



School of Natural Resources and Agricultural Sciences
Department of High Latitude Agriculture
303 O'Neill Building • P.O. Box 757200 • Fairbanks, AK 99775-7200
(907) 474-5651 • (907) 474-1841 fax • website: georgesong.org
email: flowersuaf@gmail.com

May 24, 2013

Alaska Division of Agriculture
1800 Glenn Highway, Suite 12
Palmer, Alaska 99645

Attached with this letter is a letter of intent for the Alaska Specialty Crop Competitive Grant Program.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Patricia S. Holloway', written over a large, diagonal watermark that says 'Tier II Sample LOI'.

Patricia S. Holloway, PhD
Professor of Horticulture and Director, Georgeson
Botanical Garden

Post Harvest Handling Methods for Enhanced Competitiveness of Fresh Cut Peonies

**University of Alaska Fairbanks
Patricia S. Holloway**

1. Proposal Summary

World cut flower sales are a highly competitive, volatile and multi-billion dollar industry. Sales are subject to fashion whims of consumers as well as industry demands for quality blooms that meet bud size standards and ship well; a product that has the requisite stem length/strength; and one with a long vase life. Since the product is a senescing (dying) stem, the industry has a daunting task of delivering a product whose consumer life is as long and colorful as possible. Cut flowers must meet rigorous standards or they will be replaced by a myriad of other available world specialty cuts.

The Alaska peony industry must meet world standards yet fit with the cultural conditions, climate and distribution system of Alaska. Every stage of plant production, from cultivation, harvest, post harvest handling, and shipping, impacts product quality. UAF researchers began studying production chain management in 2001 (georgesong.org/research/peonies/index.html). Funding for these studies from USDA New Crops New Opportunities ended with the retirement of Sen. Stevens. We found that chilling at 34°F for 1 week, doubles the vase life of peonies, but 12 hours is not sufficient. We want to determine the minimum time necessary for chilling prior to shipping for maximum consumer vase life. Some growers actually ship the day of harvest, which may not lead to the best product.

One of our experiments hinted that vase life of Alaska peonies is double of those from the Lower 48. We will repeat this experiment to verify those data so growers can use that information as one more unique feature for marketing Alaska peonies. The UAF Experiment Station has a collection of 110 peony cultivars. We will determine the maximum vase life for all these cultivars so growers can rank them for quality. We will also conduct an experiment to identify differences in vase life with 'Sarah Bernhardt' peonies from Alaska farms to identify quality variations within the industry. Finally, an experiment from Chile showed that foliar application of Borocal® can increase stem strength and improve vase life of peonies. We will experiment with foliar-applied B and Ca under Alaska conditions. Our goal in all these experiments is to establish standards for all Alaska peony growers to provide the best quality fresh cut flowers to meet or exceed rigorous industry standards.

2. Estimated Budget project duration Oct 2013 – Oct 2014

CATEGORY	SCBGP Request	Match (incl. source)	TOTAL
Personnel-Holloway 173.3	\$10,336.00 ¹	\$10,336.00 ¹	\$20,672.00

hours			
Zhang 200 hours	\$4513.00 ¹	\$4513.00 ¹	\$9026.00
Fringe Benefits-Holloway 34.1%	\$3525.00	\$3525.00	\$7050.00
Zhang 34.1%	\$1539.00	\$1539.00	\$3078.00
Student intern, part time	\$4500.00		\$4500.00
Fringe Benefits-student (8.2%)	\$369.00		\$369.00
UAF indirect costs		\$4978.00	\$4978.00
Supplies- in kind		\$730.00 ²	\$730.00
Supplies- labels, markers, jars, batteries, pruners, buckets, dataloggers		\$1000.00 ³	\$1000.00
TOTAL	\$24,782.00	\$26,621.00	\$51,403.00

¹ USDA Hatch funds; the salary for this project will cover summer work. Salary covered by USDA Hatch will be used for winter data analysis, write-up.

² Donated flowers/labor by growers; 10 growers (\$25/hr, 1 hr), 12 stems each, \$4.00 per stem. We would like to include at least 10 growers but many Interior growers have just planted roots and are not sure they will have marketable peonies in 2014. Adding growers in 2014 will not increase the project expenses.

³ Laboratory equipment and supplies will be through UAF Agricultural & Forestry Experiment Station.

3. Partners. Alaska Peony Growers Association. Interior, rather than statewide, growers will be included for this one-year study to save shipping and travel costs. If variation exists, the project can be expanded statewide in the future. Grower volunteers with known quantities of marketable peonies sold through pack houses:

Borman Farms, Frank Borman, Delta Junction

Debra Hagen, Ester

Fox Hollow, Wanda Hakken, Nenana

Nestegg Peonies, Marilyn Berglin, Fox

Mr. Lulu Arctic Alaskan Peony Farms, Suzanne Williams, Central, Fairbanks

North Pole Peonies, Ron & Marji Illingworth, North Pole

Polar Peonies, Jan Hanscom, Carolyn Chapin, Fairbanks

Springerhill Farm, Virginia Young, Nenana