

geela
Governor's Environmental and
Economic Leadership Award
2008



 **A S T I A**
2008 Cleantech Innovator Award



Natural Products

For Pest Management

 **MarroneTM**
Bio Innovations

Early Stage Insecticides Currently in Development

Russell Blair
Marketing Manager
Marrone Bio Innovations
Davis, CA

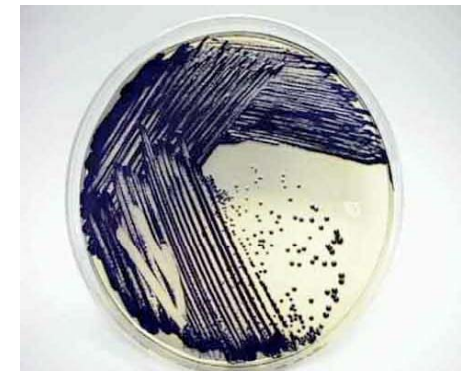
MBI-203

Chromobacterium substugae



Product Description

- Motile, purple-pigmented bacterium isolated from a forest soil in Maryland.
- First new microbacterial since Bt.
- Marrone Bio Innovations has licensed this technology based on a novel species of *Chromobacterium* from USDA and is developing it into a microbial bioinsecticide.



MBI-203

Chromobacterium substugae



Basic Characteristics

- Mode-of-Action - Unknown, but it is not an infectious process.
- Toxicity - No mammalian or avian toxicity.
- Field Testing - Initial field testing in Fall of 2009.

MBI-203

Chromobacterium substugae



Spectrum of Activity - Interesting spectrum of activity from laboratory and greenhouse testing:

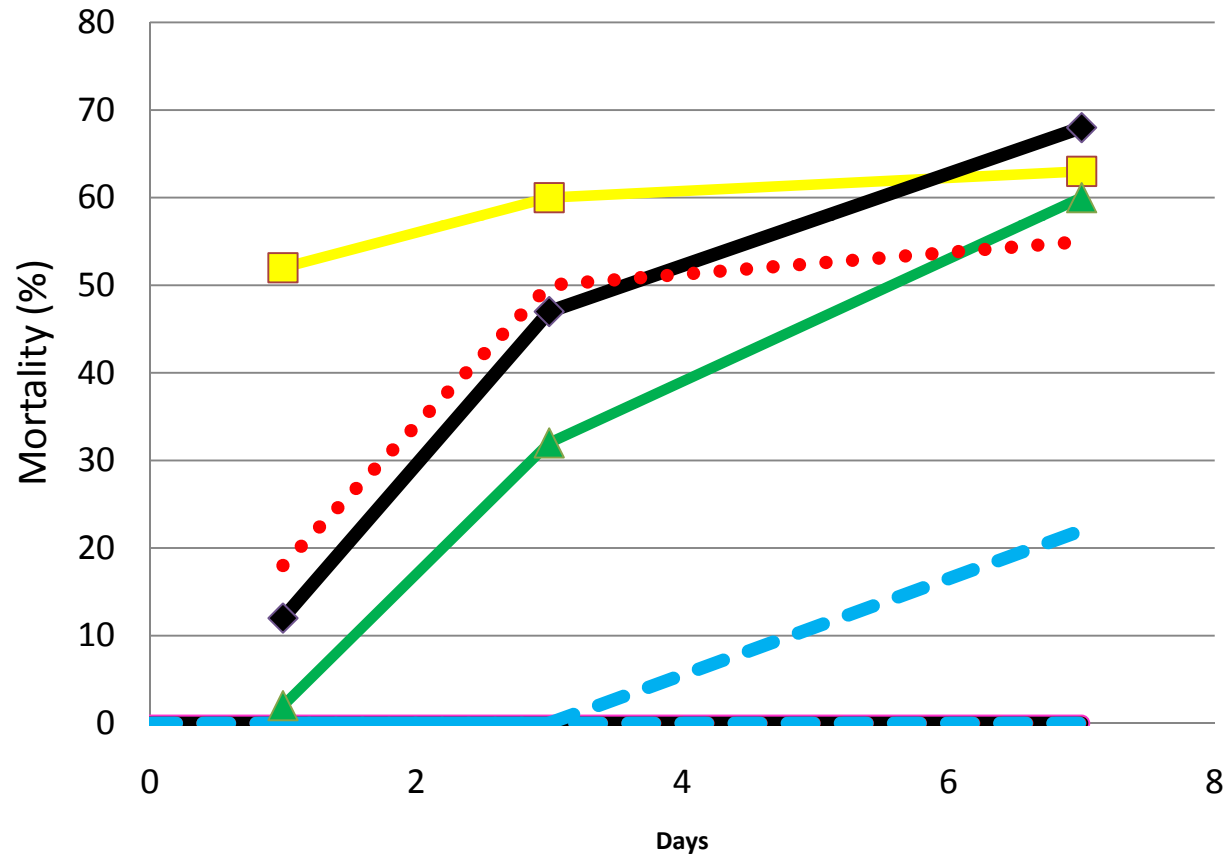
- Coleoptera – Leaf-feeding Coleoptera including Colorado Potato Beetle larvae and Striped Cucumber Beetle adults.
- Lepidoptera (Trichoplusia ni, Plutella xylostella, etc.).
- Aphids and Two-Spotted Spider Mites – Moderate Activity.
- Whiteflies – Currently confirming USDA's initial good lab efficacy data.

