A black and white photograph showing a crop duster airplane flying low over a large agricultural field. The plane is spraying a fine mist from its rear-mounted spray boom. In the foreground, a person wearing a hard hat and safety vest stands in the field, observing the operation. The background shows a flat landscape with some distant buildings and utility poles under a cloudy sky.

Novaluron as an Ovicide: A Model for Evaluation of Aerially-Applied Insecticides.

Part 2: Field Study

Martin, D.E., Lopez, J.D., Hoffmann, W.C., Fritz, B.K.
Aerial Application Technology Research Group
College Station, Texas



Objective

To evaluate deposition and efficacy of
Lannate and Novaluron applied with
conventional and rotary aerial spray systems
for control of cotton bollworm (*Helicoverpa*
zea) in Bt cotton.



Treatments

Treatment	Nozzle	Target Rate (gpa)	Chemical
1	ASC-A10H	2	Novaluron (Diamond 0.83 EC)
2	CP-03	2	Novaluron (Diamond 0.83 EC)
3	CP-03	2	Novaluron (Diamond 0.83 EC) Aero Dyne-Amic
4	CP-03	5	Novaluron (Diamond 0.83 EC)
5	CP-03	2	Methomyl (Lannate LV)
6	Check	Check	Untreated





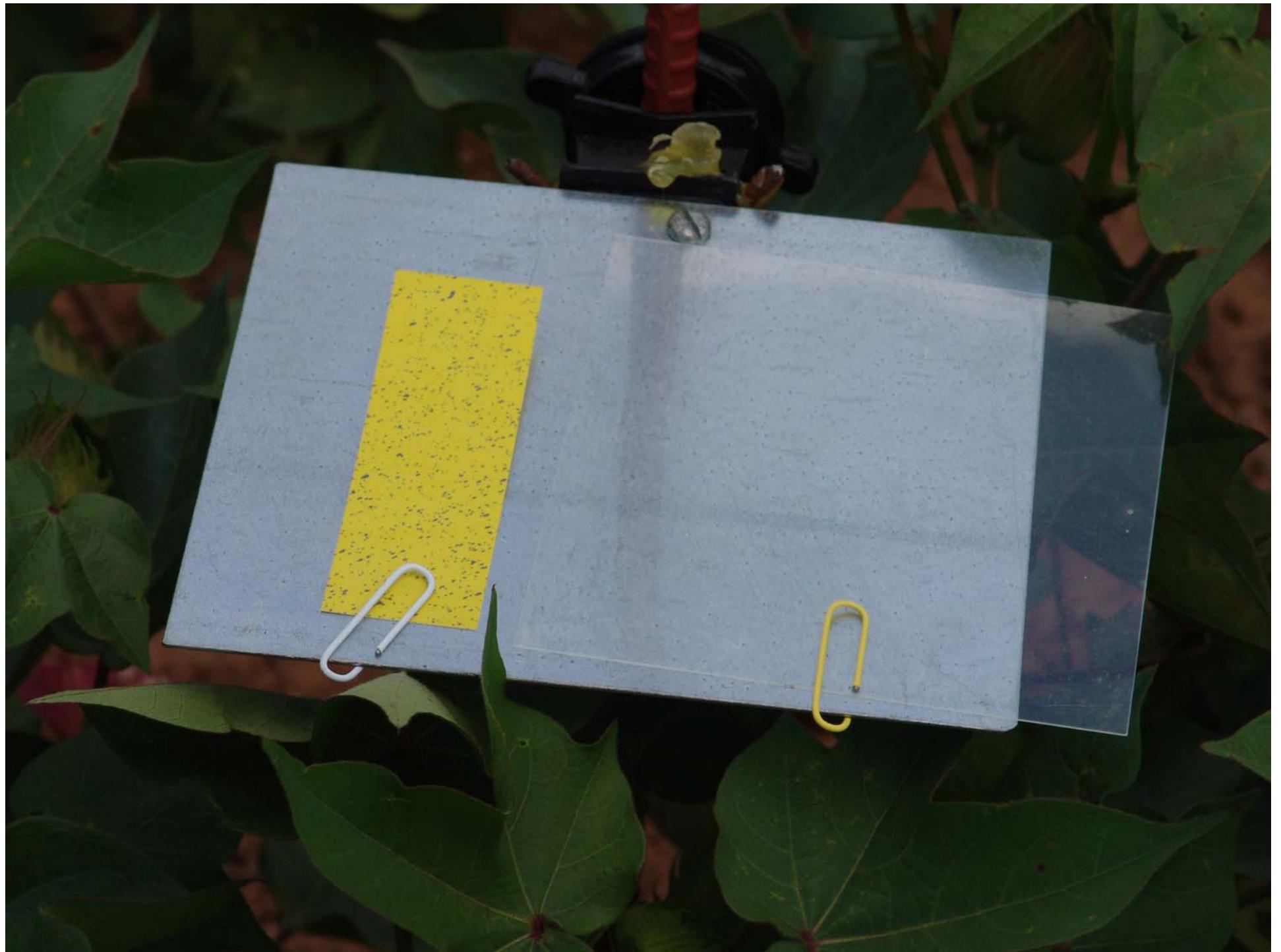
Image © 2005 DigitalGlobe

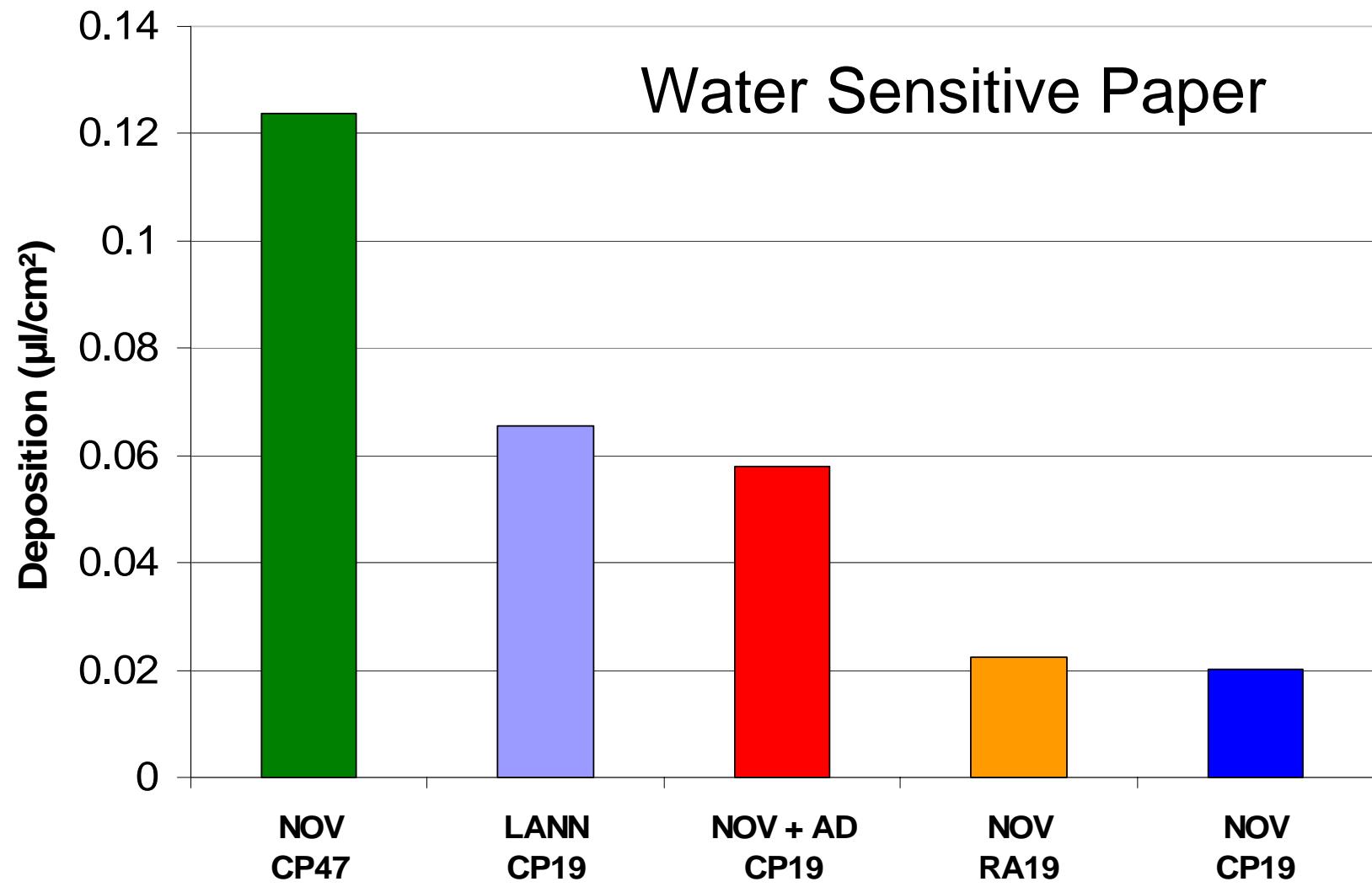
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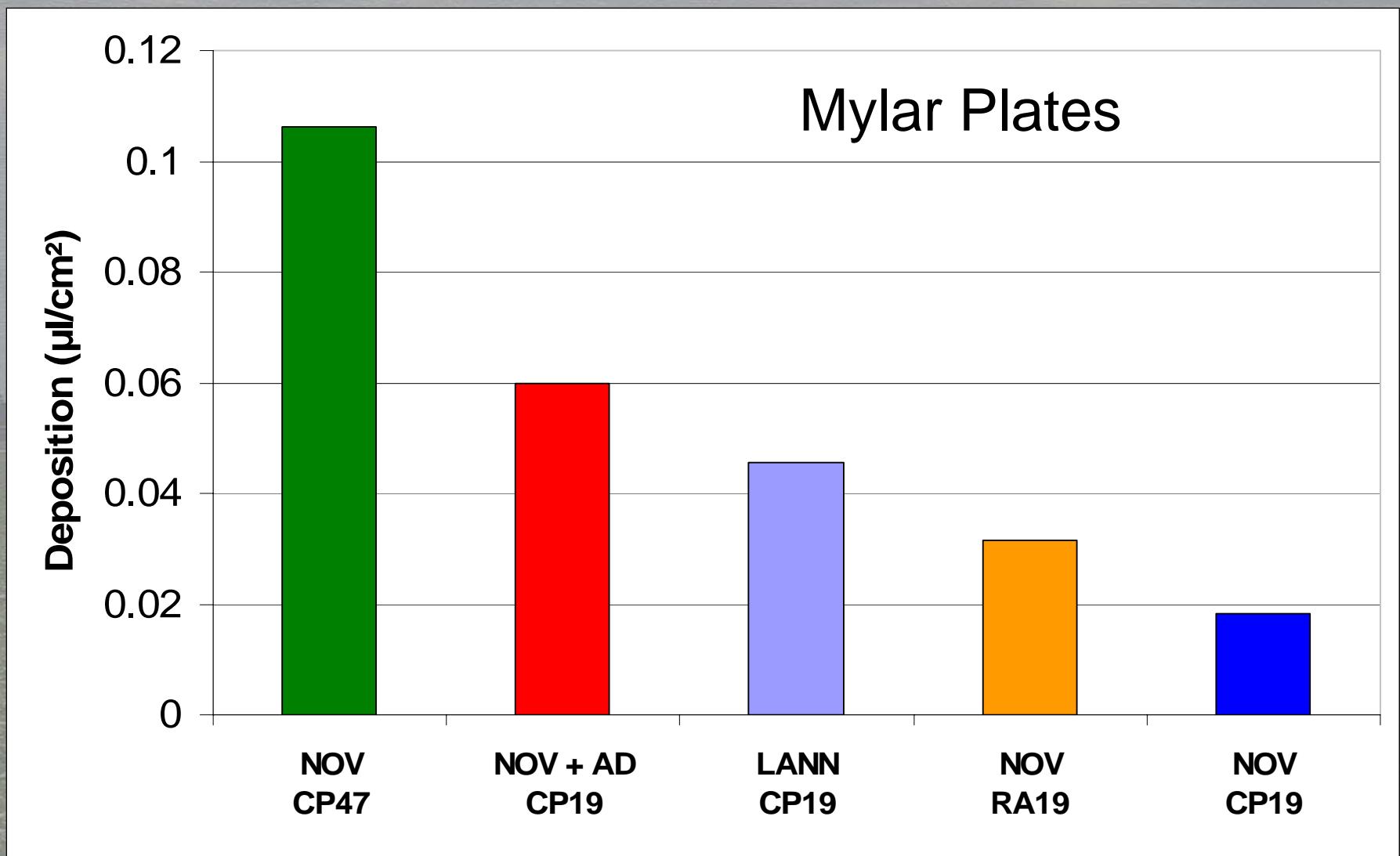
Pointer 30°30'21.90" N 96°24'32.93" W elev 213 ft

