



- NewsArticlesVideosImagesBooks
- Health & MedicineMind & BrainPlants & AnimalsEarth & ClimateSpace & TimeMatter & EnergyComputers & MathFossils & Ruins

Science News

ShareBlogCite

PrintEmailBookmark

Bioinsecticide To Control The Mediterranean Fruit Fly

ScienceDaily (Oct. 22, 2009) — The Mediterranean fruit fly, *Ceratitis capitata*, is a world plague which represents one of the most serious problems for agriculture. However, the control methods currently present in the market for this plague are ineffective.

See also:

Plants & Animals

- Insects (and Butterflies)
- New Species
- Agriculture and Food

Earth & Climate

- Weather
- Air Quality
- Environmental Issues

Reference

- Fly
- Pest (animal)
- Seed predation
- Cabbage

The research group of the Institute of Biotechnology of the University of Granada (Spain) has isolated and identified a stump of the genus *Bacillus*, extremely toxic for larvae of *C. capitata*. After subjecting such stump to a specific treatment, protected by a patent, they have managed to increase notably its toxicity against this fly.

According to Dr. Susana Vilchez (hired by the *Ramón y Cajal*), the Mediterranean fruit fly has a special economic relevance in the Mediterranean countries, like Spain. Given the capacity of the *C. capitata* to tolerate colder climates than the rest of the species of flies and their wide range of host plants, the *C. capitata* has been considered as one

of the most important species from an economic point of view. This plague attacks more than 260 species of fruits, flowers or nuts of agricultural fruits and it has been estimated that it causes losses assessed in hundreds of millions of dollars annually in the countries where it becomes established.

Biological alternative

Chemical insecticides such as malatión have been traditionally used, but they are not effective for the control of the *C. capitata*. In addition, their use presents a series of drawbacks such as environmental pollution, dangerousness for the staff, the need of safety periods before the commercialization of the fruit, insects-resistance phenomena, etc.

As the European legislation is getting increasingly strict with regard to the use of chemical insecticides -- the use of malatión has been forbidden since June of 2007 -- the alternative of biological control is gaining prominence.

The results obtained by the scientists from Granada are promising, as at present there is not any bio-insecticide in the market based on bacteria and active against this plague. In addition, this is a new technique for the Mediterranean fruit fly, environmentally friendly, non-toxic, easy to produce, and one that can be supplied by conventional methods.

The researchers maintain that the development of a commercial product based on these bacteria will mean an important advance for the agricultural industry.

Adapted from materials provided by University of Granada.

Email or share this story: | More

Need to cite this story in your essay, paper, or report? Use one of the following formats:

☒ APA

University of Granada (2009, October 22). Bioinsecticide To Control The Mediterranean Fruit Fly. *ScienceDaily*. Retrieved October 23, 2009, from http://www.sciencedaily.com/releases/2009/10/091022101655.htm

☐ MLA

Search ScienceDaily

Number of stories in archives: 44,032

Find with keyword(s):

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

Ads by Google

Advertise here

Insects Limited, Inc

800-992-1991 Visit and View our catalog for pest control needs at www.insectslimited.com

Granada Apartments

Holiday Rentals in Andalucia Best prices, Best locations Granada www.visitalltheworld.com/

Sheen Zar Afghanistan

Sheen Zar Agricultural Trading LLC Increase Agriculture capacity www.sheenzar.com

Ads by Google

Advertise here

50 Hotels in Granada

Compare hotels and save up to 75%! Save time, book at Booking.com www.booking.com/Hotels-Granada

High Throughput Screening

Transcreeper Kinase Assay Smart HTS. Discover more now! www.bellbrooklabs.com

Elite car hire in Granada

Car rental at Granada airport all included from 112 € www.elitecargranada.com

Diabetes Articles

Internet review journal on clinical diabetes. Subscript here for free. InternationalDiabetesMonitor.com

Air Quality Instruments

Particulate and Weather Instruments PM and Meteorological Systems www.metone.com

Related Stories



Foreign Fruit Fly Suppression Program Grows In Hawaii

(Jan. 5, 2005) — Fruit grower Hugo Butler of Kula, Maui, used to feed most of his peaches, loquats and persimmons to the hogs because the fruit was too fly-damaged to sell. But that changed once he joined the ... > [read more](#)



Success Controlling Medfly

(July 26, 2005) — A lure developed by the Agricultural Research Service and Suterra LLC is helping keep the Mediterranean fruit fly out of the United States and giving other countries an effective, environmentally ... > [read more](#)



Cold Treatment Kills Fruit Fly On Citrus Fruits

(Dec. 2, 2007) — Cold storage at temperatures of 2° or 3°C can effectively kill Queensland Fruit Fly in citrus stored for 14 to 16 days. This method provides an alternative to methyl bromide fumigation, which ... > [read more](#)



Olive Groves May Be Rescued By Helpful Wasp

(Mar. 7, 2009) — Olives basking in sunny California groves might find that their new best friend is a small brown wasp. Known to scientists as *Psytalia cf. concolor*, the little wasp can help foil the olive fruit ... > [read more](#)

Mediterranean Diet Reduces Long-term Risk Of Subsequent Weight Gain And Obesity Among Adults

(Jan. 23, 2009) — A research group from Spain has studied the dietary patterns associated with a high intake of fruits and vegetables in Mediterranean populations. They have analyzed the associations between fruit and ... > [read more](#)

Just In:

Secrets Of Drought Resistance Revealed

Science Video News

Cloned Apples

Grafting -- an ancient way of cloning plants -- enables plant scientists to create new varieties of apples. The selected genetic traits allow trees. ... > [full story](#)

Physicist Calls for Airline Industry to Educate Workers about Radiation Levels

Mathematicians Show Tricks Behind Ads, Sales Mechanical Engineering Students Develop High-Altitude Reconnaissance Airships

[more science videos](#)



Breaking News

... from NewsDaily.com

DNA clues reopen French boy murder case from 1984

Brief shocks may deliver AIDS vaccines better Fossils of tiny dinosaur on first public display

Experts study thriving HIV "controllers" in vaccine search

World must use GM crops, says UK science academy

[more science news](#)

In Other News ...

Blast heard in Pakistani city of Peshawar: police

Japan PM says no need to rush U.S. base decision

Women Marines want a chance outside the Afghan wire

Calpers reviewing relationship with Apollo: report

U.S. says concerned by Nicaragua election ruling

U.S. arrests 300 in raids on Mexican drug cartel

Microsoft launches Windows 7, eyes PC sales rebound

U.S. airliner loses contact, overflies destination

[more top news](#)



Ads by Google

50 Hotels in Granada

Compare hotels and save up to 75%! Save time, book at Booking.com www.booking.com/Hotels-Gra

Enjoy the Alpujarras

Las Chimeneas offers great rooms Lovely walks and new restaurant alpujarra-tours.com

High Throughput Screening

Transcreeper Kinase Assay Smart HTS. Discover more now! www.bellbrooklabs.com

Elite car hire in Granada

Car rental at Granada airport all included from 112 € www.elitecargranada.com

Air Quality Instruments

Particulate and Weather Instruments PM and Meteorological Systems www.metone.com

Copyright Reuters 2008. See [Restrictions](#).

Free Subscriptions

... from ScienceDaily

Get the latest science news with our free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

[Email Newsletters](#)

[RSS Newsfeeds](#)

Feedback

... we want to hear from you!

Tell us what you think of the new ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

Your Name:

Your Email: