

**Herculex\* I  
Insect Protection**

Pure form of the plant-incorporated protectant, *Bacillus thuringiensis* subsp. *aizawai* delta endotoxin protein as produced in corn cells. For control of European corn borer, black cutworm, fall armyworm, Southwestern corn borer, corn earworm, and Western bean cutworm, lesser corn stalk borer, Southern corn stalk borer, and sugarcane borer.

Active Ingredient:

*Bacillus thuringiensis* Cry1F protein and the genetic material necessary for its production (plasmid insert PHI8999) in corn.....<0.0010 - 0.235%\*\*

Other Ingredient:

Substance produced by a marker gene and its controlling sequences in corn.....<0.0020%\*\*

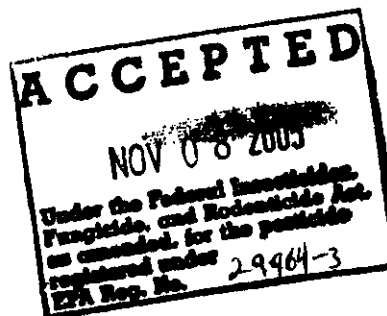
\*\*% total protein on a dry wt. basis as expressed in corn plant cells (whole plant)

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

EPA REG. NO.: 29964-3

EPA ESTABLISHMENT NUMBER: 029964-IA-001.

Pioneer Hi-Bred International, Inc.  
Regulatory Science and Registration  
7250 NW 62<sup>nd</sup> Avenue  
Johnston, IA 50131



Pioneer® brand corn hybrids with Herculex\* I Insect Protection  
Herculex is a trademark of Dow AgroSciences LLC

**DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

The subject registration automatically expires on midnight October 15, 2008.

The plant-incorporated protectant product should be used as specified in the terms and conditions of the registration.

Corn has been transformed to express a *Bacillus thuringiensis* subsp. *aizawai* (*B.t.a.*) delta-endotoxin protein for control of the European corn borer (*Ostrinia nubilalis*) and other lepidopteran pests.

Routine applications of insecticides to control European corn borer are unnecessary when corn containing the *B.t.a.* delta-endotoxin protein is planted.

Growers are instructed to read information on insect resistance management. The following information regarding commercial production must be included in the grower guides for cotton and non-cotton growing areas:

**Corn-Belt/Non-Cotton Growing Areas**

For Cry1F field corn grown outside cotton-growing areas (e.g., the Corn Belt), growers must adhere to the following refuge requirements.

- Growers must plant a structured refuge of at least 20% non-*Bt* corn and/or non-lepidopteran resistant *Bt* corn which may be treated with insecticides as needed to control lepidopteran stalk-boring and other pests.
- 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 1/2 mile (1/4 mile or closer preferred).
- When planting the refuge in strips across the field, refuges must be at least 4 rows wide, preferably 6 rows wide.
- Insecticide treatments for control of European corn borer, Corn earworm, Southwestern corn borer, fall armyworm, black cutworm, and Western bean cutworm, lesser corn stalk borer, Southern corn stalk borer, and sugarcane 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). Microbial *Bt* insecticides must not be applied to non-*Bt* corn and/or non-lepidopteran resistant *Bt* corn refuges.

**Cotton-Growing Area Refuge Requirements for *Bt* Corn**

For *Bt* field corn grown in cotton-growing areas:

- Growers must plant a structured refuge of 50% non-*Bt* corn and/or non-lepidopteran resistant *Bt* corn that may be treated with insecticides as needed to control lepidopteran stalk-boring and other pests.
- 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 1/2 mile (1/4 mile or closer preferred).
- When planting the refuge in strips across the field, refuges must be at least 4 rows wide, preferably 6 rows wide.

- Insecticide treatments for control of European corn borer , Corn earworm, Southwestern corn borer, fall armyworm, black cutworm, and Western bean cutworm 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 *Bt* insecticides must not be applied to non-*Bt* corn and/or non-lepidopteran resistant *Bt* corn refuges.
- 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 Dunkin, New Madrid, Pemiscot, Scott, Stoddard).

CROP	INSECTS CONTROLLED
Field corn	black cutworm corn earworm European corn borer fall armyworm Southwestern corn borer Western bean cutworm lesser corn stalk borer Southern corn stalk borer sugarcane borer

EPA Accepted: \_\_\_/\_\_\_/\_\_\_