

CITRUS FRUITS

GROWERS OF
CITRUS FRUITS
MAY OBTAIN INFORMATION OF GREAT VALUE
AS TO THE IDEAL CONDITIONS THAT PREVAIL IN
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OF ITS ORANGES AND GRAPE FRUIT—
ALONG THE
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LINE RAILROAD**
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They are all hard wood, have a magnificent and abun-
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PROPAGATING CITRUS TREES.

Good Seed, Rigid Selection of Plants
and Buds Necessary to Produce
Good Trees.

By A. J. Cook, State Commissioner of
Horticulture.

MORE and more, I think, will our citrus growers start their own trees. Yet nurserymen need not shiver at this advice, as few will follow it. The orchardist can then select seeds and buds, and can care for the little plants from the very first, and very likely such care, costing but little, will double the annual income as the trees come to maturity. I know starting trees is a complex matter—a trade to be learned, but I have great faith in Yankee gumption.

As large seeds are preferable, seeds of the sour orange, sweet orange and pomelo are to be preferred, the largest seeds always to be selected. These should be secured from the fruit of trees of maximum performance and thrift. Whether or not the stock affects quality of scion or bud so as to influence quality of fruit, surely every plant and animal has better promise if the parents are full of vigor, health and action. In Europe sour stock is everywhere preferred and almost universally used. We are now rapidly coming to the same practice,

vent this may be stratified in moist sand till needed for planting. Seeds from Florida come dry, but will germinate readily if soaked in water about 70 hours before planting. Mr. R. M. Teague, one of our most successful growers, always plants in the open, with no protection. He thinks this gives him hardier trees and a better root system. It is said, however, that



Fig. 9—Cutting bud from scion.

his location is a very protected district. But most of our nurserymen protect the young plants by use of a lath cover. The seeds should never be planted until the earth is warm or they may decay. In any case, the soil should be rich, loamy and with a surface of sand

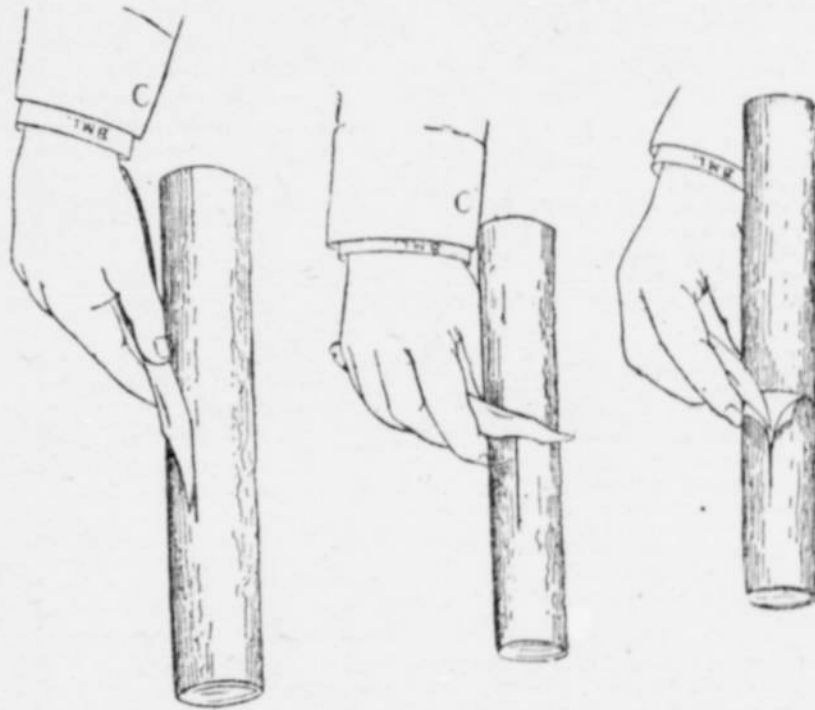


FIG 8—PREPARING STOCK TO RECEIVE THE BUDS.

Securing the Seed—Seeds are secured by cutting selected fruit, squeezing out pulp and seeds and sieving; or the fruit may be decomposed in water and the seeds washed free from the pulp by use of the sieve. The seeds should never be permitted to dry and to pre-

at least for two or three inches. If this is slightly ridged, and the seeds planted on the ridges, the drainage will be more perfect and the dampening-off fungus will not be so likely to put in its deadly work.

From March to May, depending upon season and soil, is the time to plant the seed bed. The seeds are best planted in rows one foot apart. The seeds are covered about one inch with soil that has been screened. It is easy to irrigate between the rows and to cultivate with a hand cultivator. The seeds will come up in about three weeks if the weather is favorable. The young seedlings should be well watered and cultivated and left in the seed bed for one year. As already stated, many prefer to protect the young seedlings. The earth must be kept moist, but not too wet or the plants will die of fungus attack. The early spring is the best time to plant not only the seeds but to transplant the seedlings.

