

lice adheres to the kernel following dry roasting, a disadvantage when compared to Barcelona which has an easier loosening pellicle.

AVAILABILITY OF TREES

Nurserymen are in the process of building their stocks of this cultivar and already have orders through 1985. There is an adequate supply of scionwood, but nurserymen do not produce

grafted trees. Neither the Oregon Agricultural Experiment Station nor USDA produces trees for sale.

Due to the amount of time required for proper testing and evaluation of filbert trees, it is not anticipated that another important cultivar will be available in the trade for 10 to 15 years. Thus Ennis should demand an ever-increasing place in new plantings.

Butler — A Filbert Pollinizer¹

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Butler is being introduced as a pollinizer for Barcelona and Ennis. It will replace Daviana, which is now the principal pollinizer grown in the Pacific Northwest. A new pollinizer has been sought for over 30 years because Daviana has several serious faults; it is highly susceptible to the big bud mite, *Phytocoptella avellanae* Newkirk and Kiefer, causing a serious reduction in nut yield; it has a thin shell which make the nuts especially attractive to birds and rodents and causes further reductions in yield; and it has a long shape that is undesirable to the trade. Since the inshell trade utilizes a round nut, Daviana nuts must be screened out and cracked for kernel use. Butler does not overcome all of the disadvantages of Daviana, but it does represent a considerable improvement.

ORIGIN

The Butler cultivar is a seedling selection discovered by Mr. Joseph C. Butler in his orchard at Wilsonville, Oregon. The characteristic that first made it noticeable was its productivity. It was brought to public attention

in 1959. Before that, Mr. Butler had propagated 11 trees by rooting suckers arising at the base of the parent tree. In 1970, Butler was planted in the USDA/AES replicated variety trials as one of several grower selections.

TREE AND BEARING CHARACTERISTICS

Butler nuts are free-husking and have a husk slightly longer than the nut. The period of nut drop is long, beginning before and ending after that of Barcelona. Catkins are large and productive with much viable pollen. This pollen is compatible with Barcelona, Ennis, and several other cultivars. Yield is as good, or better than that of Barcelona, and far superior to Daviana, which it replaces. Butler is biennial bearing in habit. Young trees are erect and vigorous, as evidenced by long, upright shoots. As the tree begins bearing and slows its vegetative growth, it becomes more round-headed; however, it never droops or weeps as is the habit of some filbert cultivars.

Butler proved to have outstanding hardiness during a December 1972 freeze. With little cold acclimation,

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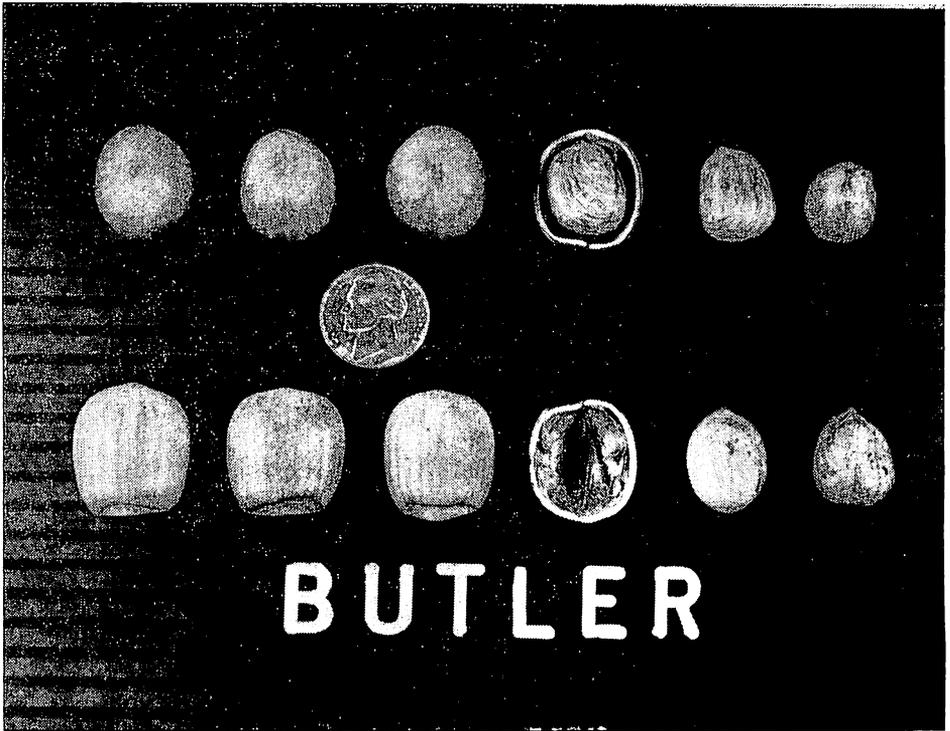


