

U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Biopesticides and Pollution Prevention Division (7511P) 1200 Pennsylvania Avenue NW Washington DC 20460

EPA Reg Number

Date of Issuance

264-1096

Term of Issuance

Unconditional, Time-Limited

Name of Pesticide Product

TwinLink™ Cotton

NOTICE OF PESTICIDE

X Registration

Reregistration (under FIFRA as amended)

Name and Address of Registrant (include ZIP Code)

Bayer CropScience LP 2 T W Alexander Drive

Research Triangle Park, NC 27709

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 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 registration does not eliminate the need for continual reassessment of the pesticide If EPA determines at any time, that additional data are required to maintain in effect an existing registration the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA

This product is registered in accordance with FIFRA section 3(c)(5) and is subject to the following terms and conditions

The subject registration will automatically expire at midnight on January 31, 2015

Continued

Signature of Approving Official

Keith A Matthews, Director

Biopesticides and Pollution Prevention Division (7511P)

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EPA Form 8570-6

II The Following Data and Information are Required to be Submitted as Terms of the Registration

A Analytical Method

Validation studies required to satisfy the terms of registration for the parental Plant-Incorporated Protectant (PIP) cotton Events T304-40 and GHB119 (EPA Registration Numbers 264-1094 and 264-1095), are also required to support this registration and must be submitted within one year of the date of registration

B Insect Resistance Management (IRM)

- 1 Bayer CropScience LP must submit, by September 1, 2012, a detailed resistance monitoring plan for the major pests of TwinLink™ Cotton tobacco budworm, cotton bollworm and pink bollworm. In addition, baseline susceptibility and diagnostic concentration determinations for tobacco budworm, cotton bollworm, and pink bollworm to Cry2Ae and Cry1Ab proteins must be submitted by September 1, 2012
- 2 Bayer CropScience LP must submit a final remedial action plan for tobacco budworm and cotton bollworm within 90 days of the date of registration. The remedial action plan must include definitions of "suspected" and "confirmed" resistance and steps to take should confirmed resistance occur.
- Bayer CropScience LP must submit, within 90 days of the date of registration, a compliance assurance program (CAP) for TwinLinkTM Cotton that must include a 'phased compliance approach" that outlines instances of non-compliance to the IRM requirements and options of responding to non-compliant growers The CAP must be developed for regions that have structured refuge requirements (i.e., western cotton-growing regions), a CAP is not necessary for regions with natural refuge requirements
- 4 Persons purchasing TwinLinkTM Cotton must sign a grower agreement. The term grower agreement' refers to any grower purchase contract, license agreement, or similar legal document and 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. In addition. Bayer CropScience LP must implement a system which is reasonably likely to assure that persons purchasing TwinLinkTM Cotton will affirm annually that they are contractually bound to comply with the requirements of the IRM program. Bayer CropScience LP must submit, within 90 days of the date of regisfration, a copy of the grower agreement/stewardship documents and a written description of a system assuring that growers will sign the grower agreement.

III Gene Flow

- A The following information regarding commercial production must be included in the grower guide for TwinLinkTM Cotton
 - 1 No planting of TwinLink™ Cotton is permitted south of Route 60 (near Tampa) in Florida
 - 2 Commercial planting of TwinLink[™] Cotton is prohibited in Hawaii Puerto Rico, and the U S Virgin Islands
- B The following information regarding test plots and seed production must occur on bags of TwinLinkTM Cotton intended for these purposes
 - 1 Test plots or breeding nurseries regardless of plot size established in Hawaii must not be planted within 3 miles of Gossypium tomentosum
 - 2 Experimental plots and breeding nurseries of TwinLink™ Cotton are prohibited on the U S Virgin Islands, and
 - 3 Test plots or breeding nurseries, regardless of plot size, established on the island of Puerto Rico must not be planted within 3 miles of feral cotton plants
- C Upon approval by EPA, test plots and/or breeding nurseries in Hawaii, the U S Virgin Islands and Puerto Rico may be established without restrictions if alternative measures, such as insecticide applications, are shown to effectively mitigate gene flow