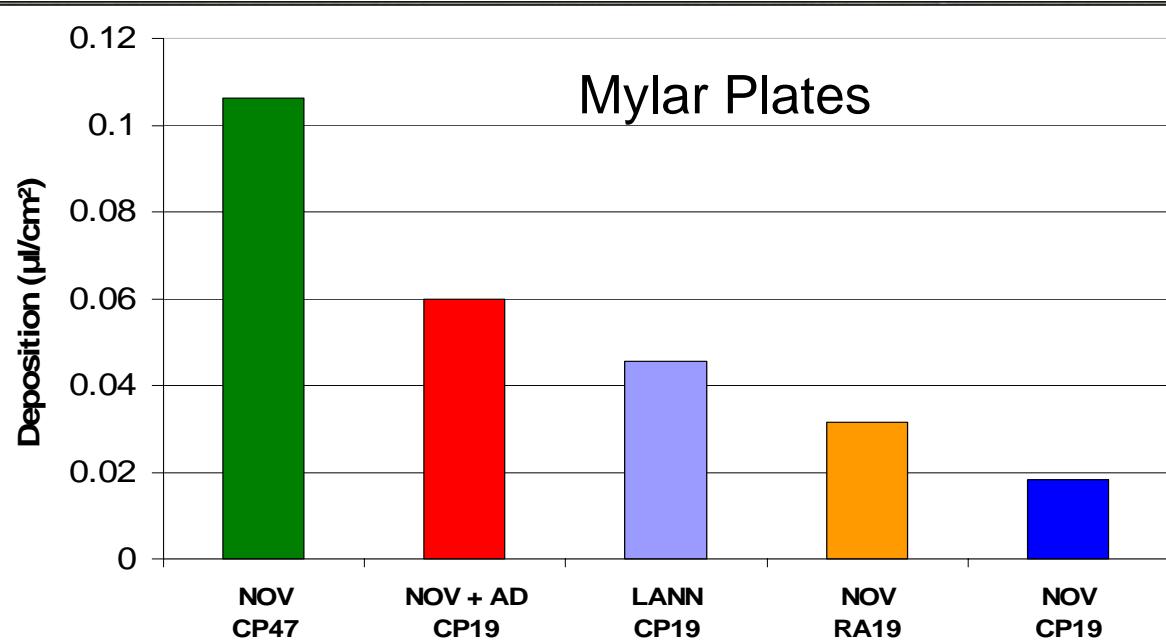
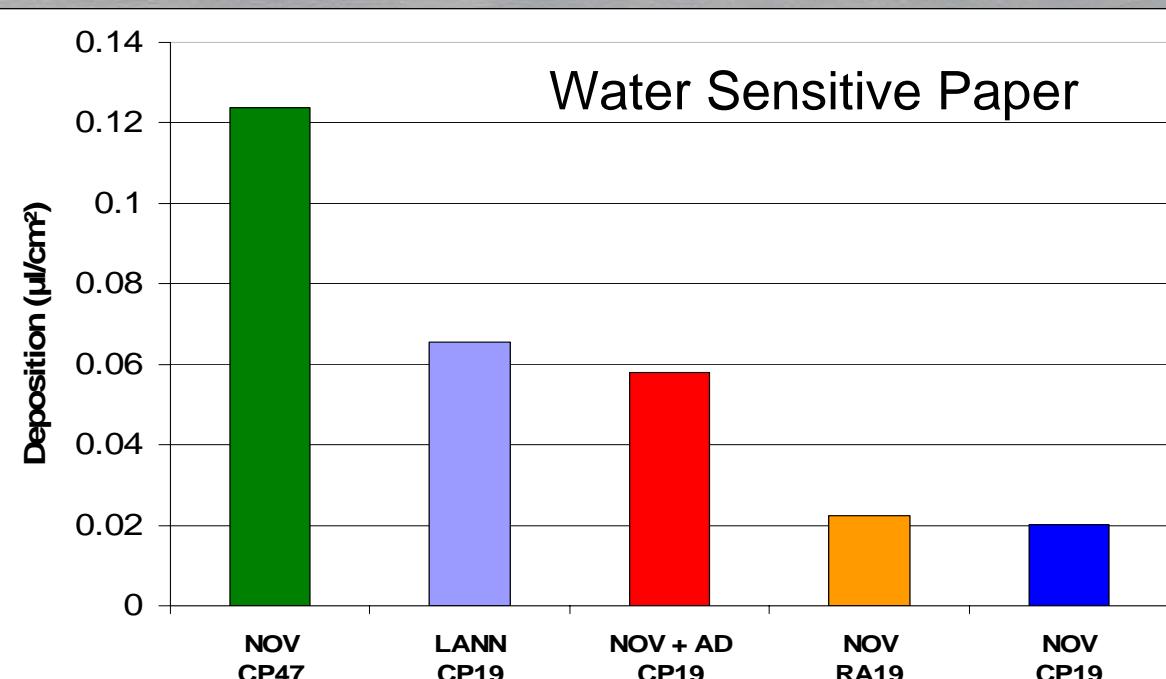
Streaming ||||| 100%

