

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Biopesticides and Pollution
Prevention Division (7511P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:

524-595

Date of Issuance:

APR 08 2011

Term of Issuance: Conditional

Name of Pesticide Product:

MON 89034 x TC1507 x MON
88017 x DAS-59122-7 RIB
Complete Insect Protected,
Herbicide-Tolerant Corn

NOTICE OF PESTICIDE:

x Registration
Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA § 3(c)(7)(A) provided that you do the following terms and conditions

- 1) Submit/cite all data required for registration of your product under FIFRA § 3(c)(5) when the Agency requires registrants of similar products to submit such data.
2) The subject registration will automatically expire on midnight October 31, 2011.
3) The subject registration is limited to MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend in field corn.
4) Submit or cite all data required to support MON 89034 x TC1507 x MON 88017 x DAS-59122-7 plant-incorporated protectant products within the timeframes required by the terms and conditions of EPA Registration Numbers 524-581.

Signature of Approving Official:

[Handwritten signature]

Date:

08/08/2011

5) Provided the registration expiration date is extended, submit an interim report on the following data within one year and a final report within two years.

- Revised modeling incorporating the structural elements recommended by the SAP (i.e., explicit larval movement, switch from a frequency-based model to one including density-dependent larval mortality, epistatic mechanisms for resistance in target pests) with separate analyses for SWCB and ECB. Non-uniform oviposition should be modeled for both ECB and SWCB, especially (but not only) for the second generation of adults which will more likely lay eggs on Bt rather than on damaged (or crowded out) non-Bt refuge plants in seed blends.
- Biological research on adult movement (related to mating and movement from refuges), larval movement, larval feeding (i.e., selective feeding within corn ears or on pollen), survival of heterozygote genotypes on MON 89034 x TC1507 x MON 88017 x DAS-59122-7 (markers may need to be determined for heterozygotes), and the potential for epistatic mechanisms of resistance (particularly with older instars).

6) Do the following Insect Resistance Management Program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn.

a) Refuge Requirements for MON 89034 x TC1507 x MON 88017 x DAS-59122-7

The following information must be included on the product bag or bag-tag as sold per respective region:

Bag or Bag-Tag for the Corn-Growing Region

There are no requirements for a separate structured refuge for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn when planted in the U.S. corn-growing region. The refuge seed of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn is contained in the bag resulting in a refuge configuration that is interspersed within the field. SEE THE IRM/GROWER GUIDE FOR DETAILED IRM REQUIREMENTS, including the areas making up the corn-growing region.

Bag or Bag-Tag for the Cotton-Growing Region

Growers in the cotton-growing region of the U.S. who plant MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn are required to plant an additional 20% structured refuge (i.e. 20 acres of non-B.t. corn for every 80 acres of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn planted). The 20% refuge must be planted with corn hybrids that do not contain B.t. technologies for the control of corn rootworms or corn borers. The refuge and the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar among varieties. The structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge, or as a separate block that is within 1/2 mile of the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn field. SEE THE IRM/GROWER GUIDE FOR DETAILED IRM REQUIREMENTS, including the areas making up the cotton-growing region.

The cotton-growing region requiring the additional 20% refuge consists of the following states:

Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greenville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

The following information regarding refuge placement for commercial production must be included in the IRM/Grower Guide:

This product includes refuge that is interspersed within the field by planting a licensed seed-mixture containing MON 89034 x TC1507 x MON 88017 x DAS-59122-7 and a minimum of 5% non-PIP seed. The seed mix refuge option for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn satisfies the refuge requirements in all regions other than in cotton growing regions where corn earworm is a significant pest as defined below.

The seed producer must ensure a minimum of 5% non-PIP refuge seed is included with the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 in each lot of seed corn.

The interspersed refuge can only be used by planting seed corn specifically generated by qualified seed producers/conditioners licensed by the registrant. The refuge seed in the seed mixture may not be treated with seed-applied insecticides for corn rootworm (CRW) control unless the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed in the seed mixture receives the same treatment. Insecticidal treatments labeled for adult CRW control are discouraged during the time of adult CRW emergence.

Additional refuge requirements in cotton-growing regions where corn earworm is a significant pest

In cotton-growing regions where corn earworm is a significant pest, as defined below, MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn requires the planting of an additional 20% structured refuge (i.e. 20 acres of non-Bt corn for every 80 acres of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn planted).