IV Insect Resistance Management

A TwinLinkTM Cotton is not permitted to be planted in the following counties of the Texas panhandle Dallam, Sherman, Hansford, Ochiltree, Lipscomb, Hartley, Moore Hutchinson, Roberts, and Carson

- B The required IRM program for TwinLinkTM Cotton must have the following elements
 - 1 Requirements relating to creation of a non-*Bt* cotton refuge in conjunction with the planting of any acreage of TwinLinkTM Cotton in the states of Arizona, California, and New Mexico and in the following Texas counties Brewster, Crane, Crockett, Culberson, El Paso Hudspeth, Jeff Davis Loving, Pecos, Presidio, Reeves, Terrell Val Verde Ward, and Winkler,
 - 2 Requirements for Bayer CropScience LP to prepare and require TwinLink™ Cotton users to sign "grower agreements" which impose binding contractual obligations on the grower to comply with the refuge requirements,
 - 3 Requirements for Bayer CropScience LP to develop, implement, and report to EPA on programs to educate growers about IRM requirements,
 - 4 Requirements for Bayer CropScience LP to develop, implement and report to EPA on programs to evaluate and promote growers' compliance with IRM requirements in the states of Arizona, California, and New Mexico and in the following Texas

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- counties Brewster, Crane, Crockett Culberson El Paso Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Val Verde, Ward, and Winkler,
- 5 Requirements for Bayer CropScience LP to develop, implement, and report to EPA on programs to evaluate whether there are statistically significant and biologically relevant changes in susceptibility to Cry2Ae and Cry1Ab proteins in target insects,
- Requirements for Bayer CropScience LP to develop, and if triggered, to implement a "remedial action plan' which would contain measures Bayer CropScience LP would take in the event that any insect resistance was detected as well as to report on activity under the plan to EPA
- 7 Annual reports on or before January 31st of each year, starting in 2013
- C Refuge Requirements for Pink Bollworm Resistance Management only in the states of Arizona California and New Mexico and in the following Texas counties Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell Val Verde Ward, and Winkler

All growers of TwinLinkTM Cotton must employ one of the following structured refuge options

1 External, Unsprayed Refuge

Ensure that at least 5 acres of non-*Bt* cotton (refuge cotton) is planted for every 95 acres of TwinLinkTM Cotton The size of the refuge must be at least 150 feet wide, but preferably 300 feet wide. This refuge may not be treated with sterile insects, pheromone, or any insecticide (except listed below) labeled for the control of tobacco budworm, cotton bollworm, or pink bollworm. At the pre-squaring cotton stage only, the refuge may be treated with any lepidopteran insecticide to control foliage feeding caterpillars. The refuge may be treated with acephate or methyl parathion at rates which will not control tobacco budworm or the cotton bollworm (equal to or less than 0.5 lbs active ingredient per acre.) The variety of cotton planted in the refuge must be comparable to TwinLinkTM Cotton, especially in the maturity date, and the refuge must be managed (e.g., planting time, use of fertilizer, weed control, irrigation, termination, and management of other pests) similarly to TwinLinkTM Cotton. Ensure that a non-*Bt* cotton refuge is maintained within at least ½ linear mile (preferably adjacent to or within 1/4 mile or closer) from the *Bt* cotton fields

2 External Sprayed Refuge

Ensure that at least 20 acres of non-Bt cotton are planted as a refuge for every 80 acres of TwinLinkTM Cotton (total of 100A). The variety of cotton planted in the refuge must be comparable to Bt cotton, especially in the maturity date, and the refuge must be managed (e.g., planting time, use of fertilizer, weed control, irrigation, termination and management of other pests) similarly to TwinLinkTM Cotton. The non-Bt cotton may be treated with sterile insects, insecticides (excluding foliar Bt kurstaki products), or pheromones labeled for control of the tobacco budworm, cotton bollworm, or pink bollworm. Ensure that a non-Bt refuge

is maintained within at least 1 linear mile (preferably within $\frac{1}{2}$ mile or closer) from the Bt cotton fields

