Growers must read this Product Grower Guide prior to planting for information on planting and Insect Resistance Management.
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Monsanto Company is committed to enhancing farmer productivity and profitability through the introduction of new seed technologies to the market. This IRM/Grower Guide provides information regarding Insect Resistance Management ("IRM") requirements. It is also intended to assist farmers through the period of transition from first-generation products to more advanced products.

**GENUITY™ SMARTSTAX™ — PAGE 9**

Genuity™ SmartStax™ is the most-advanced, all-in-one corn trait system that controls the broadest spectrum of above- and below-ground insects and weeds. Genuity™ SmartStax™ hybrids provide multiple B.t. proteins that will dramatically decrease the probability that insects will become resistant to the traits. Based on this multiple gene approach, Genuity™ SmartStax™ is approved for reduced refuge in the corn belt from 20% down to 5% for both above- and below-ground pests. The cotton belt refuge for Genuity™ SmartStax™ is also reduced, from 50% down to 20%.

**GENUITY™ VT DOUBLE PRO™ — PAGE 15**

Genuity™ VT Double PRO™ is a new corn technology scheduled for launch in the 2010 growing season:
- It includes broad spectrum insect control against corn earworm, European and southwestern corn borers, sugarcane borer, southern cornstalk borer and fall armyworm.
- Dual mode-of-action of Genuity™ VT Double PRO™ allows for lower corn borer refuge acres compared to other registered B.t.-traited products.
- Seed containing Genuity™ VT Double PRO™ technology is treated with seed-applied insecticide.*

**GENUITY™ VT TRIPLE PRO™ — PAGE 11**

Genuity™ VT Triple PRO™ is now being made available in selected southern corn- and cotton-growing areas. It includes:
- Broader spectrum insect control: European and southwestern corn borers, sugarcane borer, southern cornstalk borer, corn earworm, fall armyworm, western corn rootworm, northern corn rootworm and Mexican corn rootworm
- Advanced control of ear pests resulting in higher grain quality and higher-yielding crop potential
- Dual mode-of-action which allows for lower corn borer refuge acres in southern cotton-growing areas compared to other registered B.t.-traited products — a low 20% refuge requirement for above- and below-ground insect pests
- The same Roundup Ready® 2 Technology as Monsanto’s previous product, YieldGard VT Triple®

**GENUITY™ BOLLGARD II® — PAGE 19**

Just as Bollgard® revolutionized insect control in cotton, Genuity™ Bollgard II® takes in-plant, built-in worm control to a whole new level in the science of plant protection. It features:
- Better boll protection which allows cotton to reach its maximum yield potential
- Greatly reduced — and often eliminated — need to spray for the most damaging worm species
- A natural refuge option for certain specified areas

*A seed-applied insecticide can protect seed, roots and seedlings from insects such as black cutworm, wireworm, white grubs, seed corn maggots, chinch bug and early flea beetles.
YIELDGARD VT TRIPLE® — PAGE 12
YieldGard VT Triple corn technology combines YieldGard® Corn Borer and YieldGard VT Rootworm/RR2® technologies into a single plant. By providing in-plant protection against both corn borer species and corn rootworm larvae*, the genetic yield potential of YieldGard VT Triple corn hybrids is optimized. This technology also suppresses corn earworm, fall armyworm and stalk borer. YieldGard VT Triple corn hybrids also include Roundup Ready® 2 Technology. YieldGard VT Triple seed is treated with a seed-applied insecticide.**

YIELDGARD® PLUS AND YIELDGARD PLUS WITH ROUNDUP READY® CORN 2 — PAGE 12
YieldGard Plus and YieldGard Plus with Roundup Ready Corn 2 insect-protected corn combine the insect protection spectrum of YieldGard Corn Borer and YieldGard Rootworm technologies and provide effective and consistent control of corn borer and corn rootworm larvae.* These technologies also suppress corn earworm, fall armyworm and stalk borer. YieldGard Plus and YieldGard Plus with Roundup Ready Corn 2 are treated with a seed-applied insecticide.**

YIELDGARD VT ROOTWORM/RR2® — PAGE 14
YieldGard VT Rootworm/RR2 technology is the next generation of YieldGard stacked-trait technologies. It offers better insect control and improved consistency of control of corn rootworm larvae.* Protecting the root of the corn plant from feeding by corn rootworm larvae decreases lodging and protects the genetic yield potential of YieldGard VT Rootworm/RR2 corn hybrids. YieldGard VT Rootworm/RR2 is treated with a seed-applied insecticide.**

YIELDGARD ROOTWORM AND YIELDGARD ROOTWORM WITH ROUNDUP READY CORN 2 — PAGE 14
YieldGard Rootworm and YieldGard Rootworm with Roundup Ready Corn 2 insect-protected corn provide effective and consistent, in-plant control of corn rootworm larvae* during the critical larval feeding period. YieldGard Rootworm and YieldGard Rootworm with Roundup Ready Corn 2 are treated with a seed-applied insecticide.**

YIELDGARD CORN BORER AND YIELDGARD CORN BORER WITH ROUNDUP READY CORN 2 — PAGE 15
YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 insect-protected corn provide whole-season, in-plant protection against European corn borer, southwestern corn borer, sugarcane borer and southern cornstalk borer. YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 also suppress corn earworm, fall armyworm and stalk borer.

BOLLGARD® — PAGE 21
Bollgard cotton provides excellent, season-long control of tobacco budworm and pink bollworm, and a high level of suppression of the cotton bollworm.

*Includes European corn borer, southwestern corn borer, sugarcane borer and southern cornstalk borer, in addition to western, northern and Mexican corn rootworm species.
**A seed-applied insecticide can protect seed, roots and seedlings from insects such as black cutworm, wireworm, white grubs, seed corn maggots, chinch bug and early flea beetles.
Insect Resistance Management (IRM) requirements vary depending upon whether you are growing corn or cotton, and the growing area where you are planting the seed. **See the map below to determine your growing area.** If you have any questions regarding the IRM requirements for your growing area, you may call 1-800-768-6387 for further information.
**AREA 1**
Follow Corn-Growing area IRM requirements (pages 9-18) for planting corn.

**INCLUDES:**
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
WEST VIRGINIA
WISCONSIN
WYOMING

**MISSOURI**
All Counties EXCEPT, Dunklin, New Madrid, Pemiscot, Scott and Stoddard.

**TENNESSEE**
All Counties EXCEPT Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby and Tipton.

**VIRGINIA**
All Counties EXCEPT Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey and Sussex.

**AREA 2**
Follow Corn-Growing area IRM requirements (pages 9-18) for planting corn. For cotton IRM requirements, see pages 19-25.

**INCLUDES:**
KANSAS*
KENTUCKY
MARYLAND
OKLAHOMA*

All Counties EXCEPT Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman and Washita.

**TEXAS**
All Counties EXCEPT Brewster, Carson, Crane, Crockett, Culberson, Dallam, El Paso, Hays, Hartley, Hudspeth, Hutchinson, Jeff Davis, Loving, Lipscomb, Moore, Ochiltree, Pecos, Presidio, Roberts, Reeves, Sherman, Terrell, Val Verde, Ward and Winkler.

**VIRGINIA**
Counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey and Sussex.

**AREA 3**
Follow Cotton-Growing area IRM requirements (pages 9-18) for planting corn. For cotton IRM requirements, see pages 19-25.

**INCLUDES:**
ARIZONA*
ARKANSAS
FLORIDA (except Area 7)
GEORGIA
LOUISIANA
MISSISSIPPI
MISSOURI

Counties of Dunklin, New Madrid, Pemiscot, Scott and Stoddard.

**NEVADA**
Counties of Carson, Dallam, Davis, Loving, Lipscomb, Moore, Ochiltree, Pecos, Presidio, Roberts, Reeves, Sherman, Terrell, Val Verde, Ward and Winkler.

No natural refuge option is available for planting cotton in this area.

**AREA 4**
Follow Corn-Growing area IRM requirements (pages 9-18) for planting corn. For cotton IRM requirements, see pages 19-25.

**INCLUDES:**
ARIZONA*
CALIFORNIA*
NEW MEXICO*

No natural refuge option for cotton is available in this area. See page 21 for pink bollworm eradication provisions.

