Stone Fruits On Root Resist Bacterial Canker

Leonard H. Day

Stone fruit growers should consider the use of peach roots in areas where bacterial canker is severe. Rootstocks are favorable.

Peach Root Resist Bacterial Canker — Commonly known as bacterial canker.

The disease is the development of bark canker on the trunk and the branch. The disease is often recognized by the occurrence of gum, which is called gumming. The gum is usually exuded from the canker and is commonly called gum.

Leased farm land, declined from 19% of our total land, is farmed by part-owners who own farms and lease additional land.

In California Now

Arthur Shultis

Land values leveling off

It is probable that leasing of farm land in California is at its lowest point for some time.

Leasing can be expected to some extent from the low prices in prices of farm products. Buyers will wait in a declining market.

Some of the farms recently purchased may become distressed through unfavorable prices or improper operation and come back in the market for sale in the near future.

Even with some decline, land values can be expected to some extent. New farmers and young farmers will find it easier to rent rather than buy land.

Yield and Quality of Raisins Improved When Harvesting When Grapes Are At Full Ripeness

The most advantageous time to pick raisin grapes for sun drying is before the fruit is overripe with or without copious exudation of gum.

When a branch or trunk is completely invaded by disease, the defects arise soon and wilt the tree. The importance of disease without gumming is commonly called Sopur Bap by the growers.

The canker do not progress downward more than an inch or two below the gum and the infections seldom begin in the rootstock.

In the production of these fruits, and with the great union well above Leo.

Well-ripened grapes not only give greater yields of raisins than unripe ones, but the quality of the raisins is also better. It can be said for natural sun-dried grapes.

Suggestions For Grazing Lambs On Irrigated Pasture

Robert F. Miller

The fattening of lambs on irrigated pastures is not as advantageous.

There have been some heavy losses due to a feed reaction when lambs were first turned into rich clover fields, trouble from parasites, particularly coccidiosis, from overstocking and possible from biotic feed.

Experience in the handling of lambs on irrigated pasture is important.

Follow are a few helpful suggestions in growing lambs on irrigated pastures:

1) Provide ample forage at all times. Do not overstock—10 to 12 lambs per acre is usually about right.

2) Thirsty, feeder grazers averaging about 50 pounds do best. Thirsty sheep do not do as well as thirsty grazing lambs.

3) Maturity of forage is important.

4) Rotation grazing, change fields every five days. Using a clover base feed uniform eliminates feed reaction.

5) For lambing, the end of the season is better.

(Continued on page 6)

Leased Farm Lands In California Now Less Than In 1940

Arthur Shultis

(Continued on page 2)

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(Continued on page 6)

Present and Future Research In Dairy Industry Problems

Arthur Shultis

The following abstract is from an address before the Annual Meeting of the Dairy Institute of California College of Agriculture, held in Berkeley, Calif., by E. L. Jack, Chairman of the Dairy Division, California College of Agriculture.

Now under way in the Division of Dairy Industry are technological researches endeavoring to improve processes in the following products: control of flavor defects in ice cream and the achievement of better ice cream; the improvement of nutritive value of cottage cheese by the addition of vitamin D; and the use of color as a coloring agent for butter, the improvement of milk marketability and color in evaporated milk, improved processing for the better control of physical defects in ice cream, and the correct usage of water softening and liquid refrigerants.

New State Knowledge Sought

In addition to the researches on specific dairy products we are seeking new knowledge as to the effects of milk proteins, their improvement of flavor, color and nutritive value of milk fat, the nature and mode of action of milk enzymes, and the chemistry and milk as a food of nutrition in the milk and the milk products.

Operative Studies

In cooperative studies with the Department of Home Economics studies are being made of the milk of milk and the milk and milk products.

Cooperative Studies

In cooperative studies with the Department of Agricultural Engineering we are studying the bulk handling of milk from ranch to farm.

The Division of Animal Husbandry of the California Department of Agriculture is cooperating on problems of animal husbandry, particularly the cattle industry.

The Division of Chemistry is cooperating on phyochemical problems in found dairy products.

(Continued on page 3)
Branch Wilt Of Persian Walnut Trees Resulting From The Fungus Which Attacks The Buised Bark

A branch wilt disease affecting Persian Walnuts in California was first noted a decade ago in the southern San Joaquin Valley. Probably it was presented in the Sacramento Valley at the same time. With the exception of the late Merced variety, it has become a major disease of certain walnut varieties throughout the central valley. The outer branches — not the trunk roots or the entire tree — are commonly affected. Per E. E. Wilson

Branch wilt is caused by a fungus named Glomerella cucurbitarum in Madrid, Lake, and Contra Costa counties. No reports of the disease were received from southern California nor from the counties of Sonoma, Napa, Alameda and Santa Clara.

