

plants, applying in the drill 400 pounds per acre of fertilizer, then covering, repeating the application further away from the plant each time. The latest applications should be made in the middles and lightly raked in. As a final, finishing, stimulating dose, 350 pounds to the acre cast in the middles. Some apply four to five tons of commercial fertilizer to the acre. This is considered by good authorities as excessive and wasteful.

In the West bleaching is accomplished by drawing the dirt about the stalks. This mode if practiced here, cause damage from rust. Florida celery is bleached with boards. The exact time for bleaching is determined by the size of the plants, generally about ninety days from time of setting. And now the wisdom of assorting the plants in two sizes is apparent, as the boards may be used for bleaching alternate rows of the different size plants, economizing with half the expense that would otherwise be incurred.

When sufficiently bleached the celery is harvested, taken to the packing tables, assorted as to size, and neatly packed into crates of three, four, and five dozen. Some small shipments are made by express, but, the main crop is forwarded in iced freight cars. The journey only adds to the beauty and crispness, and the celery reaches the market in fine condition.

#### Where Celery May Be Grown.

Mary experiments have been made, with varying success, to grown celery at different points in the State. Extensive preparations are now under way in Duval county, in this line of experiment.

The growers at Sanford, where success is now almost universal, claim that the climatic conditions there, together with soil, artesian well sub-irrigation, and thorough tile drainage, give them the pre-eminence in successful celery growing. The fact is cited that one of their most successful growers, made a dismal failure trying to grow celery on the opposite side of Lake Monroe. They view with complacency all experimental attempts to wrest from them the title of "the Celery City."

#### Can Celery Growing Be Overdone?

The shipments of celery from Sanford increased from 1,100 crates in 1899 to 190,250 in 1908. The present crop for 1909 is estimated at 600 cars. There is no apparent danger of overdoing this business. An expanding market and unappropriated seasons encourage the belief that many times the present acreage will not glut the markets. Florida celery yields from \$1,000 to \$2,000 an acre. California is satisfied with a net profit of \$150 an acre. Some of their growers have discarded celery and substituted hops.

#### Keep a Few Sheep.

Sheep produce the richest manure of all domestic animals, and they distribute it in such a way that it does the most good to pastures and fields. The droppings of horses and cattle do considerable damage to grass. The feed sheep pick up is just like finding money. No man would pass a piece of money on the ground and not pick it up. Why not get an animal that will pick up more money in a month than you will ever find in a lifetime?

## PRUNING THE ORANGE TREE

### A Method That Is Practiced in California But Not Generally Followed in Florida.

By T. R. Wallace.

Pruning is a phase of orange culture which receives meager attention by the grower, and yet it is one of the important details. It is usually discussed in a very general way and with a sort of tacit acceptance of the theory that evergreen trees do not need pruning except to remove accumulations of dead wood. The writer's study of the subject has been through direct experiment and in closely observing the experiments of others, and the object of the study is to find what methods of culture must go hand in hand with the use of fertilizers to obtain the most desired results with reasonable certainty. The direct issues in mind were quantity and quality of fruit, and the striking fact that, in the attempt to produce quantity by direct fertilizing, an abundance of fruit wood was evolved which went dead instead of producing fruit. This dead wood being invariably found inside the tree, the investigations naturally led to the study of that part.

Presuming that in a suitable soil and climate we have an orange orchard on healthy root, and that the trees are kept healthy by proper soil fertilization (which simply means correct farming,) and we are feeding the trees with useful fertilizers to insure steady and desirable fruiting, can we by pruning enhance the value of our crops? I answer that we can.

The inclination of the citrus trees after a few years is to grown top, and the top usually forms like a pyramid over the center of the tree, shutting out the light and air from the center or inside of the tree. This deprives the tree of considerable bearing surface inside and the crop is borne mostly on the outside. As this becomes habitual, even though we fertilize ever so cleverly to produce fruit wood, the interior fruit wood dies from simple inanition, and practically the bearing of inside fruit stops. This cannot be corrected by simply cleaning out the interior of the tree nor by thinning out fruit wood from the side. The letting in of light and air through the sides of the tree is of no important value, and indeed the denser foliage of the sides the better protection the outside fruit will have from winds and severe climatic changes.

Practically the pruning of the orange tree consists in removing the branch reaching up and enclosing the center-top and the opening out of the center so that the air and light can freely descend upon and into the cup-top thus produced. This permits the tree to prepare and nourish an inside rim or surface of fruiting wood, and to bear fruit on it. Practically that provides two fruiting surfaces, an outside and inside. The taking out of the top allows more strength to concentrate in the lower sides and they become rich and strong to the ground, so that they not only produce more fruit, but afford their crop more protection by dense side foliage. Thus an increase in both quantity and quality

of fruit is effected. But this is still further augmented by the crop grown inside. This inside crop is as well very superior fruit for packing, as it is protected from the wind, and as well there is always a sufficient thin foliage swinging over the inside rim of the cup to protect from sunburn.

In such pruning only the saw is required, and care must be exercised to cut all limbs fully back to the eye, and no limb should be nipped or cut on any part of its length or between buds, as in such case it will either die back or sprout like a broom. This method of pruning is not expensive, and can be done very quickly by anyone who can handle a saw properly. It cannot be done periodically every few years, but each year the trees should be gone over. The first year it will be found that but one, two or three limbs can be profitably and safely removed.

The next year another limb or two can be removed, until the proper inside shape and healthy fruiting wood is produced. The increase both in quantity and quality of the crop will more than offset the seeming loss of crop suggested by removing the central limbs reaching up into the top.

#### Fruit Growing in Jamaica.

Some interesting details in regard to what is evidently a prosperous fruit-growing concern in Jamaica were lately published in the Jamaica Times. The property referred to is the Hartlands plantation, consisting of some 2,300 acres of rich, level, clayey land, which is under irrigation. Pines and bananas were grown for a time on part of the plantation, but neither of these crops gave satisfactory returns, and were abandoned. Ordinary pen work is carried out on a considerable scale and large numbers of cattle are reared. Citrus fruit cultivation was started some six or seven years ago, however, and promises to be a very profitable undertaking. About 120 acres have been planted with oranges, and 75 acres with grapefruit. The fruit trees are planted 22 yards apart and there are now over 15,000 trees on the property. Tenches have been dug across the beds by means of which the orange trees are irrigated when water is required. The fruit gathering season begins in September, and there is always a ready market for the grapefruit. During the year 1907-8, there were exported from the plantation 4,000 boxes of oranges, and 12,000 boxes of grapefruit.

Castilloa rubber trees appear to do well in Cuba, although their value does not seem to be recognized by many planters on whose estates the young trees grow wild. The chief of the Botanical Department at the Agricultural Experiment Station has recommended that Castilloa trees be grown as shade for tobacco plants in place of many worthless trees that are now used for this purpose.