Considerations for Fall Armyworm Management

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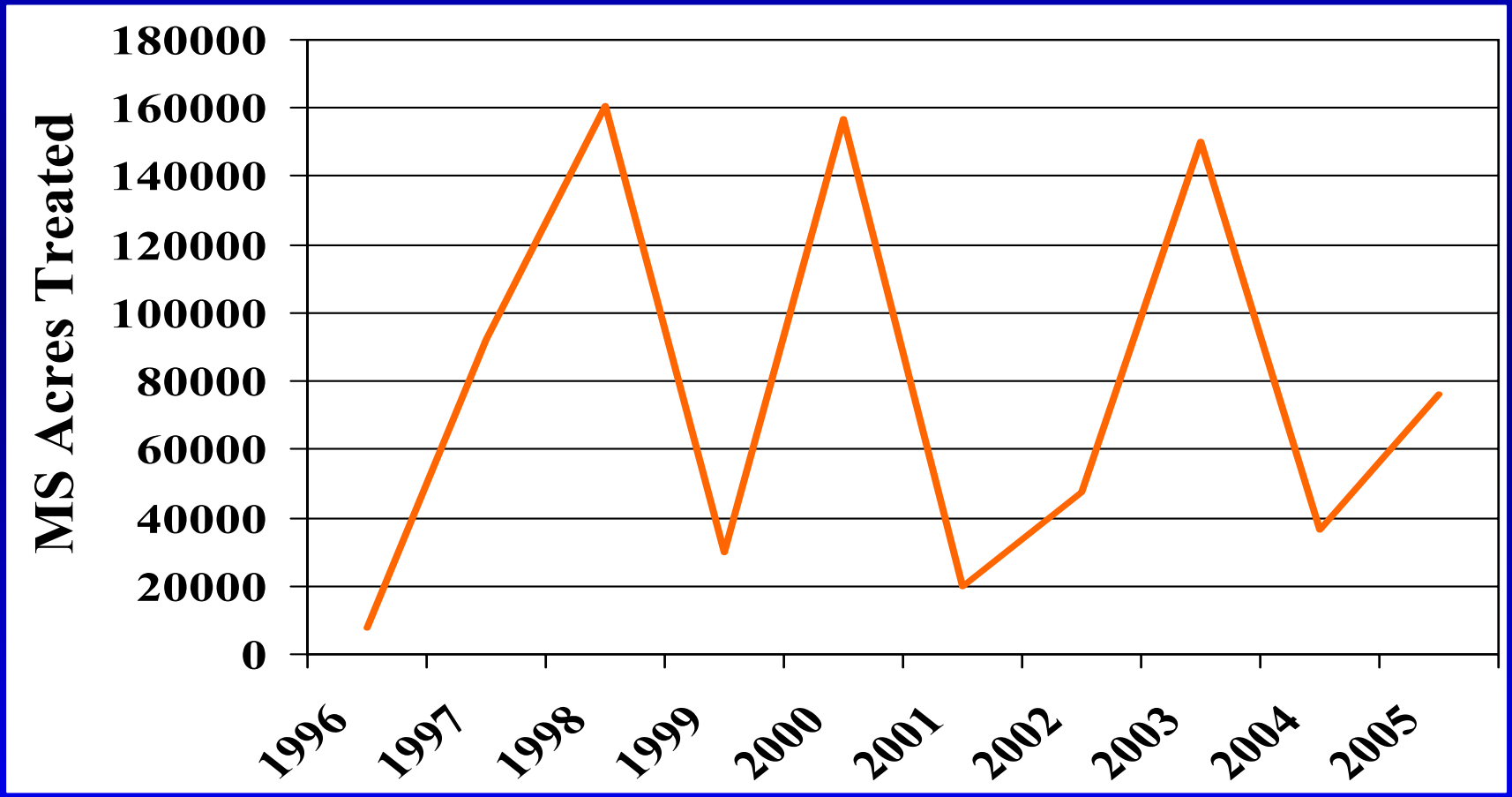
SIMRU

Fall Armyworm Problem

- Sporadic pest



Armyworm Problem

Egg masses difficult to locate because of location in canopy.

Armyworm Problem

Small fall armyworm larvae feed on leaves, bracts, and flowers.

Armyworm Problem

Larger larvae damage flowers and bolls.

Armyworm Problem

Problem is often identified when large larvae are found in white flowers.

