

SUMMARY OF REPORTS ON DAMAGE FROM FROST DURING THE PAST WINTER

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Undoubtedly the directors, in turning over to me the papers received on this subject, had in mind simply a very short summary of their contents as an opening to a general discussion of the frost and its results; since the papers were not numerous and I have, to make up the lack, no harmful personal experience to relate.

The windstorm which occurred the latter part of November, though restricted in its scope, was very severe where it prevailed and did more damage, in those localities than the cold which followed it, later in the season. Those who write from these places naturally report about both the wind and the cold. It would seem very proper that both should be included in our discussion today.

The experience of different growers in different localities, as to which ones of our best varieties proved most cold resistant, most wind resistant, and most heat resistant, during the time they have been Avocado growers, is the kind of information we are all seeking in making up our minds as to what we want to plant ourselves or advise others to plant. The tree, other things being equal, that will best stand up under adverse conditions, is the one we are studying to discover.

Besides methods of protection against frost, wind and heat, brought forward in our discussions, we are gradually learning where we can and where we can not safely plant the desirable Guatemalan varieties. For this purpose we know, as a rule, the foothill sections are the best. In this connection it is interesting and instructive to study the frost effects, at different elevations, in a district of Avocado plantings. Of the letters received, practically all touch on this point.

A writer from Yorba Linda states the frost seemed to have missed all trees on high ground, but my hundred trees on low ground were badly frozen. In the Upland grove situated at the highest elevation no damage. Several hundred feet further down some leaves burned and some young shoots killed. Three or four hundred feet further down, close to the Santa Fe Railroad, two or three trees not hurt, but all the others of about a dozen varieties had the leaves and young shoots burned and in a few cases about one third of the tree killed back.

A Monrovia-Duarte report first describes the damage done and the quantity of valuable fruit blown off, between Sierra Madre and Glendora, by the November wind storm, which was the hardest continuous wind known there in thirty-eight years. It then gives an account of the effects of the cold. At 1500 feet elevation no damage. At the Sierra Madre elevation the thermometer touched 32, at the foothills just above Monrovia 31. In the upper part of Monrovia 31, in the middle part 28. Just below the town, lower in the

valley it went to 22, and away down in the middle of the valley it went as low as 17. At 30 and above no particular harm done. This does not mean we can grow no Avocados except in the higher foothills. We can. Many of the more hardy varieties will do well wherever oranges will, but some of them must have better than the average orange orchard conditions.

We have all the past experience in orange and lemon growing in California to guide us and prevent unwise locations being used for Avocado orchards. Nor need any orange grower be deterred from planting them on his property, if he will select the varieties proper for his location.