Bitter Pit

Bitter Pit is a very common disorder affecting the fruits of apples, particularly large fruited varieties such as Bramley's Seedling and Newton Wonder. Bitter Pit is caused by a deficiency in calcium and/or a too high concentration of potassium or magnesium within the fruits but its incidence is influenced by various factors which affect the movement of calcium into or out of the fruits while on the tree.

Bitter Pit appears to be connected to water shortages at critical times and is generally worse in seasons when there are wide fluctuations in rainfall and temperature. Excessive tree vigour, excessive fruit thinning, and too much nitrogenous fertilizer are also factors which predispose fruits to Bitter Pit. It is also prevalent in fruits which are immature when picked.

DAMAGE

Bitter Pit can appear from when the fruits are half developed until they are harvested, but it more often develops during storage, producing hard, slightly sunken pits on the surface of the skin and lines of brown tissue beneath the pits through the flesh, rendering the fruit bitter and inedible.

CONTROL

Bitter Pit can be prevented to a certain extent by careful cultivation as in the majority of cases analysis of the soil rarely indicates that there is a lack of calcium. The object should be to maintain uniform and steady growth throughout the growing season. Special care should be taken to prevent water stress during fruit formation. Soil moisture should be conserved by mulching above the roots with some kind of humus but straw should not be used as this can aggravate the problem. The mulch should be forked in at the end of the season.

Light pruning should normally be practiced but on a vigorous growing tree which only produces a few large fruits, late summer pruning would be beneficial. All shoots which have grown out during the current season should be cut right back to their point of origin, except where a replacement leader is required to fill the gap.

If Bitter Pit becomes a regular problem, it may be necessary to spray the tree several times with calcium nitrate from mid-June at the manufacturer's recommended rate. This will increase the concentration of calcium nitrate within developing apples. Calcium nitrate can be obtained from Gardening Direct (Tel 0845 217 0788). The fruit of Bramley's Seedling can be injured by sprays of calcium nitrate but as this variety is very susceptible to the disorder, some risk may have to be taken and the trees should be sprayed with calcium nitrate using a 1/2-strength solution for all applications.

USE CHEMICALS SAFELY: ALWAYS READ THE LABEL

When using chemicals it is most important to follow the manufacturer's instructions precisely. Only use on the fruits that are listed on the manufacturer's label. An accurate weighing machine and measuring cylinder should be obtained. Chemicals can be wasted by making concentrations unnecessarily strong or by making them too weak and ineffective. Furthermore, if chemicals are too strong they may cause damage to the foliage.

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