3 Embedded Refuge (for pink bollworm only)

Refuge cotton must be planted as at least one single non-Bt cotton row for every six to ten rows of TwinLinkTM Cotton. The refuge may be treated with sterile insects, any insecticide (excluding foliar Bt kurstaki products), or pheromone labeled for the control of pink bollworm whenever the entire field is treated. The in-field refuge rows may not be treated independently of the surrounding Bt cotton field in which it is embedded. The refuge must be managed (fertilizer, weed control, etc.) identically to the TwinLinkTM Cotton. There is no field unit option.

- Natural Refuge Requirements for Tobacco Budworm and Cotton Bollworm Resistance Management only in the states of Alabama, Arkansas, Florida, Georgia, Kansas, Kentucky Louisiana, Maryland Missouri, Mississippi, North Carolina Oklahoma, South Carolina, Tennessee, Texas (excluding the following counties Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Val Verde, Ward, and Winkler) and Virginia
 - Provided there remains an active registration for TwinLinkTM Cotton, Bayer CropScience LP must submit to EPA by January 31 2017, and every five years after registration, data to support an EPA reassessment of the natural refuge and to confirm its effectiveness with tobacco budworm and cotton bollworm. The data must include resistance monitoring data, cropping pattern analysis, and simulation modeling to reexamine levels of effective refuge in the states of Alabama, Arkansas, Florida, Georgia, Kansas, Kentucky, Louisiana, Maryland, Missouri, Mississippi North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia Both cropping and land use patterns can change over time, which could have an impact on the amount of natural refuge available to tobacco budworm and cotton bollworm relative to cotton If, based on this reassessment, EPA determines that additional tobacco budworm and/or cotton bollworm sampling, gossypol analysis, statistical analysis, and simulation modeling are needed to justify continuation of the natural refuge, Bayer CropScience LP must submit these data within the EPA requested timeframe If EPA's assessment concludes that the natural refuge is no longer scientifically supported, Bayer CropScience LP agrees to submit an application to amend the registration to restore the structure refuge requirements previously required for tobacco budworm and cotton bollworm uses

E Grower Agreements

The following provisions regarding grower agreements are required for TwinLink™ Cotton

- Persons purchasing the TwinLink™ Cotton product 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 Bayer CropScience LP must implement a system that is reasonably likely to assure that persons purchasing TwinLinkTM Cotton will affirm annually that they are contractually bound to comply with the requirements of the IRM program
- 4 Bayer CropScience LP must use an approved grower agreement and must submit to EPA within 90 days from the date of registration a copy of the grower agreement/stewardship documents and any specific stewardship documents referenced in the grower agreement. If Bayer CropScience LP wishes to change any part of 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, thirty days prior to implementing a proposed change, Bayer CropScience LP must submit to EPA the text of such changes to ensure the agreement is consistent with the terms and conditions of this registration.
- Bayer CropScience LP Seeds must implement an approved system which is reasonably likely to assure that persons purchasing TwinLinkTM Cotton sign grower agreement(s). A written description of the system assuring that growers will sign the grower agreement must be submitted to EPA within 90 days from the date of registration.
- 6 Bayer CropScience LP shall maintain records of all TwinLink™ Cotton 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, 2013 and annually thereafter, Bayer CropScience LP shall provide EPA with a report on the number of units of the TwinLinkTM Cotton 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 the twelve-month period covering the prior October through September.
- 8 Bayer CropScience LP 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 the names, personal information, and grower license number will be kept as confidential business information

F IRM Education and IRM Compliance Monitoring Programs

Bayer CropScience LP must implement the following IRM education and compliance monitoring programs

