

SEQUOIA . . . *University of California Centennial Strawberry Variety*

R. S. BRINGHURST · VICTOR VOTH

SEUQUOIA, a new University of California strawberry variety, has been named and released for propagation and distribution—and has been further designated the *Centennial* strawberry variety in recognition of the University's anniversary this year. Fruit growers should direct requests for plants to California strawberry nurserymen. Some plants should be available in October for the 1968 winter planting season.

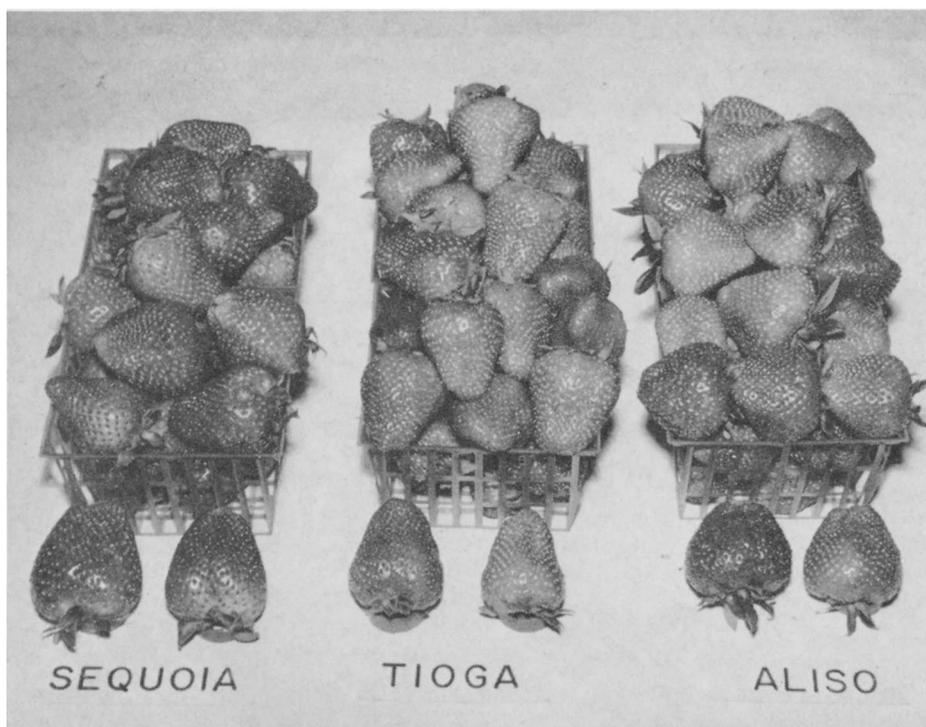
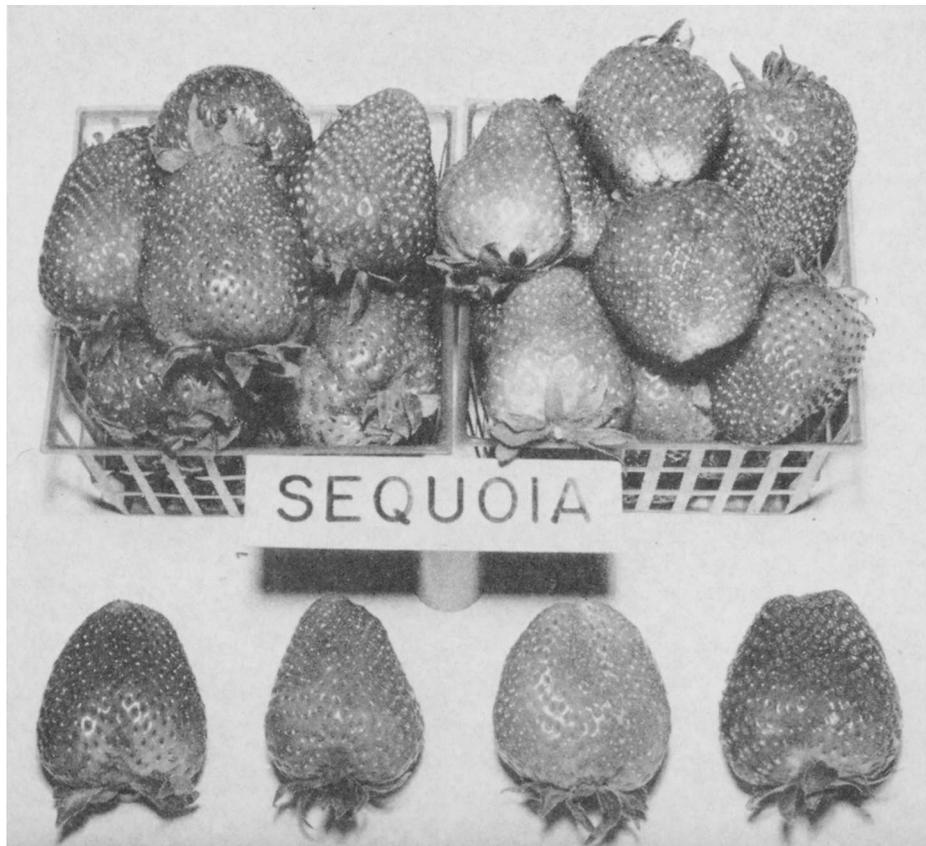
Sequoia is recommended primarily for winter planting in the south-coastal and central-coastal production areas. Only high-elevation nursery plants should be used. The variety should produce a large crop of early, high-quality fruit, of exceptionally large size and uniform appearance.

