

GROWING

RIPE FOR DEVELOPMENT

Beach plums as regional niche crop

by Kara Lynn Dunn



Above, Beach Plum Project Manager Rick Uva is seen with one of Coonamessett Farms' early plantings of beach plums in 1997.

This experimental stand is testing the effects of drip irrigation in a sandy borrow-pit unsuited to growing other crops. Other sections of the orchard are now testing the effects of mulching and fertilization.

Inset, Beach plums ripen in late August through September. The fruit comes in several colors, from yellow to dark purple.

Interest in growing and processing a fruit native to the sandy coastal dunes of the Northeastern U.S. is being revived by the Beach Plum Project. Project Manager Rick Uva of Cornell University's Horticulture Department says the time is ripe for producing and marketing beach plums as a heritage specialty crop.

"The current coincidence of consumer demand for beach plums outstripping the supply, depressed cranberry and tree fruit prices prompting growers to consider alternative crops and our increasing knowledge of beach plum management yields an unparalleled opportunity to launch a small, but regionally important, industry,"

Uva says.

The Beach Plum Project, funded by a Northeast Sustainable Agriculture Research and Education grant to Cornell University for 2001-2003, has 15 locations growing beach plums in Massachusetts (eight) and New York (seven). Most operations are small, diversified farms; some are organic; some are run by cranberry growers whose farms balance low cranberry bogs with adjacent upland areas suited to beach plums. The project's goals include developing beach plum production orchards, a germ plasm collection, a quality control program and a Beach Plum Consortium.

Continued on page 30

RIPE FOR DEVELOPMENT

Continued from page 19

Project participants include farms, small processing operations and research and education institutions, including Cornell University, the University of Massachusetts and Rutgers University. A germ plasm collection has already been built with seeds from significant native beach plum areas in Maine, Massachusetts, Connecticut, New York, New Jersey and Delaware.

A heritage crop

Historically, beach plums have been significant to the coastal regions of the Northeast. Colonial settlers, and likely Native Americans, harvested wild fruit and made jams and jellies. A second high-interest period came in the 1940s, with the formation of the Cape Cod Beach Plum Growers Association.

Bill Clark of the Massachusetts Cooperative Extension—Cape Cod Office prompted the latest resurgence of enthusiasm about six years ago after finding old records of the Cape Cod Beach Plum Growers.

One of the first Massachusetts growers to share Bill's interest in beach plums' potential as a regional heritage specialty crop was Ron Smolowitz of Coonamessett Farm, East Falmouth, Mass.

"The records Bill found show that

Growing the Beach Plum

Beach plums are a native plant from Newfoundland to North Carolina, with a concentration found from Massachusetts to Delaware. Henry Hudson reported beach plums growing along the banks of the Hudson River in 1609. The fruit and preserves made with the plums became a seaport marketplace trademark in early Colonial times.

In the 1940s, commercial processors shipping their preserves throughout the U.S. joined Cape Cod's successful cottage industry roadside marketers. The Massachusetts legislature modestly funded research into growing the beach plum. A Cape Cod Beach Plum Growers' Association formed, started a varieties register and developed a quality seal to identify Fancy Grade Pure Beach Plum Products.

Photos of native plantations of beach plum often show expansive Atlantic Ocean views with the low, spreading shrub extending some 10 to 15 feet across the sand. The tree-type plum plant can reach heights of 10 feet, with a large taproot that extends deeply into the soil. White flowers appear in the spring; the deep blue, purple, red and, rarely, yellow fruit ripens from late August through September.

Although traditionally found in sandy dune environments, the plant may also be grown in any fertile, well-drained soil and may produce more vigorously there than in seaside conditions. Full sun is required. The plants require pollination by bees or other insects. A study offered by Cape Cod Cooperative Extension suggests an orchard design of close plant spacing typical of blueberry or current plantations. Production from seeds, plants and root cuttings is possible.

Prepared from "The Beach Plum: A History and Grower's Guide," provided by Cape Cod Cooperative Extension



Wild beach plums grow in native stands only on the Atlantic coast of North America with concentrations in Massachusetts, New York and New Jersey.

in the 1930s and '40s, housewives were processing 15,000 bushels of beach plums a year and, while strawberries were selling for two cents a quart, beach plums were selling for 25 cents a quart," Smolowitz says. "We had already added 10 beach plum plants to our diversified farm operation in 1986. After talking with Bill in 1996, we planted a new orchard of 200 plants as part of a research project for which Bill had successfully written a Massachusetts Department of Agriculture agro-technology grant."

Smolowitz and some of his 15 employees will harvest and process Coonamessett Farm's first large crop of beach plums this fall. Small batches of beach plum jam and chutney were made in earlier seasons to sell at the farm's market. Ron says beach plums have always been a premium product in the Cape Cod region, and that the popularity of Coonamessett Farm's 100-percent-pure beach plum jam at \$5.50 per 8-ounce jar consistently outsells his blueberry, red and black raspberry and strawberry jams priced at \$4.50 per jar.

