

A Panama Canal Lighthouse



Photo by American Press Association.

THIS picture shows the lighthouse at Gatun locks used to guide vessels approaching the locks across Gatun lake. Range lights have been established for guidance on long tangents and side lights, spaced about a mile apart, mark each side of the channel. Lighted beacons are also to be used. These are to be built of reinforced concrete. The sailing lines are marked by range lights except at the entrance to the channel and will be fixed so that a ship will follow a course which will keep it 250 feet from any ship coming in the opposite direction.

HOME COURSE IN FRUITS AND BERRIES

RASPBERRIES, CURRANTS AND GOOSEBERRIES.

By LE ROY CADY and K. A. KIRKPATRICK of the Minnesota Agricultural College.

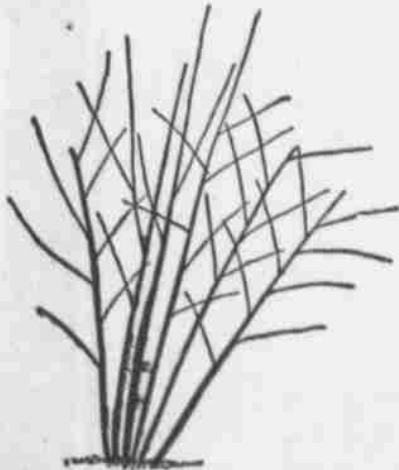
THE raspberry will succeed on any good corn soil. It likes a great deal of moisture. A north slope is accounted best. The presence of an abundance of humus in the ground chosen is desirable. The best fertilizer to use is stable manure comparatively free from straw or foul weed seeds. Apply a fairly heavy dressing to clover or timothy stubble in the fall and plow under. If the ground is already quite rich in nitrogen it may be desirable to grow a crop of roots or potatoes previous to setting the plants or even to dispense with the manuring altogether.

It is desirable to plow in the fall and allow fall weathering. If plowing must be done in the spring the top portion of the soil should first be thoroughly stirred with a disk or other harrow. In the spring, if the plowing has been done in the fall, as soon as the top of the soil dries sufficiently it should be dragged. Follow with a disk or spading harrow, working the surface up thoroughly. Some growers prefer to apply well rotted stable manure just previous to this treatment.

Time to Plant.

The upright or suckering varieties may be set with good results in the fall. The black caps, or the tip growing sorts, must be planted in the spring. Wait until good, large sprouts have started from the tip plant.

Practicable raspberry propagation is done only by means of sucker plants



and tip plants. To obtain sucker plants the planter should dig up the little sucker sprouts which stand in the outer part of the hills or rows. Care should be taken to get a good portion of the running underground root. But the best possible results will usually be secured by digging up several large, thrifty plants in the fall. Cut the roots in three inch pieces and stratify them over winter. In the spring sow these in shallow drills in well prepared garden soil. This method requires a year.

For the tip plants the tips of the growing canes may be allowed to droop and touch the soil in the latter part of July. If the soil is loose and extremely dry they should have earth placed over their tips with a spade or hoe. In late fall they will have rooted nicely. When laying down the canes for the winter a foot or more of the

The treatment for the first year is similar to that for the suckering kind. The second and succeeding years five or six canes may be allowed to develop. The canes which have borne fruit should always be removed soon after the crop is harvested.

If one wishes to grow the berries without laying them down to winter the young shoots should have the tops pinched out of them when they are about fifteen to twenty inches high.

Cuttings and Rooted Vines.

If cuttings are planted and the supply is sufficient two in each place increase the chances of getting a full stand. Should both cuttings grow one of them can easily be pulled up without injuring the other. To protect the cuttings from drying out plant them so that the top bud projects only a trifle above the ground.

If rooted vines, either plain or grafted, are used the roots should be cut back to three to four inches, depending on their vigor. Only one cane of the top should be left, and this should be cut back to two or three good buds. If grafts are used all scion roots and all suckers should be carefully removed.

During the first year after planting no pruning or training is usually given, although it is perhaps a good plan with vigorous plants, especially if the season is propitious, to rub off all except the straightest and strongest of the young shoots that start. The following winter the vines should be pruned and staked before they start to grow, the size of the stake used depending on the method of training adopted.

By the third year all vines should have erect, straight stems, with two or more canes growing from the principal part, out of which the head or crown is to be formed and from which the growth of the vine is to be renewed from year to year.

To prune intelligently the age, size and condition of the plant, the location, climate, soil and other features of its environment and the principles governing its life must be considered.