- Bayer CropScience LP must design and implement a comprehensive, ongoing IRM education program designed to convey to TwinLinkTM Cotton users the importance of complying with the IRM program. The program shall include information encouraging *Bt* cotton users to pursue optional elements of the IRM program relating to refuge configuration and proximity to *Bt* cotton fields. The education program shall involve the use of multiple media, e.g. face-to-face meetings, mailing written materials, and electronic communications such as by internet or television commercials. Copies of the materials, including the Grower Guide or other technical bulletins must be submitted to EPA for their records. The program shall involve at least one written communication annually to each TwinLinkTM Cotton grower separate from the grower agreement. Bayer CropScience LP shall coordinate its education program with the educational efforts of other organizations. such as the National Cotton Council and state extension programs.
- 2 Annually, Bayer CropScience LP shall revise, and expand as necessary, its education program to take into account the information collected through the compliance survey required under paragraph 6 below and from other sources. The changes shall address aspects of grower compliance that are not sufficiently high
- 3 Beginning January 31, 2013 and annually thereafter, Bayer CropScience LP shall provide a report to EPA summarizing the activities it carried out under its education program for the prior year and its plans for its education program during the current year
- 4 Bayer CropScience LP shall continue to implement an ongoing IRM compliance assurance program in the states of Arizona, California, and New Mexico and in the following Texas counties—Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos Presidio, Reeves Terrell, Val Verde, Ward, and Winkler The program is designed to evaluate the extent to which growers are complying with the IRM program and to which Bayer CropScience LP takes such actions as are reasonably needed to assure that growers who have not complied with the program either do so in the future or lose their access to TwinLinkTM Cotton Other required features of the program are described in paragraphs 5 12 below
- Bayer CropScience LP shall establish and publicize a "phased compliance approach," i.e. a guidance document that indicates how Bayer CropScience LP will address instances of non-compliance with the terms of the IRM program and general criteria for choosing among options for responding to any non-compliant growers. The options shall include withdrawal of the right to purchase TwinLinkTM Cotton for an individual grower or for all growers in a specific region. An individual grower found to be significantly out of compliance two years in a row would be denied purchase of the product the next year.
- 6 The IRM compliance assurance program shall include an annual survey of a statistically representative sample of TwinLinkTM Cotton growers conducted by an

- independent third party. The survey shall measure the degree of compliance with the IRM program by growers in different regions of the country and consider the potential impact of non-response. Beginning in 2013, Bayer CropScience LP shall provide a written summary of the results of the prior year's survey to EPA by January 31st of each year. Bayer CropScience LP Seeds shall confer with EPA on the design and content of the survey prior to its implementation.
- Annually, Bayer CropScience LP shall revise, and expand as necessary, its compliance assurance program to take into account the information collected through the compliance survey (required under paragraph 6) and from other sources. The changes shall address aspects of grower compliance that are not sufficiently high Bayer CropScience LP will confer with EPA prior to adopting any changes.
- 8 Bayer CropScience LP must conduct an annual on-farm assessment program Bayer CropScience LP shall train its representatives who make on-farm visits with TwinLinkTM Cotton growers to perform assessments of compliance with IRM requirements. In the event that any of these visits results in the identification of a grower who is not in compliance with the IRM program, Bayer CropScience LP shall take appropriate action, consistent with its "phased compliance approach," to promote compliance
- 9 Bayer CropScience LP shall carry out a program for investigating 'tips and complaints" that an individual grower or growers is/are not in compliance with the IRM program. Whenever an investigation results in the identification of a grower who is not in compliance with the IRM program, Bayer CropScience LP shall take appropriate action, consistent with its "phased compliance approach."
- 10 If a grower who purchases TwinLinkTM Cotton for planting was specifically identified as not being in compliance during the previous year, Bayer CropScience LP shall visit the grower and evaluate whether that the grower is in compliance with the IRM program for the current year
- 11 Beginning January 31, 2013 and annually thereafter, Bayer CropScience LP shall provide a report to EPA summarizing the activities it carried out under its compliance assurance program for the prior year and its plans for its compliance assurance program during the current year Included in that report will be the percent of growers using each refuge option (or combination of options) by region, the approximate number or percent of growers visited on farm by Bayer CropScience LP and the results of these visits, the number of tips investigated, the percent of growers not in compliance with each refuge option (both size and distance), and the follow-up actions taken
- 12 Bayer CropScience LP must allow a review of the compliance records by EPA or by a State pesticide regulatory agency if the State agency can demonstrate that the names, personal information, and grower license number of the growers will be kept as confidential business information

