

THE PROTECTION OF ORCHARD BY SMUDGING

By P. J. O'Gara, Scientific Assistant, Fruit-Disease Investigations, Bureau of Plant Industry.

Using the instrument, wet the bulb and whirl it rapidly so that evaporation will take place from the wet surface. The whirling should be continued until the mercury is as low as possible. When it cannot be lowered any farther it should be read simultaneously with the dry bulb thermometer. The temperature of the dry bulb, which is the temperature, and the difference between it and that of the wet bulb should then be referred to table II. In using the psychrometer, take several readings and take the mean before referring to the table. In this way greater accuracy will result. One point which should not be overlooked in the matter of selecting the thermometers is that the two instruments should read exactly alike for all temperatures, because it is the difference between the two thermometers that is of the greatest importance.

(2) Several good thermometers, which should be placed at different heights in the orchard at an elevation of from four to five feet from the ground. Temperatures near the ground are always much lower than those four or five feet higher. It is the temperature of the air which surrounds the fruiting portion of the tree that we wish to know about.

(3) Maximum and minimum thermometer. This instrument is not absolutely necessary, but it is very useful in serving as a check upon the observations made with the other thermometers.

(4) An aneroid barometer. This instrument is rather costly, being worth from \$18 to \$20, but if a grower does not desire to buy a barometer, several might purchase the instrument together. This instrument measures the air pressure and the high and lows which may be seen on the weather maps. During a period of high pressure the chances are that frosts may be expected, while during low pressure, which means that there is a considerable quantity of water vapor in the atmosphere, frosts are not so likely to appear. This instrument would indicate the movement of the high and low pressure of the atmosphere as a check upon the psychrometer observations.

(5) It would also be well to get a daily weather map and warn from the nearest weather station. These reports would indicate, at least in a general way, the kind of weather that would be likely to occur within a certain time and would give this information long enough in advance so that preparation might be made for firing in the orchards. For very small orchards preparation may be quickly made, but where the tracts are large it requires some time. Without doubt the small tracts of say ten acres or less can be much more easily and successfully handled.

(6) The cost of firing with wood and coal, including labor, should not average more than \$2 a night per acre, even where it may be necessary to keep the fires burning five or six hours. In some localities where wood can be had without expense except for hauling, these figures might be reduced somewhat. However, in localities where wood is rather scarce they would probably be somewhat higher.

(7) The results of the past season's work in the Rogue River valley have shown that many acres of crops valued at from \$500 to \$1000 per acre have been saved at a total expenditure of not more than \$15 to \$20 per acre for firing. Very striking examples have been seen where unsmudged orchards adjoining those that have been smudged have borne no fruit.

(8) Straw and stable manure are valuable for producing dense smudges but are not effective in raising the temperature in the orchard. The value of the smudge, or dense smoke, is more to protect the trees from the early morning sun where some slight freezing of the blossoms and the fruit has occurred during the night.

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EDEN PRECINCT ITEMS

J. W. Dean of Wagoner creek came down to Phoenix Monday.

Mr. and Mrs. Joshua Patterson were over in Fern Valley Sunday visiting their daughter, Mrs. William Fern.

Miss Gussie Clinehammer came down from Ashland Saturday evening to visit her sister, Mrs. Sam Van Dyke.

Lem Hughes of Fern Valley was in the city of Medford last Saturday.

Mr. and Mrs. W. E. Anderson of North Phoenix were Medford visitors last Saturday.

F. E. Furry, the liveryman of Phoenix, was in Medford last Thursday.

Last Sunday afternoon several of the neighbors gathered at the home of Mr. and Mrs. C. Carey and enjoyed ice cream.

Miss Clara Allen was a Phoenix visitor Monday morning.

Mrs. A. B. Fern was over in North Talent last Monday after berries to can.

J. S. Spitzer of Talent was a Medford business caller last Monday morning.

Mrs. W. S. Staneliff of North Talent was in Phoenix Saturday evening.

V. A. Dunlap and daughter, Miss Bertha, of Talent, visited in Phoenix Sunday evening.

John Shideler of Talent was in Phoenix last Monday forenoon.

Mr. and Mrs. W. S. Staneliff were visitors at the home of Mr. and Mrs. Ed Hamlin of Eden Valley last Sunday.

Talent continues to boom. There are five new dwellings under way, besides we have a big furniture store, two barber shops and a bath, a big hardware store, a box factory, and soon to have another large packing house. These are all new business houses, to say nothing of the old ones.

James Allen of North Talent is delivering about 20 tons of alfalfa hay to different parties in Phoenix at a good figure.

Wiley Turnbow left for Sterling early Monday morning to aid in fighting a forest fire which he fears will reach his buildings on his ranch near there.

