

Apple Scab and Pear Scab

Scab is a widespread fungal disease of apples and pears. Causing mainly blemished fruit, its effects are tolerated by gardeners, though commercially, fruit may be unmarketable. The disease is caused by two closely related fungi; *Venturia inaequalis* affecting apples and related ornamental species such as Pyracantha, Cotoneaster, Viburnum and Sorbus, and *Venturia pirina*, affecting only pears.

Typical symptoms

Apples

- **Leaves:** brown/green blotches appear first on the underside of leaves in spring. As leaves unfold, both surfaces may show symptoms. Young lesions are velvety brown to olive green and have feathery, indistinct margins. These may expand and run into each other, mainly along the veins and may develop a blistered appearance. When infections are numerous on young leaves, they become curled, dwarfed and distorted. Leaves may drop prematurely. Some crab apple species may have more severe symptoms, the variety 'John Downie' is very susceptible to scab.
- **Fruit:** dark spots on the skin look much like those on the leaves initially. As the fruit enlarges, these then develop into brown corky patches. A severe infection can cause fruit to crack if the apple is still growing. These wounds may cause the fruit to rot through a secondary infection.
- **Twigs:** small blister like swellings burst to produce brown/green pustules in spring. The cracked bark may then provide sites for further infection by the fungus causing canker.

Pears

- **Leaves:** scabby spots similar to those on apples appear on shoots, leaves, fruit and buds.
- **Fruit:** dark brown spotting can be more severe than on apples, causing infected fruit to grow deformed and deeply cleft.
- **Twigs:** conspicuous swellings which later burst. Infection occurs frequently on bud scales.

Life cycle

The fungus overwinters in fallen infected leaves, fruit and in infected twigs. In the spring, given a moist environment, spores released from these sources are blown or splashed onto newly emerging leaves causing infection. As the fungus develops, further spores are produced and the infection continues to spread throughout the growing season. Scab attacks are worst in cool, wet periods in spring and early summer.

Prevention and control

Treatment is the same for apples and pears, although it needs to start earlier in the season for pears because shoot infections are more serious.

- **Garden hygiene:** Remove badly infected fruitlets during thinning in June and remove mature fallen fruits in the autumn. Remove all fallen leaves in the autumn and compost them. If this is impractical, mow the ground below the trees to shred the leaves and increase the rate at which they are taken down into the soil. Watering fallen leaves with diluted urine, or any other high nitrogen liquid (nettle brew, liquid manure) will also help to kill the spores and speed up the decomposition rate.
- **Cultural control:** Pick-off and destroy any leaves and fruit left on the tree in the winter. Prune-out and burn diseased twigs. Prune trees regularly to maintain an open centre. This will increase air circulation and rapid drying of leaves which in turn discourages scab development.
- **Resistant varieties:** Both apple and pear cultivars vary considerably in their resistance to scab. They can also lose their resistance with time. Contact a specialist fruit nursery for details of current resistant varieties.

Some scab resistant apples are:

- Ashmead's Kernel
- Ellison's Orange
- Fortune
- Discovery
- Egremont Russet
- Grenadier
- Kidd's Orange Red
- Limelight
- Lord Derby
- Red Devil
- Reverend Wilkes
- Saturn
- Sunset
- Winter Gem

Resistant pears:

- Buerre Hardy
- Bristol Cross
- Catillac
- Gorham
- Jargonelle
- Conference is partially resistant.

- **Susceptible varieties:** Some apples that are particularly susceptible to scab are:
 - Cox's Orange Pippin
 - Gala

- James Grieve
- Laxton's Superb

Susceptible pears:

- Williams
- Bon Crétien