



• U.S. TECHNOLOGY USE GUIDE •

# TUG

• INSECT RESISTANCE MANAGEMENT GUIDE •





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# Stewardship Overview

This Technology Use Guide (TUG) is a valuable source of technical information about Bayer CropScience LP's (Bayer's) current portfolio of seed products containing biotechnology-derived traits, related crop protection products, seed treatments, and single-use wheat varieties. It sets forth some of the requirements, recommendations, and Best Management Practices (BMPs) for the use of these products.

**All purchasers of Bayer traited seed are required to have a current signed Technology Stewardship Agreement (TSA). Please visit [www.agcelerate.com](http://www.agcelerate.com) to sign a 2026 TSA unless you signed one in 2024.**

This TUG is not a pesticide product label. It is intended to provide additional information and highlight approved uses allowed by certain product labels. Read and follow all precautions and requirements in the label booklet and any separately published supplemental labeling for the agricultural herbicide or any other pesticide product you are using. Nothing in this TUG should be construed as a substitute for reading and following all product labeling.





## Bayer Corn Technologies



Short stature corn hybrids developed through traditional breeding in the Preceon™ Smart Corn System were developed to be around 1/3 shorter than traditional corn hybrids. With less height to catch wind,\* the short stature corn hybrids have increased tolerance to high winds and other challenging weather conditions. Farmers can see a reduced risk of yield loss resulting from lodging, greensnap and goose-necking. Initial trials have also shown potential for greater soil exploration and depth in locations with overall robust root growth,\* however the effects of this characteristic have yet to be fully understood.



Products with SmartStax® PRO with RNAi Technology contain Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34Ab1 and Cry35Ab1 from *Bacillus thuringiensis* (*B.t.*) and DvSnf7 double stranded RNA. Together this technology controls European corn borer, southwestern corn borer, southern cornstalk borer, fall armyworm, stalk borer, lesser corn stalk borer, sugarcane borer, black cutworm, western corn rootworm, northern corn rootworm and Mexican corn rootworm and controls or suppresses corn earworm. Products with SmartStax® PRO Technology also contain Roundup Ready® 2 Technology and LibertyLink® Technology that provide tolerance to in-crop applications of labeled glyphosate herbicides and glufosinate herbicides, respectively, when applied according to label directions.



Products with SmartStax® Technology contain Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34Ab1 and Cry35Ab1 from *B.t.* that together control European corn borer, southwestern corn borer, southern cornstalk borer, fall armyworm, stalk borer, lesser corn stalk borer, sugarcane borer, black cutworm, western corn rootworm, northern corn rootworm and Mexican corn rootworm and control or suppress corn earworm.<sup>1,2</sup> Products with SmartStax® Technology also contain Roundup Ready® 2 Technology and LibertyLink® Technology that provide tolerance to in-crop applications of labeled glyphosate herbicides and glufosinate herbicides, respectively, when applied according to label directions.



Products with Trecepta® Technology contain Cry1A.105, Cry2Ab2 and Vip3Aa20 from *B.t.* that together control European corn borer, southwestern corn borer, southern cornstalk borer, corn earworm, fall armyworm, stalk borer, lesser cornstalk borer, sugarcane borer, beet armyworm, true armyworm, black cutworm, western bean cutworm, and dingy cutworm.<sup>1</sup> Products containing this technology also contain Roundup Ready® 2 Technology that provides tolerance to in-crop applications of labeled glyphosate herbicides when applied according to label directions.



Products with VT4PRO™ with RNAi Technology contain Cry1A.105, Cry2Ab2, Cry3Bb1, Vip3Aa20 from *B.t.* and DvSnf7 double-stranded RNA that together control European corn borer, southwestern corn borer, southern cornstalk borer, corn earworm, fall armyworm, stalk borer, lesser cornstalk borer, sugarcane borer, beet armyworm, true armyworm, black cutworm, western bean cutworm, dingy cutworm, western corn rootworm, northern corn rootworm, and Mexican corn rootworm.<sup>1</sup> Products containing this technology also contain Roundup Ready® 2 Technology that provides tolerance to in-crop applications of labeled glyphosate herbicides when applied according to label directions.





## Bayer Corn Technologies



Products with VT Triple PRO® Technology contain Cry1A.105, Cry2Ab2 and Cry3Bb1 from *B.t.* that together control European corn borer, southwestern corn borer, southern cornstalk borer, fall armyworm, stalk borer, lesser corn stalk borer, sugarcane borer, western corn rootworm, northern corn rootworm, and Mexican corn rootworm and control or suppress corn earworm.<sup>1,2</sup> Products with VT Triple PRO® Technology also contain Roundup Ready® 2 Technology that provides tolerance to in-crop applications of labeled glyphosate herbicides when applied according to label directions.



Products with VT Double PRO® Technology contain Cry1A.105 and Cry2Ab2 from *B.t.* that together control European corn borer, southwestern corn borer, sugarcane borer, southern cornstalk borer, stalk borer, lesser cornstalk borer and fall armyworm, and control or suppress corn earworm.<sup>1</sup> Products with VT Double PRO® Technology also contain Roundup Ready® 2 Technology that provides tolerance to in-crop applications of labeled glyphosate herbicides when applied according to label directions.



Roundup Ready® Corn 2 products and corn with Roundup Ready® 2 Technology contain in-plant tolerance to glyphosate, the active ingredient in Roundup® Brand Agricultural Herbicides: SmartStax® PRO Corn, SmartStax® PRO RIB Complete® corn blend, SmartStax® Corn, SmartStax® RIB Complete® corn blend, VT Double PRO® Corn, VT Double PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Double PRO® Corn, DroughtGard® Hybrids with VT Double PRO® RIB Complete® corn blend, VT Triple PRO® Corn, VT Triple PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Triple PRO® Corn, DroughtGard® Hybrids with VT Triple PRO® RIB Complete® corn blend, VT4PRO™ Corn, VT4PRO™ RIB Complete®, Trecepta® Corn, Trecepta RIB Complete® corn blend.



Products with DroughtGard® Hybrids Technology contain cold shock protein B from *Bacillus subtilis*, a protein that can mitigate the effects of drought stress: DroughtGard® Hybrids with VT Double PRO® Corn, DroughtGard® Hybrids with VT Double PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Triple PRO® Corn, and DroughtGard® Hybrids with VT Triple PRO® RIB Complete® corn blend.



The Acceleron® portfolio delivers coverage on four fronts: fungicides, insecticides, nematicides and bio-enhancers to help protect your seed investment against diseases, insects, nematodes, as well as moisture or nutrient stress. For more information, consult your local retailer or visit [crops.science.bayer.us/seedgrowth/acceleron](https://crops.science.bayer.us/seedgrowth/acceleron).



RIB Complete® corn blend products have refuge seed in the bag along with traited seed, resulting in a refuge configuration that is interspersed within the field: SmartStax® PRO RIB Complete® corn blend, SmartStax® RIB Complete® corn blend, Trecepta® RIB Complete® corn blend, VT Double PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Double PRO® RIB Complete® corn blend, VT Triple PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Triple PRO® RIB Complete® corn blend, and VT4PRO™ RIB Complete® corn blend.

<sup>1</sup>Based upon root observations from 2016-2022 Bayer internal trials both in greenhouse and limited field environments (6 locations, 3 states) comparing limited genetics of short stature vs standard height corn products.

<sup>2</sup>Routine applications of insecticides to control these insects under typical growing conditions and infestation levels are usually unnecessary for these products.

<sup>3</sup>Applications of soil-applied insecticides (i.e., application of an insecticide to the soil surface, in furrows and/or incorporated into the soil) are not recommended for control of corn rootworm except under limited circumstances and under consultation with an extension agent, crop consultant or other local experts. Soil-applied insecticides should not be necessary for corn rootworm control with this product.

SmartStax® PRO RIB Complete® corn blend, SmartStax® RIB Complete® corn blend, Trecepta® RIB Complete® corn blend, VT Double PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Double PRO® RIB Complete® corn blend, VT Triple PRO® RIB Complete® corn blend, DroughtGard® Hybrids with VT Triple PRO® RIB Complete® corn blend, and VT4PRO™ RIB Complete® corn blend, require a 20% planted, structured refuge in the Cotton-Growing Area. See map on page 25 of this section.





## *Integrated Pest Management (IPM)*

### **Sustainable Agriculture**

Bayer insect-protected 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-insect-protected refuge acres but are equally important for detecting and controlling non-target pests that exceed established thresholds on insect-protected crops.

### **Pests Not Controlled**

Specific insect-protected 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/treatments. 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.

### **An IPM Checklist**

#### **Pest scouting:**

- Use appropriate scouting techniques and treatment decisions.

#### **Insecticide applications:**

- Select insecticide treatments that have minimal negative impact on beneficial insects, whenever possible. These insects are conserved by insect-protected crops and can contribute to insect pest control.
- Rotate insecticide mode of action or use products with multiple modes of action to help reduce the risk of insect pests developing chemical resistance. For more information, visit [irac-online.org/modes-of-action/](http://irac-online.org/modes-of-action/).

#### **Cultural practices:**

- Select cultivars well-adapted to your setting, giving appropriate attention to the 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.



# Corn Refuge Requirements

Growers must read the IRM Grower Guide prior to planting for information on required IRM.

The corn product IRM Grower Guide is located on the seed bag tag.

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

*A key component of any IRM plan is a refuge.*

A refuge is a block or strip of corn that does not contain a plant-incorporated protectant such as an insect protection technology for controlling targeted insect pests, or the refuge can be included in an EPA-approved seed blend product provided by qualified seed producers/conditioners licensed by Bayer. There are no requirements for a separate structured refuge for approved seed

blend products when planted in the U.S. Corn-Growing Area (as defined on page 8) because the refuge seed is contained within the bag/container. Bayer does not recommend the planting of seed blend products in the Cotton-Growing Area (as defined on page 15). If planted in a cotton area, an additional 20% separate structured refuge is required.

*The primary purpose of a refuge is to maintain a population of insect pests that are not exposed to plant-incorporated protectants such as insect protection proteins.*

The lack of exposure to insect protection proteins allows susceptible insects emerging from the refuge to mate with the rare resistant insects that may emerge from the insect-protected crop. Susceptibility to insect protection technology would then be passed to their offspring, helping to preserve the long-term effectiveness of insect

protection technologies. To help reduce the risk of insects developing resistance, the refuge should be planted with a similar non-insect-protected product (e.g., a similar relative maturity), as close as possible and at the same time as, the crop containing insect protection technologies.

*As a condition of registration for insect-protected products required by the EPA, seed companies are required to conduct IRM compliance assessments during the growing season to ensure grower compliance.*

Failure to follow IRM requirements and properly plant a refuge may result in the loss of access to Bayer Crop Science insect-protected technologies. Do your part to ensure these technologies are preserved by fully cooperating in refuge management. Continued availability of insect-

protected technologies depends on grower compliance with EPA product registration and label requirements. With an effective IRM plan in place, growers will continue to benefit from effective and consistent insect protection and top-yield potential found in crops containing these technologies.



## Refuge Planting

- Grower mixing of non-insect-protected seed with insect-protected corn seed is not permitted. However, non-insect-protected seed can be included in an EPA-approved seed blend product if provided by qualified seed producers/conditioners licensed by Bayer.
- Plant the structured refuge at the same time as the insect-protected corn seed to help ensure that plant development is similar among products.
- To avoid inadvertent mixing of seed in the planting process, be sure to clean all seed out of hoppers when switching from non-insect-protected seed to insect-protected corn seed or vice versa.
- Adjacent and separate refuge fields must be planted and managed by the same grower.
- If insect-protected corn seeds are planted on rotated ground, then the corn refuge can be planted on either continuous corn ground or on rotated ground.
- If insect-protected corn seeds are planted on continuous corn ground, then the corn refuge also must be planted on continuous corn ground.

## Requirements by Growing Area

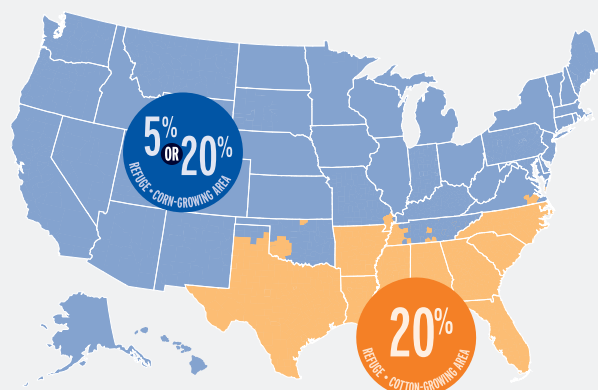


The following states and counties are within the **Corn-Growing Area**. The blue circle structured refuge requirements apply to non-refuge in a bag insect-protected corn products grown in this area.

Alaska  
Arizona  
California  
Colorado  
Connecticut  
Delaware  
Hawaii  
Idaho  
Illinois  
Indiana  
Iowa  
Kansas  
Kentucky  
Maine  
Maryland  
Massachusetts  
Michigan  
Minnesota

Missouri—*all counties except Dunklin, New Madrid, Pemiscot, Scott & Stoddard*  
Montana  
Nebraska  
Nevada  
New Hampshire  
New Jersey  
New Mexico  
New York  
North Dakota  
Ohio  
Oklahoma—*all counties except Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman & Washita*  
Oregon  
Pennsylvania  
Rhode Island  
South Dakota

Tennessee—*all counties except Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby & Tipton*  
Texas—*only the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts & Sherman*  
Utah  
Vermont  
Virginia—*all counties except Dinwiddie, Franklin City, Greenville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey & Sussex*  
Washington  
West Virginia  
Wisconsin  
Wyoming



The following states and counties are within the **Cotton-Growing Area**. The orange circle structured refuge requirements apply to insect-protected corn products grown in this area.

Alabama  
Arkansas  
Florida  
Georgia  
Louisiana  
Mississippi  
Missouri—*only the counties of Dunklin, New Madrid, Pemiscot, Scott & Stoddard*  
North Carolina

Oklahoma—*only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman & Washita*  
South Carolina  
Tennessee—*only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby & Tipton*

Texas—*all counties except Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts & Sherman*  
Virginia—*only the counties of Dinwiddie, Franklin City, Greenville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey & Sussex*

# Corn Structured Refuge Requirements

Follow all pesticide label directions. Please see page 8 for Growing Area descriptions.

| Product                      | Corn-Growing Area Structured Refuge | Cotton-Growing Area Structured Refuge | Common or Single-Pest Configuration Options |          |          |
|------------------------------|-------------------------------------|---------------------------------------|---------------------------------------------|----------|----------|
|                              |                                     |                                       | Within                                      | Adjacent | 1/2 Mile |
| <b>SmartStax<sup>®</sup></b> | 5%                                  | 20%                                   | ●                                           | ●        | ★        |

Under typical growing conditions and infestation levels for products planted with SmartStax<sup>®</sup> Technology, routine applications of insecticides to control pests are usually unnecessary. However, the refuge can be protected from lepidopteran damage by use of non-*B.t.* insecticides if the population of one or more target lepidopteran pests in the refuge exceeds economic thresholds.<sup>1</sup> The refuge can also be protected from corn rootworm damage by an appropriate seed treatment or soil insecticide; but insecticides labeled for adult corn rootworm control must be avoided in the refuge during the period of corn rootworm adult emergence. If insecticides are applied to the refuge for control of corn rootworm adults, the same treatment must also be applied in the same timeframe to the SmartStax<sup>®</sup> Corn field. SmartStax<sup>®</sup> Technology contains Roundup Ready<sup>®</sup> 2 Technology and LibertyLink<sup>®</sup> herbicide-tolerance traits, but your refuge may or may not. Select an appropriate herbicide for your refuge to avoid crop damage.

|                                                                         |                                  |                                                                                                           |   |   |   |
|-------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|
| <b>SmartStax<sup>®</sup> PRO</b><br><small>with RNAi TECHNOLOGY</small> | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |
| <b>SmartStax<sup>®</sup></b><br><small>RIB COMPLETE</small>             | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |
| <b>VT4<sup>®</sup> PRO</b><br><small>with RNAi TECHNOLOGY</small>       | 5%                               | 20%                                                                                                       | ● | ● | ● |
| <b>Trecepta<sup>®</sup></b><br><small>CORN</small>                      | 5%                               | 20%                                                                                                       | ● | ● | ● |

The refuge can be treated with a non-*B.t.* foliar-applied insecticide for control of lepidopteran pests (e.g., corn borer), if pest pressure reaches an economic threshold for damage.<sup>1</sup> Microbial *B.t.* insecticides must not be applied to the refuge corn.

|                                                                             |                                  |                                                                                                           |   |   |   |
|-----------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|
| <b>VT4<sup>®</sup> PRO</b><br><small>RIB COMPLETE</small>                   | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |
| <b>Trecepta<sup>®</sup></b><br><small>RIB COMPLETE<sup>®</sup> CORN</small> | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |

**Cotton-Growing Area:** The 20% separate structured refuge can be protected from lepidopteran damage by use of non-*B.t.* insecticides if the population of one or more target pests of Trecepta<sup>®</sup> RIB Complete<sup>®</sup> corn blend exceeds economic thresholds in the refuge. Microbial *B.t.* insecticides must not be applied to the refuge corn. In addition, refuge can be protected from corn rootworm damage by appropriate seed treatment or soil insecticide.

|                                                                                                                         |     |     |   |   |    |
|-------------------------------------------------------------------------------------------------------------------------|-----|-----|---|---|----|
| <b>VT Triple PRO<sup>®</sup></b> <b>DroughtGard<sup>®</sup></b><br><small>HYBRIDS<br/>VT Triple PRO<sup>®</sup></small> | 20% | 20% | ● | ● | ★★ |
|-------------------------------------------------------------------------------------------------------------------------|-----|-----|---|---|----|

