

Brown Marmorated Stink Bug, here is the solution to visualize the damage on fruits

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Thanks to a work capable of optimizing and automating the recognition of damage caused by the Asian bug on pears, Enrico Giovanella (University of Modena and Reggio Emilia) has been awarded the first prize of the first edition of the AgriFood Future Award for the agricultural stream.

The prize was awarded on May 9 in Salerno during AgriFood Future Research, a specialized event held alongside the national AgriFood Future event promoted by Unioncamere in collaboration with the Salerno Chamber of Commerce. In just two editions, this event has established itself as a primary forum for debating the future of agri-food systems.

The **AgriFood Future** event with the scientific direction of Professor **Alex Giordano**, in 2024 and in 2025, has given life to a series of meetings between businesses, institutions and trade associations, to favor a dialogue between technology, community and food production based on the concept of Foodsystem 5.0.

A concrete stimulus to make in [such] a way that it is not innovations to guide our future, but that technological solutions ensure a sustainable development both from the environmental, social and economic point of view.

With the AgriFood Future Award it was intended to give a further stimulus rewarding, in collaboration with Image Line, those research works capable of proposing an innovation aimed at filling the gap between scientific production and needs of the agri-food system. Concrete studies that face problems and propose solutions implementable by the industry of [the] sector.

The work of Giovanella with the title “**Visualization of damage on pears caused by Halyomorpha halys through multivariate analysis of hyperspectral images in the near infrared**” resulted [as] the best, in the category – Agriculture – for having given an important contribution for the visualization of **damage not detectable to the naked eye** on pears caused by the punctures of the Asian bug, in order to implement sorting systems in post-harvest.

Problems Addressed	Proposed Solutions	Interested Companies
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Difficulty in the early detection of damage from Asian bugs.	Use of hyperspectral imaging in the near infrared to detect damage not visible to the naked eye.	Cooperatives and companies of storage and distribution of fruit.
Economic loss due to the sale of damaged pears or to their exclusion from the market.	Development of an image analysis algorithm to classify healthy and damaged pears.	Fruit transformation industries.
Lack of automated tools for the selection of fruit in post-harvest.	Creation of a dataset to improve the automatic classification and selection of pears.	Producers of technologies for quality control in post-harvest.

Read the complete article on the work of Enrico Giovanella on Agronotizie

<https://agronotizie.imaginenetwork.com/agronomia/2025/02/13/cimice-asiatica-studio-dell-analisi-multivariata-per-visualizzare-i-danni/86732>

Fonte: <https://www.ruralhack.org/en/brown-marmorated-stink-bug-here-is-the-solution-to-visualize-the-damage-on-fruits/>