

apple tree blight proved very severe. In fact, from every quarter within the region of the fog belt, complaints of this blight were heard.

This season, I determined, if possible, to reach some definite conclusion in regard to the nature of the blight as reported from various quarters, and from a thorough comparison I am satisfied that the *fusicladium dentriticum* is the cause of all the trouble. In the experimental garden at Berkeley, we have had all grades of it on the pears, and on one variety, the first attacked, the bloom is affected precisely as in the case of Winter Nelis, and the consequence is that the fruit does not even form. The branches of this one when young are attacked by the fungus, and the second year reveals the damage done. I have found the same thing in several orchards, notably in an eight-year-old orchard near Watsonville. This orchard, although otherwise in an apparently healthy condition, has failed to bear at all.

In the case of the White Winter Pearmain, we have in the cracked back peculiar to this variety abundant protecting places for the resting spores, which carry the disease over from year to year. Most probably the spores, seating themselves under the scaly bark, are protected from such changes of atmosphere as are brought with the dry north wind, that destroyer to all form of fungi. On the smooth branches of other varieties comparatively little opportunity for the lodgment of resting spores is presented, and the time of blooming has passed before any great number of spores have developed, so that the harm that is done does not show itself until the young fruit has advanced a little, while on the other hand, varieties seriously affected have sufficient spores present to destroy the bloom.

EXPERIMENTS AT BERKELEY.

Having read of the good results of the application of sulphate of iron on certain mildews, we determined to spray with it. The results produced were not favorable; when used strong enough to affect the fungus, it affected the foliage and fruit also. One pound to forty gallons was the strongest solution that could be used on the trees in foliage without hurting the latter seriously; used stronger it had the effect of checking the fungus and the fruit and foliage at once. Even with the solution one pound to forty gallons of water the foliage suffered and the fruit dropped. Next season the sulphate of

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