

**THE BEND BULLETIN**

"For every man a square deal, no less and no more."

CHARLES D. ROWE, EDITOR

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FRIDAY, APRIL 26, 1907.

**A SUGGESTION.**

When President Withycombe, of the Oregon agricultural college at Corvallis, was at the Redmond fair last fall he stated that one of the leading industries of this region in the future will be the dairy business. That is the opinion held by many here. Therefore it will be well for the farmers of the upper Deschutes valley to gradually turn their attention to the needs of the dairying business and lay their plans accordingly.

Speaking of the wealth that comes to the farmers of Washington from dairy products, August Wolfe says in an article on the "Inland Empire of the Northwest":

"Dairying, which netted the farmers of the state of Washington \$9,500,000 a year ago, is yet in its infancy. Sixty thousand cows were used last year, but their products did not supply more than 25 per cent of the demands; in fact, competent authorities say there is immediate need for from 150,000 to 200,000 cows to supply the dairy and creamery demands of Washington alone."

"Profitable dairying in the Northwest carries with it the growing of fodder stuffs, such as alfalfa, grasses and grains. How productive the first named is may be noted that by the ordinary process an acre of land will yield from two to two and a half tons, while under irrigation this is doubled and trebled, and there are instances where 30 tons have been cut on a single acre. As alfalfa thrives in almost any kind of a soil, it is but natural to conclude that a few years will see extensive fields wherever cows or live stock are kept."

It has been amply demonstrated that the Bend country can grow good alfalfa. Acres upon acres of it should be sowed as rapidly as possible. And as the fodder supply increases, cows with the very best strains of dairy blood in them should be brought into this country. The majority of cattle in these parts now are range or beef stock. They will always be needed. We also need good dairy breeds. It will take time to introduce large numbers of these cattle into this region, and the work should be started at once by those who have the means to undertake it.

When the time comes that there is an extensive dairy business established in the Bend country, then you will find more dollars in the farmers' pockets. And it isn't too early to begin the bringing in of dairy stock now.

**LET THE PROSPEROUS GIVE.**

How much is it worth to you to be an American citizen? How highly do you value the privilege of living in a country that never experiences a famine and where it is commonly said too much, instead of too little, is eaten? At the present time China and Russia are passing through one of the worst famines in their histories. Thousands are dying. Diseases, caused by lack of nourishment, are spreading among them. Children are being sold into slavery; daughters into lives of shame. The people of whole sections are living on a paste or dough made from grass, weeds, herbs—a vile stuff with but little nourishment and fruitful in breeding disease. What should prosperous America do to relieve this dire state of affairs?

It has been suggested that the ladies of Bend plan some little entertainment or social, the proceeds from which, together with contributions from those who so desired, could be forwarded to the sufferers. It is an excellent idea and Bend ladies should take immediate action. It is said that \$1.00 will support a human life in the famine-stricken districts until they harvest their next crop. How little it

takes to support those poor wretches, and yet donations have been very slow in coming.

There are many ways to spend money, but few of them will be of more immediate or lasting benefit than will the money that is given to keep life in those down-trodden, hungry and suffering beings in a foreign land. Should not Bend do its share—and more—to relieve this suffering? What is your American citizenship worth to you?

The Bulletin has made it a point to make numerous inquiries regarding the condition of fall sown grain. Every report so far obtained states that fall sown crops never looked better and that they are in excellent condition. In fact, there is promise of a bumper yield from this grain. Many of the farmers hereabout firmly believe that all grain, the nature of which permits it, should be sowed in the fall, thus securing the benefit of the fall and winter moisture. Each year's experience seems to prove them correct in their theory.

Judging from the actions of the development league at Laidlaw, people there are determined to lead in to that burg by the nose both the Corvallis & Eastern and Oregon Trunk Line railroads. They have simply got to build into Laidlaw whether they want to or not. Well, that is the kind of spirit that wins. If people do not know that Laidlaw is on the map it won't be the fault of the development league.

Those Prineville chaps may think they gave the Bend school team an awful drubbing, but they mustn't fool themselves with the belief that they took the nerve out of the Bend boys. Wait until the next game and they will learn that the Bend aggregation is composed of the stuff that "won't stay licked."

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**Problems That Confront The Irrigator.**

**Irrigation in Fruit Growing**

From Farmers' Bulletin No. 116, issued by the U. S. Department of Agriculture.