Primary Control Measures

Bt Cotton

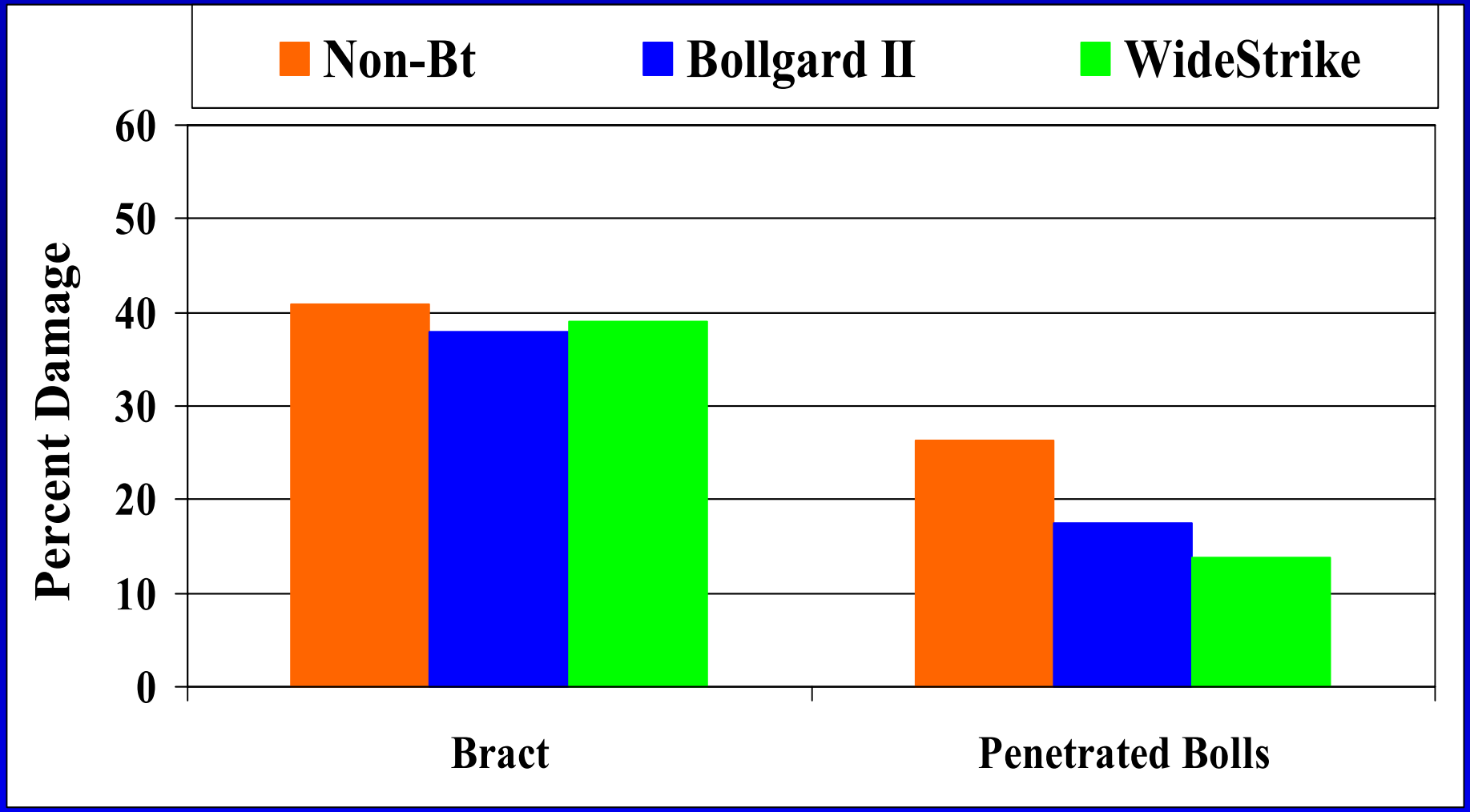
Conventional Insecticides

Field Infestation of Cotton with FAW

- Treatments
  - WideStrike
  - Bollgard II
  - Non-Bt
- 2-d old larvae (5-10 / WF)
- 5-day old larvae (1 / WF)
- Rated 7DAI
  - Bract damage
  - Penetrated bolls

