

making tests and on a much more elaborate scale and we hope to have some very definite information by the end of the season. Just before I left for this meeting Mr. Russell gave me the following preliminary results of the first planting of corn this year. He had the following treatments:

1% DDT dust; 3% DDT dust; 5% DDT dust; 20% wettable DDT—2 lbs to 100 gallons; the same material, 4 lbs. to 100 gallons; 25% DDT emulsifiable oil—1 pint to 100 gallons; also 2 pints to 100 gallons; DDD spray; Benzine Hexachloride spray; and injections of oil plus dichlor ethyl ether and untreated checks. Each of the above was applied at three different intervals of time, every two days, every three days, and every four days, with the first application being made shortly after the first silks appeared. A total of six applications was made on the every second day treatments,

four on the every third day treatment, and three on the every fourth day treatments. The results of the first check showed the untreated having 80% wormy ears, oil injection, 70% wormy, Benzine Hexachloride 60% wormy, for the every other day treatments, and 100% wormy for every fourth day treatments. All of the DDT and the DDD treatments showed from 0 to 20% wormy ears. As I stated above these are preliminary reports based on only a few ears from each plot. Also Mr. Russell states that the first application was made later than it should have been, which he feels accounts for the presence of worms in DDT or DDD treated plots. By the end of this season, we feel that we will be able to state definitely whether or not DDT and/or DDD can be successfully used to control ear worms in corn and at a cost low enough to make it profitable.

GROWERS PROBLEMS IN GROWING AND MARKETING ICEBERG LETTUCE

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The State of Florida is proud of its climate and can easily demonstrate its great ability to grow a wide range of crops: beans, tomatoes, cabbage, celery, citrus, and many others. It would seem strange that with all these crops to choose from anyone would want to grow iceberg lettuce, which is one crop that is not suited to the Florida climate, and frequently fails to make a marketable crop. But this very difficulty is the reason for some farmers choosing to grow it. As long as there is only a small amount of it produced in Florida, the bulk of the supply for the Florida consumer must come from California and Arizona. The cross-country freight rate gives the Florida grower a competitive advantage which is not found in the crops that are grown in abundance.

Those farmers who have decided that they like this kind of risk and have had experience in growing the crop, have found that in addition to the common problems which occur to the standard truck crops, iceberg lettuce has a few additional ones of its own. This paper is addressed to farmers who are familiar with the common hazards: cutworm, wire worm, damp off, freeze, flood, etc., and will just concern itself with the troubles that are encountered only with Florida iceberg.

By far the most important is warm weather, which causes the heads to be soft. The Everglades must have unusually cool, dry weather to compete with the Imperial Valley. Most of the time even in the middle of the winter, the quality of the lettuce is irregular, and the number of marketable heads does not exceed 25% of those planted. It takes the unusually cool, dry periods to make a good crop. Last year, for example,

it was too warm for lettuce all through the winter up to the freeze of February 5th, and that was so cold that it destroyed most of the plants. The only way a grower can work toward combatting the weather is to pick varieties which are best suited to this climate.

Iceberg lettuce is subject to tipburn. This is the name given to a condition in which the internal leaves begin to die at the tip, and turn brown. A fungus, which seems to be always present in lettuce, is ready to attack these dead leaf tips and produce slime. Tipburn develops because of an unhealthy condition in the lettuce, usually due to warm or damp weather. Therefore, there is no way of combatting it. Because it forms inside the head, the packer is usually unable to know which heads have developed it, and cannot put up a clean pack. By the time the heads with tipburn reach the market they frequently develop slime. There is little that can be done to prevent this, except to create conditions which will produce healthy plants.

There is another type of fungus which occurs in warm weather. It is called bottom rot, and attacks the base of the head on the outside. This is most common on the muck. It is very contagious and spreads rapidly through a field. It seems as though badly infected elds carry the infestation from one year to the next. Since this fungus attacks the lettuce head from the outside, it would seem that some chemical could be found to check its growth, but to date none has been developed.

The marketing of iceberg lettuce has certain problems that are different from those of the more widely grown truck crops. When the Florida farmer begins to have lettuce to sell in the winter, he finds that nearly all the brokers and wholesalers have

arrangements with some California producer for a week or two in advance. They must do this if they want to assure themselves of a supply, because it takes nearly two weeks for a shipment to get to Florida. If they did not buy ahead like this, they would be dependent on whatever unsold cars happened to be rolling to Florida on consignment at that particular time. Since there are frequently no such cars, it would be foolish for the Florida buyer not to contract ahead, and have his supply en route.

This means that when Florida iceberg comes on the market it is very difficult to sell to a trade which has a two-weeks supply bought and on the road. Furthermore, the wholesalers usually remember some previous occasion when they had switched to Florida iceberg, and then found suddenly some morning that the weather had warmed up and there was no supply. It was too late to order any from California and there was probably a lot of embarrassment in not having any on hand for their retail customers who were dependent on them.

Usually it is necessary to offer the lettuce at a sufficiently large discount under the California price to overcome the buyers' fear of taking on an uncertain supply. Then, if things go well for a while, it is often possible to work the price up and reduce the discount. However, if a warm spell of weather comes along and you fail to keep up deliveries, you will probably have a lot of trouble ever getting the customer to switch to your product again. There is little that can be done to remedy this condition, except plant enough of the crop regularly to assure a supply as long as the weather does permit harvesting.