

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

NOVEMBER 13, 2007



## INSIDE

**Are You Covered if Hail or Disaster Strikes Your Farm? . . 1**

**Bee Researchers Close in on Colony Collapse Disorder . . . 2**

**Farmers' Interstate Transportation Impacted by New UCRA. 3**

**Marketing NJ's Peach Crop 2007 with Plans for 2008 . . . . . 4**

**Ten Reasons Why You Should Attend Mid Atlantic Fruit & Veg Convention . . . . . 4**

**Wine Grape Seesion . . . . . 5**

**Calendar of Events . . . . . 5**

**Artisan Distilling Workshop . 6**

**Cider Production - Building Expertise. . . . . 6**

### Are You Covered if Hail or Disaster Strikes Your Farm?

*Win Cowgill, County Agricultural Agent and Kris Smolenski, Program Assistant in Agriculture*

In August, 2007, a disastrous hail storm hit a two square mile area of Hunterdon County, NJ. Fruit, vegetable, nursery, flower and field crop growers were severely impacted with crop losses of up to 95% in some cases. We estimate the crop loss to be in the millions of dollars. Many growers had no crop insurance coverage.

We are working on a disaster declaration through the Farm Service Agency and the Governor's office. Of concern to growers is the proposed conditons in the new Farm Bill under consideration by congress. If growers did not have at least the minimum CAT or NAP coverage **they may not eledgible** for assistance even if a disaster declaration is declared.

**Do not let four minutes of hail change your life, explore crop insurance this fall and at the bare minimum obtain CAT and or NAP coverage.**

**CAT and NAP** - Catastrophic or CAT crop insurance is the minimum coverage available that is subsidized 100% by the federal government. This plan costs a producer \$100 in administrative fees, per crop per county. Producers are given a maximum guarantee based on their actual production history. Actual production histories are calculated by taking the last four successive years of a grower's records and averaging them together. If no records are available from the farm, the county averages will be utilized. Catastrophic crop insurance is sold by private insurance agencies. For more information or a list of insurance agents, contact Kris Smolenski of the Garden State Crop Insurance Education Initiative at 1-800-308-2449.

CAT pays 55% of the USDA's established price of the commodity when crop losses exceed 50% of the set guarantee. This means you have to have lost over 50% of your guaranteed yield and will only get paid 55% of the price election. This is a low level of protection against yield loss.

The Farm Service Agency has a similar program to CAT crop insurance. It is called the Noninsured Crop Disaster Assistance Program or NAP. To be eligible for NAP, crops must be uninsurable under the CAT policy. Contact a crop insurance agent if you have questions regarding whether a crop is insurable in your county. Like CAT, NAP protects against natural disasters and covers losses greater than 50% of the crop's expected production, based on the approved yield and reported acreage. Also like CAT, NAP only pays 55% of the average market price for the specific commodity established by the FSA state committee. To apply for coverage or for further information regarding NAP, contact your local FSA office. □

# Bee Researchers Close in on Colony Collapse Disorder

*Excerpted from The Vegetable & Small Fruit Gazette, October 2007, Volume 11, No. 10*

University Park, PA -- Across the nation, beekeepers have seen hive after hive succumb to Colony Collapse Disorder (CCD); a team of entomologists and infectious disease researchers now report a strong correlation between the occupancy of CCD and a virus, Israeli Acute Paralysis Virus (IAPV).

"We have not proven a causal relationship between any infectious agent and CCD," the researchers report in the Sept. 6 issue of Science Express online. However, they note that the prevalence of IAPV genetic material in bees suffering from CCD, the timing of the outbreaks and the geographical circumstances "indicate that IAPV is a significant marker for CCD."

Many researchers are investigating CCD because domestic honeybees are vital to a variety of agricultural crops in the US. Beekeepers truck their hives cross country to pollinate almond groves in California, field crops and forages in the Midwest, apples and blueberries in the Northeast and citrus in Florida.

