A powerful choice for protecting your cotton
Product Use Guide 8th Edition
This Product Use Guide sets forth the requirements for growing WideStrike® and WideStrike® 3 Insect Protection cotton, including Insect Resistance Management (IRM) practices.

WideStrike® and WideStrike® 3 Insect Protection cotton are protected under one or more U.S. patents. You must have a valid, executed Technology Use Agreement on file with Dow AgroSciences to legally obtain, plant and grow WideStrike or WideStrike 3 cotton. Your failure to comply with the terms of the Technology Use Agreement or the Product Use Guide could result in your forfeiting the privilege to grow WideStrike or WideStrike 3 cotton and potential legal liability. You must communicate all applicable requirements and restrictions on your WideStrike or WideStrike 3 cotton to all persons growing, possessing or taking an interest in your WideStrike or WideStrike 3 cotton.

For so long as you have a valid Technology Use Agreement for WideStrike® or WideStrike® 3 Insect Protection in effect, Dow AgroSciences will use reasonable efforts to send you the current Product Use Guides and other periodic updates relating to WideStrike or WideStrike 3. To obtain a copy of the current WideStrike Technology Use Agreement, contact your authorized WideStrike cottonseed dealer or Dow AgroSciences at 800-258-3033 or visit www.PhytoGenYields.com.

A Technology Use Agreement may be signed electronically online at www.agcelerate.com. For additional information, visit www.PhytoGenYields.com, www.traitstewardship.com, call 877-4-TRAITS (877-487-2487) or contact your seed provider. Signing a Technology Use Agreement with Dow AgroSciences entitles you to receive the most current Product Use Guide and other periodic updates relating to Bt cotton.
YOU HAVE A POWERFUL CHOICE FOR BT COTTON.

WideStrike® Insect Protection uses innovative in-plant technology to give you season-long protection against a broad spectrum of yield-robbing pests.

This two-gene insect protection trait expresses the Cry1F and Cry1Ac proteins from Bacillus thuringiensis (Bt) in cotton plants.¹ It’s a powerful multiple-gene combination you won’t find in any other Bt cotton.

![Image of cotton field]

Spectrum of Activity for WideStrike®

<table>
<thead>
<tr>
<th>Excellent Control</th>
<th>No Control</th>
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</thead>
<tbody>
<tr>
<td>Tobacco Budworm</td>
<td>Cotton Bollworm</td>
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<tr>
<td>Pink Bollworm</td>
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<tr>
<td>Soybean Looper</td>
<td>Cabbage Looper</td>
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<tr>
<td>Fall Armyworm</td>
<td>Beet Armyworm</td>
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<tr>
<td>Southern Armyworm</td>
<td>Cotton Leaf Perforator</td>
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<tr>
<td>Saltmarsh Caterpillar</td>
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<tr>
<td>Black Cutworm</td>
<td>Omnivorous Leaf Roller</td>
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<tr>
<td>Citrus Peelminer</td>
<td>Beneficials</td>
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</tbody>
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NOTHING STOPS WIDESTRIKE FROM PROTECTING YOUR COTTON.

WideStrike is built into the cotton plant and is always working to protect your profits. Even below spray threshold levels, it protects leaves, squares and bolls from yield-robbing worms.

- Works all season long — stops early season and late-season worms
- Broad spectrum
- Works in all weather conditions
- Reduces sprays and pesticide handling
- Preserves beneficial insects
- No drift concerns from aerial spraying
- Stacked insect protection trait

You can count on this powerful innovation in Bt cotton because it comes from Dow AgroSciences — a trusted leader in the cotton industry for more than five decades.

As with all Bt cotton varieties, WideStrike Insect Protection cotton should be scouted regularly and supplemental insecticide sprays should be made when local spray thresholds are met.

¹Cry1F and Cry1Ac Bt proteins and the genetic material necessary for their production in cotton: EPA Reg. No. 69476-3.
A SMART CHOICE FOR IRM AND STEWARDSHIP.