Eye alt 6437 ft









Effect of Adjuvants

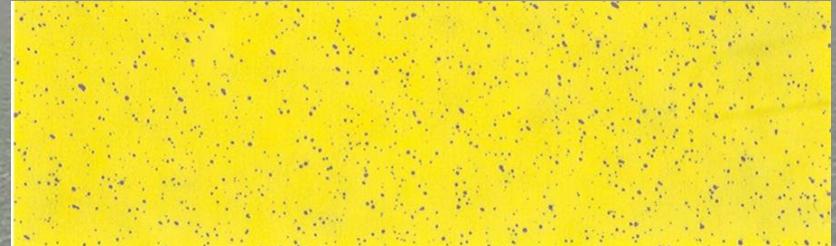


Novaluron @ 2 gpa



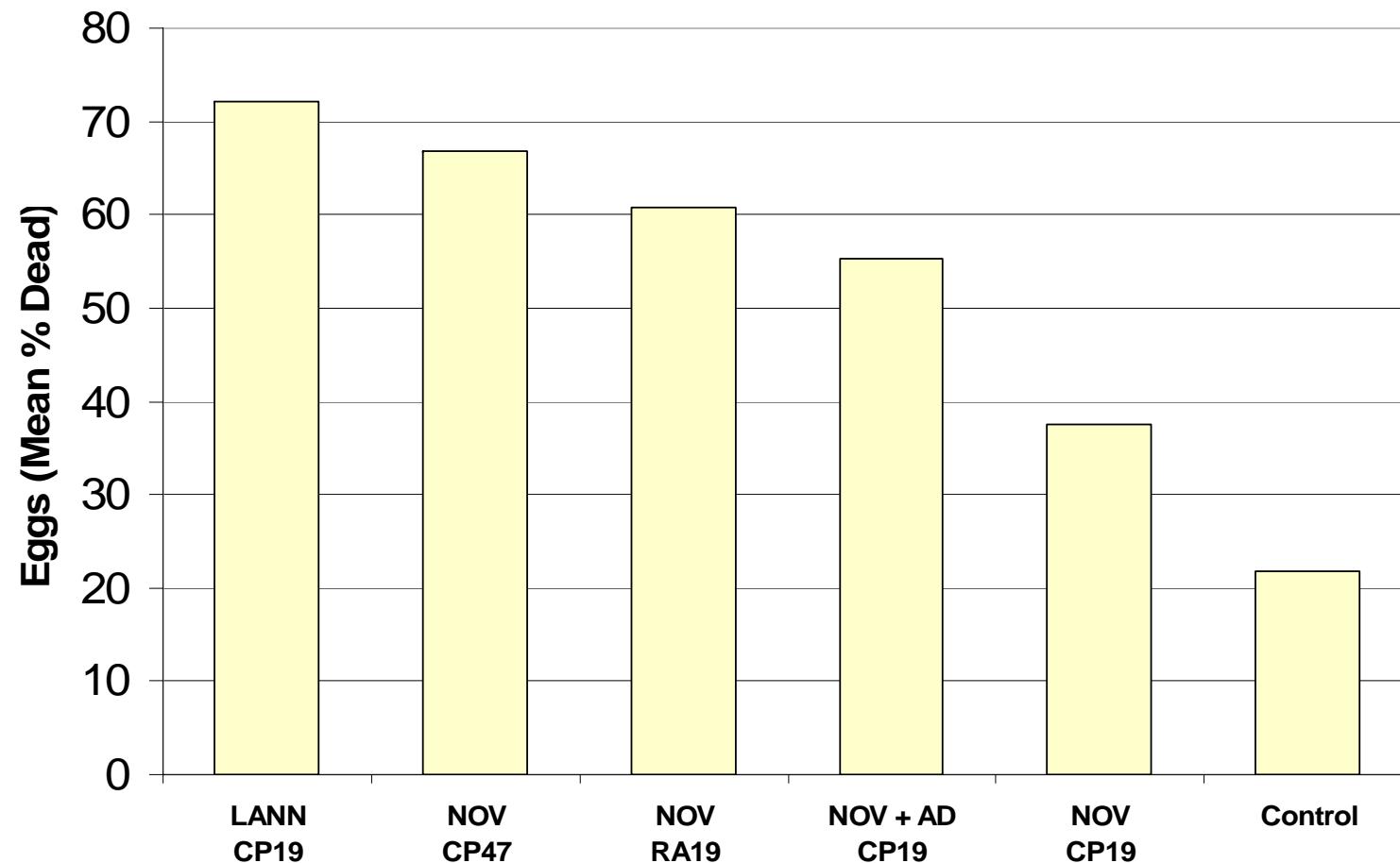
VMD = 138
Droplet Density = 8.8 drops/cm²