G Insect Resistance Monitoring

Bayer CropScience LP must carry out appropriate programs to detect the emergence of insect resistance, as early as possible, with the Cry2Ae and Cry1Ab toxins expressed in TwinLinkTM Cotton Resistance monitoring programs include surveying insects for potential resistance and collection of information from growers about events that may indicate resistance Bayer CropScience LP should coordinate its monitoring efforts for TwinLinkTM Cotton with the current resistance monitoring programs for other registered Bt cotton products The following resistance monitoring terms will be required for TwinLinkTM Cotton

- 1 Bayer CropScience LP must submit to EPA a TwinLink™ Cotton (Cry2Ae and Cry1Ab toxins) resistance monitoring plan for *Heliothis virescens* (tobacco budworm) *Helicoverpa zea* (cotton bollworm), and *Pectinophora gossypiella* (pink bollworm) The monitoring program description must include sampling (number of locations and samples per location), sampling methodology bioassay methodology, standardization procedures, detection technique and sensitivity and the statistical analysis of the probability of detecting resistance
- 2 Collection sites must be focused in areas of high adoption of TwinLink™ Cotton for tobacco budworm, cotton bollworm and pink bollworm Bayer CropScience LP shall provide the monitoring plan baseline susceptibility and diagnostic concentration determinations for tobacco budworm cotton bollworm, and pink bollworm to Cry2Ae and Cry1Ab proteins within six months of registration
- 3 The following testing scheme for survivors of the diagnostic or discriminating concentrations (or dentified survivors of any resistance detection method) must be implemented 1) Determine if the observed effect is heritable, 2) Determine if the increased tolerance can be observed in the field (i.e., survive on TwinLink™ Cotton plants), 3) Determine if the effect is due to resistance, 4) Determine the nature of resistance (dominant, recessive), 5) Determine the resistance allele frequency, 6) Determine, in subsequent years, whether the resistance allele frequency is increasing, and 7) Determine the geographic extent of the resistance allele (or alleles) distribution Should the resistance allele frequency be increasing and spreading, a specific remedial action plan should be designed to mitigate the extent of *Bt* resistance See section H ("Remedial Action Plans") below
- 4 Bayer CropScience LP must also follow up on grower, extension specialist or consultant reports of less than expected results or control failures (such s increases in damaged squares or bolls) for the target lepidopteran pests (*Heliothis virescens* (TBW), *Helicoverpa zea* (CBW), *Pectinophora gossypiella* (PBW)) as well as for cabbage looper, soybean looper, saltmarsh caterpillar, black cutworm, fall armyworm, southern armyworm, and European corn borer Bayer CropScience LP will instruct its customers (growers and seed distributors) to contact them (e g, via a toll-free customer service number) if incidents of unexpected levels of TBW, CBW or PBW damage occur Bayer CropScience LP will investigate all damage reports. See Remedial Action Plans (section H) below

- 5 Bayer CropScience LP must provide to EPA for review and approval any revisions to the TBW, CBW, and PBW resistance monitoring plans prior to their implementation
- 6 Beginning in 2013, a report on results of resistance monitoring and investigations of damage reports must be submitted to the Agency annually by September 1st each year for the duration of the registration

H Remedial Action Plans

Specific remedial action plans are required for TwinLinkTM Cotton for the purpose of containing resistance and perhaps eliminating resistance if it develops. One remedial action plan is for the areas where pink bollworm is the predominate pest and the other is for the areas where tobacco budworm and cotton bollworm are the predominate pests.