In addition to making beach plums into jams, project researchers and collaborators are looking at processing options for jellies, juice, wine, preserves and dried plum products. Samples developed and produced by the Food Venture Center of the New York State Agricultural Experiment Station in Geneva; by upstate New York wine maker Steve Richards and by Chatham Jam and Jelly Shop, West Chatham, Mass., with fruit from the Rutgers Cream Ridge Experiment Station,

Rutgers, N.J., have been and will be tested by consumer focus groups.

Consumers prefer pure, chefs choose regional

Dr. Wen-fei Uva, a horticulture marketing specialist with Cornell's Applied Economics and Management Department, has conducted consumer testing to evaluate interest in beach plums and says, "There is a future for beach plum production. A focus group of gourmet jam and jelly consumers in New York City included individuals who enjoy eating gourmet jams and jellies, who give such products as gifts and who have some knowledge of beach plums," she explains. "Most of the participants associated beach plums with Cape Cod, beach habitats and Colonial heritage."

The consumers were asked about their preference for 100-percent-pure beach plum products over blended products. Dr. Uva says commercial producers often add different varieties of plums to make up for the lack of enough beach plums for large quantity production. In blind tests that removed products from labeled packaging, consumers were able to distinguish differences between 100-percent-pure beach plum products over blended and mass-produced products and liked the concept of the pure products. Dr. Uva noted that early consumer testing is mainly to explore marketing ideas for beach plum products, and that the group's comments on taste preferences

RIPE FOR DEVELOPMENT

Continued from page 31

were noted as aside information; actual taste testing will come in the future once analysis of sugar content and recipes has been completed.

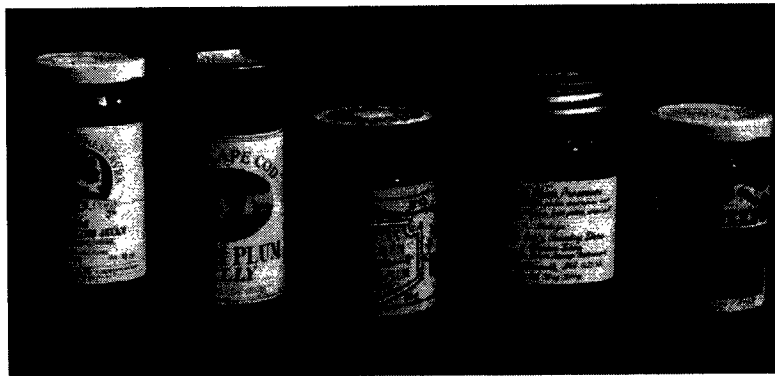
Robin and Carol Cummings of the Chatham Jam & Jelly Shop, East Falmouth, Mass., make 130 different varieties of jams and jellies and have produced a 100-percent-pure beach plum jelly since 1983. They intend to maintain that tradition, saying that the summer tourists and higher-income customers that frequent their shop prefer pure quality products.

"We are likely the largest user of beach plums on Cape Cod," Robin says. "We buy 1,000 pounds of beach plum harvested wild each year by local people. One gentleman has picked for 50 years."

Robin says wild beach plum picking is not an easy job, and that pickers are dying off with no one taking their place. He notes that native beach plum areas are threatened by urban sprawl, and that people who used to pick on Long Island and in New Jersey and Connecticut now visit Cape Cod to pick plums or buy the processed jams and jellies.

As part of the Beach Plum Project, Robin and Carol processed cultivated beach plums and found one variety "as close as you can get" to the wild beach plums for taste and quality.

Dr. Uva interviewed chefs in



The beach plum jam sold for \$5.50 per 8-ounce jar at Coonamessett Farm's Market in East Falmouth, Mass., consistently outsells the farm's berry jams at \$4.50 per jar.

southeastern Massachusetts and says those chefs with an interest in locally-grown and regionally-significant foods in the coastal region are a given audience for new beach plum products. She says research must focus on developing products suitable for restaurant use and on developing marketing strategies to reach chefs.

At the New York State Food Venture Center, fruit from both wild and cultivated stands have been evaluated for quality, size, color, pulp yield, juice color, pH, acidity and soluble solids. Results show a large variation in all measurements, prompting research into selecting and breeding for superior traits. Also among the tasks for researchers working with early innovator-farmers with field trials of beach plums is developing production methods to stabilize and increase yields and

to control pests.

"The wild beach plum is not a reliable producer. We need to track each plant to study opportunities for consistent growth, to learn the best method for pollination, to learn how soil differences—native dune soils versus fertile soils—influence taste and quality," says Smolowitz. "At Coonamessett Farm, our orchard is planted in sand. We are currently researching the effects of irrigation, mulching and fertilizing. While we want to stay small-scale and direct sale, perhaps processing and selling 1,000 jars of jam each year from our farm market, Cornell's research is looking at the options for larger-scale production."

Jeffrey LaFleur is doubly interested in the Beach Plum Project. He is executive director of the Cape Cod Cranberry Growers Association, and he and three association member farmers have planted beach plums on their home farms. He says beach plums may prove to be an alternative crop for cranberry growers looking to diversify.

