

**Project Number:**

LNE01-153

**Project Title:**

Beach Plum: Small Farm Sustainability Through Crop Diversification and Value Added Products.

**Project Coordinator:**

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**Team Members:**

Project Manager Richard H. Uva, Ph.D.- Post Doctoral Research Associate, Dept. of Horticulture, Cornell Univ.

Extension Coordinator Co-PI: Mr. William F. Clark- Director, Cape Cod Coop. Ext., Barnstable, MA.

Market Research Leader Co-PI. Wen-fei L. Uva, Ph.D.- Senior Extension Associate. Dept. of Applied Economics and Management, Cornell Univ.

Chair of Industry Advisory Board Mr. Jeffrey LaFleur-- Executive Director, Cape Cod Cranberry Growers' Association

IPM Coordinator. David Simser-- Principal, SIMSER, Inc., P.O. Box 767, E. Falmouth, MA.

Food Products Coordinator John S. Roberts, Ph.D.- Assistant Professor, Dept. of Food Sci. &Tech., Food Venture Center, NY Ag. Exp. Sta., Geneva, NY.

Weed Science Advisor Andrew F. Senesac, Ph.D.- Senior Extension Specialist, Weed Science. Long Island Hort. Res. & Ed. Center, Riverhead, NY.

Beach Plum Grower. Mr. Ron Smolowitz, Owner/operator, Coonamessett Farm, E. Falmouth, MA.

Marketing Consultant. Lawrence S. Spiegel, Ph.D, President, Spiegel International, E. Sandwich, MA. Advises and consults on marketing research.

Specialist in Small Fruit. Joseph A. Fiola, Ph.D.-, Specialist in Viticulture and Small Fruit, University of Maryland, Western MD Research & Education Center, Keedysville, MD

**Funding:**

\$142,910

**Reporting Period:**

January 1, 2002-December 31, 2002

**Summary**— Beach plum, a fruiting shrub native to stressful dune habitats, has been wild collected since colonial times to make preserves and jelly. Today, jelly production from native stands is a small but thriving cottage industry in the Northeast. This project's goals are to develop an integrated system for a sustainable beach plum industry, including fruit production, processing the crop into value added commodities, developing niche markets for these products, and education of growers, processors and marketers. This research will catalyze a new growth industry based on high value niche marketing in an at-risk agricultural region where small farms predominate.

**Performance Targets**—1. We will contact all New England cranberry growers *and* 500 small farm entrepreneurs to identify early innovators desiring to enter the beach plum industry. By the end of this project, we will help early innovators plant 12 beach plum production orchards. 2. Using the project's business plan, early innovators will mentor others. Forty new partners will be enlisted by project's end. 3. Establish a germplasm collection for a beach plum improvement program; make an initial distribution of improved clones to producers. 4. Establish quality control and assurance standards for fresh fruit, juice, pulp, jelly, jam and preserves. 5. Link growers, producers and marketers; catalyze formation of a Beach Plum Cooperative to promote a sustainable niche market industry.

**Milestones**—During this reporting period, 15 new beach plum plantings were installed on farms (12) and research centers (3) in the northeast region. Size of plantings ranged from 10 plants to 800 (about 1 acre) with the mean number of plants per grower being 175. As a result of web site hits, media publicity and Field Day attendance, we received an additional 22 requests for plants for spring 2003 which will bring the total number of plantings to 40.

Seed from the germplasm collection of summer 2001 has been grown and plants await spring, 2003 planting at Cornell University, Western MD Research & Education Center and the University of Massachusetts, as well as with 2 grower/collaborators, one in northern Maine and one in southeastern Massachusetts.

Exploratory interviews with chefs were conducted in summer of 2002. Beach plum is particularly appealing to chefs who use locally grown produce to lend regional flavor to their menus. Desirable products for them include purees and fresh or frozen pitted fruits. Attending regional food service trade shows would be a good way to publicize beach plum in the future.