A statement of some of the more important of these life principles follows: The sap flows with greatest force to the outer extremities; the more upright a branch is the more sap flows into it; the sap when abundant and active produces wood; the more abundant the flow of the sap the larger and later the fruit; the ascending sap grows richer the farther it flows; checking the flow of the sap makes the plant bear earlier and produces more and richer fruit. The vine usually bears its fruit on new shoots growing from the wood of the previous year. The time for pruning is in winter, when the vines are dormant. They should not be cut when frozen or while the sap is flowing rapidly. Summer pruning is practiced on the young growth to regulate the quantity of fruit and the shape of the plant.

In pruning one or more of the following objects are usually accomplished: Parts of plants removed, renewed, promoted or retarded; wounded and diseased plants cured; the shape and habits of plants modified; the size and quantity of the fruit increased or diminished; the quality of the fruit improved; the fruit made to ripen earlier or later; a regular succession of fruit secured, and the spraying, training, cultivation and gathering of the fruit facilitated.

Methods Used in Pruning.

There are various ways in which the objects of pruning are accomplished. For instance, the growth and health of a plant are promoted and the size of the fruit is increased (1) by removing all the diseased parts and suckers, (2) by shortening extended shoots, side shoots and laterals, (3) by putting upright the part whose rapid growth is desired and (4) by removing the fruit buds or fruit. The plant is retarded in

growth and made to bear earlier and richer fruit by shortening the leading shoots and leaving the fruit bearing wood and by bending down the branches and ring pruning them. The healing of wounded and diseased plants is promoted by removing the injured parts and dressing the wound. The head of a plant is renewed by cutting off the branches above; the head is made to grow thicker by cutting back the outer branches and to grow thinner by amputating all canes on which there is too much growth.

There are so many species of grapes, each having peculiarities of its own and therefore responding most readily to certain cultural methods to which it is best adapted, that the pruning, training and growing of vines, which otherwise may appear quite simple, become complicated operations in which comparatively few people grow expert, and vineyards in which serious mistakes are not made are rare.

Distances For Planting.

A decision as to the proper distance apart to set trees varies with different planters. Some plant 16 by 32 feet—that is, the trees sixteen feet apart in rows thirty-two feet apart. The object of this method is to obtain a crop from the trees until they begin to interfere with each other, when every alternate tree in the row is cut out, leaving the trees in the entire orchard at a distance of thirty-two feet each way. The trees to be cut out should be early bearing, short lived varieties. This system has the advantage of more fully utilizing the land for fruit production until the thinning out becomes necessary.

Other planters adopt a distance between trees of twenty, twenty-four or thirty feet apart each way, claiming that by the time the trees interfere with each other they will have finished their growth and the orchard will begin to decline. But it is generally conceded that thirty-two to forty feet is the preferred standard distance. If the distance of forty feet each way is adopted it will afford ample space between the rows for growing any crop which requires cultivation, such as corn, beans, potatoes, etc. Such cultivation is highly important and necessary for the maintenance of moisture in the soil and for the health and vigor of the trees. This distance will afford free circulation of air and abundance of sunlight, both of which are essential to the growing of well developed and highly colored fruit. Small grain should never be grown among fruit trees, especially when the orchard is young.

Best Time to Plant.

The question as to the best time to plant is governed somewhat by latitudes. In southern latitudes late fall or the early part of the winter may be safe for planting. But in most of the states early spring is considered the better time. Fall planting has the objection against it that the roots of a tree do not take hold of the ground sufficiently to supply enough moisture to maintain a healthy active circulation of the sap, which is required to prevent shriveling of the branches during winter's extreme cold and exhaustive evaporation from drying winds.

The selection of trees is a very important part of orcharding, for upon are and judgment in this matter depend largely the future profits of the investment. Strong, stocky and vigorous one or two year old trees, called "whips" by nurserymen, having well developed root systems, are preferable. Trees of this type and age are more satisfactory and profitable in time and suffer less in transplanting, cost less and are much more easily handled than older ones.

In this connection we would suggest the advisability of purchasing trees for planting from the nearest responsible nurseryman. The local nurseryman, if perfectly familiar with his business, will understand the needs and demands of his home customers and should grow the varieties best suited to his section of country. If honest he should feel himself morally if not legally responsible for the correctness of his nomenclature. By securing trees at the nearby nursery all danger from damage by long transit and the injurious effects of sunshine and frost are avoided. Besides, if the farmer makes his purchase direct from the nurseryman he will save the expense of the middleman or agent and is less liable to the mistakes and injury that may occur through repeated handling.

It is well there is no one without a fault, for he would not have a friend to the world.—Hazlitt.

Notice to Creditors.

Notice is hereby given that the undersigned, Jasper E. Rhodes, has been duly appointed by the County Court of the State of Oregon for Polk County, executor of the estate

of John M. Rhodes, deceased, and has qualified.