References To Tree Vigor Unility trees, particularly those subject to infection by branch wilt, are weakened by Armillaria root rot of the trunk and limbs within a few years and become more and more quickly become involved in the fungus which attacks the Buised Bark. Sometimes it starts at a sunburned spot or around an injury made by mechanical or other means. Wood under the diseased bark is discolored to a dark gray and bluish black. The discolored wood in the tree often expands up and down the branch beyond the limits of the diseased wood are filled with a dark brown, finely powdered mass. A noticeable feature of diseased branches is that the timber is far more soft than that of bark tissues covered by a dark brown to black powdery deposit which is composed of numerous fungal spores.

Fungus Isolated From Affected Branches

In about 300 examinations of specimens collected at various places, the dark-spored fungus was present in the bark and wood of over 90 per cent of recently wilted branches. The black spot deposit beneath the branch surface bark usually is present when the branch wilt and thus the association of this fungus with the external symptoms of the disease is readily established.

Trees Killed By Incorrosion With Time

Experiments revealed trees inoculated with fungus spores during January, February, March or April do not produce symptoms of branch wilt as did those trees inoculated in June and July. Young Mayette and Franquette trees were killed within 18 to 30 days after being inoculated in July. Older trees inoculated in July, showed the sudden wilting of the foliage that occurs on naturally infected branches.

Control Measures Sought

In an effort to develop control measures the following investigations are under way: (1) Testing the resistance to wilt of strains of Mayette and Franquette walnut. (2) Promoting and fertilizing the trees to increase their vigor; (3) Spraying the trees with suitable fungicides such as bordeaux mixture 16-16-200; (4) Insecticide trials with sunflower, corn, bean and other crops; (5) Studies of other diseases and pests combinations; (6) Removal and destruction of diseased branches from the trees. The latter procedure is considered effective in this work. Reports will be published as soon as results are made and specific results are.

E. E. Wilson is Associate Professor of Plant Pathology and Plant Pathol¬ogy in the University of California. The reversion of California forests for the production of "golden bleached" raisins.

High Temperatures Reduce Water Take Of Dairy Cattle

The water consumption results reported above are based upon a large experiment designed to study the effects of high temperature, on the performance of dairy cows.

These experiments were conducted in a large room especially equipped for the study of animal performance, nutrition and temperature.

Maintaining the constant values of feed and water consumption, and the room and that temperature is increased from 60° to 100°. The temperatures were being studied for periods approaching three months and data in the study is about 90° above.

Water consumption was maintained above 40°F for more than 24 hours. The temperature was increased by the recent increase in the milk flow, increase, there is an actual decrease in the amount of water excreted by the cows. Cows do not cenate, no larger quantity of water is required to replace body moisture released by the metabolic changes of the cow.

It has long been recognized that there is a definite relationship between a cow's water requirement and its food consumption and milk production.

When, in the study of the collected data, proper correction was made for the decline in food intake and milk production the slight correlation between room temperature and water consumption was the largest experiment designed to study the relationship of air movement, humidity and temperature with the performance of dairy cattle.

These results do not in any way minimize the importance of high temperature in the performance of dairy cattle and the supply of good clean water at all times.

W. M. Regan is Professor of Animal Husbandry and Animal Husbandmen in the Western Region of the University of California. S. W. Mood is Associate Professor of Animal Husbandmen in the experiment Station, Davis.

Time To Harvest Raisin Grapes For Improved Yields

(Continued from page 1)

be on the leaves by September 15th, and the fruits are fully colored before September 15th, they should usually be drydried before September 25th. The best raisins are made when the "golding bleached" raisins, yellow color of the skin is not more than 30 per cent of the total surface area.

In general, the longer the ripening period, the better the quality of the raisins. A standard diet of hay and water and milk should be used for purposes other than milk production. The making of "golden bleached" raisins, yellow color of the skin is not more than 30 per cent of the total surface area.

(6) Grapes containing a considerable proportion of raisins should be considered overflow for the production of "golden bleached" raisins. H. E. Jacob is Associate Professor of Viticulture and Associate Professor in the Department of Botany and Plant Pathology in the University of California. Experimental Station Bulletin No. 64, giving factors influencing the yield, composition, and quality of raisins may be obtained by addressing a request to University of California, College of Agriculture, Davis, California.