



## Downy mildew of Impatiens

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Impatiens (garden balsam or busy lizzie), which are native to East Africa, are widely distributed in tropical and subtropical areas of the world. The leaves are hairless and the stems succulent. The fruits are 'explosive' and will rapidly expel seeds when touched. The flowers can be single or doubles.

Since 2006 downy mildew caused by the fungus *Plasmopara obducens* has been affecting Impatiens in Victoria. The disease was first detected in Western Australia in 2007.

This Gardennote describes the symptoms and control of downy mildew in Impatiens.

### General

*Plasmopara obducens* affects Impatiens species and cultivars. The disease can cause stunting, premature leaf fall, poor flowering and even death. The host range includes cultivated and wild species and has been found in single and double flowered varieties.



Impatiens balsamina (Double Impatiens). Photo courtesy of Mohanraj S



Impatiens wallerana – 'busy lizzie'. Photo by Chris Franklin

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## Symptoms

The first symptoms are usually pale green leaves. The underside of affected leaves may show a sparse or dense white layer covering the entire leaf surface. Affected leaves then yellow and may fall prematurely, or they may collapse.

Plants can be stunted, produce small pale leaves and few or no flowers. Early symptoms of infection may be difficult to detect as the characteristic white downy growth is restricted to the underside of leaves, and leaf symptoms may be confused with nutritional deficiencies or mite damage.



*Downy mildew on underside of impatiens leaf. Photo courtesy Leanne Pundt – University of Connecticut*



*Downy mildew on Impatiens. Photo courtesy Leanne Pundt – University of Connecticut*

## Reducing the incidence of downy mildew

Downy mildew is spread by water splash and wind. The pathogen can survive in seed, soil, potting media or diseased plants for years before symptoms appear. Do not replant impatiens in the same area for several years. Downy mildew on Impatiens cannot spread to other plants outside the Impatiens group. Most fungal infections on plants are encouraged by humid conditions. A high humidity environment can be the result of crowded plants with poor ventilation, or watering in the evening. Downy mildew is more prevalent when the weather is wet and humid. A film of water on the plant's surface for more than six hours allows the downy mildew pathogen to germinate and infect. Dispose of infected plants in a sealed bag and place them in a bin. Do not add them to the compost heap.

## Control

Preventive fungicides should be applied before the disease develops. Protectant fungicides such as Mancozeb act as a barrier to the disease. Protect susceptible plants during cool wet weather when the disease is prevalent. Mancozeb is not absorbed by the plant and is washed off during watering or rain. Weekly applications may be required.

### Downy mildew checklist

- Yellowish or pale green foliage
- Downward curling of the leaves
- Distortion of the leaves
- White to light grey growth on the undersides of the leaves
- Emerging leaves that are small and/or discoloured (yellow or pale green)
- Flower buds may fail to form
- Plants may be stunted

## Acknowledgment

This Gardennote was compiled from information presented by MK Hausbeck, Professor and Extension Specialist, Department of Plant Pathology, Michigan State University

<http://plantpathology.msu.edu/labs/hausbeck/Research/orn%20DM%20Impatiens.pdf>

When sending or delivering samples, the following information is required:

Collector's name, location (where the specimen was found), your full address, description of the damage, and date collected.

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