Sequoia, tested as Cal. 56.124-12, originated in 1956 as a hybrid between Cal. 52.16-15 (a sister of the Wiltguard variety and the only parent of the Aliso variety) and Cal. 51s1-1 (selected from a first generation selfed-population from the Lassen variety). Sequoia was selected at the University of California South Coast Field Station, Santa Ana, in 1958.

Plants of Sequoia are erect in growth habits, vigorous, attractive, and distinctly different in appearance from other University varieties. They have a relatively low chilling requirement and a low temperature threshold requirement for growth allowing them to grow well during the winter months. The plants runner readily in the nurseries and increases at the high-elevation nurseries have been excellent in both test years.

Sequoia is classified as 'susceptible' to *Verticillium* wilt although in tests it has been significantly less susceptible than Lassen or Shasta. There was little evidence of susceptibility to bacterial blight, *Xanthomonas fragariae*, but it was moderately susceptible to leaf spot, *Mycosphaerella*. It has stood up very well in both nursery and production test plots adjacent to highly diseased susceptible clones of Salinas and Fresno varieties with bacterial blight.

The fruit is particularly attractive because of its large size, smooth, long conical



cal appearance, and dark red skin and flesh. It must be harvested at frequent intervals, particularly during hot periods, or the finish will become dull, the skin tender and the fruit soft. For handling and shipping, the fruit should be harvested before it reaches full color. The flavor is excellent, with a delightful balance of sugar, acid and aroma, and peak quality is reached before the fruit attains full color. The tips tend to ripen slower than the lower part of the fruit but this does not detract appreciably from the appearance.

The data presented in the graphs indicate what might be anticipated from the variety. (A detailed comparison with the other University varieties will be published in the future.)

The early fruit production potential of the variety is indicated by the 1967 Santa Ana data (graph 1). Plants dug October 13 and planted immediately, started to produce fruit in January and by the end of March had averaged about 250 grams per plant (March 1968 fruit is shown in photos). At the spacing involved, this was more than nine tons per acre (over 1,500 trays). Moreover, the fruit was large and attractive. The same planting at Watsonville and Salinas (central coast) was similarly early but the fruit was lost because of a heavy spring rainfall.

Sequoia may be planted over a long period of time with about the same total yield both with and without plant storage. Differences for Sequoia among the total yields presented in graph 1 were not significant. However, the patterns of production changed drastically because of differences in the amount of chilling that the plants received, and differences in the timing of the plantings. Differences among plant harvest dates and chilling treatments within a given harvest period were highly significant. This may change somewhat from year to year and it should be pointed out that the winter of 1966-67 was relatively warm while the spring was very cold and wet.

