

What's in Season from the Garden State

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

September 20, 2010

Jersey Local, Exotic and Native (*Food, that is*)

The mere thought of *Jersey Fresh* fare invokes images of farm stands laden with harvests from fields and orchards: tomatoes, eggplants, peaches, apples, corn, melons, and cranberries. Some of these products are ancestors of species native to New Jersey such as blueberries and cranberries, while others, such as tomatoes and peaches, are imports, using varieties developed to suit our region. But beyond our farms, delving deeper into the wild, we find native species of trees that bear delicious, nutritious fruits and nuts – almost unheard of or forgotten by most of us who may pass them on a country or shore road. Some may even surprise you that they indeed grow in New Jersey.

Persimmon and Paw Paw

It's rare to see a paw paw fruit in markets, but many produce retailers have two Asian varieties of commercially grown persimmons. Naturalists say that the wild persimmon (American persimmon) is a special treat different than the Asian varieties. It is ripe in the fall, but is a challenge to catch at its peak – not ripe enough manifests the pucker persimmons are known for, while overripe persimmons are mushy. Persimmon fruit can hang on a tree for more than a month before it drops. This extended harvest season and the ripe fruit's extreme softness does not make the American persimmon appealing as a commercial product, but may perhaps have a place in local farm markets, or grown in home gardens.

Dr. Joseph Heckman, Extension Specialist in Soil Fertility at Rutgers NJAES grows persimmons on his small farm, in addition to paw paw. Dr. Heckman does encourage New Jersey growers to consider the paw paw as an addition to fall seasonal products in local markets.

The large fruit which ripens in September has a tropical-like flavor reminiscent of a combination of pineapple, mango, and banana custard. Dr. Heckman has established plantings of pawpaw at two Rutgers NJAES research farms and he reports, "From my experience pawpaw is an easy tree to grow. I have never sprayed any of my trees and have never had a pest problem. I think pawpaw may be an especially easy crop to produce organically."

Kentucky State University is conducting a research program on pawpaw and provides a wide range of materials on their website: <http://www.pawpaw.kysu.edu>.

Taming the Wild Beach Plum

The great eats at the Jersey Shore aren't just the seafood - there's an edible treat that grows right on our sandy beaches. Rutgers NJAES Cooperative Extension agricultural agent for Cape May County, Jenny Carleo, describes the beach plum: "A native of the Atlantic coast, nowadays

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*Jersey Native Fruits: Top: Persimmon;
Middle: Paw Paw; Bottom: Beach Plum*



New Eastern Filbert Blight resistant hazelnut developed at Rutgers.



Nut clusters of purple-leaf ornamental hazelnut developed at Rutgers.

the beach plum plant is prized for its dune retaining and restoring capabilities and its incredulous salt and wind tolerance. Only the most fortunate coastal dwellers and patrons are intimately familiar with its jewel-toned fruits, which range from deepest purple to cherry red to the rarely stumbled upon yellow. There are a few planted orchards in New Jersey, New England and even Michigan, but native beach plum plants are abundant on the Atlantic seaboard from Maine to Virginia.

Although the fresh fruit (with pit) is an acquired taste, one need not have the affinity for tartness and acidity that cherishers of the fresh drupes must have. To me there is nothing like the taste of beach plum jam atop a buttery, toasted English muffin on a sunny autumn morning.”

According to research conducted by Rutgers scientists Dr. Amy Howell, Dr. Brad Hillman and Jenny Carleo, with support from the Cape May County Beach Plum Association, beach plums exhibit health promoting properties similar to the benefits of blueberries and cranberries.

The similarities, according to Carleo, are as follows: “Cranberries are now widely known for preventing urinary tract infections. Cranberries and beach plums have specific, unique tannins called proanthocyanidins (PACs) that have “bacterial anti-adhesion activity”: the ability to prevent E. coli from sticking to cells in the body thus preventing infection.

Blueberries and beach plums have anti-oxidant properties in common. In fact, some of the samples of beach plums tested have an even higher level of anti-oxidants than blueberries, cranberries and even other plums with notable levels of anti-oxidants. Even more impressive is that a small portion of the samples tested exhibited both high levels of PACs as well as bioactivity, including anti-oxidant activity.”

Beach plums are also of interest to Rutgers NJAES plant breeder, Dr. Joe Goffreda. Originally interested in hybridizing to apricots to make plumcots, the progeny were generally sterile, and the few plants that were fertile had fruit that were small, like the beach plum. His program continued to backcross the best fertile hybrids to apricot, while still battling problems with infertility. There is, however, potential for these crosses as ornamental landscape plants since some of the sterile hybrids produce attractive flowers with very heavy flower bud density and an interesting spreading growth habit.

