

INTENSITY OF OCCURRENCE OF THREE COMMON LEAF DISEASES ON MATURE RUBBER TREES IN NIGERIA

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The intensity of occurrence of three common leaf diseases (Bird's eye spot, *Colletotrichum* leaf fall and *Corynespora* leaf fall) of *Hevea brasiliensis* Muell. Arg. de Juss was studied in mature trees of six local clones (NIG 800, NIG 801, NIG 802, NIG 803, NIG 804, and NIG 805) and three exotic clones (PR 107, RRIM 707 and GT 1) at the Rubber Research Institute of Nigeria (RRIN), in a randomized complete block design. Intensity of *Corynespora* leaf fall disease was the highest with disease index ranging from 26.19 to 40.19%, while *Colletotrichum* leaf fall severity was the least (7.61 – 17.91%). RRIM 707 had the highest disease indices for *Corynespora* leaf fall and Bird's eye spot disease, while NIG 803 clone was the most affected by *Colletotrichum* leaf fall disease. Among the clones developed in Nigeria, RRIN 802 showed lower intensity of all the three diseases. This study suggests that adequate control of the leaf diseases is necessary for these clones.

Keywords: Clones, Disease severity, Foliar disease, *Hevea brasiliensis*, Nigeria

Hevea brasiliensis (Muell. Arg.), commonly called Para rubber, is afflicted by a plethora of biotic and abiotic stresses caused by pathogens, parasites or by non-pathogenic agents. Infection of the rubber plants by foliar pathogens causes devastating effects not only in the nursery but also on the immature and mature trees (Awoderu, 1969; Rao, 1975; Begho, 1995; Jayasinghe *et al.*, 1995; Jayasinghe, 2000). The three common leaf diseases of rubber of immense economic importance in Nigeria are Bird's eye spot (*Drechslera heveae*), *Colletotrichum* leaf fall (*Colletotrichum gloeosporioides*) and *Corynespora* leaf fall (*Corynespora cassiicola*). Harinidi and Wisma (1996) reported that prolonged infection of susceptible clones by *C. cassiicola* could cause defoliation of the

crown for the whole year. Foliar infection in immature trees results in die back, stunting or even death of trees, while in mature trees it reduces latex production up to 45%. This study evaluated the occurrence of these three leaf diseases in nine rubber clones in a clone garden at Rubber Research Institute of Nigeria, Iyanomo, Benin City.

A field survey on the intensity of occurrence of the three leaf diseases, *viz.* Bird's eye spot (*D. heveae*), *Colletotrichum* leaf fall (*C. gloeosporioides*) and *Corynespora* leaf fall (*C. cassiicola*), was conducted in a 40 ha clone garden of Rubber Research Institute of Nigeria (RRIN) planted in 1991 and opened for tapping in 1998. This study was conducted in 2008 and 2009 in the