Plant-Incorporated Protectant Label

MON 89034

Lepidopteran-Protected Corn
(OECD Unique Identifier: MON-89Ø34-3)

This product is effective in controlling leaf, stalk, and ear damage caused by corn borers.

Active Ingredients:

*Bacillus thuringiensis* Cry1A.105 protein and the genetic material (Vector PV-ZMIR245) necessary for its production in MON 89034 (OECD Unique Identifier: MON-89Ø34-3)...

............................................................................................................................ ≤ 0.0056%*

*Bacillus thuringiensis* Cry2Ab2 protein and the genetic material (Vector PV-ZMIR245) necessary for its production in MON 89034 (OECD Unique Identifier: MON-89Ø34-3)...

............................................................................................................................ ≤ 0.0055%*

*Percentage (wt/wt) on a dry weight basis for whole plant (forage)

KEEP OUT OF REACH OF CHILDREN

CAUTION

NET CONTENTS__________

EPA Registration No. 524-575

EPA Establishment No. 524-MO-002

Monsanto Company
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**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.

The subject registration will automatically expire on midnight September 30, 2022.

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

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.

1) **Refuge Requirements for MON 89034 Field Corn**

In order to minimize the risk of corn borers developing resistance to MON 89034 field corn, an insect resistance management plan must be implemented which includes planting of a structured refuge.

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. Furthermore, these refuge requirements do not apply to commercial hybrid sweet corn.

a) **Corn-Belt/Non-Cotton Growing Area Refuge Requirements**

For MON 89034 field corn grown outside cotton-growing areas (e.g., the Corn Belt), grower guides must specify that growers must adhere to the following refuge requirements.

Growers must plant a structured refuge of at least 5% corn, which is not a lepidopteran-protected \textit{B.t.} corn hybrid. The refuge may be treated with insecticides, as detailed below, to control lepidopteran stalk-boring and other pests.

Insecticide treatments for control of European corn borer, corn earworm, southwestern corn borer, southern cornstalk borer, sugarcane borer, fall armyworm, lesser corn stalk borer, and stalk borer 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 or crop consultants). Instructions to growers will specify that microbial \textit{B.t.} insecticides must not be applied to non-\textit{B.t.} corn refuges.
Refuge planting options include: separate fields, blocks within fields (e.g., along the edges or headlands), and strips across the field.

External refuges must be planted within ½ mile.

When planting the refuge in strips across the field, refuges must be at least 4 consecutive rows wide.

b) Cotton-Growing Area Refuge Requirements

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, 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, Sussex), and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, Stoddard).

For MON 89034 field corn grown in cotton-growing areas, grower guides must specify that growers must adhere to the following refuge requirements.

Growers must plant a 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.
Insecticide treatments for control of European corn borer, corn earworm, southwestern corn borer, southern cornstalk borer, sugarcane borer, fall armyworm, lesser corn stalk borer, and stalk borer 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). Instructions to growers will specify that microbial *B.t.* insecticides must not be applied to non-\textit{B.t.} corn refuges.

Refuge planting options include: separate fields, blocks within fields (e.g., along the edges or headlands), and strips across the field.

External refuges must be planted within $\frac{1}{2}$ mile.

When planting the refuge in strips across the field, refuges must be at least four (4) consecutive rows wide.

2) Post-Harvest Requirements for MON 89034 Sweet Corn

For MON 89034 sweet corn, growers are required to destroy any MON 89034 sweet corn stalks that remain in the field following harvest via rotary mowing, discing, or plow-down within one (1) month of harvest.
Corn Insects Controlled or Suppressed

| European corn borer          | Ostrinia nubilalis          |
| Southwestern corn borer      | Diatraea grandiosella       |
| Southern cornstalk borer    | Diatraea cramboidoides      |
| Corn earworm                | Helicoverpa zea             |
| Fall armyworm               | Spodoptera frugiperda       |
| Stalk borer                 | Papaipema nebris            |
| Lesser corn stalk borer     | Elasmopalpus lignosellus    |
| Sugarcane borer             | Diatraea saccharalis        |

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 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