MBI-203

Chromobacterium substugae



Two-Spotted Spidermite Mortality



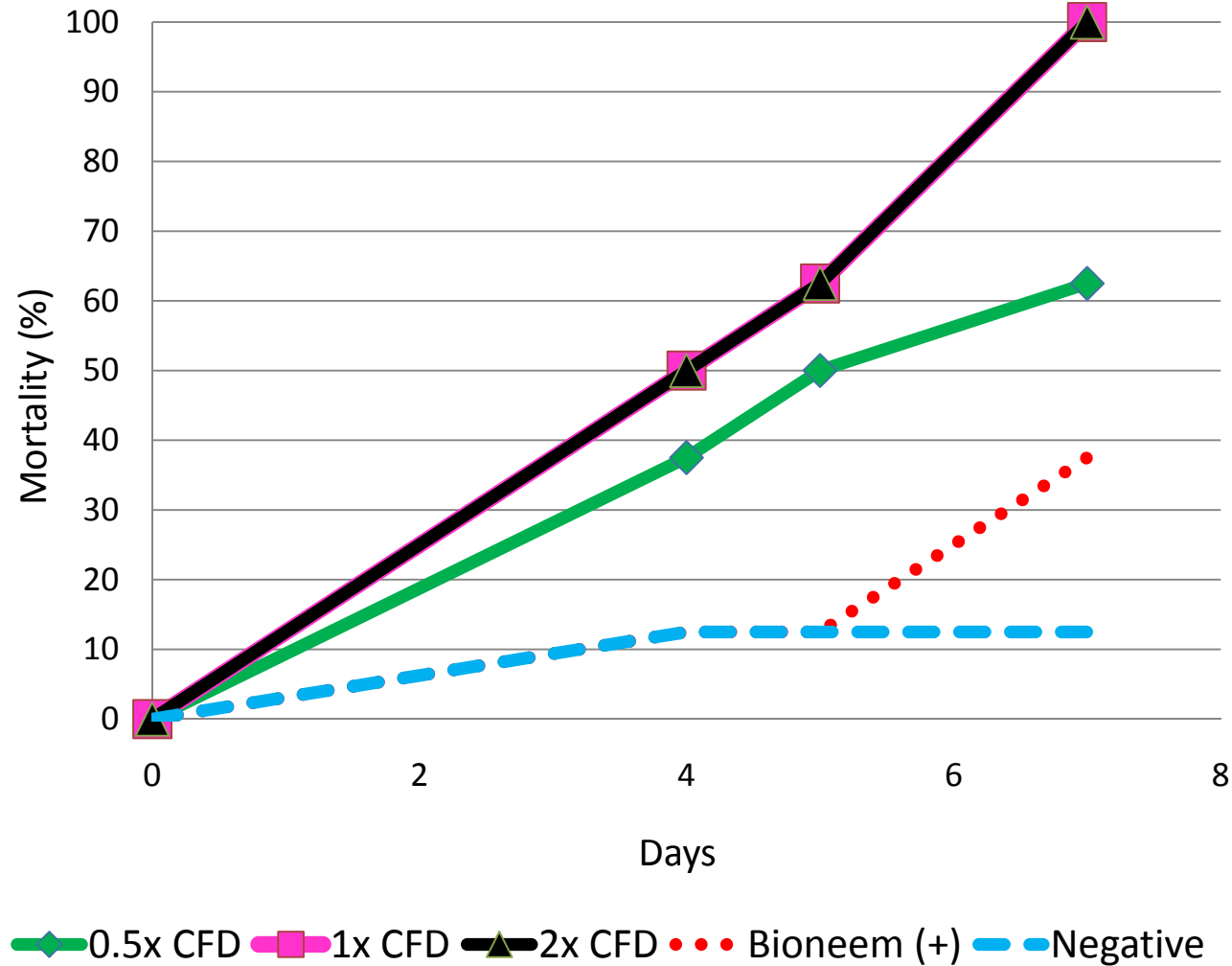
—●— Untreated —■— 0.5x CFD —▲— 1x CFD —◆— 2x CFD ●●● Pylon (+)

