

# 2007 CMDC

## Wright

### **Use & Copyright**

The materials in this document were developed by and for use by University of Nebraska–Lincoln Extension in the Institute of Agriculture and Natural Resources. The materials are copyrighted by the Board of Regents of the University of Nebraska–Lincoln on behalf of the University of Nebraska–Lincoln Extension. All rights are reserved.

Copies may be printed for individual personal use; however, these materials can not be republished in print, on another Web site or used commercially without prior written permission. To seek permission to print a publication for educational use, please email us at [dpittman1@unl.edu](mailto:dpittman1@unl.edu).

### **Disclaimer**

Reference to commercial products or trade names in these publications is made with the understanding that no discrimination is intended and no endorsement by University of Nebraska-Lincoln Extension is implied.

**Percentage yield loss caused by European corn borer for various corn growth stages**  
(North Central Regional Extension Publication No. 327)

Plant Stage	Yield Loss/Borer/Plant
Early Whorl	5.5%
Late Whorl	4.4%
Pre-Tassel	6.6%
Pollen-Shed	4.4%
Blister	3.0%
Dough	2.0%

2007cmdc-wright001

**Economic injury level**

- **$EIL = C/V * I * D * K$** 
  - C= control costs (\$/acre)
  - V= crop value (\$/bu)
  - I= injury/pest/acre (% defoliation/insect/acre)
  - D= damage per unit injury (bu/ac/% defoliation)
  - K= % control

2007cmdc-wright002

**Crop growth stage and insect thresholds**

- **Control adult rootworms when severe silk clipping (silks chewed to within 1/2" of husks) occurs at 25-50% pollen-shed.**
- **Corn is unlikely to benefit from treatment for spider mites after the dent stage**

2007cmdc-wright003

**Crop growth stage and insect thresholds**

- **Use 250 soybean aphids per plant economic threshold up through R5; threshold higher after that stage**
- **R5 = beginning seed stage**

2007cmdc-wright004

## Corn rootworm thresholds

Average number of western corn rootworm beetles present in cornfields that may produce an economically damaging rootworm population in corn the following year

Continuous corn*	
Plants per acre	Average number of rootworm beetles per plant
14,000	1.28
16,000	1.12
18,000	1
20,000	0.9
22,000	0.81
24,000	0.75
26,000	0.69
28,000	0.64
30,000	0.6
32,000	0.56

\*Based on a 50:50 ratio of females to males

2007cmdc-wright005

## Corn rootworm management options in corn-after corn

- **Bt rootworm corn hybrids**
- **Planting time Insecticides**
  - Granular
  - Liquids
  - Seed treatments
- **Postemergence applications**

2007cmdc-wright006

## Corn rootworm management options in corn after corn

- **Bt rootworm corn hybrids**
  - YieldGard Rootworm (Monsanto)
  - Herculex Rootworm (Dow AgroSciences/Pioneer Hi-Bred-Dupont)
  - Agrisure Rootworm (Syngenta)

2007cmdc-wright007

## Corn rootworm management in corn after corn

- **Planting time insecticides**
  - Granular (Aztec, Force, Lorsban, etc.)
  - Liquids (Capture, Warrior, Regent, etc.)
  - Seed treatments (Poncho, Cruiser @ high rates)

2007cmdc-wright008

## **Corn rootworm management options in corn after corn**

- **Postemergence applications**
  - Larvae (granules, liquids)
  - Adults (various products)
    - Insecticide resistance to organophosphate and carbamate insecticides occurs in parts of Nebraska

2007cmdc-wright009