

Holloway, P. 2002. Horticultural Crop Production for Alaska. Cooperative States Research and Extension Service HATCH report Acc. 0190422

Plant evaluations at the Georgeson Botanical garden included 1120 woody perennials, herbaceous perennials, annual flowers, herbs and vegetables. Recommended vegetables from observational trials included 'Sora' and 'Easter Egg' radish, R-17804 daikon-type radish, 'Papaya Pear' summer squash, 'Bright Yellow' Swiss chard, 'Hakurei' turnip, 'Raven' and 'Super Zuke' zucchini. Replicated trials of 14 carrot cultivars showed significant yield differences among seasons, but only the most productive cultivar, 'Artist' had significantly higher yields than the four least productive cultivars: 'Gold Pak', 'Gold King', 'Touchon Deluxe' and 'Sweetness'. Among baby carrots only the highest yielding cultivar, 'Baby Sweet', had a higher yield than the lowest ranking 'Thumbelina' (Tukey's HSD, $P=0.05$). Trials of 8 tomato cultivars expanded the options for outdoor tomato production with significant equivalent yields to our standard cultivar, 'Sub-Arctic 25'. 'Prairie Fire' and 'Northern Delight' have larger fruit than 'Sub-Arctic 25' and 'Oregon 11' matures earlier. Because of insufficient early snowfall, one third of the perennials in the trial plots were winterkilled. Particularly hit hard were shrub roses, some of which had been grown for more than 20 years. Rose cultivars and species that were completely winterkilled included 'Morden Centennial', 'Morden Blush', 'Persian Yellow', 'F.J. Grootendorst', 'Charles Albanel', 'Carefree Sunshine', 'Knockout', 'Sir Thomas Lipton', 'Agnes', 'Foxi Pavement', 'David Thompson', 'Assiniboyn', and *Rosa canina*. Roses that exhibited top dieback but recovered from the crown included: 'Lac MaJeu', 'Killwinning', 'Altai Scotch', 'William Baffin', 'Jens Munk', 'Apart', *Rosa rugosa*, *R. rugosa* 'Alba', *R. rugosa* 'Rubra', 'Hazeldeen', 'Martin Frobisher', 'Dwarf Pavement', 'Snow Pavement', 'Prairie Wren', 'Henry Hudson', and 'Wassagamung'. One notable survivor that showed only tip dieback was Rose 'Lac LaNonne'. Selections from the All America Selections program continue to dominate the annual flower trials. Ranked outstanding among annual flowers included Petunia 'Merlin Blue Morn' and 'Blue Wave', Rudbeckia 'Prairie Sun', and Rudbeckia 'Sundance Bicolor'. Other cultivars with outstanding ratings were: Dianthus 'Amazon Neon', Salvia 'Victoria', Digitalis 'Foxy', Aster 'Riviera Mix', Ageratum 'Red Top', Cosmos 'Gazebo White' and 'Versailles Mix' and *Verbena bonariensis*.

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.

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