ASSOCIATION OF A SOIL-BORNE FUNGUS WITH CHILLI ARROW LEAF DISORDER AND ITS CONTROL WITH DAZOMET

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A dosorder characterized by acute retardation of normal leaf development, especially of the lamina, and restricted internode elongation resulting in bushy stunted appearence of plants is widely encountered in the dry zone areas of Sri Lanka. The disease is more prevalent in areas where chilli crops are raised in rice fields. More than 80% damage to the chilli crop in these areas is attributed to the narrow leaf disorder which reduces chilli yields drastically.

Browning of roots, stunting of lateral roots and swelling and curling of root tips were other symptoms observed in affected chilli plants. Root symptoms were mild to severe and correlated to foliar symptoms, plants with extreme root damage showing severe narrow leaf disorder.

Pre-plant soil fumigation with Basamid granular (dazomet) brought about complete control of chilli narrow leaf disorder when applied at the rate of $40g/m^2$. More than 100% growth increase was also observed in fumigated 'sick soil' compared to the control. Furadan was ineffective against the disorder.

The roots of stunted chilli plants grown in 'sick soil' when examined under light microscope revealed the presence of thalli and resting spores of an unidentified fungus. The thallus of the fungus was restricted to individual cells. The fungus was not observed in chilli plants grown in a healthy soil or in the fumigated 'sick soil'.