Unlike other diseases that have plagued bees in the past, CCD leaves a hive with a few newly hatched adults, a queen and plenty of food. Researchers suspect a pathogen because while bees will not recolonize a CCD hive, once the hive is irradiated and therefore sterile, bees are happy to live there.

The disease was recognized in 2006, but beekeepers reported hive declines similar to CCD as early as 2004. An estimated 23 percent of all beekeeping operations in the U.S. suffered from CCD during the winter of 2006-2007.

After looking at other methods of identifying the cause of the disease, the researchers decided to sequence the genetic material in bees to try to find a potential pathogen.

"The genome of the honeybee had just been completed," said Diana Cox-Foster, professor of entomology, Penn State. "So it was possible to do the sequencing and then eliminate the genetic material of the bees." W. Ian Lipkin, M.D., professor of epidemiology, neurology and pathology at Columbia University and director of the Center for Infection and Immunity at Columbia University Mailman School of Public Health, and his team prepared samples for 454 Life Science -- the company that developed the array-based pyrosequencer -- to sequence cDNA from the RNA of the bees. Researchers analyzed data using a unique set of algorithms generated at Columbia, did a large amount of viral sequence comparison, developed real time PCR assays and cloned the full length IAPV genome, among other things.

The samples sequenced included bees from four geographically separated CCD suffering operations, apparently healthy bees imported from Australia, non-diseased samples from Pennsylvania and Hawaii, and samples of royal jelly imported from China. Royal jelly is secreted by bees and used to feed all larvae, but those fed only with royal jelly become queens.

"We chose bees from Hawaii because at that time, those populations were free of varroa mites, a problem in all mainland hives," says Cox-Foster. "The royal jelly was not intended for bees, but for human consumption and cosmetics, but some beekeepers use it to create new queens."

The researchers grouped material for sequencing as presumed CCD positive, presumed CCD negative and royal jelly. The pooled RNA sequences were analyzed for bacteria, fungi, parasites and viruses matches.

Lipkin played a key role in the search for new or reemerging pathogens, contributing unique methods. The genetic sequences, minus that of the domestic honeybee, were eventually matched against GenBank, a database of genetic sequences maintained by the U.S. National Center for Biology Information, National Institutes of Health. Ninety-six percent of the genetic material matched that previously found in bees. The bacterial sequences were those normally found in bees worldwide, analyzed by Nancy A. Moran, the Regents' professor of ecology and evolutionary biology, University of Arizona, and colleagues and Jay Evans, research entomologist, Bee Research Laboratory, U.S. Department of Agriculture, Agricultural Research Service and colleagues.

"The bacteria found were the same as those found in two previous studies from two different parts of the world at two different times," says Cox-Foster. "They represent mutualistic or symbiotic relationships with the bees, similar to those of humans and the bacteria found in the human gut."

Protozoans and fungi analyzed by Liwang Cui, associate professor of entomology, and David M. Geiser, associate professor of plant pathology, Penn State respectively, were associated with both CCD and non-CCD populations.

"We knew before we started that we would find a boatload of viruses in the bees given our preliminary research," says Cox-Foster. "Eighteen different types are known from serology and antibody work in England." Cox-Foster's and Lipkin's groups analyzed the viruses. They found the expected viruses, and they found one that, while identified by researchers at Hebrew University in 2004, has just now appeared in scientific publication. This virus, IAPV, along with Kashmir bee virus (KBV), was found only in CCD populations. In the initial experiments, the researchers report that "IAPV was found in all four affected operations sampled, in two of

SEE CCD ON PAGE 3

four royal jelly samples and in the Australian sample. KBV was present in three of four CCD operations, but not in the royal jelly."

Other viruses and *Nosema* parasites had been suggested as the cause of CCD, but the researchers found that those pathogens appear in both CCD and non-CCD samples. Only KBV and IAPV correlated with CCD in the genetic survey. In a recently published study, Jeffery S. Pettis, research leader, Bee Research Laboratory, and colleagues reported that *Nosema ceranae* had been in the U.S. for at least 10 years, along with *Nosema apis*. Researchers then analyzed samples collected for 30 CCD colonies and 21 healthy colonies in the past three years for four pathogens: KBV, IAPV and *Nosema apis* and *Nosema ceranae* -- both fungi that infect bees. They found that all samples that had IAPV had KBV, but KBV also occurred in both sick and healthy samples.