The winter of 1967-68 was much cooler with colder nights during December and January. Frost in Orange County during December resulted in lost blooms and a decline in plant performance as compared with the frost-free areas of San Diego County. Cooler nights in all areas also caused the fruit to color unevenly during January and February, but the variety performed well during March with good color characteristics. In the central coast, where earliness may not

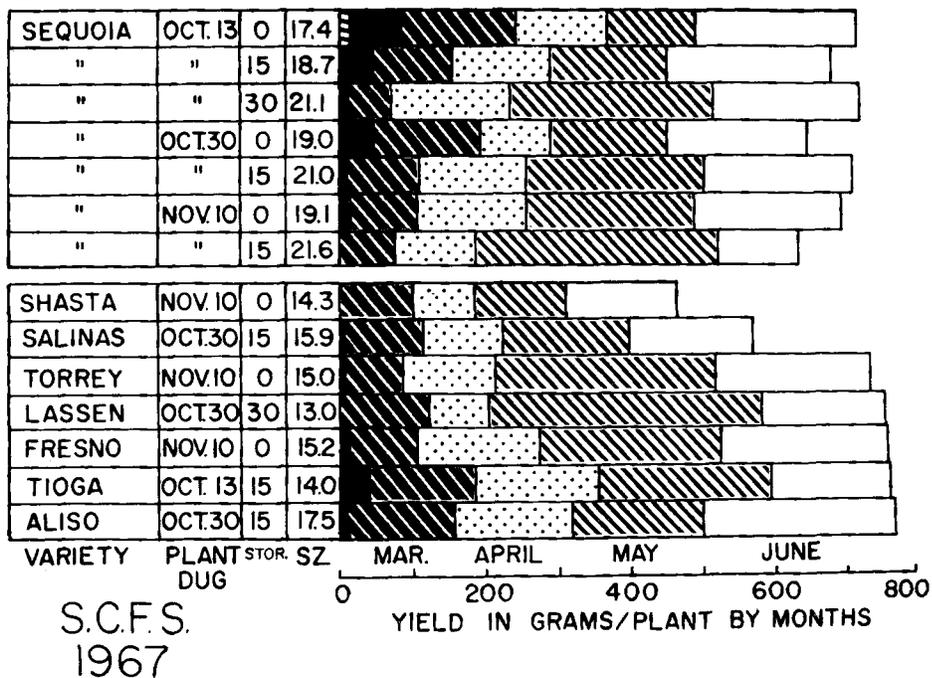
always be desirable because of the weather hazard in years such as 1967, the later plantings with or without plant storage may be preferred.

It is important to note that, for a given planting date at a given location, Sequoia produces larger fruit than any of the other varieties, averaging from 16 to over 20 grams. Also the fruit of Sequoia is about as firm and handles about as well as that of Lassen, although this is not one of its strong points.

Whether Sequoia should be summer planted at coastal sites is questionable. Results have not been favorable. If it is so planted Sequoia must be set late or plants will lack vigor, and the fruit will be smaller and softer.

R. S. Bringhurst is Pomologist, University of California, Davis, and Victor Voth is Specialist, South Coast Field Station, Santa Ana.

Graph 1. Comparisons of yield (454 grams per plant = 17.5 tons per acre at 9-inch plant spacing), and average fruit size in grams per fruit of Sequoia from the various plant harvest dates and cold storage treatments, with the best performance of other University varieties in similar plantings at the South Coast Field Station, Santa Ana.



Graph 2. Comparisons of yield (454 grams per plant = 13 tons per acre at 12-inch plant spacing), average fruit size in grams per fruit, and firmness (as measured by a penetrometer [$\times 45 =$ grams pressure]) of Sequoia (from plants with and without storage), with the best performance of other University varieties in similar plantings at Watsonville and Salinas.

