applied insecticides
- SAIs should not be necessary for CRW control with pyramided CRW traited B.t. corn hybrid(s)

Corn Technologies

**RIB Complete®**

There is no requirement for a structured refuge for products designated as RIB Complete. The refuge seed for RIB Complete® products is contained in the bag, resulting in a refuge configuration that is interspersed within the field when the bag is planted. Interspersed refuge can only be used by planting seed corn specifically generated by qualified seed producers/conditioners licensed by Monsanto to produce RIB Complete products. The refuge incorporated into a bag of a RIB Complete hybrid only provides refuge to the area planted by that bag. If planting other insect-protected hybrids that are not RIB Complete products, those hybrids will require their own refuge as specified by the technology provider which may include a structured refuge or incorporate a manufacturer blended refuge. Always read and understand manufacturer’s refuge requirements for insect protected corn hybrids prior to planting.

**SmartStax® RIB Complete®**

This technology contains contain *Bacillus thuringiensis* (B.t.) proteins that provide three separate modes of action (Cry1A.105, Cry2Ab2, Cry1F) for protection against lepidopteran, above ground insect pests, as well as combined modes of action (Cry3Bb1, Cry34Ab1 and Cry35Ab1) for protection against coleopteran, below ground insect pests. Providing several different B.t. proteins with different modes of action for control will significantly decrease the probability that insects will become resistant to these traits, resulting in enhanced durability of transgenic insect control via B.t.-protected corn products. This product provides protection against European corn borer (*Ostrinia nubilalis*), fall armyworm (*Spodoptera frugiperda*), corn earworm (*Helicoverpa zea*), and black cutworm (*Agrotis ipsilon*). Routine applications of insecticides to control these insects are usually unnecessary when SmartStax® RIB Complete® corn is planted. To enhance effectiveness of the B.t. proteins in controlling Western Bean Cutworm it is recommended growers utilize a foliar insecticide where egg masses are observed on greater than 5% of pre-tassel corn plants. The seed producers/conditioners licensed by Monsanto ensure a minimum of 5% non-B.t. refuge seed is included with SmartStax RIB Complete products in each bag of seed corn.

SmartStax RIB Complete products contain Roundup Ready 2 technology and LibertyLink® technology that provide tolerance to in-crop applications of labeled glyphosate agricultural herbicides and glufosinate herbicides. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

**VT Double PRO® RIB Complete®**

This technology contains contain *Bacillus thuringiensis* (B.t.) proteins that provide two separate modes of action (Cry1A.105 and Cry2Ab2) for protection against lepidopteran, above ground insect pests. Providing different B.t. proteins with different modes of action for protection against above-ground insects will significantly decrease the probability that insects will become resistant to these traits, resulting in enhanced durability of transgenic insect control via B.t.-protected corn products. This product provides protection against European corn borer (*Ostrinia nubilalis*), fall armyworm (*Spodoptera frugiperda*), and corn earworm (*Helicoverpa zea*). Routine applications of insecticides to control these insects are usually unnecessary when corn containing VT Double PRO® RIB Complete® is planted. The seed producers/conditioners licensed by Monsanto ensure a minimum of 5% non-B.t. refuge seed is included with VT Double PRO RIB Complete products in each bag of seed corn.

VT Double PRO RIB Complete products contain Roundup Ready 2 technology that provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

**Genuity® VT Triple PRO® RIB Complete®**

This technology contains contain *Bacillus thuringiensis* (B.t.) proteins that provide two separate modes of action (Cry1A.105, Cry2Ab2) for protection against lepidopteran, above ground insect pests, as well as one mode of action (Cry3Bb1) for protection against coleopteran, below ground insect pests. This product provides protection against European corn borer (*Ostrinia nubilalis*), fall armyworm (*Spodoptera frugiperda*), corn earworm (*Diabrotica barberi*), western corn rootworm (*Diabrotica virgifera virgifera*), and black cutworm (*Agrotis ipsilon*). Routine applications of insecticides to control these insects are usually unnecessary when Genuity® VT Triple PRO® RIB Complete® is planted. The seed producers/conditioners licensed by Monsanto ensure a minimum of 10% non-B.t. refuge seed is included with Genuity VT Triple PRO RIB Complete products in each bag of seed corn.

As part of the IRM plan for Genuity VT Triple PRO RIB Complete corn, experts recommend that growers incorporate crop rotations (out of corn), use of pyramided traits for below ground pests and, when appropriate, use of insecticides to minimize selection of resistant populations.

Genuity VT Triple PRO RIB Complete products contain Roundup Ready 2 technology that provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

**Corn Technologies**
Corn Technologies

**Roundup Ready® Corn 2 and Corn with Roundup Ready® 2 Technology**

Roundup Ready® Corn 2 and corn with Roundup Ready® 2 technology contain Roundup Ready technology that provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides. Roundup Ready Corn 2 and corn with Roundup Ready 2 technology are equivalent in their tolerance to glyphosate agricultural herbicides. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

**Product Specific Weed Management Recommendations and Additional Information**

Corn yield is very sensitive to early-season weed competition. Weed control systems must provide growers the opportunity to control weeds before they become competitive.

- When spring conditions allow, apply pre-emergence residual herbicides at the application rate specified on the product label.
- Or apply a pre-emergence residual herbicide at the appropriate application rate tank-mixed with Roundup WeatherMAX® in-crop before weeds exceed 10 cm in height.
- Follow with a post-emergence in-crop application of Roundup WeatherMAX for additional weed flushes before they exceed 10 cm in height.
- Roundup WeatherMAX may be tank-mixed with other herbicides for post-emergence weed control.
- For complete information about the use of Monsanto agricultural herbicides on Roundup Ready Corn 2 or corn with Roundup Ready 2 technology, refer to the appropriate product’s label booklet or supplemental label.
Insect Pest Control

Performance Series® sweet corn contains Cry1A.105, Cry2Ab2 and Cry3Bb1 from B.t. that together provide excellent protection against European corn borer (Ostrinia nubilalis), fall armyworm (Spodoptera frugiperda), northern corn rootworm (Diabrotica barberi), western corn rootworm (Diabrotica virgifera virgifera), and corn earworm (Helicoverpa zea). Monsanto recommends that you scout your fields as usual, and if unexpected feeding and/or larvae of these insects are encountered, an appropriate insecticide should be used according to label recommendations. Under typical infestation levels, Performance Series sweet corn effectively controls corn earworm, but under extremely high infestation levels supplemental insecticide applications may be required to ensure high quality ears at harvest. Thus, protection from corn earworm must be coupled with thorough scouting and spray programs to maximize marketable yield. Supplemental insecticide sprays to control extremely high corn earworm infestations will aid in situations where high corn earworm pressure has been determined. If supplemental insecticide applications are necessary for control of high levels of corn earworm, rotating insecticide mode of action will help reduce the risk of insect pests developing chemical resistance.

- For target pests, no spray prior to silking.
- After silking, schedule sprays based on insect flight activity and follow state recommendations under high infestation ratings.
- Under heavy insect pressure, spray intervals may have to be reduced.
- Monitor for secondary pests: sap beetles, stink bugs, western bean cutworm, corn silk flies, etc.

Performance Series sweet corn seed is treated for control of wireworms, white grubs, seed corn maggot, and black cutworm.

Planting Requirements

Read and follow the bag tag prior to planting Performance Series sweet corn.

- **Do not repackage seeds.** Each package of seeds includes important legal requirements on the label. Seeds must remain in their original packaging and must not be further subdivided.
- **Post-Harvest IRM Requirements.** A structured refuge is not required for Performance Series sweet corn, however crop destruction must occur no later than 30 days following harvest, but preferably within 14 days. The allowed crop destruction methods are rotary mowing, disking, or plowing down.
- **Identity Preserved (I.P.) Production.** All harvested ears must be stored in areas where the identity of the ears can be preserved.

Performance Series sweet corn contains Roundup Ready® 2 technology that provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides. For information on this technology and weed resistance management refer to the Roundup Ready technology section.
Roundup Ready® Technology

Roundup Ready® technology provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides, allowing a grower to gain the benefits of utilizing glyphosate agricultural herbicides in a weed control system that provides the broadest weed control spectrum, application flexibility, and crop safety.

For ease of reading, all references in the following section on Roundup Ready technology shall refer equally to all products listed above, unless specified as different.