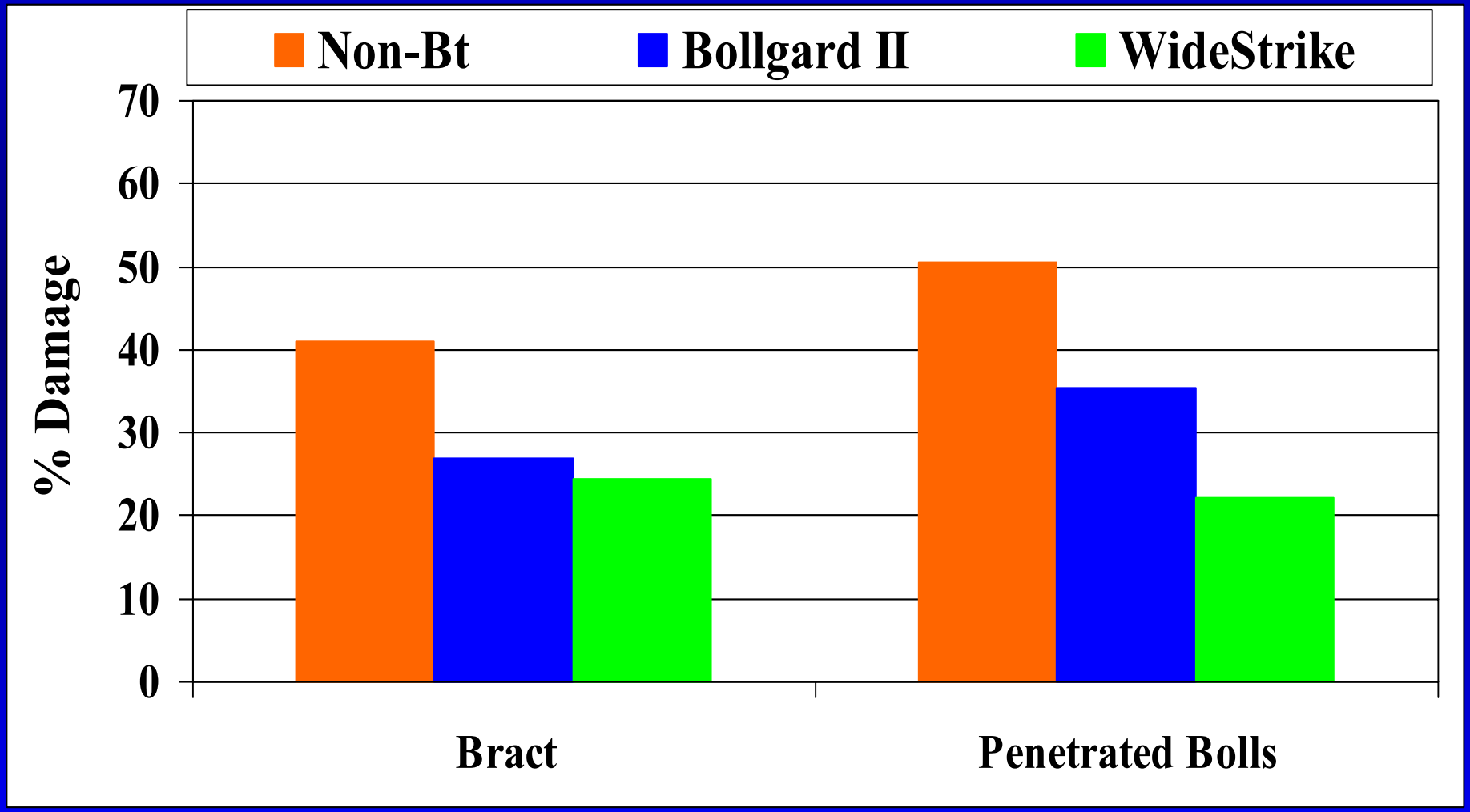
Percent Boll Damage by 2-d old FAW

Louisiana



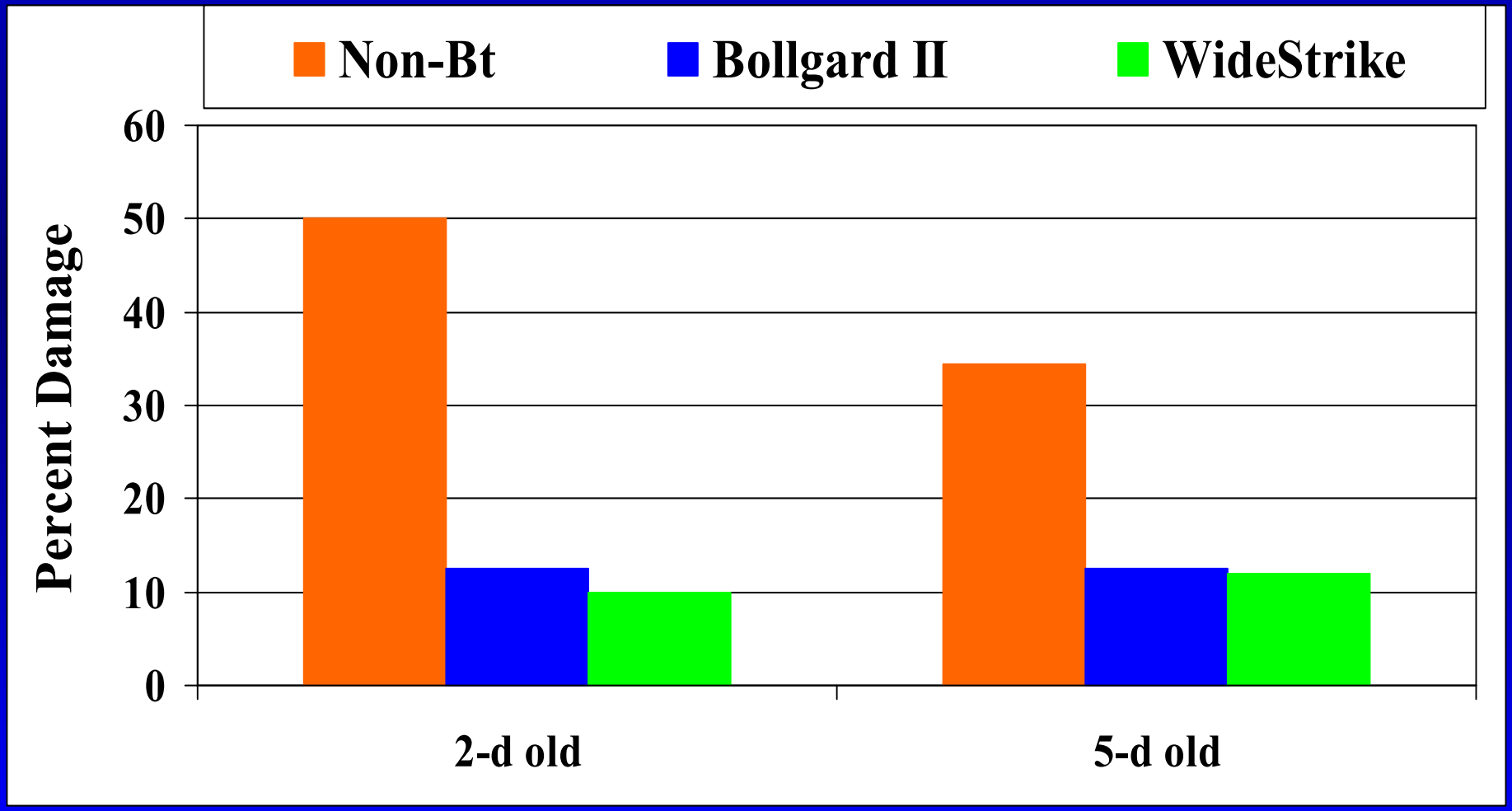
