

Holloway, P. 2007. Horticultural Crop Production for Alaska. Cooperative States Research and Extension Service HATCH report Acc. 0190422

## **CRIS**

### **Horticultural Crop Production for Alaska**

Principal Investigator

Dr. Patricia S. Holloway

## **OUTPUTS**

Peony roots were purchased from six commercial sources to study the variation in root size and quality of commercial peonies. Roots were weighed, the number of buds and roots counted, and the length of roots per plant was recorded prior to cold storage at 1C. Roots will be planted in field beds beginning in late May, 2008 to study the correlation between root quality and cut flower productivity. Roots of Sarah Bernhardt and Duchess de Nemours peonies were planted immediately outdoors, potted into containers or mixed with moistened wood chips to learn the best methods of handling peony roots in fall. Containerized roots as well as those in wood chips will be planted outdoors in May 2008 for long-term comparisons of growth and cut flower productivity. Seeds of bog blueberry, *Vaccinium uliginosum* were extracted from fresh and frozen berries at weekly intervals to learn about the initiation and depth of dormancy of stored fruit. Germination tests were initiated to compare germination over time from fresh, frozen and air dried seeds. Other seeds were extracted from frozen berries, air dried for 24h and are being cold stratified for 1-6 months to determine methods of fulfilling chilling requirements. Seedlings will be planted outdoors in June 2008 to establish field trials of bog blueberry for fruit production. More than 350 annual flowers have been selected for summer bedding plant field trials. Seeds will be germinated in spring 2008. Micropropagation experiments were initiated with *Vaccinium uliginosum*, *V. vitis-idaea* and *V. ovalifolium* to identify optimum levels of zeatin, 2-ip, and combinations of the two for microshoot production.

## **IMPACT:**

Twelve commercial businesses have planted trial plots of peonies for field cut flower production. More than 30 growers are exploring the potential for field grown cut flowers in Alaska. Tomato field experiment was requested by TerraCopia Inc (UT). The vegetable research is designed for small market gardeners and homeowners. It provides comparative trial information that is useful in developing regional truck farms and expanding produce choices as farmers' markets. The annual and perennial flower trial research is used by seed companies, nurseries, growers, landscapers and home gardeners to identify hardy perennials, disease resistant annual flowers for home and commercial production. Specific trial information was requested by Johnny's Selected Seeds (ME), Territorial Seeds (OR), Pan American and Ball Seed Co.(IL), and Goldsmith Seeds (CA). Five undergraduate students completed internships in horticulture during the past year.

Participants:

Individuals: Dr. Patricia S. Holloway, Principal Investigator designed and initiated all research projects and contacted potential partners.

Partner Organizations: Alaska Department of Natural Resources Division of Agriculture and the UAF Cooperative Extension Service have agreed to sponsor a joint workshop on peony production for growers to be held 1 Feb 2008. The USDA Agricultural Research Service, Alaska has agreed to continue joint research on diseases, especially viruses of peonies. They will also participate in the grower training workshop in February.

Training: Mr. James Auer is completing his MS Degree in Resource Economics jointly with the SNRAS Natural Resources Management Degree and the School of Management by working on the marketing of peonies. Mr. Sean Willison is completing his MS degree in Natural Resources Management by working on native plant seed germination/revegetation project. Ms. Allison Peterson is completing her MS degree in Natural Resources Management by working on propagation of Alaska native plants. Ms. Katie Kokx and Mia Peterbur are completing undergraduate research projects on propagation of Alaska native berries and ornamentals.

#### **PUBLICATIONS:**

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