Goffreda’s breeding program is also developing clonally propagated beach plum cultivars for commercial fruit production. The major breeding objectives include increasing plant vigor, selecting plants that bear heavy crops annually, increasing fruit size, and selecting plants that produce high quality fruit that are rich in antioxidants and other beneficial phytonutrients.

To read more about the beach plum, see our back issue of this newsletter: <http://www.njfarmfresh.rutgers.edu/pdfs/WhatsinSeason9-17-07.pdf>

Tough Nuts to Crack: Breeding Hazelnuts and Pecans for Jersey Farms or Gardens

Unlike pecans, which are not native to New Jersey, native hazelnuts grow here more as a spreading shrub, however it is the taller European variety which is pruned to a single trunk tree that is grown commercially. The

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**New Jersey Department of
Agriculture's Jersey Fresh
Availability Report**

Apples	Mint
Arugula	Parsley
Baby Arugula & Spinach	Peppers
Basil	Spinach
Beets	Squash
Cabbage	Sweet Corn
Cilantro	Sweet Potatoes
Collards	Swiss Chard
Cucumbers	Tomatoes
Dandelions	White Cranberries
Dill	White Potatoes
Escarol/Endive	
Eggplant	
Kale	
Leeks	
Lettuces	



**Native Edible Fruit and
Nuts of New Jersey**

- American walnut
- American Chestnut
- beach plum
- beechnut
- hazelnut
- hickory
- mulberry
- paw paw
- persimmon
- red mulberry
- blueberry
- blackberry
- grape
- cranberry
- elderberry
- raspberry
- strawberry

Source: *The Native Plant Society of
New Jersey* <http://www.npsnj.org>

US contributes only a small part of the worldwide hazelnut (a.k.a. filberts) production, with the commercial crop grown mainly in Oregon.

The European variety of hazelnut is favored because it produces large nuts with thin shells and high quality kernels, whereas the North American hazelnut produces tiny, thick shelled nuts.

The conundrum, as is often the case with imported species of plants, is that they are not resistant to disease, the way native species are. Such is the case with the European hazelnut, susceptible to Eastern Filbert Blight, while the North American hazelnuts are resistant. Also lacking in cold tolerance, the suitability as a commercial crop in New Jersey doesn't currently make the European hazelnut a good candidate. However, Dr. Thomas Molnar, a plant breeder at Rutgers NJAES sees the potential of hazelnut as a suitable crop for New Jersey. According to Molnar, "Hazelnuts, compared to other species, are a very low-input crop, needing very little to no supplemental irrigation, pesticide or fungicides. They can be grown on a diversity of soil types, including those that are less than ideal. Hazelnuts are widely adapted, and depending on the cultivar, can be very cold hardy. In regions such as New Jersey, the Mid-Atlantic and much of the fruit belt of the eastern U.S. and southern Canada, many hazelnuts would thrive."

Dr. Molnar is conducting a breeding program to come up with disease resistant, cold tolerant hazelnut trees – that have large, thin shelled nuts that taste good. A tall order, but well underway. According to Molnar, "We are now in the initial phases of multi-location testing of our first generation of disease resistant plants. We are confident by the end of this decade, due to our breeding and research, there will be small to medium scale orchards of hazelnuts being grown for nut production in New Jersey and surrounding states."

The cultivars being developed will also appeal to home gardeners. Explains Molnar, "In addition to hazelnuts for nut production, we are also developing a new line of disease resistant ornamental hazelnuts. These include plants with attractive purple leaves and bright fall color, as well as those with contorted and weeping branches. The fall color comes from our native *hazelnut* and the purple leaves from the European species. These plants also produce nuts, making them edible landscape plants."

For more information on the hazelnut breeding program, visit: <http://agproducts.rutgers.edu/hazelnuts>.

Dr. Molnar's breeding program is also looking at adapting pecans to New Jersey's climate. The program has a collection of northern pecan seedlings and some grafted cultivars. Molnar explains, "The trees are cold hardy and very attractive, but our growing season is too short to grow the more southern types that have the larger nuts everyone is familiar with. The northern pecans have a much smaller nut (also edible and quite tasty). We hope that out of our 100 or so seedlings we planted at our research farms we might find one or two that we can release for backyard production in New Jersey. I don't see a pecan industry developing here in the near future, but it will be possible for people to grow the trees in their backyard."

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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