PLANTING A THOMPSON SEEDLESS VINEYARD

By DEAN H. THAYER, '26

Insure the Success of Your Vineyard by Careful Handling During First Three Years—Grape Vines Always Responsive to Good Pruning and Cultural Methods

THE success and profit to be derived from a vineyard is largely determined by the care it receives during its first three years. During this period of development, the training that determines the shape, form and, to a certain extent, the vigor of the vine, is often neglected, due to the fact that it is bearing no fruit and bringing in no returns. Since these first three years are so important they will be briefly discussed in the following paragraphs.

The cheapest way to start a vineyard is to start it from cuttings. They may either be bought from a nursery or they can be made from the prunings of other vineyards. In making the cuttings select only mature one-year-old canes, those that have made a moderately fast growth during the season. Vines that have grown very fast and have long intervals between the buds or that have made a very slow growth will not make good cuttings. These cuttings should be made twelve to eighteen inches in length, containing four or more buds. The lower cut should be made one-sixteenth inch below the bud and the upper cut one and one-half inch above the bud. This makes it easy to distinguish the top end of the cutting during planting.

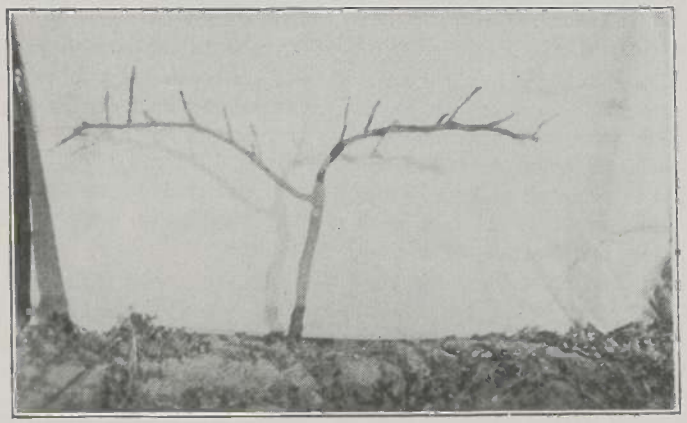
When the cuttings are made several months before planting time, they should be tied in bundles of about one hundred to a bundle and the bundles tied with baling wire, being careful to get all of the bottom ends on the same plane. They should then be buried in the ground one and one-half to two feet deep in a damp, cool place. About four to six weeks before time to plant the cuttings they are placed in a callousing pit, which consists of a hole a little deeper than the cuttings are long. The cuttings are placed in the hole with the bottom ends up. All of the bottom ends of the cuttings should be placed as nearly level as possible. Damp, sandy loam is then packed around the cuttings and four inches of sand is placed over the bottom of the cuttings. The sand is put on top because it absorbs and holds the heat and thus stimulates callousing of the cuttings and root development. The damp soil is placed around the cuttings to lower the temperature and to keep the soil from drying out.

How The Vineyard Looks During The Second Year

So soon as the bottom ends of the cuttings are "calloused over" they are ready to be planted in the nursery row. They can be planted any time in March or April.

The cuttings should be planted in a place where plenty of water can be obtained, because a great deal of moisture is needed until the roots are established. In planting the cuttings a furrow is ploughed about twelve inches deep; the cuttings are then laid along the slanting side of the furrow eight to twelve inches apart, being placed deeply in the furrow so that the second bud from the top of the cutting will come nearly level with the surface of the ground. Another furrow is then ploughed in the the same direction to cover the cutting to the desired depth.

From now on all the care needed is to keep out the weeds by an occasional cultivation, and to irrigate them as needed. It is very important to give them plenty of water, keeping the soil damp at all times. From 75 to 80 per cent of the cuttings should grow. When the vines have grown to such an extent that they interfere with cultivation it should be stopped so as not to injure the ten-

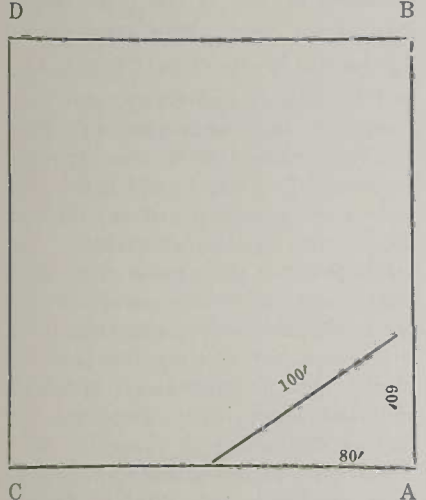


A Four Year Old Vine After Pruning. A Typical Type For The Trellis

der shoots, but irrigation should be continued throughout the season.

The vines should be ready to transplant to the field the next spring. They are either ploughed up or dug with a shovel and gathered together for pruning. All of the shoots should be cut off but one and this one cut back to two buds. In pruning the roots only the larger roots on the two lower nodes should be left unless they are very weak, in which case it is advisable to leave roots higher on the cutting. All bruised and injured roots should be cut back to sound tissue. The main roots are usually left four to eight inches long. The vines are now ready for planting in the permanent vineyard. From the time the vines are pruned until they are placed in the holes for planting, they should be kept wrapped in wet burlap sacks or kept in a bucket of water to prevent the roots from drying out.

The squaring up and staking out of the vinyeard is a very important step. It is essential to get the rows straight and to place the vines exactly the same distance apart in the rows. This perfect alignment makes it easier to cultivate and irrigate and it also adds to the appearance of the vineyard. It is very easy to square up the vinyeard if you have some established boundary, such as a fence or roadway. The following figure shows a simple method of squaring a vineyard.



