

Plant-Incorporated Protectant Label

MON 89034 x MON 88017

Lepidopteran-and Rootworm-Protected Corn
(OECD Unique Identifier: MON-89Ø34-3 × MON 88Ø17-3)

Active Ingredients:

Bacillus thuringiensis Cry1A.105 protein and the genetic material necessary for its production (vector PV-ZMIR245) in event MON 89034 corn.....0.001-0.0024%

Bacillus thuringiensis Cry2Ab2 protein and the genetic material necessary for its production (vector PV-ZMIR245) in event MON 89034 corn.....0.0030-0.0057%

Bacillus thuringiensis Cry3Bb1 protein and the genetic material necessary for its production (vector PV-ZMIR39) in event MON 88017 corn.....0.0037-0.0070%

Inert Ingredient:

CP4 EPSPS protein (5-enolpyruvylshikimate-3-phosphate synthase) and genetic material necessary (vector PV-ZMIR39) for its production in corn event MON 88017.....0.0038-0.0069%

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

Caution

KEEP OUT OF REACH OF CHILDREN

NET CONTENTS _____

EPA Registration No. 524-576

EPA Establishment No. 524-MO-002

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DIRECTIONS FOR USE

It is a violation of Federal law to use this seed in any manner inconsistent with this labeling. Information regarding commercial production must be included in the Technology Use Guide.

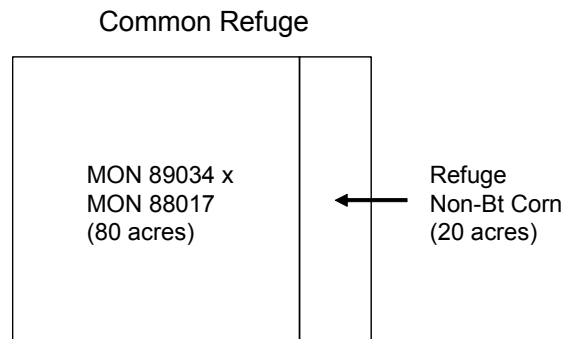
MON 89034 x MON 88017 protects corn crops from leaf, stalk, and ear damage caused by corn borers and root damage caused by corn rootworm larvae. In order to minimize the risk of these pests developing resistance to MON 89034 x MON 88017 corn, an insect resistance management plan must be implemented which includes planting of a structured refuge. Growers who fail to comply with the IRM requirements risk losing access to Monsanto corn PIP products.

These refuge requirements do not apply to seed increase/propagation of inbred and hybrid seed corn and small scale research trials for observation, nor to commercial hybrid sweet corn.

For MON 89034 x MON 88017 sweet corn, growers are required to destroy any MON 89034 x MON 88017 sweet corn stalks that remain in the field following harvest via rotary mowing, discing, or plow-down within one (1) month of harvest.

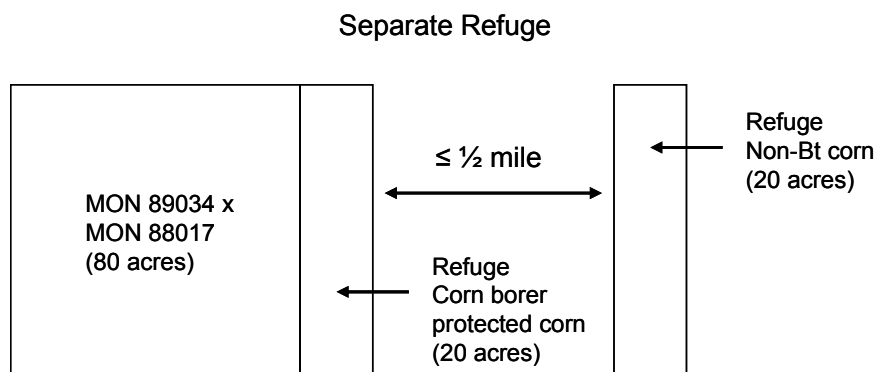
For MON 89034 x MON 88017 field corn, two options for deployment of the refuge are available to growers.

