

GOVERNMENT OF JAMMU & KASHMIR
DIRECTORATE OF AGRICULTURE, JAMMU
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ADVISORY FOR THE CONTROL OF LATE BLIGHT OF POTATO

Potato (*Solanum tuberosum* L.) is the fourth most important food crop in the world (Marnique, 2000) after wheat, rice and corn (Rhodes, 1982) besides, an important part of global food supply (Anonymous, 2003). India is the third largest producer of potato in the world,

The area under crop in the Jammu and Kashmir state is approximately 2500 hectares with production of 22589.20 tonnes (Anonymous, 2009). Among other constraints/ diseases late blight disease [*Phytophthora infestans*] of potato is one of the highly destructive disease and a major constraint in the profitable cultivation of potato

Losses of up to 10 to 75 per cent by the disease have been reported in India (Dutta, 1979) and are depending on the crop growth stage at which the disease first appears, which also could be upto the extent of 100 per cent (Kumar *et al.* 2010).

Late blight (*Phytophthora infestans*), though reported **SPORADIC** (by SKUAST-J, 2006) in its distribution in districts of Jammu Division; During the survey (by SKUAST-J, 2008-09) of winter season of potato fields at Assar, Jathi, Chenani and Udhampur, the incidence of the late blight of potato disease ranged between 5.82-47.32 per cent being highest in Udhampur and lowest in Jathi areas.

Accordingly, In order to contain this disease from becoming an epidemic, this Directorate intends to impress upon all the Officers/stakeholders; as extension machinery of the Agriculture Department to extend more and more know how about the said disease to the grass root level for adoption of GOOD AGRICULTURAL PRACTICES (**Follow high ridge culture to avoid tuber infection**) and exercising PROPER SURVEILLANCE when whether is congenial - for early detection.

Brief about its pathogenicity and predisposing factors.

- 1. The pathogen favours wet weather with moderate temperatures (16°C to 27°C), high humidity and frequent rainfall. Under such conditions, the disease can spread extremely rapidly and has the potential to completely defoliate fields within 3 weeks of the first visible infections if no control measures are taken.*
- 2. In addition to attacking foliage, P. infestans can infect tubers at any stage of development before or after harvest. Soft rot of tubers often occurs in storage following tuber infections.*

The descriptive manifestation/dispersal of the disease and its management is given hereunder for wider publicity and use.

Symptoms:

- Infected tubers from cold stores serve as primary source of disease. On emergence the sprouts and leaves get infected.
- Water soaked spots appear on margins of leaves which later turn into black patches with whitish fungus growth visible on lower surface in the morning hours.
- Black patches may extend and kill the foliage in a few days if moist weather prevails.
- Decaying leaves emit an offensive odour.
- Brown depressed patches appear on tubers which finally rot in the soil before harvesting.



Control Measures:

1. Use selected healthy tubers for planting.
2. Infected/rejected tubers taken out of cold stores should be buried and not left in the open.
3. Follow high ridging of earthing 4" to 6" at the time of earthing up to reduce the chances of tuber infection.
4. On appearance of the disease symptoms, Spray the crop -twice with Ridomil MZ (@ 0.2 per cent) at interval of 15 days and later, 4 more sprays of Dithane M-45/ Indofil M-45 (@ 0.2 per cent) at interval of 7 days. Besides, infected plant material in the field should be properly destroyed.

**DIRECTOR OF AGRICULTURE,
JAMMU**