The 20% refuge must be planted with corn hybrids that do not contain Bt technologies for the control of corn rootworms or corn borers. The refuge and the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar among varieties. The structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge, or as a separate block that is within 1/2 mile of the MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn field. In-field refuge options include blocks, perimeter strips (i.e., strips around the field), or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 consecutive rows wide. The refuge can be protected from lepidopteran damage by use of non-Bt insecticides if the population of one or more target lepidopteran pests of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn in the refuge exceeds

economic thresholds. In addition, the refuge can be protected from CRW damage by an appropriate seed treatment or soil insecticide; however, insecticides labeled for adult CRW control must be avoided in the refuge during the period of CRW adult emergence. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants).

The cotton-growing region requiring the additional 20% refuge consists of the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

b) Grower Agreement for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 Seed Blend Corn

1) Persons purchasing MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn must sign a grower agreement. The term "grower agreement" refers to any grower purchase contract, license agreement, or similar legal document.

2) The grower agreement and/or specific stewardship documents referenced in the grower agreement must clearly set forth the terms of the current IRM program. By signing the grower agreement, a grower must be contractually bound to comply with the requirements of the IRM program.

3) Monsanto must implement a system (equivalent to what is already approved for previously registered Monsanto *Bt* corn products), which is reasonably likely to assure that persons purchasing *MON 89034 x TC1507 x MON 88017 x DAS-59122-7* seed blend corn will affirm annually that they are contractually bound to comply with the requirements of the IRM program. A description of the system must be submitted to EPA within 90 days from the date of registration.

4) Monsanto must use a grower agreement and must submit to EPA, within 90 days from the date of registration, a copy of that agreement and any specific stewardship documents referenced in the grower agreement. If Monsanto wishes to change any part of the grower agreement or any specific stewardship documents referenced in the grower agreement that would affect either the content of the IRM program or the legal enforceability of the provisions of the agreement relating to the IRM program, 30 days prior to implementing a proposed change, Monsanto must submit to EPA the text of such changes to ensure that it is consistent with the terms and conditions of this registration.

5) Monsanto must implement a system (equivalent to what is already approved for previously registered Monsanto *Bt* corn products), which is reasonably likely to assure that persons purchasing *MON 89034 x TC1507 x MON 88017 x DAS-59122-7* seed blend corn sign grower

agreement(s). A description of the system must be submitted to EPA within 90 days from the date of registration.

6) Monsanto shall maintain records of all MON 89034 x TC1507x MON 88017 x DAS-59122-7 seed blend corn grower agreements for a period of three years from December 31st of the year in which the agreement was signed.

7) Beginning on January 31, 2012 and annually thereafter, Monsanto shall provide EPA with a report on the number of units of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn seed shipped and not returned, and the number of such units that were sold to persons who have signed grower agreements. The report shall cover the time frame of a twelve-month period. Note: The first report shall contain the specified information from the time frame starting with the date of registration and extending through the 2011 growing season.

8) Monsanto must allow a review of the grower agreements and grower agreement records by EPA or by a State pesticide regulatory agency if the State agency can demonstrate that confidential business information, including names, personal information, and grower license number, will be protected.

c) IRM Education and IRM Compliance Monitoring Program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 Seed Blend Corn

1) Monsanto must design and implement a comprehensive, ongoing IRM education program designed to convey to MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn users the importance of complying with the IRM program. The education program shall involve the use of multiple media, e.g. face-to-face meetings, mailing written materials, EPA-reviewed language on IRM requirements on the bag or bag tag, and electronic communications such as by internet, radio, or television commercials. Copies of the materials will be provided to EPA for their records. The program shall involve at least one written communication annually to each MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn user separate from the grower technical guide. The communication shall inform the user of the current IRM requirements. Monsanto shall coordinate its education program with the educational efforts of other registrants and other organizations, such as the National Corn Growers Association and state extension programs.

2) Annually, Monsanto shall revise, and expand as necessary, its education program to take into account the information collected through the compliance survey and from other sources. The changes shall address aspects of grower compliance that are not sufficiently high.

3) Beginning January 31, 2012, Monsanto must provide a report to EPA summarizing the activities it carried out under its education program for the prior year. Annually thereafter, Monsanto must provide EPA any substantive changes to its grower education activities as part of the overall IRM compliance assurance program report. Monsanto must either submit a separate report or contribute to the report from the industry working group, Agricultural Biotechnology Stewardship Technical Committee (ABSTC).