Transplanting—The young plants from the seed beds should be transplanted to the nursery in rows at least three or four feet apart, or so as to admit of cultivating by horse without injury, and 15 inches apart in the rows. This gives ample room for digging and balling. The plants are easily loosened in the seed bed by the use of a long spade, and should be quickly set, as the roots must not be permitted to become dry. Only robust plants should be transplanted to the nursery. As Mr. R. M. Teague says, "The best are none too good." Some advise keeping puny plants two years in the seed beds. It were better to discard them entirely. To take up the seed bed plants, a four or five tined potato fork is excellent. It will not cut the roots as will the spade. If the weather is hot it is well to place shade boards above the young plants. The nursery should be carefully watered and cultivated for two years, when the nursery trees should be ready for budding. This insures larger and stronger trees, and the buds can be set six inches above the ground. Budding is possible whenever the bark slips easily, and may be done in March and April. Summer budding is not uncommon, though the

best time to set the buds is in September and October. The buds will start as soon as the sap begins to flow; will become strong before fall, and will resist the cold winter. Here, again, it is well to select only the best of the young trees. The bud union is the weak place in a citrus tree, and should be well above the reach of irrigating water as a preventive of gum disease.

Selecting Buds—The selection of the buds, is, I think, the most important step in the whole range of citrus culture, and is reason enough for one to grow his own trees, at least from the time they are set in the nursery. Only buds from tested trees, whose performance has been most excellent in both quality and quantity for a number of years, should ever be accepted. This gives us pedigree stock. In this way we hope to double our outputs and profit. We must remember what selection has done for corn in Illinois and Iowa.

Mr. R. M. Teague uses only selected buds. He allowed his patrons to furnish their own buds if they so prefer, though this privilege is rarely accepted. The past season only two persons accepted the offer, though he sold over 200,000 trees. Only plump, vigorous buds should be used. The method of inserting the bud is explained by Figs. 8 and 9 where is shown the T-shaped cut, the peeling of the bark and the cutting and insertion of the bud. The tying by budding twine or waxed strip of cloth is well shown. Some of the twigs with foliage are left on the young plants to promote vigor (Fig. 10)

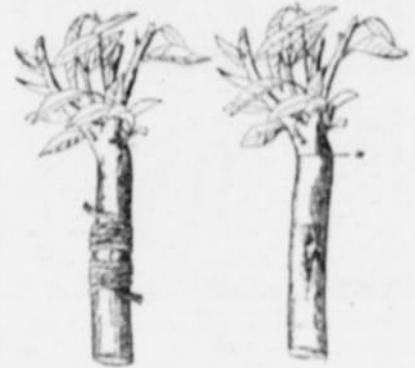


Fig. 10—Showing bud inserted and wrapped.

though not many, as we wish to throw sap to the buds. After the buds are well started the old twigs may be gradually removed. One or two years after budding the young trees are ready to set in the orchard.

Large trees may be budded if a change in variety or if a better tree is desired. Here the buds are inserted into the branches (figs. 11 and 12) some of which are permitted to remain to insure thrift, and removed as the new growths from the bud become large and thrifty. The trunks in this case should be protected from the sun's hot rays by whitewash, or by wrapping with some protecting cover. It is also well to protect young trees in the orchard in similar fashion. All pruning of orchards should be close, and the fresh cut at once waxed over. In case Fuller's rose weevil attacks the buds, as they are wont to do, the insects may be headed off by winding loose cotton about the trunk below the bud. The beetles are wingless, and so can reach the buds only by crawling up the trunk. The cotton will prevent this.

Citrus trees can be started by grafting, by slips, or by layering, but as none of these methods are now in vogue in our citrus orchards it is needless to discuss them here.

A California orange grower saved 300 acres of oranges during a six-nights' freeze by the use of four smudge sleds and 500 sacks of manure. The smudging fire is built upon a low sled, which is drawn about through the orchard. One man can protect about ten to 20 acres in this way, and the expense of the sled need not be over \$10.

Brain Food.

A recent remark by Datas, the "memory man," that "fish is the ideal memory diet," recalls a story of Mark Twain.

A man once consulted Mark on the subject of how his brain power might be increased. "I've heard that fish is good for the brain," said he. "Do you think I should eat a lot of fish?"

"Yes," replied the humorist promptly. "I think a whale would do for you. You needn't eat a large whale, just a medium-sized one."—Pearson's Weekly.

Pruning Grapes—Grapevines may be pruned any time after growth has ceased and the leaves begin to drop. How to prune cannot be explained fully on the printed page, by use of pictures or by word of mouth, but requires practical experience in the vineyard covering several years' growth.

Mother (to park policeman)—"My little boy wants to see the monkeys. Can you direct us to the aviary?"—Boston Transcript.