

New study may aid rearing of stink bugs for biological control

January 5 2014



A female of *Podisus nigrispinus* is shown preying on a caterpillar of *Plutella xylostella*. Credit: Alessandra Marieli Vacari

Many people think of stink bugs as pests, especially as the brown marmorated stink bug spreads throughout the U.S. However, certain stink bugs are beneficial, such as *Podisus nigrispinus* (Dallas), a predatory stink bug that is considered an important biological control agent for various insect pests of cotton, soybean, tomato, corn, kale, and

other crops.

Now a new study appearing in *Annals of the Entomological Society of America* called "Effect of Egg Rearing Temperature and Storage Time on the Biological Characteristics of the Predatory Stink Bug *Podisus nigrispinus* (Hemiptera: Pentatomidae)" may aid companies that rear these [beneficial insects](#) and the growers who use them in the field. This is the first study to examine the storage technique for the predator *P. nigrispinus* to improve its mass rearing in laboratory conditions without compromising the quality of insects produced.

"Our goal was to evaluate the effect of low temperatures on the biological characteristics of *P. nigrispinus*, with the aim of optimizing mass-rearing programs for this potential [biological control agent](#)," the authors wrote. "The successful storage of [eggs](#) at a low temperature is important for the use of natural enemies in pest control programs, as it allows greater flexibility in the mass-rearing process. It also increases the availability of insects for release in the field at the earliest opportunity."

The researchers found that the optimum temperature for *P. nigrispinus* eggs to be stored is 15 degrees celsius, and that the eggs could be stored for up to 17 days without significantly affecting most of the biological characteristics analyzed in the study.

"Our results suggest that low temperatures can be used to store eggs for mass rearing of this potential [biological control](#) agent," the authors write. "This would allow *P. nigrispinus* to be used in augmentative releases that could be coordinated with pest outbreaks in the field."

More information: *Annals of the Entomological Society of America*.
[DOI: 10.1603/AN13027](https://doi.org/10.1603/AN13027)

Provided by Entomological Society of America

Citation: New study may aid rearing of stink bugs for biological control (2014, January 5)
retrieved 24 April 2024 from <https://phys.org/news/2014-01-aid-rearing-bugs-biological.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.