1 Remedial Action Plan for Pink Bollworm

If resistance involves the pink bollworm (*Pectinophora gossypiella*), Bayer CropScience LP must implement the Arizona *Bt* Cotton Working Group's Remedial Action Plan Bayer CropScience LP must obtain approval from EPA before modifying the Arizona *Bt* Cotton Working Group's Remedial Action Strategy The Arizona *Bt* Cotton Working Group's Remedial Action Plan is enclosed

2 Remedial Action Plan for Tobacco Budworm and Cotton Bollworm

If resistance involves the tobacco budworm (*Heliothis virescens*) and/or the cotton bollworm (*Helicoverpa zea*), Bayer CropScience LP must implement a Remedial Action Plan approved by EPA. Once approved, Bayer CropScience LP must obtain approval from EPA before modifying the Remedial Action Plan for tobacco budworm and cotton bollworm. A final remedial action plan for tobacco budworm and cotton bollworm must be submitted within 90 days of the date of registration. This remedial action plan must include definitions of "suspected" and "confirmed" resistance and steps to take in the event of confirmed resistance. The plan should be based on the steps described in Bayer CropScience LP's IRM submission, and include

- a Notifying the Agency within 30 days of resistance confirmation,
- b Notifying affected customers and extension agents about confirmed resistance,
- c Encouraging affected customers and extension agents to employ alternative lepidopteran control measures,
- d Ceasing sale and distribution of TwinLinkTM Cotton in affected area,
- e Devising long-term resistance management action plan according to characteristics of resistance event and local agronomic needs

V Annual Reporting

The annual reporting requirements for TwinLink™ Cotton are as follows

- A Annual Sales reported and summed by state (county level data available by request), January 31st each year, beginning in 2013,
- B Grower Agreements number of units of *Bt* cotton seeds 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 2013,
- C Grower Education substantive changes to education program completed previous year, January 31st each year, beginning in 2013,
- D Compliance Assurance Plan Compliance Assurance Program activities and results, January 31st each year, beginning in 2013,
- E Compliance Survey Results to include annual survey results and plans for the next year full report January 31st each year, beginning in 2013,
- F Insect Resistance Monitoring Results results of monitoring and investigations of damage reports, September 1st each year, beginning in 2013

A stamped copy of the label is enclosed for your records

Sincerely,

Keith A Matthews, Director

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Biopesticides and Pollution Prevention Division

(7511P)

Enclosures (2)

TwinLink™ Cotton

Plant-Incorporated Protectant Cry1Ab and Cry2Ae insecticidal proteins for control of lepitopteran insects

This product is effective at controlling cotton bollworm tobacco budworm pink bollworm fall armyworm and beet armyworm in cotton

Active Ingredients

Bacillus thunngiensis Cry1Ab protein and the genetic material (from plasmid pTDL008) necessary for its production in Event T304-40 x GHB119 cotton (BCS-GHØØ4-7 x BCS-GHØØ5-8)

0 000643 – 0 001176%*

Bacillus thunngiensis Cry2Ae protein and the genetic material (from plasmid pTEM12) necessary for its production in Event T304-40 x GHB119 cotton (BCS-GHØØ4-7 x BCS-GHØØ5-8)

0 001648 – 0 005176%*

Inert Ingredient

Substance produced by a herbicide tolerance gene and its controlling sequences (from plasmids pTDL008 and pTEM12) necessary for its production in Event T304–40 x GHB119 cotton (BCS-GHØØ4-7 x BCS-GHØØ5-8) 0 038352 – 0 073077%

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REGISTRATION NUMBER 264
EPA ESTABLISHMENT NUMBER 000264-TX-004
NET CONTENTS pounds of cotton seed
Bayer CropScience LP 2 T W Alexander Dr Research Triangle Park NC 27709

ACCEPTED

JAN 2 6 2012 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 264-1096

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

Use this plant-pesticide product as specified in the terms and conditions of the registration

^{*} Percentage protein on a dry weight basis as expressed in whole cotton plants

Cotton has been transformed to express *Bacillus thurngiensis* insecticidal protein Cry1Ab and *Bacillus thurngiensis* insecticidal protein Cry2Ae for the control of cotton bollworm tobacco budworm pink bollworm fall armyworm and beet armyworm

