



# MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

## Recommendation Sheet

April 2007, No. 160\*

### NEW FUNGICIDES FOR THE MANAGEMENT OF LATE BLIGHT DISEASE IN POTATO

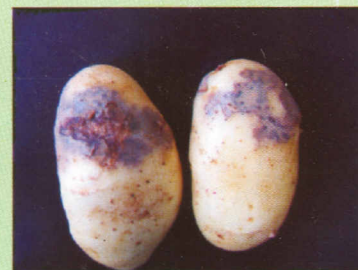
Late blight disease caused by the fungus *Phytophthora infestans* is a severe disease of potato on varieties Delaware, Mondial and Spunta. An outbreak of late blight occurred in 2004 and since then disease pressure has remained high, particularly in first season.

The disease can spread rapidly from sources of infection such as volunteers, seeds and infested fields. Preventive fungicide applications are necessary and treatment should continue until the end of the crop cycle as tuber blight may develop.

Tuber infection develops when fungal spores are disseminated by water from aerial parts into the soil. To control tuber blight, it is important to carry out a proper earthing-up in order to reduce exposure of the tubers to the disease as well as limiting late blight on the aerial parts. Harvest should also be completed as soon as possible to reduce the risks of infection and rotting.



Late blight on potato leaflet



Tuber infection (tuber blight)

### Recommendations

Four new fungicides are recommended against late blight and they should be applied in a spraying programme with respect to the agro-climatic zones of Mauritius. Among them, Infinito (fluopicolide + propamocarb hydrochloride) broadens the range of systemic fungicides available and will reduce the risk of development of resistant strains of the fungus.

FUNGICIDE	DOSAGE		TIMING
	(per ha)	(per arp)	
<b>Infinito 687.5 SC</b> (fluopicolide + propamocarb hydrochloride)	1.4 L	0.60 L	Apply early during crop cycle and as an alternative to Melody Duo 69 WG and Ridomil Gold Pepito. Maximum of 4 applications
<b>Acrobat MZ WG</b> (dimethomorph + mancozeb)	2 kg	0.85 kg	Apply as any local systemic fungicide every 7 to 10 days, early in the crop cycle
<b>Electis 75 WG</b> (zoxamide + mancozeb)	1.8 kg	0.75 kg	Apply as any other local systemic fungicide but particularly as the last three treatments in regions where tuber infection is a problem
<b>Pennfluid</b> (mancozeb)	3 L	1.25 L	Use in a spraying programme as an alternative to Dithane M 45 or Penncozeb

Fungicide	Formulation, properties <sup>†</sup> and mode of action	Pre-harvest interval (days)
<b>Infinito 687.5 SC</b>	suspension concentrate, systemic, preventive activity and anti-sporulant properties	7
<b>Acrobat MZ WG</b>	wettable granules, contact and local systemic, anti-sporulant and disrupts cell wall formation of fungus	3
<b>Electis 75 WG</b>	wettable granules, contact and local systemic, prevents cell division and inhibits spore germination, rainfastness properties, effective against tuber blight	7
<b>Pennfluid</b>	contact fungicide, inhibits spore germination, contains an oil suspension of mancozeb that confers properties of adherence and spread over leaves, as effective as wettable powder formulation despite a reduced concentration of mancozeb	7

<sup>†</sup>Properties of fungicides:

Contact: does not enter the plant; protects externally

Local systemic: absorbed by the plant into the immediate area of application but not mobile far from the site of uptake

Systemic: absorbed and travels to upper parts of the plant

\* This Recommendation Sheet supplements No. 148 of March 2005.

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