The feasibility of application depends upon: (1) availability, (2) effectiveness,, and (3) alternative costs. Currently, the use of straw is less expensive.

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Sweet Ann and Utah Giant Sweet Cherries Introduced

S. V. THOMSON[1]

Two new sweet cherry varieties, Sweet Ann and Utah Giant, were named and released by Utah State Agricultural Experiment Station in 1981. These varieties were developed by Dr. B. N. Wadley a former member of the Department of Plant Pathology at Utah State University and retired U.S.D.A. scientist.

Sweet Ann is a medium-sized, yellow, sweet cherry with a pleasing blush covering one-half of each fruit. The fruit is firm and has an excellent flavor and a small pit. It is slightly sweeter and more firm than Royal Ann and its blush is a brighter red. Bud inoculations of trees grown on Mahaleb rootstock proved that Sweet Ann is highly resistant to western-X disease. Sweet Ann trees have not become infected with western-X disease either in inoculation studies or under natural orchard conditions.

Bloom and maturity occur in Sweet Ann at about the same time as in Bing. Trees regularly set a heavy crop of fruit with many fruits to a cluster. It is a good pollinizer for Bing and Lambert but is self-sterile. Sweet Ann appears to be somewhat resistant to spring frosts since it has set fruit when Bing and Lambert have been damaged. It is also winter hardy. Temperatures dropped to —29°C (—20°F) in the winter of 1978-79 during December and again in January. There was no damage observed on Sweet Ann trees and they set a heavy crop. Tree shape is similar to that of Bing.

High summer temperatures frequently cause up to 40 percent doubling in Bing cherries grown in northern Utah orchards and 80 percent in southern Utah. In contrast, doubles have not been observed in Sweet Ann nor has fruit splitting been a problem in this new variety despite heavy rains in some years during the fruit ripening period.

Where western-X occurs, Sweet Ann would make a good replacement for the highly susceptible Royal Ann variety. The new cherry's medium size, light color, firmness, and per-

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sistent stem should make it an excellent candidate for brining purposes. Sweet Ann stems are of medium length and are quite persistent in the fruit. The fruits are excellent for canning since they remain firm and hold their color well. Sweet Ann would also make a fine home yard variety.

Utah Giant was selected from open-pollinated Napa Long Stem Bing in a search for resistant varieties to X-disease by Dr. Wadley and assisted by the author in its more recent development.

Utah Giant blooms concurrently with Bing and is 5 to 7 days earlier than Angela or Star. Ninety percent of the bloom usually occurs between April 13 and April 25. The pollination group is unknown and it is self-sterile. Fruit set is heavy in normal years but it is susceptible to early frosts. The fruit often sets in large clusters. Fruit doubling, which is frequent in Bing and Lambert, has not been observed. The pit is medium in size and is partially freestone. Trees of Utah Giant at Farmington were only slightly damaged by the severe winters of 1972 and 1978. Fruit splitting under wet conditions is similar to that of Bing.

Utah Giant is partially resistant to western X-disease. Inoculation of this variety with buds from X-diseased trees indicates it has some resistance but not as much as Angela or Sweet Ann varieties. It is more resistant than Bing, Lambert, or Van, however, and may have enough field resistance to be used in areas where X-disease occurs.

The fruit of Utah Giant is excellent for canning since it retains its firmness, color, and flavor after processing. The cherries store well when refrigerated if not excessively bruised or without stems. Utah Giant would make an excellent home yard tree and holds tremendous promise as a replacement for Bing in commercial orchards. The visual appeal, large size, and flavor of the fruit should greatly enhance roadside sales.

Requests for budwood should be sent to Dr. Sherman V. Thomson, Department of Biology, UMC 45, Utah State University, Logan, Utah 84322. The USDA has no budwood or trees for distribution.

Five New Grape Varieties

Byron T. Johnson

Kee-Wah-Din is a cross of OSBU pollinated by Baco Noir, tested as selection 64. B-2. The variety is a blue-black grape, extremely early; August 1st in Cincinnati. The berries are medium-small, round on a medium-large cluster with a shoulder. The shank is short. The vine is healthy, vigorous and productive, with 4 clusters per shoot. It is self-fruitful. The juice has a light red tinge with sugars at 20%. The flavor is berrylike resembling the Baco Noir parent. It makes a good red wine. The variety appears best adapted to regions similar to Minnesota, Wisconsin, and

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