The refuge can be treated with a soil-applied or seed-applied insecticide to control corn rootworm larvae and other soil pests. The refuge can also be treated with a non-*B.t.* foliar applied insecticide for control of late-season pests (e.g., corn borer), if pest pressure reaches an economic threshold for damage.<sup>1</sup> However, if corn rootworm adults are present at the time of foliar application, then the VT Triple PRO<sup>®</sup> corn field must be treated in a similar manner.

|                                                                                                                                                                   |                                  |                                                                                                           |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|
| <b>VT Triple PRO<sup>®</sup></b> <b>DroughtGard<sup>®</sup></b><br><small>RIB COMPLETE<sup>®</sup><br/>VT Triple PRO<sup>®</sup> RIB COMPLETE<sup>®</sup></small> | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|

**Cotton-Growing Area:** The 20% separate structured refuge can be protected from lepidopteran damage by use of non-*B.t.* insecticides if the population of one or more target pests of Trecepta<sup>®</sup> RIB Complete<sup>®</sup> corn blend exceeds economic thresholds in the refuge. Microbial *B.t.* insecticides must not be applied to the refuge corn. In addition, refuge can be protected from corn rootworm damage by appropriate seed treatment or soil insecticide.

|                                                                                                                         |    |     |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------|----|-----|---|---|---|
| <b>VT Double PRO<sup>®</sup></b> <b>DroughtGard<sup>®</sup></b><br><small>HYBRIDS<br/>VT Double PRO<sup>®</sup></small> | 5% | 20% | ● | ● | ● |
|-------------------------------------------------------------------------------------------------------------------------|----|-----|---|---|---|

The refuge can be treated with a non-*B.t.* foliar-applied insecticide for control of lepidopteran pests (e.g., corn borer), if pest pressure reaches an economic threshold for damage.<sup>1</sup> Microbial *B.t.* insecticides must not be applied to the refuge corn.

|                                                                                                                                                                   |                                  |                                                                                                           |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|
| <b>VT Double PRO<sup>®</sup></b> <b>DroughtGard<sup>®</sup></b><br><small>RIB COMPLETE<sup>®</sup><br/>VT Double PRO<sup>®</sup> RIB COMPLETE<sup>®</sup></small> | NO<br>structured refuge required | Not recommended for the Cotton-Growing Area. If planted, an additional 20% structured refuge is required. | ● | ● | ● |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|---|---|---|

**Cotton-Growing Area:** The 20% separate structured refuge can be protected from lepidopteran damage by use of non-*B.t.* insecticides if the population of one or more target pests of VT Double PRO<sup>®</sup> RIB Complete<sup>®</sup> corn blend exceeds economic thresholds in the refuge.<sup>1</sup> Microbial *B.t.* insecticides must not be applied to the refuge corn. In addition, refuge can be protected from corn rootworm damage by appropriate seed treatment or soil insecticide.

\* = 1/2 mile option for SmartStax<sup>®</sup> Corn is only available to growers in the following states: AK, AL, AR, AZ, CA, CT, DE, FL, GA, HI, IL, LA, MA, MD, ME, MS, MT, NC, NH, NJ, NM, NV, NY, OR, PA, RI, SC, TN, UT, VA, VT, WA, WI, WY.

\*\* = 1/2 mile option for VT Triple PRO<sup>®</sup> Corn is only available to growers planting separate refuge areas for corn borers (this option is not available for a separate corn rootworm refuge area).

<sup>1</sup> Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., extension service agents and crop consultants).



## Corn Structured Refuge Requirements

### Common and Single-Pest Structured Refuge Configuration Options

-  Insect-protected Technology
-  Non-insect protected Refuge  
(i.e., Roundup Ready® Corn 2 or conventional corn)
-  Designates road, ditch, path, etc.

Sample configurations shown are for a 20% refuge

*The graphic depictions of refuge configurations in this overview are offered merely as examples to growers and are not necessarily drawn to scale.*

#### Within



Block



Perimeter



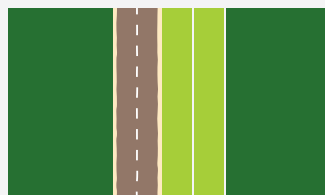
Strips

If perimeter or strips are used for the refuge, they must be at least 4 (four) contiguous rows wide.

#### OR Adjacent



Adjacent



Within adjacent field

#### OR 1/2 Mile Option



← ≤ 1/2 mile →

1/2 mile option available for limited products and in limited areas — see footnotes on page 26 for details.



## How to Calculate a Separate Structured Refuge



Refer to this diagram for the example below.

- A** Total Corn Acres\*
- B** Refuge Acres
- C** Insect-protected Acres
- %** Percent of Required Refuge— **5%** or **20%**  
Based on total corn acres

As part of our commitment to enhancing grower productivity, growers can access an IRM corn refuge look-up tool at [iwilltakeaction.com/insects/bt-refuge-lookup-tool/](http://iwilltakeaction.com/insects/bt-refuge-lookup-tool/).

Example below is for a 20% refuge product.

**START** with the **TOTAL** number of corn acres you want to plant in an area.

Multiply by the **PERCENT** of refuge required for the insect-protected trait.

This is your minimum **REFUGE ACRES**.

|            |              |   |              |   |               |
|------------|--------------|---|--------------|---|---------------|
| Example    | <b>A</b> 200 | x | <b>%</b> 20% | = | <b>B</b> 40 ✓ |
| Your Field |              | x |              | = |               |

Next, subtract your refuge acres from your total corn acres.

This is your maximum **INSECT-PROTECTED ACRES**.

|            |              |   |             |   |              |
|------------|--------------|---|-------------|---|--------------|
| Example    | <b>A</b> 200 | – | <b>B</b> 40 | = | <b>C</b> 160 |
| Your Field |              | – |             | = |              |

\*Includes all corn acres that are in field or adjacent to each other and will be allocated to the insect-protected product and its associated refuge.



# Acceleron® Corn Offerings



The Acceleron® Brand portfolio helps protect your seed investment against diseases, insects, nematodes, and moisture or nutrient stress.

## Fungicides

Some key diseases cost growers 225M bushels of corn per year. Our exclusive combinations of fungicides protect against these top diseases, including *Fusarium*, *Pythium*, *Rhizoctonia solani* and *Colletotrichum graminicola*.

## Insecticides

Early season corn insects feed on seeds and seedlings, which can cause delayed emergence, stand loss, plant injury and stunting. Our insecticides control 15 early season pests that cause significant damage to corn crops across the U.S., including wireworm, seed corn maggot, white grub, grape colaspis and black cutworm.

## Nematicides

Nematodes cost an estimated 10.2% yield loss in corn.<sup>1</sup> They pierce and infect roots, causing a loss of nutrients and water while opening the door for secondary issues. Poncho® Votivo® Seed Treatment has been shown to provide broad-spectrum protection against plant-parasitic nematodes for up to 60 days after planting.

New to the Acceleron offerings for 2026: Acceleron N-314 Seed Treatment,<sup>2</sup> the first dual mode of action chemistry and biological product for corn that provides broad spectrum efficacy protecting against yield robbing nematodes.

## Bio-Enhancers

Nutrient and moisture deficiencies can impair root growth, making it even harder for plants to get the nutrients and moisture they need. Bio-enhancers for corn make nutrients available to plants, helping maximize yield potential. Although benefits vary by crop, some products can also enhance functional root volume and increase nutrient uptake, protecting plants from moisture or nutrient stress.

## Additional Offerings

- The BioRise® Corn Offerings complement our lineup of fungicides, insecticides and nematicides. 2016 and newer product classes are treated with BioRise® 360 ST.<sup>3</sup>

For more information, please consult your local retailer or visit [crops.science.bayer.us/seedgrowth/acceleron](https://crops.science.bayer.us/seedgrowth/acceleron).

For important information related to stewardship and best management practices for seed treatments, refer to page 16 of this Technology Use Guide.

<sup>1</sup>Nationwide estimated loss. Ferris, Howard. "Nematodes and Plant Damage." University of California, 1 Oct. 2015. Web.

<sup>2</sup>Acceleron N-314 Seed Treatment will be available on all VT4PRO™ with RNAi Technology and SmartStax® PRO with RNAi Technology trait offerings on Bayer owned seed brands for the 2026 season.

<sup>3</sup>BioRise® Corn offerings can vary by seed company.

# Corn Offerings



BASIC

## FUNGICIDES

Two modes of action providing enhanced protection against soil-borne and seedborne diseases, including *Fusarium*, *Rhizoctonia solani* and *Pythium*.

## INSECTICIDES <sup>[1]</sup>

Controls over 15 corn insect pests and protects against damage from early season pests, such as wireworm, seedcorn maggot, white grub, grape colaspis and black cutworm. Standard insecticide rate of 0.50 mg a.i./seed for products containing Clothianidin.

## NEMATICIDES <sup>[1]</sup>

Protection against damage from a wide range of nematode species. Refer to your 2026 seed price card for availability and pricing.

## BIO-ENHANCERS

### + BioRise® Corn Offering <sup>[2]</sup>

Designed to increase functional root volume, as well as water and nutrient uptake through enhanced mycorrhizal colonization.

<sup>[1]</sup> Insecticide and nematicide offerings will vary by trait and class. Refer to price card, bag tag or bag flap for details. Clothianidin at the 1.25 mg a.i./seed rate available on select products.

<sup>[2]</sup> Class of 2016 and newer base genetics are treated with BioRise® 360 ST.

<sup>[3]</sup> Results from seven years of internal trials comparing hybrids treated with and without Enhanced Disease Control Offering + Poncho® Votivo® Seed Treatment. N=598.



ELITE

## FUNGICIDES

Protection against soilborne and seedborne diseases, including *Fusarium*, *Rhizoctonia solani* and *Pythium*.

## + ENHANCED DISEASE CONTROL OFFERING

Offers a 3.7 bu/A advantage on average<sup>[3]</sup> with enhanced early- to mid-season disease control due to the reduction of infections caused by *Fusarium*, *Rhizoctonia solani* and *Colletotrichum graminicola*.

## INSECTICIDES <sup>[1]</sup>

Controls over 15 corn insect pests and protects against damage from early season pests, such as wireworm, seedcorn maggot, white grub, grape colaspis and black cutworm. Standard insecticide rate of 0.50 mg a.i./seed for products containing Clothianidin.

## NEW MY24 ACCELERON® N-314 SEED TREATMENT NEMATICIDE OFFERING

on VT4PRO™ with RNAi Technology and SmartStax® PRO with RNAi Technology on Bayer-owned seed brands for the 2026 season.

## NEMATICIDES <sup>[1]</sup>

Protection against damage from a wide range of nematode species. Refer to your 2026 seed price card for availability and pricing.

## BIO-ENHANCERS

### + BioRise® Corn Offering <sup>[2]</sup>

Designed to increase functional root volume, as well as water and nutrient uptake through enhanced mycorrhizal colonization.



## Bayer Cotton Technologies



Combining ThryvOn® Cotton with the proven Bollgard® 3 XtenDFlex® Technology results in cotton which contains the insecticidal proteins Cry51Aa2, Cry1Ac, Cry2Ab2 and Vip3Aa19. These varieties have the same insect protection as Bollgard® 3 with the added season-long protection against tarnished plant bugs and thrips species,<sup>1</sup> which may help reduce the number of foliar insecticide applications needed to control these sucking pests. Bollgard® 3 ThryvOn® Cotton with XtenDFlex® Technology varieties include tolerance to labeled dicamba, glyphosate and glufosinate herbicides, providing effective weed control options for use before, at and after planting.



Bollgard® 3 XtenDFlex® Cotton combines the proven performance of the insecticidal proteins Cry1Ac and Cry2Ab2 with Vip3Aa19 for greater protection against cotton bollworm, tobacco budworm, fall armyworm and beet armyworm while further decreasing the chance of resistance development. The increased insecticidal efficacy of Bollgard® 3 Cotton is combined with the triple herbicide tolerance to labeled dicamba,<sup>2</sup> glyphosate and glufosinate herbicides from XtenDFlex® Technology to provide our highest available level of protection from yield-robbing insects and weeds.



Bollgard II® XtenDFlex® Cotton contains two distinct insecticidal proteins, Cry1Ac and Cry2Ab2 for control of tobacco budworm, pink bollworm and cotton bollworm. Bollgard II® XtenDFlex® Cotton provides tolerance to labeled dicamba,<sup>2</sup> glyphosate and glufosinate herbicides, allowing effective and sustainable weed control options for use before, at and after planting.



XtenDFlex® Cotton varieties include tolerance to labeled dicamba,<sup>2</sup> glyphosate and glufosinate herbicides, providing effective weed control options for use before, at and after planting.



Bollgard II® with Roundup Ready® Flex Cotton varieties offer growers the benefits of both insect protection and glyphosate tolerance combined in one crop. These varieties exhibit the same insect protection qualities as Bollgard II® Cotton and are tolerant to in-crop applications of glyphosate agricultural herbicides when used according to label directions.

<sup>1</sup> ThryvOn® Technology may help reduce insecticide applications for tarnished plant bugs and thrips species [tobacco thrips (*Frankliniella fusca*), Western flower thrips (*Frankliniella occidentalis*), tarnished plant bug (*Lygus lineolaris*) and the Western Tarnished Plant bug (*Lygus hesperus*)]. Scouting is critical to determine which and how many insecticide applications are recommended to avoid economic losses greater than the pest management costs (i.e., when economic thresholds are met).

<sup>2</sup> Bayer will not authorize the use of dicamba herbicides containing the dimethylamine (DMA) salt of dicamba for use in Bollgard® 3 XtenDFlex®, Bollgard II® XtenDFlex® or XtenDFlex® Cotton even if the EPA were to approve those herbicides for use with those products.





## Bayer Cotton Technologies

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Roundup Ready® Flex Cotton varieties offer improved tolerance to the active ingredient in Roundup® Brand Agricultural Herbicides. This technology gives growers the opportunity to make in-crop broadcast applications of glyphosate agricultural herbicides when used according to label directions.

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Bollgard II® Cotton varieties contain two distinct insecticidal proteins, Cry1Ac and Cry2Ab2, from *Bacillus thuringiensis* (B.t.) that control tobacco budworm, pink bollworm and cotton bollworm. Bollgard II® Cotton also provides control against fall armyworm, beet armyworm, cabbage and soybean loopers and other secondary leaf- or fruit-feeding caterpillar pests of cotton.

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The Acceleron® portfolio delivers coverage on three fronts: fungicides, insecticides, and nematicides to help protect your seed investment against diseases, insects and nematodes as well as moisture or nutrient stress. For more information, please consult your local retailer or visit [crops.science.bayer.us/seedgrowth/acceleron](https://crops.science.bayer.us/seedgrowth/acceleron).

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## Your Guide for Successful Cotton Crops With ThryvOn® Technology

Navigating the world of cotton farming just got easier with the latest advancements in ThryvOn® Technology. Bollgard® 3 ThryvOn® cotton with XtendFlex® Technology is an innovative new product. The first of its kind, this Bt cotton technology offers growers protection against key tarnished plant bug and thrips species.<sup>1</sup> ThryvOn Technology is stacked with Bollgard 3 XtendFlex Technology to provide a broad spectrum of insect and weed protection, including protection against bollworm, tobacco budworm and other common worm pests. Additionally, with tolerance to glyphosate and glufosinate, Bollgard 3 ThryvOn cotton with XtendFlex Technology provides more options against tough-to-control and resistant weeds like Palmer amaranth, waterhemp and marestail. Whether you're facing challenges with thrips species or the nuisance of tarnished plant bug species, our straightforward guide is here to help. We've boiled down the essentials into easy-to-follow steps, tailored to keep your cotton healthy and productive.

ThryvOn Technology helps reduce the damage caused by key tarnished plant bug and thrips species, resulting in potentially fewer insecticide applications needed to control these pests throughout the season. For thrips species, ThryvOn Technology reduces the number of eggs laid, which decreases thrips species populations and the damage they cause. ThryvOn Technology also helps control young tarnished plant bug nymphs, which can result in less plant bug damage. As ThryvOn Technology does not provide complete control of tarnished plant bug or thrips species and has little impact on adults of these species, growers planting ThryvOn Technology should continue to scout and spray with insecticides when necessary. Be sure to follow your locally recommended tarnished plant bug and thrips species economic thresholds from your state cooperative extension service, professional consultants or other qualified authorities. Whenever possible, select insecticides that are least harmful to beneficial insects.

<sup>1</sup>Tobacco thrips (*Frankliniella fusca*), Western flower thrips (*F. occidentalis*), tarnished plant bug (*Lygus lineolaris*) and Western tarnished plant bug (*L. hesperus*).

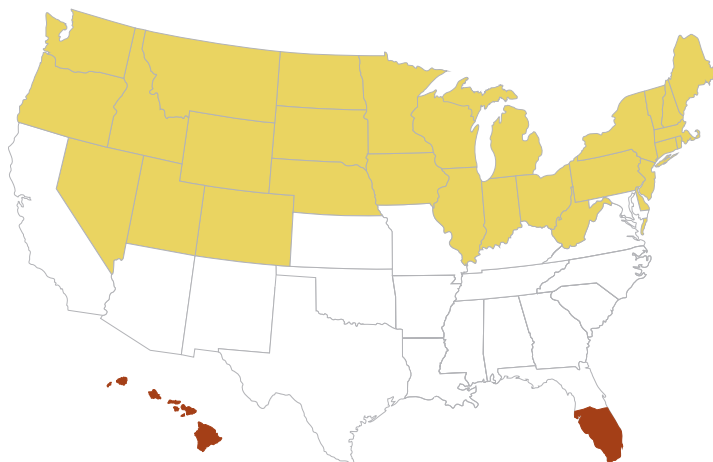
### Areas of the United States where Bollgard® 3 ThryvOn® cotton with XtendFlex® Technology, Bollgard® 3 XtendFlex® and Bollgard II® XtendFlex® Cotton products cannot be grown

#### ● Sale Prohibited

Sale or commercial planting of Bollgard® 3 ThryvOn® cotton with XtendFlex® Technology, Bollgard® 3 XtendFlex® and Bollgard II® XtendFlex® Cotton is prohibited in Hawaii, Puerto Rico and the U.S. Virgin Islands, and in Florida counties of Pinellas, Hillsborough, Hardee, Highlands, Okeechobee and St. Lucie and all counties south of Highway 70 thereof.

