

Progress report on bunchy-top of abaca or Manila hemp.—Abaca or Manila hemp (*Musa textilis*) is one of the leading export crops of the Philippine Islands. Its most serious malady is bunchy-top, which is considered to be a virus disease. In all probability this is an old disease of abaca. The writer noted symptoms of it in the province of Albay, Island of Luzon, in 1910 and 1911. Dr. Otto A. Reinking brought a specimen from the same island from Silang, Cavite Province, on April 7, 1925. The alarming proportions of the disease in the abaca regions of the Philippines has recently attracted the attention of growers, and the writer's interest in bunchy-top was stimulated by a conference with Dr. Reinking.

The most striking characteristic of bunchy-top is the crowding of the leaves into a more or less rosette arrangement. Infected plants are much stunted and produce short pseudo-stems. Observations indicate that infected plants never recover. They die prematurely, and very few of them, if any, produce fruits. Abaca is susceptible to the disease at all times during its life cycle. Aphids were noted on bunchy-top infected abaca in Los Banos as early as June, 1925. On October 23, 1925, they were found in abundance on the unexpanded youngest leaves of healthy and bunchy-topped plants. This aphid has been identified as *Pentalonia nigronervosa* Coq. by Doctor L. B. Uichaneo. It is of interest to note that in Queensland, Australia, bunchy-top of banana is reported to be transmitted from plant to plant by the same species.¹ We are led to believe that this aphid plays an important role in the transmission of bunchy-top of abaca in the field.

Results obtained from experiments using *Pentalonia nigronervosa* as vector indicate that bunchy-top may be transmitted from diseased abaca plants to healthy ones by this aphid. Material from several sources was used in the preliminary experiments, namely, young abaca plants grown in the Plant Pathology experimental plots, infected plants in the Agronomy field, and plants grown from seeds. Since bunchy-top plants do not produce fruits, disease-free plants were obtained from seed. Seeds were germinated in flats, and after emergence the seedlings were transplanted to pots where they were screened by cheesecloth. These seedlings were used in transmission experiments. Further work is in progress.—GERARDO OFFI-MARIA OCFEMIA, Department of Plant Pathology, College of Agriculture, Los Banos, Philippine Islands.

¹ Anonymous. Bunchy top in bananas. Cause and nature of disease. Report of Investigation Committee. Queensland Agric. Jour. 24: 424-429. 1925.