



Late blight disease of potato

Phytophthora infestans سطاتبلا ترخاتملا يف تحفلا

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Water-soaked lesions on leaf (R.W. Samson, Purdue University, Bugwood.org).</p>	<ul style="list-style-type: none"> • Avoid planting crop near tomato, pepper and nightshade fields to reduce ability for disease to spread. • Remove alternate hosts such as hairy nightshade weed. • Plant resistant varieties such as Cara and Sponta. • Increase plant spacing to 50 cm between plants and 25 cm between rows to reduce humidity. • Sow seeds 15 cm deep. • Avoid overhead irrigation to reduce increased humidity in fields. • Rotate field every 2-3-years with non-Solanaceous crops, such as wheat and maize. 	<ul style="list-style-type: none"> • This water mould disease spreads by air. It is most severe in cool weather (15-20°C) with high humidity (90%). • Check plants weekly from 3 weeks after emergence until harvest. • Check upper leaf surfaces for small, water-soaked, light green lesions that turn grey-brown and necrotic later on. White mycelium may be found during high humidity. • Consider preventive fungicides between 3 to 12 weeks after crop emergence if the disease was present in the last cropping season, or if in the area. • If 3-4 plants per acre show symptoms, protection is too late, systemic fungicide may be considered. • If stems have black-purplish lesions covered with white mycelium, then direct control is too late. 	<ul style="list-style-type: none"> • Pick up all infected potato plants with early symptoms and destroy by burning. Do not carry openly through the field to not spread the disease 	<ul style="list-style-type: none"> • Before many disease symptoms appear, consider protective fungicides which contain chlorothalonil or etheylene bisdithiocarbamate, and make repetitive sprays once per week. There are no curative fungicides. All recommended fungicides are foliar applications. • Many are toxic to fish & moderately harmful for birds and bees. • When using a pesticide or botanical, always wear protective clothing and follow the product instructions. Always consult recent list of registered pesticides. 	
 <p>Fluffy white disease (R.W. Samson, Purdue University, Bugwood.org)</p>				<ul style="list-style-type: none"> • Propamocarb or propamocarb+ chlorothalonil (protectants). Trade Names: Tattoo, Tattoo C, and others. Apply preventatively at 7-10-day intervals (Tattoo); 7-14 days (Tattoo C, usually at a rate of 2.7 L/Ha), but double check label. • Chlorothalonil (protectant). Trade Names: for example, Bravo 500, Echo 90DF or 720 (Apply preventatively at 7- to 10-day intervals). Often at a rate of 0.5-1 L/Ha but double check label. • Dimethomorph (protectant), Trade Names: Acrobat 50WP or Forum. (Apply preventatively at 7- to 10-day intervals. Often at a rate of 450 g/Ha but double check labels. • Copper hydroxide (protectant). Trade Names: for example, Kocide 2000 or Parasol WPF (Apply preventatively at 7-10-day intervals often at a rate of 0.75-3 lbs and 90 L/Ha, but check label. 	<ul style="list-style-type: none"> • WHO toxicity class U (unlikely acute hazard). RHI: 48h; Pre-harvest interval. PHI: 14 d (Tattoo); RHI: 48h; PHI: 7 d (Tattoo C). Do not exceed 7.5 L/hectare/season (Tattoo) Do not exceed 3 sprays per season (Tattoo C). • WHO toxicity class U (unlikely acute hazard). RHI: 48h; PHI: 1 d. Moderately harmful for soil & predatory mites. • WHO toxicity class U (unlikely acute hazard). RHI: 12h; PHI: 4 d. Do not exceed 3 applications per season. • WHO toxicity class III (slightly hazardous). RHI: 48h; PHI: 1 d. Do not exceed 6 sprays per year. May be phytotoxic, do not spray in full sunshine. Moderately harmful for soil organisms.



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EDITED BY: Plantwise