#### ● Sale Not Allowed

Sale or commercial planting of Bollgard® 3 ThryvOn® cotton with XtendFlex® Technology, Bollgard® 3 XtendFlex® and Bollgard II® Cotton is not allowed in the following: Alaska, Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Washington, Washington D.C., West Virginia, Wisconsin and Wyoming.



## Pest Management Practices

To ensure your cotton with ThryvOn Technology stays healthy and productive, follow these pest management practices:

Thrips species:

- **Preplanting Care:** It is required to use seed treatments containing imidacloprid in certain geographies to help protect the durability of ThryvOn Technology against thrips species. Above is a map detailing where imidacloprid seed treatment is required and guidelines for imidacloprid use.
- **Stay Informed and Scout:** Growers should refer to their local academic extension's thrips management recommendations, specifically for cotton with ThryvOn Technology. These guidelines are tailored to your region's needs, helping you tackle thrips species more effectively.

Tarnished plant bug species:

- **Stay Informed and Scout:** Always keep an eye out for tarnished plant bug species and follow your local academic extension's tarnished plant bug management recommendations for your cotton with ThryvOn Technology. These tips include how often to check your plants and when it might be time to act. The advice varies by area, so local guidelines are your best bet for up-to-date strategies.





# Acceleron® Cotton Offerings



**The Acceleron® Brand portfolio helps protect your seed investment against diseases, insects, nematodes, and moisture or nutrient stress.**

## Fungicides

Cotton seedling diseases cost cotton growers an average of 350M pounds per year. Our exclusive combinations of fungicides help protect against these damaging diseases, including *Rhizoctonia solani*, *Pythium*, *Fusarium* and *Thielaviopsis basicola*.

## Insecticides

Early season cotton insects feed on seeds and seedlings, which can cause delayed emergence, stand loss, plant injury and stunting. Our insecticides protect against certain sucking insects—including thrips and aphids—that cause significant damage to cotton crops across the U.S. cotton-growing area.

## Nematicides + Copeo® Seed Treatment

Nematodes cost an estimated 10.7% yield loss in cotton.\* They pierce and infect roots, causing a loss of nutrients and water while

opening the door for secondary issues. Copeo® Seed Treatment is a seed treatment for cotton that contributes to higher yield potential under nematode pressure.

## Acceleron® Seed Applied Solutions

The tiers of Acceleron® Seed Applied Solutions available on cotton products in 2026 are shown below.

## Additional Offerings

Additional Offerings from SeedGrowth®:

- Aeris® Insecticide/Nematicide and
- EverGol® Xtend C Fungicide

For more information, please consult your local retailer or visit [cropsience.bayer.us/seedgrowth/acceleron](https://cropsience.bayer.us/seedgrowth/acceleron).

For important information related to stewardship and best management practices for seed treatments, refer to page 16 of this Technology Use Guide.

\*Nationwide estimated loss. Ferris, Howard. "Nematodes and Plant Damage." University of California, 1 Oct. 2015. Web.

# Cotton Offerings



**BASIC**

## FUNGICIDES

Protection against *Rhizoctonia solani*, *Pythium*, *Fusarium* and *Thielaviopsis basicola* with an exclusive combination of fungicides and more rapid and increased emergence of seedlings under certain cold conditions



**STANDARD**

## FUNGICIDES

Protection against *rhizoctonia solani*, *pythium*, *fusarium* and *thielaviopsis basicola* with an exclusive combination of fungicides and more rapid and increased emergence of seedlings under certain cold conditions.

## INSECTICIDES

Reduces damage to cotton caused by early season insect pests, including thrips and aphids.



**ELITE**

Plus **Copeo®**  
Seed Treatment

## FUNGICIDES

Protection against *Rhizoctonia solani*, *Pythium*, *Fusarium* and *Thielaviopsis basicola* with an exclusive combination of fungicides and more rapid and increased emergence of seedlings under certain cold conditions.

## INSECTICIDES

Reduces damage to cotton caused by early season insect pests, including thrips and aphids.

## NEMATICIDES

Protection against damage from a wide range of nematode species.

## Additional Offerings

### EVERGOL® XTEND C FUNGICIDE

### AERIS® SEED-APPLIED INSECTICIDE/NEMATICIDE

Additional cotton offerings from Bayer available for purchase through your local distributor.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. EACH ACCELERON® SEED APPLIED SOLUTIONS OFFERING is a combination of separate individually registered products. Not all products are registered in all states and may be subject to use restrictions. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Acceleron® is a registered trademark of Bayer Group. ©2023 Bayer Group. All rights reserved.



## Bayer Soybean Technologies



XtendFlex® Soybeans are built on Roundup Ready 2 Xtend® Technology to help maximize yield potential, and they have tolerance to labeled dicamba<sup>1</sup>, glyphosate and glufosinate herbicides<sup>2</sup> which will provide additional weed control options for use before, at and after planting.



Roundup Ready 2 Xtend® Soybeans are built on Roundup Ready 2 Yield® Technology to help maximize yield potential, and they have tolerance to labeled dicamba<sup>1</sup> and glyphosate herbicides, providing additional weed control options for use before, at and after planting.



Roundup Ready 2 Yield® Soybeans combine in-plant tolerance to labeled glyphosate herbicides with a high-yield potential product.



Vistive® Gold Soybeans with Roundup Ready 2 Yield® Technology combine in-plant tolerance to labeled glyphosate herbicides with a high-yield potential product that produces a low-saturate, high-oleic soybean oil with broad applications.



The Acceleron® portfolio delivers coverage on two fronts—fungicide and insecticide—to help protect your seed investment against diseases and insects. For more information, please consult your local retailer or visit [cropsience.bayer.us/seedgrowth/acceleron](https://cropsience.bayer.us/seedgrowth/acceleron)



<sup>1</sup> Bayer will not authorize the use of dicamba herbicides containing the dimethylamine (DMA) salt of dicamba for use in Roundup Ready 2 Xtend® or XtendFlex® Soybeans even if the EPA were to approve those herbicides for use with these products.

<sup>2</sup> Only use herbicides labeled for use in the Roundup Ready® Xtend Crop System and LibertyLink® System.



# Acceleron® Soybean Offerings



against diseases and insects.

The Acceleron® portfolio helps protect your seed investment

## Fungicides

Four key diseases cost soybean growers over 90M bushels per year. Our exclusive combinations of fungicides protect against these top diseases, including *Fusarium*, *Pythium*, early season *Phytophthora* and *Rhizoctonia solani*.

## Insecticides

Early season soybean insects feed on seeds and seedlings, which can cause delayed emergence, stand loss, plant injury and stunting. Our insecticides control nine early season insects—including bean leaf beetles, early season soybean aphids and seedcorn maggots—that cause significant damage to soybean crops across the U.S.

## Nematicides + ILEVO® Seed Treatment

Nematodes can cause an estimated 10.6% yield loss in soybeans.\* They pierce and infect roots, causing a loss of nutrients and water

while opening the door for secondary issues. ILEVO® Seed Treatment helps protect against multiple key soybean plant parasitic nematodes (SCN, RKN, RN).

## Acceleron® Seed Applied Solutions

The tiers of Acceleron® Seed Applied Solutions available on soybean products in 2026 are shown below.

## Additional Offerings

- Acceleron® E-007 SAT and ILEVO® Seed Treatment
- Acceleron® B-200 SAT
- ILEVO®

For more information, talk to your local retailer or visit [crops.science.bayer.us/seedgrowth/acceleron](https://crops.science.bayer.us/seedgrowth/acceleron).

For important information related to stewardship and best management practices for seed treatments, please refer to page 16 of this Technology Use Guide.

\*Nationwide estimated loss. Ferris, Howard. "Nematodes and Plant Damage." University of California, 1 Oct. 2015. Web.

# Soybean Offerings



BASIC

## FUNGICIDES

Protection against *Pythium*, early-season *Phytophthora*, *Rhizoctonia solani* and *Fusarium* with an exclusive combination of fungicides and more rapid and increased emergence of seedlings under certain conditions.



STANDARD

## FUNGICIDES

Protection against *Pythium*, early-season *Phytophthora*, *Rhizoctonia solani* and *Fusarium* with an exclusive combination of fungicides and more rapid and increased emergence of seedlings under certain cold conditions.

## INSECTICIDES

Protection from pests including bean leaf beetles, early-season soybean aphids and seed corn maggots.

## Additional Offerings

### ILEVO® SEED TREATMENT

ILEVO® Seed Treatment offers protection against Sudden Death Syndrome and damage caused by plant parasitic nematodes, including Soybean Cyst Nematodes (SCN).



ACCELERON  
E-007 SAT

## Upstream

### ACCELERON® SEED APPLIED SOLUTIONS SEED BRAND OFFERING

- |                              |                         |                      |                  |
|------------------------------|-------------------------|----------------------|------------------|
| • Asgrow®                    | • Fontanelle Hybrids®   | • Kruger Seeds™      | • Stewart Seeds™ |
| • Alloy™ (Enlist offering)   | • Gold Country Seed®    | • Lewis Hybrids™     | • Stone Seed™    |
| • Channel®                   | • Hubner Seed & Design® | • REA Hybrids™       |                  |
| • Connect™ (Enlist offering) | • Jung Seed Genetics™   | • Specialty Hybrids™ |                  |

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. EACH ACCELERON® SEED APPLIED SOLUTIONS OFFERING is a combination of separate individually registered products. Not all products are registered in all states and may be subject to use restrictions. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Acceleron® is a registered trademark of Bayer Group. ©2023 Bayer Group. All rights reserved.



## Bayer Canola Technologies



TruFlex® Canola with Roundup Ready® Technology is part of an improved system designed for a range of growing conditions that provides high-yield potential varieties that have tolerance to glyphosate herbicides, enabling a wider application window for grower flexibility and better weed control and crop safety.



TruFlex® Canola with Roundup Ready® and LibertyLink® Technologies is part of an improved system designed for a range of growing conditions that provides high-yield potential varieties that have tolerance to glyphosate and glufosinate herbicides that provide additional weed control options and enable a wider glyphosate application window for grower flexibility and better weed control and crop safety.



DEKALB® LibertyLink® Canola contains the LibertyLink® trait combining in-plant tolerance to glufosinate herbicides with a high-yield potential product.



Roundup Ready® Spring Canola combines in-plant tolerance to glyphosate herbicides with a high-yield potential product.

Roundup Ready® Winter Canola combines in-plant tolerance to glyphosate herbicides with a high-yield potential product developed for seeding in the fall and harvesting in the following spring/summer.





# Introduction to Biofuels

## What are Biofuels?



Biofuels are low-carbon energy sources produced directly or indirectly from organic materials also known as biomass — including plant materials and animal waste. They are considered renewable energy sources because they can be replenished relatively quickly compared to fossil fuels.



Global transportation decarbonization targets are shaping biofuel markets and accelerating demand for biomass-based feedstock. Global air travel is expected to double in the next 15 years. In turn, biomass-based diesel demand could reach 40 billion gallons by 2040, three times the demand from 2022. 80% of the growth of biomass-based diesel is expected to come from renewable diesel and sustainable aviation fuel to better support the increased global air travel anticipated.\*\*



Ethanol primarily comes from sugar or starch-rich crops like corn and sugarcane; biodiesel is typically made from oilseed crops like soybeans and canola to produce fatty acid esters; and sustainable aviation fuel can also utilize oilseed crops (processed differently than for biodiesel) as well as a broader range of feedstocks including cellulosic biomass and various wastes to create jet fuel.



With Bayer's continued focus on agronomic solutions and innovations for farmers, it has invested in three new crops aimed at creating new revenue opportunities for farmers through the biomass-based diesel market.



1. Camelina



2. Winter Canola



3. CoverCress®\*

Each of these crops can be grown, harvested and sold to be processed into oil, which can then be further refined into biomass-based diesel, helping meet the growing biofuels demand while providing alternate cropping options for farmers that can help improve sustainability of their farming operation.

**\*\*Source:** Neste, SAF Forum - Berlin 2024: WY Parthenon Novel feedstocks POV 2024 Internal Analysis based on IEA under Sustainable Development scenario definition.



# Why do we need Biofuels?

Biofuels can play a crucial role in the global transition to cleaner energy. Here's why they matter:

**Reduced Carbon Emissions:**

Unlike fossil fuels, biofuels release carbon that was recently absorbed by plants, resulting in lower net emissions.<sup>1</sup>

**Transportation Sector:**

Biofuels are crucial for helping decarbonize aviation, shipping, and trucking, where electric alternatives are limited.<sup>1</sup>

**Energy Security:**

They can lessen dependence on oil imports by providing a domestically produced energy source.<sup>2</sup>

**Policy Support:**

Both the EU and US governments have policies in place to support biofuel production and use.<sup>3</sup>

**Economic Growth:**

The biofuel industry can create jobs in agriculture, production, and research, boosting local economies<sup>4</sup>

**Flexibility:**

They can be used in existing vehicle engines with little or no modifications, making them an easier transition fuel.<sup>5</sup>

## Overview and Benefits of Closed Loop

Collaboration with companies throughout the value chain is important to help ensure there is a market for the final product since many of these crops are not currently traded as a commodity on the grain market. Therefore, in order to help provide farmers with certainty, stability, and transparency to assess potential profitability, Bayer collaborates within the value chain so that processors can provide farmers a grain contract prior to farmers purchasing seed and planting their crop. Further downstream, collaboration with the oil refiner helps to provide a market channel to the processor and the potential for market demand for crops for biofuel uses.







## Introducing newgold® – Bayer’s New Multi-Crop Seed Brand for Biofuels

**newgold® seed is our first multi-crop seed brand developed specifically for low-carbon intensity crops, turning acres into a source of cleaner energy and stronger returns for farmers.**

Bayer has announced the launch of newgold® seed, its first multi-crop seed brand developed specifically for low-carbon intensity crops, designed to help farmers participate directly in the fast-growing biofuels market while strengthening farm profitability and sustainability.

The brand is launching in the United States and Canada this year. newgold® seed represents a win for farmers and the environment, and a key step forward in our strategy to “Expand Beyond the

Core” within the global Crop Science **Five-Year Framework**, by developing seeds for biofuel and strong value chain partnerships from field to fuel.

### From Vision to Action in Low-Carbon Agriculture

newgold® seed represents a shift from treating biofuels as a niche opportunity to building a scalable agricultural system that connects farmers, fuel producers, and markets.

The brand focuses on low carbon intensity oilseed crops such as **camelina** and **winter canola** – crops designed to fit between seasons, into existing rotations, or on underutilized acres – creating potential additional revenue streams for farmers.

By combining best-in-class seed technology, agronomic expertise and strong industry partnerships, Bayer is helping farmers turn sustainability goals into measurable, bankable outcomes.



Global Crop Science Five-Year Framework



**Farmers worldwide are increasingly adopting cover crops to enhance soil fertility, reduce erosion and boost long-term productivity. Crops such as camelina can deliver multiple sustainability benefits and offer farmers new revenue opportunities while increasing on-farm productivity.**

### **More Than a Crop: A Profit Multiplier**

At the core of newgold® seed is a simple idea: low-carbon crops must work economically at the field level. newgold® seed is designed as a profit multiplier, giving growers the flexibility to decide how and where it fits best on their operation:

- As a double crop, adding value between seasons
- Within rotations, improving soil health while diversifying income
- On marginal or underutilized land, turning unused acres into productive assets

By bridging the gap between the field and fuel producers, Bayer aims to reduce uncertainty and help farmers confidently adopt low-carbon cropping systems that deliver value today and resilience for the future.





## ***What Is Camelina?***

**Camelina**, also known as false flax or gold-of-pleasure, is an oilseed belonging to the mustard family. It is available as Spring Camelina (short season) and Winter Camelina (long season) to fit different growing regions and crop rotations.

