Efficacy of Belt in Western Bean Cutworm Management

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Western bean cutworm (*Striacosta albicosta* (Smith)) and southwestern corn borer (*Diatraea grandiosella* Dyar) are the two major lepidopteran pests of corn grown in the northwest Texas Panhandle. Recently, these two insects have become difficult to manage. Treatment estimates from crop consultants in the Panhandle have been as high as 40% or approximately 36,000 acres in the four northwest Texas counties.

Due to an ongoing tolerance issue in this area of spider mites to the broad spectrum pesticide, bifenthrin, producers and crop consultants need an effective alternative to manage lepidopteran pests in corn.

**Flubendiamide** is a new broad–spectrum lepidoptera control product that disrupts cellular calcium balance

**Characteristics of Flubendiamide**

- **New Mode of Action**
- Should be no cross–resistance to insecticides from other chemistries
- Must be ingested – has minimal contact or ovicidal activity
- Fast acting: feeding ceases and paralysis occurs within minutes

**Summary**

Unusually large corn earworm and fall armyworm population may have confounded the western bean cutworm efficacy

Western bean cutworm eclosion may have occurred before treatment – larvae may have entered the ears and not had the opportunity to ingest the Belt

Belt applications targeted for western bean cutworm control may need to be timed earlier in the moth flight. Future research will include use of bucket style trapping data to time applications more appropriately

Very few southwestern corn borer were found in the ears. Future research will include sampling for this insect in the stalk

One single application of Belt may not be effective in managing both western bean cutworm and southwestern corn borer due to prolonged flight of southwestern corn borer moths