4) Given that MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend will likely have different refuge strategies for lepidoptera and CRW than other registered Bt corn products,

Monsanto must submit a revised compliance assurance program (CAP) within 90 days of the date of registration. This revised CAP must be found acceptable by BPPD by April 1, 2012. This strategy should be specific for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn and the new refuge requirements. Availability of non-Bt corn refuge seeds in desirable varieties must be addressed. Compliance is an area of ongoing concern -- recent data have shown that refuge compliance for Bt corn has fallen in recent years.

d) Insect Resistance Monitoring and Remedial Action Plans for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 Corn

Existing programs for resistance monitoring and remedial action for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 are applicable and required for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn. Monsanto must submit a revised definition of unexpected damage in MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn for resistance monitoring must also submit a remedial action plan within 90 days of the date of registration that must be found acceptable to BPPD by April 1, 2012.

A report on results of resistance monitoring and investigations of damage reports must be submitted to the Agency annually by August 31st each year, beginning in 2012, for the duration of the conditional registration.

e) Annual Reporting Requirements for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 Seed Blend Corn

- 1) Annual Sales: reported and summed by state (county level data available by request) January 31st each year, beginning in 2012;
- 2) Grower Agreements: number of units of MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn seed shipped or sold and not returned, and the number of such units that were sold to persons who have signed grower agreements, January 31st each year, beginning in 2011;
- 3) Grower Education: substantive changes to education program completed previous year, January 31st each year, beginning in 2012;
- 4) Compliance Assurance Program: compliance assurance program activities and results for the prior year and plans for the compliance assurance program for the current year, January 31st each year, beginning in 2012;
- 5) Compliance Survey Results: results of annual surveys for the prior year and survey plans for the current year; full report January 31st each year, beginning in 2012;
- 6) Insect Resistance Monitoring Results: results of monitoring and investigations of damage reports, August 31st each year, beginning in 2012.

f) Refuge Assurance Program for MON 89034 x TC1507 x MON 88017 x DAS-59122-7 Seed Blend Corn

Monsanto and Monsanto's seed company licensees must continue to implement a blended seed refuge assurance program designed to ensure MON 89034 x TC1507 x MON 88017 x DAS-

59122-7 seed blend corn products are formulated with the appropriate rate of refuge seeds. The program must include the following four elements:

1. Trait purity check on seed lots prior to blending (Monsanto and Monsanto Licensees)
2. Standard Operating Procedures for the blending process;
3. Calibration of blending equipment; and
4. Records and data retention records for seed blend products.
 - Calibration records – Monsanto and Monsanto's Licensees will retain documentation for three (3) years on the equipment calibration including the procedure, when it was conducted and the results.
 - Blend proportion records (weight and kernel based) – Monsanto and Monsanto Licensees will retain documentation for three (3) years on the kernel per pound data of the components, the calculations to determine the proportions based on weight and the actual weights that are blended together to make up an MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn product by seed lot.

All records must be maintained at the Monsanto and Monsanto Licensees blending facility and must be available for the EPA review upon request.

Within one year of the date of registration Monsanto will collect documentation from qualification test runs that validate blend percentages from their licensees/conditioners that produce MON 89034 x TC1507 x MON 88017 x DAS-59122-7 seed blend corn and submit this data to the Agency. Any licensee/conditioner that is unable to verify their blend accuracy will provide evidence demonstrating application and participation in the USDA USA Accredited Seed Conditioning Program (ASCP) as outlined in ARC 1005D Appendix, <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateN&navID=AccreditedSeedPrograms&rightNavI=AccreditedSeedPrograms&topNav=&leftNav=&page=ASLProgram&resultType=&acct=audrevcom>.

Should Monsanto or Monsanto's Licensees be notified by the USDA/AMS or State Seed Control Officials that your seed blend products have been found to have a lower percentage of the refuge component than is represented on the label, they must notify EPA within 30 days. This would constitute information reportable under FIFRA section 6(a)(2).


6) Monsanto must submit revised product labeling that indicates one seed tag for use in both cotton and non-cotton growing areas within six months.

7) Monsanto must report on how many of their licensees (by number and percentage) color seed January 31st each year, beginning in 2012.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A copy of the stamped label is enclosed for your records.

