MID-SEASON (*V10—R2*)

ENVIRONMENT

CORN PLANT DEVELOPMENT

Continuing to evaluate corn stand development is key to optimizing on-farm success throughout the growing season.

VEGETATIVE *(V10-V11)*

- *New leaves emerging every 2-3 days.*
- *Period of rapid uptake of nutrients and moisture and rapid plant growth.*

VEGETATIVE *(V12-NTH)*

- *Brace roots develop.*
- *Number of kernels in row length on the cob is determined.*
- *Plant reaches full height.*
- *Ear size being determined, stress can result in significant yield loss.*

VEGETATIVE *(VT)*

- *Tasseling - 2-3 days prior to silking.*
- *Pollen shed lasts for 4-6 days on an individual tassel.*
- *By the end of this stage, the plant has absorbed about 65% of the total N, 50% of the total P and 85% of the total K it will require for the entire season.*

REPRODUCTIVE *(R1)*

- *Silking - One of the most critical stages in determining yield potential..*
- *Successful pollination must occur for kernel development.*
- *K uptake complete, N and P uptake is occurring rapidly.*
- *Leaf analysis for nutrients at this stage highly correlates with final yield.*

REPRODUCTIVE *(R2)*

- *Bliter - Kernels form a small blister containing clear fluid..*
- *Embryo is developing in every kernel.*
- *Kernels 85% moisture.*

PRODUCT SELECTION

VARYING GDU REQUIREMENTS

Having a number of products with a range of GDU requirements to mid-pollination can reduce the risk of poor pollination due to heat and drought stress, zipper ear, diplodia ear rot, and silk clipping from insects such as Japanese beetle and corn rootworm adults.

HYBRID SELECTION

On average, daily GDU accumulation during the prime pollination period is around 25 GDUs. A difference as small as 40 to 50 GDUs to mid-pollination between products can lead to a spread of 1 to 2 days for flowering.

MID-SEASON (*V10—R2*)

FERTILITY

MID-SEASON NUTRIENT DEFICIENCY

When nutrient deficiency symptoms appear, results of tissue testing around silking combined with an in depth soil analysis can help determine if the observed deficiency is due to lack of soil availability or plant uptake.

- **Yellowing along the midrib on lower leaves consistent with nitrogen deficiency**
- **Stalk lodging due to cannibalization**
- **Phosphorous deficiency symptoms of stunting and purpling**
- **Potassium deficiency symptoms of leaf margin yellowing**

INSECT MANAGEMENT

CORN ROOTWORM DEVELOPMENT

Understanding the stages of corn rootworm development is essential to building an effective management strategy.

EGGS

- Laid in the soil during the late summer/early fall.
- Overwintering of both Northern Corn Rootworm and Western corn rootworm eggs in soil.
- Typically begin to hatch and feed on corn roots in early June.

LARVAE

- Hatch and begin feeding on corn roots in early June.
- Feed on roots for approximately 3 weeks prior to pupation.
- There are 3 stages (instars) of larval development.
- The greatest amount of root feeding/damage is done by 3rd instar larvae.

PUPAE

- Resting stage; no feeding occurs.
- Period of transition from larva to adult.

ADULT

- Emergence begins in early July with peak emergence around the beginning of August.
- Male beetles emerge about 2 weeks prior to female beetles.
- Adult beetles can feed on corn leaves, pollen and soft kernels, but cause the most damage when feeding on silks due to possible interference with pollination.
- It generally takes 2-3 weeks from the time female beetles emerge and mate until they are gravid (pregnant).

MID-SEASON (*V10—R2*)

INSECT MANAGEMENT

BE ON THE LOOKOUT FOR POTENTIAL MID-SEASON INSECT PESTS

CORN GROWTH STAGE				
V10	V12	VT	R1	R2
Common Stalk Borer				
Armyworm				
Brown Stinkbug				
Corn Rootworm Larvae				
European Corn Borer 1st generation*				
Southwestern Corn Borer 1st generation*				
Corn Leaf Aphids				
Corn Rootworm Adult				
Japanese Beetle				
Grasshopper				
	European Corn Borer 2nd generation			
	Western Bean Cutworm			
	Corn Earworm			
	Fall Armyworm			
	Southwestern Corn Borer 2nd generation			

DISEASE MANAGEMENT

THE IMPORTANCE OF SCOUTING

Scouting near the VT growth stage is important to determine if a fungicide application is needed. Scouting is essential each year, not only to determine management needs for the current year's crop, but also to identify potential disease risks for the following year.

1. Slight Infection
Few lesions on lower leaves.

3. Light Infection
Lesions on lower leaves.

5. Moderate Infection
Lesions on lower and middle leaves.

7. Heavy Infection
Lesions on lower and middle leaves, extending to upper leaves.

9. Very Heavy Infection
Lesions on all leaves. Plants may be prematurely killed.