Establish the line AB as a base line taken from some known boundary, A being the corner of the vineyard. Beginning at A measure off sixty feet on the line AB. At this point place one end of a wire 100 feet long, and place one end of an 80-foot wire at point A. Stretch the wires tightly and their intersection will locate a point on the second base line, making a square corner for the vineyard. A second corner is now established by using the line AC as a base. After these two corners are established it is very easy to measure off the other two sides.

A Four Year Old Vine in Full Fruit

In staking out the vineyard, three wires are used. Two of these have soldered buttons marking the distances between the rows and are stretched on opposite sides of the vineyard. The third wire, with soldered buttons marking the distances between the plants in the rows, is stretched between these first two wires, and short stakes driven at each button.

The distance that the vines should be planted in the vineyard will depend on whether the vines are to be staked or trained on a trellis. Staked vines are usually planted ten feet by ten feet and trellised vines are usually planted eight feet by twelve feet. The first two years of training the vine is the same, regardless of the method to be used.

The simplest way to plant the vines after getting the vineyard staked is to dig a hole as close to the stake as possible, making all of the holes on the same side of the stakes. The holes should be about fourteen inches deep and large enough in diameter to accommodate the roots. In planting, the vines are placed in the hole so that the top of the vine is leaning against the stake. As the soil is thrown in the hole the roots are spread out in a natural position and the soil packed around them so that no air pockets will be left. Top soil should be used in filling in the hole since it is usually richer than that taken from the bottom of the hole. The vines should be planted so that the top bud is just above the level of the ground. If possible, the vines should be watered immediately after planting, especially if the soil is dry.

The care of the vines during this first year in the vineyard is practically the same as that given them in the nursery row. The soil should be kept damp at all times until the young vines are well rooted. They are cultivated occasionally to keep down the weeds. This year the vines are left to run as they wish so as soon as they have grown to such an extent that they interfere with cultivation it should be stopped so as not to injure the young shoots.

Pruning during the first winter consists of cutting off all of the new canes but one, and it is cut back to two buds, just as was done with the young vines as they were taken from the nursery row. During this first winter stakes should be set to which the young vines are tied as they start out in the spring. The best stakes to use are two by two inch split redwood. The stakes should be driven about two inches from the vines, care being taken to place them all on the same side of the vines, so that the rows will be straight. If there is a prevailing wind the stakes should be driven on the leeward side of the vine so that the vine will be blown against the stake and not against the string.

The critical period for the vine is during the second spring and summer. At this time it requires the

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greatest amount of work and attention. As soon as the vines start in the spring they must be watched and when six to eight inches long the two best canes are tied to the stake and the others pulled off. In making the tie the string is tied firmly around the stake but loosely around the vine; in this way the string will not slip out of place nor will it bind the tender shoot. In about a week the vines must be tied up again, this time one o fthe two shoots is cut off leaving the best one to form the trunk. The vines must be visited every week or ten days and tied up when they have made a growth of six to eight inches. All suckers or new shoots starting up must be pulled off as soon as they appear. When the vine reaches the top of the stake it is let grow until it is eight to ten inches above the stake, then it is cut off even with the top of the stake and the top of the vine is tied firmly to the stake. The four or five top lateral branches that come out are left grow as long as they wish, but all laterals below these are kept pinched back to about two or three inches in length; they are not removed entirely because they help to shade the new trunk and also help manufacture plant food.

The pruning during the second winter consists of removing all of these short three-inch laterals and any suckers that have started. The top four or five laterals are cut back to two or three buds. From then on the trunk is kept bare.

During the third summer there will be only a small amount of fruit produced, but it is better to geet a good root system established before trying to get a crop from the vines. All that needs to be done this summer, along the training line, is to keep out all suckers and any new shoots that start along the trunk.

The third winter the vines are pruned as mature vines. By this time the vineyard should be well established; it should have a deep, uniform root system; a strong, straight truck, and a well-formed head. The vine is now ready to start bearing fruit.

In summarizing the important steps in establishing a Thompson Seedless vineyard, we see that the most perilous period of the vines life is during the second year of the vineyard. At this time a great deal of care and attention must be given it if a good straight trunk and well-shaped head is formed.

The grape vine responds readily to all pruning and cultural practices so it is profitable to give it the best of care and attention at all times.

The hired man lit a lantern to go and see his best girl. "Humph!" said the farmer. "When I was young I never went courting with a lantern; I went in the dark."

"Yeh!" said the hired man, "and look what you got!"

BARKER BROTHERS WHOLESALE HOUSE

On March 30, 1926, the Vegetable Gardening Class visited Barker Brothers Wholesale Produce House. This is the largest produce house in Tucson. They supply both local and out-of-town retail buyers. While we were there they were busy repacking apples. They ship the fruit in by carload lots and then go over it all and take out the bad fruit. They have to stand this loss.

We were first taken through their large refrigerator rooms. The temperature in these rooms was around 38 degrees Fahrenheit. They use a direct expansion system of cooling. The walls are lumber and the inside is lined with a layer of cork. They had a large number of vegetables and fruits stored in these rooms. By going through these rooms we got an idea as to the methods that were used in packing many different vegetables. Some of the vegetables that they had on cold storage were squash, celery, eggplant, lettuce, carrots, tomatoes, asparagus and rhubarb. Most of the vegetables come from local gardens, the West Coast of Mexico, or California. There was also a large amount of oranges and apples in cold storage.

We next went to the basement of the plant where we saw the compressor that they used, and also their banana ripening rooms. They receive bananas by the carload lot in a green stage and then unload and ripe nthem. In ripening the bananas they are exposed to different temperatures. They are first put in a room of rather low temperature and left there for a while, then they are put in other rooms which have higher temperatures. When they are ripe they are again packed and are ready to be placed on the market as ripe bananas. They also use some of the rooms with higher temperatures to ripen their tomatoes.