Sincerely,



Keith A. Matthews, Director
Biopesticides and Pollution
Prevention Division (7511P)

Plant-Incorporated Protectant Label

MON 89034 × TC1507 × MON 88017 × DAS-59122-7

RIB Complete™

Insect-Protected, Herbicide-Tolerant Corn

(Alternate Brand Name: Genuity® SmartStax® RIB Complete™)‡

(OECD Unique Identifier: MON-89034-3 × DAS- 01507-1 ×

MON-88017-3 × DAS-59122-7)

Active Ingredients:

Bacillus thuringiensis Cry1A.105 protein and the genetic material (vector PV-ZMIR245) necessary for its production in corn event MON 89034 (OECD Unique Identifier: MON-89034-3) ≤ 0.0026%*

Bacillus thuringiensis Cry2Ab2 protein and the genetic material (vector PV-ZMIR245) necessary for its production in corn event MON 89034 (OECD Unique Identifier: MON-89034-3) ≤ 0.0053%*

Bacillus thuringiensis Cry1F protein and the genetic material (vector PHP8999) necessary for its production in corn event TC1507 (OECD Unique Identifier: DAS- 01507-1) .. ≤ 0.0012%*

Bacillus thuringiensis Cry3Bb1 protein and the genetic material (vector PV-ZMIR39) necessary for its production in corn event MON 88017 (OECD Unique Identifier: MON-88017-3) ≤ 0.0079%*

Bacillus thuringiensis Cry34Ab1 protein and the genetic material (vector PHP17662) necessary for its production in corn event DAS-59122-7 (OECD Unique Identifier: DAS-59122-7)..... ≤ 0.0194%*

Bacillus thuringiensis Cry35Ab1 protein and the genetic material (vector PHP17662) necessary for its production in corn event DAS-59122-7 (OECD Unique Identifier: DAS-59122-7)..... ≤ 0.0042%*

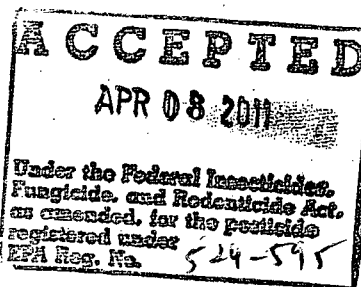
Other Ingredients:

CP4 EPSPS protein (5-enolpyruvylshikimate-3-phosphate synthase) and the genetic material (vector PV-ZMIR39) necessary for its production in corn event MON 88017 ≤ 0.0052%*

PAT protein (phosphinothricin acetyl transferase) and the genetic material (vectors PHP17662 and PHP8999) necessary for its production in corn events TC1507 and DAS-59122-7 ≤ 0.00045%*

*Maximum percent (wt/wt) of dry forage

‡ Genuity® SmartStax® RIB Complete™ seed with this refuge configuration contains 95% MON 89034 × TC1507 × MON 88017 × DAS-59122-7 mixed with at least 5% non-*Bt* corn within a single lot of seed.



10/13

KEEP OUT OF REACH OF CHILDREN

CAUTION

NET CONTENTS _____

EPA Registration No. 524-~~XXX~~ 595
EPA Establishment No. 524-MO-002

Monsanto Company
800 North Lindbergh Blvd.
St. Louis, MO 63167

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product must be used as specified in the terms and conditions of the registration.

This product may be combined or produced through conventional breeding with other registered plant-incorporated protectants that are similarly approved for use in combination, through conventional breeding, with other registered plant-incorporated protectants to produce inbred corn lines and hybrid corn varieties with combined pesticidal traits.

MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ protects corn crops from leaf, stalk, and ear damage caused by lepidopteran corn pests listed on this label and root damage caused by corn rootworm larvae listed on this label. In order to minimize the risk of these pests developing resistance to MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ corn, an insect resistance management plan must be implemented as defined in the registration terms and conditions.

Grower agreements will specify that growers must adhere to the refuge requirements that will be described in the IRM/Grower Guide for MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ corn or other applicable product use documents.

Sales of corn hybrids that contain Monsanto's *Bt* corn plant-incorporated pesticide(s) must be accompanied by an IRM/Grower Guide which includes information on planting, production, and insect resistance management and notes that routine applications of insecticides to control these insects are usually unnecessary when corn containing the *Bt* proteins is planted.

Corn seed bags or bag tags for products containing MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ must include the refuge size requirement in text and graphical format.

INSECT RESISTANCE MANAGEMENT

Growers are instructed to read information on insect resistance management in the IRM/Grower Guide.

These refuge requirements do not apply to seed increase/propagation of inbred and hybrid seed corn up to a total of 20,000 acres per county and up to a combined United States (U.S.) total of 250,000 acres per plant-incorporated protectant (PIP) active ingredient per registrant per year.

The following information must be included on the product bag or bag-tag as sold per respective region:

Bag or Bag-Tag for the Corn-Growing Region

There are no requirements for a separate structured refuge for Genuity® SmartStax® RIB Complete™ corn when planted in the U.S. corn-growing region. The refuge seed of Genuity® SmartStax® RIB Complete™ corn is contained in the bag resulting in a refuge configuration that is interspersed within the field. SEE THE IRM/GROWER GUIDE FOR DETAILED IRM REQUIREMENTS, including the areas making up the corn-growing region.