"IAPV was found to increase the risk of CCD with a trend for increased CCD risk in samples positive for *Nosema apis*," the researchers said. "Neither KBV nor *N. ceranae* contributed significantly to the risk for CCD nor did they alter the influence of IAPV on CCD." However, while IAPV may be a marker for CCD, proving that any organism is the cause of IAPV is somewhat more difficult. The researchers will now try to infect bee colonies with CCD. Beside general health stress from the heavy load of pathogens normally carried by bees, other suggested contributors to CCD include pesticides, drought and nutritional stress.

Timing also may be the key to pinpointing the cause. The United States began allowing importation of bees from Australia in 2004, which coincides with early reports of CCD. The same year, IAPV, described by Israeli researchers with symptoms of shivering wings, progressed paralysis and bees dying outside the hive appeared. While CCD does not seem to have the same symptoms, this may reflect a different strain of the virus, co-infection with another pathogen or the presence of other stressors.

The researchers note that "the varroa mite, for example, absent in Australia, immunosuppresses bees making them more susceptible to infection by other organisms." Beekeepers used mitocides, chemicals used to control varroa, on both CCD and healthy colonies.

While unquestionably it is important to identify the cause of CCD, this total genetic study of bees and their fellow travelers also may lead to a better understanding of other disease causing agents in the population and to an understanding of the beneficial organisms that reside within the bee.

*Submitted by Jerome L. Frecon, Agricultural Agent. □*

## Farmers' Interstate Transportation Impacted by New Unified Carrier Registration Agreement

According to the Motor Vehicle Commission, the old Single State Registration (SSR) has expired and the new Uniform Carrier Registration (UCR) is now in its place. New Jersey has not adopted the new program and it appears that it will take a statutory change to implement UCR in New Jersey. Under the SSR, only the power unit or tractor is assessed a fee. Under UCR both the power unit and trailer is assessed a fee. Presently there are 34 states enrolled in a UCR program for 2007. A New Jersey motor carrier, motor private carrier (most farms fall in this category), broker, freight forwarder, or leasing company conducting interstate transportation must choose a single base state with which it shall register and pay its UCR agreement fee. In 2007, UCR fees shall be based on the size of the fleet. \$39 for a fleet of 0-2, \$116 for a fleet of 3-5, \$231 for a fleet of 6-20, \$806 for a fleet of 21-100, \$3840 for a fleet of 101-1000, and \$37,500 for a fleet of 1001 or more. Since New Jersey is not enrolled in the program, an entity is required to choose a participating UCR state that is nearest to the location of the entity's principal place of business, for New Jersey that would be New York. PA and DE will be adopting the UCR program as of January 1, 2008. When New Jersey becomes a UCR participating state, the entity shall, effective with the first registration year in which the state is a participating state, choose the state as its base state. Enforcement of the UCR shall commence on November 15, 2007.

**NOTE: You must be registered before November 14, 2007, in order to operate in interstate commerce. To avoid delays, it is highly recommended that you register on-line at the UCR National Web site at [www.ucr.in.gov](http://www.ucr.in.gov) and follow the step-by-step instructions.**

*Prepared by Agricultural Economic Development, NJ Department of Agriculture, in consultation with the NJ Motor Vehicle Commission, October 17, 2007. □*

# Marketing New Jersey's Peach Crop 2007 with Plans for 2008

December 12, 2007

Gloucester County Government  
Services Building  
1200 North Delsea Drive  
Clayton, N.J. 08312

*Sponsored by the New Jersey Peach  
Promotion Council in cooperation with  
Rutgers NJAES Cooperative Extension*

10:00 a.m. Welcome and Introduction  
– Ed Gaventa, Chair, New Jersey  
Peach Promotion Council (NJPPC)