All persons having claims against the said estate are hereby required to present them, duly verified, with the proper vouchers, within six months from the date of this notice, to the said executor at the office of Oscar Hayter, Lawyer, at Rooms 5-7 Uglow Building, in the City of Dallas, in Polk County, State of Oregon.

Dated and first published June 6, 1913.

JASPER E. RHODES, Executor of the estate of John M. Rhodes, deceased, OSCAR HAYTER, Attorney. 6-6 7-4

Notice to Creditors.

Notice is hereby given that the undersigned, Joseph A. Haines, has been duly appointed by the County Court of the State of Oregon for Polk County, executor of the estate of Ellenor Haines, deceased, and has qualified.

All persons having claims against the said estate are hereby required to present them, duly verified, with the proper vouchers, within six months from the date of this notice, to the said executor at the office of Oscar Hayter, Lawyer, at Rooms 5-7 Uglow Building, in the City of Dallas, in Polk County, State of Oregon.

Dated and first published June 6, 1913.

JOSEPH A. HAINES, Executor of the estate of Ellenor Haines, deceased, OSCAR HAYTER, Attorney. 6-6 7-4

Notice to Creditors.

Notice is hereby given that the undersigned has been appointed guardian of the Estate of Orange E. Osburn, an incompetent person, by the County Court of the State of Oregon, for Polk County, and has qualified.

All persons having claims against the said estate are hereby notified to present the same, duly verified, together with the proper vouchers, to the undersigned guardian at the offices of Walter L. Toole, Jr., Lawyer, National Bank Building, Dallas, Oregon, within six months from the date of this notice.

Dated and first published June 6th, 1913.

R. L. OSBURN, Guardian of the Estate of Orange E. Osburn, an Incompetent Person, WALTER L. TOOLE, Jr., Attorney. 6-6 7-4

Summons.

In the Circuit Court of the State of Oregon, for Polk County.

R. A. Campbell, Plaintiff, vs. L. E. Braley, Defendant.

To L. E. Braley, the above named defendant:

In the Name of the State of Oregon: You are hereby notified and required to appear in the above named court and answer plaintiff's complaint filed against you in the above entitled action, within six weeks from the date of the first publication of this summons, which said date of first publication is the 20th day of June, 1913, and if you fail so to appear and answer said complaint for want thereof, the plaintiff will apply to the said court for the relief prayed for in said complaint, to-wit: For judgment against you for the sum of \$123.00 with interest thereon at 8 per cent from March 6, 1912, until paid, the further sum of \$40.00 attorneys fees and the costs and disbursements of this action.

This summons is served upon you by publication in the Polk County Observer by order of the Hon. John R. Teal, County Judge of Polk County, Oregon, made at chambers in Dallas, Oregon, on the 18th day of June, 1913.

W. O. SIMS, Attorney for Plaintiff. 6-20 8-1

Notice to Creditors.

Notice is hereby given that the undersigned, F. J. Craven, has been duly appointed by the County Court of the State of Oregon for Polk County, executor of the estate of George M. Goeh, deceased, and has qualified.

All persons having claims against the said estate are hereby required to present them, duly verified, with the proper vouchers, within six months from the date of this notice, to the said executor at the Dallas City Bank, in the City of Dallas, in Polk County, State of Oregon.

Dated and first published June 27, 1913.

F. J. CRAVEN, Executor of the estate of George M. Goeh, deceased, OSCAR HAYTER, Attorney. 6-27 7-25

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25c the Package

Recipe for Fruit Rocks—One and one-half cup of brown sugar, mixed with one-half cup butter and one-half cup other shortening, three eggs, two-thirds cup white flour, three cups Roman Meal, one teaspoon soda dissolved in one-half cup of water or sour milk, one teaspoon each cinnamon, nutmeg, salt, two cups Sultana raisins or chopped dates (mix white flour through these) drop from teaspoon into greased pan; moderate oven.

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---Elbert Hubbard

After and Afterward In Tornado Stricken Omaha



OMAHA is finding itself. Torn and smashed by the terrible tornado, it faced the work of restoration with indomitable spirit. Phoenix-like, it started to rise from its own devastation. Of the 1,779 homes that were destroyed or damaged by the twister more than 70 per cent are now repaired or reconstructed. The above pictures show a concrete example of what was done. The upper view was taken the morning after the awful hail cloud had swept through the city and shows the damage done to a brick electric garage at Farnam and Fortieth streets. The lower picture was taken recently of the same building, showing how the structure was reclaimed from the wreckage. Other buildings rose out of their ruins in just this way.

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