The first option is planting a common refuge for both corn borers and corn rootworms. The common refuge must be planted with corn hybrids that do not contain Bt technologies for the control of corn borers or corn rootworms. The refuge area must represent at least 20% of the grower's corn acres (i.e., sum of MON 89034 x MON 88017 acres and refuge acres; refuge area must contain 20 acres of corn for every 80 acres of MON 89034 x MON 88017 corn planted). It can be planted as block within or adjacent (e.g., across the road) to the MON 89034 x MON 88017 field, perimeter strips (i.e., strips around the field), or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 consecutive rows wide. The common refuge can be treated with an insecticide to control rootworm larvae and other soil pests. The refuge can also be treated with a non-Bt foliar insecticide for the control of late season pests if pest pressure reaches an economic threshold for damage; however, if rootworm adults are present at the time of foliar applications then the MON 89034 x MON 88017 field (acres) must be treated in a similar manner. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants). A schematic of one common refuge deployment option is shown below:



The second option is planting separate refuge areas (e.g., two refuge areas, a double refuge, or paired refuge areas) for corn borers and corn rootworms. The corn borer refuge must be planted with corn that is not a lepidopteran-protected Bt hybrid, must represent at least 20% of the grower's corn acres, and must be planted within ½ mile of the MON 89034 x MON 88017 field. Refuge planting options include: separate fields, blocks within fields (e.g. along the edges or headlands), perimeter strips, or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 rows wide. The corn borer refuge can be treated with an insecticide for corn rootworm larval control, or a non-Bt foliar applied insecticide for corn borer control if pest pressure reaches an economic threshold for damage. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants).

The corn rootworm refuge must be planted with corn that is not a corn rootworm-protected Bt hybrid, but can be planted with Bt hybrids that control corn borers. The corn rootworm refuge must represent at least 20% of the grower's corn acres (i.e., corn rootworm refuge must contain 20 acres of corn for every 80 acres of MON 89034 x MON 88017 corn planted) and can be planted as a block within or adjacent to the MON 89034 x MON 88017 field, strips around the field, or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 rows wide. The corn rootworm refuge can be treated with an insecticide to control rootworm larvae and other soil pests. The refuge can also be treated with a non-Bt foliar insecticide for control of late season pests; however, if corn rootworm adults are present at the time of foliar applications then the MON 89034 x MON 88017 field must be treated in a similar manner. A schematic of one separate refuge option with the corn rootworm refuge planted as a block within the field and the corn borer refuge planted within a ½ mile of the MON 89034 x MON 88017 field is shown below:



Corn Insects Controlled

European corn borer	<i>Ostrinia nubilalis</i>
Southwestern corn borer	<i>Diatraea grandiosella</i>
Southern cornstalk borer	<i>Diatraea crambidoides</i>
Corn earworm	<i>Helicoverpa zea</i>
Fall armyworm	<i>Spodoptera frugiperda</i>
Corn stalk borer	<i>Papaipema nebris</i>
Sugarcane borer	<i>Diatraea saccharalis</i>
Western corn rootworm	<i>Diabrotica virgifera virgifera</i>
Northern corn rootworm	<i>Diabrotica barberi</i>
Mexican corn rootworm	<i>Diabrotica virgifera zea</i>

Sales of corn hybrids that contain Monsanto's Bt corn plant pesticide 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 Bt proteins is planted.

MON 89034 x MON 88017 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: 5023179, 5110732, 5164316, 5196525, 5322938, 5352605, 5359142, 5378619, 5424412, 5554798, 5641876, 5717084, 5728925, 5804425, 6018100, 6025545, 6051753, 6063597, 6083878, 6331665, 6489542, 6645497, 6962705, 7064249, 7227056, and 7250501.