Monsanto Agricultural Herbicide Products for Use with Roundup Ready Technology

These agricultural herbicide products available from Monsanto for the 2017 crop season can be used over any crop containing Roundup Ready technology:

• Roundup WeatherMAX®
• Roundup Transorb® HC

For ease of reading, all references in the following section on Roundup WeatherMAX shall refer equally to Roundup Transorb HC, unless specified as different. For complete information about the use of Roundup WeatherMAX or Roundup Transorb HC agricultural herbicides over the top of crops containing Roundup Ready technology, refer to the appropriate product’s label booklet or supplemental label. A complete list of labels can be located at www.monsanto.ca, www.Roundup.ca or http://pr-rp.hc-sc.gc.ca/ls-re/index-eng.php.

Approved labels, including supplemental labeling, for Monsanto agricultural herbicides must be in the possession of the user at the time of pesticide application. Read and follow all pesticide product label directions.

Weed Management Recommendations for Crops Containing Roundup Ready Technology

Roundup Ready technology enables flexibility, effective broad-spectrum weed control and proven crop safety to control weeds at planting and after crop emergence. Growers can select the weed control program that best fits the way they farm and provides them the greatest benefit.

Options include the use of a residual herbicide with Roundup WeatherMAX, tank-mixing other non-residual herbicides with Roundup WeatherMAX where appropriate and a total post emergence program.

Follow the recommendations below to minimize the risk of developing glyphosate-resistant weed populations and maintaining maximum yield potential in crops containing Roundup Ready technology.

• Start clean with tillage and/or a burndown herbicide.
• Early season weed control is critical to maintain maximum yield potential by:
  – Apply a residual or pre-emergence herbicide at the recommended rate, alone or tank mixed with Roundup WeatherMAX for the target weed spectrum.
  – Utilize post emergence, in-crop applications of Roundup WeatherMAX at labelled rates for the crop containing Roundup Ready technology. Roundup WeatherMAX may be mixed with other herbicides to add additional modes of action for post-emergent weed control.
  – Report any incidence of repeated non-performance of Monsanto brand herbicides on a particular weed to the local Monsanto representative, retailer, or Monsanto’s Technical Support Line at 1-800-667-4944.

Current recommendations for effective and sustainable weed control for crops containing Roundup Ready technology can be found at Monsanto Crop Management Solutions (www.monsantocms.ca) or by calling the Monsanto Technical Support line at 1-800-667-4944.
Roundup Ready® Technology

Roundup WeatherMAX® Applications in Crops Containing Roundup Ready Technology

<table>
<thead>
<tr>
<th>Crop Containing Roundup Ready Technology</th>
<th>In-Crop Application Rate(s)</th>
<th>Crop Stage Application Range</th>
<th>Additional Requirements</th>
<th>Maximum Total Application for Growing Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartStax® RIB Complete® Corn VT Double PRO® RIB Complete® Corn</td>
<td>1.67 L/ha</td>
<td>Up to and including 8 leaf stage</td>
<td>Max of 2 applications at this rate per season.</td>
<td></td>
</tr>
<tr>
<td>Genuity® VT Triple PRO® RIB Complete® Corn Roundup Ready® Corn 2 Performance Series® Sweet Corn</td>
<td>3.33 L/ha</td>
<td>Up to and including 6 leaf stage</td>
<td>Only 1 application at this rate per season</td>
<td></td>
</tr>
<tr>
<td>Genuity® Roundup Ready 2 Yield® Soybeans Roundup Ready 2 Xtend® Soybeans</td>
<td>1.67 L/ha</td>
<td>First trifoliate leaf stage through to flowering</td>
<td>Max of 2 applications at this rate per season.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.33 L/ha</td>
<td>First trifoliate leaf stage through to flowering</td>
<td>Only 1 application at this rate per season</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.67 L/ha</td>
<td>First trifoliate leaf stage through to flowering</td>
<td>Only 1 application at this rate per season</td>
<td></td>
</tr>
<tr>
<td>Genuity® Roundup Ready® Canola</td>
<td>0.55 - 1.27 L/ha</td>
<td>0 - 6 Leaf</td>
<td></td>
<td>1.66 L/ha</td>
</tr>
<tr>
<td>Genuity® Roundup Ready® Sugarbeets</td>
<td>0.83 - 2.30 L/ha</td>
<td>Crop emergence up to 30 days prior to harvest</td>
<td>Max of 4 in-crop applications per growing season</td>
<td>7.31 L/ha</td>
</tr>
<tr>
<td>HarvXtra™ Alfalfa with Roundup Ready® Technology</td>
<td>1.67 - 3.33 L/ha</td>
<td>Crop emergence up to 5 days prior to cutting of alfalfa</td>
<td>Max of 3 in-crop applications per growing season</td>
<td></td>
</tr>
</tbody>
</table>

Follow all pesticide product labeling. If there is any conflict between these recommendations and applicable pesticide product labeling, the pesticide product labeling controls. For complete information about the use of Monsanto agricultural herbicides in crops containing Roundup Ready technology, refer to the appropriate product’s label booklet or supplemental label.

Recommendations for Managing Resistant Weeds in the Roundup Ready System

Various weed biotypes are known to be resistant to glyphosate. For the current weed control recommendations for glyphosate resistant weed biotypes, refer to monsantocms.ca or call the Monsanto Technical Support line at 1-800-667-4944.

Recommendations for Managing Volunteer Plants from the Roundup Ready System

Volunteer plants from crops containing Roundup Ready technology will be resistant to glyphosate. For the current Roundup Ready volunteer control recommendations refer to monsantocms.ca or call the Monsanto Technical Support line at 1-800-667-4944.
Genuity® Roundup Ready 2 Yield® soybean varieties contain Roundup Ready technology that provides tolerance to in-crop applications of labeled glyphosate agricultural herbicides. For information on this technology and weed resistance management refer to the Roundup Ready® technology section.

**Product Specific Weed Management Recommendations and Additional Information**

- Include a soil-applied, pre-emergent or post emergent residual herbicide at an appropriate rate as listed on the label.
- In-crop, apply Roundup WeatherMAX® before weeds exceed 10 cm in height.
- Weeds such as lambsquarters, waterhemp, pigweed, and giant ragweed tend to emerge throughout the season. Sequential Roundup WeatherMAX applications before weeds exceed 10 cm in height or the addition of a soil residual herbicide labeled for use in soybeans may be required for control of subsequent weed flushes.
- For complete information about the use of Monsanto agricultural herbicides over the top of Genuity Roundup Ready 2 Yield Soybeans, refer to the appropriate product’s label booklet or supplemental label.
Roundup Ready 2 Xtend® Soybeans

Roundup Ready 2 Xtend® Soybeans are built on the Genuity® Roundup Ready 2 Yield® trait technology stacked with a trait that includes tolerance to dicamba herbicide. Roundup Ready 2 Xtend soybeans are intended to provide growers with more consistent, flexible control of weeds, especially tough-to-manage and glyphosate-resistant broadleaf weeds, and to help maximize soybean yield potential. For information on Roundup Ready technology and weed resistance management refer to the Roundup Ready technology section.

Monsanto Agricultural Herbicide Products for Use in the Roundup Ready® Xtend Crop System

The following are products sold by Monsanto for use in Roundup Ready 2 Xtend Soybean for the 2017 crop season:

- Roundup WeatherMAX®
- Roundup Transorb® HC
- XtendiMax® with VaporGrip® Technology
- Roundup Xtend™ with VaporGrip® Technology

If using Roundup Transorb HC, guidelines and application rates are the same as for Roundup WeatherMAX as described in the Roundup Ready technology section.

For complete information about the use of Monsanto agricultural herbicides in the Roundup Ready Xtend Crop System, refer to the appropriate product’s label booklet or supplemental label. A complete list of specimen labels can be located at www.monsanto.ca or at http://pr-rp.hc-sc.gc.ca/ls-re/index-eng.php. Approved labels, including supplemental labeling, for Monsanto agricultural herbicides must be in the possession of the user at the time of pesticide application. Read and follow all pesticide product label directions.

Weed Management Recommendations in Roundup Ready 2 Xtend Soybeans

The chosen herbicide program and timing of application of Roundup Xtend with VaporGrip Technology or XtendiMax with VaporGrip Technology plus Roundup WeatherMAX should be tailored to the target weed species and method of tillage in a given field. Always consider using additional herbicide modes of action, or traditional residual herbicides as needed. See the application crop stage guidelines in chart below. Always follow label requirements and use the following best management practices for sustainable, effective weed control:

- Scout fields before and after each burndown and in-crop application.
- Start with a clean field, using either a burndown herbicide application, residual herbicide or tillage, making sure weeds are controlled at planting.