**AREA 5**
Follow Corn-Growing area IRM requirements (pages 9-18) for planting corn. For cotton IRM requirements, see pages 19-25.

**INCLUDES:**
TEXAS
Counties of Carson, Dallam, Hays, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts and Sherman.

**AREA 6**
Follow Cotton-Growing area IRM requirements (pages 9-18) for planting corn. For cotton IRM requirements, see pages 19-25.

**INCLUDES:**
FLORIDA

Counties of Manatee, Hardee, Highlands, Okeechobee, St. Lucie, Martin, Glades, DeSoto, Sarasota, Charlotte, Lee, Hendry, Palm Beach, Collier, Broward, Monroe, Miami-Dade, and areas South of Route 60 in Pinellas, Hillsboro, Polk, Osceola and Indian River.

No planting or sale for commercial planting of Genuity™ Bollgard II® or Bollgard is permitted south of Route 60 (near Tampa) in Florida.

**AREA 7**
Follow Corn-Growing area IRM requirements (pages 9-18) for planting corn.

**INCLUDES:**
ALASKA
HAWAII

No planting or sale for commercial planting of Genuity™ Bollgard II® or Bollgard is permitted in Hawaii.

NOTE: No planting or sale for planting of Genuity™ Bollgard II® or Bollgard is permitted in Hawaii, Puerto Rico and the U.S. Virgin Islands.

*In 2010, no planting or sale for planting of Bollgard® cotton is permitted in Arizona, California, Colorado, Kansas, New Mexico and Oklahoma.

**As of September 24, 2009, Genuity™ SmartStax®, Genuity™ VT Triple PRO® and Genuity™ VT Double PRO® are not approved for sale or planting in Maine.

***As of September 24, 2009, Genuity™ SmartStax® is not approved for planting in New York, Puerto Rico and the U.S. Virgin Islands.
Resistance has developed in nature to many pest control tactics. The risk of insect resistance is real, but may be reduced with proper planning. The best way to preserve the benefits and insect protection of *Bacillus thuringiensis* (*B.t.*) technology is to develop and implement an Insect Resistance Management (IRM) plan.

**WHY PLANT A REFUGE?**

A key component of any IRM plan is a refuge. A refuge is simply a block or strip of the same crop that does not contain a *B.t.* technology for controlling targeted insect pests. The primary purpose of a refuge is to maintain a population of insect pests that are not exposed to the *B.t.* proteins. The lack of exposure to *B.t.* proteins allows susceptible insects nearby to mate with any rare resistant insects that may emerge. Susceptibility to *B.t.* technology would then be passed on to their offspring, helping to preserve the long-term effectiveness of *B.t.* technologies. To help reduce the risk of insects developing resistance, the refuge should be planted with a similar hybrid/variety, as close as possible to, and at the same time as, the *B.t.* technologies. With an effective IRM plan in place, farmers will continue to benefit from the effective and consistent insect protection and top-yield potential found in crops containing these technologies.

**Retain the Right to Choose Your Technology**

The United States Environmental Protection Agency (EPA) mandates the planting of a refuge for *B.t.* technology. Insect Resistance Management is a requirement for purchasing and growing seed protected products like YieldGard® Plus, YieldGard Plus with Roundup Ready® Corn 2, YieldGard VT Rootworm/RR2®, YieldGard Corn Borer, YieldGard Corn Borer

**CORN**

**COMMON REFUGE**

A common refuge is a single field that serves as a refuge for both above-ground pests (e.g. corn borer) and below-ground pests (e.g. corn rootworm) at the same time. The refuge can be within the *B.t.* field or immediately adjacent to it.

**SEPARATE REFUGE**

A separate refuge is an option that requires two fields—one field which is adjacent to or within your *B.t.* field that serves as a refuge for below-ground pests (e.g. corn rootworm) and a separate field (up to 1/2 mile away) that serves as a refuge for above-ground pests (e.g. corn borer).

**COTTON**

**EMBEDDED REFUGE**

In an embedded refuge, at least 5% of the total cotton acres must be non-*B.t.* cotton. The refuge is located within a single field and planted as a contiguous block within the field unit. Whenever the *B.t.* field is treated with an insecticide, the refuge is treated the same way, with the same product.

**UNSPRAYED REFUGE**

In an unsprayed refuge, at least 5% of the total cotton acres must be non-*B.t.* cotton and may not be treated with any lepidoptera-active insecticide. The refuge must average at least 150 feet wide and must be within 1/2 mile of the *B.t.* field.

**SPRAYED REFUGE**

In a sprayed refuge, at least 20% of the total cotton acres must be non-*B.t.* cotton. This refuge may be treated with any insecticide (excluding foliar *B.t.* products). The refuge must be located within one mile of the *B.t.* field.

*In some areas, a natural refuge option is available for Genuity® Bollgard II®.*
Monsanto Company is committed to enhancing farmer productivity and profitability through the introduction of new seed technologies to the market. Farmers planting seed with biotech traits must agree to implement good stewardship practices.

with Roundup Ready Corn 2, YieldGard Rootworm, YieldGard Rootworm with Roundup Ready Corn 2, YieldGard VT Triple® and, Monsanto’s newest corn technologies—Genuity™ VT Triple PRO™, Genuity® VT Double PRO® and Genuity® SmartStax™. Insect Resistance Management is also a requirement for purchasing and growing Genuity™ Bollgard II® cotton and Bollgard®. Continued use of B.t. technologies depends on compliance with EPA registration conditions.

**Good Stewardship Means**

- Reading and signing a Monsanto Technology/Stewardship Agreement (MTSA)
- Complying with all the Insect Resistance Management (IRM) practices for specific biotech traits as mandated by the Environmental Protection Agency (EPA), this IRM/Grower Guide and the MTSA
- Utilizing all seed with biotech traits only for planting a single crop
- Selling harvested corn with biotech traits to grain handlers that confirm their acceptance; or using that grain as domestic feed

**Refuge Requirements**

- Plant the refuge at the same time as the B.t. technologies
- Mixing non-B.t. seed with B.t. technologies is not permitted
- To avoid inadvertent mixing of seed in the planting process, be sure to clean all seed out of hoppers when switching from non-B.t. seed to traited seed, or vice versa
- Adjacent and separate refuge fields must be planted and managed by the same farmer
- If the corn refuge is planted on rotated ground, then the B.t. corn technologies must also be planted on rotated ground
- If the corn refuge is planted on continuous corn ground, then the B.t. corn technologies can be planted on either continuous corn ground or on rotated ground

Farmers should monitor their fields and contact their seed dealer or Monsanto at 1-800-768-6387 if performance problems are observed.

**Questions?**

**Monsanto’s Here to Help.**

Monsanto works to develop and implement IRM programs that strike a balance between available knowledge and practicality, with farmer acceptance and implementation of the plan as critical components.

The several refuge configurations depicted in this Guide are offered merely as examples to farmers and are not necessarily to scale. As detailed in this IRM/Grower Guide, refuge requirements vary by the type of product being planted and the location of planting. Farmers must plant the amount of refuge acres for a product that is required for their growing region. Please contact your seed dealer with any questions and/or call 1-800-768-6387.

As a condition of registration of B.t. products by the EPA, seed companies are required to conduct IRM compliance assessments during the growing season to ensure farmer compliance. Failure to follow IRM guidelines and properly plant a refuge may result in the loss of access to B.t. technologies. Please do your part to ensure these technologies are preserved by fully cooperating in refuge management.

If you have questions about seed stewardship or become aware of individuals utilizing biotech traits in a manner other than as noted above, please call 1-800-768-6387. Letters to report unacceptable or unauthorized behavior of individuals using biotech traits may be sent to:

**Monsanto Trait Stewardship**

800 N. Lindbergh Boulevard C3ND
St. Louis, MO 63167

Information may be provided as anonymous or confidential as defined below:

“Anonymous” reporting results when a person reports information to Monsanto in such a way that the identity of the person reporting the information cannot be identified. This kind of reporting includes telephone calls requesting anonymity in the report and unsigned letters.