# Overview of Camelina

## Potential Farmer Benefits for Growing Camelina

### Agronomic Advantages:

- Crop stress tolerance
- Has demonstrated efficient use of soil moisture
- Has shown resistance or tolerance to flea beetles, blackleg and blackspot diseases when compared to other Brassica oilseed crops like canola

### Flexibility in Crop Rotations:

- Double-cropping potential
- Winter and spring varieties
- Crop rotation diversification
- Pest and disease break
- Has shown natural seed suppression
- Has demonstrated drought tolerance

### No Additional Equipment Investments:

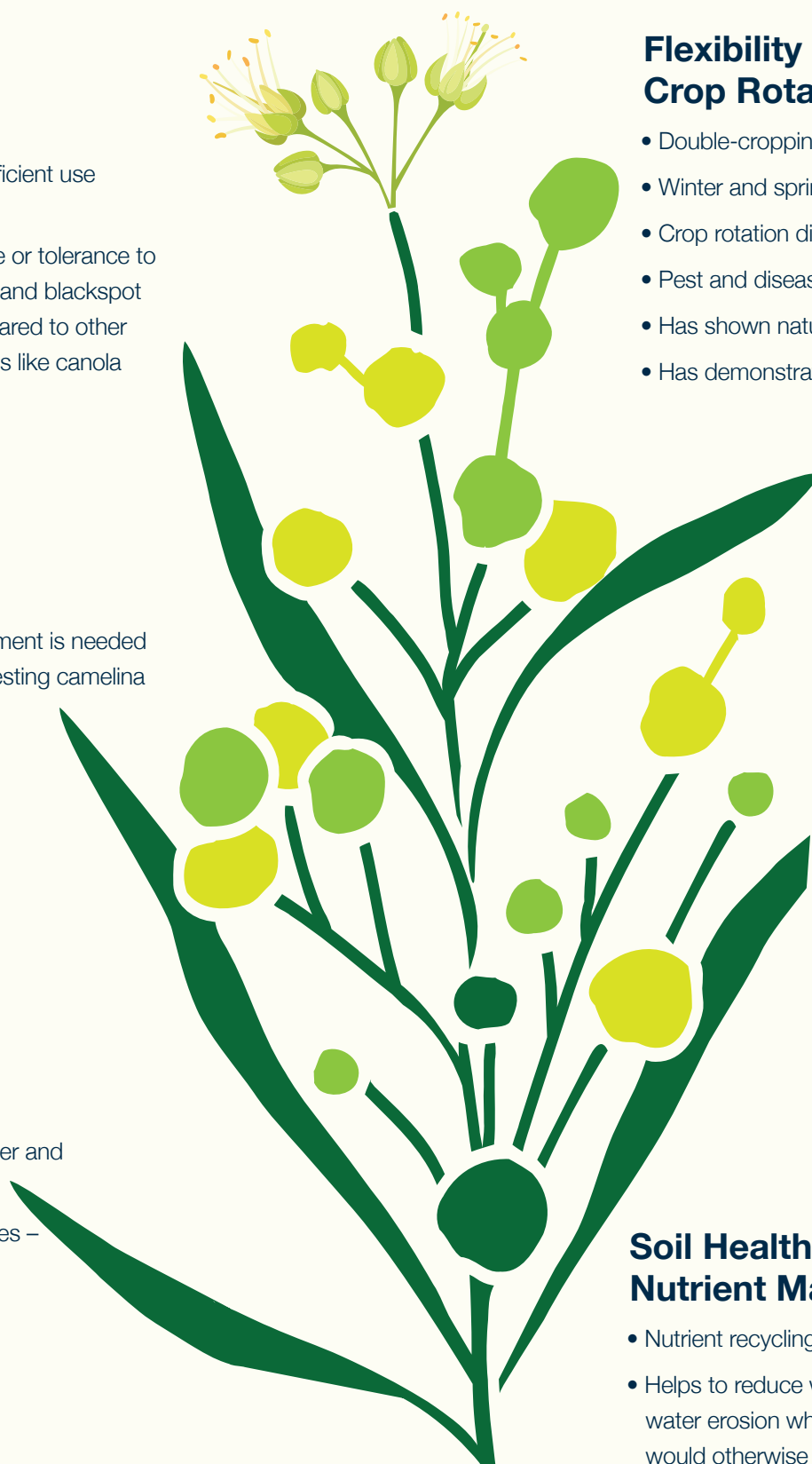
- No specialized equipment is needed for planting and harvesting camelina
- Has shown shatter resistance, it can be straight cut

### Support and Profitability Potential:

- Relatively lower fertilizer and spray requirements
- Marketing opportunities – closed loop
- Agronomic support

### Soil Health and Nutrient Management:

- Nutrient recycling and mineralization
- Helps to reduce wind and water erosion when the ground would otherwise be bare







## WestBred® Wheat

**Bayer offers a portfolio of elite WestBred® wheat varieties that provides growers with high-yield potential options for both winter and spring wheat across all major classes.**



Seed quality, patent/plant variety protection, and good stewardship practices are important factors in maximizing yield and profit potential while enabling Bayer to continue investment and innovation in wheat genetics.

Bayer's WestBred® single-use wheat varieties are included in the Technology Stewardship Agreement, establishing certain rights and obligations for wheat growers similar to other row crops.

The Technology Stewardship Agreement gives growers permission to use Bayer Technologies (as defined in the Technology Stewardship Agreement) on an annual basis. By entering into a Technology Stewardship Agreement, Bayer or its permitted designee subsequently issuing a grower a license number, the grower has a limited-use license to Bayer Technologies in wheat, including WestBred® wheat varieties, subject to the Technology Stewardship Agreement's terms and conditions.

Bayer will continue to patent new single-use wheat varieties that we commercialize. Intellectual property rights encourage advancements and investments in innovation. Our investments in advanced breeding allow us to accelerate the rate of innovation in wheat, which translates into additional value for farmers.

Intellectual property rights in the United States include patents on specific wheat varieties and Plant Variety Protection (PVP) certificates that plant breeders obtain when they develop a new variety.

A list of varieties designated by Bayer as single-use is published electronically at **[cs.bayerpatents.bayer.com](https://cs.bayerpatents.bayer.com)** and may be updated yearly at Bayer's sole discretion.



# Weed Management

**FOLLOW ALL PESTICIDE PRODUCT LABELING.** If there is any conflict between these recommendations and applicable pesticide product labeling, the pesticide product labeling controls. Cultural practices, including but not limited to, variety selection, planting date, seeding rate, seed treatment, fertility management, crop rotation and/or tillage can contribute to creating a favorable growth environment for wheat, giving it a competitive advantage over weeds. An example is wild oat, which can maintain dormancy or have delayed emergence unless stimulated to germinate early with cultivation.<sup>1</sup> Encouraging emergence prior to planting allows control with a nonselective burndown application or tillage.

## Clearfield® Production System for Wheat

Appropriate stewardship of the patent-protected Clearfield® Production System for wheat, which includes the use of registered herbicides, is vital to sustain the utility of this technology. All Clearfield® wheat growers are required to sign the BASF Clearfield® Wheat Stewardship Agreement that provides the terms and conditions for the authorized use of the product. BASF uses the AgCelerate Stewardship platform for grower licensing found at **AgCelerate.com**. Clearfield® wheat growers should be aware of the following:

- Growers are required to sign a BASF Clearfield® Wheat Stewardship Agreement that specifies the use of registered herbicides on Clearfield® and Clearfield® Plus wheat, including imazamox-containing herbicides, along with purchasing certified Clearfield® and Clearfield® Plus varieties.
- Growers must purchase new seed every year from an authorized Clearfield® seed retailer. Saving seed to plant next year's crop is not allowed.
- Currently, Beyond® herbicide is the only federally and state approved imazamox-containing herbicide registered for use on Clearfield® and Clearfield® Plus wheat. Applications of any herbicide that is not registered for use on that crop is not permitted under the law.



EverGol® Energy is an innovative seed treatment fungicide that promotes more root growth for faster crop establishment. EverGol® Energy controls seed and soil-borne disease, such as *Rhizoctonia*.



For advanced broad-spectrum disease control, Raxil® PRO MD offers three modes of action against scab, smut, bunt and other diseases that threaten cereal seeds and seedlings.

Treating cereal seeds with Raxil PRO MD helps them emerge strong, green and lush. Applied directly to the seed, Raxil PRO MD offers advanced broad-spectrum protection against diseases that threaten cereal seeds and seedlings, promoting the development of a robust plant. The result is a healthier crop capable of producing high performance.





## ***Bayer Alfalfa Technologies***



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Roundup Ready® Alfalfa products have in-plant tolerance to the active ingredient glyphosate in Roundup® Brand Agricultural Herbicides.

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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.

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# Roundup Ready® Alfalfa Technology

Roundup Ready® Alfalfa products have in-plant tolerance to the active ingredient glyphosate in Roundup® Brand Agricultural Herbicides, which enables growers to apply Roundup® Brand Agricultural Herbicides up to five days before cutting for excellent weed control, crop safety and improved forage quality potential.



## Hay and Forage Management Requirements

Roundup Ready® Alfalfa must be managed for high quality hay/forage production, including timely cutting to promote high forage quality (i.e., generally before 10% bloom) and to prevent seed development.

- In areas where conventional alfalfa seed production or Adventitious Presence (AP) sensitive seed production is intermingled with forage production, Roundup Ready® Alfalfa must be harvested at or before 10% bloom to help minimize potential pollen flow from Roundup Ready® Alfalfa to conventional alfalfa, and the grower is responsible to control any feral alfalfa resulting from Roundup Ready® Alfalfa use.
- In all other areas, Roundup Ready® Alfalfa must be harvested no later than 50% bloom.

Growers who are unwilling or unable to make these commitments to stewardship should not grow Roundup Ready® Alfalfa.

An in-crop weed control program, using glyphosate agricultural herbicides can provide excellent weed control in most situations. A residual herbicide labeled for use in alfalfa also may be applied post-emergence in alfalfa. Please contact a Bayer Representative,

local crop advisor or extension specialist to determine the best option for your situation.

## 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.

## Roundup Ready® Alfalfa Stand Takeout

Use appropriate, commercially available herbicide treatments in reduced tillage systems, or in combination with tillage, to terminate a Roundup Ready® Alfalfa 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:** Roundup® Brand Agricultural Herbicides are not effective for terminating Roundup Ready® Alfalfa stands.

## Planting Limitation

Growers must not plant Roundup Ready® Alfalfa in any wildlife feed plots and must not plant Roundup Ready® Alfalfa for the production of sprouts.

**Fly-on planting:** Growers who choose to fly-on Roundup Ready® Alfalfa seed must control any resulting feral alfalfa.





# Roundup Ready® Alfalfa Technology *continued*

## Crop Product Export

Grower must lawfully plant Roundup Ready® Alfalfa, direct any product produced from Roundup Ready® Alfalfa seed or crops (including hay and hay products) only to those countries where regulatory approvals have been granted, and grow and manage Roundup Ready® Alfalfa in accordance with the information found in this TUG. In addition, due to the unique cropping practices, do not plant Roundup Ready® Alfalfa in Imperial County, California, until Forage Genetics International, LLC (FGI) grants express permission for such planting. It is a violation of national and international laws to move material containing biotechnology traits across boundaries into nations where import is not permitted.

For more information and the latest updates on Roundup Ready® Alfalfa, please call **1-855-227-8917**.

## Management of Roundup Ready® Alfalfa Volunteers in Rotational Crop Fields

- In a timely manner, use recommended and commercially available mechanical and/or herbicidal methods for managing volunteer Roundup Ready® Alfalfa 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 unwilling to implement recommended stand termination practices.

In the event that no known mechanical or herbicidal options are available to manage volunteer Roundup Ready® Alfalfa in the desired rotational crop, you should change to a crop with established volunteer management practices for that rotation.

Note: Roundup® Brand Agricultural Herbicides are not effective for terminating Roundup Ready® Alfalfa volunteers.

## Stewardship

All Roundup Ready® Alfalfa growers are required to sign the Technology Stewardship Agreement limited-use license that provides the terms and conditions for the authorized use of the product. The Technology Stewardship Agreement must be signed and a grower license number issued from Bayer or its permitted designee before purchase or use of the seed.

The Technology Stewardship Agreement explicitly prohibits all forms of commercial seed harvest on the stand. Every grower of Roundup Ready® Alfalfa agrees to only lawfully plant Roundup Ready® Alfalfa, and not to plant Roundup Ready® Alfalfa for the production of seed, unless under specific contract to produce seed.



# HarvXtra® Alfalfa with Roundup Ready® Alfalfa Technology

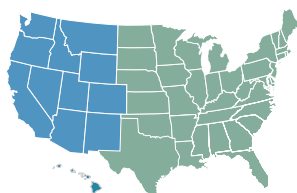
**HarvXtra® Alfalfa with Roundup Ready® Technology products contain the biotechnology-derived trait developed to help maximize alfalfa quality compared to commercially available alfalfa harvested at the same growth stage, by reducing the amount of lignin in the plant.**



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 have the same in-plant tolerance to glyphosate as Roundup Ready® Alfalfa, which enables growers to apply Roundup® Brand Agricultural Herbicides up to five days before cutting for excellent weed control and crop safety.

## Planting Limitation

Growers may plant HarvXtra® Alfalfa with Roundup Ready® Technology in the United States with the following states subject to execution of a Seed and Feed Use Agreement: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.



All planting of HarvXtra® Alfalfa with Roundup Ready® Technology in the Western States shall include execution by the grower of a Seed and Feed Use Agreement noting that HarvXtra® Alfalfa with Roundup Ready® Technology can only be used on farm or otherwise only in the U.S.

Growers must not plant HarvXtra® Alfalfa with Roundup Ready® Technology in any wildlife feed plots and must not plant HarvXtra® Alfalfa with Roundup Ready® Technology for the production of sprouts.

Fly-on planting: Growers who choose to fly-on HarvXtra® Alfalfa with Roundup Ready® Technology seed must control any resulting feral alfalfa.

## Stewarded HarvXtra® Alfalfa with Roundup Ready® Technology

Growers must direct any product produced from HarvXtra® Alfalfa with Roundup Ready® Technology seed or crops (including hay and hay products) only to United States domestic use. In addition, due to the unique cropping practices, do not plant HarvXtra® Alfalfa with Roundup Ready® Technology in Imperial County, California, until Forage Genetics International, LLC (FGI) grants express permission

for such planting. It is a violation of national and international law to move material containing biotechnology traits across boundaries into nations where import is not permitted. Growers should consult their product purchaser to confirm their buying position for this product. For more information and the latest updates on HarvXtra® Alfalfa with Roundup Ready® Technology, please visit [harvxtra.com](http://harvxtra.com) or call **1-855-227-8917**.

## Hay and Forage Management Requirements

HarvXtra® Alfalfa with Roundup Ready® Technology gives growers options to manage for high-quality hay/forage production that include timely cutting to promote high forage quality (i.e., generally before 10% bloom) or slightly delaying harvest for higher tonnage without sacrificing acceptable forage quality while still preventing seed.

- 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, and grower is responsible to control any feral alfalfa resulting from HarvXtra® Alfalfa with Roundup Ready® Technology use.
- In all other areas HarvXtra® Alfalfa with Roundup Ready® Technology must be harvested no later than 50% bloom.

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

An in-crop weed control program, using glyphosate agricultural herbicides, can provide excellent weed control in most situations. A residual herbicide labeled for use in alfalfa may also be applied post-emergence in alfalfa. Contact a Bayer Representative, local crop advisor or extension specialist to determine the best option for your situation.



# HarvXtra® Alfalfa with Roundup Ready® Technology *continued*

## 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.

## Crop Product Export

Grower must lawfully plant, grow and manage all HarvXtra® Alfalfa with Roundup Ready® Technology in accordance with the information found in this TUG. Grower must direct any product produced from HarvXtra® Alfalfa with Roundup Ready® Technology seed or crops (including hay and hay products) only to U.S. domestic use. Do not export any product produced from HarvXtra® Alfalfa with Roundup Ready® Technology seed or crops, including hay and hay products.

It is a violation of national and international laws to move material containing biotechnology traits across boundaries into nations where import is not permitted.

For more information and the latest updates on HarvXtra® Alfalfa with Roundup Ready® Technology, please visit the specialty tab at [harvxtra.com](http://harvxtra.com).

## 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:** Roundup® Brand Agricultural 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 unwilling 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:** Roundup® Brand Agricultural Herbicides are not effective for terminating HarvXtra® Alfalfa with Roundup Ready® Technology volunteers.

## Stewardship

All HarvXtra® Alfalfa with Roundup Ready® Technology growers are required to sign the Technology Stewardship Agreement limited-use license which provides the terms and conditions for the authorized use of the product. The Technology Stewardship Agreement must be signed and a grower license number issued from Bayer or its permitted designee before purchase or use of seed.

For the 2025 growing season, growers must direct any product produced from HarvXtra® Alfalfa with Roundup Ready® Technology seed or crops, including hay and hay products, only to U.S. domestic use. All planting of HarvXtra® Alfalfa with Roundup Ready® Technology in the Western States shall include separate execution by the grower of a Seed and Feed Use Agreement (which is a term of the Technology

Stewardship Agreement) noting that HarvXtra® with Roundup Ready® Technology can only be used on farm or otherwise in the U.S.

The Technology Stewardship Agreement explicitly prohibits all forms of commercial seed harvest on the stand. Every grower of HarvXtra® Alfalfa with Roundup Ready® Technology agrees to only lawfully plant HarvXtra® Alfalfa with Roundup Ready® Technology and not to plant HarvXtra® Alfalfa with Roundup Ready® Technology for the production of seed, unless under specific contract to produce seed.

For more information and the latest updates on HarvXtra® Alfalfa with Roundup Ready® Technology, please visit [harvxtra.com](http://harvxtra.com) or call **1-855-227-8917**.



## *Roundup Ready® Sugarbeets*

Roundup Ready® Sugarbeet products have in-plant tolerance to the active ingredient glyphosate in Roundup® Brand Agricultural Herbicides, enabling growers to apply labeled Roundup® Brand Agricultural Herbicides from planting through 30 days prior to harvest for excellent weed control, crop safety and preservation of yield potential.



### **Agronomic Principles in Sugarbeets**

Roundup Ready® Sugarbeets provide a mechanism to control weeds at planting and after emergence of the crop.

### **Planting Limitation**

Grower must not plant Roundup Ready® Sugarbeets in any wildlife feed plots.

### **Crop Product Export**

Any product produced from a Roundup Ready® Sugarbeet crop or seed may only be used, exported to, processed or sold in countries where regulatory approvals have been granted. It is a violation of national and international laws to move material containing biotechnology traits across boundaries into nations where import is not permitted.



## Stewardship

All Roundup Ready® Sugarbeet growers must sign the Technology Stewardship Agreement limited-use license that provides the terms and conditions for the authorized use of the product. The Technology Stewardship Agreement must be signed and a grower license number issued from Bayer or its permitted designee prior to purchase or use of seed.

Bolting sugarbeets must be rogued or topped in Roundup Ready® Sugarbeet fields.

The grower agrees to transport and plant Roundup Ready® Sugarbeets only for the production of a root crop and not for seed production, unless under specific contract to produce seed.

## Weed Management

**FOLLOW ALL PESTICIDE PRODUCT LABELING.** If there is any conflict between these recommendations and applicable pesticide product labeling, the pesticide product labeling controls. Follow the recommendations below to help minimize the risk of developing glyphosate-resistant weed populations in Roundup Ready® Sugarbeets.

