Stone Fruits On Peach Root Resist Bacterial Canker

Leonard H. Day

Stone fruit growers should consider the use of peach roots in areas where bacterial canker—commonly known as Sour Sap and bacterial canker—is a major problem. To be considered are the compatibility of the peach root with the desired fruit variety and whether the soil and other conditions prevailing are suitable.

Bacterial Canker

The most acute phase of the disease is the development of bark cankers on scaffold branches or on the trunks above the graft union, with or without copious exudation of gum. When a branch or trunk is completely girdled by the disease the fruit above will wilt and die. Thus, the importance of disease without copious gumming is commonly called Sour Sap by the growers. The cankers do not progress downward more than an inch or two below the point of origin, and the infection seldom begins in the rootstocks.

Land Values Leveling Off

In California now less than in 1940

Arthur Shoulis

Extract of talk given before the Cali-

fornia Chapter, National Institute of

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Land Values Leveling Off

It is probable that leasing of farm lands in California is at its lowest point for some time. Leasing of land about 1/3 times and are expected to decline some-

which is not always the experience in pri-

ties of farm products. Buyers will wait for a declining market.

Some of the farms recently pur-

chased may become distressed through unwise or im-

proper operation and come back in the market at a low price.

Even with some decline, land val-

ues which have reached a high level, young farmers will find it easier to rent rather than to buy.

Leasing Worthwhile

As practiced in California, leasing of agricultural land is a worthwhile device for the gradual transfer of ownership.

Yield And Quality Of Raisins

Improved When Harvesting When Grapes Are At Full Ripeess

H. E. Jacob

The most advantageous time to pick raisin grapes for sun drying rep- resents a compromise between two considerations: (1) The larger yield and better quality obtained from grapes harvested at maturity. (2) The more favorable drying conditions early in the season.

The main constituents of ripe grapes are water and sugar. Other substances—acids, cream of tartar, proteins, fats, minerals, aromatic compounds, fiber and other insoluble materials—are present in smaller amounts.

Water constitutes 70% to 80% of the grape. Sugars, mainly dextrose and levulose constitute about 15% to 25%. As the maturity of the grapes advances much of the sugar content increases, and the water decreases.

When grapes are dried into raisins, from 90% to 95% of the water in the fresh fruit evaporates, but nearly all of the sugars and other solid material remains in the raisins.

Dry raisins contain only about 15% water, and from 85% to 72% sugar according to the variety of grapes and the method of drying used in making the raisins.

Sugar Content And Yields

The approximate sugar content of fresh grapes is usually measured by means of a hydrometer test of the juice pressed from the fruit.

The hydrometer—Balling or Brits—is calibrated to read "per cent sugar," but since all dissolved substances af-
flect the reading, the result is more properly termed "degree Balling" or "degree Brits" per cent soluble sol-
ids. It is always from one to two de-

r- higher than the true sugar con-
sent of the grape juice.

Grapes are usually harvested for raisins when the juice tests some-
what between 20° and 24° Balling. A ton of fresh Thompson Seedless grapes at 25° Balling will make 405 pounds of natural sun-dried raisins, 6½ tons of fresh grapes per acre.

If the grapes were harvested at 24° Balling, the yield of raisins from an average acre of vineyard would be about 191 pounds greater than if they were harvested at 20° Balling—the difference of 81 pounds multiplied by the average yield of 6½ tons. At the 1942 raisin price level of $13.00 per ton—the $12.00 price of 1946 is now only a memory—the in-
creased yield would be worth about $83.39 an acre.

Drying Time

As the sugars advance, the days become shorter, the temperature be-
comes lower, and occasional damag-
ing rains are more probable.

At Fresno, the mean temperature for August is about 93° F.; for Sep-
tember, 72° F.; and for October, 63° F. Average Thompson Seedless grapes will dry in about 12 days with a mean daily temperature of 80° F. but at 90° to 95° about 20 days are required. At 60° about 46 days are needed for drying.

These figures apply only to the nat-
ural air—drying process. Massed grapes dry more rapidly. Massed grapes require about a half—longer time to dry than Thompson Seedless.

Thompson Seedless grapes picked in early September may be expected to dry in two to three weeks. Those picked in late September are likely to require four to six weeks, and any grapes picked in October are likely to be damaged by rain if they are not brought to the process before.

In the years of 1913 to 1916, in-
clusive, the earliest rain apt to cause serious damage to raisins in the Genu-
tile San Joaquin Valley, occurred on September 19, 1915. Eight of the 34 years had rain by September 30th and 14 years had rain by October 10th. raisins not damaged by rain, that the riper the grapes the better the quality of the raisins. Raisins made from grapes of less than 20° Balling, are nearly always inferior or substandard in quality. Raisins made from grapes of 23° to 24° Balling, are usually of average or standard quality. Those made from grapes over 20° Balling, usually are of superior quality.

Raisins dried by other processes, such as "golden bleached," do not always follow the rule for naturals that the riper the grapes the better the quality of the raisins. In "golden bleached" raisins, the color of the raisins assumes great importance, and overripe grapes which may have some partially dried berries will pro-
duce raisins of nonuniform color.

