College of Natural Resources and the Environment

University of Massachusetts Amherst

Competitive Agricultural Systems in a Global Economy

Modeling the Fate of Genetically Engineered Baculoviruses

Issue

The development of genetically modified organisms (GMOs) that express insecticidal proteins has provided useful tools for use in controlling insect pests. Predicting the environmental fate of these organisms provides an additional measure of safety necessary for the further development of GMOs, including recombinant baculoviruses as efficacious agents do for controlling insects

What has been done?

Many of these GMO including plants with enhanced pest resistance and recombinant insect viruses expressing insecticidal proteins have increased efficacy but could upset natural ecosystems. We have developed a model that can predict the fate and ultimately the environmental impact of genetically modified insect viruses.

Impact

Predicting the environmental fate of these organisms provides an additional measure of safety necessary for the further development of GMOs

Primary impact area(s)

- Research
- Education
- Extension

Funding sources

- National Research Initiative

Topics

- Integrated Pest Management

Contacts

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