Sugarbeets are extremely sensitive to weed competition for light, nutrients and soil moisture and can lose yield potential rapidly if weeds are not controlled early. 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 Roundup Ready® Sugarbeets (before weeds exceed crop height). More than one in-crop herbicide application will be required to help control weed infestations to protect yield potential as Roundup® Brand Agricultural Herbicides have no soil residual activity.

A post-emergence weed control program, using glyphosate agricultural herbicides, can provide excellent weed control in most situations. A residual herbicide labeled for use in sugarbeets also may be applied preplant, pre-emergence or post-emergence in Roundup Ready® Sugarbeets. Please contact your sugarbeet seed representative, local crop advisor or extension specialist to determine the best option for your situation.

## Recommendations

- Start with a clean field by using a burndown herbicide application, residual herbicide or tillage, making sure weeds are controlled at planting.
- Early season weed control is critical to protect sugarbeet yield potential. Apply the first in-crop application of glyphosate agricultural herbicide while weeds are less than 2 inches in height.
- Follow with additional post-emergence in-crop application of glyphosate agricultural herbicides at labeled rate or for additional weed flushes before weeds exceed 4 inches in height.
- Use mechanical weed control, cultivation and/or residual herbicides where appropriate.

- Use additional herbicide mechanisms of action, residual herbicides and/or mechanical weed control in other Roundup Ready® crops you rotate with Roundup Ready® Sugarbeets.

## Additional Information

- Add ammonium sulfate at a rate of 17 lbs/100 gallons of spray solution with Roundup® Brand Agricultural Herbicides to help maximize product performance. Tank mixtures of Bayer brand labeled glyphosate herbicides with fungicides, insecticides, micronutrients or foliar fertilizers are not recommended. Sequential applications should be at least 10 days apart.
- For tough-to-control weeds, or weeds not controlled by Bayer brand-labeled glyphosate herbicides, use labeled rates of other approved herbicides, alone or in tank mixtures, with Bayer brand-labeled glyphosate herbicides.
  - For example, for residual control of grass and small seeded broad leaf weeds early in the season, Warrant® Herbicide may be tank mixed with glyphosate agricultural herbicides at labeled rate from the 2 leaf stage up to the 8 leaf stage, with the 4 leaf stage being ideal timing. Allow at least 7 days between sequential applications.
- If using another approved glyphosate agricultural herbicide, you must refer to the label booklet or applicable supplemental labeling for the use of that product on Roundup Ready® Sugarbeets for appropriate use rates.
- Maximum use rates apply to the total amount applied of all glyphosate-containing products. Please see the glyphosate agricultural herbicide label for more information on maximum use rates.
- Report any incidence of repeated non-performance of labeled glyphosate agricultural herbicides on a particular weed to the appropriate company representative, local retailer or county extension agent.

Various weed biotypes are known to be resistant to glyphosate. For the current weed control recommendations for glyphosate-resistant weed biotypes, please call **1-866-992-2937**. A complete list of specimen labels can be located at **[cdms.net/Label-Database](https://cdms.net/Label-Database)**. Approved labels, including any applicable supplemental labeling for Roundup® Brand Agricultural Herbicides, must be in the possession of the user at the time of pesticide application and can be obtained by calling **1-866-992-2937** or by contacting your State Pesticide Lead Agency for more information.



## ***Bayer Sweet Corn Technologies***



Performance Series® Sweet Corn contains Cry1A.105, Cry2Ab2 and Cry3Bb1 proteins from *Bacillus thuringiensis* (B.t.) that together control European corn borer, southwestern corn borer, sugarcane borer, southern cornstalk borer, fall armyworm, stalk borer, lesser corn stalk borer, western corn rootworm, northern corn rootworm and Mexican corn rootworm and control or suppress corn earworm.



This product also contains Roundup Ready® 2 Technology that provides crop safety to in-crop applications of glyphosate agricultural herbicides when applied according to label directions.



# Performance Series® Sweet Corn



## Planting Requirements

Read and follow the IRM Guide on 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:** 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 or (for home garden use) by chopping up the stalks using home garden tools, such as a hoe.
- **Identity Preserved (IP) Production:** All harvested ears must be stored in areas where the identity of the ears can be preserved.

All growers in Idaho and Oregon who intend to plant Performance Series® Sweet Corn must contact Seminis Vegetable Seeds, Inc. at 866-334-1056 to order Performance Series® Sweet Corn seed.

Performance Series® Sweet Corn may only be sold into the Treasure Valley area of Idaho and Oregon (Ada, Owyhee, Canyon, Gem, Payette and Washington counties in Idaho and Malheur County in Oregon) beginning on January 1 and ending on February 15 of each calendar year. Growers must inform Seminis Vegetable Seeds, Inc. of the location(s) of their Performance Series® Sweet Corn field(s) to ensure pinning prior to delivery of Performance Series® Sweet Corn seed.

## Compliance Monitoring Program

The EPA requires Bayer to take corrective measures in response to a finding of grower IRM non-compliance. As mandated by the EPA, Bayer or an approved agent of Bayer, must monitor IRM requirements. The Bayer Technology Stewardship Agreement, signed by the grower,

requires that, upon request by Bayer or its approved agent, a grower must provide the location of all fields planted with Performance Series® Sweet Corn. The grower must cooperate fully with any field inspections and allow Bayer or an agent of Bayer to inspect all fields to ensure post-harvest crop destruction. All inspections will be performed at a reasonable time and arranged in advance with the grower so the grower can be present.

## Product Marketing and Stewardship Requirements

This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, 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 biotechnology traits across boundaries into nations where import is not permitted. All growers are responsible for talking to their produce handler or purchaser to confirm their buying position for this produce so the marketing requirements can be met.

## Performance Series® Sweet Corn Insect Pest Control

Performance Series® Sweet Corn provides control or suppression of the most important above-ground insect pests of sweet corn, including corn earworm, fall armyworm, European corn borer, southwestern corn borer, sugarcane borer, stalk borer, lesser stalk borer and southern cornstalk borer. Bayer recommends that you continue to scout your fields as usual, and if these insects are present, an appropriate insecticide should be used according to label directions.

Performance Series® Sweet Corn also provides control of below-ground feeding from western corn rootworm, northern corn rootworm and Mexican corn rootworm larvae, and the seed is treated for control of wireworms, white grubs, seed corn maggot and black cutworm.

Performance Series® Sweet Corn does not control silk flies, adult corn rootworm beetles, sap beetles, western bean cutworm, stinkbugs and other insect pests not listed above. It is recommended that you scout and spray according to label recommendations to control those pests.

Performance Series® Sweet Corn provides growers with a dual mode of action for many above-ground insect pests, including corn earworm. Performance Series® Sweet Corn can control or suppress corn earworm under typical infestation levels, but supplemental insecticide applications may be required when corn earworm populations are above economic thresholds to ensure quality ears at harvest. Protection from corn earworm must be coupled with thorough scouting and spray programs to help maximize marketable yield potential.

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 more information, visit [irac-online.org/modes-of-action](http://irac-online.org/modes-of-action).

- 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, including sap beetles, stink bugs, western bean cutworm and corn silk flies.

## Weed Management

**FOLLOW ALL PESTICIDE PRODUCT LABELING.** If there is any conflict between these recommendations and applicable pesticide product labeling, the pesticide product labeling controls. Follow the recommendations below to help minimize the risk of developing glyphosate-resistant weed populations in a Roundup Ready® 2 Technology System.

The Roundup Ready® 2 Technology System enables flexibility, broad-spectrum weed control and proven crop safety. Growers can select the weed control program that best fits the way they farm and that provides them the greatest benefit. Options include the use of a residual herbicide with Roundup® Brand Agricultural Herbicides, tank mixing other herbicides with Roundup® Brand Agricultural Herbicides where appropriate and a total post-emergence program.

Corn yield is especially sensitive to early season weed competition, so control weeds before they become competitive. The Roundup Ready® 2 Technology System provides a mechanism to control weeds at planting and once they emerge. 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 herbicide resistance and possible decreased yields. Use diverse weed management tools that include multiple herbicide mechanisms of action—if appropriate—alone or in tank mixes with Roundup® Brand Agricultural Herbicides based on the weed spectrum in the field and according to label directions.

### Recommendations

- Start clean with a burndown herbicide or tillage. Early season weed control is critical to yield.
- Apply a pre-emergence residual herbicide at the appropriate application rate tank mixed with glyphosate agricultural herbicides at labeled rate before weeds exceed 4 inches in height.
- Follow with a post-emergence in-crop application of glyphosate agricultural herbicides at labeled rate for additional weed flushes before they exceed 4 inches in height.
- Report any incidence of repeated non-performance of Roundup® Brand Agricultural Herbicides or other glyphosate products on a particular weed to the appropriate company representative, local retailer or county extension agent.

### Additional Information

Make sure the intended use of all products is approved in your state. Do not use this information as the basis for any glyphosate product other than Roundup® Brand Agricultural Herbicides. All use of Roundup® Brand Agricultural Herbicide products must be in accordance with the current product label. Nothing in this TUG should be construed as a substitute for reading all product labeling.

Performance Series® Sweet Corn growers are required to destroy any stalks that remain in the field following harvest via rotary mowing, disking, plow-down or (for home garden use) by chopping up the stalks using home garden tools, such as a hoe, within one month of harvest, but preferably within 14 days.

Various weed biotypes are known to be resistant to glyphosate. For the current weed control recommendations for glyphosate-resistant weed biotypes, please call **1-866-992-2937**. A complete list of specimen labels can be located at [cdms.net/Label-Database](http://cdms.net/Label-Database). Approved labels, including any applicable supplemental labeling, for Roundup® Brand Agricultural Herbicides must be in the possession of the user at the time of pesticide application and can be obtained by calling **1-866-992-2937** or by contacting your State Pesticide Lead Agency for more information.





# TECHNOLOGY STEWARDSHIP AGREEMENT (Limited Use License)

This Agreement is entered into between you (Grower) and Bayer and consists of the terms in this document and any applicable riders.

This Agreement grants Grower a limited use license to patented germplasm, Plant Variety Protection ("PVP") rights, and biological material and know-how contained in the seed technologies and products set forth below and any future seed technologies or products developed, licensed, or owned by Bayer that are made available to Grower (collectively, "Bayer Technologies") for the sole purpose to use Seed (as defined below) for a single planting of a commercial crop in the United States, in accordance with the terms of this Agreement.

## Canola Products

Roundup Ready® branded  
canola products  
TruFlex® branded  
canola products  
DEKALB® LibertyLink®  
branded canola products\*

## Corn Products

Roundup Ready® branded  
corn products  
DroughtGard®  
branded corn products  
VT Double PRO® branded  
corn products  
VT Triple PRO®  
branded corn products  
VT4PRO™ branded  
corn products

Trecepta® branded

corn products  
SmartStax® branded corn  
products

Performance Series®  
branded corn products  
Preceon™ branded corn  
products

## Cotton Products

Bollgard II® branded cotton  
products  
Roundup Ready® branded  
cotton products  
Bollgard® 3 and ThryvOn®  
branded cotton products  
XtendFlex® branded cotton  
products

## Soybean Products

Roundup Ready 2 Xtend®  
branded soybean products  
Roundup Ready 2 Yield®  
branded soybean products  
Vistive® branded soybean  
products  
XtendFlex® branded soybean  
products

## Wheat Products

WestBred® single use wheat  
varieties

## Camelina Products

Newgold® Camelina

Seed containing Bayer Technologies is referred to in this Agreement as "Seed." The names of the technologies and/or products set forth below may change.

The licensed United States patents, and/or PVP certificates, and/or WestBred® single use wheat varieties for Bayer Technologies can be found at <https://cs.bayerpatents.bayer.com> and/or on the applicable Seed bag, label, and/or tag.

This Agreement includes an Alfalfa Rider and a Sugarbeet Rider, attached hereto, which are between Grower and Forage Genetics International, LLC ("FGI") and Grower and KWS SAAT SE & Co. KGaA ("KWS"), respectively. The Alfalfa Rider grants Grower a limited license to use Roundup Ready® Alfalfa and HarvXtra® Alfalfa with Roundup Ready® Technology. The Sugarbeet Rider grants Grower a limited license to use Roundup Ready® Sugarbeets.

This Agreement, the Technology Use Guide ("TUG"), the applicable Seed bag, label, and/or tag, and, if applicable, the appropriate Insect Resistance Management Grower Guide ("IRM Grower Guide") contains Grower's stewardship responsibilities and requirements associated with the use of Seed and Bayer Technologies. IN ADDITION, THIS AGREEMENT INCLUDES A GENERAL CLASS ACTION WAIVER AND MANDATORY BINDING ARBITRATION PROVISIONS. The general class action waiver is in Section 4(f), and the arbitration provision is in Section 4(e).

\*For certain products, Grower may need to obtain applicable third party licenses prior to purchase of such products. For example, for canola products containing the LibertyLink® trait, Grower must hold a valid and current BASF Grower Technology Agreement ("BGTA") before Grower purchases such products.

## 1. GROWER AGREES:

- To acquire Seed only from authorized seed companies in the United States with technology license(s) from Bayer for the applicable Bayer Technologies or from a licensed company's dealer authorized to sell such licensed Seed in the United States (an "Authorized Seed Seller").
- To obtain and read before planting, and strictly follow the applicable requirements of this Agreement, the TUG, the applicable Seed bag, label, and/or tag, the labels on any pesticides used in conjunction with the Bayer Technologies, and, if applicable, the appropriate IRM Grower Guide, as each may be amended from time to time. The TUG, applicable Seed bag, label, and/or tag, and the IRM Grower Guide are incorporated into and are a part of this Agreement. Grower must implement an Insect Resistance Management ("IRM") program, if applicable; and cooperate and comply with these and any additional IRM/Integrated Pest Management ("IPM") programs that Bayer communicates or makes available to Grower. Grower may lose its limited use license to use the Bayer Technologies if Grower fails to comply with this Agreement, including by failing to comply with the foregoing stewardship requirements and/or any IRM program required by this Agreement. Bayer advises Grower to follow the recommendations and best management practices provided in the TUG, IRM Grower Guide, and applicable Seed bag, label, and/or tag. Grower may obtain additional copies of the TUG, IRM Grower Guide, or IPM information by contacting Bayer at 1-866-992-2937 or by going to [tug.bayer.com](http://tug.bayer.com).
- To pay all applicable fees for the use of the Bayer Technologies and applicable fees due to Bayer that are invoiced for the Seed. If Grower fails to pay Bayer for any owed fees or costs of Seed or Bayer Technologies, Grower agrees to

pay Bayer default late fees at the rate of 1.5% per month (or the maximum allowed by law, whichever is less) until paid in full, plus all collection agency fees, reasonable attorneys' fees, court costs, and all other costs of collection including but not limited to data retention and e-discovery costs. Bayer has the right of set-off.

- Not to transfer any Seed to any other person or entity for planting, and not to export any Seed outside of the United States.
- Not to save or clean any crop produced from Seed for planting, and not to transfer Seed produced from Seed to any other person or entity for planting. Except to the extent specifically permitted by a valid Technology Stewardship Agreement, the planting or transfer of any crop or Seed produced from Seed shall constitute infringement of United States patents, PVPs, and/or breach of this Agreement.
- Not to plant and/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 Bayer to produce Seed ("Production Licensee") and such agreement requires Grower to physically deliver to Production Licensee, sell for non-seed purposes, or use for non-seed purposes all Seed produced. The production agreement between Grower and Production Licensee must also prohibit Grower from purchasing or otherwise obtaining from Production Licensee any of the Seed produced unless, after physical delivery by Grower to Production Licensee, that Seed has been conditioned, packaged, and delivered by Production Licensee to Grower in the same manner as Seed sold by Production Licensee to growers who have not entered into a Seed production agreement.
- Not to plant any Seed or any Seed produced from Seed, and not to supply Seed produced from Seed to any other person or entity, for crop breeding, research, molecular analysis, or generation of herbicide or other registration data. Grower may not conduct research on Grower's crops or material produced from Seed other than to make agronomic comparisons and conduct yield testing for Grower's own use. Bayer makes separate license agreements available to academic institutions for research.
- To use on crops containing any Bayer Technologies only pesticides labeled for such use and follow current label directions. BAYER DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY COMPANIES OTHER THAN BAYER, INCLUDING BUT NOT LIMITED TO THOSE THAT ARE LABELED FOR USE IN CROP(S) CONTAINING BAYER TECHNOLOGIES. BAYER SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF THESE PRODUCTS IN CROP(S) CONTAINING BAYER TECHNOLOGIES. ALL QUESTIONS AND COMPLAINTS ARISING FROM THE USE OF PRODUCTS MANUFACTURED OR MARKETED BY OTHER COMPANIES, OR THE IMPACT TO BAYER TECHNOLOGIES FROM THE USE OF SUCH PRODUCTS, SHOULD BE DIRECTED TO THOSE OTHER COMPANIES.
- 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 timely notify in writing purchasers or lessees of land owned by Grower that has Seed planted on it that the Seed and Bayer Technologies are subject to this Agreement and the purchasers or lessees must have or obtain their own Technology Stewardship Agreement to harvest, use, sell, or otherwise transfer crops or material produced from Seed.
- To keep and provide Bayer and its representatives, promptly following Bayer's actual (or attempted) oral or written communication, and, in any event, no later than seven days after the date of any written request:
  - copies of all records, receipts, or other documents that could be relevant to Grower's performance of this Agreement, including, but not limited to, (i) Farm Service Agency records including, without limitation, the Summary Acreage History Report, Producer Farm Data Report, Form 578 (producer print), Farm and Tract Detail Listing and corresponding aerial photographs and maps, and Risk Management Agency claim documentation, (ii) grower/dealer/retailer/applcator records for Seed, and (iii) chemical purchase records and application records and all documentation required on the chemistry product label or by government regulation; and
  - the identity of, and access to, land farmed by or at the direction of Grower (including refuge areas) and bins, wagons, or seed storage containers used or under the control or direction of Grower, for purposes of examining and taking samples of crops, crop residue, or seeds located therein.
- To allow Bayer to obtain Grower's internet or cell phone service provider records to validate Grower's electronic signature, if applicable.

l To promptly notify Bayer if any Grower Information provided to Bayer herein changes.

m To direct crops or material produced from Seed only to appropriate grain handlers and/or markets, and to prevent movement to markets where such crops or material have not yet received regulatory approval for import and to notify such grain handlers that the applicable crops or material produced from Seed have not yet received that approval. Grower acknowledges that crops 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.

n To allow Bayer to obtain Seed and/or chemical transaction data from any dealer from which Grower purchases Seed for purposes of verifying compliance with this Agreement and reporting sales of Seed in accordance with this Agreement.