CENTRAL POINT NEWS ITEMS

James Grieve, who was overcome by heat last Saturday, is still in a precarious condition, but is much improved. It will be weeks before he is able to resume his run on rural route No. 1. Mr. Grieve is conscious, but not allowed to talk or undergo any undue excitement. It is the belief of Dr. Pollnitz that Mr. Grieve will soon rally and grow stronger under the splendid nursing of Mrs. Grieve.

S. Conutt, formerly a resident of Central Point, but now of Tolo, was transacting business here Monday and reports much improvement in the new town, and that 40 buildings are to go up as soon as logs can be taken to the Tolo mill to make the lumber. Some new business houses are already complete and more are to be erected when home-sawed material can be obtained.

Louis L. Tullier was transacting business in Central Point today and reports all things as flourishing on the farm. Mr. Tullier is still a booster of the first water and the Rogue River valley is fortunate in having him as a citizen.

Mr. and Mrs. S. K. Adams were in from the Eagle Point vicinity Monday trading and marketing products. Central Point is many degrees cooler than in the past few days, 97 being the highest point reached by the mercury, with a trade wind just a size larger than a "balmy breeze."

Mayor Leever is building a garage for his new White Steamer, which is to arrive in a few days. It will be the handsomest automobile in Central Point.

Secretary William E. Kahler of the Commercial club was kept busy for several days the past week answering correspondence and sending out booklets to eastern parties who had requested them. The secretary now has a neat new return postcard which is a novelty in the line of a baby booster.

Work will be resumed next Monday on the Whiteside Childers block, corner Fourth and Pine streets.

The city council is talking of building a high board fence around the bastille to keep the vermin from carrying the thing away.

Many of our citizens packed up valley property, but few cash buyers, bag and baggage today and left for Ashland to camp during the chautauqua.

Real estate dealers report business the quietest in many months. Hundreds of letters offering to trade eastern property for Rogue River.

W. E. Whiteside has been busy the past few days completing the inside finish of his fine Pine-street bungalow, into which he recently moved his family.

The housewives of Central Point.

Benj. Howe of Talent came Saturday afternoon on his bike on his way to Elk creek to visit his sister, who is engaged teaching a school about five miles above the mouth of the creek.

Mr. Wheeler, of the firm of Clapp & Wheeler of Butte Falls, stopped here Friday night, as did also Ed Walker of the Iowa mills, near Butte Falls. Ed got to the depot just in time to see the train move off for Medford.

W. A. Gellatly, sheriff of Benton county, Oregon, his two brothers, H. G. Gellatly, of Cheomoth, J. A. Gellatly, of Wenatchee, Wash., mayor of the town of Wenatchee, with son and daughter and Miss Farris, J. A. Gellatly and family came all the way from Wenatchee, Wash., in his auto. They are going to Crater Lake and will then proceed on north through Eastern Oregon to Pendleton in their auto, and thence on to their home in Wenatchee, Wash. They are a jolly crowd and are going to see what is to be seen on the route.

John P. Clum, one of the postoffice inspectors, stayed with us Friday

night on his tour of inspection. I understand that Mr. Parden, the gentleman who bought the Joseph Rader place, has had his leg so badly injured that his physician forbids his using it, but I did not learn the cause of the trouble.

A. H. Boothby and wife and son Percy and wife called Friday evening on their way to Medford. A. H. Boothby and wife are on their way to San Joaquin valley, California, where he has resided for the last year or more. Mr. Boothby was for a number of years a resident of this valley and for a number of years resided in Klamath county, Oregon.

Rev. Reuter, formerly of Medford, having acted as pastor of the First Methodist church in that city for some years, but now he has charge of the church at Newport, Or., came out Friday to look after a young orchard he had planted near here.

Our railroad agent at the Pacific & Eastern depot of this place has moved from the Sunnyside hotel into the house recently bought by L. B. Williams, and vacated by Professor P. H. Daley.

Quite a number of the railroad men quit work on the road Friday here, but said that they were going to another camp. The P. & E. R. R. Co. has begun to lay steel again.

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CANNOT HAVE A SALOON AT WEED

WEED, Cal., July 12.—The board of supervisors at Yreka yesterday rejected the application of the Weed Lumber company for a liquor license permit for a saloon here. Last year the board limited the number of saloons in Weed to six. At that time there were seven, but a short time ago one of the saloons went out of commission and Weed has only had the limit, six.

The Weed Lumber company made application to the board at the present meeting for a liquor license permit, but as the board had heretofore made an order limiting the number, and which order was sanctioned by the residents of Weed, it could not see its way clear to overrule its former order, and the application was rejected.

SAYS ALL WHO LOVE CHRIST ARE GETTING TOGETHER

CLEVELAND, O., July 12.—A giant combination in religions is the future told by John D. Rockefeller and which is being discussed by the theologians today. Rockefeller, before his Bible class yesterday, declared that in time there will be an amalgamation of all religions.

"People who love Christ are coming together," Rockefeller said. "They will unite, regardless of slight differences in present religious organizations."

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