“Confidential” reporting results when a person reports information to Monsanto in such a way that the reporting person’s identity is known to Monsanto. Every effort will be made to protect a person’s identity, but it is important to understand that a court may order Monsanto to reveal the identity of people who are “known” to have supplied relevant information.
Integrated Pest Management
Sustainable Agriculture

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

Pests Not Controlled

Although B.t. cotton will sustain less damage from some of the most troublesome lepidopteran pests, it will not provide protection against non-lepidopteran species. Similarly, certain B.t. corn offers protection against several of the key lepidopteran and coleopteran insect pests, but will not provide protection against 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.

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

• Employ appropriate scouting techniques and treatment decisions
• Select insecticides that have minimal negative impact on beneficial insects; these insects are conserved by B.t.-protected crops and contribute to insect pest control
• Select cultivars well adapted to your setting; give appropriate attention to impact of crop maturity and timing of harvest on pest severity
• Use recommended cultural control methods to reduce pest overwintering; destroy crop promptly after harvest and use other soil management practices to reduce overwintering insects
SCHEDULED FOR LAUNCH IN 2010 — Genuity™ SmartStax™ is the most-advanced, all-in-one technology that controls or suppresses a broad spectrum of above- and below-ground insect pests and contains two genes for broad weed control options. Providing multiple *Bacillus thuringiensis* (*B.t.*) proteins with different modes-of-action for control dramatically decreases the probability that insects will become resistant to these traits.

**COMMON REFUGE GROWING AREAS 1 2 3 4 5 6 7 AND 8**

**CONTROL TARGET**
Planting a non-*B.t.* common refuge provides convenience by combining the corn borer and corn rootworm refuges into one effective insect refuge. Planting a common refuge also meets the distance requirement to ensure compliance.

**TREATMENT (follow all pesticide label requirements)**
Under typical growing conditions for this product, routine applications of insecticides to control pests are usually unnecessary when Genuity™ SmartStax™ is planted. The common 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. 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. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g. Extension Service agents and crop consultants). Genuity™ SmartStax™ contains the Roundup Ready® and LibertyLink® herbicide tolerance traits, but your refuge may not. Select an appropriate herbicide for your refuge before spraying the refuge.

**REFUGE PLANTING**
The common refuge must be planted with corn hybrids that do not contain *B.t.* technologies for the control of corn borer or corn rootworm. The refuge can be planted with Roundup Ready® Corn 2 or conventional corn. The corn refuge and Genuity™ SmartStax™ 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 hybrids. If the refuge is planted on rotated ground, then the Genuity™ SmartStax™ corn must also be planted on rotated ground. If the refuge is planted on continuous corn land, the Genuity™ SmartStax™ field may be planted on either continuous or rotated land. This option is encouraged where western corn rootworm rotation resistant biotype may be present. Ensure each *B.t.*-containing product has its own designated refuge. A refuge sized for Genuity™ SmartStax™ corn cannot also function as the refuge for another *B.t.* technology.

**% NON-*B.T.* REFUGE**

**5% REFUGE**
Corn-Growing Areas (Areas 1, 2, 4, 5 and 8): The refuge area must represent at least 5% of the farmer’s corn acres.

**20% REFUGE**
Cotton-Growing Areas (Areas 3, 6 and 7): The refuge area must represent at least 20% of the farmer’s corn acres.

**REFUGE LOCATION**
The common refuge can be within or adjacent to the Genuity™ SmartStax™ field. If adjacent, it can be separated by a road, path, ditch, etc., but not by another field. Monsanto recommends planting the corn refuge for Genuity™ SmartStax™ as an in-field or adjacent refuge as explained in this IRM/Grower Guide. However, if corn rootworms are not significant within a region, the common refuge may also be planted as a separate block that is within 1/2 mile of the Genuity™ SmartStax™ field. This additional option to plant the refuge as a block within 1/2 mile is only available to farmers in the following States: AK, AL, AR, AZ, CA, CT, DE, FL, GA, HI, ID, LA, MA, MD, ME, MS, MT, NC, NH, NJ, NM, NV, NY, OR, PA, RI, TN, SC, UT, VA, VT, WA, WV, WY.

**REFUGE CONFIGURATION OPTIONS**
The common refuge must be planted as an in-field or adjacent refuge. It can be planted as a block within or adjacent (e.g. across the road) to the Genuity™ SmartStax™ field, perimeter strips (i.e. strips around the field), or in-field strips. If perimeter strips or in-field strips are implemented, the strips must be at least four contiguous rows of corn wide. Farmers should calculate the acres required for refuge and plant the appropriate amount of refuge seed for the configuration option selected. For example, if in the 5% refuge region and choosing to plant in-field strips, calculate how much refuge seed is needed to meet the 5% minimum requirement and fill the refuge planter boxes with that amount. Plant the strips until the 5% minimum refuge seed is completed. Then fill the planter boxes with Genuity™ SmartStax™ seed and continue planting the rest of the field.
REFUGE PERCENTAGES FOR SPECIFIC GROWING AREAS

The refuge size is either (a minimum of) 5% in corn-growing regions (i.e. 5 acres of non-B.t. corn for every 95 acres of Genuity™ SmartStax™ planted) or (a minimum of) 20% in cotton-growing regions (i.e. 20 acres of non-B.t. corn for every 80 acres of Genuity™ SmartStax™ planted), as specified below.

5% REFUGE GROWING AREAS

Plant a minimum 5% non-B.t. corn refuge in all counties of the following states: AK, AZ, CA, CO, CT, DE, HI, IA, ID, IL, IN, KS, KY, MA, MD, ME, MI, MN, MT, ND, NE, NH, NM, NJ, NV, NY, OH, OR, PA, RI, SD, UT, VT, WA, WI, WV, and in:
- MO—counts except Dunkin, New Madrid, Pemiscot, Scott, and Stoddard
- OK—all counties except Carroll, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita
- TN—all counties except Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton
- TX—all counties except Carson, Dallam, Hardsford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman
- VA—all counties except Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex

20% REFUGE GROWING AREAS

Plant a minimum 20% non-B.t. corn refuge in all counties of the following states: AL, AR, FL, GA, LA, MS, NC, SC, and in:
- MO—counts of Dunkin, New Madrid, Pemiscot, Scott, and Stoddard
- OK—all counties except Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita
- TN—all counties except Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton
- TX—all counties except Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman
- VA—all counties except Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex

5% IN CORN-GROWING AREAS

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<th>REFUGE CONFIGURATIONS</th>
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<td>Within</td>
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<td>1/2 Mile Option</td>
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<td>1/2 mile option available in limited areas - see page 9 for details.</td>
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20% IN COTTON-GROWING AREAS

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<tr>
<td>Within</td>
<td>40 120 200 300</td>
<td></td>
</tr>
<tr>
<td>Block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perimeter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjacent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within adjacent field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2 Mile Option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2 mile option available in limited areas - see page 9 for details.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REFUGE CALCULATOR (see above for specific areas)

Field Size (acres) =

Maximum Genuity™ SmartStax™ acres:

Field size x .95 =

Corn Rootworm and Corn Borer Refuge acres needed for 5% minimum refuge:

Field size x .05 =

NOTE: Genuity™ SmartStax™ is not approved for sale or planting in Maine, New York, Puerto Rico and the U.S. Virgin Islands.
The dual modes of insect control provided by Genuity™ VT Triple PRO™ against targeted above- and below-ground insects reduce the likelihood of insects developing resistance. This means enhanced durability and a change in refuge requirements, for corn farmers in cotton-growing areas, that reduces the number of acres needed to commit to refuge.

**CONTROL TARGET**
Serves as a refuge for both corn borer and corn rootworm. The common refuge offers convenience by combining the corn borer and corn rootworm refuges into one effective corn refuge.

**TREATMENT (follow all pesticide label requirements)**
The common refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control 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 (i.e. corn borer), if pest pressure reaches an economic threshold for damage. However, if rootworm adults are present at the time of foliar application, then the Genuity™ VT Triple PRO™ field must be treated in a similar manner.

**REFUGE PLANTING**
Refuge must be planted with corn hybrids that do not contain B.t. technologies. The refuge can be planted with Roundup Ready® Corn 2 or conventional corn.