"Our association is investigating crops that will complement the cranberry system. For every acre of producing cranberry bog, our farmers own additional three to four acres of

uplands, wetlands and reservoirs. Most growers have ideal soil conditions for beach plums. The soil surrounding cranberry bogs tends to sandy, stratified drift soils. It is this land that we are looking at using to produce alternative crops, as well as in the bogs themselves," says LaFleur, who anticipates selling his first crop of beach plums to local jam and jelly producers and possibly offering pick-your-own.

Field Day will feature beach plums

A September 19, 2002, Beach Plum Field Day at the Long Island Horticultural Research and Education Center will offer visitors the opportunity to see plants in the ground on a field tour; hear early summary results on how to grow beach plums and on pest management and weed control; taste products; and learn the results of consumer testing. Dr. Uva, who is developing worksheets to help beach plum growers estimate start-up and production costs, will share preliminary estimates on production costs. Anyone interested in attending the Long Island event must call ahead to Rick Uva's office at 607-255-2746 for reservations. (Note: an August Beach Plum Field Day was held at Coonamessett Farm.)

Annie Bliss, codirector of East End Community Organic Farm in East Hampton, N.Y., plans to attend the September Field Day to learn more ways to make her first-year planting of 200 beach plum plants successful.

"We learned about the Beach Plum Project at a Cornell-sponsored agriculture seminar and were interested in participating in the project because beach plums grow well in the wild in our area, and the local folk have long used the fruit to make jellies and other value-added products," Bliss says. "Our soil is not particularly sandy, so it remains to be seen how well the plums will do, but we expect to try to find a processor to use our beach plums."

That processor may come from among the not-for-profit educational farm's youth interns, farm members who work 35 garden sites, or four market gardeners who sublease a portion of the farm leased by East End Community Organic Farm from the township.

An hour-and-a-half north of New York City, in New Paltz in the Hudson Valley region, Huguenot Farm is a 77-acre inland farm. Two hundred beach plum plants are among the more than 200 varieties of fruits, vegetables and flowers grown on the certified organic and veganic CSA farm.

"We enjoy growing heirloom varieties and unusual fruits and vegetables, and the beach plum fits right in," says Ron Khosla. "While produce such as broccoli, potatoes, tomatoes and apples are our bread and butter, we like trying to grow something different and learning 'here's what you can do with it' to share with our CSA families. The members of our CSA are an educated audience and a ready-made market for trying products such as beach plums, quince, persimmons and currants."

When their first substantial crop of beach plums is harvested, they expect a CSA members' group project to be their first processing effort. Khosla and his wife Kate, who grew some 3,000 varieties of tomatoes one year as part of Seed Savers project, have made the processing of tomato sauce, salsa, pumpkin seeds and pickles part of the Huguenot Farm CSA experience.

Not far from Huguenot Street Farm, author Lee Reich grows a handful of beach plum shrubs among the many fruits he grows on his farmette to gain firsthand knowledge for his books and articles on fruit gardening. He has recently completed a chapter on beach plums for the updated edition of his book, "Uncommon Fruits Worthy of Attention."

"My audience for beach plum information will be home gardeners interested in growing fruits good for fresh eating. The beach plum can be a small, but totally tasty, fresh fruit, and the shrubs are quite ornamental for

home use. They are beautiful in bloom and are historically significant to the Hudson Valley area. The explorer Verazano wrote about seeing beach plums along the Hudson River shoreline in 1524," Reich says.

Next steps for Beach Plum Project

Dr. Thomas Whitlow, an associate professor of horticulture at Cornell University and principal investigator for the Beach Plum Project, says the next steps for the Beach Plum Project will be to increase the growers' network to increase production acreage by five-fold.

"We will be organizing that network of growers with processors, chefs

and specialty outlets and hope to soon add New Jersey growers to our field trials. We will be developing selection criteria based on processing and product quality characteristics identified by consumer focus groups, gourmet chefs and specialty merchandisers, and these criteria will drive selection and propagation of superior lines. We will continue to develop a strong, positive consumer identity and quality-conscious niche market demand for high-value beach plum products made with superior fruit," Dr. Whitlow says.

Uva notes that his initial search for native beach plum stands took him from Ogunquit, Maine, to the border of southern Maryland, and that the results of this project may be

significant for coastal growers in several states. Those interested in keeping up with the project may visit the Web site at www.beachplum.cornell.edu for project updates, the University of Massachusetts' Beach Plum Grower's Guide, a list of plant and product suppliers and photos. Anyone wishing to participate directly in the Beach Plum Project may contact Rick Uva at Cornell University, Department of Horticulture, 14 Plant Science Building, Ithaca, N.Y. 14853-5904, 607-255-2746, rhul@cornell.edu. ■

The author is a freelance writer who keeps horses and sheep on a 100-acre farm in Mannsville, N.Y.

This article originally appeared in the September 2002 edition of *Farming: The Journal of Northeast Agriculture*. For more information about *Farming* and a free subscription, visit www.farmingmagazine.com or call 800-422-7147.