

Oregon Agricultural College Is the Friend of the Farmer

THE average family orchard in Oregon is too large and too poorly cared for," says Prof. C. I. Lewis, O. A. C., horticulturist. "It produces more fruit than the family can use and it is often of inferior quality."

"As a result of this policy the family orchard is often declared to be a menace to the commercial industry. Some growers have gone so far as to say that the day of the family orchard is about up. Unless the men who own family orchards take better care of them they will be legislated out of existence. It seems to me that it would be a great mistake to prevent the growing of home orchards on Oregon farms. There are few things that contribute so much to the delights of farm life as the family orchard. And I believe that we can establish much better family orchards than any we now have."

"The number of trees should be reduced quite materially. Instead of trying to have a whole tree for every variety desired, it is better to plant fewer trees and later graft four or five varieties upon them. All the varieties needed for the family use every month in the year can be provided in this way, and by having fewer trees to care for the owners will care for them much better. In this way they will have better fruit, it will cost much less in room and money and his orchard will not be a source of insects and diseases for his neighbor's trees."

SPRAY NOW FOR CURRANT WORM

NOW is the time to spray for the green currant worm," says A. L. Lovett, crop expert at the Oregon Agricultural college. The adult insects are busy in the field at this time depositing eggs in the leaves. If lead arsenate spray is used in the near future the young worms will devour poison with their first meal. In this way later injury by the mature worms will be minimized. Where unchecked the worms often strip the leaves of the currant and gooseberry bushes at about the time the fruit is ripening. The advantage of spraying early is apparent. It takes less poison to kill the small forms and discoloring the mature fruit with a later spray may be avoided.

"The adult currant worm is a sawfly—*Diphodius appendiculatus*. Hartig. The female sawfly deposits eggs between the two surfaces of the leaf. These eggs hatch into small green worms with a black head much too large for the body. These worms feed greedily on the leaves of the currant and gooseberry. They mature in late May, occurring at this time as velvety green worms about one-half inch in length. The mature worms spin small brown capsule like cocoons in the pollen leaves and trash at the surface of the ground. A second generation of adults emerge in a few days and deposit eggs for a summer generation of worms."

"Spray the foliage with lead arsenate at the rate of one pound of arsenate to 15 gallons of water. (If powdered arsenate is used, dilute 1-30). This solution should be applied as soon as the berries are set. Both gooseberry and currant bushes should be treated."

NATIVE PLANTS BEST

FARMERS could often improve their ground by planting shrubbery that appears to be at home among its surroundings," says Prof. A. L. Peck in the Oregon Countryman published by the agricultural students at Corvallis. "And what can seem more at home than shrubs and trees that grow wild in the district. Few of our people realize that we have here in Oregon a number of native plants that are very valuable for ornamental use. Eastern people know it, and nursery catalogs list many well known and often thoroughly despised Oregon species. It is to be regretted that while distant people see the beauty in our native material our own people must send to California or Chile or Australia for some odd outsider to plant on their grounds. Why is it that many prefer an apparently dying palm or a monkey puzzle or a fearfully distorted and weeping ash or willow to a neat, well grown and thrifty specimen that looks at home? They are making sad mistakes in collecting materials that always appear half starved, homelick, crippled and freakish. Instead of planting materials that harmonize with our natural plantings in this big country of ours."

DAIRY HERD PROFITS VARY

THE average income per cow in Oregon as shown by reports from 3,609 cows, was last year \$66.66, as reported in the agricultural college survey. Only direct income from the sale of milk or cream is included in the item. In reality allowance should be made for the value of skim milk in addition.

Many herds show a much higher income. An average of the highest herds reported from each of several counties is slightly in excess of \$100 per cow.

In Clatsop county three herds of 50 cows in all averaged \$118.59 per cow. The three lowest herds reported show an average income of \$29.26 from the cows.

In Tillamook county the three high-income producing herds show an average of \$114.59 each for 61 cows. The three lowest producing herds showed an average of \$37.61 for 71 cows.

A select herd of Jerseys in Linn county produced an income of \$145 per cow for the year 1912 and \$140 for the year 1911.