## 2. GROWER RECEIVES:

a A limited use license to purchase and to plant Seed pursuant to the terms of this Agreement in the United States, comprised of the 50 states and the District of Columbia, except in any state or county where the Seed does not have all the necessary approvals or is not authorized for sale by Bayer. Grower also receives a limited use license to apply crop protection products (e.g., herbicides) that are labeled for use with Seed pursuant to the applicable product labels, unless otherwise restricted by law. Bayer (or the respective licensor) retains ownership of the Bayer Technologies owned by it, including the gene technologies and varieties. These licenses do not authorize Grower to plant Seed in the United States that has been purchased in another country or plant Seed in another country that has been purchased in the United States.

b A limited use license under applicable United States patents (other than the Dow AgroSciences Patent Rights, as defined below) to use Bayer Technologies subject to the conditions listed in this Agreement, and with respect to alfalfa and/or sugarbeet Seed, the conditions listed in the Alfalfa Rider and/or Sugarbeet Rider. Dow AgroSciences LLC and Agrigenetics, Inc. (collectively "Dow AgroSciences") licenses Grower under its applicable United States patents (the "Dow AgroSciences Patent Rights") to use Dow AgroSciences' Event TC1507 and Event DAS 59122-7 to the extent either is present in any SmartStax® Seed obtained by Grower pursuant to this Agreement. Bayer is authorized to act on Dow AgroSciences' behalf for this Agreement, subject to the conditions listed in this Agreement.

c A limited use license to prepare and apply on glyphosate-tolerant soybean, cotton, or canola Seed crops (or have others prepare and apply) tank mixes of, or to sequentially apply (or have others sequentially apply), glyphosate herbicides labeled for use on those crops with quizalofop, clethodim, sethoxydim, fluzafop, and/or fenoxaprop labeled for use on those crops to control volunteer corn with Roundup Ready® 2 Technology in Grower's crops for the applicable growing season. However, neither Grower nor a third party may utilize any type of co-pack or premix of glyphosate plus one or more of the above-identified active ingredients in the preparation of a tank mix for use on glyphosate tolerant soybean, cotton, or canola crops.

## 3. GENERAL TERMS:

a **Term:** This Agreement will remain in effect until either Grower or Bayer chooses to terminate the Agreement, as provided in Section 3(e) below.

b **Modification:** From time to time, Bayer may unilaterally revise the terms and conditions of this Agreement, including the incorporated TUG and IRM Grower Guide, by (i) posting such amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com), and/or (ii) by notifying Grower of any amended terms by mail, text message, electronic mail, or other means. If Grower has provided Bayer an email address or cell phone number in conjunction with this Agreement, Bayer may send Agreement amendments and new stewardship information to Grower by email, text message, or mail. Grower accepts and agrees to be bound by the amended terms of this Agreement upon the earlier of: (1) Grower's continued use of Bayer Technologies after receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com); or (2) 30 days after Grower's receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com). In the event that Grower has not used Bayer Technologies after receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com), and Grower does not accept and agree to the amended terms of the Agreement, Grower may terminate the Agreement, as set forth in Section 3(e), within 30 days after Grower's receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com). Modifications made to the Agreement pursuant to this Section 3(b) may be reflected in Seed bags, labels, and/or tags, as applicable, produced after such modifications.

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

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

e **Termination:** Grower may terminate this Agreement, effective immediately, by providing written notice of termination to Bayer either by (i) delivering the notice of termination to DRC Data Services, Attn: AgCelera Agreements, PO Box 221679, Charlotte, NC 28222-1679 or (ii) providing electronic written notice to [NAgrowerlicensing@bayer.com](mailto:NAgrowerlicensing@bayer.com). Bayer may terminate this Agreement effective immediately, in whole or in part, by delivering written notice to Grower. Upon termination, Grower's responsibilities and the other terms herein shall survive (including, but not limited to, the terms set forth in Sections 1(c), 1(h), 1(j), 1(k), 3(f), 3(g), and 4)) as to Seed previously purchased or used by Grower.

If Bayer terminates this Agreement, Grower is not entitled to obtain a future limited use license from Bayer unless Bayer provides Grower with specific written notice expressly recognizing the prior termination and inviting Grower to submit a new limited use license. Grower expressly acknowledges that Grower's submission of a new Technology Stewardship Agreement and Bayer's issuance of a new license number shall not satisfy the specific written notice requirement and that any such action shall have no legal effect.

## f Breach:

1. **Injunctive Relief:** 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 United States patents or PVPs, Grower agrees that, among other things, Bayer and Dow AgroSciences, as appropriate, shall be entitled to preliminary and permanent injunctions enjoining Grower and any individual and/or entity acting in concert with or on Grower's behalf from making, using, selling, or offering Seed for sale. Additionally, Grower agrees that any such finding of infringement by Grower shall entitle Bayer and Dow AgroSciences, as appropriate, to patent infringement damages to the full extent authorized by 35 U.S.C. § 271 et. seq. **If Grower is found by any court to have infringed one or more of the United States patents or PVPs covering Bayer Technologies, or otherwise to have breached this Agreement, Grower agrees to pay Bayer, the licensed Bayer Technologies 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.**

2. **Liquidated Damages:** The parties agree that patent infringement and/or breach of contract damages are difficult to calculate, and agree that for cotton, soybean, and wheat Seed that has been saved and planted by Grower, the reasonable royalty for patent infringement and/or breach of contract damages shall be \$250 per unit of soybean Seed, \$1,000 per unit of herbicide tolerant cotton Seed, \$2,000 per unit of insect protected/herbicide tolerant cotton Seed, and \$50 per bushel of wheat Seed. The parties agree that the reasonable royalty and/or breach of contract damages may, like other terms of this license, be modified pursuant to Section 3(b), which may result in an increased reasonable royalty and/or breach of contract damages, as applicable. Patent infringement and/or breach of contract damages for other unauthorized activities (including, but not limited to, unauthorized sales and transfers of Seed as well as unauthorized activities pertaining to other crops) will be separately calculated.

g **Governing Law:** This Agreement and the parties' relationship shall be governed by the laws of the State of Missouri and the United States (without regard to the choice of law rules).

h **Waiver:** The failure of Bayer or any owners of patents or PVPs 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 Bayer or such patent or PVP owner to exercise such right(s) on any subsequent occasion.

i **Entire Agreement:** This Agreement, along with the incorporated TUG, IRM Grower Guide, and applicable Seed bag, label, and/or tag, and any amendments pursuant to Section 3(b) encompasses the entire agreement of the parties, apply to all Seed purchased by Grower, and cannot be modified or amended at any time except (i) pursuant to Section 3(b), (ii) in writing signed by Bayer, or (iii) Bayer's acceptance of an updated Technology Stewardship Agreement with Grower.

j **Privacy:** Bayer may collect, use, and disclose personal information, including the Grower Information provided on Page 1 and any information related to the performance of this Agreement, such as information about the use of Bayer products and services, preferences, and feedback, and any communications with Bayer, to assist Bayer in establishing and maintaining a business relationship with Grower, including, for example, to: (i) better understand Grower's needs and preferences; (ii) enable Bayer to operate and manage its businesses and operations (including research and development of new and existing products and services and offering incentives to retailers to make products and services available); and (iii) periodically send marketing materials, news/updates, and other information about certain products, services, events, and other matters that may be of interest to Grower. For more information about how Bayer handles personal information, please read Bayer's Privacy Statement, which may be updated from time to time in accordance with its terms, at [www.croscience.bayer.us/privacy-statement](http://www.croscience.bayer.us/privacy-statement).

k **Compliance With Laws:** Grower will comply with all applicable state, federal, and local laws, rules, regulations, and executive orders when performing its obligations under this Agreement.

## 4. GROWER CLAIMS AND REMEDIES:

The terms and conditions set forth in this Section 4 apply as well as Section 3(g) to all Seed purchased by Grower pursuant to this Agreement, regardless of Seed brand or Authorized Seed Seller. Those Authorized Seed Sellers are third party beneficiaries to Sections 3(g) and 4 of this Agreement.

a **Notice requirement:** As a condition precedent to Grower, or any third person with an interest in Grower's crop, receiving the limited remedy set forth in this Section 4, Grower must provide written, prompt, and timely notice to: (i) Bayer regarding the performance or non-performance of the Bayer Technologies or Seed, or (ii) the Authorized Seed Seller regarding the performance or non-performance of Seed produced by such Authorized Seed Seller or associated entities. Any and all claims brought under this Section 4 must be brought by the earlier of: (1) any date beyond which any seed treatment, seed enhancement, inoculant, or other seed-applied product sold with or applied to the Seed or identified on the Seed's tag is not claimed to be effective; or (2) two years after the Seed's purchase date. Within that time period, all claims must be presented to the Authorized Seed Seller or Bayer within 30 days after the condition or event giving rise to the claim is discovered or should have been discovered, or prior to the harvest of the crop, whichever comes first, so that the claim may be investigated, and the Seed or crop inspected. The notice shall include a statement setting forth the nature of the claim and the name of the Bayer Technologies and/or Seed hybrid or variety. If delivering to Bayer, Grower must (1) deliver written notice to DRC Data Services, Attn: AgCelera Agreements, PO Box 221679, Charlotte, NC 28222-1679, or (2) provide electronic written notice to [nagrowerlicensing@bayer.com](mailto:nagrowerlicensing@bayer.com).

b **Limited Warranty and Disclaimer of Warranties:** Bayer warrants the Bayer Technologies licensed hereunder only to the extent specifically set forth on the applicable Seed bag, label, and/or tag, and warrants that the Bayer Technologies will perform only as specifically set forth in the TUG when used in accordance with directions. This warranty applies only to Bayer Technologies contained in Seed that has been licensed by Bayer to Grower pursuant to this Agreement and purchased by Grower from Authorized Seed Sellers. EXCEPT FOR THE EXCLUSIVE WARRANTY SET FORTH ABOVE, BAYER DISCLAIMS ANY AND ALL WARRANTIES, WITH RESPECT TO THE SEED AND ANY PLANT OR CROP GROWN FROM THE SEED, WHETHER EXPRESS OR IMPLIED (EITHER IN FACT OR BY OPERATION OF LAW), INCLUDING, BUT NOT LIMITED TO: (i) THE IMPLIED WARRANTY OF MERCHANTABILITY; (ii) THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; (iii) THE IMPLIED WARRANTY AGAINST INFRINGEMENT (FOR THE SEED ALONE OR IN COMBINATION WITH ANY REGISTERED PESTICIDES OR OTHER SEED TREATMENT PRODUCTS); (iv) ANY WARRANTIES FOR CROP PERFORMANCE OR FREEDOM FROM DISEASE (EVEN IF SEED BORNE); AND (v) IN ACCORDANCE WITH APPLICABLE GOVERNMENTAL REGULATIONS, ANY WARRANTY THAT THE SEED IS FREE OF UNINTENTIONAL PHENOTYPIC AND/OR GENOTYPIC (BIOTECH) TRAITS. IF GROWER: (1) APPLIES OR AUTHORIZES A THIRD PARTY TO APPLY ANY SEED ENHANCEMENT, SEED TREATMENT, OR SEED COATING (WHETHER CHEMICAL OR BIOLOGICAL) TO SEED

THAT BAYER HAS NOT RECOMMENDED OR APPROVED; (2) ALLOWS A THIRD PARTY THAT BAYER HAS NOT AUTHORIZED TO APPLY ANY SEED ENHANCEMENT, SEED TREATMENT, OR SEED COATING (WHETHER CHEMICAL OR BIOLOGICAL) TO THE SEED, WHETHER OR NOT BAYER HAS RECOMMENDED OR APPROVED THE SEED ENHANCEMENT, SEED TREATMENT, OR SEED COATING; OR (3) REPACKAGES OR ALLOWS A THIRD PARTY THAT BAYER HAS NOT AUTHORIZED TO REPACKAGE THE SEED, THEN IN EACH CASE BAYER DISCLAIMS ALL WARRANTIES FOR THE ENHANCED, TREATED, COATED, AND/OR REPACKAGED SEED, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE EXCLUSIVE WARRANTY, THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND THE IMPLIED WARRANTY AGAINST INFRINGEMENT.

c **Grower's Exclusive Limited Remedy:** BAYER AND/OR ANY AUTHORIZED SEED SELLER'S TOTAL LIABILITY, AND GROWER'S SOLE AND EXCLUSIVE REMEDY, FOR ANY AND ALL LOSSES, INJURIES, AND/OR DAMAGES ARISING OUT OF THE PURCHASE OR USE OF SEED OR ANY PLANT OR CROP GROWN FROM THIS SEED, OR OTHERWISE ARISING OUT OF BREACH BY BAYER AND/OR AUTHORIZED SEED SELLER OF THE EXCLUSIVE WARRANTY SET FORTH ABOVE, HOWEVER SUCH LIABILITY MAY ARISE, WHETHER SUCH CLAIMS ARE BASED ON CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT, OR ANY OTHER THEORY OF RECOVERY OR REMEDY, SHALL BE, AT THE ELECTION OF BAYER AND/OR AUTHORIZED SEED SELLER, THE PURCHASE PRICE PAID BY GROWER FOR THE SEED (AS SET FORTH IN THE APPLICABLE INVOICE) OR REPLACEMENT OF THE SEED. BAYER AND/



OR AUTHORIZED SEED SELLER SHALL NOT BE LIABLE TO PURCHASER AND/OR ANY THIRD PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL, RELIANCE, REMOTE, EXEMPLARY, SPECIAL, INDIRECT OR PUNITIVE DAMAGES. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFIT OR YIELD AND LOSS OF AMOUNTS INCURRED OR EXPENDED IN PLANTING, USING, AND/OR CARING FOR THE SEED AND/OR ANY PLANT OR CROP GROWN FROM THE SEED. GROWER AGREES THAT IF THE PURCHASE PRICE PAID BY GROWER FOR THE SEED OR REPLACEMENT SEED IS PROVIDED, THE REMEDY SET FORTH IN THIS SECTION 4(C) WILL NOT HAVE FAILED OF ITS ESSENTIAL PURPOSE.

**d Mandatory Forum Selection for Claims Made by Grower EXCEPT AS PROVIDED IN SECTION 4(E) and All Other Claims:**

THE PARTIES CONSENT TO THE SOLE AND EXCLUSIVE JURISDICTION AND VENUE OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI, EASTERN DIVISION, AND THE CIRCUIT COURT OF THE COUNTY OF ST. LOUIS, MISSOURI (ANY LAWSUIT MUST BE FILED, IF IN FEDERAL COURT, IN ST. LOUIS, MO, OR, IF IN STATE COURT, IN ST. LOUIS COUNTY, MO), FOR ALL CLAIMS AND DISPUTES ARISING OUT OF OR RELATING IN ANY WAY WITH THIS AGREEMENT AND/OR PURCHASE OR USE OF SEED OR BAYER TECHNOLOGIES, EXCEPT FOR THOSE CERTAIN CLAIMS MADE BY GROWER AND SUBJECT TO SECTION 4(E) BELOW. THE PARTIES WAIVE ANY OBJECTION TO VENUE IN THE EASTERN DIVISION OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI, AND THE CIRCUIT COURT OF THE COUNTY OF ST. LOUIS, INCLUDING THOSE BASED, IN WHOLE OR IN PART, ON THE DIVISIONAL VENUE LOCAL RULE(S) OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI. THIS AGREEMENT CONTAINS A BINDING ARBITRATION PROVISION FOR THOSE CERTAIN CLAIMS PURSUANT TO THE PROVISIONS OF THE FEDERAL ARBITRATION ACT, 9 U.S.C. § 1 ET SEQ., WHICH MAY BE ENFORCED BY THE PARTIES PURSUANT TO SECTION 4(E) BELOW. THE PARTIES SPECIFICALLY AGREE THAT THIS SECTION COVERS BAYER AND ANY CURRENT OR FUTURE BAYER AFFILIATES.

**e BINDING ARBITRATION FOR CERTAIN SEED-RELATED CLAIMS MADE BY GROWER:** Certain states' agriculture laws and regulations require that a grower submit any seed performance or failure claims to arbitration, conciliation, or mediation before, and as a prerequisite to, maintaining a legal action. Some states also require a timely (as set forth in the applicable laws and regulations) inspection as part of that process. Grower acknowledges the applicability of such laws and regulations, including, without limitation, associated notice requirements, and agrees to follow such laws and regulations with respect to all Seed. Grower should consult applicable state agriculture laws and regulations for further detail. This requirement to arbitrate specifically excludes any claim, action, or dispute (i) involving the infringement, validity, or enforceability of a patent or that otherwise arises under the United States patent laws or, (ii) if state agriculture law does not require arbitration of seed performance or failure claims.