- It is highly recommended to use a pre-plant or pre-emergence application of Roundup Xtend with VaporGrip Technology or a tank mix of Roundup WeatherMAX herbicide and XtendiMax with VaporGrip Technology herbicide for short term residual control of broadleaf weeds and early season weed removal. Early season application maximizes protection of yield potential and minimize risk to non-target plants.
- If a pre-plant/pre-emergence application is not made, apply Roundup Xtend with VaporGrip Technology or Roundup WeatherMAX herbicide mixed with XtendiMax with VaporGrip Technology herbicide early post emergence and before weeds exceed 10 cm in height.
- Sequential post emergence application of Roundup Xtend with VaporGrip Technology, Roundup WeatherMAX herbicide or XtendiMax with VaporGrip Technology herbicides alone or tank mixed may be applied to manage additional flushes of small weeds (< 10 cm).
- Apply additional residual herbicides for broad spectrum weed control at the recommended rates appropriate for the target weed spectrum to reduce the risk of selection for herbicide resistant bio-types.
- Where glyphosate-resistant weeds exist, include an additional effective herbicide mode of action (in addition to dicamba) in the weed control system.
- For complete information about the use of Monsanto agricultural herbicides in the Roundup Ready Xtend Crop System, refer to the appropriate product’s label booklet or supplemental label.
Roundup Ready 2 Xtend® Soybeans

Roundup Xtend™ with VaporGrip® Technology and XtendiMax® with VaporGrip® Technology

Application Requirements in Roundup Ready 2 Xtend® Soybeans

<table>
<thead>
<tr>
<th>Monsanto Brand Herbicide</th>
<th>In-Crop Application Rate(s)</th>
<th>Crop Stage Application Range</th>
<th>Additional Requirements</th>
<th>Maximum Total Application for Growing Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>XtendiMax® with VaporGrip® Technology</td>
<td>0.823 - 1.71 L/ha</td>
<td>Pre-plant or pre-emergence and/or post-emergence once or twice up to early flower stage of crop (R1)</td>
<td>Second in-crop application should only be made for control of glyphosate-resistant weeds.</td>
<td>3.36 L/ha</td>
</tr>
<tr>
<td>Roundup Xtend™ with VaporGrip® Technology</td>
<td>2.5 L/ha</td>
<td>Pre-plant or Pre-emergence and/or Post-emergence once or twice up to early flower stage of crop (R1)</td>
<td>A third application should only be made for control of glyphosate-resistant weeds.</td>
<td>10 L/ha</td>
</tr>
<tr>
<td></td>
<td>3.75 L/ha</td>
<td>Should be applied pre-plant, pre-emergence or in-crop early post-emergence (up to the V2 growth stage)</td>
<td>Only one application at this rate per season</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 L/ha</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Follow all pesticide product labeling. If there is any conflict between these recommendations and applicable pesticide product labeling, the pesticide product labeling controls. For complete information about the use of Monsanto agricultural herbicides in the Roundup Ready Xtend Crop System, refer to the appropriate product’s label booklet or supplemental label.

Recommendations for Managing Resistant Weeds in the Roundup Ready Xtend Crop System

Various weed biotypes are known to be resistant to glyphosate or dicamba. For the current weed control recommendations for dicamba- or glyphosate-resistant weed biotypes, refer to monsantos.ca or call the Monsanto Technical Support line at 1-800-667-4944.

Recommendations for Managing Volunteer Plants from the Roundup Ready® Xtend Crop System

Volunteer plants from the Roundup Ready Xtend Crop System will be resistant to glyphosate and dicamba. For the current Roundup Ready Xtend Crop System volunteer control recommendations refer to monsantos.ca or call the Monsanto Technical Support line at 1-800-667-4944.

Application Requirements for Monsanto Herbicides Containing Dicamba

Application requirements for Roundup Xtend™ with VaporGrip® Technology or XtendiMax® with VaporGrip® Technology agricultural herbicides alone or in tank mixes:

- Use nozzles and operating pressures that produce extremely coarse to ultra-coarse droplets to minimize drift.
- Ensure ground speed is less than 25 km/h.
- Optimal wind speeds for application typically occur between 5 and 15 km/h.
- Do not spray if wind is blowing towards a sensitive crop or habitat.
- Do not spray when inversion conditions may exist, typically when wind speeds are less than 5 km/h.
- Use required buffer distances between the point of direct application and closest downwind edge of sensitive terrestrial habitats (this includes sensitive crops). When tank mixing, the largest buffer distance for an individual tank mix component must be used. For example a tank mix of Roundup WeatherMAX® and XtendiMax with VaporGrip Technology would require a minimum downwind buffer of 15 meters (50 feet) to a sensitive crop or other sensitive terrestrial habitat. Review all herbicide product labels for addition information on required buffers zones to sensitive terrestrial habitats (including sensitive crops) as well as sensitive aquatic and estuarine/marine habitats.
- Do not treat areas where movement of the chemical into the soil or surface washing may bring Roundup Xtend with VaporGrip Technology or XtendiMax with VaporGrip Technology into contact with roots of desirable plants.
- Do not spray when the temperature is expected to exceed 30°C.
- Do not use ammonium sulfate (AMS) and ammonium based additives, adjuvants, or sprayable fluid fertilizers.
- Do not add water conditioners or buffering agents that acidify the spray solution.
- Triple rinse spraying equipment prior to making herbicide applications to other crops that are sensitive to either glyphosate or dicamba. Ensure triple rinse procedure includes all parts of the spray equipment that may have been in contact with herbicides including, but not limited to, tanks, booms, spray lines, and pumps.

Additional Information

In crop applications of Roundup Xtend with VaporGrip Technology or XtendiMax with VaporGrip Technology herbicide under stressful environments may cause temporary loss of turgor, a response commonly described as leaf droop in Roundup Ready 2 Xtend Soybeans. Typically, affected plants recover in 1-3 days depending on the level of droop and environmental conditions.

A plant back interval of 120 days is required for those crops not on the label of Roundup Xtend with VaporGrip Technology or XtendiMax with VaporGrip Technology agricultural herbicides.
Roundup Ready 2 Xtend® Soybeans

Rates and Window of Application

Application window for Roundup Xtend™ with VaporGrip® Technology and XtendiMax® with VaporGrip® Technology on Roundup Ready 2 Xtend® soybeans

Preferred application window to maximize residual weed control benefit (At 0.7 L/ac for XtendiMax® and 2 L/ac for Roundup Xtend™)

Application window for both products

Application Requirements for Roundup Xtend™ with VaporGrip® Technology and XtendiMax® with VaporGrip® Technology (alone or in tankmix)

<table>
<thead>
<tr>
<th>NOZZLES</th>
<th>WEED HEIGHT</th>
<th>LABEL BUFFER</th>
<th>GROUND SPEEDS</th>
<th>TRIPLE RINSE</th>
<th>BOOM HEIGHT</th>
<th>WIND SPEED</th>
<th>AMMONIUM SULFATE</th>
<th>WATER VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use nozzles and operating pressures that produce Extremely Coarse (XC) to Ultra Coarse (UC) droplets to minimize drift</td>
<td>Spray weeds less than 10 cm tall</td>
<td>Maintain the required label buffer to protect sensitive areas</td>
<td>Make sure ground speed is less than 25 km/h</td>
<td>Use triple rinse tank clean-out procedure</td>
<td>Maintain boom height 50 cm above crop canopy to reduce the risk of drift</td>
<td>Optimal wind speeds for application typically occur between 5 and 15 km/h</td>
<td>Ammonium sulfate and ammonium-based additives are restricted in applications</td>
<td>Minimum carrier volume is 10 GPA</td>
</tr>
</tbody>
</table>
Genuity® Roundup Ready® canola varieties contain Roundup Ready technology providing in-plant tolerance to glyphosate herbicide. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

**Product Specific Weed Management Recommendations and Additional Information**

- To help maximize yield potential by eliminate competing weeds, spray Roundup WeatherMAX herbicide when Genuity Roundup Ready Canola is at the 1- to 3-leaf stage and before weeds exceed 8 cm in height.

