

Efficacy of Copper Sprays in the Management of Coffee Leaf Rust in Kenya

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SUMMARY

In a two-year field evaluation, sprays of Chemcopp 50% WP and Agcopp 75% WP formulations of cuprous oxide (American Chemet Exp. Corp.) each applied at the rate of 0.22% controlled coffee leaf rust as effectively as the standard sprays of Nordox 50% WP (0.35%); Nordox 75% WP (0.22%) and Cobox 50% WP (0.35%). The implications of the results in coffee production in Kenya are discussed.

INTRODUCTION

The occurrence of coffee leaf rust (*Hemileia vastatrix* Berk. & Br.) was first recorded in Kenya in 1913 (Rayner, 1960). It is one of the three major diseases affecting coffee (*Coffea arabica* L.) in Kenya. The disease is characterised by round, scattered, orange pustules on the lower surface of leaves (Figure 1a). Affected leaves are shed prematurely and branches, often carrying a heavy crop, are left with scanty or no leaves at all (Figure 1b). Severe leaf rust epidemics are known to have stopped the growing of Arabica coffee in parts of the world, especially, in South-East Asia. This was before the discovery and availability of the first copper fungicide: Bordeaux Mixture in 1887 (Rayner, 1960). Over the years, coffee leaf rust has been kept under control in Kenya by use of various copper fungicides (Kingori and Masaba, 1994). New copper formulations are evaluated for efficacy against coffee leaf rust following established procedures (Javed, 1979).