

RESEARCH NOTES

ON THE RESISTANCE OF A WILD BRINJAL VARIETY TO BACTERIAL WILT

Bacterial wilt is a serious disease of brinjal in Kerala, caused by the bacterium *Pseudomonas solanacearum*. Two varieties of egg plant, **Aroman** and **Sinampiro** were reported to be resistant to the bacterial wilt (Anon 1962). Crosses between the varieties (Native Long Purple x American variety **Rostia**) and **Indian**, yielded a resistant strain in the **Philippines** (Anon 1960). **Winstead** and **Kelman** (1960) found that the brinjal varieties **Florida Market**, **Florida High Bush** and **Fort Myer's Market** were **intermediate** in resistance. **Suzuki et al** (1967) concluded that wilt resistance in egg plants was controlled by hereditary units.

Not many attempts have been made to evolve wilt resistant brinjal varieties in India. In the present studies the resistance to bacterial wilt in two brinjal varieties, namely, **Purple Long Datta** a popular cultivar variety of brinjal and a wild variety *Solanum melongena* var. *insanum* **Prain** was studied. Two different trials were conducted at the Agricultural College, **Vellayani**, Kerala State, in two seasons viz., **May to September 1967** and **October to February 1968-69**. In the first trial eighteen plants each of the two varieties were grown in pots in wilt sick soil collected from field where the brinjal plants were affected recently by wilt. In the second trial twenty five plants each of the two varieties grown in pots in sick soil were inoculated by the streaking method (**Winstead** and **Kelman** 1952). A streak was made on the basal part of the stem of each plant with a sterilised needle and a drop of the bacterial suspension prepared from wilted plants was placed in it. Cotton wool dipped in sterile water was wound around the stem at the site of the streak. **These plants** were also watered with water which was mixed with chopped up pieces of wilted brinjal plants. Thus **conditions** favourable for the maximum infection were created for all the plants of both the varieties under observation.

It was observed that in both the experiments none of the plants of the wild brinjal wilted. At the same time 12 out of the 18 plants of the cultivar **Purple Long Datta** wilted in the first trial and all the 25 plants of this variety in the second trial. The wild varieties were thus seen to be resistant to the bacterial wilt.

Preliminary studies on the cross compatibility between this wild brinjal and certain other cultivated brinjal varieties showed that they were highly compatible indicating that the wild variety was a potential source in the breeding of wilt resistant brinjal varieties.

References

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