Percent Boll Damage by 5-d old FAW

Louisiana



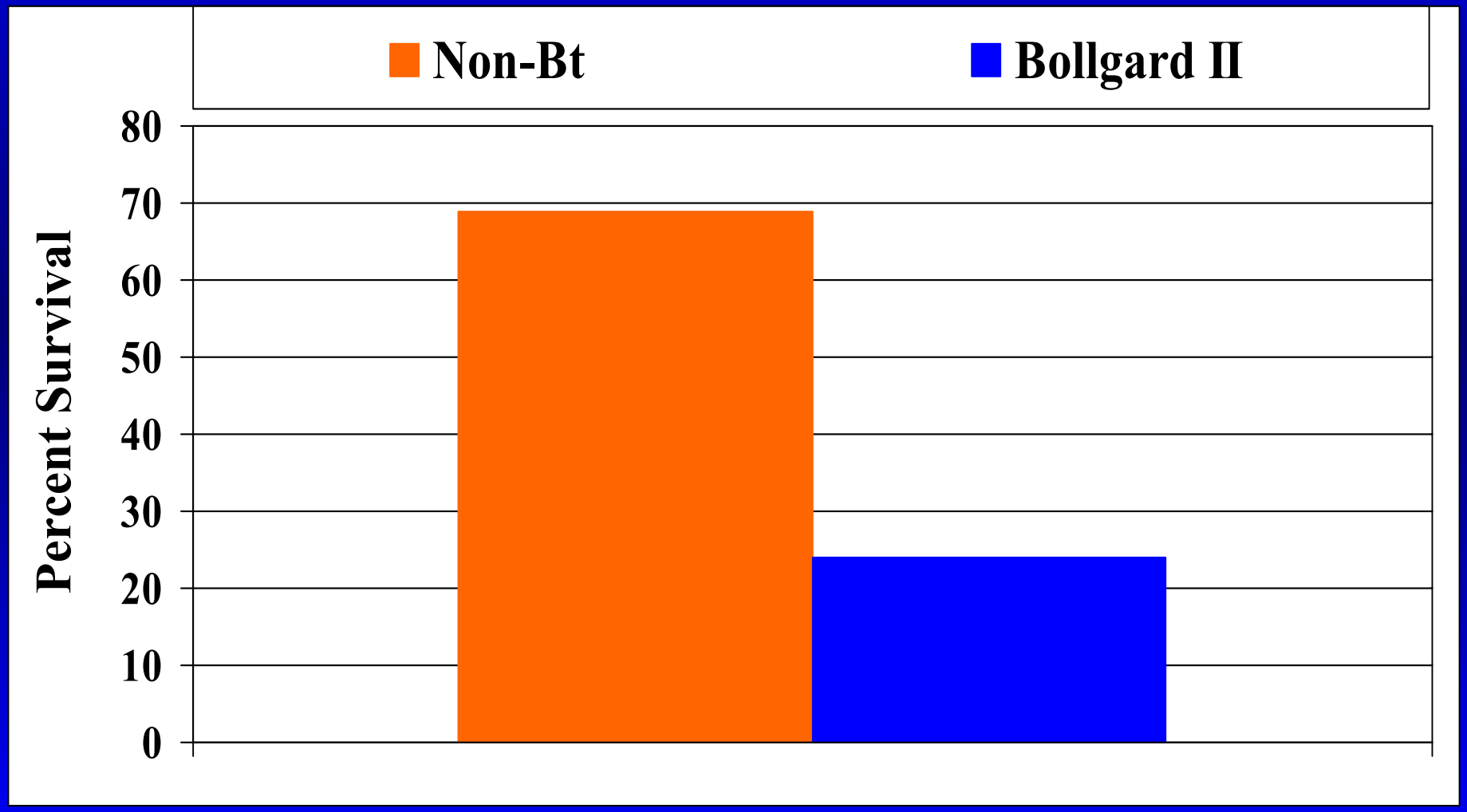
Percent Boll Damage by 2-d and 5-d old FAW

