

## Growing and Using Loganberry Crop

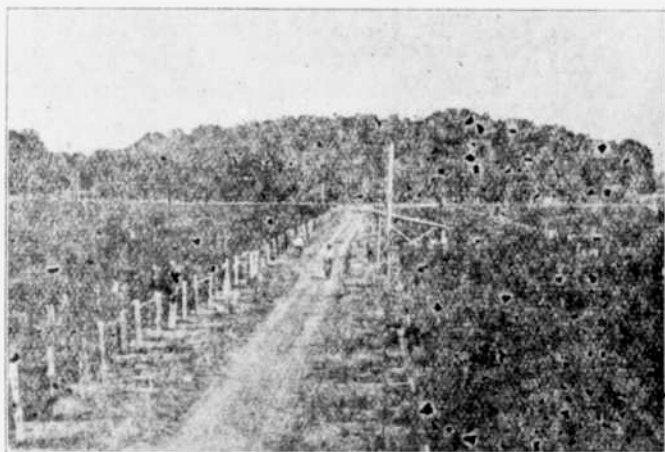
### Production Easy in Oregon But Handling More Difficult

#### COOPERATION — ADVERTISING

#### Time and Methods of Harvesting Important in Securing Good Fruits and By-Products.

(By C. I. Lewis, Chief O. A. C. Horticultural Department.)

Oregon Agricultural College, Corvallis, Oct. 11.—Being a relatively new fruit, the loganberry up to the present time has had a somewhat limited output, owing to the small acreage now in bearing. There is a good opportunity greatly to increase the out-



put, since the Pacific Northwest not only has large areas of suitable soil, but a climate that will produce this berry profitably. Another factor in its favor is its adaptability to various commercial uses. As a canning berry it is very satisfactory, and as a pie fruit it is believed to be one of the very best that we can produce, being superior even to that queen of pie fruits, the blackberry. In addition to its adaptability to canning, the berry can be easily evaporated, and in this condition sent all over the world. It makes rich jams and beautiful jells, having a bright red live color which adds attractiveness to a fruit product. One of its greatest uses, however, is in the manufacture of juice, vinegars, and wines. The juice of the loganberry, in fact, is pronounced by many people to be superior to that of the grape.

The production of the loganberry is relatively easy. The cultural methods that are successful with other cane fruits such as the blackberry or raspberry, are likewise applicable to the loganberry.

The marketing problem is somewhat difficult. It is especially so because of the fact that this is a new product, that it is relatively unknown, and that it therefore needs extensive advertising and careful distribution. There is always great danger in attempting to introduce a new product, for unless the first reception by the American public is favorable, years of hard work are required to overcome early prejudice. The loganberry is a very tart fruit. When put up in the right way, it will meet with a very hearty reception, but when poorly handled it will soon cease to meet with a strong demand in any market. In the past undoubtedly some of the canned goods that have been sent out have been unsatisfactory. The cannery man fills the cans full of a fruit, which is packed solid and which when shaken down leaves few air spaces. Consequently, when the syrup is poured into the cans, there is very little room left for it around the berries. As a result the product is too tart. In order to put a sweeter product on the market,

either less berries should be put in the can, or else a heavier syrup should be used.

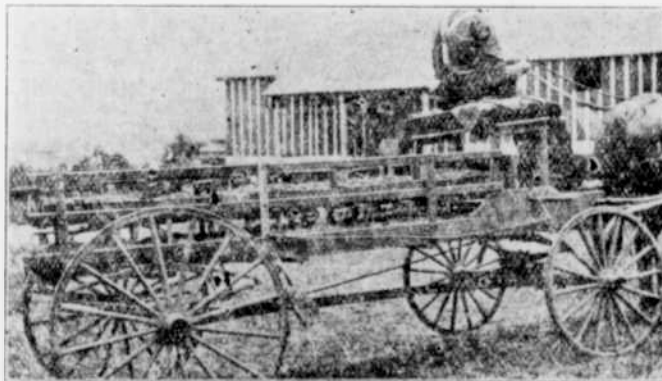
Many of the berries have been picked too green. Many, in drying, have been scorched and blackened, and handled in such a way that they have been rendered very unattractive. We cannot hope to build up a permanent trade with such fruit. Then, again we have to meet the danger of a substitute. Already in some Eastern markets blackberries, canned and labeled as loganberries, have been sold as such on the market.

A few juices are being put on the market; some of these are very good indeed, but, unfortunately, some are of very inferior grade. Acquaintance with such goods makes it very evident that standardization is necessary. To get a standardization which will meet the market requirements and carry weight with the growers themselves, it will be necessary to cooperate.

As to just what standards can be established, it is somewhat difficult to state at this time. The canned goods can be standardized by determining the strength of syrup necessary to give the proper blend. The

evaporated products, first grade, should consist of berries which are of a good color, of pleasant flavor, and not too tart. The juices should be clear, have a good aroma, pleasant flavor, and should be free from all foreign taints. The juice will probably go through the same evolution as has the grape juice. Hundreds of people have tried to put on the market grape juice that they claimed to be superior to the brands that are well established. Invariably, however, these juices are inferior. Should we be so fortunate as to be able to put a high grade loganberry juice on the market, the demand will be almost unlimited.