**COMMON REFUGE GROWING AREAS**

<table>
<thead>
<tr>
<th>CONTROL TARGET</th>
<th>GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as a refuge for both corn borer and corn rootworm. The common refuge offers convenience by combining the corn borer and corn rootworm refuges into one effective corn refuge.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TREATMENT (follow all pesticide label requirements)</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The common refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control 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 (i.e. corn borer), if pest pressure reaches an economic threshold for damage. However, if rootworm adults are present at the time of foliar application, then the Genuity™ VT Triple PRO™ field must be treated in a similar manner.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFUGE PLANTING</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuge must be planted with corn hybrids that do not contain B.t. technologies. The refuge can be planted with Roundup Ready® Corn 2 or conventional corn.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% NON-B.T. REFUGE</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The refuge area must represent at least 20% of the farmer’s corn acres (Genuity™ VT Triple PRO™ plus refuge acres).</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFUGE LOCATION</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The refuge can be within or adjacent to the Genuity™ VT Triple PRO™ field. If adjacent, it can be separated by a road, path, ditch, etc., but not by another field.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFUGE CONFIGURATION OPTIONS</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuge can be planted as a block, strips within the field or as a perimeter around the field. See refuge configuration options below.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIZE</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>If perimeter or strips are used for the refuge, the strips must be at least four contiguous rows wide.</td>
<td>1 2 3 4 5 6 AND 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMON REFUGE CONFIGURATIONS</th>
<th>COMMON REFUGE GROWING AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within</td>
<td>Block</td>
</tr>
</tbody>
</table>

Plant a minimum 20% non-B.t. common (corn rootworm and corn borer) refuge within or adjacent to each Genuity™ VT Triple PRO™ corn field. Can be separated by a road, path, ditch, etc., but not by another field.

NOTE: Monsanto currently does not offer a product to plant as a separate 1/2 mile refuge option for Genuity™ VT Triple PRO™ in 2010. If you have questions, please contact Monsanto at 1-800-768-6387, Option #1.
Either common or separate refuge planting options can be implemented to meet IRM requirements for YieldGard VT Triple®, YieldGard® Plus and YieldGard Plus with Roundup Ready® Corn 2. The separate refuge planting option offers farmers the flexibility of controlling corn borer in both the corn rootworm and corn borer refuge areas without the need to also spray the B.t. field.

**COMMON REFUGE GROWING AREAS 1 2 3 4 5 6 AND 7**

**CONTROL TARGET**
Serves as a refuge for both corn borer and corn rootworm. The common refuge option offers flexibility by combining the corn borer and corn rootworm refuges into one effective corn refuge.

**TREATMENT (follow all pesticide label requirements)**
The common refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control rootworm larvae and other soil pests.

The refuge can also be treated with a non-B.t. foliar insecticide for control of late-season pests (i.e. corn borer), if pest pressure reaches an economic threshold for damage. However, if rootworm adults are present at the time of foliar application, then the B.t. field must be treated in a similar manner.

**REFUGE PLANTING**
Refuge must be planted with corn hybrids that do not contain B.t. technologies. The refuge can be planted with Roundup Ready Corn 2 or conventional corn.

**% NON-B.T. REFUGE**
Corn-Growing Areas (Areas 1, 2, 4 and 5): The refuge area must represent at least 20% of the farmer’s corn acres.
Cotton-Growing Areas (Areas 3, 6 and 7): The refuge area must represent at least 50% of the farmer’s corn acres.

**REFUGE LOCATION**
The refuge can be within or adjacent to the B.t. field. If adjacent, it can be separated by a road, path, ditch, etc., but not by another field.

**REFUGE CONFIGURATION OPTIONS**
Refuge can be planted as a block, strips within the field or as a perimeter around the field. See refuge configuration options below.

**SIZE**
If perimeter or strips are used for the refuge, the strips must be at least four contiguous rows wide.

**COMMON REFUGE CONFIGURATIONS**

- **Within**
  - Block
  - Perimeter
  - Strips

  Minimum of 4 Rows

- **Adjacent** or

  **Minimum**

  **Adjacent**

  - YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or YieldGard VT Triple
  - Refuge (i.e. Roundup® Ready Corn 2 or conventional corn)
  - Designates ditch, road, path, etc.

*50% in cotton-growing areas (Areas 3, 6 and 7).
CONTROL TARGET
One field, adjacent or within, serves as a refuge for corn rootworm.

TREATMENT (follow all pesticide label requirements)
The corn rootworm refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control rootworm larvae and other soil pests.

Since the premise of the separate refuge allows planting YieldGard Corn Borer protected hybrids as the corn rootworm refuge, it is unlikely that late-season foliar insecticide applications will be required for other insect pests. However, in the event that late-season foliar insecticide applications are necessary for control of other corn insect pests that have reached economic threshold, and if rootworm adults are present at the time of application, then the B.t. field must be treated in a similar manner.

REFUGE PLANTING
Refuge must be planted with corn hybrids that do not contain B.t. technology for control of western, northern and Mexican corn rootworm. However, under this option the corn rootworm refuge can be planted with B.t. hybrids that control corn borer, such as YieldGard Corn Borer or YieldGard Corn Borer with Roundup Ready Corn 2.

% REFUGE
Both Corn- and Cotton-Growing Areas (Areas 1, 2, 3, 4, 5, 6 and 7): The corn rootworm refuge area must represent at least 20% of the farmer’s corn acres (YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2, YieldGard VT Triple, YieldGard Corn Borer with Roundup Ready Corn 2 and YieldGard Corn Borer).

REFUGE LOCATION
The corn rootworm refuge must be within or adjacent to the B.t. field. If adjacent, it can be separated by a road, path, ditch, etc., but not by another field.

REFUGE CONFIGURATION OPTIONS
See refuge configuration options below.

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

SEPARATE REFUGE GROWING AREAS

CONTROL TARGET
Another field, planted separately (within 1/2 mile), serves as a refuge for corn borer.

TREATMENT (follow all pesticide label requirements)
The corn borer refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control corn rootworm larvae and other soil pests, or a non-B.t. foliar-applied insecticide for corn borer control if pest pressure reaches an economic threshold.

REFUGE PLANTING
Refuge must be planted with corn hybrids that do not contain B.t. technology for control of above- or below-ground insect pests. The refuge can be planted with Roundup Ready Corn 2 or conventional corn.

% NON-B.T. REFUGE
Corn-Growing Areas (Areas 1, 2, 4 and 5): The corn borer refuge area must represent at least 20% of the farmer’s total corn acres. (YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2, YieldGard VT Triple, YieldGard Corn Borer with Roundup Ready Corn 2, YieldGard Corn Borer, plus any non-B.t. acres)

Cotton-Growing Areas (Areas 3, 6 and 7): The corn borer refuge area must represent at least 50% of the farmer’s total corn acres (YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2, YieldGard VT Triple, YieldGard Corn Borer with Roundup Ready Corn 2, YieldGard Corn Borer).

REFUGE LOCATION
Plant a corn borer refuge within 1/2 mile of each YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or YieldGard VT Triple corn field.

REFUGE CONFIGURATION OPTIONS
See refuge configuration options below.

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

SEPARATE REFUGE CONFIGURATIONS

CORN ROOTWORM
Plant a minimum 20% corn rootworm refuge adjacent or within the YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or YieldGard VT Triple corn field.

CORN BORER
Plant the minimum* non-B.t. separate corn borer refuge within 1/2 mile of each B.t. corn field.

*20% in corn-growing areas (Areas 1, 2, 4 and 5) and 50% in cotton-growing areas (Areas 3, 6 and 7).
**CONTROL TARGET**
Serves as a refuge for western, northern and Mexican corn rootworm. The refuge on each farm may be arranged in a number of configurations, offering the flexibility to easily incorporate an effective corn refuge into the farm operation.

**TREATMENT (follow all pesticide label requirements)**
The refuge can be treated with a soil-applied, seed-applied or foliar-applied insecticide to control rootworm larvae and other soil pests.

The refuge can also be treated with a non-B.t. foliar insecticide for control of late-season pests (i.e. corn borer), if pest pressure reaches an economic threshold for damage. However, if rootworm adults are present at the time of foliar application, then the B.t. field must be treated in a similar manner.

**REFUGE PLANTING**
Refuge must be planted with corn hybrids that do not contain B.t. product for corn rootworm management. The refuge can be planted with YieldGard® Corn Borer, YieldGard Corn Borer with Roundup Ready® Corn 2, Roundup Ready Corn 2, or conventional corn.