Mississippi



Percent Survival of 3-d old FAW

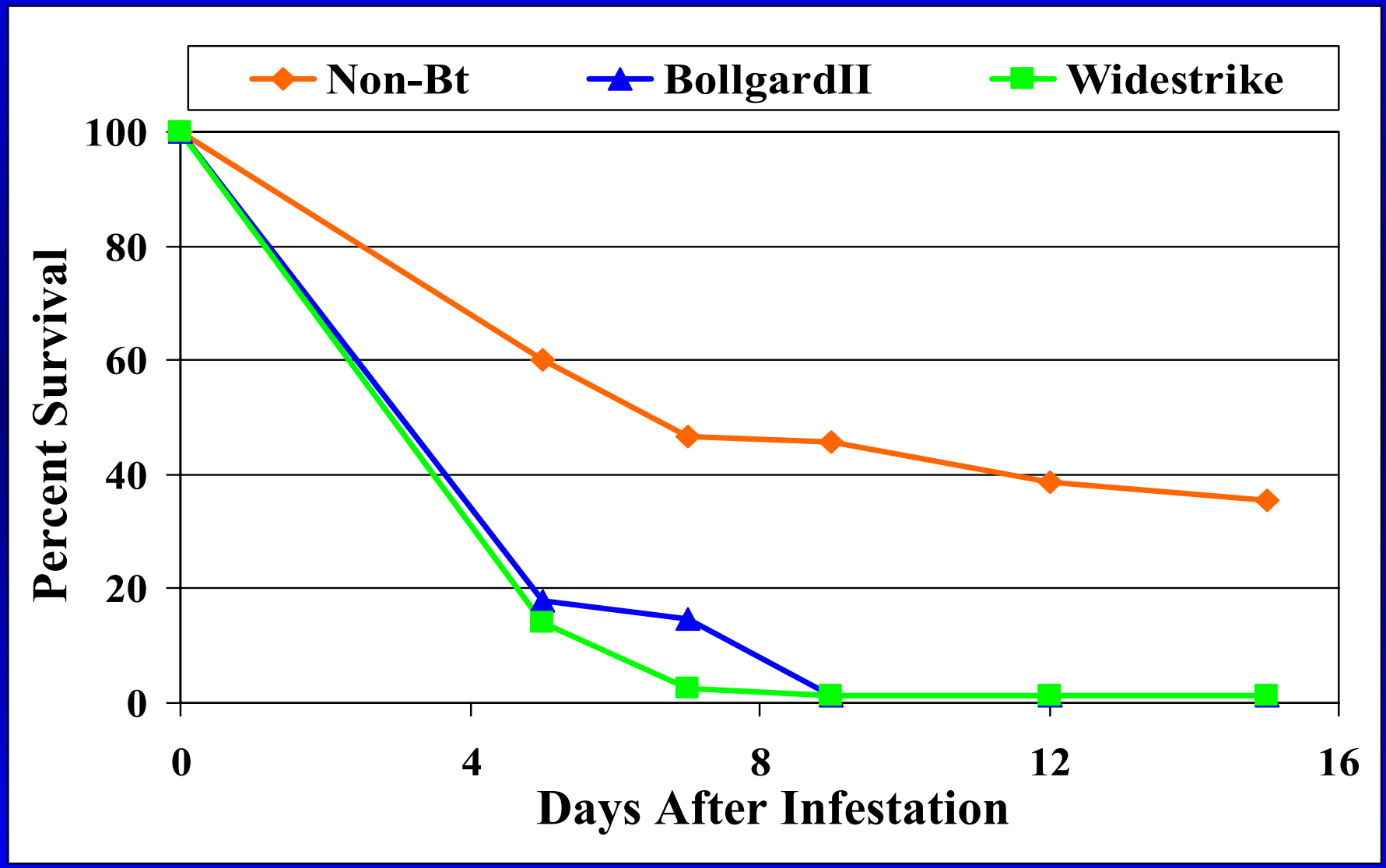
Mississippi



Bt Cotton Lab Bioassay with FAW

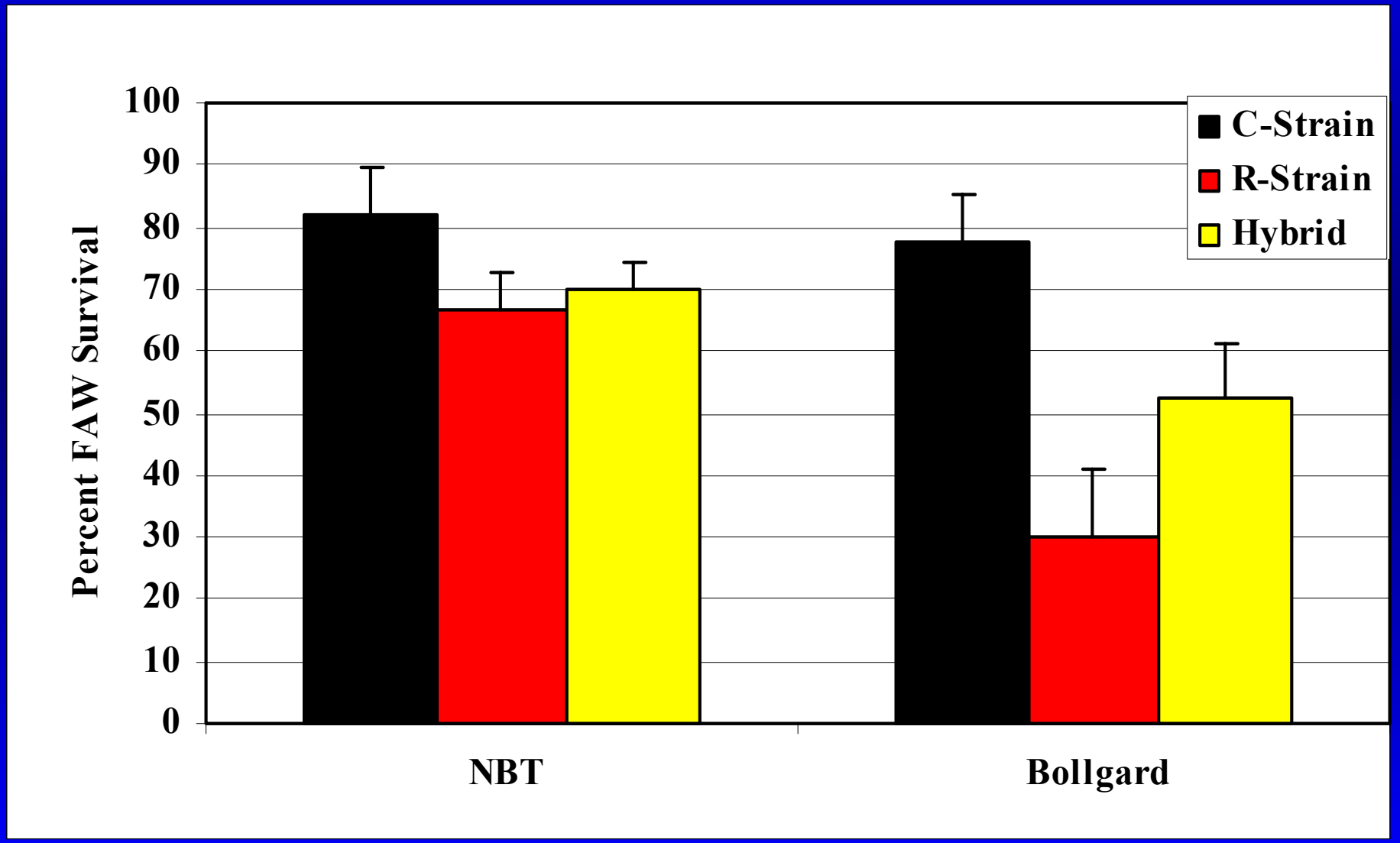
- Egg masses hatched on squares
- 5d after eclosion, larvae transferred to individual squares
- Rated 5, 7, 10, 12, 15 DAI
- Treatments
  - WideStrike
  - Bollgard II
  - Non-Bt