We’re committed to making sure the land remains viable for profitable crop production. The lasting effectiveness and continued availability of Bt technologies hinges on growers adopting practices that assist in preventing development of resistant pest populations. Following all Insect Resistance Management (IRM) requirements will ensure the effectiveness of Bt technology and protect your options in the future.

Since WideStrike® Insect Protection is a two-gene trait, the natural refuge has been accepted as an applicable refuge to the majority of the Cotton Belt.

REFUGE REQUIREMENTS FOR WIDESTRIKE.

No Structured Refuge Required
Structured Refuge Required (Pink Bollworm Eradication6)
No Bt Cotton Allowed

6Check with local authorities about the availability of a pink bollworm eradication program in your area.
INSECT RESISTANCE MANAGEMENT (IRM) FOR WIDESTRIKE AND WIDESTRIKE 3 COTTON.

IRM is mandated by the U.S. Environmental Protection Agency (EPA) and is the responsibility of each person growing and using Bt cotton protection technology. Properly managing WideStrike and WideStrike 3 technology is essential to preserving it as a useful crop protection tool for years to come. Failure to implement IRM plans may lead to adaptation by the target pest populations to the Bt insecticidal proteins and loss of efficacy of the product.

A key element in IRM is the use of a refuge. Within this refuge, certain target insects survive without exposure to Bt insecticidal proteins. This ensures sufficient target insects susceptible to Bt insecticidal proteins are nearby to mate with any rare insects naturally resistant to Bt proteins that may emerge from your WideStrike and WideStrike 3 cotton fields. Susceptibility to Bt proteins is then passed on to their offspring.

Natural refuges provided by host crops and wild plants other than cotton are sufficient to manage resistance in most of the central and eastern cotton-growing regions. You are not required to plant a structured refuge for WideStrike cotton in the following states: Alabama, Arkansas, Florida, Georgia, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, 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.

Unless otherwise allowed by special local use needs (e.g., pink bollworm eradication in Arizona; please consult your local Extension service agent), you must plant a structured refuge consisting of non-Bt cotton to accompany your WideStrike® and WideStrike® 3 Insect Protection Bt cotton acreage if you farm in the following Western region: Arizona, California, New Mexico and the following Texas counties: Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Val Verde, Ward and Winkler.

In this Western region, you must keep accurate records of where you plant all your Bt and non-Bt cotton (including the location and acreage of each type and variety of all Bt and non-Bt cotton you plant) so your Bt crops can be readily identified and your refuge areas verified. These records must be made available to Dow AgroSciences upon request.

The following is important information about how to implement an IRM plan for WideStrike and WideStrike 3 cotton in the Western region.

REQUIREMENTS FOR REFUGE FIELDS IN THE WESTERN COTTON BELT.

The non-Bt cotton varieties planted in your refuge must be agronomically similar (particularly plant maturity group) to the associated WideStrike® and WideStrike® 3 Insect Protection cotton varieties planted. Additionally, the refuge must be managed the same as the associated WideStrike and WideStrike 3 cotton varieties (e.g., planting time, irrigation, fertilizer, weed control, management of other pests and harvest).

It is recommended that all seed hoppers be thoroughly cleaned out when switching from planting the WideStrike and WideStrike 3 cotton fields and the non-Bt cotton refuge fields to avoid inadvertently mixing Bt and non-Bt seed.
REFUGE OPTIONS

OPTION 1: Embedded Refuge.

At least one row of non-\(Bt\) refuge cotton must be planted for every six to 10 rows of WideStrike\textsuperscript{®} or WideStrike\textsuperscript{® 3} Insect Protection cotton. The refuge may be treated with sterile insects, any insecticide (except \(Bt\) foliar spray products) or pheromones labeled for the control of pink bollworm, but only if the entire field is similarly treated. The in-field refuge rows must not be treated independently of the surrounding WideStrike or WideStrike 3 cotton field in which they are embedded, and the refuge rows must be managed identically to the WideStrike or WideStrike 3 cotton rows. One way the interspersed rows can be planted is by putting the non-\(Bt\) cotton variety in one hopper on the seed planter and WideStrike or WideStrike 3 cottonseed in the remaining hoppers. The interspersed refuge approach is not allowed outside of the western Cotton Belt.

