A Note on the Non-transmission of Centrosema Mosaic Virus through Seed.

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ABSTRACT.

No symptoms of Centrosema *mosaic virus were recorded on* 1,252 *plants of* Centrosema pubescens *raised from seed derived from* C. pubescens *plants with mosaic symptoms in three tests carried out in Port Moresby. New leaves produced on* C. pubescens *transplants infected with* Centrosema *mosaic virus grown in the same vicinity as the test seedlings had characteristic symptoms under the same conditions.*

INTRODUCTION.

Centrosema pubescens Benth. has been recorded with mosaic symptoms in the field in Papua and New Guinea since 1954 (Magee 1954), and has been studied by van Velsen and Crowley (1962).

The latter authors found that sap from mosaic-infected leaves of *Crotalaria anagyroides* produced mosaic symptoms on *Centrosema pubescens,* some other species of *Crotalaria, Calopogonium mucunoides, Desmodium distortum, Medicago orbicularis, Stizolobium deeringianum* and *Trifolium subterraneum.* Thirty-nine other species of 23 genera, including species of *Phaseolus* and *Pisum,* and *Vigna sinensis,* were found to be non-susceptible in these tests.

Van Velsen and Crowley reported that no symptoms occurred in 100 seedlings of each species raised from seed from naturally infected plants of *Centrosema pubescens, Crotalaria anagyroides, Crotalaria retusa, Crotalaria goreensis* and *Calopogonium mucunoides* kept under observation for 56 days.

EXPERIMENTAL.

As it was considered important to know whether the causal virus was seed-borne even at low percentage transmission, the following tests were carried out.

Seed from *C. pubescens* plants showing characteristic symptoms of mosaic were collected by two agronomists in the Markham Valley. The seed was lightly abraded with sandpaper in Port Moresby, and sown in pots kept in insect-proof cages. Three such tests were carried out in 1967 and 1968.

In the first two tests with seed from infected plants, 968 seedlings were kept under observation for twelve weeks while in the third test, 284 seedlings were observed for five weeks. No symptoms of mosaic were observed in any of the 1,252 seedlings.

During one of the tests *C. pubescens* plants with mosaic symptoms from around Port Moresby and the Markham Valley were transplanted to pots and kept within a few yards of the insect cage under similar conditions of temperature and shade as the test seedlings in order to determine whether symptoms were still produced on the new leaves in this environment. Young leaves produced after transplanting had characteristic mosaic symptoms.

From the work of van Velsen and Crowley (1962) and from the above tests, it appears that *Centrosema* mosaic virus is not seedborne or that it is of low percentage transmission.

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