Refuge Planting
for Insect Resistance Management

Take ACTION
Insect-Resistance Management

PLANTING THE PROPER REFUGE IS CRITICAL WHEN REFUGE IN A BAG IS NOT AVAILABLE

STEP 1 — REFUGE SIZE

Plant the *correct* size refuge for the area and corn product.

- **The Corn-Growing Area**
  - *5% or 20%, structured refuge required*
- **The Cotton-Growing Area**
 - *20% or 50%, structured refuge required*

Refer to IRM product guide.

See reverse side for instructions on correctly calculating your refuge acres.

REFUGE | CORN-GROWING AREA
5% OR 20%

REFUGE | COTTON-GROWING AREA
20% OR 50%
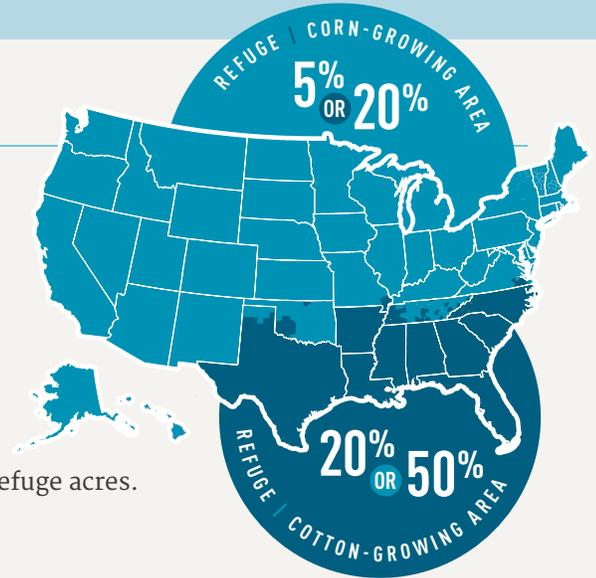
STEP 2 — REFUGE LOCATION

Plant the required refuge within each field that contains Bt insect-protected corn.

Refuge should always be a minimum of four rows wide.

BLOCK　　PERIMETER　　STRIPS
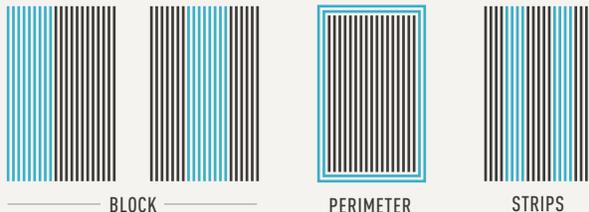
1/2-mile option refuge may be available for select products*

Strip Refuge (Split Planter)

For strip refuges, use the outside two planter boxes on one side of your planter. By doing this, you will be planting four contiguous rows on your return trip.
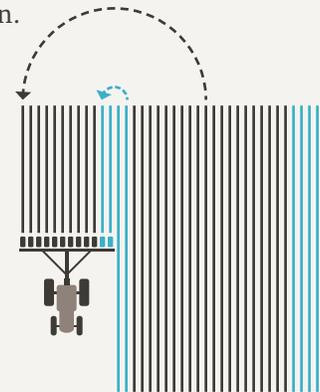
STEP 3 — REFUGE PLANTING

In each field, plant your refuge first before planting Bt insect-protected corn. This will ensure that the minimum refuge size requirement is met should unforeseen circumstances (i.e., adverse weather) alter your planting schedule and strategy.

Use a refuge product that contains no Bt insect-protection traits.

STEP 4 — TREATMENT

If you need to treat your refuge with a non-Bt foliar insecticide, you may need to treat the Bt product technology in a similar manner.

*Provided as a summary only. Growers must read the seed company IRM Grower/Product Guide prior to planting for important information on planting and insect resistance management.

Calculating IRM Compliance

STRUCTURED REFUGE

A
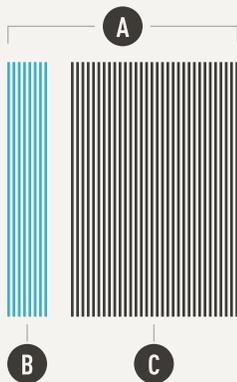
Refer to this diagram for the examples below

A Total Corn Acres*

B Refuge Acres

C Bt Acres

% Percent of Required Refuge—5%, 20% or 50%.
Based on total corn acres

*Includes all corn acres that are infield or adjacent to each other
and will be allocated to the Bt product and its associated refuge.

B   C

REFUGE | CORN-GROWING AREA
5% OR **20%**

REFUGE | COTTON-GROWING AREA
20% OR **50%**
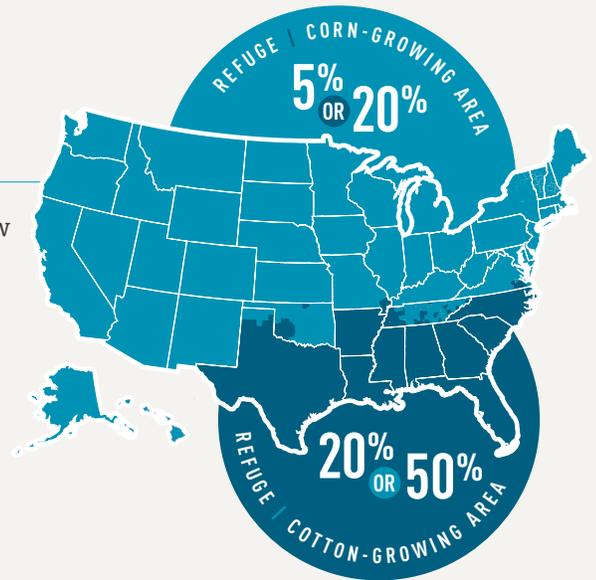
THE WRONG WAY TO CALCULATE / (Example shown is for a 20% refuge product.)

Do **not** multiply the amount of Bt acres or seed
by the percent of refuge required.

This is **not** the correct
minimum refuge size.

Example: **C** 160 X **%** 20% = **B** ~~32~~

THE CORRECT WAY TO CALCULATE / (Example shown is for a 20% refuge product.)

Start with the **total** number of corn
acres you want to plant in an area.

Multiply by the **percent** of
refuge required for the Bt trait.

This is your minimum
refuge acres.

Example: **A** 200 X **%** 20% = **B** 40

Your Field: **A** X **%** = **B**

Next, subtract your refuge acres from your total corn acres.

This is your maximum
Bt acres.

Example: **A** 200 – **B** 40 = **C** 160

Your Field: **A** – **B** = **C**

Download a free Insect Resistance Management (IRM) corn refuge calculator at **www.irmcalculator.com**.

www.IWillTakeAction.com

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NATIONAL CORN GROWERS ASSOCIATION

Insect Resistance Management
Planting Refuges, Preserving Technology

Take**ACTION**
Insect-Resistance Management