10:10 a.m. Membership and Extra Con-  
tribution by Santo John Maccherone,  
Vice Chair, New Jersey  
Peach Promotion Council

10:20 a.m. New Jersey Wholesale Peach  
Buyers Guide and New Jersey  
Peach Festival by Jerome  
L. Frecon, Agricultural Agent,  
Rutgers NJAES, Cooperative  
Extension

10:35 a.m. Promotional Accomplish-  
ments for 2007 with Empha-  
sis on Advertising, Jersey  
Peaches Web Site, and Peach  
Media Day by Phil Neary,  
Promotions Chair, NJPPC

10:50 a.m. Details and Impact of Promo-  
tional Efforts in 2007 by Pegi  
Adams, Consultant 2007

11:15 a.m. Promotional Ideas for 2008  
by Pegi Adams

11:35 a.m. Perspectives and Other  
Ideas on Promoting the New  
Jersey Peach Crop in 2008  
by Santo John Maccherone  
– Moderator with key input  
from Brokers, Growers, Sales  
Agents, Shippers and Whole-  
salers.

12:00 a.m. Adjourn to Luncheon Cour-  
tesy of the New Jersey Peach  
Promotion Council

Please Pre-register by calling J. Frecon  
or Alice Rogers at 856-307-6450 Ext  
1 or [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu). □

# Ten Reasons Why You Should Attend the Mid Atlantic Fruit and Vegetable Convention in Hershey, PA

*Jerome L. Frecon, Agricultural Agent and William Tietjen,  
Agricultural Agent*

The 2008 Mid Atlantic Fruit and Vegetable Convention will be held on January 29, 30, and 31, 2008 at the Hershey Lodge and Convention Center in Hershey, PA. The meeting is sponsored by the New Jersey State Horticultural Society, The State Horticultural Association of PA, The Pennsylvania Vegetable Growers Association, The Maryland Horticultural Society, Rutgers New Jersey Agricultural Experiment Station Cooperative Extension, The Pennsylvania State University College of Agricultural Sciences, and University of Maryland Cooperative Extension. Other organizations meeting with us include: The National Peach Council, The North American Bramble Growers Association, and the North American Strawberry Growers Association. Further information is available on our web site at <http://gloucester.njaes.rutgers.edu>



Ten reasons to attend this year's meeting are:

1. Attend and learn new technologies in fruit and vegetable production, marketing, and management in 43 sessions over three days;
2. Visit the best and largest tradeshow of fruit and vegetable suppliers with over 145 exhibitors;
3. Relax with your spouse and other family members in the warm and friendly environment of the Hershey Lodge, a great place for a short mid winter vacation for your family. The Hershey link is [http://www.hersheypa.com/accommodations/hershey\\_lodge/](http://www.hersheypa.com/accommodations/hershey_lodge/)
4. Listen to experts from across North America as they discuss many important and timely topics not available at local and regional education meetings;
5. Get involved by joining and supporting your industry organizations that develop and run this large convention.
6. Share your appreciation for Awardees and enjoy the company and good food with other growers and industry at the Fruit and Vegetable Dinner and Recognition Banquet on Tuesday evening;
7. Share the good and the bad of 2007, and plan for 2008 with your peers and 1,800 attendees.
8. Make important business contacts and exchange information that will help you market your business, service or product. One good idea can pay for the three days cost of registration;
9. Earn a large number of pesticide applicator credits and learn how to be a better steward of safety and the environment;
10. Attend concurrent meetings, workshops, receptions and contests not included in the official program;

Registration information is available by contacting Jerome L. Frecon at 856 307-6450 Ext 1, or [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu). □

# Mid Atlantic Fruit & Vegetable Convention Wine Grape Session Hershey Lodge & Convention Center

TUESDAY morning, January 28, 2008 (Empire Room CD)

Moderator: Dr. Dan Ward, Rutgers NJAES Cooperative Extension

8:00 Registration and Visit Exhibitors

9:00 \*Weed Management in Wine Grapes by Dr. Brad Majek, Specialist in Weed Science, Rutgers New Jersey Agricultural Experiment Station, Cooperative Extension”.