- A second application maybe required to:
  - Control late flushes of annual weeds such as foxtail, pigweed, and wild mustard.
  - Provide season-long suppression of Canada thistle, quackgrass, and perennial sow thistle.
  - Protect yield potential by eliminating competition from both annuals and hard-to-control perennials.

- Some short-term, visual yellowing may occur with later applications (4- to 6-leaf stage). This effect is temporary and will not influence crop growth, maturity or yield.

For complete information about the use of Monsanto agricultural herbicides over the top of Genuity Roundup Ready canola, refer to the appropriate product’s label booklet or supplemental label.

**Volunteer Canola containing Roundup Ready Technology**

Canola can present unique challenges as a volunteer plant due to the persistence of seeds in the soil; a small seed size that allows it to easily be moved by equipment, wind or water; pollen movement from flowering plants; and the ability for a single plant to produce large number of seeds.

The introduction of herbicide tolerance in canola did not change the fundamental reasons volunteer canola can occur, but does require that growers consider that Roundup Ready technology (and other herbicide tolerance traits) may be present in volunteers when developing volunteer management plans for canola. In addition to cultural control methods, there are numerous herbicide products that can be used to control volunteer canola containing Roundup Ready technology (or other herbicide tolerance traits) in cropping systems.

- If field scouting identifies volunteer canola prior to a burn down or pre-harvest application with a glyphosate herbicides, it is recommended to tank mix additional herbicides labeled for that use and that control volunteer canola (including other herbicide tolerant canola types) to ensure all volunteer canola, including any canola volunteers containing Roundup Ready technology are controlled.

- If field scouting identifies volunteer canola in another crop containing Roundup Ready technology, it is recommended to tank mix additional herbicides labelled for use in that crop type that control volunteer canola, including other herbicide tolerant canola types, with Roundup WeatherMAX or other labeled glyphosate herbicides to ensure all volunteer canola, including any canola volunteers containing Roundup Ready technology are controlled.

- Where conventional tillage is used, light cultivation provides effective control of all canola volunteers, including any containing Roundup Ready technology.

For additional information visit [www.monsantocms.ca](http://www.monsantocms.ca) or call the Monsanto Technical Support Line at 1-800-667-4944.
Genuity® Roundup Ready® sugarbeet varieties contain Roundup Ready technology providing in-plant tolerance to glyphosate herbicide. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

For complete information about the use of Monsanto agricultural herbicides over the top of Genuity Roundup Ready sugarbeets, refer to the appropriate product’s label booklet or supplemental label.

Product Specific Weed Management Recommendations and Additional Information

Sugarbeets are extremely sensitive to weed competition for light, nutrients and soil moisture, and can lose yield potential rapidly if weeds are not controlled. Sugarbeet weed control research suggests that sugarbeets need to be kept weed-free for the first eight weeks of growth to protect yield potential. Therefore, weeds must be controlled when they are small and before they compete with Genuity Roundup Ready sugarbeets (exceed crop height), that is from less than 5 cm up to 10 cm in height, to preserve sugarbeet yield potential. More than one in-crop herbicide application will be required to help control weed infestations to protect yield potential as Roundup WeatherMAX® herbicide has no soil residual activity. A residual herbicide labeled for use in sugarbeets may also be applied preplant, preemergence or postemergence in Genuity Roundup Ready Sugarbeets.

Bolting sugarbeets must be rogued or topped in Genuity Roundup Ready sugarbeet fields.

For additional information visit www.monsantocms.ca or call the Monsanto Technical Support Line at 1-800-667-4944.

Recommendations for Applications of Roundup WeatherMAX Agricultural Herbicide in Genuity Roundup Ready Sugarbeets

<table>
<thead>
<tr>
<th>Stage</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting</td>
<td></td>
</tr>
<tr>
<td>2-Leaf</td>
<td></td>
</tr>
<tr>
<td>8-Leaf</td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td></td>
</tr>
</tbody>
</table>

7.31 L/ha total in-crop application from emergence until 30 days prior to harvest

0.83 - 2.30L/ha for annual and/or perennial weeds.

Maximum 4 applications per growing season.

Always refer to herbicide label for proper use rates, weeds controlled and application timing. The weed spectrum on your farm may require the use of herbicide products different from the ones listed here for the best weed control.
HarvXtra™ Alfalfa with Roundup Ready® Technology

HarvXtra™ Alfalfa with Roundup Ready® Technology products contain the biotechnology-derived trait developed to maximize alfalfa quality compared to commercially available alfalfa harvested at the same growth stage, by reducing the amount of lignin in the plant. This technology is designed to ease the yield versus quality trade-off currently faced by alfalfa producers by enabling them to maintain high-quality alfalfa longer. These products also contain Roundup Ready technology providing in-plant tolerance to glyphosate. For information on this technology and weed resistance management refer to the Roundup Ready technology section.

Planting Limitation
For the 2017 growing season, this product is available for planting in a limited geography and growers must direct any product produced from HarvXtra Alfalfa with Roundup Ready Technology seed or crops (including hay and hay products) only to domestic use in Canada or United States. 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 product purchaser to confirm their buying position for this product.

HarvXtra Alfalfa with Roundup Ready Technology is only for sale and planting in the following provinces in 2017: Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland.

HarvXtra Alfalfa with Roundup Ready Technology is not permitted to be planted or harvested for seed production in Canada.

HarvXtra Alfalfa with Roundup Ready Technology is not permitted to be planted in any wildlife feed plots.

HarvXtra Alfalfa with Roundup Ready Technology may not be planted for the production of sprouts.

Fly-on planting of HarvXtra Alfalfa with Roundup Ready Technology is not allowed.

Hay and Forage Management Requirements
HarvXtra Alfalfa with Roundup Ready Technology gives growers the options for managing for high quality hay/forage production, including timely cutting to promote high forage quality (i.e., generally before 10% bloom) without sacrificing higher tonnage.

- In areas where conventional alfalfa seed production or adventitious presence (AP) sensitive seed production is intermingled with forage production, HarvXtra Alfalfa with Roundup Ready Technology must be harvested at or before 10% bloom to help minimize potential pollen flow from HarvXtra Alfalfa with Roundup Ready Technology to conventional alfalfa.
- In all other areas HarvXtra Alfalfa with Roundup Ready Technology is recommended to be harvested at or before 10% bloom and must be harvested prior to 50% bloom.
- Grower is responsible to control any feral alfalfa resulting from HarvXtra Alfalfa with Roundup Ready Technology use.

Growers who are unwilling to or who cannot make these commitments to stewardship should not grow HarvXtra Alfalfa with Roundup Ready Technology.

To preserve the quality potential of forage and hay in established stands, apply Roundup WeatherMAX® after weeds have emerged but before alfalfa re-growth interferes with application spray coverage of the target weeds.

Alfalfa In-Crop Rotation
Avoid planting alfalfa in a field from which an alfalfa crop has recently been removed. Recommended rotational crop sequences fall into two categories—grass crops (e.g., corn and cereal crops) and broadleaf crops.

HarvXtra Alfalfa with Roundup Ready Technology Stand Takeout
Use appropriate, commercially available herbicide treatments in reduced tillage systems, or in combination with tillage, to terminate a HarvXtra Alfalfa with Roundup Ready Technology stand.

If necessary, use tillage and/or additional herbicide application(s) after stand takeout, and prior to planting of the subsequent rotational crop to manage any newly-emerged or surviving alfalfa.

Note: Glyphosate herbicides are not effective for terminating HarvXtra Alfalfa with Roundup Ready Technology stands.
Management of HarvXtra Alfalfa with Roundup Ready Technology Volunteers in Rotational Crop Fields

In a timely manner, use recommended and commercially available mechanical and/or herbicidal methods for managing volunteer HarvXtra™ Alfalfa with Roundup Ready® Technology in rotational crop fields.

- Implement treatments before volunteers become too large to control or begin to compete with the rotational crop.
- Herbicide alternatives are available for management of volunteer alfalfa in grass crops.
- Rotation with certain broadleaf crops is not advisable if the grower is not willing to implement recommended stand termination practices.
- In the event that no known mechanical or herbicidal options are available to manage volunteer HarvXtra Alfalfa with Roundup Ready Technology in the desired rotational crop, you should change to a crop with established volunteer management practices for that rotation.

Note: Glyphosate herbicides are not effective for terminating HarvXtra Alfalfa with Roundup Ready Technology volunteers.

For more information and the latest updates on HarvXtra Alfalfa with Roundup Ready Technology, go www.harvxtra.ca.

Product Specific Weed Management Recommendations and Additional Information

An initial application of Roundup WeatherMAX® should be applied at or before the 3 to 4 trifoliate growth stage.

To preserve the quality potential of forage and hay in established stands, apply Roundup WeatherMAX after weeds have emerged but before alfalfa re-growth interferes with application spray coverage of the target weeds. To help control flushes of weeds in established alfalfa, make applications of Roundup WeatherMAX before weeds exceed 10 cm in height, up to 5 days before cutting. Applications between cuttings may be applied as a single application or in multiple applications. Sequential applications should be at least 25 days apart.

Use other approved herbicide products tank-mixed or in sequence with Roundup WeatherMAX as part of a HarvXtra Alfalfa with Roundup Ready Technology weed control program, if appropriate for the weed spectrum present.

Note: Due to the genetic diversity of alfalfa, up to 10% of the seedlings are susceptible and will not survive the first application of labeled glyphosate agricultural herbicides. The initial application is necessary to eliminate the effects of stand gaps created by loss of plants that are not Roundup Ready and to ensure adequate spray coverage of emerging weeds before crop canopy interference.

It has been reported that some growers using alfalfa containing Roundup Ready® technology may have a limited, temporary crop response where glyphosate application is closely followed by freezing or near-freezing conditions, or by large temperature swings. Monsanto is actively investigating this situation. Because glyphosate based herbicides are most effective in controlling actively growing weeds, application in these conditions is not recommended. If freezing or near-freezing temperatures, or large temperature swings, are forecasted within 5 days after a planned glyphosate application to your HarvXtra Alfalfa with Roundup Ready Technology, you should delay the application until those conditions are no longer forecasted.

For complete information about the use of Monsanto agricultural herbicides in HarvXtra Alfalfa with Roundup Ready Technology, refer to the appropriate product’s label booklet or supplemental label.
This Monsanto Technology Stewardship Agreement ("Agreement") is entered into between you ("Grower"), Monsanto Canada Inc ("Monsanto"), and consists of the terms on this page and on the reverse side of this page and any applicable Riders.

Under the terms of the Agreement that Growers have signed with Monsanto, Monsanto is required to notify Growers of any amendments or revisions to the Agreement. Accordingly, following are the current terms of the Agreement. Continuing use of Monsanto Technologies after receipt of these terms constitutes Grower’s agreement to be bound by the amended terms of this Agreement.

This Agreement grants Grower a limited use license to use the following technologies in accordance with the terms of this Agreement:

**Canola Products**
- Genetically Roundup Ready Canola
- Roundup Ready 2 Xtend® Canola
- RIB Complete® Canola
- SmartStax® RIB Complete® Corn

**Corn Products**
- Roundup Ready® Corn 2
- VT Double PRO® RIB Complete® Corn
- Genetically VT Triple PRO® RIB Complete® Corn

**Soybean Products**
- Roundup Ready 2 Yield® Soybeans
- Genetically Roundup Ready 2 Yield® Soybeans
- Sugarbeet Products
- Genetically Roundup Ready Sugarbeets

and Monsanto Plant Breeders Rights protected varieties and any future seed technologies developed, licensed or owned by Monsanto that are made available to Grower ("Monsanto Technologies"). Seed containing Monsanto Technologies are referred to herein as ("Seed"). The licensed Canadian patents for Monsanto Technologies and/or PBR certificates can be found at the following web page: www.monsantotechnology.com and/or on the product label.

This Agreement includes an Alfalfa Rider, attached hereto, which is between Grower and Forage Genetics International, LLC ("FGI") and which grants Grower a limited use license to use HarvXtra™ Alfalfa with Roundup Ready™ Technology.

This Agreement also contains Grower’s stewardship responsibilities and requirements associated with the use of Seed and Monsanto Technologies.

1. GROWER AGREES:
   a. To acquire Seed only from authorized seed companies in Canada with technology license(s) from Monsanto for the applicable Monsanto Technology(ies) or from a licensed company’s dealer authorized to sell such licensed Seed in Canada.
   b. To obtain and read before planting and strictly follow the applicable requirements of this Agreement, the Technology Use Guide ("TUG") as may be unilaterally amended by Monsanto from time to time, which the TUG is incorporated into and is a part of this Agreement. Further, Grower acknowledges that compliance with the foregoing stewardship requirements is a fundamental term of this Agreement, and Grower may lose its limited use license to use these products if Grower fails to comply with this Agreement, including by failing to follow the IRM program required by this Agreement. Monsanto further advises Grower to follow the recommendations and best management practices provided in the TUG, and seed bag and/or tag. Grower may obtain additional copies of the TUG by contacting Monsanto at 1-800-667-4944 or by going to www.monsanto.com.
   c. To pay all applicable royalties and technology fees for the use of the Monsanto Technologies and applicable fees due Monsanto that are part of, associated with the Seed purchase price or that are invoiced for the Seed. If Grower fails to pay Monsanto or any wholly owned Monsanto subsidiaries, for costs of Seed, Monsanto Technologies, and/or royalties, Grower agrees to pay Monsanto default interest charges at the rate of 18% per annum (or the maximum allowed by law whichever is less) plus reasonable attorneys’ fees, court costs and all other costs of collection. Monsanto or any subsidiary has the right of set-off.
   d. To use Seed solely for a single planting of a commercial crop in Canada.
   e. Not to transfer any Seed to any other person or entity for planting and not to export any Seed.
   f. Not to save or clean any crop produced from Seed for planting, and not to supply seed produced from Seed to anyone for planting.
   g. Not to plant or clean Seed for seed production unless, and only if, Grower has entered into a valid, written Seed production agreement with a seed company that is licensed by Monsanto to produce Seed.
   h. Not to harvest any volunteer crops from fields planted the previous year with Seed.
   i. Not to plant any Seed, or any seed produced from Seed, for crop breeding, research, or generation of herbicide or other registration data. Grower may not conduct research on Grower’s crop produced from Seed other than to make agronomic comparisons and conduct yield testing for Grower’s own use. Monsanto makes available separate license agreements to academic institutions for research.
   j. To use on crops containing Monsanto Technology only pesticides labeled for such use. MONSANTO DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, INCLUDING BUT NOT LIMITED TO THOSE THAT ARE LABELED FOR USE IN CROPS CONTAINING MONSANTO TECHNOLOGY. MONSANTO SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF SUCH PRODUCTS IN CROPS.
   k. To accept and continue the obligations of this Agreement on any new land purchased or leased by Grower that has Seed planted on it by a previous owner or possessor of the land, and to promptly notify in writing purchasers or lessees of land owned by Grower that has Seed planted on it that the Monsanto Technology is subject to this Agreement and they must have or obtain their own Monsanto Technology Stewardship Agreement to harvest or use, transfer or sell the harvested crop.
   l. For purposes of monitoring Grower’s compliance with this Agreement, Grower grants Monsanto the right to inspect, take samples, and test all of the Grower’s owned and/or leased fields and storage bins for the presence of Monsanto Technologies and for other traits stacked with Monsanto Technologies and to allow Monsanto to examine and copy any records and receipts that could be relevant to Grower’s performance of this Agreement. Grower agrees that Monsanto may share any relevant information with the owner of the other trait(s) stacked with Monsanto Technologies. This right will be in effect following the purchase of all Seed, and extend for 3 (three) years after the final harvest of the crop produced from the Seed. Upon request, the Grower shall supply Monsanto with a list of all locations planted by or on behalf of the Grower. The right to inspect, take samples and test as aforesaid may be exercised on reasonable notice. Notice may be given in any manner including verbal notice provided by telephone.
   m. To promptly notify Monsanto should any Grower Information provided to Monsanto herein change.
   n. To only direct crops or materials produced from the Seed only to appropriate grain handlers and/or markets to prevent movement to markets where the grain has not yet received regulatory approval for import and to notify such grain handlers that it’s crop has not yet received that approval. Grower acknowledges that any crop or material produced from Seed can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted, and Grower purchases the Seed with that knowledge.

NOTICE REGARDING GROWER INFORMATION

For more information about how Monsanto handles your personal information or if you have other questions or concerns relating to Monsanto’s privacy practices, please contact Monsanto’s privacy officer by e-mail at canada.privacy@monsanto.com or by telephone at 1-800-667-4944.

