1. Moong/ Urd/ Moth beans

Green Gram (*Vigna radiata*) and Urd (*Vigna mungo*) Family: Fabaceae

1. Web Blight

Symptoms :

- Symptoms appear on leaves initially as small, water-soaked, light green lesions of various shapes.
- Spots that are formed on older leaves gradually increase in number and size attaining reddish brown colour and spread to young leaves also.
- Numerous white sclerotia are formed in the pink coloured web formed by the fungal mycelium.
- Affected leaves shed and drop. As a result of shortening of the branches, yields are drastically reduced.

Causal organism & Disease cycle: (*Rhizotonia solani)*

Disease Cycle: *Rhizoctonia solani* survives in the soil and on infected crop debris as sclerotia or mycelium. Sclerotia are known to survive for several years in the soil. The fungi spread by water (flooding), irrigation, movement of contaminated soil, and plant debris. At the onset of the growing season, in response to favorable humidity and temperatures (15 to 35°C), fungal growth is attracted to freshly planted host crops by chemical stimulants released by growing plant cells. The fungi infect plants, leading to characteristic symptoms on the stem, sheaths, leaves and ears. The fungi overwinter as sclerotia or in seed.

Diseases Management:

- Follow crop rotation
- Adjust sowing time in such a way that it should not be timed with main rainfall
- Good soil drainage and thin plant density reduces the incidence of disease.
- Use biocontrol agent *Trichoderma viride* @ 5-10kg / ha.

- Spray of Mancozeb/ Copper Oxychloride at 3 g per litre or Carbendazim/ Thiophanate-methyl at 1g per litre at the time of podding.

1. Yellow mosaic virus:

Economic importance: The disease is prevalent in black gram and green gram in Andhra Pradesh, T.N., U.P., M.P., Bihar, Punjab, Haryana, Himachal Pradesh, Rajasthan and Orissa. It is a wide spread viral disease. It is a serious disease of mungbean and depending upon the magnitude of infestation, loss in yield may vary from 10 to 100 per cent.

Symptoms:

- Initially small yellow patches or spots appear on young leaves.
- The disease is prevalent on green gram.
- First symptoms appear on young leaves in the form of mild scattered yellow spots appear on young leaves. Spots gradually increase in size and ultimately some leaves turn completely yellow.
- Infected leaves also show necrotic symptoms.
- Diseased plants are stunted, mature late and produce very few flowers and pods. Pods of infected plants are reduced in size and turn yellow in colour.
- The early infection causes death of the plant before seed set.

Causal organism & Disease cycle

- It is caused by *Mungbean yellow mosaic virus.* The virus survives in the weed hosts and other legume crops. The disease spreads through white fly, *Bemisia tabaci*.

Diseases Management:

- The crop must be sown timely. Cultivate the crop during Rabi season.
- Rogue out the diseased plants up to 40 days after sowing. The spacing between the lines should be maintained at 30 to 40 cm.
- Only certified seeds should be used for sowing and increase the seed rate (25 kg/ha).
- Grow seven rows of sorghum as border crop.
- Weeds plants should be rouged out at their inception.
- Growing resistant and tolerant varieties such as T-1, T-44, ML-1 pantmung 1,2, and ML - 131, HUM 8, HUM 9, PDM 84-139, Pusa Bold 1, Pusa Bold 2,K1284, Teja, LBG 752, Pant-30 and Pant-90.

- Follow mixed cropping by growing two rows of maize (60 x 30 cm) or sorghum (45 x 15 cm) for every 15 rows of black gram or green gram.
- Apply 10% phorate granules at the rate of 1kg/ha in the soil before sowing. Repeated spray of insecticide may help in controlling the spread of disease by reducing the population of white files.
- Treat seeds with Imidacloprid 70 WS @ 5ml/kg to control vector. Give one foliar spray of systemic insecticide (Dimethoate @ 750 ml/ha) on 30 days after sowing.