Novaluron and Aero Dyne-Amic@ 2 gpa

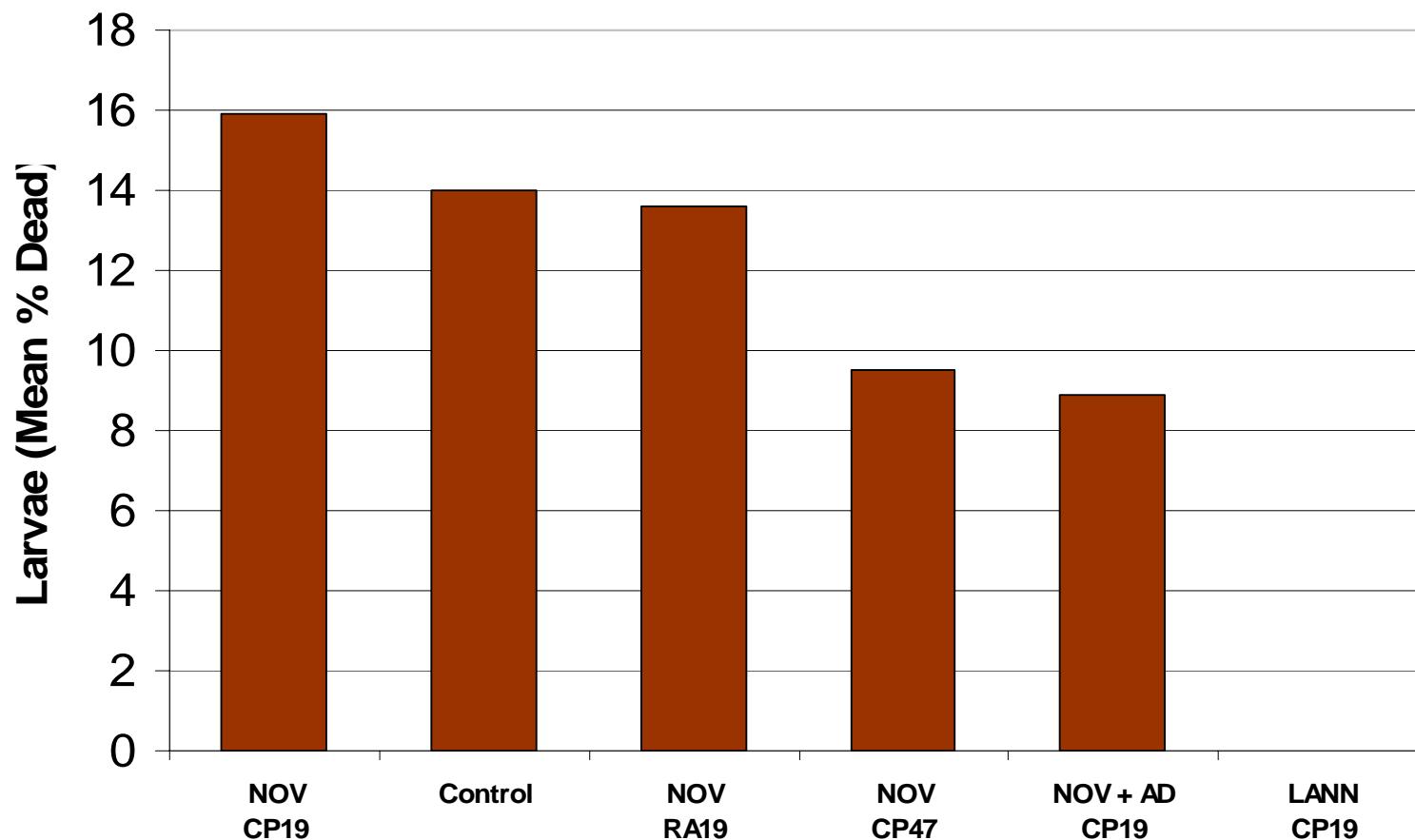


VMD = 143
Droplet Density = 33.8 drops/cm²

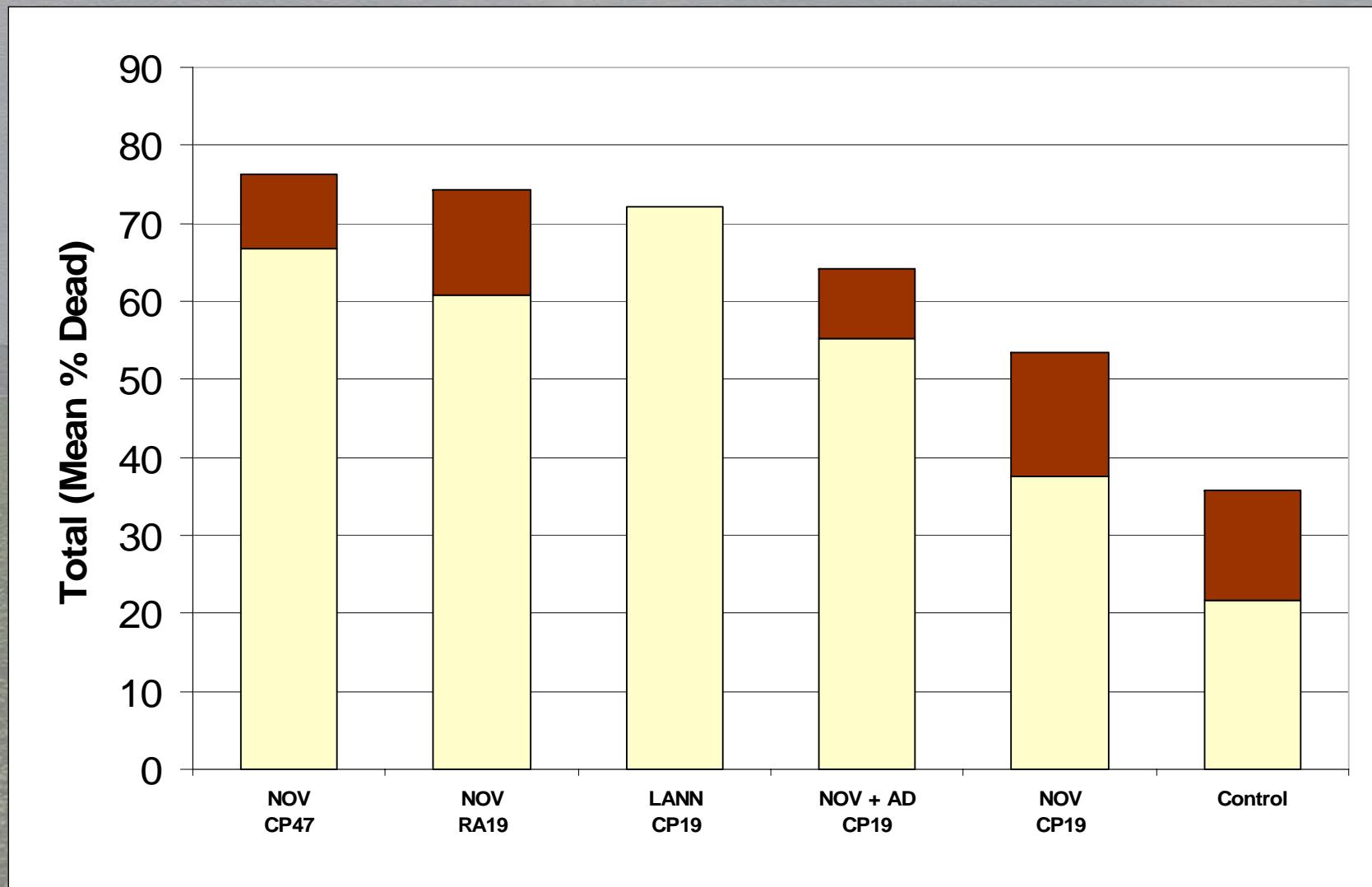
0 Day Post Treatment



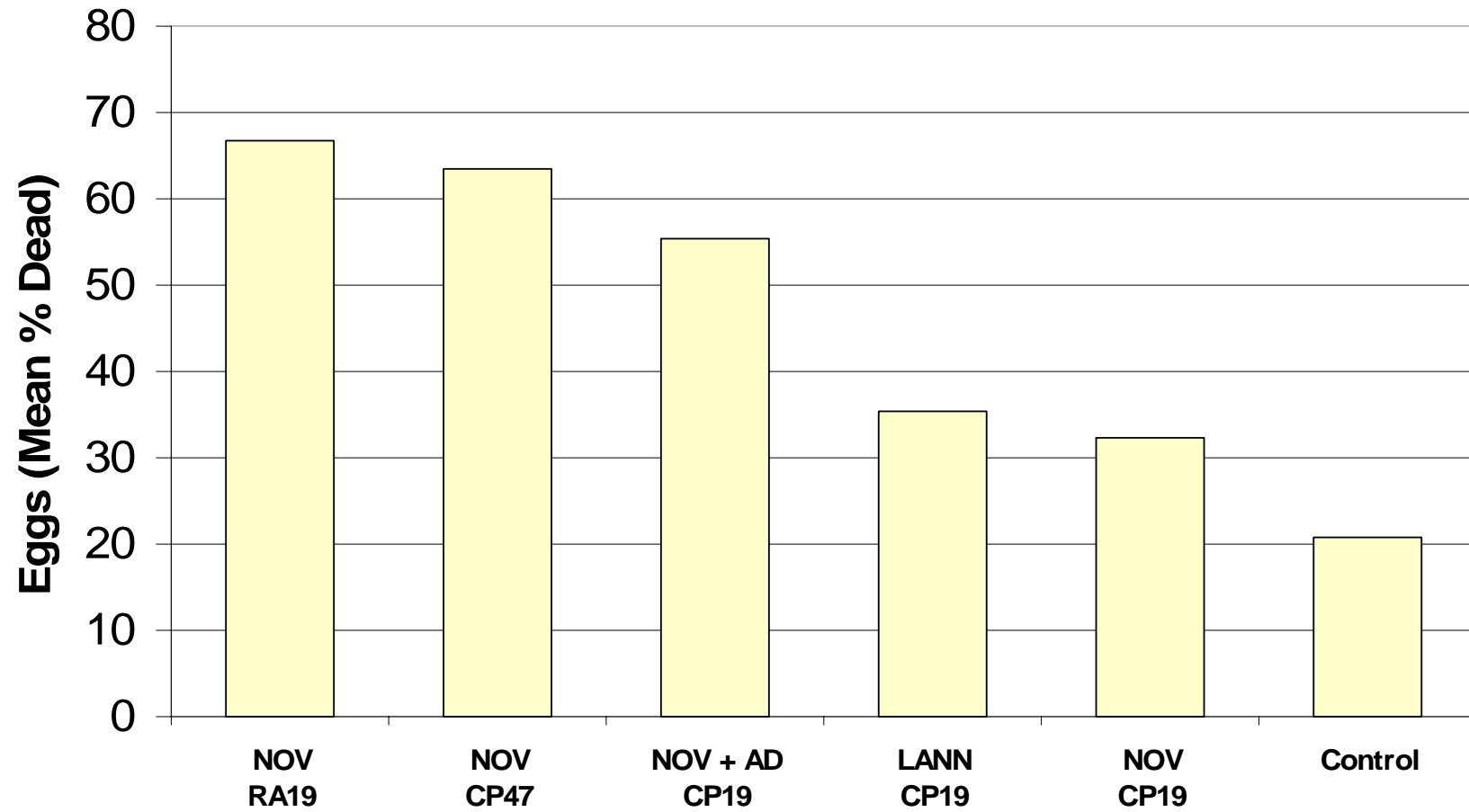
0 Day Post Treatment