Survival of FAW on Bt Cotton

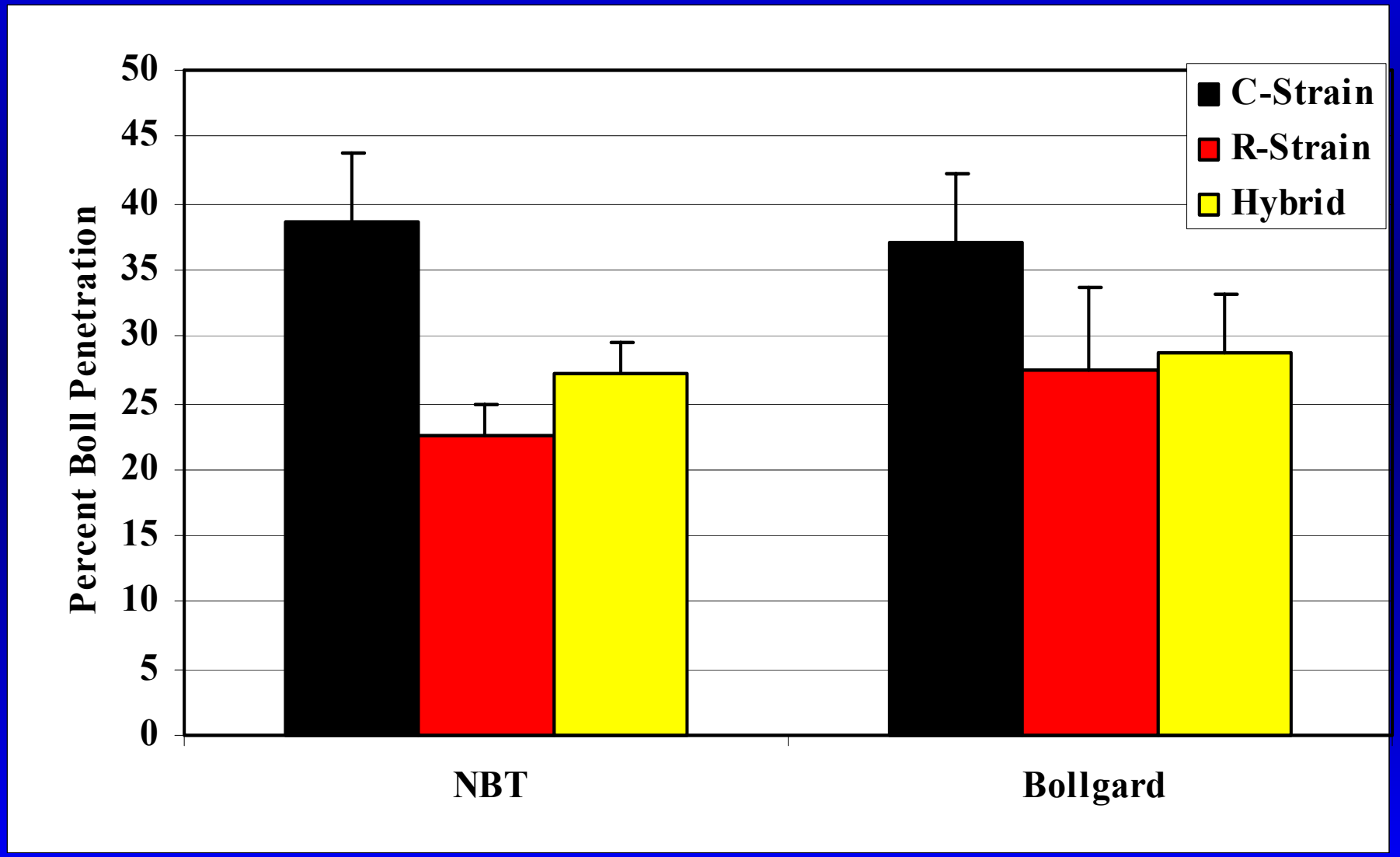


Susceptibility of FAW Strains on Bollgard and Non-Bt Cotton

Percent Survival of FAW Strains on Non-Bt and Bollgard Cotton After 5 d. Leaf Tissue Bioassay.



Percent Boll Penetration by FAW Strains on Non-Bt and Bollgard Cotton After 7 d. Bloom Cages.



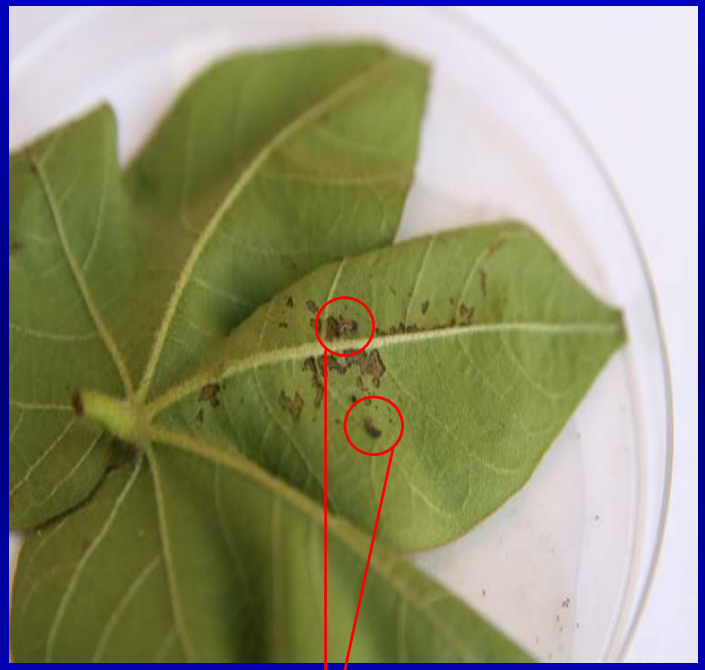
Diamond

- Insect growth regulator – molting inhibitor.
- Active against certain sucking bugs and caterpillars.
- Becoming a common control measure for tarnished plant bug .
- Reports of little fall armyworm activity following Diamond applications.

