

RESEARCH NOTE

Narrow — Leaf Disorder of Chilli

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Chilli crop grown in the fields of the dry zone of Sri Lanka is affected with a disorder characterized by acute retardation of leaf lamina development, proliferation of axillary shoots and reduced pod set. Spread of this disorder within a field is very rapid, the entire crop being affected within 1—2 weeks of appearance of the first symptoms. This disorder was first observed in the Polonnaruwa district in the early eighties and subsequently in Mahaweli systems H. C. and G., Anuradhapura, Kantalai, Matale and Kurunegala districts.

This had been one of the most baffling disorders of chilli in recent times. Even though the cause had been attributed to several factors such as bacteria (*Corynebacterium* sp., *Bacillus* sp.), chemical toxicity, misuse of pesticides and fertilizers, and physiological factors etc., it had not been possible to ascertain the exact cause.

Transmission and isolation studies were undertaken at Maha Illuppallama to understand the nature and spread of the disorder problem. Typical narrow-leaf symptoms developed on chilli seedlings raised on soil collected from fields where the disorder was observed, but not on the autoclaved soil and on soils collected from fields with healthy chilli plants. Furthermore, chilli seedlings raised on autoclaved soil supplemented with water suspension made from soil with the disorder, developed narrow-leaf symptoms. These results indicate that this disorder is transmitted through soil and water and that the causal factor is destroyed or inactivated by autoclaving. No pathogenic fungi or bacteria could be isolated from 'infected' plant, soil or water. The symptoms were not transmitted through plant sap, insects (i. e., leaf hoppers, aphids, mites, white flies), shoot and bud grafts, cuscute and seeds collected from plants affected with disorder.