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ANTHRACNOSE OF CASSAVA—A NEW RECORD FOR INDIA

During the South-West Monsoon period of 1978, a severe leaf spot disease was observed on cassava (Manihot esculenta Crantz) cultivated in the instructional Farm of the College of Agriculture, Vellayani, Kerala State. The disease is characterised by the appearance of numerous small, circular sunken spots on the leaf lamina measuring 10 to 30 mm in diameter (Fig. 1). When fully formed the centre of the spots are white and studded with pinkish fruiting bodies of the fungus.

![Fig. 1. Cassava leaf showing symptoms of anthracnose.](image)

The fungus is isolated on potato dextrose agar (PDA) medium and its pathogenicity is confirmed by inoculating healthy plants. Symptoms of the disease developed fully on test plants in 5 to 7 days after inoculation.

The mycelial growth of the fungus on PDA is greyish white and forms zonations. The conidia are cylindrical, hyaline and single celled. They measure 10.71 μ to 14.28 μ in length and 3.5 μ to 4.6 μ in breadth (12.79 μ x 4.16 μ). Based on the morphological characters, the organism is identified as Colletotrichum gloeosporioides (Penz.) Sacc., and its characters agree with those described by Mordue. This is the first record for India of anthracnose of cassava caused by this fungus. Anthracnose of cassava was reported from Madagascar, Congo and Ghana. The causal organism was described differently as Gloeosporium manihotis Henn. and Colletotrichum manihotis Henn. The detailed monographic study of the genus Colletotrichum by von Arx has shown that G. manihotis is a synonym of C. gloeosporioides (Penz.) Sacc. Hence the causal organism of anthracnose disease reported here is identified as C. gloeosporioides.

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TRANSLOCATION HETEROZYGOSITY IN GLORIOSA LINN.

A case of translocation heterozygosity showing an interchange multiple of 4 chromosomes was discovered in a diploid cultivar of Gloriosa plantii, Loud. (Voucher specimen No. 333, syn. G. simplex Linn., 2n = 22). The nature of chromosomal heterozygosity could not be detected karyotypically. However, the male meiosis showed consistent presence of one ring of 4 chromosomes plus 911 at meiotic metaphase I (Fig. 1). The ring multiple was found oriented adjacently with 4 distal chiasmata. The average chiasma frequency was 19.0 ± 0.38 per cell as compared with 17.2 ± 0.44 in homozygote plants (Fig. 2), out of which on average 13 were centralised giving a terminal coefficient of 0.677. Anaphases I and II were normal with an equal distribution of 4 chromosomes to each pole. Tetrad formation and subsequent course of meiosis was also normal resulting to 60-80% stainable pollen grains. The taxon was both male

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