OPTION 2: Five Percent (5%) Unsprayed Refuge.

For a 5% unsprayed refuge, you may plant up to ninety-five percent (95%) of your cotton acres with WideStrike or WideStrike 3 cotton. You must plant at least 5% of your cotton acres with non-\(Bt\) cotton. If you plant more than one brand of \(Bt\) cotton, you must ensure that at least 5% of your total cotton acres are planted with non-\(Bt\) cotton in accordance with these refuge requirements.

The unsprayed refuge should preferably be placed within \(\frac{1}{4}\) mile or closer of the associated WideStrike or WideStrike 3 cotton fields but cannot be located farther than \(\frac{1}{2}\) mile from the associated WideStrike or WideStrike 3 fields. The 5% unsprayed refuge should preferably average about 300 feet in width but cannot average less than 150 feet in width.
The unsprayed refuge cotton must not be treated with any insecticide that is labeled for control of tobacco budworm, cotton bollworm or pink bollworm. At the presquaring cotton stage only, the refuge may be treated with any lepidopteran insecticide to control foliage-feeding caterpillars. Insecticide products containing the following active ingredients CANNOT be sprayed on the refuge under the unsprayed refuge option: foliar B.t.k. products, acephate (>0.5 lb a.i./A), amitraz, emamectin benzoate, endosulfan, indoxacarb, methomyl, methoxyfenozide, methyl parathion (>0.5 lb a.i./A), profenofos, pyrethroids, spinosad, sulprofos, thiodicarb, Helicoverpa zea nuclear polyhedrosis virus, gossypolure.

If the unsprayed refuge is to be planted in the same field as the WideStrike® or WideStrike® 3 Insect Protection cotton, the unsprayed refuge cotton must be planted in a continuous block and no Bt cotton may be planted within such block.

**OPTION 3:**
**Twenty Percent (20%) Sprayed Refuge.**

For a 20% sprayed refuge, you may plant up to eighty percent (80%) of your cotton acres with WideStrike or WideStrike 3 cotton. You must plant at least 20% of your cotton acres with non-Bt cotton. If you plant more than one brand of Bt cotton, you must ensure that at least 20% of your total cotton acres are planted with non-Bt cotton in accordance with these refuge requirements.

The sprayed refuge preferably should be placed within ½ mile or closer of the associated WideStrike or WideStrike 3 cotton fields but cannot be located farther than one (1) mile from the associated WideStrike or WideStrike 3 cotton fields.

If the lepidopteran pest population in the 20% refuge exceeds the economic threshold, the 20% refuge can be sprayed with any insecticides, except Bt foliar sprays, to manage the pest population. Pests not targeted by WideStrike or WideStrike 3 can be managed as needed in the non-Bt refuge and in the WideStrike® or WideStrike® 3 Insect Protection cotton.

**IRM TIPS LINE**

*Bt* cottonseed companies are required by the EPA to establish a system to collect information about alleged instances of noncompliance with the IRM requirements. If you have a tip or complaint, please call the Dow AgroSciences toll-free IRM Tips & Complaints phone line at 877-4-TRAITS (877-487-2487).

1Use of insecticides with active ingredients other than those listed above, which provide significant control of lepidopteran insects, are subject to these same restrictions on use.
AGRONOMIC MANAGEMENT

As with any cotton crop, utilize the best management practices for your area. Use WideStrike or WideStrike 3 cotton varieties, seeding rates and other practices recommended for your area and take all appropriate steps to minimize plant stress. The agronomic management of your specific variety is a function of the variety and its characteristics and not the WideStrike or WideStrike 3 contained within the variety. Insect management may have an impact on the overall management of the crop; however, decisions must be made according to the growth characteristics of the specific variety. Consult your local crop adviser, Extension specialist or seed company representative for cotton management recommendations for your specific area.

