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STRAWBERRY CULTURE PROBLEMS IN ARIZONA

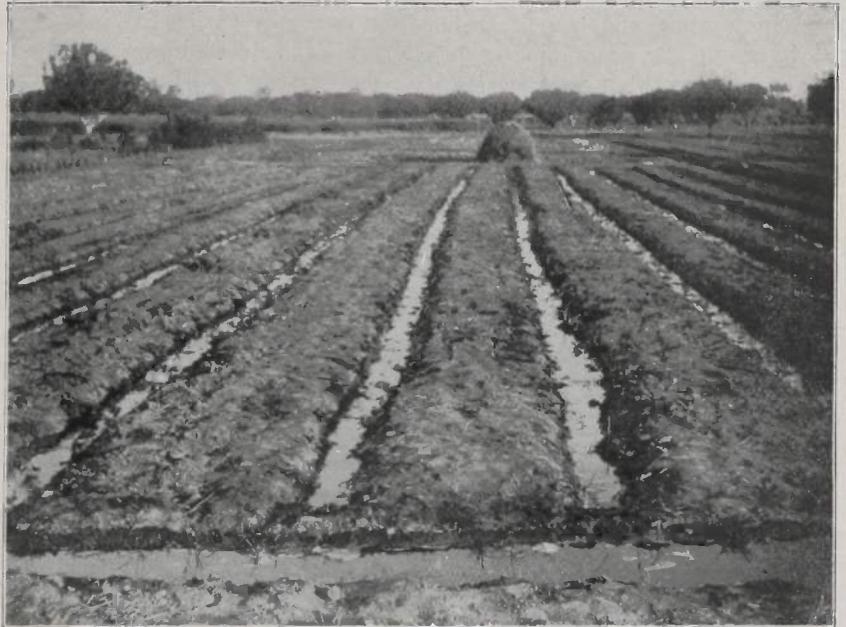
By M. F. Wharton, M.S.

The One Year System of Production; Carrying the Bed Through the Summer; Soil Factors in Arizona

STRAWBERRY culture in Arizona has been developed on more or less of the same basis as in other parts of the country and as far as the general requirements and procedure are concerned this fills the bill very nicely. Such recommendations as to the general procedure can be found in any reliable publication on the subject. To go into the details of the cut and dried procedure of planting here would not only take too much space but would be dry and uninteresting. It is the writer's intention to take up such particular practices of culture as are necessary to adapt general practices to our specialized conditions.

More interest has been shown of late in the possibilities of producing a crop in one year and then plowing up the strawberry bed. This is brought about by two main causes. The first and most important, no doubt, is that of the bed becoming foul from weed seeds already on the land and those brought in by our irrigation waters. The next is the problem of carrying a bed over the hot summer months without losing the greater part of the plants by burning out. As is well known there are two advised times for setting out a strawberry bed. In November or early in the spring, (in the latter part of February or first part of March). Should a person plan to grow for one season only it is imperative that the planting be made in November so that the plants will be well started by spring. Double the number of plants regularly used should be planted in order to produce a real commercial crop. Instead of spacing from sixteen to eighteen inches in the row it is better to space from ten to twelve. It is entirely possible on a good market to make a fair return from a one-year bed, where the planting is made early and the number of plants set are doubled.

In permanent bed planting one of the most troublesome factors to overcome is to carry the strawberry plants through the heat of the summer. Un-



Irrigating Young Strawberry Plants in the Salt River Valley

less properly protected there is a high death rate requiring a resetting to fill in the bed in the fall. Not only is this very expensive but the plants that do survive are greatly weakened and will not produce to the best of their ability. Several schemes have been tried out in various parts of the country and the Texas Experiment Station has solved the problem in part. Using a covering of from two to four inches of cotton hulls as a mulch they were able to bring through over 90 per cent of the plants in good shape. The hulls are raked off in the fall and burned or are left as a mulch until the following spring and then the bed is cleared before picking time. This is expensive and troublesome and really not the ideal to be desired although it is very effective. Another method that is more practical is to plant corn or he-gari in the furrows so that it will be well along in its growth and furnish shade during the hotter portions of the day. If the lower leaves are stripped off to a height of two feet a free movement of air near the ground will be permitted and a still

cooler condition over the bed will exist. The corn can be removed at the end of the season with little trouble and the bed can be kept clear of weeds during the summer.

Where the one year system is to be practiced it is suggested that a portion of the bed be reserved in either of the above manners as a source of supply of plants for the following fall. In this way the cost of replanting each fall will be materially lessened.

