





Downy Mildew causes light yellow coloured spots on young soy bean leaves.

Below: Infected seeds may be dull white with cracks in the seed coat.



Downy Mildew, a common disease of soya beans worldwide reduces seed quality and yields. Phosphite provides effective control when applied as a foliar spray.

Peronospora manshurica - Symptoms

Downy Mildew first appears on the upper surfaces of young leaves as light yellowish-coloured spots. The size and shape of the lesions depends on leaf age. Older lesions may turn greyish-brown to dark brown with yellow margins, eventually becoming totally brown. Severely infected leaves turn yellow, then brown and fall. In moist weather, a white down can often be seen on the lesions on the lower surfaces of leaves.

Pod infections may occur without any visible external symptoms. The interior of the pod may be covered with a white fungal growth and infected seeds may be dull white with cracks in the seed coat. Infected seeds can produce infected seedlings.

Cause

The disease is caused by the fungus *Peronospora manshurica* and is one of the most common diseases of soybeans worldwide. It causes some defoliation, reduced seed quality and size, and may lower yields up to 20 %.



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Treatment Cultural

The development of Downy Mildew is mostly weather dependent with the most important component being the effect during leaf wetness periods.

Because Downy Mildew is an obligate parasite, its season-toseason survival is dependent on the presence of live hosts. Infection in-season is usually a result of wind blown spores from other infected crops, infection through rain splash or transmission from infected cultivating tools.

Key factors in the cultural control of disease include:

- Avoiding fields with heavy, poorly drained soils
- Rotation with other unrelated crops
- Where possible, not planting down-wind of a potential inoculum source
- Maximising the distance from potential sources of inoculum
- Use of resistant cultivars where available
- Maximising plant in-row and between-row spacings to decrease canopy density
- Limiting the availability of free water: good drainage and irrigation is important
- Extending intervals between irrigations if possible and avoiding long irrigation periods
- Not irrigating too late in the day allow for foliage to dry before nightfall
- Using protective fungicides
- Destroying volunteers after harvesting
- Destroying infected crop debris after harvesting

Application Rates for Phosphite 600:

Application Method	Phosphite 600 Rate	Water Rate	Application Program
Foliar Spray or Drip Irrigation	2 - 3 L / Ha	80 L / Ha	Use lower rate on young or immature crops. For fully grown crops, use higher rate.





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