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SELLING SALEM DISTRICT

Dates of Slogans in Daily Statesman

(In Twice-a-Week Statesman Following Day)

- (With a few possible changes.) Loganberries, October 2. Prunes, October 9. Dairying, October 16. Flax, October 23. Filberts, October 30. Walnuts, November 6. Strawberries, November 13. Apples, November 20. Raspberries, November 27. Mint, December 4. Great cows, etc., December 11. Blackberries, December 18. Cherries, December 25. Pears, January 1, 1925. Gooseberries, January 8. Corn, January 15. Celery, January 22. Spinach, etc., January 29. Onions, etc., February 5. Potatoes, etc., February 12. Bees, February 19. Poultry and pet stock, Feb. 26. Goats, March 5. Paved highways, March 19. Broccoli, etc., March 26. Silos, etc., April 2. Legumes, April 9. Asparagus, etc., April 16. Grapes, etc., April 23. Drug garden, April 30. Sugar beets, sorghum, etc., May 7. Water powers, May 14. Irrigation, May 21. Mining, May 28. Land, irrigation, etc., June 4. Dehydration, June 11. Hops, cabbage, etc., June 18. Wholesale and jobbing, June 25. Cucumbers, etc., July 2. Hogs, July 9. City beautiful, etc., July 16. Schools, etc., July 23. Sheep, July 30. National advertising, Aug. 6. Seeds, etc., August 13. Livestock, August 20. Grain and grain products, August 27. Manufacturing, September 3. Automotive industries, September 10. Woodworking, etc., Sept. 17. Paper mills, etc., Sept. 24. (Back copies of the Thursday editions of the Daily Oregon Statesman are on hand. They are for sale at 10 cents each, mailed to any address. Current copies 5c)

DON'T KNOW WHY, BUT IT IS SO

The experts do not know why black raspberries persist in the Salem district, in the Willamette valley, and run out in all other sections; even in the great berry district of the Puyallup valley in Washington

They only know it is so. In fact, all the cane fruits persist in the Salem district to a degree not known elsewhere, except in the western Washington berry section for all of them except the black raspberries.

Nature has set apart the Salem district as a great cane fruit growing country—And our growers, shippers, manufacturers and others are coming each succeeding year to function more perfectly and to cooperate more generally in doing their share.

Salem is elected the center of the world's greatest bush fruit district, as well as of the greatest tree fruit and nut district.

Valley Motor Co

260 North High Street.

Phone 1995

Boost This Community by Advertising on the Slogan Pages

DID YOU KNOW That Salem is the Oregon raspberry center; that on account of the great demand of the canneries and the coming jelly and jam and preserves plants here, there will not be enough raspberries grown for many years; and the prices will therefore be remunerative; that in the matter of black raspberries, this district has what amounts to a franchise—for the black raspberry grows to perfection here, and the vines persist, bearing year after year; while in the great raspberry district of Washington the black raspberry cannot be successfully grown; that this fact should be heralded to the entire world; that there is sure money in both black and red raspberries, and room for more growers who will raise a large tonnage to the acre of the best berries the world can send to market?

Eat a Plate a Day

WEATHERLY ICE CREAM

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Buttercup Ice Cream Co.

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VALLEY PACKING CO. CASCADE BRAND HAMS, BACON AND LARD SALEM, OREGON

MAINTAINING THE FERTILITY OF RASPBERRY SOILS IN OUR DISTRICT

There are Ten Elements or Materials Necessary for the Successful Growth of Plants—Phosphorus, Potash and Sulfur in Some Cases Must Be Supplied; But Nitrogen Is the Important Material That Goes First and Has Got to Be Supplied in All Cases

Editor Statesman:—Of the many factors associated with raspberry culture, soil fertility is probably the most important. In many instances, receives the most attention. Soils vary greatly in the matter of plant food elements, and in terms of soil management each individual piece of ground is a problem area in itself. Consequently, in an article of this nature only general recommendations can be made concerning the matter of fertility.

