

Efficacy of Belt in Western Bean Cutworm Management



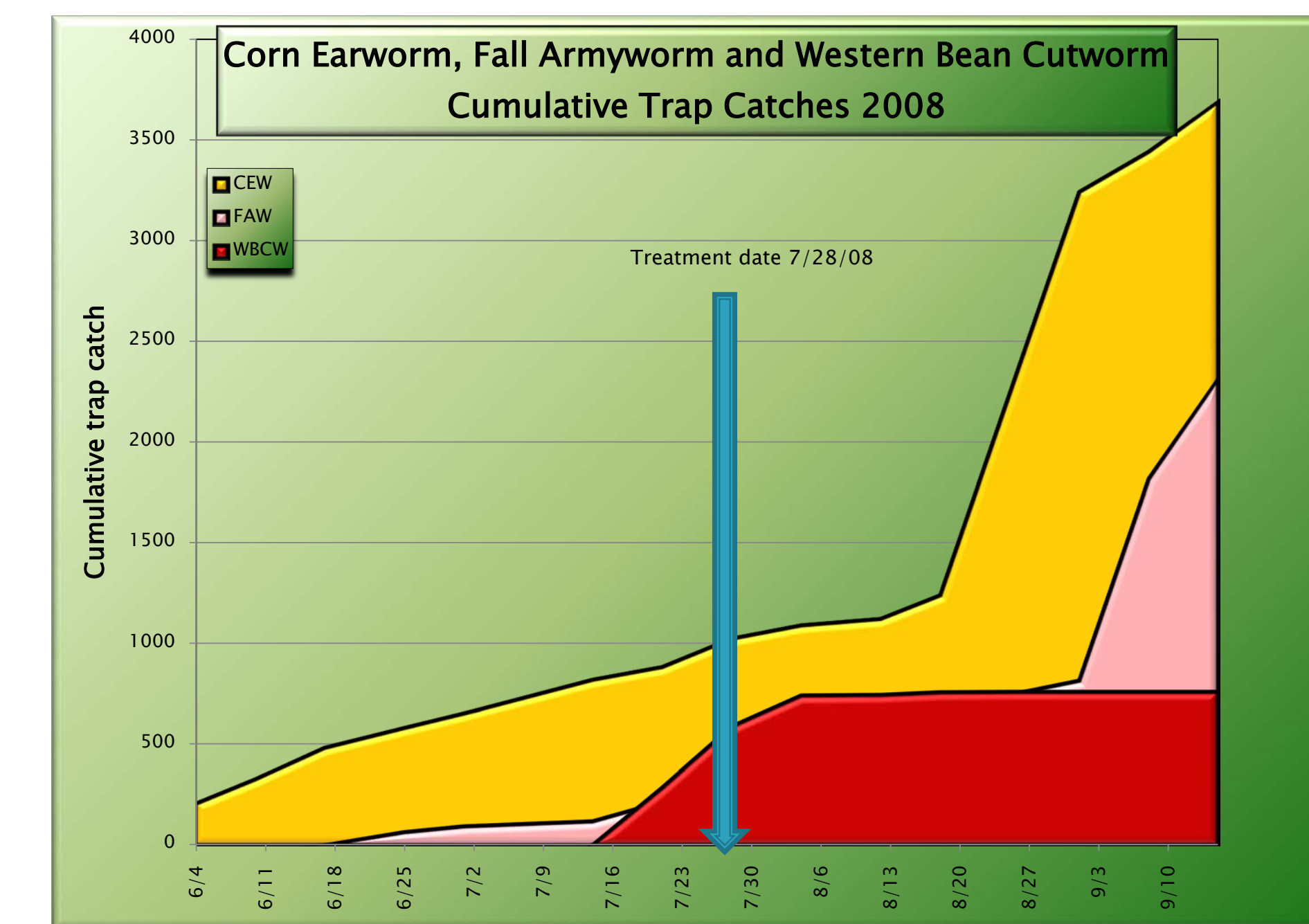
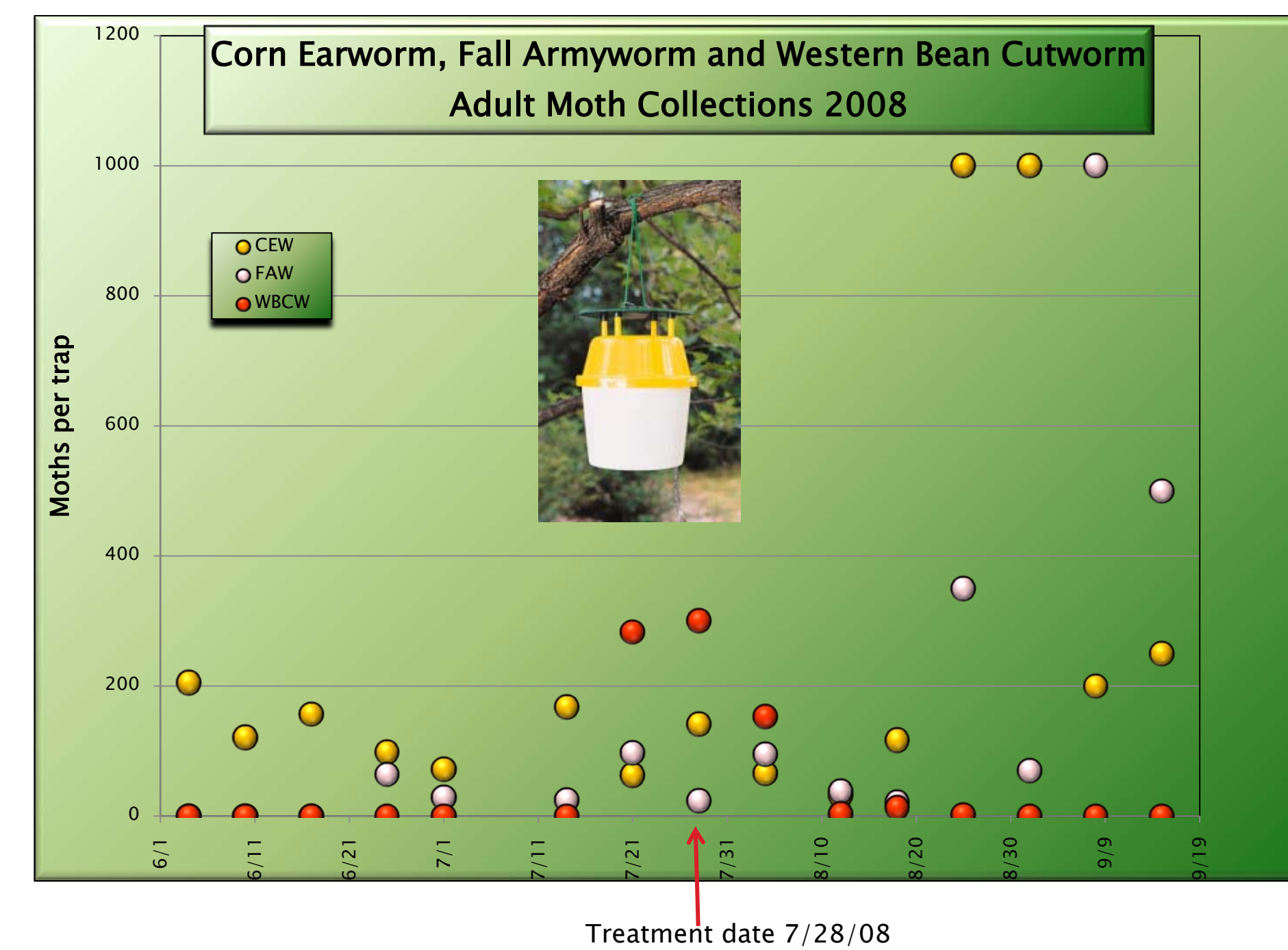
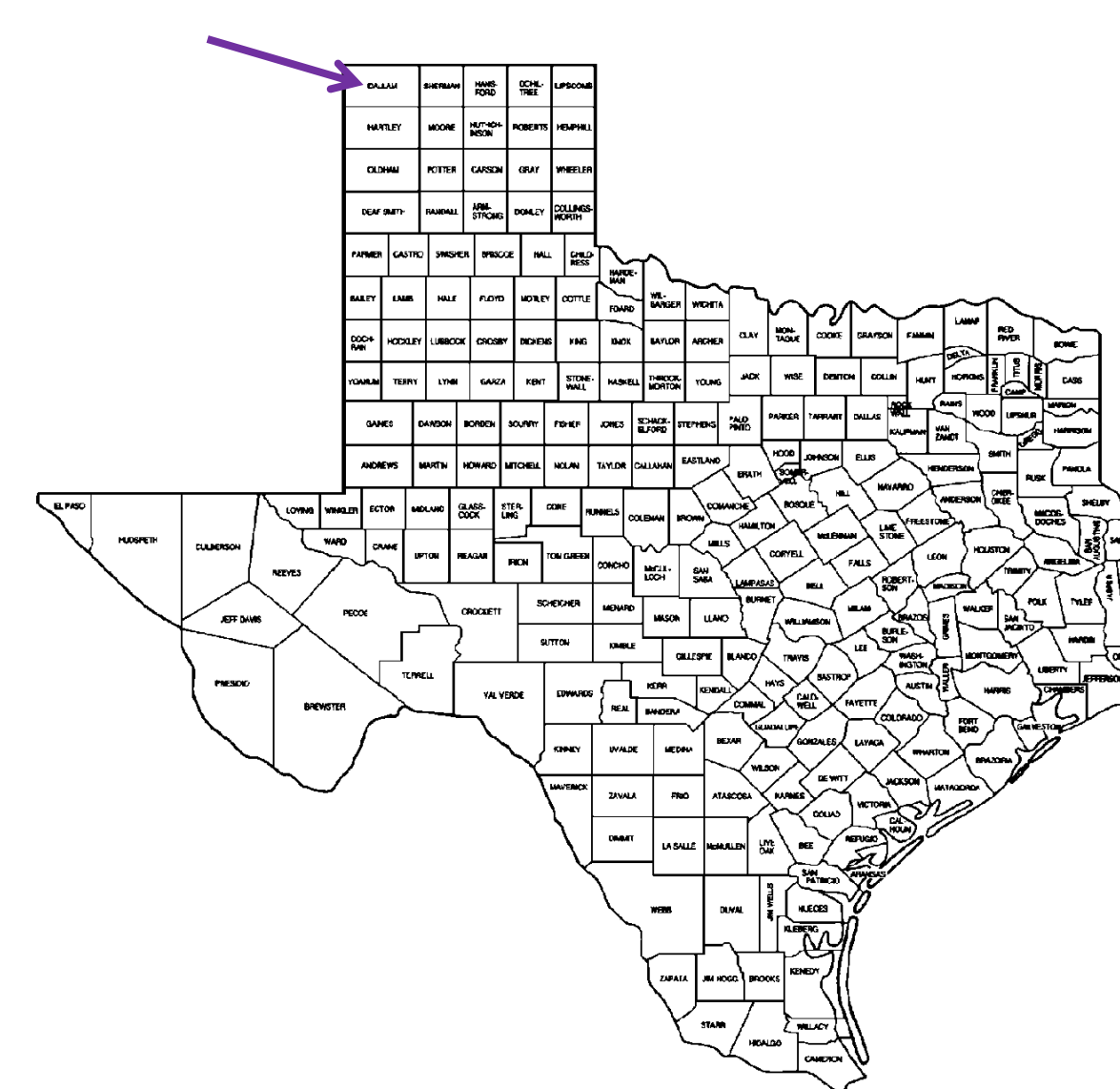
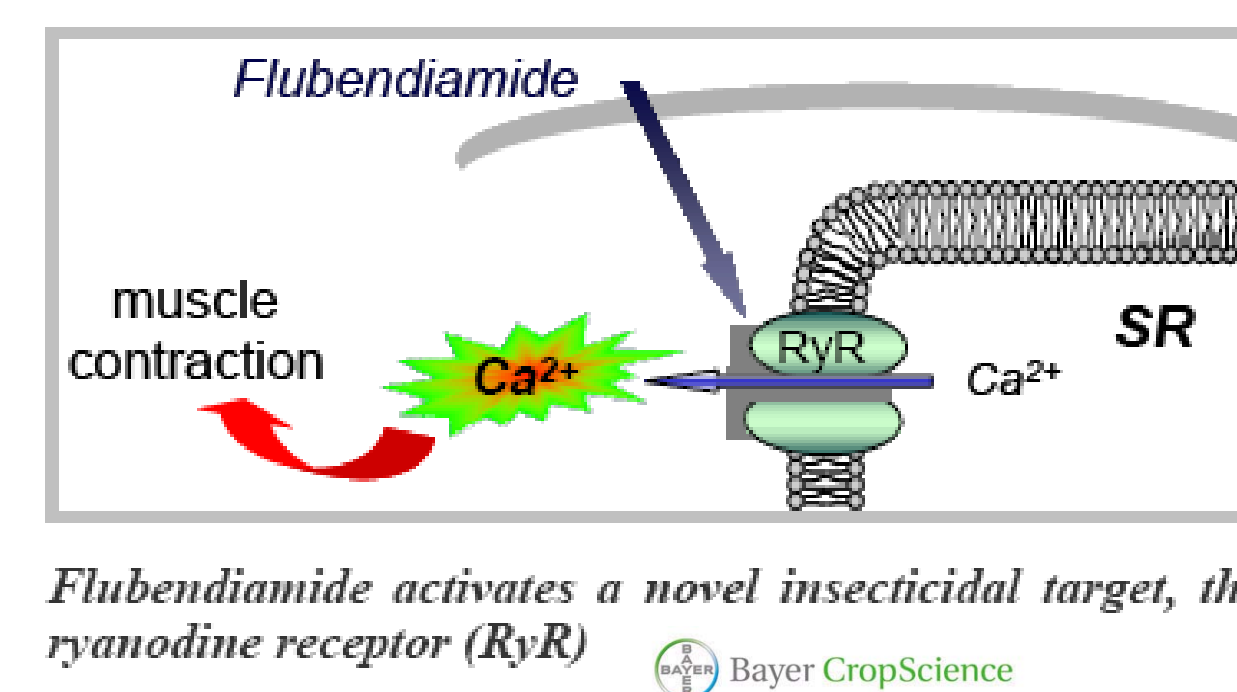
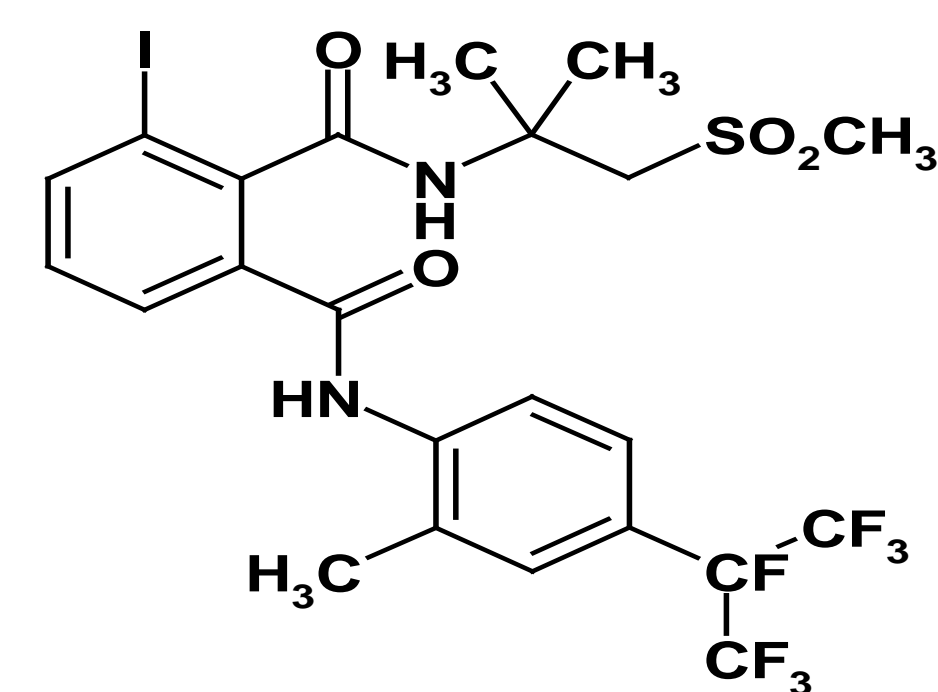