CROP	PESTS
Cotton	Cotton Bollworm (Helicoverpa zea) Tobacco Budworm (Heliothis virescens) Pink Bollworm (Pectinophora gossypiella) Fall Armyworm (Spodoptera frugiperda) Beet Armyworm (Spodoptera exigua)

The following information regarding commercial production must be included in the grower guide for TwinLink Cotton

- No commercial planting of this product is permitted south of Route 60 (near Tampa) in Florida
- Commercial planting of this product is prohibited in Hawaii Puerto Rico and the US Virgin Islands
- This product is not permitted to be planted in the following counties of the Texas panhandle Dallam Sherman Hansford Ochiltree Lipscomb Hartley Moore Hutchinson Roberts and Carlson

The following information regarding test plots and seed production must occur on bags of TwinLink Cotton intended for these purposes

- Test plots or breeding nurseries regardless of the plot size established in Hawaii must not be planted within 3 miles of Gossypium tomentosum
- Experimental plots and breeding nurseries of TwinLink Cotton are prohibited on the US Virgin Islands and
- Test plots or breeding nurseries regardless of the plot size established on the island of Puerto Rico must not be planted within 3 miles of feral cotton plants

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal

Storage Store in cool dry place inaccessible to children

Pesticide disposal Any seed not used must be returned to the seed provider

Container disposal Do not reuse bag Ensure that the bag is completely empty of seeds before destroying

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INSECT RESISTANCE MANAGEMENT

Growers of TwinLink Cotton in the states of Arizona, California, and New Mexico and in the following Texas counties Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Val Verde, Ward, and Winkler must employ one of the following structured refuge options

1) External Unsprayed Refuge

Ensure that at least 5 acres of non-*Bt* cotton (refuge cotton) is planted for every 95 acres of TwinLink Cotton. The size of the refuge must be at least 150 feet wide but preferably 300 feet wide. This refuge may not be treated with sterile insects pheromone or any insecticide (except listed below) labeled for the control of tobacco budworm cotton bollworm or pink bollworm. At the pre-squaring cotton stage only, the refuge may be treated with any lepidopteran insecticide to control foliage feeding caterpillars. The refuge may be treated with acephate or methyl parathion at rates which will not control tobacco budworm or the cotton bollworm (equal to or less than 0.5 lbs active ingredient per acre.) The variety of cotton planted in the refuge must be comparable to TwinLink Cotton especially in the maturity date and the refuge must be managed (e.g. planting time use of fertilizer weed control irrigation termination and management of other pests) similarly to TwinLink Cotton. Ensure that a non-*Bt* cotton refuge is maintained within at least ½ linear mile (preferably adjacent to or within ¼ mile or closer) from the *Bt* cotton fields.

2) External Sprayed Refuge

Ensure that at least 20 acres of non-*Bt* cotton are planted as a refuge for every 80 acres of TwinLink Cotton (total of 100 A). The variety of cotton planted in the refuge must be comparable to *Bt* cotton especially in the maturity date, and the refuge must be managed (e.g. planting time use of fertilizer weed control irrigation termination and management of other pests) similarly to TwinLink Cotton. The non-*Bt* cotton may be treated with sterile insects insecticides (excluding foliar *Bt. kurstaki* products) or pheromones labeled for control of the tobacco budworm cotton bollworm or pink bollworm. Ensure that a non-*Bt* refuge is maintained within at least 1 linear mile (preferably within ½ mile or closer) from the *Bt* cotton fields

3) Embedded Refuge Options (for pink bollworm only)

Refuge cotton must be planted as at least one single non-*Bt* cotton row for every six to ten rows of TwinLink Cotton. The refuge may be treated with sterile insects any insecticide (excluding foliar *Bt kurstaki* products) or pheromone labeled for the control of pink bollworm whenever the entire field is treated. The in-field refuge rows may not be treated independently of the surrounding *Bt* cotton field in which it is embedded. The refuge must be managed (fertilizer weed control etc.) identically to the TwinLink Cotton. There is no field unit option.