MBI-203

Chromobacterium substugae



Tobacco Budworm Mortality Diet Incorporation Assay

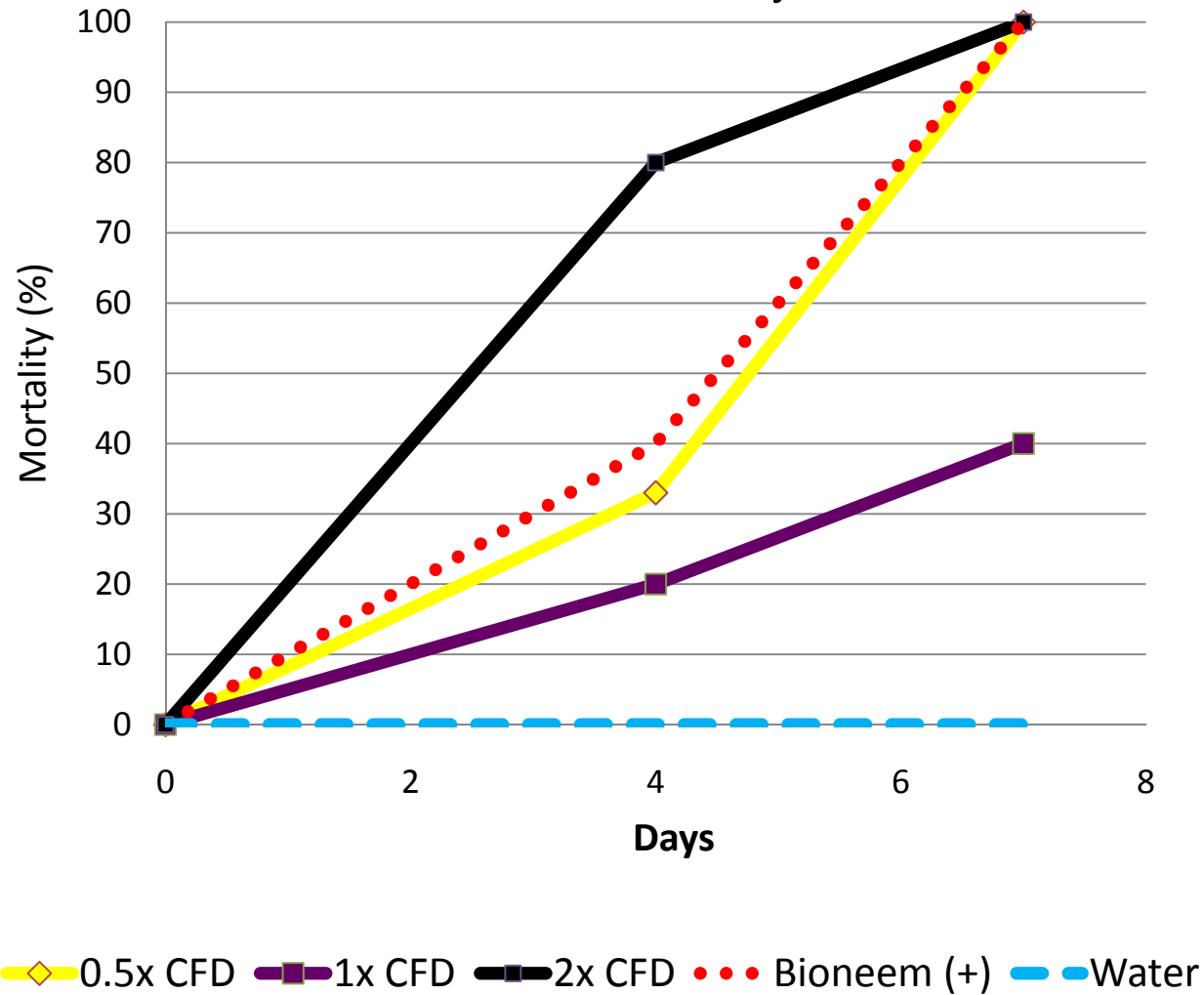


MBI-203

Chromobacterium substugae



Cabbage Looper Mortality Mustard Assay



MBI-205

Eucalyptus sp.



- **Product Description** – Extract of *Eucalyptus sp.* from India
(not eucalyptus oil)
- **Basic Characteristics** - Mode-of-action is feeding inhibitor
- **Spectrum of Activity** - Silverleaf whitefly
Two-spotted spider mite (suppression)
Caterpillars – Broad spectrum
Aphids
- **Field Testing** - Initial field testing in Fall of 2009.



Thank you !

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