If not specified in the state seed law, the parties acknowledge that this transaction involves interstate commerce and agree that arbitration shall be conducted pursuant to the provisions of the Federal Arbitration Act, 9 U.S.C. Sec 1 et seq. and administered under the Administered Arbitration Rules established by the International Institute for Conflict Prevention and Resolution, Inc. ("CPR"). The arbitration hearing shall be conducted in the capital city of the state of Grower's residence or in any other place as the parties decide by mutual agreement. Grower and Bayer/Authorized

Seed Sellers shall each pay one half of the CPR filing fee and one half of CPR's administrative and arbitrator fees and expenses as they are incurred. The arbitrator(s) shall have the power to apportion the ultimate responsibility for all CPR fees in the final award. The arbitration proceedings and results shall remain confidential and shall not be disclosed without the written agreement of all parties, except to the extent necessary to effectuate the decision or award or as otherwise required by law.

**f CLASS ACTION WAIVER: THE PARTIES AGREE TO WAIVE, TO THE FULLEST EXTENT PERMITTED UNDER APPLICABLE LAW, ANY RIGHT TO BRING OR PARTICIPATE IN A CLASS ACTION.** In any lawsuit or other adversarial proceeding brought by Bayer against Grower arising out of or relating in any way to this Agreement, Bayer agrees not to proceed as a representative of or on behalf of any other person, class, or entity. In any lawsuit or other adversarial proceeding brought by Grower, or any person or entity which claims an interest in Grower's crop or material produced from Seed, against Bayer or an Authorized Seed Seller arising out of or relating in any way to this Agreement or relating in any way to the handling or use of Seed, crops or material produced from Seed, crop residue, or Seed treatments, Grower, or any person or entity which claims an interest in Grower's crop or material produced from Seed, agrees not to proceed as a representative of or on behalf of any other person, class, or entity. All claims arising out of or relating in any way to this Agreement, or which relate to the handling or use of Seed, crops or material produced from Seed, crop residue, or Seed treatments, may only be brought on an individual basis and may not be resolved on behalf of a class, as a private attorney-general, or in any other representative capacity. Grower shall not participate in or collect payment as a result of a class, collective, or other representative action of any kind against Bayer.

## The Technology Use Guide (TUG) is available at [tug.bayer.com](http://tug.bayer.com).

Thank you for choosing our advanced technologies. We look forward to working with you in the future.  
If you have any questions regarding Bayer Technologies or this license, please call 1-866-992-2937.

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

The Preceon™ Smart Corn System, including short stature corn developed through traditional breeding, is expected to be available, subject to final commercialization decisions, for planting in the 2025 growing season. Short stature corn developed through biotechnology is not currently available for commercial sale or commercial planting. Commercialization is dependent on multiple factors, including successful conclusion of the regulatory process. The information presented herein is provided for educational purposes only, and is not and shall not be construed as an offer to sell.

**IMPORTANT: Produce Marketing and Stewardship Requirements for Performance Series® sweet corn:**

This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. It is the grower's responsibility to talk to their produce handler or purchaser to confirm their buying position for this produce so that the marketing requirements can be met.

**U.S. Herbicide Information for Performance Series® sweet corn:** Glyphosate agricultural herbicides are approved for use on Performance Series® sweet corn (containing Roundup Ready® 2 Technology) in all U.S. states, the District of Columbia and Puerto Rico. If the directions for use on sweet corn with Roundup Ready® 2 Technology (which includes Performance Series® sweet corn) are not listed in the product label that is attached to the product you purchased, contact your Bayer representative.

The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or representative for the product registration status in your state.

All growers in Idaho and Oregon who intend to plant Performance Series® sweet corn must contact Seminis Vegetable Seeds, Inc. at 866-334-1056 to order Performance Series® sweet corn seed. Performance Series® sweet corn may only be sold into the Treasure Valley area of Idaho and Oregon (which consists of Ada, Canyon, Gem, Owyhee, Payette and Washington counties in Idaho and Malheur County in Oregon) during the time period beginning on January 1 and ending on February 15 of each calendar year. Growers must inform Seminis Vegetable Seeds, Inc. of the location(s) of their Performance Series® sweet corn field(s) to ensure pinning prior to delivery of Performance Series® sweet corn seed.

**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, or, for home garden use only allowed in the U.S., by chopping up the stalks using home garden tools such as a hoe. Crop destruction methods should destroy any surviving resistant insects.

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with products with XtendFlex® Technology.

See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.

**B.t. products** may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

Refuge seed may not always contain the DroughtGard® trait. **IMPORTANT IRM INFORMATION:** Certain products are sold as RIB Complete® corn blend products, and do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. Products sold without refuge in the bag (non-RIB Complete) require the planting of a structured refuge. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.**

**Roundup Ready® Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready® 2 Technology** contains genes that confer tolerance to glyphosate. **LibertyLink® Technology** contains genes that confer tolerance to glufosinate. **Roundup Ready® Flex Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Plants that are not tolerant to glyphosate, dicamba, and/or glufosinate may be damaged or killed if exposed to those herbicides.** Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

Insect control technology provided by **Vip3A** is utilized under license from Syngenta Crop Protection AG. Herculex® is a registered trademark of Dow AgroSciences LLC. Agrisure Viptera® is a registered trademark of a Syngenta group company. LibertyLink logo® and LibertyLink® are trademarks of BASF Corporation. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. Bollgard II®, Bollgard®, DEKALB®, DroughtGard®, Performance Series & Design®, Performance Series®, Preceon™, Respect the Refuge and Cotton Design®, RIB Complete®, Roundup Ready® 2 Technology and Design®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, SmartStax®, ThryvOn™, Trecepta®, TruFlex®, TruFlex® canola with Roundup Ready® and LibertyLink® Technologies, Vistive®, VT Double PRO®, VT Triple PRO®, VT4PRO™, WestBred® and XtendFlex® are trademarks of Bayer Group. ©2026 Bayer Group. All rights reserved. 4D1120110

# ALFALFA RIDER

## TERMS AND CONDITIONS

The following terms and conditions of the Alfalfa Rider (the "Rider") supplement the Technology Stewardship Agreement ("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 Roundup Ready® Alfalfa or 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: Roundup Ready® Alfalfa, HarvXtra® Alfalfa with Roundup Ready® Technology, patented alfalfa germplasm and Plant Variety Protection rights 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 Bayer CropScience LP authorized to act on FGI's behalf. Seed containing FGI Technologies is collectively referred to herein as "Alfalfa Seed." The licensed U.S. patents and/or PVP certificates for FGI Technologies can be found at the following web page: [cropsscience.bayer.us/product-stewardship.com](http://cropsscience.bayer.us/product-stewardship.com) and/or on the product label.

This Rider also contains Grower's stewardship responsibilities and requirements associated with the use of Alfalfa Seed and FGI Technologies.

### 1. GROWER AGREES:

- a To acquire Alfalfa Seed only from authorized seed companies in the United States with technology license(s) from FGI for the applicable FGI Technologies or from a licensed company's dealer authorized to sell such licensed Alfalfa Seed in the United States.
- b To obtain and read before planting and strictly follow the applicable requirements of the Technology Use Guide ("TUG") and, if applicable, the appropriate Insect Resistance Management Grower Guide ("IRM Grower Guide") and Seed bag, label, and/or tag, as each may be amended from time to time, which TUG, IRM Grower Guide, and Seed bag tag are incorporated into and are a part of this Rider; to implement an Insect Resistance Management ("IRM") program, if applicable; and to cooperate and comply with these and any additional IRM/Integrated Pest Management ("IPM") programs FGI or Bayer communicates or makes available to Grower. Grower may lose its limited use license to use FGI Technologies if Grower fails to comply with this Rider, including by failing to comply with the IRM program required by this Rider. FGI further advises Grower to follow the recommendations provided in the TUG, IRM Grower Guide, and Seed bag tag. Grower may obtain additional copies of the TUG, IRM Grower Guide, or IPM information by contacting Bayer at 1-866-992-2937 or by going to [tug.bayer.com](http://tug.bayer.com).
- c To pay all applicable royalties and technology fees for the use of the FGI Technologies or the Alfalfa Seed, as well as applicable fees due FGI that are part of, associated with, or invoiced as part of the Alfalfa Seed purchase price. If Grower fails to pay FGI or any wholly owned FGI subsidiaries for costs of Alfalfa Seed, FGI Technologies, and/or royalties, Grower agrees to pay FGI default late fees 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 affiliate has the right of set-off.
- d To use Alfalfa Seed solely for a commercial crop in the United States as provided below. Grower may use a single planting of Roundup Ready® Alfalfa and HarvXtra® Alfalfa with Roundup Ready® Technology for multiple cuttings.
- e Only to plant HarvXtra® Alfalfa with Roundup Ready® Technology in the United States, with the following states subject to execution of an additional FGI Seed and Feed Use Agreement: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming (collectively, the "Western States").
- f That all planting of HarvXtra® Alfalfa with Roundup Ready® Technology in the Western States is permissible only upon separate execution by the Grower of a HarvXtra® Alfalfa with Roundup Ready® Technology Seed and Feed Use Agreement ("FGI Seed and Feed Use Agreement") that includes provisions limiting HarvXtra® with Roundup Ready® Technology seed and crops or hay products produced from HarvXtra® Alfalfa with Roundup Ready® Technology to only United States domestic use.
- g All terms of the FGI Seed and Feed Use Agreement are incorporated into and made enforceable under this Rider.
- h Not to transfer any Alfalfa Seed to any other person or entity for planting, and not to export any Alfalfa Seed.
- i Not to save or clean any crop produced from Alfalfa Seed for planting, and not to supply Seed produced from Alfalfa Seed to anyone for planting. Except to the extent specifically permitted by a valid Technology Stewardship Agreement, the planting of any crop or Seed produced from Seed shall be a violation of this Rider and constitute infringement of FGI's and/or Bayer's U.S. patents.
- j Not to plant and/or clean Alfalfa Seed for Seed production unless, and only if, Grower has entered into a valid, written Alfalfa Seed production agreement with a seed company that is licensed by FGI to produce Alfalfa Seed (an "Alfalfa Licensee"), which agreement requires Grower to either physically deliver to the Alfalfa Licensee, sell for non-seed purposes, or use for non-seed purposes all of the Alfalfa Seed produced; and not to purchase or otherwise obtain from the Alfalfa Licensee any of the Alfalfa Seed produced unless, after physical delivery by Grower to the Alfalfa Licensee, that Alfalfa Seed has been conditioned,

packaged, and delivered by the Alfalfa Licensee to Grower in the same manner as Alfalfa Seed sold by the Alfalfa Licensee to growers who have not entered into an Alfalfa Seed production agreement.

- k Not to plant any Alfalfa Seed, or any Seed produced from Alfalfa Seed, for crop breeding, research, molecular analysis, or generation of herbicide or other registration data. Grower may not conduct research on Grower's crop produced from Alfalfa 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.
  - l To use on crops containing FGI Technologies only pesticides labeled for such use and follow current label directions. FGI DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES, OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKED BY OTHER COMPANIES, INCLUDING, BUT NOT LIMITED TO, THOSE THAT ARE LABELED FOR USE IN CROPS CONTAINING FGI TECHNOLOGIES. FGI SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF THESE PRODUCTS IN CROP(S) CONTAINING FGI TECHNOLOGIES. ALL QUESTIONS AND COMPLAINTS ARISING FROM THE USE OF PRODUCTS MANUFACTURED OR MARKED BY OTHER COMPANIES, OR THE IMPACT TO FGI TECHNOLOGIES FROM THE USE OF SUCH PRODUCTS, SHOULD BE DIRECTED TO THOSE COMPANIES.
  - m To accept and continue the obligations of this Rider on any new land purchased or leased by Grower that has Alfalfa 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 Alfalfa Seed planted on it that the FGI Technologies are subject to this Rider and they must have or obtain their own Technology Stewardship Agreement, Rider, and FGI Seed and Feed Use Agreement, if applicable.
  - n To keep and provide to FGI and its representatives following FGI's actual (or attempted) oral communication, and no later than seven (7) days after the date of its written or electronic request:
    1. copies of all records, receipts, or other documents that could be relevant to Grower's performance of this Rider, including, but not limited to, Summary Acreage History Report, Producer Farm Data Report, Form 578 (producer print), Farm and Tract Detail Listing and corresponding aerial photographs, Risk Management Agency claim documentation, grower/dealer/retailer/appliator records for seed and chemical purchases, and applications and all documentation required on the chemistry product label or by government regulation; and
    2. the identity of, and access to, land farmed by or at the direction of Grower (including refuge areas) and bins, wagons, or seed storage containers used or under the control or direction of Grower, for purposes of examining and taking samples of crops, crop residue, or seeds located therein.
  - o To allow FGI to obtain Grower's internet service provider ("ISP") records to validate Grower's electronic signature, if applicable.
  - p To promptly notify FGI or Bayer should any Grower Information provided herein change.
  - q To direct any crops or hay products produced from HarvXtra® Alfalfa with Roundup Ready® Technology only to United States domestic use, except where FGI expressly grants permission in writing. 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, except where FGI expressly grants permission in writing.
  - r Grower acknowledges that any crop or hay product produced from Alfalfa 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 Alfalfa Seed with that knowledge.
  - s Until FGI expressly grants permission in writing (which will be withheld pending necessary import approvals), not to export, or to sell or convey to any person or entity that intends to export, Roundup Ready® Alfalfa or HarvXtra® Alfalfa with Roundup Ready® Technology seed or crops or hay products produced from such Seed to export countries where all necessary regulatory approvals have not been granted. In addition, due to the unique cropping practices Grower agrees not to plant Roundup Ready® Alfalfa or HarvXtra® Alfalfa with Roundup Ready® Technology in Imperial County, California, pending import approvals and until FGI grants express permission in writing for such planting. Roundup Ready® Alfalfa and HarvXtra® Alfalfa with Roundup Ready® Technology Seed may not be planted for the production of sprouts.
- ### 2. GROWER RECEIVES FROM FGI:
- a A limited use license to purchase and to plant Alfalfa Seed pursuant to the terms of this Rider in the United States of America, comprised of the 50 states and the District of Columbia, except in any state or county where the products do not have all the necessary approvals, and to apply labeled glyphosate herbicides over the top of crops as applicable, unless otherwise restricted by law. FGI (or the respective licensor) retains ownership of the FGI Technologies owned by it, including the gene technologies and varieties. These licenses do not authorize Grower to plant Alfalfa Seed in the United States that has been purchased in another country or plant Alfalfa Seed in another country that has been purchased in the United States.



- b A limited use license under applicable U.S. patents to use FGI Technologies subject to the conditions listed in this Rider.
- c A limited use license to prepare and apply on glyphosate-tolerant alfalfa (or have others prepare and apply) tank mixes of, or to sequentially apply (or have others sequentially apply), glyphosate herbicides labeled for use on those crops with quizalofop, clethodim, sethoxydim, flazafop, and/or fenoxaprop labeled for use on those crops to control volunteer corn with Roundup Ready® 2 Technology in Grower's crops for the 2025 growing season. However, neither Grower nor a third party may utilize any type of co-pack or premix of glyphosate plus one or more of the above-identified active ingredients in the preparation of a tank mix for use on glyphosate-tolerant alfalfa.

### 3. GENERAL TERMS:

- a Term: This Rider will remain in effect until either Grower or FGI chooses to terminate the Rider, as provided below.
- b Modification: From time to time, FGI or Bayer may unilaterally revise the terms and conditions of this Agreement and/or the Rider, including the incorporated TUG, IRM Grower Guide, and Seed bags, labels, and/or tags, by posting such amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com), and/or by notifying Grower of any amended terms by mail, electronic mail, text message, or other means. If Grower has provided FGI or Bayer an email address or cell phone number in conjunction with this Agreement, FGI or Bayer may send Agreement and/or Rider amendments and new stewardship information to Grower by email, text message, or mail. Grower accepts and agrees to be bound by the amended terms of this Agreement and/or Rider upon the earlier of: (i) Grower's continued use of FGI Technologies after receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and [tug.bayer.com](http://tug.bayer.com); or (ii) 30 days after Grower's receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and [tug.bayer.com](http://tug.bayer.com). If Grower does not accept and agree to the amended terms of the Agreement, it may terminate the Agreement as set forth in Section 3(e).
- 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, or portion thereof, is determined to be void or unenforceable, the remaining portions and 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 DRC Data Services, Attn: AgCelerate Agreements, PO Box 221679, Charlotte, NC 28222-1679. FGI 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 Technology Stewardship Agreement or Rider and FGI's or Bayer'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 U.S. patents or PVPs covering Bayer Technologies or FGI Technologies, Grower agrees that, among other things, FGI, and Bayer, 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. Additionally, Grower agrees that any such finding of infringement by Grower shall entitle FGI, and Bayer, as appropriate, to patent infringement damages to the full extent authorized by 35 U.S.C. § 271 et. seq. 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 U.S. patents or PVPs covering Bayer Technologies or FGI Technologies, or otherwise to have breached any term of this Rider, Grower agrees to pay FGI and Bayer, 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 State of Missouri and the United States (without regard to the choice of law rules).
- h Waiver: The failure of FGI or Bayer or any owners of patents or PVPs 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 Bayer 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 incorporated TUG, IRM Grower Guide, Seed bag, label, and/or tag, and the terms of the FGI Seed and Feed Use Agreement, if applicable, all of which are hereby expressly 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 or Bayer.