By providing the personal information above and by using the Monsanto Technologies contemplated in the Technology Stewardship Agreement, you are consenting to the collection, use and disclosure of your personal information by Monsanto, its agents, representatives and licensees (including your contact information, information about your farming practices and information about the specific nature and quantity of corn, soybean, canola, sweet corn and sugarbeets that you farm using Monsanto Technologies) via electronic communication or otherwise, for the purposes of administering and enforcing the Technology Stewardship Agreement between you and Monsanto, and to assist Monsanto in establishing and maintaining a business relationship with you including to better understand your needs and preferences, to develop and produce new products and services, and to assist Monsanto in developing its business and operations.

In addition, if you would like to receive information from time to time from Monsanto regarding additional products, services, agronomic advice, events, corporate philanthropy or other related information, via electronic communication or otherwise, and to permit third parties to market products and services to you in the same manner, please call 1-800-667-4944 or emailing us at monsanto.canada@monsanto.com.

You may withdraw your consent to this optional choice at any time by calling 1-800-667-4944 or emailing us at monsanto.canada@monsanto.com.

2. GROWER RECEIVES:
   a. A limited use license to purchase and to plant Seed pursuant to the terms of this Agreement in Canada and to apply labeled glyphosate, dicamba or glufosinate herbicides over the top of crops as applicable, unless otherwise restricted by law. Monsanto (or the respective licensor) retains ownership of the Monsanto Technologies owned by it, including the genes technologies and varieties. These licenses do not authorize Grower to plant Seed in Canada that has been purchased in another country or plant Seed in another country that has been purchased in Canada.
   b. A limited use license under applicable Canadian patents (other than the Dow AgroSciences Patent Rights), to use Monsanto Technologies subject to the conditions listed in this Agreement and with respect to alfalfa Seed, the conditions listed in the Alfalfa Rider. Dow AgroSciences LLC and Agrigentics, Inc. (collectively "Dow AgroSciences") licenses Grower under its applicable Canadian patents (the "Dow AgroSciences Patent Rights") the right to use Dow AgroSciences’ Event TC 1507 and Event NS 59122-7 to the extent either is present in any SmartStax® Seed obtained by Grower pursuant to this Agreement, with Monsanto being authorized to act on Dow AgroSciences’ behalf for this Agreement, subject to the conditions listed in this Agreement.
3. GENERAL TERMS:

a  Term: This Agreement will remain in effect until either Grower or Monsanto chooses to terminate the Agreement, as provided below.

b  Modification: Monsanto may unilaterally revise the terms and conditions of this Agreement including the TUG, or seed bag, label and/or tag incorporated herein from time to time. Monsanto will notify Grower of any amended terms, including information regarding new and existing Monsanto Technologies and any additions or deletions to the Canadian patents licensed under this Agreement. If the Grower has provided Monsanto an e-mail address in conjunction with this Agreement, Monsanto may send Agreement amendments and new stewardship information to Grower by e-mail or mail. Continuing use of Monsanto Technologies after receipt of any amended terms constitutes Grower’s agreement to be bound by the amended terms of this Agreement.

c  Transferability: Grower may not transfer its rights or obligations to anyone else without the written consent of Monsanto. If Grower’s rights or obligations are transferred with Monsanto’s consent or by operation of law, this Agreement is binding on the person or entity receiving the transferred rights or obligations.

d  Binding Effect: If any provision of this Agreement is determined to be void or unenforceable, the remaining provisions shall remain in full force and effect.

e  Termination: Grower may terminate this Agreement in whole, for any reason, effective immediately by delivering written notice via certified mail to Monsanto. Grower must deliver the notice of termination to Monsanto Canada Inc. Attn: Trait Operations, 900-One Research Rd, Winnipeg Manitoba, R3T 6E3. Monsanto may terminate this Agreement for any reason, in whole or in part, effective immediately by delivering written notice to Grower at the address provided by Grower. Upon termination, Grower’s responsibilities and the other terms herein shall survive (such as but not limited to Grower’s obligation to use Seed for a single commercial crop) as to Seed previously purchased or used by Grower. If Grower breaches the terms of this Agreement, Monsanto may terminate effective immediately Grower’s rights under this Agreement. Grower will not be entitled to obtain a future limited-use license from Monsanto unless Monsanto providesGrower with specific written notice expressly recognizing the breach and termination of this Agreement and granting a new limited-use license. Grower expressly acknowledges that Grower’s submission of a new Monsanto Technology Stewardship Agreement and Monsanto’s issuance of a new license number shall not satisfy the specific written notice reference above and that any such action shall have no legal effect. If Grower is found by any court to have breached any term of this Agreement and/or to have infringed one or more of the Canadian patents licensed under this Agreement, among other things, Monsanto and Dow AgroSciences, as appropriate, shall be entitled to preliminary and permanent injunctions enjoining Grower and any individual and/or entity acting on Grower’s behalf or in concert therewith from making, using, selling, or offering Seed for sale. Grower will also be liable for all breach of contract damages.

f  Attorneys’ Fees: If Grower is found by any court to have infringed one or more of the Canadian patents covering Monsanto Technologies or otherwise to have breached this Agreement, Grower agrees to pay Monsanto and the licensed Monsanto Technology provider(s) and Dow AgroSciences, as appropriate, their attorneys’ fees and costs related to the case plus any other expenses incurred in the investigation of the breach and/or infringement.

g  Governing Law: This Agreement and the parties’ relationship shall be governed by the laws of the Province of Manitoba and Canada (without regard to the choice of law rules).

h  Waivers: The failure of Monsanto or any owners of patents to exercise one or more of its rights under this Agreement on one or more occasions shall not be deemed a waiver on the part of Monsanto or such patent owner to exercise such right(s) on any subsequent occasion.

i  Entire Agreement: This Agreement, along with provisions in the TUG and/or on seed bag and/or tag, incorporated into this Agreement, encompass the entire agreement of the parties, and supersede all previous understandings and agreements between the parties, whether oral or written. Grower also agrees that such provisions (the terms, warranties, and disclaimers and limitations as to warranties, damages, and remedies) are terms and conditions of sale and cannot be modified or amended at any time except in writing signed by Monsanto.

a  Notice Requirement: As a condition precedent to Grower or any other person with an interest in Grower’s crop asserting any claim, action, or dispute against Monsanto and/or any seller of Seed regarding performance or non-performance of Monsanto Technologies or Seed, Grower must provide Monsanto a written, prompt, and timely notice (regarding performance or non-performance of the Monsanto Technologies) and to the seller of any Seed (regarding performance or non-performance of the Seed) within sufficient time to allow an in-field inspection of the crop(s) about which any controversy, claim, action, or dispute is being asserted. The notice will be timely only if it is delivered 15 days or less after Grower first observes the issue(s) regarding performance or non-performance of the Monsanto Technology and/or the Seed. The notice shall include a statement setting forth the nature of the claim, the name of the Monsanto Technology, and Seed hybrid or variety. Grower must deliver the notice to Monsanto Canada Inc., Attn: Trait Operations, 900-One Research Rd, Winnipeg Manitoba, R3T 6E3.

b  Limited Warranty and Disclaimer of Warranties: Monsanto warrants the Monsanto Technologies licensed hereunder as set forth on the seed bag and/or tag to the extent specifically warranted thereon, or, to the extent specifically warranted therein, that the Monsanto Technologies licensed hereunder will perform as set forth in the TUG when used in accordance with directions. This warranty applies only to Monsanto Technologies contained in planting Seed that has been purchased from Monsanto and seed companies licensed by Monsanto or the seed company’s authorized dealers or distributors. EXCEPT FOR THE EXPRESS WARRANTIES IN THE LIMITED WARRANTY SET FORTH ABOVE, MONSANTO MAKES NO OTHER WARRANTIES OF ANY KIND, AND DISCLAIMS ALL OTHER WARRANTIES, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY PATENTS. THIS WARRANTY IS VOID IF THE SEED IS REPACKAGED BY ANY PARTY OTHER THAN MONSANTO OR PARTIES AUTHORIZED BY MONSANTO.

c  Grower’s Exclusive Limited Remedy: THE EXCLUSIVE REMEDY OF GROWER AND THE LIMIT OF THE LIABILITY OF MONSANTO OR ANY SELLER FOR ANY AND ALL LOSSES, INJURY OR DAMAGES RESULTING FROM THE USE OR HANDLING OF SEED (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, PRODUCT LIABILITY, STRICT LIABILITY, TORT, OR OTHERWISE) SHALL BE THE PRICE PAID BY GROWER FOR THE QUANTITY OF THE SEED INVOLVED OR, AT THE ELECTION OF MONSANTO OR THE SEED SELLER, THE REPLACEMENT OF THE SEED. IN NO EVENT SHALL MONSANTO OR ANY SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR PUNITIVE DAMAGES.
2017 ALFALFA RIDER

