

TIME REQUIREMENT FOR THE GRAFT TRANSMISSION OF CITRUS TRISTEZA VIRUS AND GREENING MLO PREVALENT AT PUNE (MAHARASHTRA STATE)

BY

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In order to determine the contact period of infected bark chips for the graft transmission of mild (m) and severe (s) strains of citrus tristeza virus (CTV) and *Citrus sinensis* var. *Mosambi* 'greening' MLO, an experiment was laid, to elucidate the required information which was not available so far.

Seventy one year old seedlings of kagzi lime (*Citrus aurantifolia*) in two lots of 35 each with (m) and (s) strain separately and 35 one year old seedlings of *Mosambi* were inoculated during 1980 by inserting bark chips from kagzi lime and *Mosambi* plants respectively having pure culture of CTV-stem pitting strains (m and s) and 'greening' MLO. These were kept in the insect proof glass house. Inoculum chips were removed at 1, 2, 4, 8, 12 and 16 days after inoculation from five plants each and the rest left served as check. Observations of symptoms was done on newly thrown off foliage after stem w. s cut back to force the new growth. Transmission was recorded by the appearance of characteristic symptoms and the experimental plants were retained upto six months.

In case of CTV (mild) and (severe) strains 16 day and 12 day contact plants, respectively, only showed symptoms. In case of 'greening' MLO, 16-day contact plants only developed the symptoms. All check five plants from which inoculum chips were not removed showed symptoms.

From the results it is clear that atleast 16, 12 and 16 day contact periods, respectively, were necessary to initiate infection by CTV (m), CTV (s) and 'greening' MLO, possibly because continuous supply of virus/MLO into the host tissue is required for that much length of time in order to establish the infection.

Yamaguchi (1979) from Japan reported a minimum 8-day contact period for graft transmission of CTV. Our results differ from that of Yamaguchi (1979) with

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regard to length of contact period. This difference could not be attributed to CTV but to *Citrus aurantifolia* stock variability as has been suggested in a parallel case by Fraser and Broadbent (1979) from Australia due to *Citrus macrophylla* stock variability when inoculated with CTV.

Since no such data was available from CTV and 'greening' MLO from this country, the information arrived at here is a new one and shall prove useful to citrus virologists for conducting further experiments with these two diseases.

REFERENCES

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