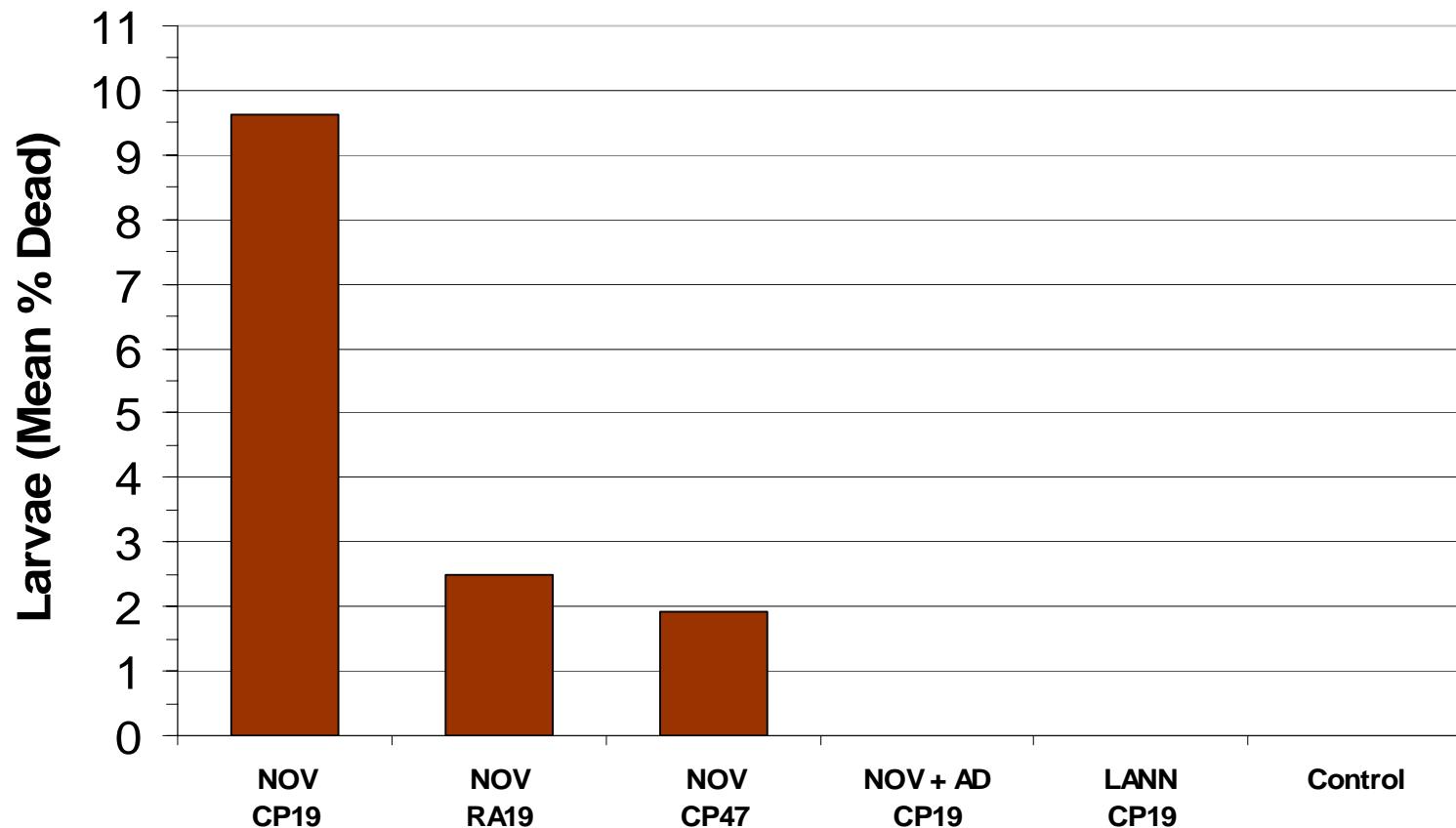
0 Day Post Treatment



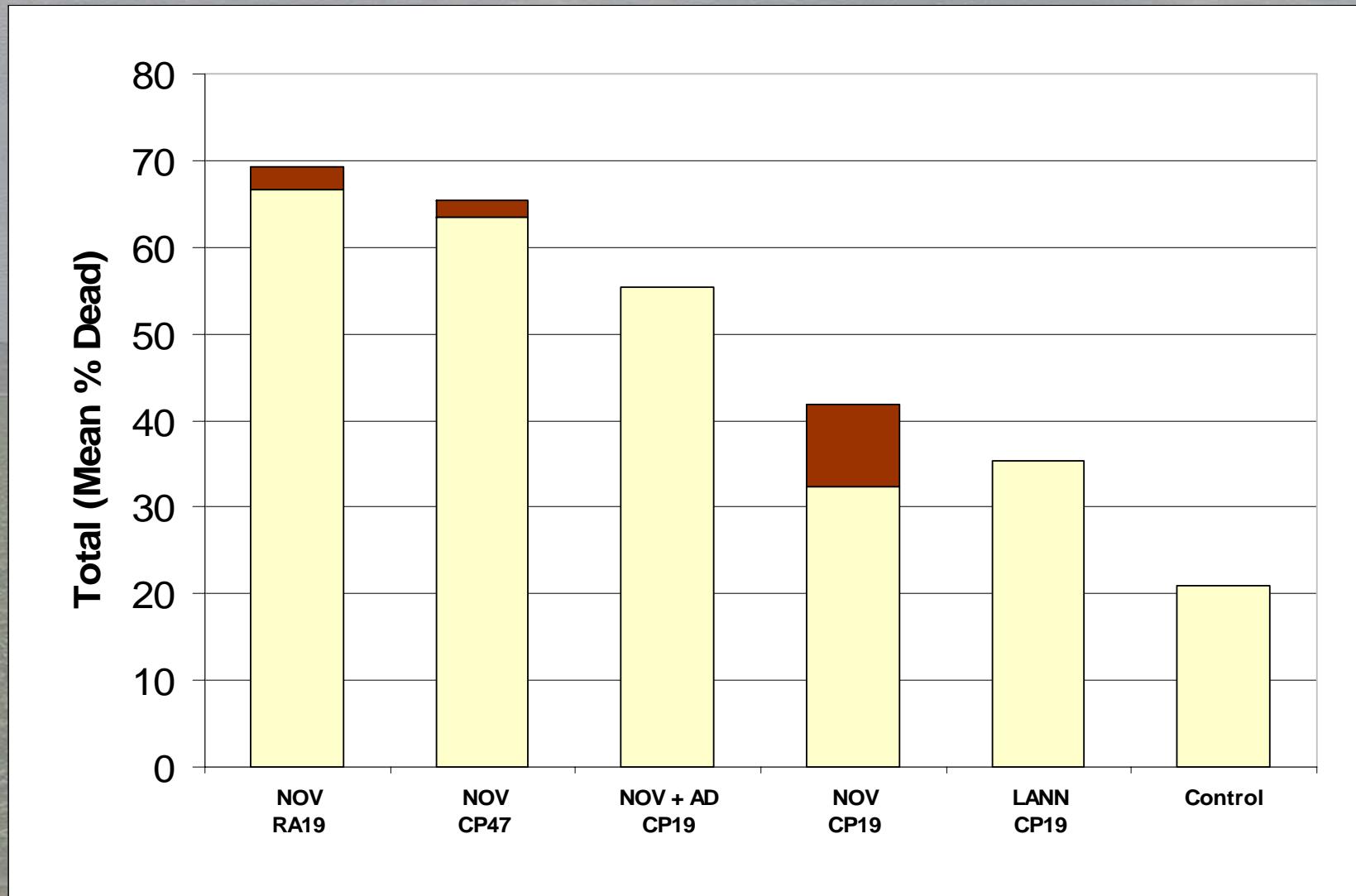
1 Day Post Treatment



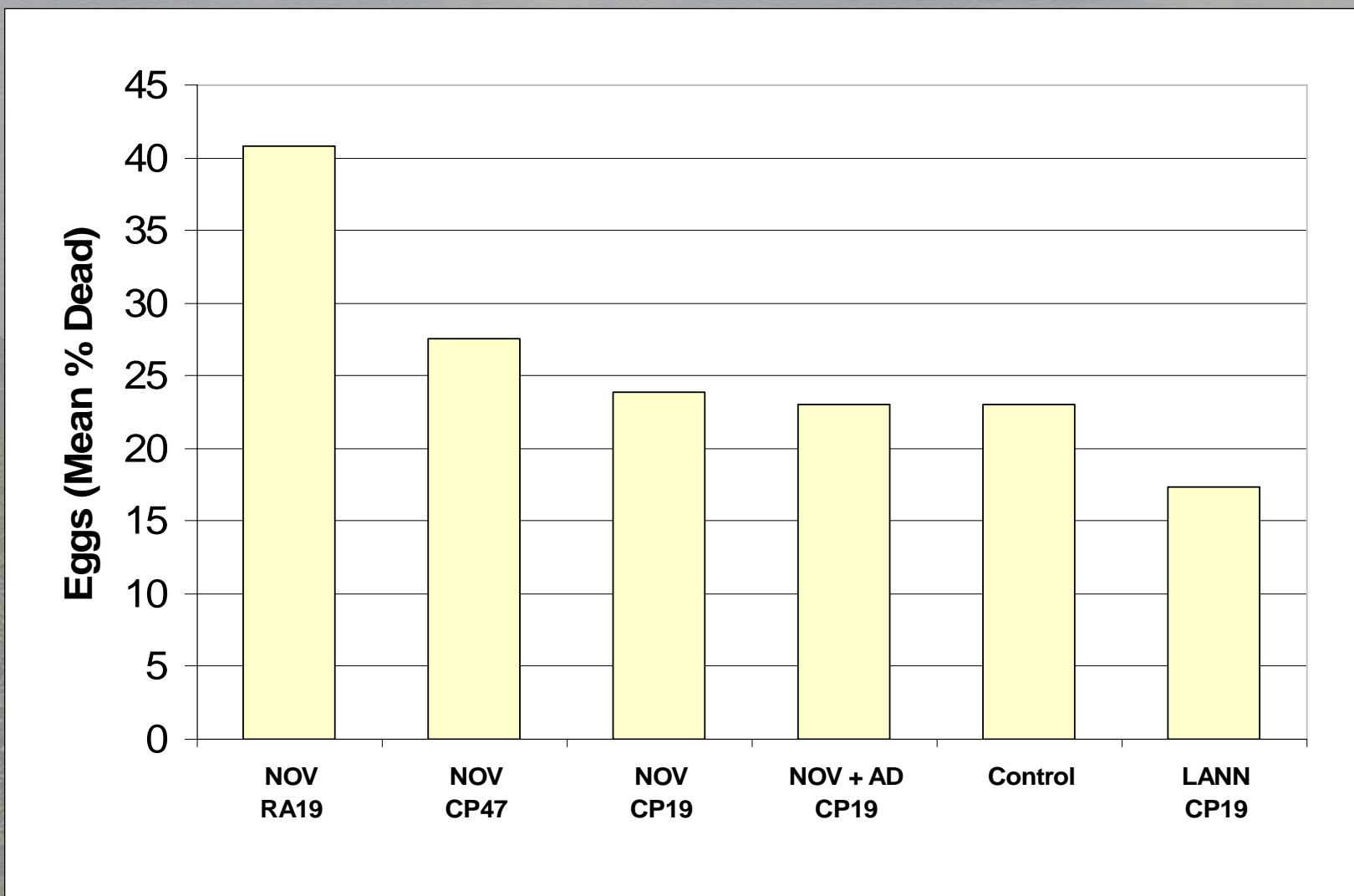
1 Day Post Treatment



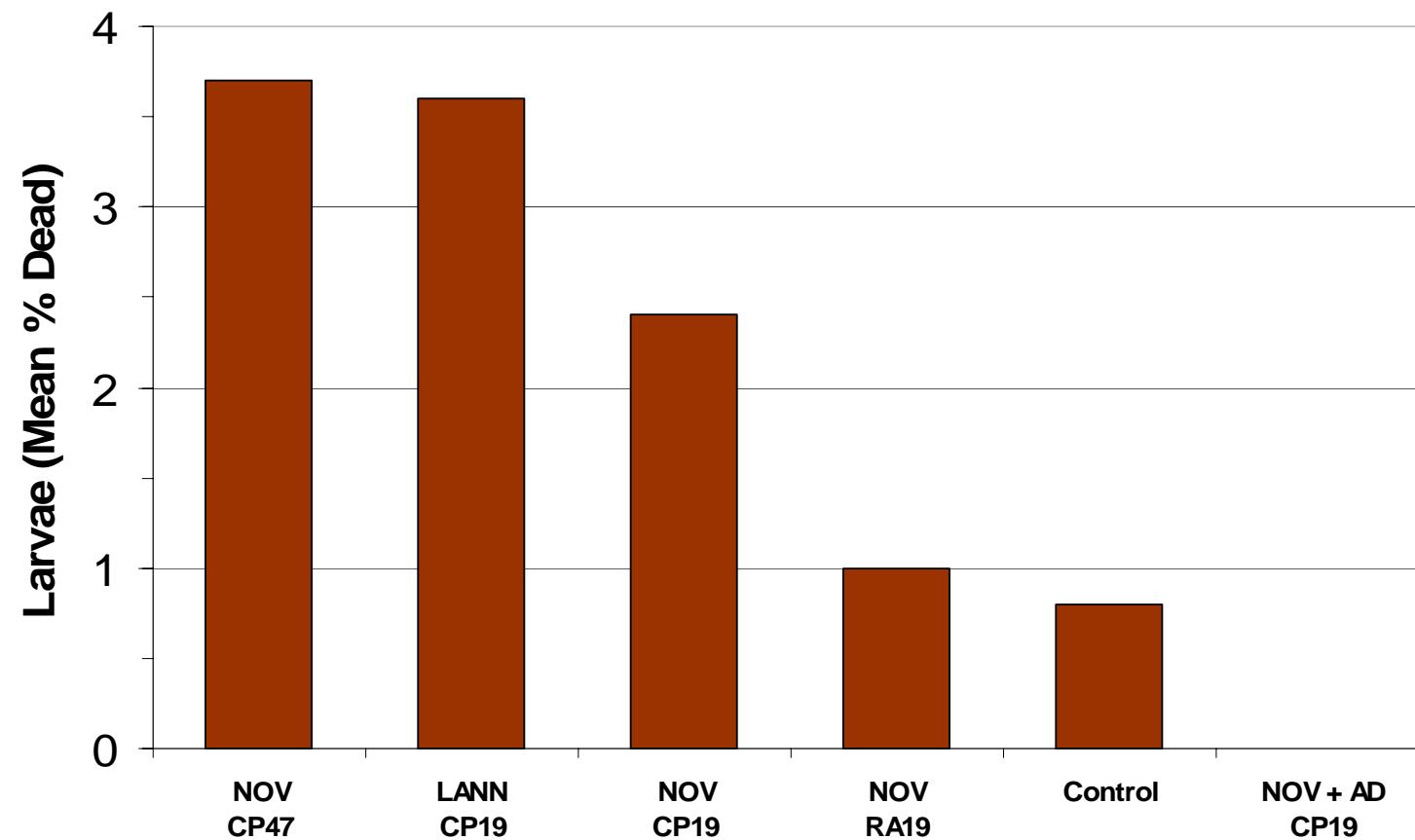
1 Day Post Treatment



