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Full Length Research Paper

Effects of fertilizer on nitrogen contents of berries of three coffee clones and berry infestation by the coffee berry borer, *Hypothenemus hampei* (Ferr.) (Coleoptera: Scolytidae)

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Abstract

The influence of six levels of fertilizer on the nitrogen content of coffee berries and the resulting incidence of *Hypothenemus hampei* was investigated on three improved clones of Robusta coffee at the Afosu Sub-station of the Cocoa Research Institute of Ghana. The treatments were unfertilized control, basal dressing of 100 kg P_2O_5 ha^{-1} mixed with 100 kg K_2O ha^{-1}, basal dressing of 100 kg P_2O_5 ha^{-1} with 100 kg K_2O ha^{-1} and 50 kg N ha^{-1}, basal dressing of 100 kg P_2O_5 ha^{-1} with 100 kg K_2O ha^{-1} and 70 kg N ha^{-1}, basal dressing of 100 kg P_2O_5 ha^{-1} with 100 kg K_2O ha^{-1} and 90 kg N ha^{-1}, as well as basal dressing of 100 kg P_2O_5 ha^{-1} with 100 kg K_2O ha^{-1} and 150 kg N ha^{-1}. The coffee clones were E152, E139 and E138. No differences were found in the nitrogen contents of berries of the various clones. Application of higher rates of fertilizer to the soil increased the nitrogen content and *H. hampei* numbers in the berries. The correlation coefficients between fertilizer dose and *H. hampei* numbers were significant. The relation between nitrogen in the berries and *H. hampei* numbers was also significant.

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Key words: Fertilizer, coffee clones, nitrogen levels, infestation, *Hypothenemus hampei*.