A report from Benton county shows an income of \$150.84 for March, 1913, for butter fat sold to a creamery from a herd on 15 cows. Milk and cream for a family of four adults was also used on the farm.

The averages show what is actually being done by many, and the higher incomes of the few show what it is possible to accomplish by testing cows and selecting only the best.

HOME MADE APPARATUS FOR TESTING SEED CORN

TESTING seed corn may be done without expense by using material about the place and working at odd moments.

Any shallow box of the size wanted will do. Shave sides and ends down until they are about two inches above the bottom. Fill near to the top with clean sand. Measure both sides and both ends into two-inch spaces, driving tacks about half way down on the marks. Lace twine strings between each pair of tacks, both crosswise and lengthwise. Letter them A, B, C along the end and number them 1, 2, 3 along the side.

Take one grain of corn from the third row from the butt of the ear. Revolve the ear a little and remove another one-fifth of the remaining distance to the tip, and so on until six grains are taken. Put them in square A 1, and number the ear A 1. Treat another ear in the same way, numbering it A 2, until you have enough to provide one ear for each acre to be planted, with a few extra for bad ears.

Cover the box with a piece of cloth, press it down over the corn and sprinkle sand or sawdust over it to keep it moist. Now put the box away where it will be kept at about house temperature for a week. Examine by rolling back one edge of the cloth, and unless the seedlings are appearing, good and strong in each square, reject the ear with the corresponding number. The squares with six strong plants are filled from the best ear for seed.

There are many good ways, but this is quite satisfactory on the farm. It is the method used at the Oregon agricultural college.

TESTING SEED CORN

THE only apparatus needed to test seed corn by the rag doll method are a strip of white cloth a foot wide and three to five feet long, a pencil and a rule. The cloth is marked off in two equal parts by a fine line drawn lengthwise through the center. A row of three inch squares is then made on each side of the center line, leaving about a foot at each end of the strip for rolling. The left hand squares are numbered 1, 2, 3, 5, etc., and the right hand squares 2, 4, 6, etc.

Six grains of corn are then removed from different rows on an ear to be tested, and placed in square 1. The ear is put aside, No. 1 also. Each ear to be tested is treated in like manner, until either the space or the seed is exhausted. The strip is then rolled up from one end and tied near the middle. It is next stood in a pail of slightly warmed water for about a day, when the water is poured off and the pail covered to keep the moisture in. The doll is kept at about house temperature for five to seven days, when it may be unrolled and the corn examined. Care is required in handling to keep the grains in their own spaces.

This is a very effective and simple means of testing corn, and is used by the extension agronomists of the

Oregon Agricultural college, because it is not only good, but the apparatus is easily secured anywhere.

HARDWOOD ASHES RICH IN PLANT FOOD MATTER

COMMON hardwood ashes have a value of about \$5 in plant food, and \$3.50 in lime per ton, according to investigations made by Prof. H. V. Tartar, agricultural chemist of Oregon Agricultural college. Their physical effect on the packed and acid soils of certain districts is also very beneficial. The almost prohibitive high price of lime to correct soil acidity should lead the Willamette valley farmer to use ashes extensively for that purpose.

"Wood ashes are valuable fertilizers for three reasons," said Prof. Tartar. "For the valuable plant foods they contain, for their effect in neutralizing acids in soils, and for their action on the physical properties of the soil."

"The plant foods in ashes are potash, phosphorous and lime. An analysis of 37 samples of hardwood ashes gave the amount of each as follows: Potash 110 pounds per ton; phosphorous, 38 pounds per ton, and lime, 682 pounds per ton.

"In order to get this value from ashes it is necessary that they be protected from rain, as most of the potash is soluble in water and is lost by exposure. After leaching, the potash content of ashes was found to be 22 pounds per ton. The ashes should be stored in a dry place until applied to the soil.

"On soils that are poorly drained and acid, ashes have an excellent effect. The land becomes more amenable to culture, is readily kept in good tilth, retaining its moisture in dry seasons and favoring drainage in wet seasons.

"Lime is essential to plant nutrition, and none of the higher plants can reach maturity without a normal supply. Some of these plants, such as clover, beans and alfalfa, require so much lime for their development that they are called 'lime plants.' The potash and phosphorous are likewise indispensable to plant growth, and ashes offer a cheap and convenient source of supply."