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Western bean cutworm (*Striacosta albicosta* (Smith)) and southwestern corn borer (*Diatraea grandiosella* Dyar) are the two major lepidopteran pests of corn grown in the northwest Texas Panhandle. Recently, these two insects have become difficult 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



Dallam County Site 1 Percent Ears Infested

| | Rate | CEW | FAW | WBC |
|------------------|--------|-------|-------|-------|
| Untreated | | 10.0% | 40.0% | 35.0% |
| Baythroid w/inis | 2.2 oz | 0.0% | 30.0% | 37.5% |
| Belt w/inis | 3 oz | 7.5% | 27.0% | 45.9% |
| Belt w/oil | 3 oz | 10.0% | 35.9% | 48.7% |
| Intrepid w/oil | 6 oz | 5.3% | 42.1% | 34.2% |

Nis- non-ionic surfactant; oil- crop oil
Treated July 27, 2008
40 ears total checked 14 days post treatment- 10 ears per replication and 4 replications (RCBD)
Each plot - 4 rows 50 feet long, counts taken from rows 2 and 3 (5 plants in each row)
CEW - Corn earworm, FAW - Fall armyworm, WBC - Western bean cutworm

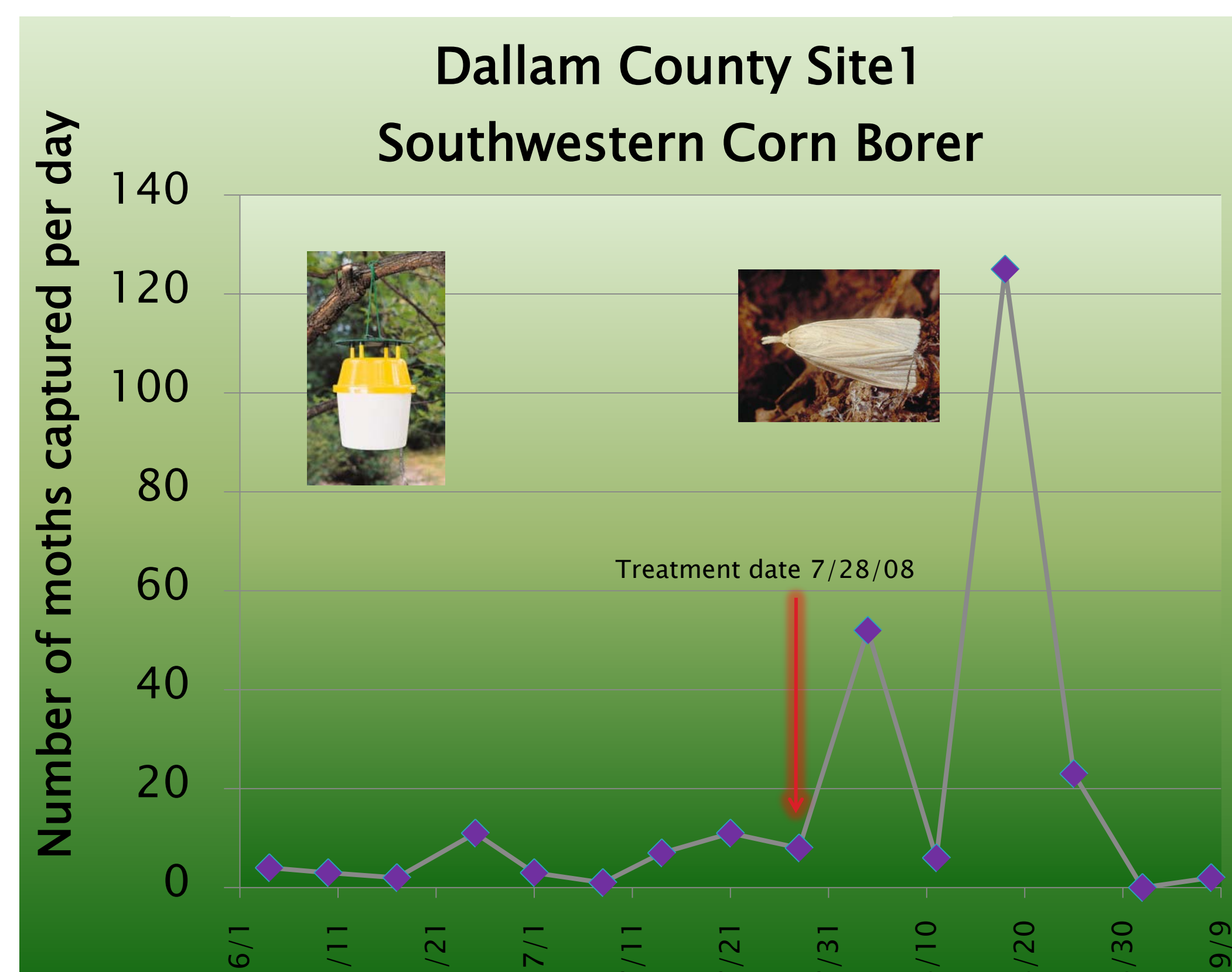
Characteristics of Flubendiamide

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