

**Brighton & Hove City Council
Arboricultural Information Note No. 12**

Cold Damage



Cold winter weather can be surprisingly damaging, even to hardy plants, but warm spring days then cool nights can also damage leaves and flowers. The resulting symptoms can be confused with pest or disease damage.

Symptoms of cold damage

Plants react differently to cold, and to different degrees of cold. Frost causes damage to tender plants when ice crystals form from the watery cell contents, breaking cell walls and damaging cell proteins, causing tissue browning and softening. Hardier plants may show leaf scorch, browning, drying and papery thinning of tips and margins.

Bedding plants and tender vegetables such as potatoes and tomatoes exhibit a range of symptoms. Leaves may darken, yellow, curl, scorch or die completely. Cold stress can be hard to distinguish from drought, over-watering, nutrient deficiencies or disease; the prevailing weather may be the best clue.

Prevention methods

Track temperature changes with a glasshouse maximum-minimum thermometer and keep horticultural fleece handy to protect plants in cold weather. Harden off tender plants thoroughly to reduce spring cold stress.

Cold, wet soils, cold winds and low night-time temperatures can cause reddish-purple leaf discolouration. Photinia is particularly prone to this reaction, forming leaf spots that look like a disease. Rhododendron and Viburnum rhytidophyllum often suffer temporary leaf curling and drooping in cold weather. On exposed sites, temporary windbreaks or permanent shelter belts can help protect plantings.

Most non-tender plants recover from cold damage, producing new foliage as the weather warms.