### 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 a written, prompt, and timely notice to FGI (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 products. Grower must deliver the notice to DRC Data Services, Attn: AgCelerate Agreements, PO Box 221679, Charlotte, NC 28222-1679.
- 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 Roundup Ready® Alfalfa or 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.
- 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, INDIRECT, OR PUNITIVE DAMAGES.
- d Forum Selection for Claims Made by Grower and All Other Claims: THE PARTIES CONSENT TO THE SOLE AND EXCLUSIVE JURISDICTION AND VENUE OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI, EASTERN DIVISION, AND THE CIRCUIT COURT OF THE COUNTY OF ST. LOUIS, MISSOURI (ANY LAWSUIT MUST BE FILED, IF IN FEDERAL COURT, IN ST. LOUIS, MO, OR, IF IN STATE COURT, IN ST. LOUIS COUNTY, MO), FOR ALL CLAIMS AND DISPUTES ARISING OUT OF OR CONNECTED IN ANY WAY WITH THIS RIDER AND/OR THE USE OF THE ALFALFA SEED OR THE FGI TECHNOLOGIES. THE PARTIES WAIVE ANY OBJECTION TO VENUE IN THE EASTERN DIVISION OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI, INCLUDING THOSE BASED, IN WHOLE OR IN PART, ON THE DIVISIONAL VENUE LOCAL RULE(S) OF THE U.S. DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI. THE PARTIES SPECIFICALLY AGREE THAT THIS SECTION COVERS FGI, ITS CURRENT OR FUTURE AFFILIATES, AND ANY CURRENT OR FUTURE U.S.-BASED WHOLLY OWNED SUBSIDIARIES OF FGI.

# SUGARBEET RIDER

## TERMS AND CONDITIONS

The following terms and conditions of the Sugarbeet Rider (the "Rider") supplement the Technology Stewardship Agreement ("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 Roundup Ready® Sugarbeets. This Rider is entered into between Grower and KWS SAAT SE & Co. KGaA ("KWS") 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 Roundup Ready® Sugarbeets and any future seed technologies developed, licensed, or owned by KWS ("KWS Technologies") in accordance with the terms of this Rider, with respect to which KWS has authorized Bayer CropScience LP ("Bayer") to act on KWS's behalf in accordance with the parties' commercial services agreement, that are made available to Grower. Seed containing KWS Technologies is collectively referred to herein as "Sugarbeet Seed." The licensed U.S. patents for KWS Technologies can be found at the following web page: [cropsscience.bayer.us/product-stewardship.com](http://cropsscience.bayer.us/product-stewardship.com) and/or on the product label.

This Rider also contains Grower's stewardship responsibilities and requirements associated with the use of Sugarbeet Seed and KWS Technologies.

### 1. GROWER AGREES:

- a To acquire Sugarbeet Seed only from authorized seed companies in the United States with technology license(s) from KWS for the applicable KWS Technologies or from a licensed company's representative authorized to sell such licensed Sugarbeet Seed in the United States.
- b To obtain and read before planting and strictly follow the applicable requirements of the Technology Use Guide ("TUG") and Seed package label, as each may be amended from time to time, which TUG and Seed package label are incorporated into and are a part of this Rider; and to cooperate and comply with these and any additional stewardship programs KWS or Bayer communicates or makes available to Grower. Grower may lose its limited use license to use the KWS Technologies if Grower fails to comply with this Rider, including by failing to comply with the foregoing stewardship requirements. KWS further advises Grower to follow the recommendations provided in the TUG and Seed package label. Grower may obtain additional copies of the TUG by contacting Bayer at 1-866-992-2937 or by going to [tug.bayer.com](http://tug.bayer.com).
- c To use Sugarbeet Seed solely for a commercial crop in the United States as provided below. Grower may use a single planting of Roundup Ready® Sugarbeets to be processed for sugar, for energy production, or for animal feed.
- d Not to transfer any Sugarbeet Seed to any other person or entity for planting, and not to export any Sugarbeet Seed.
- e Not to plant any Sugarbeet Seed, or any Seed produced from Sugarbeet Seed, for crop breeding, research, molecular analysis, generation of herbicide, or other registration data. Grower may not conduct research on Grower's crop produced from Sugarbeet Seed other than to make agronomic comparisons and conduct yield testing for Grower's own use.
- f To use on crops containing KWS Technologies only pesticides labeled for such use and follow current label directions. KWS DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES, OR RECOMMENDATIONS CONCERNING THE USE OF PRODUCTS MANUFACTURED OR MARKETING BY OTHER COMPANIES, INCLUDING BUT NOT LIMITED TO THOSE THAT ARE LABELED FOR USE IN CROPS CONTAINING KWS TECHNOLOGIES. KWS SPECIFICALLY DISCLAIMS ALL RESPONSIBILITY FOR THE USE OF THESE PRODUCTS IN CROPS CONTAINING KWS TECHNOLOGIES. ALL QUESTIONS AND COMPLAINTS ARISING FROM THE USE OF PRODUCTS MANUFACTURED OR MARKETING BY OTHER COMPANIES, OR THE IMPACT TO KWS TECHNOLOGIES FROM THE USE OF SUCH PRODUCTS, SHOULD BE DIRECTED TO THOSE COMPANIES.
- g To keep and provide to KWS and its representatives following KWS's actual (or attempted) oral communication, and no later than seven (7) days after the date of its written or electronic request:
  1. copies of all records, receipts, or other documents that could be relevant to Grower's performance of this Rider, including but not limited to Summary Acreage History Report, Producer Farm Data Report, Form 578 (producer print), Farm and Tract Detail Listing and corresponding aerial photographs, Risk Management Agency claim documentation, and grower/dealer/retailer/appliator records for seed and chemical purchases and applications and all documentation required on the chemistry product label or by government regulation; and
  2. the identity of, and access to, land farmed by or at the direction of Grower and bins, wagons, or seed storage containers used or under the control or direction of Grower, for purposes of examining and taking samples of crops, crop residue, or seeds located therein.
- h To allow KWS to obtain Grower's internet service provider ("ISP") records to validate Grower's electronic signature, if applicable.
- i To promptly notify KWS and Bayer should any Grower Information provided herein change.

### 2. GROWER RECEIVES FROM KWS:

- a A limited use license to purchase and to plant Sugarbeet Seed pursuant to the terms of this Rider in the United States of America, comprised of the 50 states and the District of Columbia, except in any state or county where the products do not have all the necessary approvals and to apply labeled glyphosate herbicides over the top of crops as applicable, unless otherwise restricted by law. KWS (or the respective licensor) retains ownership of the KWS Technologies owned by it, including the gene technologies. These licenses do not authorize Grower to plant Sugarbeet Seed in the United States that has been purchased in another country or plant Sugarbeet Seed in another country that has been purchased in the United States.
- b A limited use license under applicable U.S. patents to use KWS Technologies subject to the conditions listed in this Rider.

### 3. GENERAL TERMS:

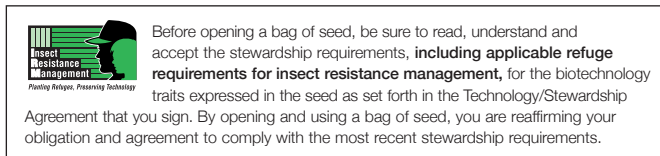
- a Term: This Rider will remain in effect until either Grower or KWS chooses to terminate the Rider, as provided below.
- b Modification: From time to time, KWS or Bayer may unilaterally revise the terms and conditions of this Agreement and/or the Rider, including the incorporated TUG and Seed packages, by posting such amended terms at [agcelerate.com](http://agcelerate.com) and/or [tug.bayer.com](http://tug.bayer.com), and/or by notifying Grower of any amended terms by mail, electronic mail, text message, or other means. If Grower has provided KWS or Bayer an email address or cell phone number in conjunction with this Agreement, KWS or Bayer may send Agreement and/or Rider amendments and new stewardship information to Grower by email, text message, or mail. Grower accepts and agrees to be bound by the amended terms of this Agreement and/or Rider upon the earlier of: (i) Grower's continued use of KWS Technologies after receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and [tug.bayer.com](http://tug.bayer.com); or (ii) 30 days after Grower's receipt of any amended terms and/or the posting of amended terms at [agcelerate.com](http://agcelerate.com) and [tug.bayer.com](http://tug.bayer.com). If Grower does not accept and agree to the amended terms of the Agreement, it may terminate the Agreement as set forth in Section 3(e).
- c Transferability: Grower may not transfer its rights or obligations to anyone else without the written consent of KWS. If Grower's rights or obligations are transferred with KWS'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, or portion thereof, is determined to be void or unenforceable, the remaining portions and provisions shall remain in full force and effect.
- e Termination: Grower may terminate this Rider effective immediately by delivering written notice to KWS. Grower must deliver the notice of termination to DRC Data Services, Attn: AgCelerate Agreements, PO Box 221679, Charlotte, NC 28222-1679. KWS 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 Sugarbeet Seed for a single commercial crop) as to Sugarbeet Seed previously purchased or used by Grower. If Grower breaches the terms of this Rider, KWS may terminate effective immediately Grower's rights under this Rider. Grower will not be entitled to obtain a future limited-use license from KWS unless KWS 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 Technology Stewardship Agreement or Rider and KWS's or Bayer'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 U.S. patents covering Bayer Technologies or KWS Technologies, Grower agrees that, among other things, KWS 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 Sugarbeet Seed for sale. Additionally, Grower agrees that any such finding of infringement by Grower shall entitle KWS to patent infringement damages to the full extent authorized by 35 U.S.C. § 271 et. seq. 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 patent rights pertaining to KWS Technologies or otherwise to have breached any term of this Rider, Grower agrees to pay KWS 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 and Forum: This Rider and the parties' relationship shall be governed by the laws of the State of Minnesota and the United States (without regard to the choice of law rules). Any dispute arising out of or relating to this Rider, the parties' relationship, KWS Technologies, or the Sugarbeet Seed shall be commenced and maintained exclusively in the state or federal courts of Minnesota. Grower waives any objection to venue or inconvenience of forum and voluntarily submits to the jurisdiction of these courts.



- h Waiver: The failure of KWS or any owners of patents to exercise one or more of its rights under this Rider on one or more occasions shall not be deemed a waiver on the part of KWS 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 package labels, all of which are hereby expressly 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 Sugarbeet 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 KWS or Bayer.

#### **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 KWS and/or any seller of Sugarbeet Seed regarding performance or non-performance of KWS Technologies or Sugarbeet Seed, Grower must provide a written, prompt, and timely notice to KWS (regarding performance or non-performance of the KWS Technologies) and to the seller of any Sugarbeet Seed (regarding performance or non-performance of the Sugarbeet 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 KWS Technologies and/or the Sugarbeet Seed. The notice shall include a statement setting forth the nature of the claim, name of the KWS Technologies, and Sugarbeet Seed product. Grower must deliver the notice to DRC Data Services, Attn: AgCelerate Agreements, PO Box 221679, Charlotte, NC 28222-1679.
- b Limited Warranty and Disclaimer of Warranties: KWS warrants the KWS Technologies licensed hereunder only as specifically set forth on the seed container and/or package label and warrants that the KWS Technologies licensed hereunder will perform only as specifically set forth in the TUG when used in accordance with directions. This warranty applies only to Roundup Ready® Sugarbeets contained in planting Sugarbeet Seed that has been purchased from KWS and seed companies licensed by KWS or the seed company's authorized dealers or distributors. EXCEPT FOR THE EXPRESS WARRANTIES IN THE LIMITED WARRANTY SET FORTH ABOVE, KWS 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 KWS.
- c Grower's Exclusive Limited Remedy: THE EXCLUSIVE REMEDY OF GROWER AND THE LIMIT OF THE LIABILITY OF KWS OR ANY SELLER FOR ANY AND ALL LOSSES, INJURY, OR DAMAGES RESULTING FROM THE USE OR HANDLING OF SUGARBEET 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 SUGARBEET SEED INVOLVED OR, AT THE ELECTION OF KWS OR THE SEED SELLER, THE REPLACEMENT OF THE SUGARBEET SEED. IN NO EVENT SHALL KWS OR ANY SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES.



Subject to final commercialization decisions, availability of the Preceon™ Smart Corn System is expected for the 2025 growing season. Product Use Statement: Enlist E3® soybeans contain the Enlist E3 trait that provides crop safety for use of labeled over-the-top applications of glyphosate, glufosinate and 2,4-D herbicides featuring Colex-D® technology when applied according to label directions. Following burndown, the only 2,4-D containing herbicide products that may be used with Enlist® crops are products that feature Colex-D technology and are expressly labeled for use on Enlist crops. 2,4-D products that do not contain Colex-D technology are not authorized for use in conjunction with Enlist E3 soybeans. Warning: Enlist E3 soybeans are tolerant of over-the-top applications of glyphosate, glufosinate, and 2,4-D. Accidental application of incompatible herbicides to this variety could result in total crop loss. When using 2,4-D herbicides, grower agrees to only use 2,4-D products that contain Colex-D technology authorized for use in conjunction with Enlist E3 soybeans. Always read and follow herbicide label directions prior to use.

No dicamba may be used in-crop with seed with Roundup Ready® Xtend Technology, unless and until approved or specifically permitted. No dicamba formulations have been registered for such in-crop use at the time this material was published. Please follow <https://www.StryaxApplicationRequirements.com/> for status updates.

#### ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

**IMPORTANT: Produce Marketing and Stewardship Requirements for Performance Series® sweet corn:** This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. It is the grower's responsibility to talk to their produce handler or purchaser to confirm their buying position for this produce so that the marketing requirements can be met.

**U.S. Herbicide Information for Performance Series® sweet corn:** Glyphosate agricultural herbicides are approved for use on Performance Series® sweet corn (containing Roundup Ready® 2 Technology) in all U.S. states, the District of Colombia and Puerto Rico. If the directions for use on sweet corn with Roundup Ready® 2 Technology (which includes Performance Series® sweet corn) are not listed in the product label that is attached to the product you purchased, contact your Bayer representative. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or representative for the product registration status in your state.

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

All growers in Idaho and Oregon who intend to plant Performance Series® sweet corn must contact Seminis Vegetable Seeds, Inc. at 866-334-1056 to order Performance Series® sweet corn seed. Performance Series® sweet corn may only be sold into the Treasure Valley area of Idaho and Oregon (which consists of Ada, Canyon, Gem, Owyhee, Payette and Washington counties in Idaho and Malheur County in Oregon) during the time period beginning on January 1 and ending on February 15 of each calendar year. Growers must inform Seminis Vegetable Seeds, Inc. of the location(s) of their Performance Series® sweet corn field(s) to ensure pinning prior to delivery of Performance Series® sweet corn seed.

**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, or, for home garden use only allowed in the U.S., by chopping up the stalks using home garden tools such as a hoe. Crop destruction methods should destroy any surviving resistant insects.

Preceon™ Smart Corn System hybrids, developed through biotechnology, are not currently available for commercial sale or commercial planting. Commercialization is dependent on multiple factors, including successful conclusion of the regulatory process. The information presented herein is provided for educational purposes only, and is not and shall not be construed as an offer to sell.

It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with products with XtendFlex® Technology.

**FOR CORN, EACH ACCELERON® SOLUTIONS OFFERING** is a combination of separate individually registered products containing the active ingredients: **BASIC** plus Poncho®/VOTIVO® Offering for corn: metalaxyl, ethaboxam, prothioconazole, fluoxastrobin, clothianidin, Bacillus firmus I-1582. **ELITE** plus Poncho®/VOTIVO® and Acceleron® N-314 Offering for corn: metalaxyl, ethaboxam, clothianidin, and Bacillus firmus I-1582, and fluopyram; prothioconazole and fluoxastrobin at rates that suppress additional diseases. **BASIC** Offering for corn: metalaxyl, prothioconazole, fluoxastrobin, ethaboxam, and clothianidin. **ELITE** Offering for corn: metalaxyl, ethaboxam, and clothianidin; and prothioconazole and fluoxastrobin at rates that suppress additional diseases.

**BioRise® Corn Offering** is the on-seed application of BioRise® 360 ST.

Not all products are registered for use in all states and may be subject to use restrictions. **The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Not all products are registered for use in all states and may be subject to use restrictions.**

See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.

**B.t. products** may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

Refuge seed may not always contain the DroughtGard® trait. **Roundup Technology®** includes glyphosate-based herbicide technologies.

**Performance may vary**, from location to location and from year to year, as local growing, soil and environmental conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on their growing environment.

The recommendations in this material are based upon trial observations and feedback received from a limited number of growers and growing environments. These recommendations should be considered as one reference point and should not be substituted for the professional opinion of agronomists, entomologists or other relevant experts evaluating specific conditions.

**IMPORTANT IRM INFORMATION:** Certain products are sold as RIB Complete® corn blend products, and do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. Products sold without refuge in the bag (non-RIB Complete) require the planting of a structured refuge. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.**

**Roundup Ready® Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready® 2 Technology** contains genes that confer tolerance to glyphosate. **LibertyLink® Technology** contains genes that confer tolerance to glufosinate. **Roundup Ready® Flex Technology** contains genes that confer tolerance to glyphosate. **Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba.** Plants that are not tolerant to glyphosate may be damaged or killed if exposed to those herbicides. Plants that are not tolerant to glyphosate, dicamba, and/or glufosinate may be damaged or killed if exposed to those herbicides. Plants that are not tolerant to dicamba may be damaged or killed if exposed to those herbicides. **Glufosinate** will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

Insect control technology provided by **Vip3A** is utilized under license from Syngenta Crop Protection AG. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or representative for the product registration status in your state. Herculex® is a registered trademark of Dow AgroSciences LLC. Agrisure Viptera® is a registered trademark of a Syngenta group company. LibertyLink logo®, LibertyLink®, Poncho® and Votivo® are trademarks of BASF Corporation. Respect the Refuge and Corn Design® is a registered trademark of National Corn Growers Association. Bayer, Bayer Cross, Bollgard II®, Bollgard®, DEKALB®, DroughtGard®, EverGol®, Performance Series & Design®, Preceon™, Raxil®, RIB Complete®, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup Technology®, SmartStax®, Trecepta®, TruFlex®, Vistive®, VT Double PRO®, VT Triple PRO®, VT4PRO™, WestBred® and XtendFlex® are trademarks of Bayer Group. All other trademarks are the property of their respective owners. For additional product information call toll-free 1-866-99-BAYER (1-866-992-2937) or visit our website at [www.BayerCropScience.us](http://www.BayerCropScience.us). Bayer CropScience LP, 800 North Lindbergh Boulevard, St. Louis, MO 63167. ©2025 Bayer Group. All rights reserved.