9:45 Managing and Assessing Winter Injury on Wine Grapes in Ontario by Ken Slingerland, Tender Fruit & Grape Specialist, Ontario Ministry of Agriculture Food and Rural Affairs, Canada.

10:30 Move to Aztec & Nigerian Rooms

10:45 Mid Atlantic Legislative Affairs Update by Gary Swain, Pennsylvania Farm Bureau.

11:00 KEYNOTE SPEAKER AND TOPIC TO BE DETERMINED

12:00-1:30 Lunch - Great Lobby and Confection Lobby  
Visit Exhibitors

Tuesday Afternoon, January 29, 2008 Empire Room CD

Moderator – Andy Muza, Penn State Cooperative Extension of Erie County

1:30 \*Fruit and Foliar Diseases of Wine Grapes by Dr. Jim Travis, Professor of Plant Pathology, Penn State”.

2:00 \*Stem and Root Diseases of Grape by Dr. Peter Oudemans, Associate Professor of Plant Pathology, Rutgers New Jersey Agricultural Experiment Station”.

2:30 Industry Show and Tell

2:40 Research on Grape Root Borer, Grape Berry Moth and the northward movement of Pierce’s Disease. by Dr. Doug Pfeiffer, Professor of Entomology, Virginia Tech.

3:20 \*Vineyard Technology, the Newest Technology Dr. Andrew Landers, Senior Extension Associate, Ag Engineering, Cornell New York Agricultural Experiment Station.

4:05 Adjourn

**4:15 Board of Directors of New Jersey State Horticultural Society – Greg Donaldson, Presiding**

6:00 Fruit & Vegetable Grower Reception – Chocolate Lobby

7:00 Annual Fruit & Vegetable Growers Dinner Aztec & Nigerian Rooms – Buffet, Recognition, Awards, (Tickets must be purchased)

\* NJ PESTICIDE APPLICATION UNITS WILL BE GIVEN AT THE CONCLUSION OF ALL TREE FRUIT, WINEGRAPE AND SMALL FRUIT SESSIONS.

All information including registration forms of the Wine Grape and other Fruit Sessions will be available in future mailings and publicity, or on our website at: <http://gloucester.njaes.rutgers.edu>

Program Chair: Jerome L. Frecon, Agricultural Agent, Rutgers NJAES Cooperative Extension. ☐

## Calendar of Events

**December 3, 2007 – Apple-Crop Workshop** at the New York State Experiment Station in Geneva, NY. A one-day distillation workshop will be taught by experts from Christian CARL GMBH. The workshop will cover the basic principles and practices of distillation, including hands-on experience with a registration fee of \$190 per person, and includes lunch.

**December 4-6, 2007 – Apple-Crop workshop** at the New York State Experiment Station in Geneva, NY. A three-day short course on Intermediate/Advanced cider making (fermented types) will be offered by Dr. Peter Mitchell. The cost for this short-course is \$625 per person.

For those wanting more detailed information about either of these courses, please contact Dr. Peter Mitchell at [im13@cornell.edu](mailto:im13@cornell.edu).

**December 12, 2007 - Marketing New Jersey’s Peach Crop 2007 with Plans for 2008**, Gloucester County Government Services Building, 1200 North Delsea Drive, Clayton, N.J. Contact: J. Frecon or Alice Rogers at 856-307-6450 Ext 1 or [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu).

**January 29-31, 2008 - Mid Atlantic Fruit and Vegetable Convention**, Hershey, PA. Contact: Jerome L. Frecon at 856 307-6450 Ext 1, or [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu)

# “Artisan Distilling Workshop at Geneva Experiment Station”

One-Day Short Course on Monday,  
December 3, 2007

*A cooperation of Cornell University, Department of Food Science and Technology, New York State Agricultural Experiment Station, Geneva and Christian CARL Ing., GmbH, Göppingen, Germany*

## Speakers

Alexander Plank, Christian CARL GmbH, Germany  
Nicolas Haase, Brewing & Distilling Technologies, Corp.

