Plant-Incorporated Protectant Label

MON 89034 × MIR162 Seed Blend

Lepidopteran-Protected Corn
(OECD Unique Identifier: MON-89Ø34-3 × SYN-IR162-4)

Active Ingredients:

*Bacillus thuringiensis* Cry1A.105 and the genetic material (vector PV-ZMIR245) necessary for its production in MON 89034 × MIR162 corn (OECD Unique Identifier: MON-89Ø34-3 × SYN-IR162-4) .......................................................... ≤0.0059%*

*Bacillus thuringiensis* Cry2Ab2 and the genetic material (vector PV-ZMIR245) necessary for its production in MON 89034 × MIR162 corn (OECD Unique Identifier: MON-89Ø34-3 × SYN-IR162-4) .......................................................... ≤0.0043%*

*Bacillus thuringiensis* Vip3Aa20 and the genetic material (vector pNOV1300) necessary for its production in MON 89034 × MIR162 corn (OECD Unique Identifier: MON-89Ø34-3 × SYN-IR162-4) .......................................................... ≤0.015%*

Other Ingredients:

Phosphomannose isomerase (PMI) marker protein and the genetic material (vector pNOV1300) necessary for its production in MON 89034 × MIR162 corn (OECD Unique Identifier: MON-89Ø34-3 × SYN-IR162-4) .......................................................... ≤0.00068%*

*Percentage (wt/wt) on a dry weight basis for whole plant (forage) of MON 89034 × MIR162 plants.

The MON 89034 × MIR162 seed with this refuge configuration contains 95% MON 89034 × MIR162 mixed with 5% non-*B.t.* corn within a single lot of seed

KEEP OUT OF REACH OF CHILDREN

CAUTION

NET CONTENTS________

EPA Registration No. 524-626
EPA Establishment No. 524-MO-002
DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Information regarding commercial production as specified in the terms and conditions of this registration must be included in the Technology Use Guide and/or Insect Resistance Management (IRM) Grower Guide.

MON 89034 × MIR162 can be used to protect corn plants from leaf, stalk, and ear damage caused by corn borers and corn earworm.

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

Refuge Requirements

A refuge must consist of corn hybrids that do not contain B.t. technologies for the control of corn borers and corn earworm. This product achieves the required refuge as the refuge is interspersed within the field and occurs only by planting a licensed seed-mixture containing MON 89034 × MIR162 or MON 89034 × MIR162 stacked with other non-PIP technologies, with a minimum of 5% non-PIP seed. This refuge configuration complies with refuge requirements only in the U.S. Corn Belt.

The sufficiency of this refuge configuration is defined by geography and ultimately is based on insect presence and species. The seed mix refuge option for MON 89034 × MIR162 complies with refuge requirements only in the U.S. Corn Belt.

The 95/5% MON 89034 × MIR162 seed mix product may be planted in cotton growing areas; however, planting the 95/5% MON 89034 × MIR162 seed mix in cotton growing areas still requires planting an additional structured refuge of at least 20% corn, which is not a lepidopteran-protected B.t. corn hybrid. The refuge may be treated with insecticides, as detailed below, to control lepidopteran stalk-boring and other pests. The interspersed refuge option for MON 89034 × MIR162 does not alone comply with refuge requirements in cotton growing areas.

Structured refuge planting options include: separate fields, blocks within fields (e.g., along the edges or headlands), perimeter strips, and strips across the field. External refuges must be planted within 1/2 mile. When planting the refuge in strips across the field, refuges must be at least four(4) consecutive rows wide.
Cotton-growing areas include the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex), and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

The seed mix (interspersed) refuge option under this registration is limited to planting specifically licensed seed corn of MON 89034 × MIR162 and MON 89034 × MIR162 stacks with non-PIP corn.

The field containing an interspersed refuge may be treated with labeled insecticides to control additional corn pests, including larval or adult lepidopteran pests, because both the MON 89034 × MIR162 and refuge are treated in the same manner. Insecticide treatments for control of pests listed on this label may be applied only if economic thresholds are reached for one or more of these target pests. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants). Microbial B.t. insecticides must not be applied to the field containing a seed mix interspersed refuge.

For the sole purpose of manufacturing and small scale research trials for observation, these refuge requirements do not apply to seed increase/propagation of inbred and hybrid seed corn up to a total of 20,000 acres per county and up to a combined United States (U.S.) total of 250,000 acres per plant-incorporated protectant (PIP) active ingredient per registrant per year.

**Corn Insects Controlled or Suppressed**

<table>
<thead>
<tr>
<th>European corn borer</th>
<th>Ostrinia nubilalis</th>
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</thead>
<tbody>
<tr>
<td>Southwestern corn borer</td>
<td>Diatraea grandiosella</td>
</tr>
<tr>
<td>Southern cornstalk borer</td>
<td>Diatraea crambidoides</td>
</tr>
<tr>
<td>Corn earworm</td>
<td>Helicoverpa zea</td>
</tr>
<tr>
<td>Fall armyworm</td>
<td>Spodoptera frugiperda</td>
</tr>
<tr>
<td>Stalk borer</td>
<td>Papaipsema nebris</td>
</tr>
<tr>
<td>Sugarcane borer</td>
<td>Diatraea saccharalis</td>
</tr>
<tr>
<td>Beet armyworm</td>
<td>Spodoptera exigua</td>
</tr>
<tr>
<td>True armyworm</td>
<td>Pseudelatia unipuncta</td>
</tr>
<tr>
<td>Black cutworm</td>
<td>Agrotis ipsilon</td>
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<tr>
<td>Western bean cutworm</td>
<td>Striacosta albicosta</td>
</tr>
<tr>
<td>Lesser cornstalk borer</td>
<td>Elasmopalpus lignosellus</td>
</tr>
<tr>
<td>Dingy Cutworm</td>
<td>Feltia jaculifera</td>
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Sales of corn hybrids that contain Monsanto’s *B.t.* corn plant incorporated protectant must be accompanied by a grower guide which includes information on planting, production, and insect resistance management and notes that routine applications of insecticides to control these insects are usually unnecessary when corn containing the *B.t.* proteins is planted.

MON 89034 × MIR162 seed blend is a product of Monsanto’s research program offering unique genetic characteristics for specific grower needs and may be protected by one or more of the following U.S. patents that can be found at [http://www.monsantotechnology.com](http://www.monsantotechnology.com)