For such raisins, a uniform yellow color of the fruit is probably the best test of maturity, so far as quality of the raisins is concerned.

Yields of "golden bleached" raisins follow the degree Balling of the fruit, not the color.

General Rules

On the basis of the information now at hand, several general rules re-
garding the time to harvest raisin grapes may be formulated:

(1) Grapes of less than 20° Balling should not be dried for raisins except as a salvage operation to avoid loss.

(2) Grapes for natural sun-dried raisins should reach 23° or 24° Balling, if such quality can be attained by September first or soon thereafter. Picking should start one week after the grapes reach 23° Balling or Septem-
ber first, whichever is the earlier.

(3) All Thompson Seedless grapes for natural sun-dried raisins should be (Continued on page 3)

Suggestions For Grazing Lambs On Irrigated Pasture

Robert F. Miller

The fattening of lambs on irrigated pasture is not altogether easy.

There have been some heavy losses due to a red fungus when lambs were first turned into rich clover fields, trouble from parasites, particularity cockles, from overcrowstck-

and possibly from frost.

Experience in the handling of lambs on irrigated pasture is impor-
tant.

Follow are a few helpful suggestions in making your selection: (1) Provide ample forage at all times. Do not overstock—10 to 12 lambs per 4 acres is about right. (2) Thistle, fescue feeders averaging about 79 pounds do best. Thistle-

tricks are not advisable. (3) Maturity of forage is important. Clover blossoms are high in nutritive ingredients, short, immature clover lacks fiber for proper diges-
tion. (4) In rotation grazing, change field every 2 weeks, Any feed uniform eliminates feed reaction. (5) Birth rate at the end of the year is (Continued on page 6)

The following abstract is from an address before the Quarterly meet-
ing of the Dairy Institute of California at Eureka, August 24, 1947, By E. L. Jack, Chairman of the Dairy Division, University of Cali-

fornia (Continued on page 2)

New Basic Knowledge Sought

In addition, extension workers on specific dairy products we are seeking new knowledge as a base with respect to the effect of heat on milk proteins, the effect of storage and nutritional value of milk fat, the nature and mode of action of milk enzymes, and other factors affecting nutritional and nutritional values.

In cooperation with the Department of Home Economics studies are being made of the food uses of milk proteins, particularly dry milk.

Division of Agricultural Engineering we are studying the bulk handling of milk from farm to fac-

By E. L. Jack, Chairman of the Dairy Division, University of Cali-

ifornia (Continued on page 2)
Supplemental Feed Supplies Leached Nutrient Values

H. R. Guilbert

An inch, or even less, of rain on dry land can leach away 20 to 100 pounds of soluble sugars, 30% to 70% of the phosphorus, and other valuable mineral compounds from the soil.

Leaching is the removal of these valuable mineral substances from the soil by irrigating or rainfall. Considering that the grass is a living plant, and that mineral substances are necessary for its growth, it is evident that leaching may be reduced in nutrient value, especially by over-fertilizing or using too much water.

Reasons for Leaching

(1) Disturbance of the root system. Excessive shallow-rooted tissues of the root system may be reduced in nutrient value.

(2) Leaching of surface nutrient solutions. Unusually heavy root systems are formed in this case.

(3) Aeration. In the absence of air, the soil is leached of mineral nutrients.

(4) A high surface-water level may cause the surface to become waterlogged and leached of mineral nutrients.

(5) A high water table may cause the water to pass through the soil, leaching out mineral nutrients.

Prevention of Leaching

(1) A good root system, with deep roots, will prevent the leaching of soil mineral nutrients.

(2) A high water table, which leaches the soil of its mineral nutrients, can be prevented by a good root system, as mentioned above.

(3) A high water table can also be prevented by a good root system, as mentioned above.

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SUGGESTIONS FOR GRAZING LAMBS ON IRRIGATED Pastures

(Continued from page 3)

Weeks. Reject all unclean—bad rinds and all that have not filled. These are likely to be infectious. It is a good practice to send any unclean—bad rinds and all that have not filled in the past to the nearest market. These may have been infected with disease-causing organisms.

(7) When the rind becomes soft and wrinkled, take off the clover. Clover may be kept dry by turning mow to keep it clean. If it must be kept dry, it should be kept dry at all times.

(8) When a break occurs and lambs are weakly, take off the clover. Clover may be kept dry by turning mow to keep it clean. If it must be kept dry, it should be kept dry at all times.

(9) Ailments—scours indicate feed on the wrong side. Practically all the olives produced in California have been the principal olives produced in Western countries, usually returning two or three dollars per pound for olive oil. Only since 1940, with lower imports and higher prices, have olives been a profitable outlet for growers.

The size of the fruit and the oil content determine the value which is made of the different olive varieties. The two leading classes, Manzanillo and Mission, are medium—small-fruited. Mission is a good oil olive, while Manzanillo is the best general-purpose variety. The Breviott and Alphonso, on which the preferred varieties used almost entirely for canning, are large-fruited, with a good size for the preparation of olive oil. Supply and selling for higher prices than the small olives.

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