## Location

New York State Agricultural Experiment Station, Geneva, NY  
Food Research Laboratory, Room 251 (Conference Room, 2<sup>nd</sup> floor)

## Price

\$ 170.00 – Members of NYS Wine Grape Foundation.  
All others - \$ 190.00.  
Includes hand-outs, morning refreshments and lunch.

## Registration Details

Registration must include payment by November 21, 2007.

Make check or money order payable to “NYSAES”.

For an agenda, or questions about lodging please call Nancy Long at 315-787-2288 between the hours of 8.30 am and 1.00 pm or email her at [NPL1@nysaes.cornell.edu](mailto:NPL1@nysaes.cornell.edu)

Send registration form along with payment to:

Nancy Long  
630 W. North Street, Cornell University/NYSAES,  
Geneva, NY 14456

# Cider Production – Building Expertise

December 4 – 6, 2007

NYS Agricultural Experiment Station  
Food Research Lab  
630 W. North Street, Geneva, NY 14456

*Sponsored by Cornell University NYSAES, Department of Food Science & Technology*

## Instructor

Peter Mitchell from Mitchell Food & Drink, Ltd. United Kingdom is a highly qualified and internationally recognized expert in cider and perry making, with over 20 years of experience and an award-winning producer in his own right.

Limited to 20 attendees – Please register early!

The Course Cost is \$625. This cost includes the course material and supplies, lunch, and coffee breaks. Lodging is up to the participants.

For an agenda, or questions about lodging please call Nancy Long at 315-787-2288 between the hours of 8.30 am and 1.00 pm or email her at [NPL1@nysaes.cornell.edu](mailto:NPL1@nysaes.cornell.edu)

Send registration form along with payment to:

Nancy Long  
630 W. North Street, Cornell University/NYSAES,  
Geneva, NY 14456

**RUTGERS**

New Jersey Agricultural  
Experiment Station

Plant & Pest Advisory  
Rutgers School of Environmental  
and Biological Sciences  
ASB II, 57 US Hwy. 1  
New Brunswick, N.J. 08901

FIRST CLASS  
POSTAGE PAID  
PERMIT #576  
MILLTOWN, NJ 08850

## **PLANT & PEST ADVISORY** FRUIT EDITION - CONTRIBUTORS

### **Rutgers Cooperative Extension (RCE) Specialists and Program Associate**

George Hamilton, Ph.D., Pest Management  
Norman Lalancette, Ph.D., Plant Pathology  
Bradley A. Majek, Ph.D., Weed Science  
Peter Oudemans, Ph.D., Small Fruit Plant Pathology  
Cesar Rodriguez-Saona, Ph.D., Cranberry/Blueberry Entomology  
Peter W. Shearer, Ph.D., Entomology  
Daniel Ward, Ph.D., Pomology  
Gail Lokaj, Program Associate in Pomology

### **Rutgers NJAES**

Joseph Goffreda, Ph.D., Breeding

### **RCE Agricultural Agents and Program Associates**

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)  
Gloucester County, Jerome L. Frecon (856-307-6450)  
Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)  
Morris County, Peter J. Nitzsche (973-285-8300)  
Passaic, Elaine F. Barbour, Agric. Assistant (973-305-5740)  
Warren County, William H. Tietjen (908-475-6505)  
Fruit IPM, Dean Polk (609-758-7311)  
Atanas Atanassov, Ph.D., Program Associate (908-788-1338)  
Gene Rizio, Program Associate (856-566-2900)  
David Schmitt, Program Associate (856-307-6450)

### **Newsletter Production**

Jack Rabin, Associate Director for Farm Services, NJAES  
Cindy Rovins, Agricultural Communications Editor

**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

**Use of Trade Names:** No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

**Reproduction of Articles:** RCE invites reproduction of individual articles, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

For back issues, visit our web site at:  
[www.rce.rutgers.edu/pubs/plantandpestadvisory](http://www.rce.rutgers.edu/pubs/plantandpestadvisory)