

# What's in Season from the Garden State

Biweekly Highlights from Cooperative Extension, a unit of Rutgers New Jersey Agricultural Experiment Station

July 23, 2009

New Jersey Department of  
Agriculture's Jersey Fresh &  
Seafood Availability Report



Arugula  
Baby Arugula &  
Baby Spinach  
Basil  
Beets  
Blueberries  
Cabbage  
Cilantro  
Collards  
Cucumbers  
Dandelions  
Dill  
Eggplant  
Kale  
Leeks  
Mint  
Parsley  
Peaches  
Peppers  
Squash  
Sweet Corn  
Swiss Chard  
Tomatoes  
Turnips

Atlantic Bonito  
Bluefish  
Bunker (Menhaden)  
Butterfish  
Flounder  
Fluke  
Ling  
Lobster  
Mahi-Mahi  
Monktail (Day Boat Gill Net)  
Scup (Porgies)  
Sea Eel  
Sea Scallops (Day Boat)  
Skate Wings  
Squid  
Tilefish  
Whiting  
**Farm Raised  
Hard Clams &  
Oysters**  
Littlenecks/Middlenecks  
Cherrystones,  
Chowders, Top-necks  
Cape May Salt  
Oysters  
Delaware Bay  
Oysters

**Forecast:**  
White Potatoes

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New Jersey Agricultural  
Experiment Station

## Peaches Make Public Enemy No. 1 List – *Not in Jersey*

The Environmental Working Group (EWG), a non-profit consumer advocacy organization, publishes an annual Shopper's Guide to Pesticides (<http://www.foodnews.org>). The guide lists 47 common fruits and vegetables and ranks them according to which have the most pesticide residues detected. They look at several criteria including number of pesticides found on samples, percentage of samples with detectable pesticides, etc. They then rate them in terms of those most contaminated and least contaminated. The number one item on their most contaminated list is Peaches. Nectarines come in as number five.

Yikes! This is disconcerting news for those of us looking forward to biting into juicy delicious Jersey peaches this summer. What does this mean for Jersey peach lovers?

First, let's look at EWG's recommendations: "Rinsing reduces but does not eliminate pesticides. Peeling helps, but invaluable nutrients often go down the drain with the skin. The best approach: eat a varied diet, rinse all produce and buy organic when possible."

The bad news is that buying an organic peach is not always possible. Unless you live in a dry, Mediterranean-like climate, delicate-skinned, juicy peaches cannot be grown organically without being damaged (or destroyed) by fruit rots.

The good news is that most New Jersey peaches are grown using methods that minimize pesticide use and testing for residues have confirmed that New Jersey peaches have low to undetectable levels. Rutgers NJAES Integrated Pest Management (IPM) program for fruit enrolls most of the peach, apple and blueberry growers in the state. Every week during the growing season, Dean Polk, Rutgers NJAES IPM Fruit Agent and the IPM staff are busy counting bugs, crunching numbers, reviewing data and making recommendations for whether to spray or not to spray, what to spray and when, what biological controls are possible, and what other less toxic, biologically-based options are possible.

As Polk explains, "It costs money to use pesticides – it can cost a grower \$1/4 million per year. Using IPM methods can save growers 20% or more of the costs through more efficient and reduced pesticide use." Polk points out that while most states using IPM programs provide growers with guidance, New Jersey's program is unique in that it involves a farm scouting component. That means that the farmers enrolled in the program receive weekly reports of what pests are actually on their farms (through trap counts) and recommendations specific to their farm.

Polk lists a number of ways that the IPM program helps growers reduce sprays versus conventional methods:

- Threshold levels – if insect population pressure is below a certain levels, sprays are not recommended.
- By reviewing the insect pressure and the pesticide application labels, the IPM program strives to recommend the lowest effective rate for the longest time possible between applications.
- By looking at temperatures and heat unit accumulations in terms of degree days,

*Continued on page 2*



Extension Agent Bill Tietjen inspects a sex pheromone trap used for monitoring insect activity. Monitoring helps time controls, reduce insecticide use, and prevent tree and fruit damage.

