

Downy mildew on lettuce

Bremia lactucae Lettuce downy mildew



Bremia lactucae (downy mildew of lettuce); browning and chlorosis of lettuce leaves (©AgrEvo)



Bremia lactucae (downy mildew of lettuce); necrotic lesions on lettuce leaf (©AgrEvo)



Bremia lactucae (downy mildew of lettuce); chlorosis of leaves (©AgrEvo)

Prevention	Monitoring	Direct Control
<ul style="list-style-type: none"> • Use resistant varieties if available • Do not plant crop next to or downwind of infected fields since downy mildew spores spread via wind • Keep fields free from weeds, particularly those in the daisy or sunflower family as these species are hosts of downy mildew. Removing weeds also improves aeration (the pathogen favours wet environments) • Space plants far enough apart that leaves can dry quickly after watering or rains. Spacing should be 30-40 cm between rows, 15-20 cm between seedlings, depending on the variety (check recommendation provided with seeds) • Avoid overhead irrigation to prevent leaves being wet for long periods of time • Avoid irrigating crop at night when temperatures are cool and there is less evaporation of water off of the leaf surface • Disinfect farm implements/tools with household bleach (1 part bleach to 1 part water) to avoid spreading the disease • Rotate with crops not susceptible to the disease (crop not listed in the Monitoring column) for 2-3 years. The spores of the pathogen can survive in the soil for this long • Avoid planting overlapping crops of lettuce if downy mildew symptoms are seen since it can spread from older to younger plants 	<ul style="list-style-type: none"> • Additional relevant crops: globe artichoke, endive, chicory, ornamental spp. • Downy mildew infects seedlings and mature plants • Look out for: <ul style="list-style-type: none"> • Light green/yellow round/angular spots on the top of leaves, particularly older leaves. Spots merge and turn brown, sometimes becoming soft and slimy • Leaf spots may become infected by additional pathogens such as <i>Botrytis cinerea</i> (grey mold) • White cotton-like growth develops on the underside of leaves in cool and humid conditions • Monitor crop closely when weather is cool (less than 23°C) and damp (humidity is more than 85%). • Consider taking action as soon as symptoms are seen 	<ul style="list-style-type: none"> • During crop growth, remove any infected plants immediately and destroy by burning (if allowed in your area) or burying deeply (at least 1 m) • After harvest, collect plant remains and burn or bury deeply (at least 1 m)

Note: Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.