There are ten elements or materials necessary for the successful growth of plants. These are carbon, hydrogen, oxygen, nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, and iron. Carbon, hydrogen, and oxygen are usually available in unlimited quantities from the air and water and make up approximately 95 per cent of the plant structure, including its crop. Calcium, magnesium and iron are used only in very small amounts and seemingly most of the soils of this state are sufficiently supplied with these. Phosphorus, potash, and sulfur are used by plants in liberal amounts and in some cases must be supplied. The remaining element, nitrogen, is furnished largely by the organic matter and along with the organic matter is usually the first plant food to disappear from western Oregon soil. Deficiency of this element in available form undoubtedly contributes to limited cane growth and yields.

Loss of Plant Food Elements:—The continued removal of crops and the loss due to drainage and leaching, as well as that due to natural decomposition, invariably reduces the soil's store of plant food. Experiments have shown that the apple trees on one acre remove nitrogen equal to that carried by 340 pounds of nitrate of soda, phosphoric acid equal to that carried by 95 pounds of 16 per cent superphosphate, and potash equal to that carried by 135 pounds of sulfate of potash. Losses from causes other than crop removal bring the total considerably higher, so that it is fairly safe to assume that the annual depletion from an acre of cane fruits is equal to that of 1200 pounds of nitrate of soda, 280 pounds of 16 per cent superphosphate, and 190 pounds of high quality sulfate of potash. Obviously any system of soil management that will insure a permanent agriculture must make plant food elements not only available for the moment, but must compensate for the natural loss due to natural agencies and to crop removal. It is far more economical in the long run to maintain soil fertility from year to year than it is to wait until the soil has ceased to be productive.

Soil Needs Organic Matter:—Organic matter returns to the soil the same elements that are removed by crops, improves the physical properties, promotes necessary bacterial and chemical action and makes the soil more retentive of moisture. Commercial fertilizers, while helpful as accessories, cannot completely replace organic material. Much of the soil now devoted to the culture of cane fruits has been under cultivation for many years and has lost a considerable portion of its organic matter. The paramount problem of the cane fruit grower so far as soil fertility is concerned, is the finding of an economical method of replacing the depleted organic matter and then maintaining it. Soil lacking in organic matter is usually characterized by light color, stickiness when wet and com-

Methods of Supplying Organic Matter:—A feasible and practical means of replenishing and maintaining the organic matter is that of cover crops. Due to the comparatively mild winters of this region, such cover crops as barley or rye and common vetch (V. sativa), can be made to produce a considerable amount of organic matter during the winter months. Common vetch being a leguminous plant, has the power to make free nitrogen from the air available for growth. Crops for this purpose should be sown before the fall rains begin at the rate of 30 to 40 pounds of vetch and 25 to 30 pounds of barley per acre. These crops should be turned under in spring. Whenever possible, the soil should be drilled rather than broadcasted, this practice resulting in better germination and less injury from drought. It is a mistake to leave cover crops standing too long, for they do not decay well, and soon deplete the soil of moisture.

A second method of replacing humus is that of applying manure, straw, or other crop refuse. A ton of wheat straw contains as much nitrogen as 6 1/2 pounds of nitrate of soda, as much phosphorus as 1 1/2 pounds of superphosphate and 4 1/2 pounds of sulfate of potash, besides a great bulk of soil-improving organic matter. No crop refuse of any kind should be permitted to go to waste within the planting distance of cane fruit plantings. Manure and crop refuse may be used in liberal quantities, 10 to 20 tons per acre not being excessive applications.

The Use of Commercial Fertilizers:—Certain commercial fertilizers have, in many cases, proved valuable to raspberries in that they have acted as quick stimulants or accelerators to cover crops. Individual instances are reported wherein yields have been increased from 10 to 25 per cent by the use of commercial fertilizers. It must be borne in mind, however, that these fertilizers contain nothing essential to plants but what is contained in manure or crop refuse, and, further, that they do but little to improve the physical condition of the soil or promote bacterial and chemical activity. Commercial fertilizers contain nothing when used excessively, or when improperly applied, may actually do harm.

