

A FEW WORDS ON POLLINATION

Pollination is of critical importance to fruit and vegetable growing. Nearly all the crops we grow need to be pollinated by insects. It should be remembered that cereal crops also require pollination. One naturally thinks of honey bees, but other insects are also very important pollinators. Bumble bees do an excellent job, as do flies and other insects even including wasps. In recent years honey bees have been having a hard time, so we are fortunate in having the other insects. In 2013 in my garden and on my allotment I saw only two or three honey bees – literally only two or three. I put down the cause as the almost-continuous rain from about 4th April until Christmas the previous year. The blossom was continuously soaked and the poor bees could not obtain pollen. I heard a story about a beekeeper who opened a hive of 12,000 honey bees and found 12,000 bodies. They had starved to death. And one reads stories in the press about new diseases coming in from other countries to decimate our honey bee population. No, thank goodness for the other pollinating insects; without them we would be in a pretty pickle. Fruit growers in some parts of the world wipe out other insects with heavy doses of insecticide then pay beekeepers to bring in hives of honey bees at pollination time. Unfortunately there are now not enough hives so those fruit growers have been hoist by their own petard.

I was surprised to learn recently that honey bees live as worker bees for only two months. What a shame. They are born, work like stink for a couple of months, then die. They do not have an ideal work-life balance. Luckily the queen bee will produce up to 2,000 eggs per day so there are plenty of replacement bees. I have always found bees to be friendly creatures, and never aggressive. On the allotment and in the garden they buzz around me, often coming quite close. If they show great interest in a flowering plant I am just about to touch I wait a little while and the bee buzzes off. I know some people are very nervous about bees, especially people who might have an allergic reaction to bee stings, but if one keeps calm and lets the bee go about its business the bee will soon fly off in search of nectar elsewhere. I have the same attitude to wasps – they won't attack me if I don't attack them. Wasps can be a nuisance especially when one is having a meal outdoors, or by getting through my anti-bird net to feast on my cherries, but they have their part to play in totally-organic gardening since they eat prodigious quantities of the insects we don't want such as whitefly and other aphids. So from now on I am not going to eradicate any wasp nests I find on the allotment, and shall be chanting:

**“Come friendly wasps and fly by me,
And eat the aphids one, two, three”.**

Pollination is essential for most of our crops but there are exceptions. Perennial vegetables such as sea kale, asparagus and Good King Henry do not need to be pollinated, nor does rhubarb. Some other crops require pollination during the same year that one takes the crops, such as beans and fruit. On the other hand some vegetables need to be pollinated the year before, such as brassicas and root crops, where one sows the product of the previous year's pollination, ie the seeds. I sometimes let a few biennial carrots, leeks, beetroot and parsnips grow for another year so that I can collect enormous quantities of seeds for future sowing.

Sometimes one cannot use insects to pollinate. I give three examples. My espalier apricot tree flowers normally in February when there are no insects around, so I hand-pollinate using a cotton bud, making a buzz, buzz sound to fool the apricot. The second example is my greenhouse, which is an insect-free zone. I take precautions of the organic kind, since in the past I found that whitefly were irresistibly attracted to my peppers and aubergines. Just like many other gardeners I grew the usual marigolds in the greenhouse as a deterrent to whitefly, with mixed results, then discovered by accident what I call my secret weapon – oxalis triangularis. Some corms of the latter dropped accidentally a few years ago onto the soil of the deep bed where I grew tomatoes. They spread rapidly, produced beautiful flowers, and for several years I have not had whitefly in the greenhouse, nor any other kind of insect. In consequence I have to regularly hand-pollinate my peppers and aubergines. My all-female cucumber plants emphatically do not need to be pollinated since that would make the cucumbers taste bitter. As for tomatoes, they scatter their pollen liberally so there is no need to hand-pollinate, except for the first trusses of flowers low down on each plant. There does not seem to be

any need to hand-pollinate the grapevine in the roof of the greenhouse so it too must scatter pollen liberally. The final example is that of strawberries on the allotment, grown under fleece to bring forward fruiting and to keep off hungry birds. Under the fleece there are no pollinating insects but the wind causes the fleece to have undulating waves and the stirring-up of the air under the fleece distributes the pollen, resulting in perfect pollination.

One does have to take measures sometimes to enhance pollination. A case in point is sweet corn. This cereal crop has pollen-producing flowers at the top of the plant and corn cobs lower down. Each cob has a stream of tassles and every single one has to receive pollen in order that every grain of corn on the cob will grow to full size and be full of sugar. To improve the chances of successful pollination one grows sweetcorn plants in a block. I usually have a block six by six in the back garden, with each plant about 18 inches from its neighbour. I grow them in the garden because badgers would take the cobs just before they were ripe if I were to grow them on the allotment. (I once lost 136 plants on the allotment in a single night; the head badger must have brought all his family for the feast and they must have had a rare old time pushing the plants over and gorging themselves on my delicious sweetcorn, which they took for maize.)

Getting runner bean flowers to set can be a problem. Some books advocate spraying with a fine water spray in the evenings. For some years in the garden I have been growing sweet peas amongst a few "Painted Lady" runner beans, which are mainly grown for show on a Monnet Arch. I have just heard that to attract pollinating insects one can grow morning glory or sweet peas among bean plants – which I had been doing unwittingly in the garden! Both of these flowering plants are twining climbers. Henceforth I shall divert a few sweet pea plants to grow among my runner beans and climbing French beans on the allotment. On another aspect, I always let a few bean pods mature then collect the beans for sowing the following year, but this can produce unexpected problems. Getting one plant to fertilise another through the transfer of pollen results in hybridisation. If all the bean plants were of the same kind there would be no problem in using the resultant beans as seed – they should come true. However, in the past I have grown up to eight different varieties on my bean framework and suffered unintended hybridisation. This resulted in some of the following year's pods having red beans and others black - when the expected colour was grey! That is incidentally how the amateur gardener can find his or her place in gardening history by breeding a novel variety. Perhaps one day I will breed a monster bean called "Biggous Beanus Masoniai"!

Good Gardening!

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