Methods

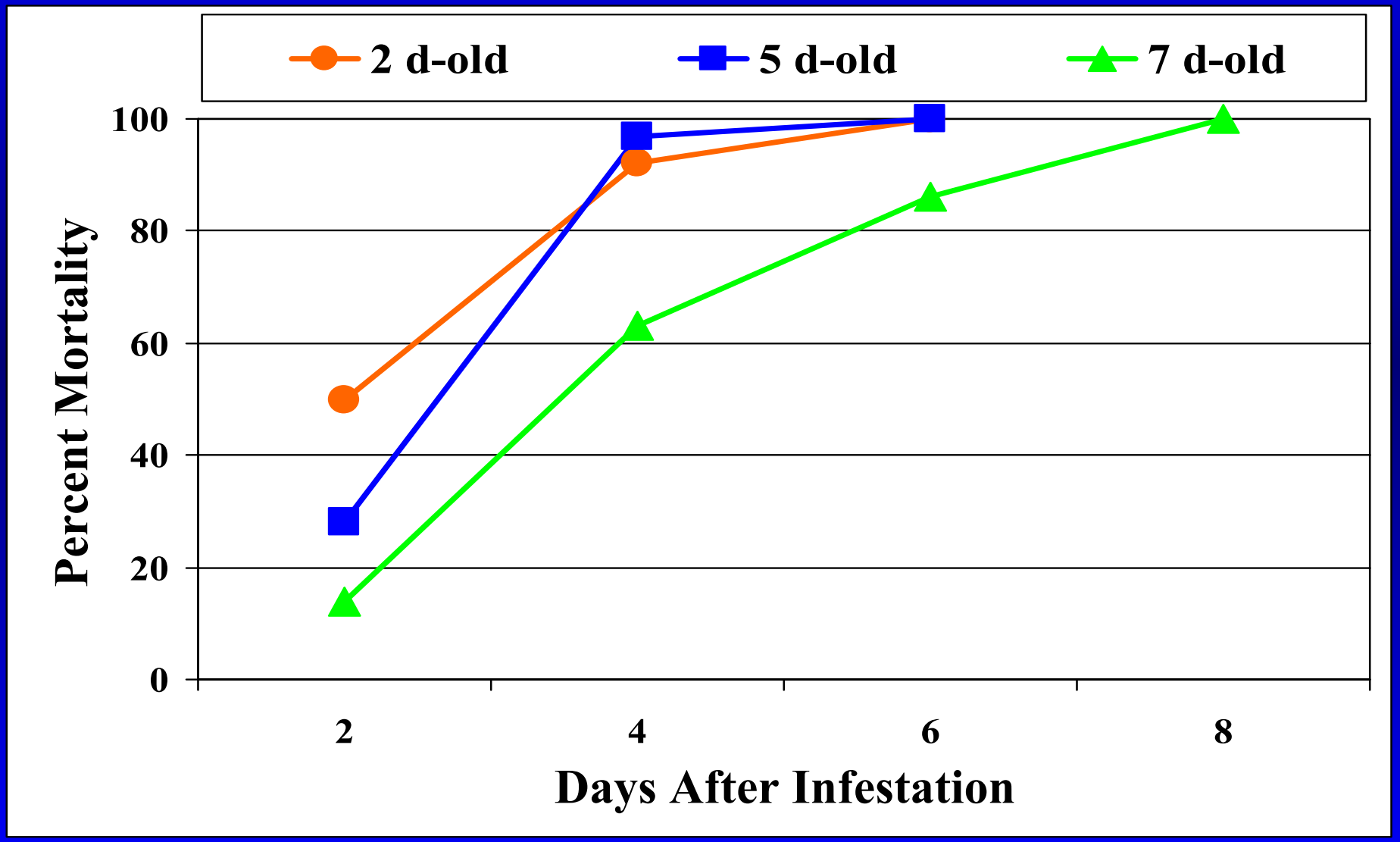
FAW Larval Age

- 4 infestations for a total of 200 FAW larvae per treatment.
- Cotton leaves were treated with Diamond and infested with 2, 5 & 7 day old larvae.
- Percent mortality was recorded every two days.