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**REFUGE REQUIREMENTS**

**GROWING AREAS**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

**% REFUGE**
In both corn- and cotton-growing areas, the refuge area must represent at least 20% of the farmer’s corn acres.

**REFUGE LOCATION**
The refuge can be within or adjacent to the B.t. field. If adjacent, it can be separated by a road, path, ditch, etc., but not by another field.

**REFUGE CONFIGURATION OPTIONS**
Refuge can be planted as a block, strips within the field or as a perimeter around the field. See refuge configuration options below.

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

---

**REFUGE CONFIGURATIONS**

- **Within**
  - Block
  - Perimeter
  - Strips

Minimum of 4 Rows

- **Adjacent**

<table>
<thead>
<tr>
<th>Or</th>
</tr>
</thead>
</table>

- YieldGard Rootworm, YieldGard Rootworm with Roundup Ready Corn 2 or YieldGard VT Rootworm/RR2
- Refuge (i.e. YieldGard Corn Borer, YieldGard Corn Borer with Roundup Ready® Corn 2, Roundup Ready Corn 2 or conventional corn)

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*Includes both corn- and cotton-growing areas (Areas 1, 2, 3, 4, 5, 6 and 7).
CONTROL TARGET
Serves as a refuge for European corn borer, southwestern corn borer or sugarcane borer. The refuge on each farm may be arranged in a number of configurations, offering the flexibility to easily incorporate an effective corn refuge into farm operations.

TREATMENT (follow all pesticide label requirements)
The refuge can also be treated with a non-B.t. foliar-applied insecticide for control of late-season pests (i.e. corn borer), if pest pressure reaches an economic threshold for damage. Sprayable B.t. insecticides must not be applied to the refuge corn.

REFUGE PLANTING
Refuge must be planted with corn hybrids that do not contain B.t. technologies. The refuge can be planted with Roundup Ready® Corn 2 or conventional corn.

% NON-B.T. REFUGE
Must represent the following % of the farmer’s total corn acres:

<table>
<thead>
<tr>
<th>AREAS 1,2,4,5</th>
<th>Genuity™ VT Double PRO® or YieldGard Corn Borer® with Roundup Ready® Corn 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AREAS 3,6,7</th>
<th>Genuity™ VT Double PRO® or YieldGard Corn Borer® with Roundup Ready® Corn 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>50%</td>
</tr>
</tbody>
</table>

REFUGE LOCATION
The refuge can be within, adjacent to or within 1/2 mile from the Genuity™ VT Double PRO®, YieldGard Corn Borer or YieldGard Corn Borer with Roundup Ready Corn 2 field.

REFUGE CONFIGURATION OPTIONS
Refuge can be planted as a block, strips within the field, a perimeter around the field or a separate block within 1/2 mile of the B.t. field. See refuge configurations below.

SIZE
If perimeter or strips are used for the refuge, they must be at least four contiguous rows wide.
### Genuity™ SmartStax™

#### REFUGE (5% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>40</th>
<th>120</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ SmartStax™ acres:</td>
<td>38</td>
<td>114</td>
<td>190</td>
<td>285</td>
</tr>
<tr>
<td>Field size x .95 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn Rootworm and Corn Borer Refuge acres needed for 5% minimum refuge:</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Field size x .05 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

#### EXAMPLES

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
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<th>300</th>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### CALCULATE REFUGE NEEDS FOR YOUR FARM

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>40</th>
<th>120</th>
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<th>300</th>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Genuity™ SmartStax™

#### REFUGE (20% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
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<th>120</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ SmartStax™ acres:</td>
<td>32</td>
<td>96</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>Field size x .80 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn Rootworm and Corn Borer Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
<td>24</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Field size x .20 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Genuity™ VT Double PRO™

#### REFUGE (5% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>40</th>
<th>120</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ VT Double PRO™ acres:</td>
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<td>285</td>
</tr>
<tr>
<td>Field size x .95 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn Borer Refuge acres needed for 5% minimum refuge:</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Field size x .05 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Genuity™ VT Double PRO™

#### REFUGE (20% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>40</th>
<th>120</th>
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<td></td>
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</tr>
</tbody>
</table>
### Genuity™ VT Triple PRO™

**COMMON REFUGE** (Refuge for both Corn Rootworm and Corn Borer, 20% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>Common Refuge</th>
<th>EXAMPLES</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>COMMON REFUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>32</td>
<td></td>
<td></td>
<td>Maximum Genuity™ VT Triple PRO™ acres:</td>
<td>32</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>300</td>
<td>240</td>
<td></td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

**CALCULATE REFUGE NEEDS FOR YOUR FARM**

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>Refuge Needs</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>COMMON REFUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>8</td>
<td></td>
<td>Maximum Genuity™ VT Triple PRO™ acres:</td>
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<td>120</td>
<td>24</td>
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<tr>
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<td>40</td>
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<td>Corn Rootworm and Corn Borer Refuge acres needed for 20% minimum refuge:</td>
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</tr>
<tr>
<td>300</td>
<td>60</td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

### YieldGard® Rootworm or YieldGard VT Rootworm/RR2®

**REFUGE** (20% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>32</td>
<td></td>
<td>Maximum YieldGard Rootworm and YieldGard VT Rootworm/RR2 acres:</td>
<td>32</td>
</tr>
<tr>
<td>120</td>
<td>96</td>
<td></td>
<td>Field size x .80 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>160</td>
<td></td>
<td>Corn Rootworm Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
</tr>
<tr>
<td>300</td>
<td>240</td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

**Calculate YieldGard Refuge Needs for Your Farm**

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge Needs</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>8</td>
<td></td>
<td>Maximum YieldGard Rootworm and YieldGard VT Rootworm/RR2 acres:</td>
<td>32</td>
</tr>
<tr>
<td>120</td>
<td>24</td>
<td></td>
<td>Field size x .80 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>40</td>
<td></td>
<td>Corn Rootworm Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
</tr>
<tr>
<td>300</td>
<td>60</td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

### YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready® Corn 2

**REFUGE** (20% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>32</td>
<td></td>
<td>Maximum YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 acres:</td>
<td>32</td>
</tr>
<tr>
<td>120</td>
<td>96</td>
<td></td>
<td>Field size x .80 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>160</td>
<td></td>
<td>Corn Borer Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
</tr>
<tr>
<td>300</td>
<td>240</td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

**Calculate YieldGard Refuge Needs for Your Farm**

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge Needs</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>8</td>
<td></td>
<td>Maximum YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 acres:</td>
<td>32</td>
</tr>
<tr>
<td>120</td>
<td>24</td>
<td></td>
<td>Field size x .80 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>40</td>
<td></td>
<td>Corn Borer Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
</tr>
<tr>
<td>300</td>
<td>60</td>
<td></td>
<td>Field size x .20 =</td>
<td></td>
</tr>
</tbody>
</table>

### YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2

**REFUGE** (50% of field size)

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>20</td>
<td></td>
<td>Maximum YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 acres:</td>
<td>20</td>
</tr>
<tr>
<td>120</td>
<td>60</td>
<td></td>
<td>Field size x .50 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>100</td>
<td></td>
<td>Corn Borer Refuge acres needed for 50% minimum refuge:</td>
<td>20</td>
</tr>
<tr>
<td>300</td>
<td>150</td>
<td></td>
<td>Field size x .50 =</td>
<td></td>
</tr>
</tbody>
</table>

**Calculate YieldGard Refuge Needs for Your Farm**

<table>
<thead>
<tr>
<th>Field Size (acres)</th>
<th>YieldGard Refuge Needs</th>
<th>AREAS</th>
<th>Field Size (acres)</th>
<th>YieldGard Refuge</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>20</td>
<td></td>
<td>Maximum YieldGard Corn Borer and YieldGard Corn Borer with Roundup Ready Corn 2 acres:</td>
<td>20</td>
</tr>
<tr>
<td>120</td>
<td>60</td>
<td></td>
<td>Field size x .50 =</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>100</td>
<td></td>
<td>Corn Borer Refuge acres needed for 50% minimum refuge:</td>
<td>20</td>
</tr>
<tr>
<td>300</td>
<td>150</td>
<td></td>
<td>Field size x .50 =</td>
<td></td>
</tr>
</tbody>
</table>
YieldGard Plus, YieldGard Plus with Roundup Ready® Corn 2 and YieldGard VT Triple®