In order to obtain the highest production from a strawberry bed it is necessary to renew it each year. This is easiest accomplished in the fall by mowing the tops close to the ground and following through with a hoe to cut out the weeds and weak plants. Where plants are too thickly matted it is possible to remove a part of them carefully and use or sell as transplants. Plants should not be left closer than six or eight inches apart even in the matted row system. By carefully hoeing out and thinning the bed will be left in good condition for the following year and each plant will

(Continued on page 13)

STRAWBERRY CULTURE PROBLEMS

Continued from Page 3

have enough space left to produce its maximum.

Immediately following the renewal it is advised that a good mulch of straw manure be applied to the bed. This will serve to furnish a goodly amount of plant food and will protect the plants from frost during the cooler months of winter. Being thus protected one can expect an earlier crop and a heavier set. The only drawback in this practice is the problem of weeds although an occasional hoeing will suffice to keep down the larger ones.

The problem of soil in the southern valleys of Arizona is not a small one indeed and though strawberries are partial to a light sandy loam soil, yet they may be grown on any rich soil fairly high in humus. The heavier types of soil such as clays and adobes are much later in production and are not usually recommended as the best type for commercial production. These soils may be put in good shape and will produce a good crop if the humus content is kept high by liberal use of manures and cover crops.

Soils containing alkali should never be used as the strawberry plant is extremely sensitive, and where alkali is present the leaves turn yellow and the plant slowly dies. In permanent beds where alkali is gradually accumulating it is suggested that several heavy floodings be given the beds during the dormant season. This practice will keep the alkali leached out and prevent serious injury to the plants.

Much has been said about varieties and many varieties are offered on the market. Only two varieties have shown sufficient merit on the Experiment Station to warrant recommendation. For commercial planting the Klondyke is outstanding as a producer and shipper under Arizona conditions. For the home garden the Arizona Everbearing is an excellent berry. The main drawback to this variety from a commercial standpoint is that the crop is produced throughout the season and the set is never sufficiently heavy to be considered commercially satisfactory. In the home garden, however, it is to be heartily recommended as a continuous supply of berries is always on hand.

For general instructions as to the best methods of establishing a strawberry plantation the reader is advised to obtain a copy of U. S. Department

of Agriculture Farmers' Bulletin number 127. A supply of these is on hand at the County Agricultural Agent's office and in the office of the University of Arizona Experiment Station, at Tucson.

WHEAT SMUT CONTROL

Continued from Page 4

worms than the poultrymen realize. planting; it is not necessary to disinfect seed containers; does away with liability of freezing, heating or sprouting, no setting of drill necessary for swollen grain; it saves seed; it costs less; it does not injure seed, and it prevents the smut.

The New Treatment

The dusting treatment can be made at any time and the wheat seed returned to the bin to wait the planting date. The dust retains its effectiveness on the seed even when applied six months before the seed is sown. It is reported mice and rats do not attack sacks of copper dusted grain. The method not only prevents stinking smut, but has a tendency to stimulate it and increase the yield. The treated seed germinates so much better, that approximately 25 per cent less seed is needed to secure a good stand, and there is more vigorous and early germination which also insures a superior crop.

Directions for Treating

The method of mixing and amount of material used is very important, and may mean the difference between an effective, safe, protective covering to the seed, and a doubtful covering where less than three ounces of material are used.

Copper carbonate is used two or three ounces to a bushel of wheat seed, depending upon local conditions and the method of mixing. It may be possible to thoroughly coat a bushel of wheat seed with two ounces of mate-

rial if the most careful treatment is given in a specially made wheat dusting machine. But, with a lot of home-made dusters, cement mixers, and other open methods, such as the hoe and wagon box, a more perfect coating can be obtained with three ounces. The results over the last few years have shown that where the regular dusting machine was used with two ounces. The results over the last few years have shown that where the dusting machine was used with two ounces, a perfect control has been obtained.

A heaping tablespoonful of copper carbonate is nearly one ounce, therefore, two heaping tablespoonsful and a third one levelled off to the rim of the spoon, will be just about two ounces.

Caution Against Inhaling Dust

It is advisable to avoid inhaling the dust. If considerable is inhaled, it is irritating and unpleasant, producing nausea and faintness. Therefore, use all possible care to avoid breathing the dust, by using a respirator, or by covering the nose and mouth with a damp cloth.

Thief: "Hands up."

Victim: "Impossible, my suspenders have broken."

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