Advertising is one of the principal problems for us to consider. Before we spend much money on advertising, however, we must have a very large production and know absolutely how much fruit we can depend on. We can begin very nicely by advertising at home, by having the people of the state send to their eastern friends



presents of dried loganberries. These, put up in cartons, would make very acceptable presents. Some splendid work is being done at the Panama Exposition.

#### Loganberry Evaporation.

In considering the question of evaporation of the loganberry, we can divide the subject into two natural

heads. First, that which deals with the harvesting and preparation of the berries for evaporation. Second, that which deals with the handling of the berries in the evaporator. We wish first to take up the work in the field, namely, the harvesting and preparation.

#### Harvesting and Preparing.

An investigation will show that many of the inferior evaporated loganberries are due to one or all of three causes—poor selection of the fruit and careless harvesting methods, rough handling in removing the fruit from the field to the evaporator, and unskillful methods employed in evaporation. Too much stress cannot be placed on the question of harvesting. It is only by very careful handling and correct knowledge of the proper berries to pick, that one can deliver to the evaporator a product that is desirable for evaporating. In addition to careless handling in the field, many berries are ruined in being transported from the field to the evaporator.

#### Types of Berries.

The best berries to select for evaporating purposes are firm, ripe berries. Care should be taken, however, not to pick these too soon. If they are light colored, or very bright colored and hard, they do not make a very satisfactory product. Thus, a very pretty product can be manufactured, one which is very attractive, but the fruit is too tart, and it also loses too much weight. During the early part of the season, growers need to be unusually cautious not to pick the berries too green. The berries are apt to ripen slowly, while a grower has a tendency to become anxious to remove the fruit and start the evaporator. The presence of large amounts of this unripe fruit is probably partly responsible for the greater loss in weight through the evaporation process during the early part of the season than is experienced during the latter part, though possible the fact that there is apt to be a little less moisture in the ground at the end of the season may be responsible for some of the difference in moisture content of the fruit. Berries which are overripe should not be used for evaporating purposes. Such berries can be utilized for juices, syrups, jams and jells.

#### Juices and Syrups.

There is a very close relation between the condition of the loganberries harvested and the amount of juice, the flavor, aroma, and the sugar and acid content of the product. For juice purposes the berries can be allowed to ripen more on the vine than is advisable with berries for evaporating. Since in the manufacture of juice the berries themselves are crushed and destroyed, they can be allowed to become dead ripe. At this time it is found that the berries contain the maximum amount of sugar and the least amount of acid. This is a

ship of sugar and acidity to the juice content of the berries:

#### Composition of Loganberry Juice

	Acidity calculated as Sulphuric Acid	Total calculated as Dextrose
Juice obtained from		
Green Berries	2.06%	3.50%
Medium Ripe Berries	2.10%	4.91%
Full Ripe Berries	1.88%	6.40%
Over Ripe Berries	1.78%	6.46%

The effect of ripeness of the berries on the quantity of juice and its general quality, is very strikingly brought out in the following table:

#### Effect of Ripeness of Berries on the Quantity of Juice.

No. of Sample	Kind of Berries	Per cent of juice	Rank according to Quality
No. 1	Green	59.3%	4th
No. 2	Medium	71.8%	3rd
No. 3	Ripe	71.8%	1st
No. 4	Over ripe	78.1%	2nd

Juice made from very ripe fruit retained a more distinct flavor and had a higher quality than was obtained from berries at other stages of ripeness. If more than a very small percent of green berries is used, the juice



is apt to have a very astringent flavor and to be undesirable. Berries which have become moldy but have not soured, should not be used for high grade juices and syrups, but can be used for the manufacture of vinegar or wine. Juices made from such berries will also make a syrup, which can be used in the manufacture of sherbets and ices, but does not make a suitable product for beverage purposes.

In addition to working with loganberries, we worked with other berries to determine the amount of juice which one can secure. The following table shows the amount of juice we were able to secure from the various berries:

#### Per Cent of Juice Obtained from Various Small Fruits.

Kind of Fruit—	Per Cent of Juice
Red Raspberry	68.0 per cent
Red Currant	75.6 per cent
Blackcap Raspberry	60.0 per cent
Phenomenal Berries	78.0 per cent
White Currants	56.2 per cent
Wild Blackberries	65.3 per cent
Loganberries	74.3 per cent

The amount of juice secured from the Phenomenal berries is somewhat misleading, since we had a rather small amount of this fruit and what we had was in the very best condition, being very ripe.

#### MANUAL TRAINING BULLETIN

A bulletin to supplement the manual training outline in the state course of study has been issued by the Extension division of the Oregon Agricultural College. The purpose of the bulletin is to offer a practical guide to teachers of the state, who are installing and developing courses in the relatively new field of public school training in the use and care of tools and in the construction of metal and wooden products. Ask for Course of Study in Manual Training, O. A. C., Corvallis, Or.