

Progress: Improvement began immediately the liver diet was begun. On 26/4/28 the weight was 82½ lb.; on 9/5/28, 88 lb.; on 16/5/28, 85½ lb.; on 23/5/28, 87 lb.; on 1/6/28, 99½ lb.; on 15/6/28, 105 lb.; on 22/6/28, 109 lb.; on 30/6/28, 113 lb.

Blood counts were as follows: On 12/5/28 the red count was 2,510,000 per cubic millimetre; hæmoglobin, 50 per cent.; colour index, 1. On 5/6/28 the red count was 4,960,000; hæmoglobin, 80 per cent.; colour index, 0.8. On 13/6/28 the red count was 4,980,000; hæmoglobin, 90 per cent.; colour index, 0.9. On 30/6/28 the red count was 5,100,000; hæmoglobin, 90 per cent.; colour index, 0.9.

The patient was discharged from hospital on 2/7/28, having gained 30½ lb. He looked fit and well. He had received no drug treatment during his stay in hospital.

APPENDIX D.

DISEASE AMONGST COCONUT-PALMS IN PLANTATIONS IN UPOLU, WESTERN SAMOA.

At the end of the year 1928 the Health Department was requested to obtain the co-operation of the Bacteriologist to the Apia Hospital with a view to investigating a disease amongst coconut-palms on Vaitele Plantation. This plantation is the property of the New Zealand Reparation Estates, and is situated about three miles west of Apia, on the main road to Mulifanua. The disease to the naked eye affects the leaves, which turn yellow, wither, and drop off, together with the fruit and fruit-stalks, whilst the tree itself carries a dead appearance, more marked in the later stages. On the 31st December, 1928, the Chief Medical Officer and the bacteriologist visited the plantation and saw a diseased tree grubbed up by the roots with a "Forest-Devil," which has the advantage of bodily tearing up the roots without cutting them. The Bacteriologist reports as follows:—

"On inspection the tree suggested lack of nourishment, and gave one the idea of a plam just about to die. The cabbage generally had a very unhealthy appearance, with leaves of a yellowish tint, and entirely devoid of fruit and flowers. No evidence of bud-rot or like disease was found. Starting from the top of the tree and working towards the root, the trunk appeared outwardly quite normal, but on sectioning with an axe it was observed to be very dry, especially at the top. The roots proved interesting, for they were decidedly unhealthy in appearance and condition. On close examination nearly all were found to be useless in so far as supplying nourishment for the palm was concerned, many being dry, crumbling at a touch, and consisting of merely an outer shell, whilst others were in a semi-rotten condition, containing a slimy jelly-like substance, causing decay of the inner root.

"An examination of the soil for rock and lava-bed yielded no result: a very few small stones with no evidence of lava-bed were found. The soil, of the brown volcanic type, appeared quite good, some being forwarded to the laboratory for chemical analysis.

"A microscopic examination of slides prepared from scrapings from the inner roots demonstrated the presence of numerous types of soil bacteria with several moulds. Cultures prepared from both dry and wet roots grew a profuse mixed growth of organisms, including a slimy fungoid growth not unlike that found in the roots when first examined. This fungus is in the process of isolation, and when grown in pure culture will form the medium for infecting healthy palms. This will demonstrate whether or not this particular fungus reproduces the disease in a healthy tree, as well as proving its power of infection. Prevention and cure experimentation can then be undertaken under ideal conditions.

"Sections of the trunk failed to show any abnormality beyond some slight shrinkage when compared with that of a healthy tree. This shrinkage may, however, have been caused during the time between cutting the tree and making sections in the laboratory."

The matter is being further investigated, sections of diseased trees being frequently examined, whilst the minor bases of the affected leaves are being examined for fungi, as in the disease report by A. Sharples in the *Malayan Agricultural Journal* of September–October, 1928.

APPENDIX E.

FATAL EPIDEMIC AMONG PIGS IN WESTERN SAMOA.

On the 20th November the Health Department was notified of an outbreak of a very fatal epidemic among pigs, which was very widespread. A visit was paid the same day by the Chief Medical Officer, Health Inspector, and Bacteriologist to the Village of Laulii, some five miles east of Apia, from which place the notification had come. Information was forthcoming that the epidemic was very widespread and very contagious, many hundreds of pigs being reported as having died in Apia and the surrounding districts. This was the first notification received as to the existence of such an epidemic. On arrival at the village the party was shown a pig which had quite recently died, and another which had symptoms of fever, cough, and shortness of breath, whilst there was oozing of froth from the nose. A post-mortem was immediately performed, which showed consolidation at the bases of both lungs, with apical patches of inflammation and extensive pleural adhesions, there being also a considerable amount of fluid in the pleural cavity. To the naked eye the appearance was that of a broncho-pneumonia. Swabs and sections were taken away, as well as portions of