Monitor your fields planted with WideStrike or WideStrike 3 cotton and immediately contact your authorized WideStrike or WideStrike 3 cottonseed dealer or Dow AgroSciences at 800-258-3033 if you observe unexpected insect damage.

Target Insects. While WideStrike® and WideStrike® 3 Insect Protection provides excellent protection against a wide range of lepidopteran insect pests, high populations of one or more target pests may cause economic damage. WideStrike and WideStrike 3 cotton fields should be carefully monitored for target insect pests — including cotton bollworm; tobacco budworm; pink bollworm; fall, beet and southern armyworms; and soybean and cabbage loopers to determine the need for remedial insecticide treatment. If any target insect pest reaches economic larval thresholds, Dow AgroSciences recommends that you use an appropriate remedial insecticide treatment to ensure desired level of control. Fields should be scouted at least twice a week during periods of heavy or sustained egg pressure. Scouting should include the following locations: terminals, squares, blooms, bloom tags and small bolls. Note that insect larvae must hatch and feed on WideStrike or WideStrike 3 cotton before they can be affected by WideStrike or WideStrike 3. Larvae that are greater than ½ inch in length will be difficult to control solely with WideStrike or WideStrike 3. Use a supplemental insecticide treatment if the frequency of such advanced-stage larvae or plant damage warrants treatment. Insecticides suitable for managing these insects include Tracer®, Naturalyte®, and Intrepid® 2F.

Sprayable Bt insecticide formulations should not be used.

Nontarget Insects. WideStrike® and WideStrike® 3 Insect Protection cotton do not provide protection against nonlepidopteran insects, which will need to be monitored and controlled using appropriate insecticides and treatment levels.

Integrated Pest Management. Integrated Pest Management (IPM) practices should be utilized with WideStrike or WideStrike 3 cotton to ensure the most cost-effective insect control. To the extent remedial insecticide treatments are warranted, use insecticides that are least harmful to beneficial insects.
RESTRICTED PLANTING LOCATIONS

Cultivation of WideStrike and WideStrike 3 cotton are prohibited in certain geographies detailed below:

a) No planting of WideStrike or WideStike 3 cotton is permitted south of Route 60 (near Tampa) in Florida.

b) Commercial culture of WideStrike or WideStrike 3 cotton is prohibited in Hawaii, Puerto Rico and the U.S. Virgin Islands.

MARKETING STEWARDSHIP

Dow AgroSciences is a member of Excellence Through Stewardship (ETS). Dow AgroSciences’ products are commercialized in accordance with ETS product launch stewardship guidance, and Dow AgroSciences’ Product Launch Stewardship Policy.

Before selecting varieties for your crop plan, Dow AgroSciences recommends you know and understand whether the variety you have chosen is a conventional variety, one approved for export or one not yet approved for export. It is important that you consult your trait provider’s technical agreements prior to planting to understand crop requirements and approved cotton markets.

Any grain or material produced from Bt seed can only be exported to, or used in, processed in 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. Talk to your grain handler or purchaser in advance to facilitate appropriate crop and grain or material handling and marketing.

For further information about your crop or grain marketing options, contact Dow AgroSciences at 877-4-TRAITS (877-487-2487). Information regarding the regulatory and market status of agricultural biotechnology products can be found at: www.biotradestatus.com.
MAKE THE CHOICE THAT POWERFULLY PROTECTS YOUR COTTON.

WideStrike® and WideStike® 3 Insect Protection are available in elite PhytoGen® cottonseed varieties through Dow AgroSciences sales representatives. Talk to your Dow AgroSciences sales representative or local retailer for more information. Or visit www.PhytoGenYields.com.