

Insecticide Usage in Non-Bt Refuges

Your non-Bt corn refuge may be treated with conventional insecticides **ONLY** if target pest pressure reaches economic thresholds. Bt-based foliar insecticides are **NOT** to be used within the refuge.

Refuge Management

In order to maximize the effectiveness of the refuge, you should manage your non-Bt corn and Bt corn in a similar manner. This can be accomplished by planting your non-Bt corn as close to and at the same time as your Bt corn. In addition, select non-Bt hybrids and Bt hybrids that have similar growth and development characteristics.

Seed companies, universities and the National Corn Growers Association (NCGA) all agree that there should be unified commitment to responsible stewardship of Bt technology so it can be preserved as an important tool in corn management.

The NCGA encourages producers to implement IRM plans when planting Bt corn. This EPA requirement is the right thing to do in order to preserve this important technology.

*For more information on IRM,
visit www.ncga.com.*



INSECT RESISTANCE MANAGEMENT FACT SHEET FOR BT CORN



Planting Refuges, Preserving Technology

Bt Corn

Bt corn has proven to be an important technology to help corn growers control damaging insect pests and produce higher yields and better quality grain.

Insect Resistance Management (IRM)

To preserve the many benefits of Bt corn technology, the implementation of an IRM plan is essential. Experts agree, and government regulations require, that an effective Bt corn IRM plan includes the planting of a non-Bt refuge (a block of non-Bt corn) planted close to your Bt corn acres.

All Bt corn products designed to control European corn borer, southwestern corn borer and corn earworm require implementation of an IRM program according to the refuge size, distance guidelines and insecticide usage described in this fact sheet.

Growers who fail to follow these IRM requirements risk losing access to Bt corn technology.

Refuge Size Requirements

Corn-growing Areas (At Least 20% Refuge)

On each farm, plant at least 20 acres of non-Bt corn for every 80 acres of Bt corn (minimum of 20% non-Bt refuge, maximum of 80% Bt corn).

Corn/Cotton-growing Areas (At Least 50% Refuge)

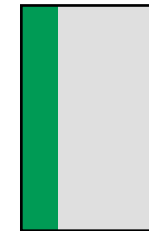
On each farm, plant at least 50 acres of non-Bt corn for every 50 acres of Bt corn (minimum of 50% non-Bt refuge, maximum of 50% Bt corn). See your seed company product use guide for the list of counties that fall under this requirement.

Refuge Distance Requirement

A non-Bt refuge must be planted within 1/2 mile of each Bt corn field, but preferably within 1/4 mile.

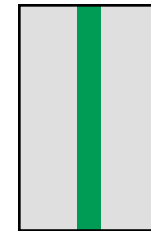
Refuge Planting Options

As illustrated below, the appropriate size non-Bt corn refuge may be planted a number of ways:



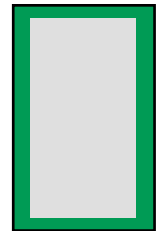
Block Refuge (Adjacent)

A block of non-Bt corn adjacent to the Bt corn field



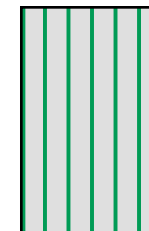
Block Refuge (Within)

A block of non-Bt corn within the Bt corn field



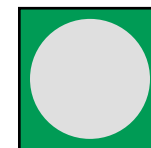
Perimeter Refuge

Non-Bt corn surrounding Bt corn field



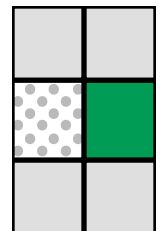
Split Planter Refuge

Strips of non-Bt corn at least 4 rows wide within the Bt corn field (6 rows preferred)



Pivot Corners Refuge

Non-Bt corn in pivot corners within the Bt corn field



Separate Field Refuge

A separate field of non-Bt corn within 1/2 mile of the Bt corn field (1/4 mile preferred)



Bt Corn Field



Non-Bt Refuge



Soybeans