**WINTER IRRIGATION.**

In the warmer parts of the arid region, where there is proper character and sufficient depth of soil to constitute the great subsoil reservoir previously described in these columns, it is possible to insure the deciduous tree all the moisture it needs for months by free winter irrigation which fills this reservoir just as a heavy winter rainfall could do it. There has been abundant evidence ever since the beginning of irrigation by Americans in California that such irrigation, followed by good summer cultivation, will be effective if the soil is retentive enough. Recent experiments in Arizona has approved for that region the teachings of experience in California. While the deciduous tree is dormant large amounts of water can be safely applied on all, except, perhaps, heavy clay soils, and water may be used at a temperature which would certainly be too cold to use while the tree is in active growth. For winter irrigation free application at intervals sufficiently long to allow deep penetration of the moisture is necessary.

**SUMMER IRRIGATION.**

When the use of water shall begin during the growing season depends, of course, upon the character and depth of the soil and the needs of the particular growth. The same considerations already urged to determine whether irrigation is needed at all have a bearing upon this question, because earliness of application is merely a degree of that need. Under some conditions, such as exceptional drought in the arid region, it may be necessary to irrigate to maintain the spring growth, and thereafter at intervals of about a month during the whole summer. Usually, however, there is natural moisture enough to start growth, even in the driest regions, and irrigation is first called for to give proper size and quality to the early ripening varieties, and from that on at intervals for the maintenance of growth, the perfection of later varieties, etc. This is in a region in which full irrigation is required.

Partial irrigation is now largely employed as a supplement to rainfall in other regions where the need of irrigation for deciduous fruit trees was formerly scouted. It varies in method according to local moisture needs. Irrigation before fruit ripening is given in a single application of about 3 acre-inches per acre after the early ripening fruits have reached good size and just before they begin the final swell which determines size. This reaches the circulation of the tree in time to materially aid in the attainment of satisfactory size. In some cases this not only does this but enables the tree to hold its foliage and growth the balance of the season.

Irrigation after fruit picking is practiced where the moisture from rainfall is enough to properly mature the earlier fruits, but the effort so far exhausts available moisture that the tree would afterwards fall of growth enough to fill out fruit buds for the following year. One irrigation at that time, accompanied by a summer pruning of excessive wood growth, has a tendency to develop fruit spurs, maintain verdure and leaf action, and bring the tree to the close of

the season in good condition for the next year's bearing. This application is also about 3 acre-inches of water per acre.

The above are used singly when either one or the other seems to be all that the tree requires. Where the need is apparently greater the two are given. This does not seem to be a deep indulgence in irrigation, and it is not, but it is great from the fact that it holds the secret of profit in the orchard; first, in making fine, marketable fruit; second, in laying the foundation for the same result the following year.

**FALL IRRIGATION.**

Fall irrigation for deciduous trees is found advisable where the rain resources of the region are very scant, so that there may be too great drying of the tissues of the tree during the long, hot autumn, and where prolonged activity of the tree does not encounter killing frosts. In some such places the too early dormancy of the tree is followed by undesirable fall bloom, which can be prevented by prolonging fall growth until a later dormancy. In regions of greater cold, and especially in the interior valleys of the northerly portions of the arid region, late irrigation must usually be carefully guarded against, because it is very necessary that the tree should become dormant early and fully harden its new wood. For the same reason, summer cultivation must stop sooner toward the North, so that a degree of dryness in the soil shall warn the tree to complete its work for the season and prepare for frosts. On the other hand, at some interior Northern points it is necessary to use late fall irrigation to guard the trees against injury by evaporation in dry winter atmosphere. It has been demonstrated that trees adequately supplied with moisture are less liable to winterkilling. These lessons of experience are akin to others previously cited—that adequate irrigation is of inestimable value and that excessive irrigation is dangerous.

Quite different is the practice with autumn and winter fruiting trees which are by their nature restricted to the semitropical regions. Fruits of the citrus family are the most conspicuous instances. They take almost a year to accomplish what the deciduous trees do in a few months. The high summer heat which ripens Northern fruits brings growth and development to the citrus fruit, but the wonderful chemistry of the ripening process is restrained. It is reserved for the cooler months of winter. As the tree has no long dormant season, but a number of short naps at intervals, its moisture supply must be continuous and the irrigator must be ever ready to supplement the rains with irrigation as may be necessary all through the autumn months and, on occasion, even into the winter if the rains fall. Size, quality, and all the characteristics of a perfect fruit, in winter fruits as well as in summer fruits, are all conditioned upon adequate moisture, and the longer the growing season of the fruit, the more water needed, as a rule. Even the olive which stands at the head for drought resistance, will shrink and shrivel its ripening fruit until its moisture needs are met. The amount of water required and the time of its application depend, then, upon the nature of the growth, as well as upon the nature of the soil which supports it.

(To be continued.)

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