

Pest Facts and Impact on Crop

- Latin name: *Papaipema nebris*
- Native to North America; may be found in most areas east of the Rockies
- Sporadic and infrequent pest of corn; incidence increases with no-till or grass weed infestation
- Highest incidence usually occurs in rows closest to grass field borders, waterways, or terraces with large weeds (e.g., giant ragweed), or in continuous corn
- Development begins in grasses, but larvae move at about 1400-1700 GDU (base 41°) to larger hosts, including nearby corn
- Primary hosts are: corn, quackgrass, giant ragweed, wirestem muhly, tomato and occasionally soybeans
- Has no known significant natural enemies



Stalk borer

Injury Symptoms

- Stalk borers tunnel into corn stalks above the soil or climb directly into the whorl resulting in tattered leaves
- Young plants (VE-V3) may be killed by tunneling below the growing point
- On older plants (V4-V8), the leaves will usually discolor, wilt, and die if tunneling is between them and the growing point; often called "dead heart"
- Plants infested after the V8 stage usually show little visible injury
- Non-lethal infestations in early stage plants cause stunting, tillering, delayed development, and increase frequency of barren plants, reducing yield



Tunnel in corn stalk



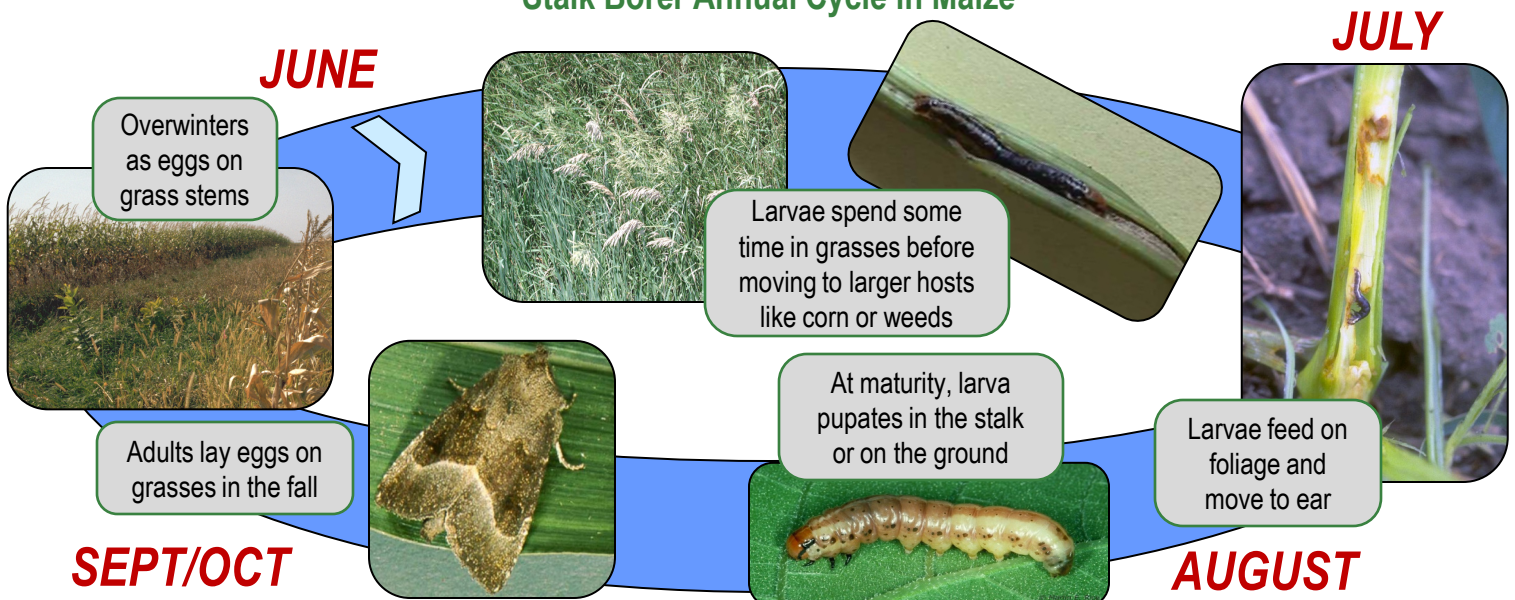
Dead "heart"



Stunted ears and dead "heart"



Stalk Borer Annual Cycle in Maize



Pest ID – Key Characteristics

- Stalk borer larvae are cream to light brown with a dark purple saddle on the forward half of the body
- Larvae have dark streaks on either side of their heads
- As larvae grow, the purple becomes dilute and faded
- Larvae are about 1/2 inch long when they leave grass and will reach nearly 2 inches at full development before fall



Early stage stalk borer head



Early stage stalk borer



Late stage stalk borer

Areas Prone to Stalk Borer Injury



Egg laying site: grass terrace

Stunted corn in border rows infested with stalk borers



Egg laying site: giant ragweed and grasses

Pest ID – Related/Confused Species

Several species share the same habitat and may cause similar looking injury

- Other borers:



European corn borer – no purple



Fall armyworm – multicolored stripes



Corn earworm – multicolored stripes



Southwestern corn borer – dark spots, no stripe on side of head



Hop vine borer – no stripe on side of head, burrows up from root



Lesser cornstalk borer – purple bands, not striped

- Other seedling feeders
 - Billbug, wireworm, cutworm – see wireworm *Crop Focus*

Management Considerations

- Tillage or herbicide grass control in the prior fall will reduce ovipositional attractiveness
- Burning grassy field borders before planting may destroy eggs
- Begin scouting at about 1300 GDU (41° base) accumulation since January 1
 - Grassy or weedy field edges, such as shelterbelts, terraces, waterways
 - No-till fields with heavy vegetation prior to burn down
- Resistance available
 - Use of YieldGard YGCB® may suppress stalk borer so pesticides are not necessary
- Pesticide use and timing
 - Most effective if timed when larva are leaving host plants after a herbicide application
 - Maximum 80% effective when used on infested plants, spray only infested areas of the field
 - On corn plants below V6, less than 10% infestation may warrant spot treatment, later than V7 nearly 100% of the plants must be infested to warrant treatment

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