

fruit by pruning off and destroying all the infected growth as soon as it appeared. This was made possible by the fact that the scab began on certain branches and not all over the tree at once. When this was pruned off, the subsequent new growth came out entirely free from the disease. To test this method further, the writer, in March, 1910, pruned off all the growth showing scabs on a row of sour orange trees on the Experiment Station grounds. Later observations of the fresh new growth following this pruning showed that it was nearly free from scab for at least two months. On new growth later in the year some infection occurred, probably from other trees which were left as checks in another part of the grounds not far distant from the pruned ones. Those unpruned continued to show scabs on the leaves as fast as the leaves unfolded.

### PREVENTIVE MEASURES

1. *Destroying All Sour Orange or Other Worthless Growth.*—All sour orange or lemon sprouts in an orange or grapefruit grove should be cut out and destroyed, as they are almost always badly infected year after year, and are a constant source of danger to the grapefruit and other varieties which are usually less susceptible. All scabbed sour oranges and worthless lemons or other scabby fruits should be picked up and destroyed.

2. *Spraying When Necessary.*—In case of a severe outbreak of scab that must be checked at once, spray with ammoniacal solution of copper carbonate (3 pints ammonia and 5 ounces of copper carbonate to 50 gallons of water) or Bordeaux mixture (3-3-50). The copper carbonate solution is to be preferred, since it usually does not cause so great an increase of scale insects as does Bordeaux. In bad attacks, the first spraying should be done soon after the petals fall, and a second may be necessary two weeks or a month later. A third spraying will probably not often be necessary. In many cases of light attack, the loss by the scab is less than the cost of spraying with the fungicide and following it up with an insecticide.

3. *Cutting out Scabby Growth.*—New growth coming out at unseasonable times, and the late bloom (known as "June bloom") are most apt to be infected. Such infected growth can be pruned out and destroyed. This will help to prevent a recurrence of the disease.