Dead FAW Larvae

FAW Larval Age & Mortality Rates

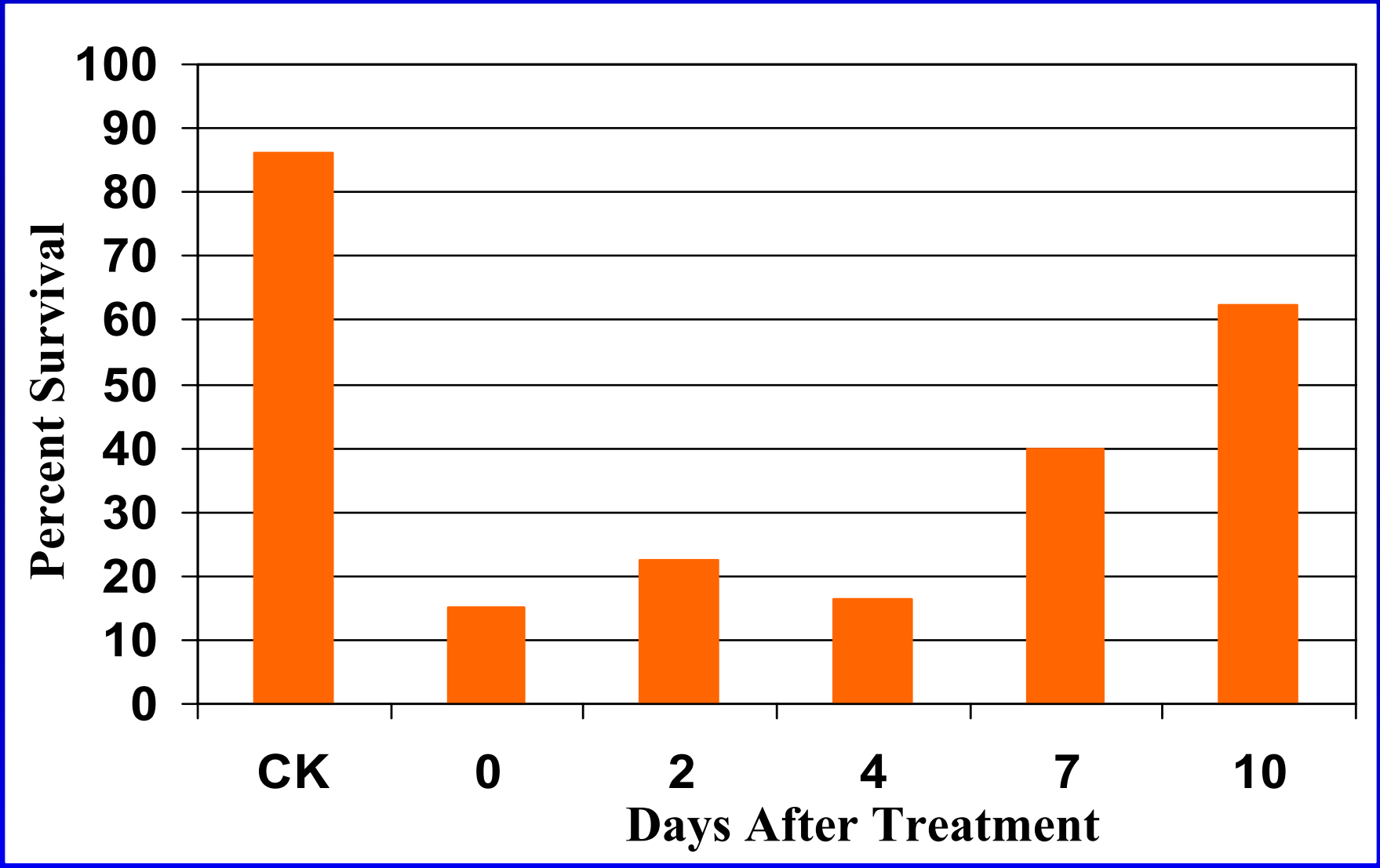


Methods

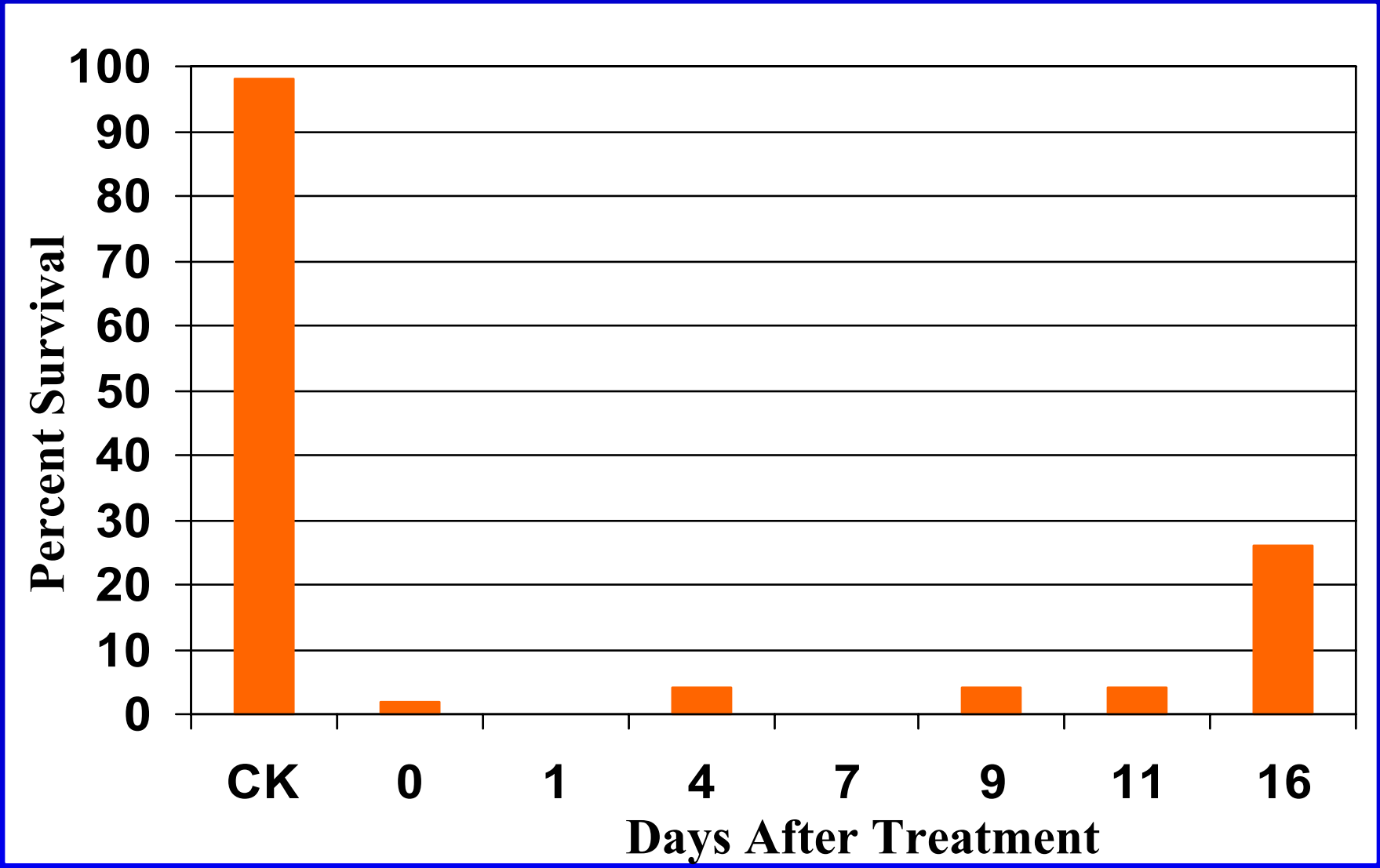
FAW Residual

- Treated field plots with 6 oz/A of Diamond.
- Collected treated leaves at various intervals after application.
- Established lab bioassay by infesting 2-d old larvae onto leaves in petri dishes.
- Rated for surviving larvae at 3-4 d.

Residual Activity of Diamond Against FAW (3 d Rating - Aug)



Residual Activity of Diamond Against FAW (4 d Rating - Oct)



Summary

- BG2 and WS provide good control of FAW, but will require supplemental sprays in some instances
- FAW host type may impact control measures, whether Bt cotton or insecticides.
- Diamond provides excellent control of various FAW larval ages after 4-6 d.
- Efficacy equal to or better than standards.
- Residual activity may be observed for 10 to 14 d.