TERMS AND CONDITIONS

The following terms and conditions of the AlfaMax Rider (the “Rider”) supplement the Monsanto Technology Stewardship Agreement (the “TSA” or the “Agreement”), are enforceable under that Agreement as well as independently and separately enforceable from the Agreement, and are applicable to Grower’s purchase or use of HarvXtra® Alfalfa with Roundup Ready® Technology. This Rider is entered into between Grower and Forage Genetics International, LLC (“FGI”) and consists of the terms and conditions set forth below. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

This Rider grants Grower a limited license to use the following technologies in accordance with the terms of this Rider: HarvXtra® AlfaMax with Roundup Ready® Technology, and Plant Breeders rights, protections owned or exclusively licensed to FGI and any future seed technologies developed, licensed or owned by FGI that are made available to Grower (“FGI Technologies”), with Monsanto authorized to act on FGI’s behalf. Seed containing FGI Technologies are collectively referred to herein as “Alfalfa Seed.” The licensed Canadian patents and/or PBR certificates for FGI Technologies can be found at the following web page: www.monsantotechnology.com and/or on the product label.

This Rider also contains Grower’s stewardship responsibilities and requirements associated with the use of AlfaMax Seed and FGI Technologies

1. GROWER AGREES:

a. To acquire AlfaMax Seed only from authorized seed companies in Canada with technology license(s) from FGI for the applicable FGI licensed company’s dealer authorized to sell such licensed AlfaMax Seed in Canada.

b. To obtain and read before planting and strictly follow the applicable requirements of the Technology Use Guide (“TUG”) and seed bag tag, as each may be amended from time to time, which TUG and seed bag tag are incorporated into and are a part of this Rider and to cooperate and comply with these requirements which FGI or Monsanto communicates or makes available to Grower. Further, Grower acknowledges that compliance with the foregoing stewardship requirements is a fundamental term of this Rider, and Grower may lose its limited use license to use these products if Grower fails to follow this Rider. FGI further advises Grower to follow the recommendations provided in the TUG and seed bag tag. Grower may obtain additional copies of the TUG by contacting Monsanto at 1-800-667-4944 or by going to www.tug.monsanto.com.

c. To pay all applicable royalties and technology fees for the use of the FGI Technologies and applicable fees due FGI that are part of, associated with the AlfaMax Seed purchase price or that are invoiced for the AlfaMax Seed. If Grower fails to pay FGI or any wholly owned FGI subsidiaries, for costs of AlfaMax Seed, FGI Technologies, and/or royalties, Grower agrees to pay FGI default interest charges at the rate of 18% per annum (or the maximum allowed by law whichever is less) plus reasonable attorneys’ fees, court costs and all other costs of collection. FGI or any subsidiary has the right of set-off.

d. To use AlfaMax Seed solely for a commercial crop in Canada as provided below. Grower may use a single planting of HarvXtra® AlfaMax with Roundup Ready® Technology for multiple cuttings.

e. Only to plant HarvXtra® AlfaMax with Roundup Ready® Technology in the following provinces: Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland (the “Eastern Provinces”).

f. That all crops or hay products produced from plantings of HarvXtra® AlfaMax with Roundup Ready® Technology in the Eastern Provinces can only be used on farm or otherwise used in the United States or Canada.

g. Not to transfer any AlfaMax Seed to any other person or entity for planting, and not to export any AlfaMax Seed.

h. Not to save or clean any crop produced from AlfaMax Seed for planting, and not to supply seed produced from AlfaMax Seed to anyone for planting.

i. Not to plant and or clean AlfaMax Seed for seed production.

j. Not to plant any AlfaMax Seed, or any seed produced from AlfaMax Seed, for crop breeding, research, or generation of herbicide or other registration data. Grower may not conduct research on Grower’s crop produced from AlfaMax Seed other than to make agronomic comparisons and conduct yield testing for Grower’s own use. FGI makes available separate license agreements to academic institutions for research.

k. To use on crops containing FGI Technology only pesticides labeled for such use. FGI DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, INCLUDING BUT NOT LIMITED TO THOSE THAT ARE LABELED FOR USE IN CROPS CONTAINING FGI TECHNOLOGY. FGI SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF THESE PRODUCTS IN CROPS CONTAINING FGI TECHNOLOGY. ALL QUESTIONS AND COMPLAINTS ARISING FROM THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, OR THE IMPACT TO FGI TECHNOLOGY FROM THE USE OF SUCH PRODUCTS, SHOULD BE DIRECTED TO THOSE COMPANIES.

l. To accept and continue the obligations of this Rider on any new land purchased or leased by Grower that has AlfaMax Seed planted on it by a previous owner or possessor of the land, and to timely notify in writing purchasers or lessees of land owned by Grower that has AlfaMax Seed planted on it that the FGI Technology is subject to this Rider and they must have or obtain their own Monsanto Technology Stewardship Agreement and Rider.

m. For purposes of monitoring Grower’s compliance with this Agreement, Grower grants Monsanto the right to inspect, take samples, and test all of the Grower’s owned and/or leased fields and storage bins for the presence of Monsanto Technologies or for other traits stacked with Monsanto Technologies and to allow Monsanto to examine and copy any records and receipts that could be relevant to Grower’s performance of this Agreement. Grower agrees that Monsanto may share any relevant information with the owner of the other trait(s) stacked with Monsanto Technologies. This right will be in effect following the purchase of all Seed, and extend for 3 (three) years after the final harvest of the crop produced from the Seed. Upon request, the Grower shall supply Monsanto with a list of all farms, grower-owned or grower-managed, that know or have reason to believe that they grow a crop that contains AlfaMax Seed.

n. To promptly notify FGI or Monsanto should any Grower Information provided herein change.

o. To direct any crops or hay products produced from HarvXtra™ AlfaMax with Roundup Ready® Technology seed or crops only to United States or Canada domestic use. Grower further agrees that it will only sell or convey such crops or hay products to persons or entities that agree they will not ship such crops or hay products outside the United States or Canada.

p. Grower acknowledges that any crop or hay product produced from AlfaMax Seed can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted, and Grower purchases the AlfaMax Seed with that knowledge.

q. Until FGI expressly grants permission in writing (which will be withheld pending regulatory approvals have been granted, and Grower purchases the AlfaMax Seed with that knowledge.

r. HarvXtra™ AlfaMax with Roundup Ready® Technology seed may not be planted for the production of sprouts.

NOTICE REGARDING GROWER INFORMATION

• For more information about how Monsanto or FGI handles your personal information or if you have other questions or concerns relating to Monsanto’s or FGI’s privacy practices, please contact Monsanto’s privacy officer by e-mail at canada.privacy@monsanto.com or by telephone at 1-800-667-4944.

• By providing the personal information in the Agreement and by using the FGI Technologies contemplated in this AlfaMax Rider you are consenting to the collection, use and disclosure of your personal information by Monsanto, FGI, their agents, representatives and licensees (including your contact information, information about your farming practices and information about the specific nature and quantity of alfalfa that you farm using FGI Technologies) via electronic communication or otherwise, for the purposes of administering and enforcing this AlfaMax Rider, and to assist FGI in establishing and maintaining a business relationship with you including to better understand your needs and preferences, to develop and produce new products and services, and to assist FGI in developing its business and operations.

2. GROWER RECEIVES FROM FGI:

a. A limited use license to purchase and to plant AlfaMax Seed pursuant to the terms of this Rider in Canada, and to apply labeled glyphosate herbicides over the top of crops as applicable, unless otherwise restricted by law. FGI (or the respective license) retains ownership of the FGI Technologies owned by it, including the gene technologies and varieties. These licenses do not authorize Grower to plant AlfaMax Seed in Canada that has been purchased in another country or plant AlfaMax Seed in another country that has been purchased in Canada.

b. A limited use license under applicable Canadian patents, to use FGI Technologies subject to the conditions listed in this Rider.

