

Ratna (16.8); Karuna (13.4); 6547 (16.5); ADT 31 (13.4); Pennai (13.4); IR 26 (13.0); Kanchi (11.0); Kakatiya (11.0); IR 20 (10.0); IR 5 (10.0); Sona (IET 1991) (10.0); Bhavani (10.0); Vaigai (10.0); Mala (9.6), Suhashini (9.6); Anupama (7.2); IR 24 (7.2); IET 2222 (7.2); Tapoocho (5.0); Deegeewoogen (5.0); IR (4.8); Basumathi (3.0); Chandina (2.4); Jayanthi (2.4); Kumar (2.4); Sigadis (1.0); Kanto (1.0); Tella hamsa (1.0), TKM 6 (1.0); TN 1 (1.0).

From the foregoing it can be seen that sheath rot, till now considered a disease of minor importance and unknown in Tamil Nadu, is coming into prominence, Annapoorna was comparatively more susceptible, while T.N. 1, TKM 6, Tella hamsa, Kanto and Sigadis showed least susceptibility.

Tamil Nadu Agril. Univ., C. L. SUBRAMANIAN.
Coimbatore-3, G. RAMAKRISHNAN.
December 27, 1974.

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Occurrence of a New Disease on Grape Seedlings Caused by *Phytophthora nicotianae* var. *parasitica* (Dastur.) Waterhouse from India

Since 1972, severe outbreaks of a 'damping off' disease of hybrid grape seedlings have been observed at the Indian Institute of Horticultural Research, Hessaraghatta.

The disease symptoms appear as light brown, irregular water soaked areas on the collar region of the young seedlings, which soon enlarge and coalesce forming distinct depressed lesions and ultimately the seedlings collapse. Bleaching of the leaves is another initial characteristic symptom of this disease.

Microscopic examination of affected tissues from diseased seedlings repeatedly showed the presence of abundant Papillate sporangia and non-septate mycelium. The sporangia on germination produced biflagellate zoospores, characteristic of the genus *Phytophthora*. Based on the morphological and cultural characters, the fungus was identified as *Phytophthora nicotianae* var. *parasitica* (Dastur.) Waterhouse. On artificial inoculation, this fungus was found to be pathogenic on seedlings of Aster, Carnation, Bougainvillea, Petunia and Hibiscus. In addition, green fruits of tomato, okra, capsicum,

brinjal, bean, cocoanut, jack and guava were also found to be susceptible.

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Addition to the Host Range of the New Strain of Brinjal Mosaic Virus

In the earlier report (Naqvi and Mahmood¹) a new strain of brinjal mosaic virus (BMV) has been reported. On further studies, however, some Solanaceous plants were proved to be additional hosts of the virus. These are: *Solanum aculeatum* St. Lag., *S. aviculare* Forst., *S. hispidum* Pers., *S. hybridum* Jacq. and *S. mammosum* L. All the above hosts produced characteristic symptoms and the virus could be recovered on back inoculation to the test plants of *S. melongena* L. var. *Pusa Purple Long*.

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February 28, 1975.

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Some Observations of Gamma Irradiation on Growth and Flowering of Tuberose Bulbs

The Department of Horticulture, Mahatma Phule Krishi Vidyapeeth, Rahuri, has initiated a programme of irradiation research on ornamental crops with a view to evolve improved strains through mutation. The present observations include data on dose-response of tuberose flowering to radiation. Some of the somatic effects are also included in this short report. Desai¹, while studying effects of irradiated bulbs of tuberose with acute doses of gamma rays, reported that bulbs survived upto 2.5 Kr.

150 bulbs of single tuberose were irradiated at Bhabha Atomic Research Centre, Trombay, with 0.5 Kr., 2.5 Kr. and 3.5 Kr. doses and planted on 20-6-1974 in the horticultural Nursery of the Department of Horticulture, at Rahuri. About 20-25 bulbs of equal size were irradiated with each dose.

Data were recorded in date of appearance of first flower stalk, length of stalk at first flowering, data of first flower opening, length of flower-stalk, girth of stalk, length of internodes and the number of leaves when first flower stalk emerged.

From Table I it is seen that the gamma dose of 0.5 Kr. gave one desirable mutant with bolder