**Recognize the problem**
Bean root rot and wilt, commonly known as “Mul kunuveema”, causes heavy crop losses, especially during the rainy season. Many pathogens can cause root rot and wilt. These include *Fusarium solani*, which infects seedlings and causes seedling rot and *Fusarium oxysporum*, the pathogen associated with wilt disease. Wilt disease produces symptoms such as yellowing and dropping of older leaves. Although symptoms appear at the flowering and fruiting stage, the preventive measures must be applied early in the crop. Leaf yellowing symptoms caused by Fusarium wilt look similar to symptoms caused by viruses. The main differences between the symptoms of these two diseases are that the leaf yellowing caused by Fusarium wilt is gradual, causes a dull yellow colour and results in leaf dropping, whereas viruses produce bright mosaic symptoms and do not cause leaf dropping.

**Background**
Both Fusarium pathogens are soil borne. Excess soil moisture and low aeration increase disease development. Treating seeds with thiophanate methyl + thiram will kill the pathogens.

**Management**
Increasing aeration and improving soil drainage inhibit pathogen development. Chemical seed treatments help to protect the developing root system from pathogen infection.

- Treat seeds with thiophanate methyl + thiram at the rate of 2g/kg of seeds one day before sowing
- Subsequent fungicide drenches helps to prevent the development of the disease but will not be effective if the disease has already developed. Following the following practices may also help to reduce the disease:
  - Deep plough land up to 9-10” deep
  - Incorporate decomposed organic matter at the rate of 10t/ha with “rice husk charcoal” at the rate of 4-5 t/ha
  - Make deep (1 foot) ditches around the beds to facilitate drainage
  - Apply fertilizers at Department Of Agriculture recommended rates
  - Two weeks after sowing, apply the above fungicides to the planting hole at the rate of 30g/10l (50-75ml/planting hole)

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

**Scientific name(s)** > *Macrophomina, Fusarium oxysporum, Rhizoctonia, Pythium, Fusarium solani*

The recommendations in this factsheet are relevant to: Sri Lanka

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**Authors:** K. P. Somachandra, M. S. K. K Perera, K. Thanabalasingam, T. K. A. I. Hadji

**Regional Agriculture Research & Development Centre**
tel: 94+572232486 email: kpsomachandra1@yahoo.com

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