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

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

Stalk Borer Annual Cycle in Maize

- **JUNE**
  - Overwinters as eggs on grass stems
  - Adults lay eggs on grasses in the fall

- **JULY**
  - Larvae spend some time in grasses before moving to larger hosts like corn or weeds
  - At maturity, larvae pupate in the stalk or on the ground
  - Larvae feed on foliage and move to ear

- **SEPT/OCT**
  - Dead “heart”

- **AUGUST**
  - Stunted ears and dead “heart”
**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

**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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