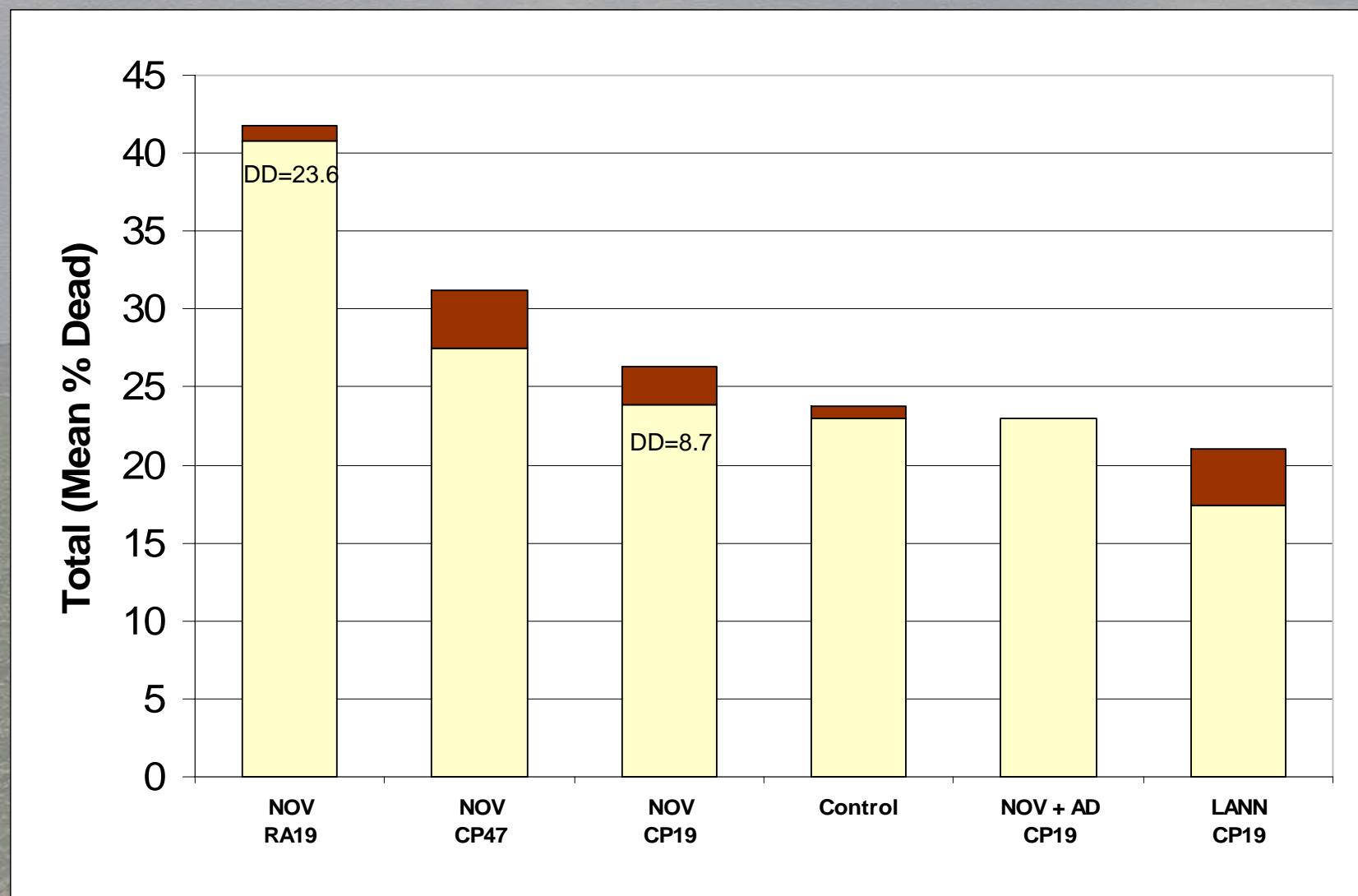
5 Day Post Treatment



5 Day Post Treatment



5 Day Post Treatment



Conclusions

- An increased application rate resulted in higher deposition
- Use of an adjuvant increased deposition
- Novaluron proved to be an effective ovicide for bollworm under field conditions
- Application technologies continue to be an important consideration for deposition and efficacy
- Additional lab, spray table and field testing needs to be conducted to improve guidelines for aerial application