**COMMON REFUGE** (Refuge for both Corn Rootworm and Corn Borer, 20% of field size)

**EXAMPLES**

- Field Size (acres) = 40 120 200 300
- Maximum YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or Yieldgard VT Triple acres: Field size x .8 = 32 96 160 240
- Corn Rootworm and Corn Borer Refuge acres needed for 20% minimum refuge: Field size x .2 = 8 24 40 60

**CALCULATE REFUGE NEEDS FOR YOUR FARM**

- Field Size (acres) = 40 120 200 300
- Maximum YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or Yieldgard VT Triple acres: Field size x .8 = 32 96 160 240
- Corn Rootworm and Corn Borer Refuge acres needed for 20% minimum refuge: Field size x .2 = 8 24 40 60

**SEPARATE REFUGE** (20% Refuge for Corn Rootworm plus 20% Refuge for Corn Borer)

<table>
<thead>
<tr>
<th>A</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITHIN or ADJACENT Refuge for Rootworm</td>
<td>YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2, or Yieldgard VT Triple</td>
<td>A x .8 = 80 160 240 560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YieldGard Corn Borer or Yieldgard Corn Borer with Roundup Ready Corn 2</td>
<td>A x .2 = 20 40 60 140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 1/2 mile Additional corn acres required for Separate Refuge</td>
<td>A ÷ 4 = B 25 50 75 175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEPARATE Refuge field for Corn Borer</td>
<td>Roundup Ready Corn 2 or Conventional Corn</td>
<td>B = 25 50 75 175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Farm Corn Acres</td>
<td>A + B = C 125 250 375 875</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMON REFUGE** (Refuge for both Corn Rootworm and Corn Borer, 50% of field size)

**EXAMPLES**

- Field Size (acres) = 40 120 200 300
- Maximum YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or Yieldgard VT Triple acres: Field size x .5 = 20 60 100 150
- Corn Rootworm and Corn Borer Refuge acres needed for 50% minimum refuge: Field size x .2 = 20 60 100 150

**CALCULATE REFUGE NEEDS FOR YOUR FARM**

- Field Size (acres) = 40 120 200 300
- Maximum YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2 or Yieldgard VT Triple acres: Field size x .5 = 20 60 100 150
- Corn Rootworm and Corn Borer Refuge acres needed for 50% minimum refuge: Field size x .2 = 20 60 100 150

**SEPARATE REFUGE** (20% Refuge for Corn Rootworm plus 50% Refuge for Corn Borer)

<table>
<thead>
<tr>
<th>A</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITHIN or ADJACENT Refuge for Rootworm</td>
<td>YieldGard Plus, YieldGard Plus with Roundup Ready Corn 2, or Yieldgard VT Triple</td>
<td>A x .8 = 80 160 240 560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YieldGard Corn Borer or Yieldgard Corn Borer with Roundup Ready Corn 2</td>
<td>A x .2 = 20 40 60 140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 1/2 mile Additional corn acres required for Separate Refuge</td>
<td>A ÷ 1 = B 100 200 300 700</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEPARATE Refuge field for Corn Borer</td>
<td>Roundup Ready Corn 2 or Conventional Corn</td>
<td>B = 100 200 300 700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Farm Corn Acres</td>
<td>A + B = C 200 400 600 1,400</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*When using a separate refuge configuration in corn-growing areas, the corn rootworm refuge must represent at least 20% of the farmer’s corn acres AND the corn borer refuge must represent at least 20% of the farmer’s total corn acres.

**When using a separate refuge configuration in cotton-growing areas, the corn rootworm refuge must represent at least 20% of the farmer’s corn acres AND the corn borer refuge must represent at least 50% of the farmer’s total corn acres.*
Genuity™ Bollgard II® cotton contains two separate *Bacillus thuringiensis* (B.t.) proteins that work to minimize insect resistance in two ways. Each protein is active on the target insects and works at a different site of action within the insects. In order to survive, insects would have to possess resistance genes to BOTH proteins, which is extremely rare in nature. Also, because Genuity™ Bollgard II® cotton enhances control of bollworm and expands the spectrum of activity to include armyworms and loopers, the use of insecticides against these pests is greatly reduced. This reduced use of insecticides may also delay development of resistance to conventional chemistries.

**NATURAL REFUGE**  **GROWING AREAS 2, 3 AND 5**

In Growing Areas 2, 3 and 5, natural refuge is a major new benefit of Genuity™ Bollgard II® cotton.

Monsanto, in conjunction with the USDA and university research, has demonstrated that sufficient numbers of tobacco budworm and cotton bollworm moths emerge from hosts other than cotton. Natural refuge is adequate to meet IRM requirements for Genuity™ Bollgard II® cotton varieties in most areas of the United States where the target pests, tobacco budworm and cotton bollworm, are key pests.
GROWING AREA 6 AND AREAS WITHIN GROWING AREA 4 WHERE PINK BOLLWORM IS THE MAJOR PEST

Natural refuge is not permitted in Growing Area 6 or in Growing Area 4 where pink bollworm is the major pest of concern. The refuge requirements for Genuity™ Bollgard II® cotton are the same as those detailed herein for Bollgard cotton. However, an embedded refuge is not allowed in these areas. In these areas only, farmers are allowed to mix individual rows of non-B.t. cotton with Genuity™ Bollgard II® cotton. Plant at least one single non-B.t. cotton row for every six to ten rows of Genuity™ Bollgard II® cotton. This will result in interspersed rows of non-B.t. cotton across a Genuity™ Bollgard II® cotton field. Farmers should confirm the appropriateness of interspersing different varieties within a field with their respective seed companies and crop advisors. The refuge may be treated with sterile insects, any insecticide (excluding foliar B.t. products) or pheromones, labeled for the control of pink bollworm whenever the entire field is treated.

The in-field refuge cotton rows may not be treated independently of the surrounding Genuity™ Bollgard II® cotton field in which it is embedded. The refuge must be managed (fertilizer, weed control, etc.) identically to the Genuity™ Bollgard II® cotton fields.

NOTES: Interspersing rows is not allowed in cotton grown in any Growing Areas other than 4 and 6.

Check with local authorities regarding exemption from refuge requirements, allowed in accordance with the Pink Bollworm Eradication Program. This includes all of Arizona and New Mexico, as well as three southern California counties and fifteen west Texas counties.

In 2010 Genuity™ Bollgard II® cotton can be planted in Growing Areas 2, 3, 4, 5 and 6, excluding certain areas.*

*See Growing Area map and key for details (pages 4-5).

NOTES: Sale or commercial planting of Bollgard® cotton is prohibited in certain states, including: Arizona, California, Colorado, Kansas, New Mexico and Oklahoma.

Sale or planting of Bollgard® is prohibited in the Texas counties of: Carson, Dallam, Hansford, Hartley, Hutchison, Lipscomb, Moore, Ochiltree, Roberts, and Sherman (Growing Area 5).

Sale or commercial planting of both Genuity™ Bollgard II® and Bollgard is prohibited in Hawaii, Puerto Rico, the U.S. Virgin Islands, and in Florida south of Route 60 (near Tampa).
The Bollgard® registration will soon expire. As such, the U.S. Environmental Protection Agency has mandated the following terms and conditions for existing Bollgard stocks:* 

- Bollgard® cotton may be sold through September 30, 2009. After that date, all sales of Bollgard cotton are prohibited.
- All Bollgard cotton seed must be planted by midnight of July 1, 2010 (the expiration date of the Bollgard cotton registration). After July 1, 2010, planting of Bollgard cotton seed is prohibited. Any Bollgard cotton seed not planted on or before July 1, 2010, must be returned to either the retailer or to Monsanto. No refunds are to be issued on Bollgard cotton seeds bought for planting in 2010 and returned by growers.
- An adequate amount of refuge seed must be purchased for planting an appropriate refuge for Bollgard cotton. Purchase of refuge seed with the Bollgard cotton seed is mandatory, and such seed must be purchased by growers in advance of their receipt of Bollgard cotton seed. Any seed purchased for use as a refuge is non-refundable, unless the proportional amount of Bollgard cotton seed that the refuge seed would have supported is returned at the same time.
- Any order for replacement or additional Bollgard cotton seed for the 2010 planting season, that does not conform to the requirements stated above must be filled with Genuity™ Bollgard II® cotton seed (or other products with current registrations).
- On-farm IRM assessments will be conducted during the planting season.
- In 2010, Bollgard cotton may only be planted in areas 3, 5 and 6. These include: Alabama, Arkansas, Florida (North of Florida Route 60), Georgia, Kentucky, Louisiana, Maryland, Missouri, Mississippi, North Carolina, South Carolina, Tennessee, Texas (excluding the ten prohibited Texas panhandle counties of: Dallam, Sherman, Hansford, Ochiltree, Lipscomb, Hartley, Moore, Hutchinson, Roberts, and Carson) and Virginia.

