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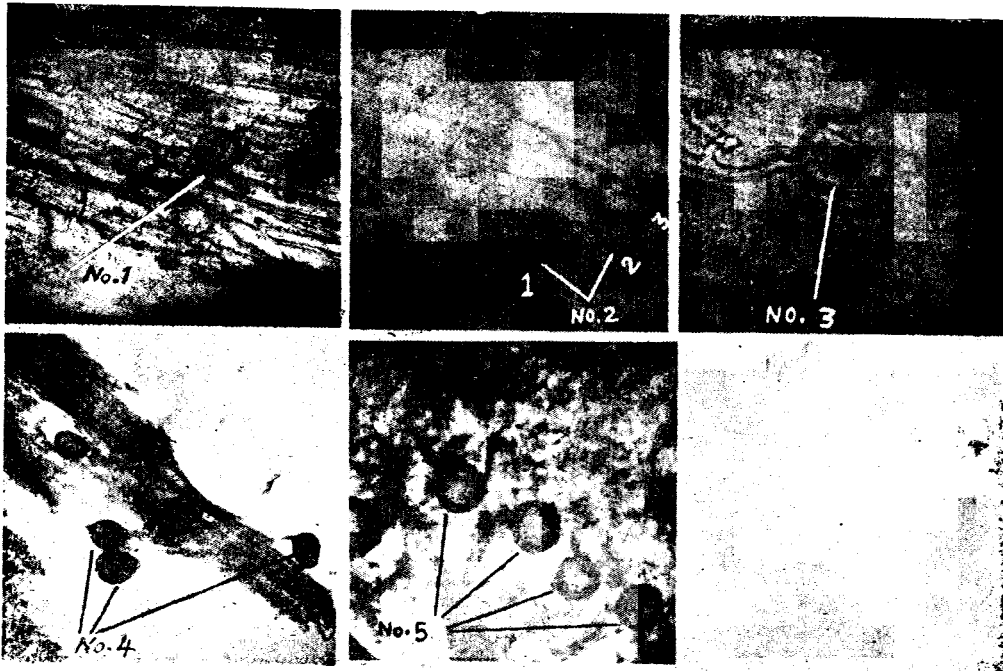
NOTE ON THE DEVELOPMENT OF VESICULAR-ARBUSCULAR MYCORRHIZA—  
*ENDOGONE FASCICULATA* IN COCONUT ROOT

Of the various mycorrhizas reported the most widespread is the so-called vesicular-arbuscular type (Nicolson, 1967). Gerdemann (1968) made a review on this and later more than hundred papers have been published on this aspect, reviewed by Mosse (1973). The long standing speculation about the identity of vesicular-arbuscular endophytes (Gerdemann, 1968) has largely been resolved in favour of one or another species of *Endogone*. Improvement in growth and also the uptake of increased phosphate was observed in many plants having micorrhizal association (Mosse, 1973). Occurrence of the vesicular-arbuscular mycorrhiza was noted in the roots of healthy and diseased coconut palm while studying the lower form of fungi associated with coconut root.

globules inside, measured 12 to 16  $\mu$  in width whereas the hyphae in the inner cortical cells measured 2 to 8  $\mu$  in width. The mycelium on the surface as well as inner cells appeared swollen at the apical portion to form vesicles ranging in size from 40  $\mu$  to 100  $\mu$  (Fig. 1). Dark thick-walled vesicles were also seen on the surface of the root. This was identified as *Endogone fasciculata*. This appears to be the first report on coconut.

This fungus was also observed in the roots of *Cassia tora*, *Melothria* sp., *Phyllanthus neuri*, *Solanum nigrum*, *Leucas aspera*, *Mullugo* sp., *Physalis minima*, etc., common weeds growing in coconut gardens.

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FIGS. 1-5. Fig. 1. Vesicle in the tender root of coconut,  $\times 125$ . Fig. 2. Vesicle in clusters in the tender root of coconut,  $\times 125$ . Fig. 3. Single vesicle with aseptate mycelium,  $\times 400$ . Fig. 4. Vesicles in mature root of coconut,  $\times 125$ . Fig. 5. Thick-walled spores in mature root of coconut,  $\times 125$ .

Coconut root materials were collected from different places in Kerala. Longitudinal sections of these were stained by boiling for one minute in acid fuchsin-lacto-phenol, destained and mounted in clear lacto-phenol for microscopic examinations. The hyphae on the root surface were broad with

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Kerala, July 1, 1974.

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