**RUTGERS COOPERATIVE EXTENSION**

## This Farm Practices IPM - Integrated Pest Management

**What is Integrated Pest Management?**  
A practice using all available means to manage pests below damaging levels.

**Goal** - To maintain crop quality in a manner that is environmentally sustainable and economically viable.

**IPM Methods**

- **Field Monitoring**  
Scouting to detect and quantify pest activity  
Weather and degree-day pest models
- **Pest Biology and Behavior**  
Manage pests, beneficial insects & their environment
- **Biological Control**  
Predators, parasites & pathogens suppress pests
- **Cultural Practices**  
Pruning, plant nutrition  
Removing alternate pest hosts  
Managing groundcover  
Disease resistant varieties
- **Use of Selective Pesticides**  
Control pests & not harm beneficials

**Advantages of IPM**

- Pest populations are recognized before they become a problem.
- Overuse of chemicals and fertilizers is avoided.
- Better predator populations lead to increased biological control.
- Reduced dependence on chemicals leads to a more sustainable agriculture.



Dan Ward displays peaches grown in bags.

an insect life cycle can be modeled and applications timed to the most vulnerable point in its life cycle for increased efficacy, and reduced insecticide use.

- Mating disruption is the use of synthetic insect sex pheromones placed in the orchard to prevent or delay mating, and can replace the use of chemical insecticides.
- Cultural practices such as ground cover management and pruning practices that reduce insect populations are recommended.
- Environmental monitoring of disease infection periods. Fungicides are used only when environmental conditions are favorable for infection and eliminated during periods of unfavorable conditions.
- IPM practice recommendations provide growers with alternative programs, so that when pesticides are used, the grower avoids the occurrence of pesticide resistant pest populations. This keeps use rates low, and avoids additional pesticide applications.

To determine if IPM practices were indeed reducing the amount of pesticides on fruit, Polk and fellow Rutgers researchers conducted a study in cooperation with the New Jersey Department of Environmental Protection (DEP). They measured pesticide residues on New Jersey fruit grown using different IPM practices and found that not only were all of the fruit below the federal tolerance level established by the US Environmental Protection Agency, they also found that there were no detectable residues from a number of pesticides commonly in use by US peach growers. More good news for New Jersey residents – DEP published two food monitoring reports (for 2000 – 2003 and 2004 – 2006) measuring pesticide residues in New Jersey produce. The results found that the majority of the residue detections were well below the established guidelines. The report concluded that data collected “demonstrates the high quality of the produce being sold at roadside markets throughout New Jersey”. The reports are available at:

<http://www.nj.gov/dep/enforcement/pcp/pcp-pubs.htm>.

While most New Jersey peach growers practice IPM, you can look for the “This Farm Practices IPM” poster at farm markets, or ask the grower what kind of IPM practices they use on their farm when you are buying your peaches and nectarines.

Finally, an advantage of local produce is they do not require post harvest fungicide applications that fruit that travels across the country receive. Jersey peaches destined for local markets are “hydro-cooled” with chlorinated water for post harvest cleaning and cooling.

Naturally, consumers wonder how effective washing fruit is, and if the produce wash products work well. Connecticut Agricultural Experiment Station conducted a study of different washing methods, and found that washing and rubbing the fruit in plain water removed most of the pesticide residues, while the washes or dish soap did not remove more than water and rubbing. The study “Removal of Trace Pesticide Residues from Produce” is available here:

<http://www.ct.gov/caes/cwp/view.asp?a=2815&q=376676>.

And finally, while organically grown peaches are not commonly available to us, the next best thing may be on the horizon soon – peaches grown in bags. This practice, which has been done successfully in a number of other countries, is being studied for the first time in the US on peaches, nectarines and grapes by Dr. Dan Ward, Rutgers NJAES Specialist in Pomology. Paper bags are placed over the individual peaches in the tree and not only do they protect the peaches from insect and disease damage, they also protect them from pesticide sprays. According to Ward, the bags can also enhance the finish of the fruit, especially on nectarines, and different color bags can lighten or darken the fruit accordingly. Other countries such as Spain claim the bagged peaches have better flavor and aroma and consider them a delicacy. Ward hopes to have more bagged peaches test marketed next year (one NJ grower is growing them this year), depending on grower interest.

Where to find Jersey Fresh? Ask for it where you shop or dine or go to:  
<http://www.jerseyfresh.nj.gov>

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