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Little leaf of Brinjal\Egg plant 1

- **INTRODUCTION**- Little leaf of brinjal or eggplant (*Solanum melongena* L.) is one of the most serious diseases of brinjal in the areas of its cultivation. Occured in almost all the states of India. This graft transmissible disease was first reported from Coimbatore(Thomas and Krishnaswami, 1939).There is hardly any variety of Brinjal which is resistance to this disease. Little leaf of brinjal is known to cause heavy economic losses (more than 90%) in India.
- **SYMPTOMS**-1. As the name indicates, symptoms of the disease include **shortening of the petioles** and **production of leaves which are much smaller(tiny)** in size. Petioles are so short that leaves seem to be glued to the stem.
- 2. **Diseased plants show** extreme reduction in size of their leaves(very tiny leaves) and nodes &internodes, giving a **bushy appearance** to whole plant. Yellowing of leaves also occur.
- 3.In heavily and early infected **plants, flower and fruit setting is negligible**, virescent and phylloid flowers are very common (Ajaneyalu and Ramkrishnan 1972a).
- 4.However, in cases of late season infections **fruits** may remain **small**, become **hard** and unfit for consumption or marketing.

Little leaf of Brinjal contd. 2

- CAUSAL PATHOGEN- Verma et al(1969) showed MLO, spherical to ovoid(40- 3000nm)structures, present in sieve tubes of the **phloem cells** of diseased plants, which lacking cell wall. The disease is thus shown to be caused by **Mycoplasma**. The disease is caused by a plant pathogenic mollicute, **Phytoplasma**, discovered in 1967 by Japanese scientists (earlier known as mycoplasma like organism or MLO) .
- TRANSMISSION- In nature the disease is transmitted by insect Hishimonus phycitis, which belongs to the group of leafhoppers. Bitter gourd, Ground gourd, Water melon, Menthi, Sunhemp and Carrot are good hosts of the vectors, while Beet , Castor, Soyabean, Chenopodium are suitable hosts for oviposition.
- CONTROL-1. Spray insecticides- Ajaneyalu and Ramkrishnan (1969,1972b) and Verma et al. (1973) reported tetracycline therapy at 1000 ppm³ times at 7 days interval to be effective in controlling this disease. Spraying with ledermycin at 500 ppm has shown beneficial effects because it suppresses the symptoms.2.Removal and destruction of weeds and infected plants -- Early destruction of infected plants , uproot and burn infected plants and weeds also to control the disease. 3.-Spray insecticides to manage and control vector.4.- Use of disease resistant varieties- as BB-7, BWR-12, Pant Ritu Raj& H8.

Little leaf of Brinjal - symptoms

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Little leaf of Brinjal –symptoms 4





Healthy plant



Infected plant



Hishimonas phycitis

Source: <http://www.nbair.res.in/insectpests/Hishimonus-phycitis.php>

Mycoplasma

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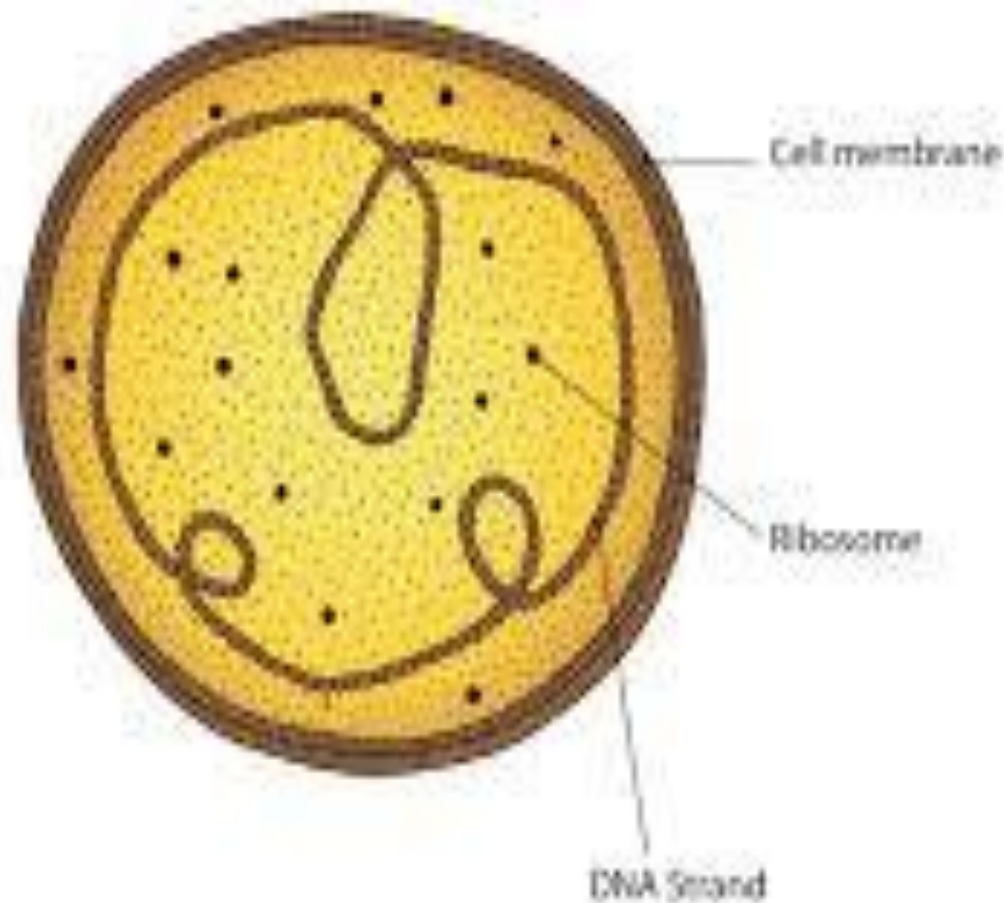


Figure 1.18: Structure of *Mycoplasma*

THANKS EVERYONE