Soil authorities are now fairly well agreed that commercial fertilizers produce beneficial results only when the soil is deficient in the available elements contained by them. Soil abundant in available nitrogen, for example, usually shows but little effect from the application of nitrogenous fertilizers. Partly, it is quite certain that commercial fertilizer will have but little effect on soils that are poorly drained, that are compact, or that are too dry. Again, it is clear that actual trial and observation constitute the only method of ascertaining the value of a commercial fertilizer upon a given piece of ground. A chemical test, while valuable in a general way, is of but little specific worth since field conditions cannot be duplicated in the laboratory.

Commercial fertilizer should be thoroughly pulverized before ap-

plication and should be worked into the soil rather than be allowed to remain on the surface. Some fertilizers are more or less caustic in effect and consequently should not be placed immediately surrounding the plants. The feeding roots of cane fruits extend pretty well across the rows and there is but little danger of placing the fertilizer out of their reach. Some growers find it advantageous to apply their fertilizers as early as February or March.

Kind of Commercial Fertilizers:—Many kinds of commercial fertilizers are now offered for sale. The more common nitrogenous fertilizers are nitrate of soda, sulfate of ammonia, dried blood, and tankage. Phosphorus is contained in such fertilizers as superphosphate, ground bone, Thomas slag, Florida phosphate rock, and Florida phosphate rock. Muriate of Potash, sulfate of potash, and wood ashes are common potash fertilizers. Sulfur is commonly supplied by ordinary crude sulfur.

By using varying amounts of different plant food elements on different plots, and by observing the results, each grower should be able to determine the kinds and quantities of fertilizers to which his soil responds. Portions of rows of equal length should be measured off, and to these fertilizers both alone and in combination should be applied. One plot for each fertilizer to be tested, and another plot; while the other plots should receive combinations of these, such as nitrogen and phosphoric acid; nitrogen and potash; phosphoric acid and potash; and phosphoric acid, potash and nitrogen. Check plots should be left for the purpose of comparison. It is suggested that nitrate of soda or its equivalent be tried at the rate of 200 to 300 pounds per acre. A high grade superphosphate, testing about 16 per cent, may be tried at strengths varying between 200 and 400 pounds per acre. Muriate of Potash may be applied at from 100 to 150 pounds per acre, while sulfur may be tried at the rate of about 100 pounds per acre.

Effects of Nitrate of Soda on Red Raspberries:—Experiments to ascertain the effects of nitrate of soda on the vigor and yields of red raspberries were carried on by the Oregon Agricultural College, during the seasons of 1919 and 1920. The work was done in the plantation of Mr. Orrin Stratton near Brownsville, Oregon. Cane growth in this plantation at the beginning of the experiments was only moderate, indicating a limiting factor. The nitrate of soda was applied at the rate of 250 pounds to the acre just as growth was starting in the spring. Check plots were maintained so as to afford a basis of comparison. The results of these experiments were as follows:

Table with 2 columns: Nitrate plot, Check Plot. Rows include: (1) No. of berries in box, (2) Color of berries, (3) Time of maturity of berries, (4) No. of new canes to plants, (5) Average length of new canes, (6) Color and appearance of foliage, (7) Average size of leaves, (8) Increase in crop 10 per cent.