**Outcomes**—Our website (<http://www.beachplum.cornell.edu/>) was activated in February of 2002. It includes field day handouts, photos, contacts, annual reports, a grower's guide, goals, news articles, a consumer focus group report and links to websites of interest.

In conjunction with other funding provided by the USDA, Dr. Wen-fei Uva conducted consumer focus group research in New York City on March 13, 2002. This research indicated that market expansion potential exists for beach plum products among gourmet consumers in coastal metropolitan areas. Gourmet jams and jellies are purchased from various independent stores or farm markets and not from supermarkets. Consumers' interests in beach plum presented market opportunities for new product development.

A factorial experiment evaluating the effects of irrigation, mulch, and fertilizer on growth and yield of beach plum (1997-2001) was analyzed and is being prepared for publication. The results showed that fertilization increased growth and yield, while irrigation and mulch had no effect. This finding confirms that beach plum is a stress tolerant crop that can be grown successfully without irrigation, even on sandy, low nutrient soils.

A study to evaluate the tolerance of beach plum seedlings to a new active ingredient pre-emergence herbicide (azafenadin) and to a new formulation of an older herbicide dichlobenil was conducted by Andrew Senesac at our demonstration planting at the Long Island Horticultural Research and Extension Center. This study indicates that these herbicides caused no reduction in plant height in comparison to the hand weeded control.

## Appendices

**Changes in Plan of Work**—No significant changes.

**Resources**— Our main resource is our web site (<http://www.beachplum.cornell.edu/>) described above. Please see the resource form for information. Other publications include:

Senesac, A. and I. Tsontakis-Bradley. 2001. Weed management in ornamentals, turfgrass, vegetables and fruit. research report 14.

Senesac, A.F. 2003. Herbicide tolerance of beach plum (*Prunus maritima*) for commercial cultivation. Proc 57<sup>th</sup> Annual Meeting of the Northeast Weed Science Society, Baltimore, MD.

Uva, R.H. 2003. Growth and yield of beach plum (*Prunus maritima* Marshall) in horticultural, land restoration, and ecological systems. Dissertation, Cornell University, Ithaca, NY.

**Events**—Twenty-five people attended the beach plum field day on Aug. 13, 2002 at our demonstration site at Coonamessett Farm in Falmouth, MA, including farmers, wine makers, food processors, extension educators, as well as Douglas Gillespie, Commissioner of the Massachusetts Department of Food and Agriculture. In addition to project updates from Cornell and Cape Cod Cooperative Extension, participants tasted and rated samples of jam and jelly from the New York State Food Ventures Center and The Chatham Jam and Jelly Shop as well as 3 beach plum wines made by Steve Richards, a home-based wine maker in Hector, NY and the Cape Cod Winery. Additionally, we manned a poster display and field tour during the Long Island Horticultural Research and Extension Center's 80<sup>th</sup> Anniversary Celebration on Sept. 19, 2002. The entire event had 200 attendees including New York State Agriculture Commissioner, Nathan Rudgers. The proceedings of the field days are posted on the web site with photographs of the event.

**Publicity**—The following was a feature article on the project: Dunn, K.L. 2002. "Ripe for development; beach plums as regional niche crop." Farming: The Journal of Northeast Agriculture. 5: 19,30-33. Farming has 36,000 subscribers, and the article was responsible for recruiting 13 of the 22 new growers to the project. Other publicity mentioning our work, field days, and website was published

in print ([Country Folks Grower](#), [Cranberry Station Newsletter](#), [Taunton Daily Gazette](#), [Healthy Fruit, Massachusetts Berry Notes](#), and internet media [Ag. Upbeat](#), [Cornell Farming Alternatives](#), and [Great Lake Fruit Workers Listserv](#)).

**Slides/Photos**—See attached images and identification forms. High resolution TIF files are on the compact disk as well as annotated photographs in a Power Point file entitled ‘photos with text.’ Also on the compact disk are the website files, and Power Point files containing a presentation, and a poster used in 2002.