

# Response of IDM Practice in Conjunction With Indigenous Technical Knowledge for Managing Downy Mildew of Cucumber

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## SUMMARY

An investigation was carried for the management of downy mildew of cucumber through IDM practice in conjunction with I.T.K. Thirteen treatments were tested with three replications. Seed treatment with Ridomil MZ-72 (0.25%) + one foliar spray of organophosphorus allite (0.25%) at 45 day after sowing on bower system gave the average minimum disease intensity (12.98%) and maximum fruit yield (318.26 q/ha). The next best treatment was seed treatment with Ridomil MZ-72 (0.25%) + one spray of Akormin (Potassium phosphorate) 0.3% as regards to general health of the plants.

Cucumber suffers from a number of diseases caused by fungal pathogens such as *Pseudoperonospora cubensis*, *Erysiphe cichoracearum*, *Colletotrichum lagenarium*, *Fusarium oxysporum*, *Fusarium solani*, *Alternaria cucumerina*, and *Rhizoctonia solani*. Among them, downy mildew caused by *Pseudoperonospora cubensis* is a serious disease as reported by Mahrishi and Sirdhana (1988). The spread of the disease is more common, rapid and devastating under sprinkler condition and rainy season (Qureshi, 1981).

## MATERIALS AND METHODS

For seed treatment, Ridomil MZ-72 was used with foliar spray of Akomin, Allite, Mancozeb and cow urine and cow dunk slurry. In ITK practice, removal of infected leaves, disease free seed and bower system were used. The soil of experiment plot was sandy loam in nature, well drained with low C.N. ratio. The most susceptible variety of cucumber, K. Green was grown in the sickplot. Crop was planted after thoroughly mixing the FYM 25t/ha, 30 kg nitrogen/ha, 30 kg phosphorus /ha and 30 kg potash/ha in the soil. Remaining dose of nitrogen (30kg/ha) was broadcast at 35 days after sowing. In bower system, plants staggings were done just after irrigation and before flowering of the crop. The seed treatment was done before 12 hrs of sowing. The foliar spray of chemical and bioagent was done as per described in the treatment. Irrigation management was done as per crop requirement

and weeds were managed manually. Observation on disease intensity was recorded in both the crop seasons. The experiment was conducted at Vegetable Research Station Kalyanpur, Kanpur in RBD having thirteen treatments viz. seed treatment with Ridomil MZ-72 (0.25%)+ one spray of Akomin (Potassium phosphorate (0.3%) at 45 days after sowing, seed treatment with Ridomil MZ-72 (0.25%)+ 3 sprays Mancozeb (0.25%) at 40, 50 and 60 days after sowing, seed treatment with Ridomil MZ-72 (0.25%)+2 need based sprays of Salicylic acid 25 ppm at 30 and 60 days after sowing, seed treatment with Ridomil MZ-72 (0.25%)+ removal of lower infected leaves in morning and foliar spray of Mancozeb (0.25%) in evening at 40, 50 and 60 days after sowing, disease free seed from summer crop+ need based spray of cow dung 5% + cow urine 5% slurry. Seed treatment with Ridomil MZ-72 (0.25%) + one spray of Akomin (Potassium phosphonate (0.3%) at 45 days after sowing on bower system, Seed treatment with Ridomil MZ-72 (0.25%)+ one need base spray of Allite (0.25%) at 45 days after sowing on bower system, Seed treatment with Ridomil MZ-72 (0.25%)+3 sprays of Mancozeb (0.25%) at 40, 50 and 60 days after sowing on bower system, Seed treatment with Ridomil MZ-72 (0.25%)+2 need base sprays of salicylic acid 25 ppm at 30 and 60 days after sowing on bower system, Seed treatment with Ridomil MZ-72 (0.25%)+ removal of infected leaves in morning and foliar spray of Mancozeb (0.25%) in evening at 40,

## Key words :

Allite, Akomin,  
Salicylic acid,  
Cucumber,  
Downy mildew,  
*Pseudoperonospora cubensis*

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