Obviously, in this particular case, beneficial results were obtained from the use of nitrate of soda. Since a considerable portion of western Oregon soil is known to be deficient in available nitrogen, similar quick results can be expected in many cases by the use of this fertilizer. Whether high production could be maintained indefinitely by this method alone, however, is problematical. The objection has been raised that nitrogenous fertilizers tend to produce berries that are soft in texture and canes that do not properly mature for winter. Experimental data, however, tend to show that this may be overcome,

MORE BLACK RASPBERRIES NEEDED IN THE PLAN OF OUR FRUIT GROWING

They Thrive and Yield Well on Moist, Well Drained Soil—In Some Localities They May Be Depended on With Proper Attention to Give Larger Yields Than Red Raspberries

(A recent article by Prof. W. S. Brown, professor of pomology of the Oregon Agricultural college, on the subject of black raspberries read as follows:)

Blackcap Deserves Wider Attention:—The blackcap raspberry is undoubtedly worthy of more attention than it has received in the past. It makes a splendid product for the table in any one of several different ways: the fresh berries are fine either for sauce or pie, the black raspberry, when properly canned, is one of the richest and finest flavored sauces that can be obtained from fruits. It leads itself especially to the making of excellent jams, and dries to the best advantage of any of the small fruits, drying out from 20 to 25 per cent of its fresh weight.

The blackcap is easily cared for and requires less hand labor than many of the other small fruits. On the whole, this industry should be encouraged by being more widely advertised. When the merits of the black raspberry begin to be known to the average housewife in Oregon, the prices of this delicate and delicious fruit will increase. The blackcap is often seen in its native habitat upon bramble bushes, that the black raspberry does not produce as well on the Pacific coast as does the red raspberry.

This is true as a general rule, but when careful selection is made of soil and slope, coupled with good cultivation, careful pruning and protection against pests and enemies, and when in addition the fertility of the soil is carefully maintained, the blackcap will in fact regularly outyield the red raspberry. In the east the black raspberry is regularly counted upon to outyield the red raspberry.

Varieties Recommended:—In a state which has been growing raspberries successfully for so many years we are safe in recommending four or five leading varieties that have proved themselves especially good. From time to time many varieties are brought forward, some of which have considerable merit; others of which will not do well under our conditions. The best thing for the grower to do is to try a few of these many varieties as a sort of a local experiment on his place, and to couple with the information he obtains any further advice he may get from the state experiment sta-

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In part at least, by applying the fertilizer early in spring, by removing the old canes as soon as the crop is harvested and by applying potash and phosphorus along with the nitrate. —HENRY HARTMAN, Corvallis, Oregon, Nov. 27, 1924. (Prof. Hartman is assistant professor of pomology at the Oregon Agricultural college, and he is a high authority in his field. He surely makes plain the problems of maintaining the fertility of raspberry soils in this section, as well as the importance of keeping it up from the start, every year.—Ed.)

be accomplished by the cultivation. Most commercial plantings are set 4x8 feet so as to permit thorough work either with horses or with tractors.

Fertility of Soil:—It is coming to be generally understood by the growers of all kinds of small fruits that if the soil is not rich enough for the fruit they must supplement the fertility of the soils in one form or another if they are to get maximum results.

The best treatment for the berry patch is to give it a liberal dressing of stable manure the year before planting. If 10 to 12 tons of manure to the acre can be worked into the soil throughout the fall preceding planting in the spring, the growth of the vines is usually such that by the second year there is quite a crop upon them, whereas, if the vines are not fertilized, it is usually the third season before they produce sufficient to pay for harvesting.

In case stable manure is not obtainable, commercial fertilizers combined with green manures is often profitable. It is a fact that nitrogen content wears out faster in the soil. Hence the job of the fruit grower is to build up the nitrogen content so that he will get a well balanced ratio of nitrogen, potash and phosphoric acid. He will know when this is accomplished by the vigorous appearance of the leaves and shoots. As a rule in this valley, we have enough phosphoric acid and potash to provide for ordinary yields, but if maximum yields are produced, they can only be brought about by increasing the nitrogen, phosphoric acid and potash in a sort of a balanced ration in the soil.

In other words, it will do you little good to increase the nitrogen application beyond a certain point, unless the plant also has enough phosphoric acid and potash to build into its tissues, to balance the nitrogen. The berry fertilizers put out by Swift and other companies are usually good when maximum production is wanted. If one chooses to make up fertilizer, he can do so by using a formula of 4 per cent nitrogen, 8 per cent phosphoric acid and 2 per cent potash.

