



Ken Muir's Guide to Pollination

Pollination is achieved by the transfer of pollen from the male part of the flower (anthers) to the female part of the flower (stigmas). The end result is fertilization followed by fruit set. The majority of flowers on plants grown for their fruits have both anthers and stigmas, whilst a few (e.g. cobnuts) bear separate male and female flowers on the same plant and those of kiwi fruits do so on different plants.

Some fruits (and these include apricots, peaches and nectarines as well as certain varieties of plums, gages, damsons and cherries) can be fertilized by their own pollen; these are described as being self-fertile, self-compatible or self-pollinating. Most varieties of soft fruit also fall into this category. Those fruits which require another variety of the same fruit flowering at the same time to achieve fertilization are said to be self-incompatible and include most varieties of apples and pears.

APPLES, PEARS & PLUMS

The various varieties of apples, pears, plums, gages and damsons are separated into pollination groups according to when they flower, starting with the earliest flowering varieties as group A, group B a little later and so on.

Varieties within the same pollination group will usually cross pollinate one another because they flower at the same time. For example, the apple variety 'Discovery' (group B) will pollinate the apple variety 'Fiesta' (group B) and vice versa.

Varieties in adjacent groups will also serve as pollinators for one another because in most seasons there is sufficient overlap of pollen resulting from an overlap in the flowering period. For example the apple variety, 'Egremont Russet' (group A) will pollinate the apple variety 'Bountiful' (group B) and vice versa.

Different types of fruit however will not pollinate one another. For example apples will not pollinate pears and vice versa.

Self-fertile varieties and partially self-fertile varieties will set fruit without a pollinator but the fruit set will always be improved when a pollinator is present. They will also act as pollinators for self-incompatible varieties.

The majority of apple and pear varieties are what are known as diploids. That is to say they contain two sets of chromosomes. There are several varieties of pear which even though they are diploids and in the same or overlapping pollination groups, are unable to pollinate each other. For example 'Onward' will not cross pollinate with 'Doyenne du Comice'.

There are a few triploid varieties such as the apples 'Bramley's Seedling' and 'Ribston Pippin' which have three sets of chromosomes. These make poor pollinators and should be grown with two diploid varieties that will not only pollinate each other but also the triploid variety. Alternatively, they can be grown with a self-fertile variety.

CHERRIES

Some acid cherries are self-fertile and all would appear to be capable of pollinating one another. Sweet cherries do not make satisfactory pollinators for acid cherries but acid cherries will pollinate sweet cherries on the rare occasions when their flowering periods overlap.

With a few notable exceptions, namely the varieties 'Celeste', 'Cherokee', 'Stella', 'Summer Sun', 'Sweetheart' and 'Sunburst', all sweet cherries are self-incompatible and require specially defined pollinators.

OTHER FRUITS

The majority of these are self-fertile and this includes most varieties of soft fruits. Most varieties of blueberries are partially self-incompatible and therefore should be grown alongside a second variety. As a general rule apricots, peaches and nectarines need to be hand pollinated. The pollination of cobnuts and filberts can be helped by pruning them whilst they are in flower. The pollination of grapes can be improved by tapping the rods during flowering.

HAND POLLINATION

There are occasions when some fruits should be pollinated by hand. This is necessary when there are likely to be few insects about, or when for example the fruit is being grown under glass and the pollinating insects are prevented from reaching the flowers.

Hand pollination should be undertaken daily, when the weather is warm and dry and the flowers are fully open. The pollen is best transferred from the anther to the stigmas with the aid of a soft camel hair brush or rabbit's tail.

POLLINATION PETS

Besides the honeybee, Britain has more than 250 species of native bee, many of which help your garden by pollinating flowers, but with fewer wild flowers and suitable nest sites, about 25% of our native bees are now endangered species. Finding nest sites has become crucially important for our bee population and bee nest kits are now available to gardeners. By attracting bees to your garden not only will you notice improved fruit crops but the bees will also visit a wide range of garden flowers.

The Red Mason Bee is a docile, friendly, solitary bee, safe around children and pets. It is also a more efficient pollinator of fruit crops than the honeybee. Nest boxes designed specifically for the Red Mason Bee are available. All you need to do is place the nest boxes in a sunny, sheltered, south facing position in the garden and you will attract Red Mason Bees in early spring. [Click here](#) for further details on our Red Mason Bee Nest.