Bag or Bag-Tag for the Cotton-Growing Region

Growers in the cotton-growing region of the U.S. who plant Genuity® SmartStax® RIB Complete™ corn seed are required to plant an additional 20% structured refuge (i.e. 20 acres of non-*B.t.* corn for every 80 acres of Genuity® SmartStax® RIB Complete™ corn planted). The 20% refuge must be planted with corn hybrids that do not contain *B.t.* technologies for the control of corn rootworms or corn borers. The refuge and the Genuity® SmartStax® RIB Complete™ corn should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar among varieties. The structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge, or as a separate block that is within ½ mile of the Genuity® SmartStax® RIB Complete™ corn field. SEE THE IRM/GROWER GUIDE FOR DETAILED IRM REQUIREMENTS, including the areas making up the cotton-growing region.

The cotton-growing region requiring the additional 20% refuge consists of the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

The following information regarding refuge placement for commercial production must be included in the IRM/Grower Guide:

This product includes refuge that is interspersed within the field by planting a licensed seed-mixture containing MON 89034 × TC1507 × MON 88017 × DAS-59122-7 and a minimum of 5% non-PIP seed. **The seed mix refuge option for MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ satisfies the refuge requirements in all regions other than in cotton growing regions where corn earworm is a significant pest as defined below.**

The seed producer must ensure a minimum of 5% non-PIP refuge seed is included with the MON 89034 × TC1507 × MON 88017 × DAS-59122-7 in each lot of seed corn.

The interspersed refuge can only be used by planting seed corn specifically generated by qualified seed producers/conditioners licensed by the registrant. The refuge seed in the seed mixture may not be treated with seed-applied insecticides for corn rootworm (CRW) control unless the MON 89034 × TC1507 × MON 88017 × DAS-59122-7 seed in the seed mixture receives the same treatment. Insecticidal treatments labeled for adult CRW control are discouraged during the time of adult CRW emergence.

Additional refuge requirements in cotton-growing regions where corn earworm is a significant pest

In cotton-growing regions where corn earworm is a significant pest, as defined below, MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ requires the planting of an additional 20% structured refuge (i.e. 20 acres of non-Bt corn for every 80 acres of MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ planted).

The 20% refuge must be planted with corn hybrids that do not contain Bt technologies for the control of corn rootworms or corn borers. The refuge and the MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar among varieties. The structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge, or as a separate block that is within ½ mile of the MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ field. In-field refuge options include blocks, perimeter strips (i.e., strips around the field), or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 consecutive rows wide. The refuge can be protected from lepidopteran damage by use of non-Bt insecticides if the population of one or more target lepidopteran pests of MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ in the refuge exceeds economic thresholds. In addition, the refuge can be protected from CRW damage by an appropriate seed treatment or soil insecticide; however, insecticides labeled for adult CRW control must be avoided in the refuge during the period of CRW adult emergence. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants).

The cotton-growing region requiring the additional 20% refuge consists of the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

Corn Insects Controlled or Suppressed

European corn borer (ECB)	<i>Ostrinia nubilalis</i>
Southwestern corn borer (SWCB)	<i>Diatraea grandiosella</i>
Southern cornstalk borer (SCSB)	<i>Diatraea erambidoides</i>
Corn earworm (CEW)	<i>Helicoverpa zea</i>
Fall armyworm (FAW)	<i>Spodoptera frugiperda</i>
Stalk borer	<i>Papaipema nebris</i>
Lesser corn stalk borer	<i>Elasmopalpus lignosellus</i>
Sugarcane borer (SCB)	<i>Diatraea saccharalis</i>
Western bean cutworm (WBC)	<i>Richia albicosta</i>
Black cutworm	<i>Agrotis ipsilon</i>
Western corn rootworm (WCRW)	<i>Diabrotica virgifera virgifera</i>
Northern corn rootworm (NCRW)	<i>Diabrotica barberi</i>
Mexican corn rootworm (MCRW)	<i>Diabrotica virgifera zea</i>

MON 89034 × TC1507 × MON 88017 × DAS-59122-7 RIB Complete™ is a product of Monsanto's and Dow AgroSciences' research programs, offering unique genetic characteristics for specific grower needs and may be protected by one or more of the following U.S. patents: 5322938, 5352605, 5359142, 5378619, 5424412, 5554798, 5641876, 5717084, 5728925, 5804425, 6018100, 6025545, 6051753, 6063597, 6083878, 6331665, 6489542, 6645497, 6962705, 7064249, 7227056, and 7250501.

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