The black raspberry requires a deep, rich, cool, moist soil, very well drained. When sufficient water can be added by irrigation, the black raspberry will do its best on sandy loam soils. Under Willamette valley conditions, however, the plant does best on a light friable clay loam that is fairly retentive of moisture. Under no conditions should the black raspberry be planted on poorly drained light clay loams. They will soon die out and will be unprofitable from the start.

The slope should be to the north preferably because the black raspberry should be kept from being shriveled up from the heat of summer and becoming too seedy. The north slope is cooler and can be kept more moist. In some sections north slopes have deeper soils than south slopes. Good air drainage is necessary also to protect the plants against winter killing, and to avoid damage from late spring frosts.

The more humus the soil contains the greater will be its water-holding capacity. There is nothing that fills the bill better in this respect than stable manure containing more or less straw. The cover crops make a very good substitute for stable manure, especially if a leguminous crop is grown. Oats and vetch sown together in proportions of 30 lbs. of vetch to 20 pounds of oats, and then plowed under as soon as plowing season arrives in the spring makes a very satisfactory cover crop.

In western Oregon careful and frequent cultivation must be resorted to if the moisture content of the soil is to be conserved. This means a frequent shallow cultivation rather than deep cultivation, because the roots of the plants are relatively shallow, and if the cultivating tools are set deeply more harm may result by cutting off roots than good may

"ONE OREGON BOY" WORTHY OF REWARD

Comments of the Portland Sunday Journal on Work of Eldon Fox

(The following is from the editorial page of the Portland Sunday Journal of last Sunday. The compliments have been well earned and are entirely appropriate.) Lamb was the meat course of the dinner at the White House, in Washington, D. C. Saturday. The lamb was raised by an Oregon boy.

It was the lamb that won the first award at the Pacific International Livestock exposition. When President Coolidge dined with the Oregon lamb as the piece de resistance of his dinner, he not only paid a compliment to Oregon and to Eldon Fox, the Silverton boy who raised the animal. He gratified his own appetite with the finest specimen that could be grown in America.

Had it not been for the boys' and girls' club work, led by O. A. C. Eldon Fox would not have raised the lamb, it would not have been exhibited at the Pacific International exposition, and the president of the United States would perhaps have had to be content with less distinguished meat.

This is a boy's story. It is the story of Eldon Fox: "As I am going to be a sheepman, I want to learn the business first by sleep, and by taking up the project through club work I feel sure we are on the right track to success. What is worth doing at all is worth doing right. Through sheep club work I have acquired a great deal of know-

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ledge which will be beneficial to me later in life. I started in club work four years ago, at the age of 13, since that time I have won eight scholarships to summer schools as well as many other prizes, such as a registered Shropshire ewe lamb for exhibiting the best club sheep.

Eldon Fox, a 16 year old boy, might have started at 12 to be a loafer. He might have joined a boys' gang. He might have got into mischief. He might have become a burglar. He might be in reform school, an apprentice for the penitentiary. Other boys have done these things, or worse, by starting wrong. But Eldon Fox has added to his previous triumphs by winning this year 23 first awards, two championships and two gold medals. Nine of his awards were won in open competition with sheepmen of all ages. He has started right.



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Our producers must grow more black raspberries; this is important.

Hotel Marion

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BLANCHING CELERY OTHER REMINDERS

Some Timely Suggestions From Some of the Experts at the OAC

(Following are excerpts from a current bulletin of the department of industrial journalism, of the Oregon Agricultural college:—Oregon celery, if being blanched at this time of year, should not be allowed to stand between the boards long after it is fit for use, says the Oregon Agricultural college experiment station. After the chlorophyll of the stalk has been changed to a yellow or white, de-

(Continued on page 13)



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