BEEF CATTLE NOT WORTH FEED ON SMALL FARM

THAT beef cattle on the small farm will make but a small profit, if any at all, is the belief of Professor E. B. Fittz, extension livestock man at O. A. C. It is advisable to turn off the beef early, since beef is produced more cheaply during the first two years of the animal's life than at any time afterwards.

"There is no profit in feeding beef cattle for the additional flesh that they put on. The hay that a beef eats in a day is worth more than the beef it makes. The only advantage in feeding is to give a high finish that will command top prices.

"The beef animal is not so profitable as the dairy cow or as pigs and sheep. When beef is produced, the producers should breed along beef lines. The Durham and Hereford generally stand at the head of the beef breeds, but the Galloway and Angus are also good beef animals."

PLANTING FAMILY ORCHARD.

N starting a family orchard I hope that you will put out what may be called an ideal family orchard," said Professor C. I. Lewis, horticulturist of the Oregon Agricultural College. "I am sure that we can learn a very profitable lesson from past experiences with family orchards in this state. For one thing we have learned that the average family orchard is too large, and that it is poorly cared for and produces more fruit than can be used by the family, because it is often of very inferior quality."

"Orchards of this kind are often regarded as a menace to the fruit industry by those who depend upon fruit growing as a livelihood. They have caused much discussion concerning enforcement of inspection laws. I believe that we can establish family orchards much better than any we now have. In fact this is necessary. Some persons have gone so far as to say that the day of the family orchard is about past. Unless men who have these orchards in charge take better care of them they will be legislated out of existence. This would be a great misfortune and we cannot afford to prevent the growing of home orchards on Oregon farms. There are few things indeed that contribute so much to the delights of farm life as the home orchard."

"One way to improve the orchards and insure better care of the trees is to reduce quite materially the number of trees planted. If it is felt that it is necessary to have every variety you desire, fewer trees may still be planted and later four or five varieties grafted onto a single tree. Many varieties of fruit are very desirable for the home orchard, but an entire tree is not required to furnish enough of each variety for family use. By setting out fewer trees and using more varieties a supply of fresh fruit can be secured for the family for practically every month of the year. Having a small orchard encourages the owner to take better care of it."

"In shaping the trees they should be headed low, and since there is plenty of room on the farm the trees should be given plenty of space. Apple trees should be given at least 30 feet; pears, 25; sweet cherries, 35; walnuts, 50; prunes, 22; peaches and sour cherries, 20.

"The trees should be planted in the orchard a little deeper than they were in the nursery row."

"In this valley it probably makes little difference whether the trees are planted in late fall or in early spring. I have always felt that fall planting is perhaps the better, but I am not at all positive as to this. There are indications that in some years at least spring planting is safer in Western Oregon, and we know that it is safer in Eastern Oregon."

"In choosing varieties for the home orchard there are several points to be kept in mind. First, only varieties which are liked by the family should be selected. Personal preference should mean very much in choosing varieties for the home orchard. Second, varieties should be so selected that they would furnish fruit throughout the entire year. Third, varieties may profitably be chosen even though they do not grow to the highest degree of commercial perfection. Some varieties do not come up to the commercial standard of color, size, and yet, because of their eating or cooking qualities, are very desirable for the family orchard."

DRAINAGE A REMEDY FOR ALKALI IN SOILS

SINCE drainage prevents alkali in soils from coming to the surface, drainage is the most successful method of reclaiming alkali soils," said M. A. McCall, farm assistant of Klamath county in addressing the O. A. C. extension course at Klamath Falls. "Indeed it is coming to be generally recognized that land that is badly alkaline cannot be wholly reclaimed by any other means. If the water that holds alkali in solution is allowed to stand and evaporate on the field, the alkali is bound to be deposited."

"There are other things, however, that will help. Manure properly added to the soil will tend to neutralize the alkali and land plaster will change black alkali to white, a less harmful form."

"Air circulating freely in the soil will render the alkali less harmful. Therefore, the addition of any organic matter that will open up the soil will be beneficial. This matter, whether manure or straw, should be well disked into the ground."

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