Figure 1. Nut and kernel of the Butler filbert. Both shell and kernel have a relatively smooth and clean appearance as compared to many other filberts.

filbert trees in Corvallis, Oregon, were suddenly subjected to temperatures of -26.6°C . In one test, 93% of the Butler trees survived that freeze, as compared to 33% of the Barcelona trees. Butler trees also exhibit good transplanting survival, and the trees are easy to propagate. This cultivar has some resistance to the big bud mite, being much less susceptible than Daviana.

NUT CHARACTERISTICS

Butler nuts occur mostly in clusters of two or three. They are all relatively uniform in shape, about 10% longer than their average diameter as compared to Daviana, which is 39% longer than its average diameter. (Barce-

lona has an average diameter 1 to 3% larger than its length.) Butler nuts tend to have a "blocky" shape (Fig. 1). While they are appreciably different from Barcelona, a few nuts in a Barcelona package would not be unattractive. Butler nuts average slightly larger than Barcelona on a weight basis, but when size graded they fall into slightly smaller grades due to their smaller diameter.

The shell is hairy at the tip, but not sufficiently so to detract from its appearance. Shell color is medium to dark brown; striping is present, but not striking. The basal scar is generally flat and of average size. Shell thickness is greater than that of Daviana, making it less attractive to birds and rodents.

The kernel, like the nut, is slightly longer than its average width and also tends to have the blocky shape (Fig. 1). The pellicle is patterned with small ridges, but these do not detract from kernel appearance. There is little tendency for the kernel to shrivel and it presents a clean appearance since very little of the inner ovary wall adheres to it. These factors give the kernel a smooth, uniform and attractive appearance. Kernel cavity is of medium size. Percentage of kernel by weight of sound nuts ranges from 45 to 47%. Blanks range from 16 to 20%

which is considerably higher than desirable. Flavor of the raw nut is good, and it is enhanced by roasting. Pellicle removal following dry roasting is much less than with Barcelona.

AVAILABILITY OF TREES

Nurserymen have limited supplies of Butler trees available for sale. Since it is being introduced as a pollinizer, only one tree will be needed for every 16 or 17 trees of the main crop cultivar. Neither the Oregon Agricultural Experiment Station nor the USDA produces trees for sale.

New Spur Type McIntosh Introduced by Stark Bro's

JERRY FRECON¹

Starkspur® UltraMac has been introduced by Stark Bro's Nurseries and Orchards Company. The new variety has been selected and developed because of its complete bright red fruit and compact spur type growth habit.

Starkspur UltraMac originated in 1968 as a whole tree mutation of Summerland Red McIntosh in the Mac F. Dewar Orchard near Oyama, British Columbia, Canada. The variety was noted and selected because it not only produced an apple superior in color to Summerland Red McIntosh, but also on a tree with erect and compact growth, and fruit borne abundantly on spurs.

Budwood was collected and trees propagated for testing and evaluation at the Canadian Department of Agriculture Research Station in Summerland, British Columbia. Through 8 years of study detailed observations were made and data collected on its fruit and tree characteristics in comparison to other prominent spur type

McIntosh originating in British Columbia. While most spur types had similar fruit characteristics superior in color but identical to Summerland Red McIntosh, there were definite differences recorded in degree of spur development.

Starkspur UltraMac will complement Starkspur McIntosh (Gatzke cultivar) because it develops more spurs and is more compact than Starkspur McIntosh. It will be offered because the tree will be smaller in size at maturity on all rootstocks than Starkspur McIntosh.

Starkspur UltraMac was imported in 1977 by Stark Bro's and propagated for testing in the United States. Trees have been established across the country for further evaluation.

U. S. Plant Patent No. 4383 has been issued for Starkspur UltraMac. The variety is being distributed exclusively by Stark Bro's. Trees will be available for sales and distribution in the Fall of 1981 and Spring of 1982.

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