*It is a violation of federal law to sell or distribute an unregistered pesticide.

NOTES: Sale or commercial planting of Bollgard® cotton is prohibited in certain states, including: Arizona, California, Colorado, Kansas, New Mexico and Oklahoma.

Sale or planting of Bollgard is prohibited in the Texas counties of: Carson, Dallam, Hansford, Hartley, Hutchison, Lipscomb, Moore, Ochiltree, Roberts, and Sherman (Growing Area 5).

Sale or commercial planting of both Genuity™ Bollgard II® and Bollgard is prohibited in Hawaii, Puerto Rico, the U.S. Virgin Islands, and in Florida south of Route 60 (near Tampa).

The B.t. delta endotoxin protein expressed in this cotton targets certain cotton insect pests. Routine applications of insecticides to control certain insects are usually unnecessary when cotton containing the B.t. delta endotoxin protein is planted. However, if insecticide applications are necessary to control certain cotton insect pests, follow all label requirements.
BOLLGARD® Continued

ALL GROWERS OF BOLLGARD COTTON MUST EMPLOY ONE OF THE FOLLOWING REFUGE OPTIONS.

5% EMBEDDED REFUGE

CONTROL TARGET
Serves as a refuge for tobacco budworm, pink bollworm and cotton bollworm.

TREATMENT (follow all pesticide label requirements)
This refuge may be treated with sterile insects, any insecticide (excluding foliar B.t. products), or pheromone labeled for the control of tobacco budworm, pink bollworm and cotton bollworm, whenever the entire field is treated. The refuge may not be treated independently of the surrounding Bollgard cotton field in which it is embedded (or fields within a field unit), except only at the pre-squaring cotton stage, when the refuge may be treated with any lepidopteran insecticide to control foliage-feeding caterpillars.

REFUGE PLANTING
The variety of cotton planted in the refuge must be comparable to Bollgard® cotton, especially in the maturity date, and the refuge must be managed (example, planting time, use of fertilizers, weed control, irrigation, terminations, and management of other pests) similarly to Bollgard cotton. % NON-B.T. REFUGE
Ensure that at least five acres of non-B.t. cotton (refuge cotton) are planted for every 95 acres of Bollgard cotton (total of 100 acres).

REFUGE CONFIGURATION OPTIONS
The refuge cotton must be embedded as a contiguous block within the Bollgard cotton field (that is, refuge block(s) surrounded by Bollgard cotton), but not at one edge of the field.

For very large fields, multiple blocks across the field may be used. For small or irregularly shaped fields, neighboring fields farmed by the same grower can be grouped into blocks to represent a larger field unit, provided the block exists within one square mile of the Bollgard cotton and the block is at least 150 feet wide, but preferably 300 feet wide. Within the larger field unit, one of the smaller fields planted to non-B.t. cotton may be utilized as the embedded refuge.

REFUGE REQUIREMENTS IN AREAS OF THE UNITED STATES WHERE PINK BOLLWORM IS THE MAJOR PEST: GROWING AREA 6
An embedded refuge is not allowed in this Growing Area. In this Growing Area only, farmers are allowed to mix individual rows of non-B.t. cotton with Bollgard cotton. Plant at least one single non-B.t. cotton row for every six to ten rows of Bollgard cotton. This will result in interspersed rows of non-B.t. cotton across a Bollgard cotton field. Farmers should be cautioned to confirm the appropriateness of interspersing different varieties within a field, with their respective seed companies and crop advisors. The refuge may be treated with sterile insects, any insecticide (excluding foliar B.t. products) or pheromones, labeled for the control of pink bollworm whenever the entire field is treated. The in-field refuge cotton rows may not be treated independently of the surrounding Bollgard cotton field in which it is embedded. The refuge must be managed (fertilizer, weed control, etc.) identically to the Bollgard cotton fields.

NOTES: Interspersing rows within Bollgard cotton is only allowed in Growing Area 6 of the United States. Check with local authorities regarding exemption from refuge requirements, allowed in accordance with the Pink Bollworm Eradication Program.

5% EMBEDDED REFUGE

LARGE FIELDS (fields greater than one mile in length and/or width): Plant the refuge in more than one location.

SMALLER FIELDS (any group of fields that are contained within a one-square-mile area): Fields can be grouped into “field units” so that one of the smaller fields, or a portion of one of the fields, serves as the embedded non-B.t. refuge.

*Excluding Kansas and Oklahoma.
CONTROL TARGET
Serves as a refuge for tobacco budworm, pink bollworm and cotton bollworm.

TREATMENT (follow all pesticide label requirements)
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. At the pre-squaring cotton stage only, the refuge maybe treated with acephate or methyl parathion at rates (equal to or less than 0.5 pounds of active ingredient per acre), which will not control tobacco budworm or the cotton bollworm, but may control other pests.

REFUGE PLANTING
The variety of cotton planted in the refuge must be comparable to Bollgard cotton, especially in the maturity date, and the refuge must be managed (example, planting time, use of fertilizers, weed control, irrigation, terminations, and management of other pests) similarly to Bollgard cotton.

% NON-B.T. REFUGE
Ensure that at least five acres of non-B.t. cotton (refuge cotton) are planted for every 95 acres of Bollgard cotton (total of 100 acres).

SIZE
The size of the refuge must be at least 150 feet wide, but preferably 300 ft. wide.

REFUGE LOCATION
Ensure that a non-B.t. cotton refuge is maintained within at least 1/2 linear mile (preferably adjacent, or within 1/4 mile or closer) from the Bollgard cotton fields.

In cases where placement of the refuge within 1/4 mile of the Bollgard cotton is in conflict with the state seed production regulations, the grower must plant the refuge as close to the Bollgard cotton as permitted.

REFUGE CONFIGURATION OPTIONS
Refuge can be planted separate, or as a block or perimeter of a field. If the refuge is to be planted in the same field as Bollgard cotton, the refuge should be planted in a continuous block. Do not interplant rows of Bollgard and conventional cotton for this option.

Plant at least 5 acres of non-B.t. cotton (as refuge cotton) for every 95 acres of Bollgard cotton (95% Bollgard, 5% non-B.t. refuge). The unsprayed refuge must average at least 150 feet wide (preferably 300 feet wide), and all associated Bollgard cotton fields must be within 1/2 mile (preferably 1/4 mile or closer), field border to field border, of the unsprayed refuge.

*Excluding Kansas and Oklahoma.
CONTROL TARGET
Serves as a refuge for tobacco budworm, pink bollworm and cotton bollworm.

TREATMENT (follow all pesticide label requirements)
The non-B.t. cotton may be treated with sterile insects, insecticides (excluding foliar B.t. products), or pheromones, labeled for control of tobacco budworm, cotton bollworm, or pink bollworm.

REFUGE PLANTING
The variety of cotton planted in the refuge must be comparable to Bollgard® cotton, especially in the maturity date, and the refuge must be managed (example, planting time, use of fertilizers, weed control, irrigation, terminations, and management of other pests) similarly to Bollgard cotton.

% NON-B.T. REFUGE
Ensure that at least 20 acres of non-B.t. cotton (refuge cotton) are planted for every 80 acres of Bollgard cotton (total of 100 acres).

SIZE
The size of the refuge must be at least 150 feet wide, but preferably 300 feet wide.

REFUGE LOCATION
Ensure that a non-B.t. cotton refuge is maintained within at least one linear mile (preferably within 1/2 mile or closer) from the Bollgard cotton fields.

