

Research Paper :

Management of stem necrosis disease of potato

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SUMMARY

An experiment was conducted during *Rabi* seasons of 2002-2003 at Potato Research Station, S.D.A.U., Deesa (North Gujarat) as well as spraying schedules with six different treatment enveloping seed treatment, soil application with four replications under Randomized Block Design. Results revealed that three sprays of methyl - o- dematon @ 0.05 % (metasystox) at 15 days interval starting from the appearance of the disease found significantly superior to all other treatments and recorded higher tuber yield (234.64 q/ha.) with 37.29 per cent increase in yield over check.

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Key words :

PSND,
Tospovirus,
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Potato is an important cash crop in the western plains of India where in Gujarat state is accredited with high productivity of potato. Potato stem necrosis disease (PSND) caused by a tospovirus transmitted by thrips vector (Paul Khurana *et al.*, 1998) is a limiting factor for potato cultivation in Northern Gujarat region due to its severe regular appearance on the crop since last few years. It is also a serious problem in early planted crop in Central India (Somani *et al.*, 1999). In Gujarat high temperature (>30°C) and dry weather conditions prevailing during onset of the *Rabi* reason are favouring the disease develop. The predisposing factors for the disease are congenial for build up of vector thrips population.

MATERIALS AND METHODS

Considering the economic importance of the disease, an experiment was conducted during *Rabi* 2002-2003 at Potato Research Station, S.D.A.U., Deesa (North Gujarat) in Randomized Block Design with four replications and six treatments:

T₁ : Imidacloprid @ 0.1 seed tuber d i p for 10 minutes,

T₂ : Soil application of Phorate 10 G @

15 kg/ha. at earthing up.

T₃ : Soil application of Carbofuran 3 G @ 10 kg/ha. at earthing up.

T₄ : Three sprays of neem based Vanguard @ 5 ml/litre at 15 days interval starting from appearance of the disease/thrips.

T₅ : Three sprays of Methyl-o-demeton @ 0.05% at 15 days interval after appearance of the disease/thrips.

T₆ : Control (No treatment)

Variety	Kufri Badshah
Gross plot size	3.0 x 3.0 m ²
Net plot size	2.0 x 2.6 m ²
Row to row distance	50.0 cm
Plant to plant distance	20.0 cm
Date of planting	20 th October, 2003

The plots under experiment were visited daily to record the first appearance of the disease/thrips on potato in the experimental field.

Recommended agronomical package and practices of the region were followed for all the treatments under the experiment.

The final disease incidence and disease index were recorded at 20 days before

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