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2017 Monsanto Technology/Stewardship Agreement (Limited Use License) page 3 of 4
3. GENERAL TERMS:

a Terms: This Rider will remain in effect until either Grower or FGI chooses to terminate the Rider, as provided below.

b Modification: FGI or Monsanto may unilaterally revise the terms and conditions of this Rider, including the Agreement and TUG incorporated herein, from time to time. FGI or Monsanto will send Grower any amended terms, including information regarding new and existing FGI Technologies and any additions or deletions to the Canadian patents licensed under this Rider. If Grower has provided FGI or Monsanto an e-mail address in conjunction with the Agreement or this Rider, FGI or Monsanto may sendGrower amendments and new stewardship information to Grower by e-mail or mail. Grower's continued use of FGI Technologies after receipt of any amended terms constitutes Grower's agreement to be bound by the amended terms of this Rider.

c Transferability: Grower may not transfer its rights or obligations to anyone else without the written consent of FGI. If Grower's rights or obligations are transferred with FGI's consent or by operation of law, this Rider is binding on the person or entity receiving the transferred rights or obligations.

d Binding Effect: If any provision of this Rider is determined to be void or unenforceable, the remaining provisions shall remain in full force and effect.

e Termination: Grower may terminate this Rider effective immediately by delivering written notice to FGI. Grower must deliver the notice of termination to Monsanto Canada Inc., Attn: Trait Operations, 900-One Research Rd, Winnipeg Manitoba, R3T 6E3. FGI or Monsanto may terminate this Rider for any reason, in whole or in part, by delivering written notice to Grower. Upon termination, Grower's responsibilities and the other terms herein shall survive (such as but not limited to Grower's obligation to use Alfalfa Seed for a single commercial crop) as to Alfalfa Seed previously purchased or used by Grower. If Grower breaches the terms of this Rider, FGI may terminate effective immediately Grower's rights under this Rider. Grower will not be entitled to obtain a future limited-use license from FGI unless FGI provides Grower with specific written notice expressly recognizing the breach and termination of this Rider and granting a new limited-use license. Grower expressly acknowledges that Grower's submission of a new Monsanto Technology Stewardship Agreement or Rider and FGI's or Monsanto's issuance of a new license number shall not satisfy the specific written notice reference above and that any such action shall have no legal effect. If Grower is found by any court to have breached any term of this Rider and/or to have infringed one or more of the Alfalfa Patent Rights, Grower agrees that, among other things, FGI and Monsanto, as appropriate, shall be entitled to preliminary and permanent injunctions enjoining Grower and any individual and/or entity acting on Grower's behalf or in concert therewith from making, using, selling, or offering Alfalfa Seed for sale. Grower will also be liable for all breach of contract damages.

f Attorneys' Fees: If Grower is found by any court to have infringed one or more of the Alfalfa Patent Rights or otherwise to have breached any term of this Rider, Grower agrees to pay FGI and Monsanto, as appropriate their attorneys’ fees and costs related to the case plus any other expenses incurred in the investigation of the breach and/or infringement.

g Governing Law: This Rider and the parties’ relationship shall be governed by the laws of the Province of Manitoba and Canada (without regard to the choice of law rules)

h Waiver: The failure of FGI or Monsanto or any owners of patents to exercise one or more of its rights under this Agreement on one or more occasions shall not be deemed a waiver on the part of FGI or Monsanto or such patent owner to exercise such right(s) on any subsequent occasion.

i Entire Agreement: This Agreement and Rider, along with provisions in the TUG and/or on bag tags, which are incorporated herein, encompass the entire agreement of the parties, and supersede all previous understandings and agreements between the parties, whether oral or written. Grower hereby acknowledges and represents that Grower has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this Agreement and Rider, made by or on behalf of any other party or any other person or entity whatsoever, prior to Grower's signing of this Agreement and Rider or purchasing Alfalfa Seed pursuant to the license granted hereunder. Grower also agrees that such provisions (the terms, warranties, and disclaimers and limitations as to warranties, damages, and remedies) are terms and conditions of sale and cannot be modified or amended at any time except in writing signed by FGI.

4. GROWER CLAIMS AND REMEDIES:

a Notice requirement: As a condition precedent to Grower or any other person with an interest in Grower’s crop asserting any claim, action, or dispute against FGI and/or any seller of Alfalfa Seed regarding performance or non-performance of FGI Technologies or Alfalfa Seed, Grower must provide FGI a written, prompt, and timely notice (regarding performance or non-performance of the FGI Technologies) and to the seller of any Alfalfa Seed (regarding performance or non-performance of the Alfalfa Seed) within sufficient time to allow an in-field inspection of the crop(s) about which any controversy, claim, action, or dispute is being asserted. The notice will be timely only if it is delivered 15 days or less after Grower first observes the issue(s) regarding performance or non-performance of the FGI Technology and/or the Alfalfa Seed. The notice shall include a statement setting forth the nature of the claim, name of the FGI Technology, and Alfalfa Seed hybrid or variety. Grower must deliver the notice to Monsanto Canada Inc., Attn: Trait Operations, 900-One Research Rd, Winnipeg Manitoba, R3T 6E3.

b Limited Warranty and Disclaimer of Warranties: FGI warrants the FGI Technology licensed hereunder as set forth on the seed bag and/or tag to the extent specifically warranted thereon, or, to the extent specifically warranted therein, that the FGI Technologies licensed hereunder will perform as set forth in the TUG when used in accordance with directions. This warranty applies only to HarvXtra™ Alfalfa with Roundup Ready® Technology contained in planting Alfalfa Seed that has been purchased from FGI and seed companies licensed by FGI or the seed company’s authorized dealers or distributors. EXCEPT FOR THE EXPRESS WARRANTIES IN THE LIMITED WARRANTY SET FORTH ABOVE, FGI MAKES NO OTHER WARRANTIES OF ANY KIND, AND DISCLAIMS ALL OTHER WARRANTIES, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY PATENTS. THIS WARRANTY IS VOID IF THE SEED IS REPACKAGED BY ANY PARTY OTHER THAN FGI OR PARTIES AUTHORIZED BY FGI.

c Grower's Exclusive Limited Remedy: THE EXCLUSIVE REMEDY OF GROWER AND THE LIMIT OF THE LIABILITY OF FGI OR ANY SELLER FOR ANY AND ALL LOSSES, INJURY OR DAMAGES RESULTING FROM THE USE OR HANDLING OF ALFALFA SEED (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, PRODUCT LIABILITY, STRICT LIABILITY, TORT, OR OTHERWISE) SHALL BE THE PRICE PAID BY GROWER FOR THE QUANTITY OF THE ALFALFA SEED INVOLVED OR, AT THE ELECTION OF FGI OR THE SEED SELLER, THE REPLACEMENT OF THE ALFALFA SEED. IN NO EVENT SHALL FGI OR ANY SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR PUNITIVE DAMAGES.
Performance Series™ Sweet Corn Insect Resistance Management (IRM) - Post-Harvest Requirements: Crop destruction must occur no later than 30 days following harvest, but preferably within 14 days. The allowed crop destruction methods are: rotary mowing, discing, or plowing down. Crop destruction methods should destroy any surviving resistant insects.

All information concerning Performance Series® sweet corn hybrids given orally or in writing by Monsanto or its employees or agents, including the information in this communication, is given in good faith, but is not to be taken as a representation or warranty by Monsanto as to the performance or suitability of Performance Series® sweet corn hybrids, which may depend on local climatic conditions and other factors. Monsanto assumes no liability for any such information. This information shall not form part of any contract with Monsanto unless otherwise specified in writing.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend® Soybeans contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate.

Genuity and Design®, Genuity®, Monsanto BioAg and Design™, Monsanto and Vine Design®, Performance Series and Design®, Performance Series®, RIB Complete and Design®, RIB Complete®, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup Transorb®, Roundup WeatherMAX®, Roundup Xtend™ with VaporGrip® Technology, XtendiMax® with VaporGrip® Technology, Roundup®, SmartStax and Design®, SmartStax®, VT Double PRO®, and VT Triple PRO® are trademarks of Monsanto Technology LLC, Monsanto Canada, Inc. licensee. LibertyLink® and the Water Droplet Design are trademarks of Bayer. Used under license. Herculex® is a registered trademark of Dow AgroSciences LLC. Used under license. Respect the Refuge and Design is a registered trademark of the Canadian Seed Trade Association. Used under license. HarvXtra™ is a trademark of Forage Genetics International, LLC. All other trademarks are the property of their respective owners. ©2017 Monsanto Canada Inc.