REFUGE CONFIGURATION OPTIONS
Refuge can be planted separate, or as a block or perimeter of a field.

NOTES: Sale or commercial planting of Bollgard cotton is prohibited in certain states, including: Arizona, California, Colorado, Kansas, New Mexico and Oklahoma.
Sale or planting of Bollgard is prohibited in the Texas counties of: Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman (Growing Area 5).
Sale or commercial planting of both Genuity™ Bollgard II® and Bollgard is prohibited in Hawaii, Puerto Rico, the U.S. Virgin Islands, and in Florida south of Route 60 (near Tampa).

GROWING AREAS 2* 3 AND 6

20% SPRAYED REFUGE

Plant at least 20 acres of non-B.t. cotton as a refuge for every 80 acres of Bollgard cotton (80% Bollgard, 20% non-B.t. refuge). This refuge may be treated with any insecticide (excluding foliar B.t. products). All Bollgard cotton fields must be within one linear mile (preferably within 1/2 mile or closer) of the associated refuge (field border to field border).

*Excluding Kansas and Oklahoma.
Embedded Refuge (5% of Total Cotton Acres)

**EXAMpLES**

<table>
<thead>
<tr>
<th>Total Cotton acres</th>
<th>40</th>
<th>120</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ Bollgard II® or Bollgard (B.t. cotton) acres:</td>
<td>38</td>
<td>114</td>
<td>190</td>
<td>285</td>
</tr>
<tr>
<td>Field size x .95 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-B.t. Refuge acres needed for 5% minimum refuge:</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Field size x .05 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CALcULATE REFUGE NEEDS FOR YOUR FARM**

<table>
<thead>
<tr>
<th>Total Cotton acres =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ Bollgard II® or Bollgard (B.t. cotton) acres:</td>
</tr>
<tr>
<td>Field size x .95 =</td>
</tr>
<tr>
<td>Non-B.t. Refuge acres needed for 5% minimum refuge:</td>
</tr>
<tr>
<td>Field size x .05 =</td>
</tr>
</tbody>
</table>

**OR**

Unsprayed Refuge (5% of Total Cotton Acres)

**EXAMpLES**

<table>
<thead>
<tr>
<th>Total Cotton acres</th>
<th>40</th>
<th>120</th>
<th>200</th>
<th>300</th>
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<td></td>
<td></td>
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<td>Refuge:</td>
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<td>6</td>
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<tr>
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</tr>
</tbody>
</table>

**CALcULATE REFUGE NEEDS FOR YOUR FARM**

<table>
<thead>
<tr>
<th>Total Cotton acres =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ Bollgard II® or Bollgard (B.t. cotton) acres:</td>
</tr>
<tr>
<td>Field size x .95 =</td>
</tr>
<tr>
<td>Refuge:</td>
</tr>
<tr>
<td>Field size x .05 =</td>
</tr>
</tbody>
</table>

**OR**

Sprayed Refuge (20% of Total Cotton Acres)

**EXAMpLES**

<table>
<thead>
<tr>
<th>Total Cotton acres</th>
<th>40</th>
<th>120</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ Bollgard II® or Bollgard (B.t. cotton) acres:</td>
<td>32</td>
<td>96</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>Field size x .80 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-B.t. Refuge acres needed for 20% minimum refuge:</td>
<td>8</td>
<td>24</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Field size x .20 =</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CALcULATE REFUGE NEEDS FOR YOUR FARM**

<table>
<thead>
<tr>
<th>Total Cotton acres =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Genuity™ Bollgard II® or Bollgard (B.t. cotton) acres:</td>
</tr>
<tr>
<td>Field size x .80 =</td>
</tr>
<tr>
<td>Non-B.t. Refuge acres needed for 20% minimum refuge:</td>
</tr>
<tr>
<td>Field size x .20 =</td>
</tr>
</tbody>
</table>

**2010 PLANTING RESTRICTIONS**

**GROWING AREAS 1, 2, AND 3**

2010: No planting of Bollgard is permitted in Colorado, Kansas or Oklahoma.

**GROWING AREA 4**

New in 2010: No planting or sale for commercial planting of Bollgard is allowed in Arizona, California or New Mexico.

**GROWING AREA 5**

No planting or sale for commercial planting of Bollgard is permitted in the following counties in Texas: Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts and Sherman.

NOTE: No planting or sale for commercial planting of Genuity™ Bollgard II® or Bollgard is permitted in Hawaii, Puerto Rico, the U.S. Virgin Islands and in Florida south of Route 60 (near Tampa).
This guide was printed using Utopia II XG Cover and Text which contains 30% post-consumer waste. Savings derived from using 30% post-consumer fiber in lieu of 100% virgin fibers:

- Saves the equivalent of 399 mature trees
- Reduces solid waste by 24,053 pounds
- Reduces waste water by 145,373 gallons
- Reduces greenhouse gas emissions by 136,243.47 pounds

Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.

This stewardship statement applies to all products listed herein except Genuity™ SmartStax®, Genuity™ VT Double PRO®, and Genuity™ VT Triple PRO™ Corn. See restrictions related to Genuity™ SmartStax®, Genuity™ VT Double PRO®, and Genuity™ VT Triple PRO™ Corn below:

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto’s Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from 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 Biotechnology Industry Organization.

IMPORTANT: Grain Marketing and Seed Availability: Genuity™ VT Double PRO® has received the necessary approvals in the United States, however, as of October 28, 2009, approvals have not been received in certain major corn export markets. Genuity™ VT Double PRO® will not be launched and seed will not be available until after import approvals are received in appropriate major corn export markets.

IMPORTANT: Grain Marketing and Seed Availability: Genuity™ VT Triple PRO® has received the necessary approvals in the United States however, as of October 28, 2009, approval has not been received in all major corn export markets. Monsanto anticipates that all such approvals will be in place for the 2010 growing season. If all approvals are not in place, Genuity™ VT Triple PRO® seed will only be available as part of a commercial demonstration program that includes grain marketing stewardship requirements. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Consult with your seed representative for current regulatory and stewardship information status.

IMPORTANT: Grain Marketing and Seed Availability: Genuity™ SmartStax® has received the necessary approvals in the United States, however, as of October 28, 2009, approvals have not been received in certain major corn export markets. Genuity™ SmartStax® will not be launched and seed will not be available until after import approvals are received in appropriate major corn export markets.

B.t. products, including Genuity™ SmartStax®, Genuity™ VT Double PRO®, and Genuity™ VT Triple PRO® Corn, may not yet be registered in all states. Check with your Monsanto representative for the registration status in your state.

Growers may utilize the natural refuge option for varieties containing the Bollgard® II trait in the following states: AL, AR, FL, GA, KS, KY, LA, MD, MS, MO, NC, OK, SC, TN, VA, and most of Texas (excluding the Texas counties of Brewster, Crane, Crockett, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Val Verde, Ward and Winkler). The natural refuge option does not apply to Bollgard® II cotton grown in areas where pink bollworm is a pest, including CA, AZ, NM, and the above listed Texas counties. It also remains the case that Bollgard® and Bollgard® II cotton cannot be planted south of Highway 60 in Florida, and that Bollgard® cotton cannot be planted in certain other counties in the Texas panhandle. Refer to the Technology Use Guide and IRM/Grower Guide for additional information regarding Bollgard® II. Bollgard®, natural refuge and EPA-mandated geographical restrictions on the planting of B.t. cotton. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate. Bollgard®, Bollgard and Design®, Bollgard II®, Genuity®, Genuity and Design®, Genuity Icons, Respect the Refuge and Cotton Design®, Roundup®, Roundup Ready®, SmartStax®, SmartStax and Design®, VT Double PRO®, VT Triple PRO®, YieldGard®, YieldGard VT®, YieldGard VT Rootworm/RR2®, YieldGard VT Triple®, and Monsanto and Vine Design® are trademarks of Monsanto Technology LLC. Ignite®, LibertyLink®, and LibertyLink® and the Water Droplet Design® are registered trademarks of Bayer. Herculex is a trademark of Dow AgroSciences LLC. Respect the Refuge® and Respect the Refuge and Corn Design® are registered trademarks of National Corn Growers Association. All other trademarks are the property of their respective owners.

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