What's in Season from the Garden State

Bi-weekly Highlights from Rutgers Cooperative Extension October 23, 2006

Gem of the Pines - New Jersey Cranberries

The New Jersey Pine Barrens – long enshrouded in mystery and legend – the dwarfed forest known as the pygmy pines; the Jersey Devil; the backwoods residents known as "Pinies" - is also home to the cranberry – a fruit with history as colorful as its brilliant red skin.

A fruit native to New Jersey, the cranberry thrives in the acidic peat soil of the Pines. The Native American Lenni Lenape had an inclination of its antibacterial properties when they used the berries as a poultice for treating arrow wounds. The fact that cranberries could be kept for a long period of time without spoiling made them useful to preserve food. Many tribes mashed the cranberries and mixed them with dried meat to create "pemmican".

It's medicinal and long-lasting properties weren't lost on the colonists either. Colonial sailors found that cranberries not only prevented the disease scurvy (caused by vitamin C deficiency); they could also be easily stored for long ocean voyages. American sailing ships carried water-packed barrels of cranberries much the way British ships carried limes for their sailors.

The first man-made cranberry bog in New Jersey was constructed in 1835 in Burlington County. After the Civil War, cranberry growing became a big business as a result of the widespread use of man-made bogs.

Bogs are flooded for wet harvest culture, and to provide an insulating layer from winter freezing. Since it takes about 300,000 gallons of water to flood an acre of bog, a system of streams, ponds, and constructed reservoirs are made. The waters are recycled through the bogs through a system of canals, sluice gates and holding ponds. Waters exit the bogs and are returned to nature, making cranberry culture harmonious with the surface water ecology of New Jersey's Pine Barrens.

New Jersey is the 3rd largest cranberry producing state in the US, after Wisconsin and Massachusetts, producing as much as 58 million pounds of cranberries a year on 3700 acres located in the Pine Barrens regions of Burlington, Ocean, and Atlantic Counties.

Despite New Jersey's prominence in the cranberry market, you won't easily find fresh New Jersey cranberries in the stores. According to Ray Samulis, Agricultural Agent for Rutgers Cooperative Extension of Burlington County, "Over 95% of New Jersey cranberries are processed, going to Ocean Spray or other cranberry processors to make juice and other cranberry products." Fortunately, finding fresh New Jersey cranberries is easier than a hunt for the Jersey Devil. Several farm markets offer fresh cranberries. These can be found on the New Jersey Department of Agriculture's website at: http://www.jerseyfresh.nj.gov/.

Lest one think the cranberry industry is as backwoods and slow-paced as a lazy river through the Pines, one should think again. Some of the most innovative research on cranberries in the world is a product of the Pines. In 1918, a Cranberry and Blue-

Continued on page 2

New Jersey Department of Agriculture's Jersey Fresh Availability Report

Current:
Apples
Apple cider
Arugula and Cilantro
Baby Arugula & Baby Spinach
Basil
Beets
Broccoli
Brussel Sprouts
Cabbage
Cauliflower
Cranberries
Dill & Parsley
Escarole/Endive
Green beans
Greens: collards, kale, mustard, dandelions & Swiss Chard
Leeks & Green Onions
Lettuces
Pumpkins
Radishes & Turnips
Spinach
Squash: yellow, zucchini, acorn, butternut, & spaghetti
Sweet potatoes
White Potatoes

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

NJ AES New Jersey Agricultural Experiment Station

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berry Laboratory was located in Whitesbog, NJ to assist in the scientific investigation of both cranberry and blueberry propagation. The laboratory remained at Whitesbog until transferred to Pemberton in 1927. It again later moved to Chatsworth where it remains to this day.

Researchers at Rutgers University's Philip E. Marucci Blueberry and Cranberry Research Center in Chatsworth have long been advancing insect control, disease resistance, and breeding of improved blueberries and cranberries. Here are some highlights of the focus of current research:

- Identifying the anti-adhesive mechanism of cranberry constituents that reduce urinary tract infections.
- Testing cranberry phytochemicals for potential role in fighting diseases such as diabetes.
- Developing new cultivars of cranberries and blueberries that improve crop yield potential and enhance health benefits.
- Developing environmentally friendly insect sex pheromones methods to disrupt insect mating and reduce insecticide use.
- Developing satellite remote sensing technologies helping cranberry farmers with crop loss detection and other aspects of farm management.
- Using Geographic Information Systems and Global Positioning Systems (GIS-GPS) technologies to conduct crop sampling methods to reduce use of fungicides and insecticides.

New cranberry products have taken cranberries out of obscurity, while their nutritional profile has gained them market prominence. Cranberries are now recognized for their anti-adhesive properties in preventing urinary tract infections. The adhesion of the different types of bacteria that cause both stomach ulcers, and periodontal gum disease, have also been shown to be inhibited in the presence of cranberry. Cranberries are a source of antioxidants that may play a role in helping to prevent heart disease and certain cancers, and may provide protection against chronic age-related afflictions like loss of coordination and memory.

Pine Island Cranberry Company, a fifth generation family farm in Chatsworth, NJ is the world's largest-producing cranberry farm. Cranberries are wet harvested in New Jersey. After bogs are flooded, workers go through with egg-beater-like equipment which knock berries loose from the vines. Since cranberries are hollow, they bob up to the surface of the water and are"corralled" (top photo) so that workers can feed them into a chute that loads them into open trucks (bottom photo). They are taken to a facility for cleaning and processing and then sent to plants for further processing.