

Organic Pest control

One of the biggest challenges to organic growing is pest control and here in France there is a much wider range of pests than we tend to get in England, some of which can decimate crops almost overnight such as the European shield bug and the gooseberry sawfly.

As with disease control there is no easy answer for the organic grower. Most of the effective systemic insecticides are not suitable for edible crops – even the ‘organic’ ones.

Systemic insecticides are absorbed into the leaves of the plant while the plant is growing, and the chemical is then translocated throughout the whole plant within the vessels that transport sap around the plant. This effectively makes the sap poisonous to the insects. A systemic – or ‘translocated’ insecticide is therefore the most effective way to deal with insects that suck the sap or eat the leaves especially as most of these will hide under the leaves and are hard to hit with a contact acting insecticide. These pesticides will however, accumulate within the plant tissues and this is why even plant-based products such as pyrethroids are not recommended for edible crops where they will be residual within the crop (Pyrethroids are a group of insecticides derived from an extract of chrysanthemum flowers including permethrin, bifenthrin and pyrethrum).

Contact-acting insecticides will only harm the insects that they come in direct contact with. You can therefore easily miss those that are hiding in the leaf joints, under the leaves and in between petals etc. Many will not kill the eggs of the pest so repeat applications are necessary. What they will also harm are beneficial insects such as bees that happen to get in the way.

Avoiding the use of chemicals altogether therefore is the most environmentally friendly solution, particularly in the potager – so what can we do?

Prevention is the first line of defence:

Fleece: cover susceptible plants with a fine horticultural fleece such as ‘enviromesh’ to protect plants from flying insects. This can be beneficial against cabbage white butterfly, carrot root fly and other butterfly, moth and beetle pests that fly in and lay their eggs onto the plants.

Insect traps: pheromone traps will attract the males of certain flying insects particularly those affecting fruit crops, the males are lured into the sticky trap by the scent of the female pheromone. This will remove some of the males from the population and therefore reduce the numbers of eggs laid by the females.

Plant stimulants: in France there are a variety of preparations that are said to promote plant health and resistance to pests and diseases, by supporting the plants’ immune system and providing vitamins and minerals in an easily assimilated form. These stimulants based on plant extracts such as Gingko and Garlic are also used in biodynamic gardening (more about that in future articles) and are available in larger stores and online.

Crop rotation and Companion planting: certain plants can help to repel pests and when planted in close proximity to your crop and will help to reduce any attacks (see articles in January/February)

Control methods: early identification of pests is obviously best so daily 'crop walking' to examine your plants is beneficial. If you identify a pest population on your crops, then:

Picking off manually: go out in early morning or evening and physically remove pests by hand – dispose of them as you wish! I have heard many different disposal methods, none of which are pleasant, but it has to be done. If you keep chickens, then they will happily eat a whole range of bugs and slugs!

Biological controls: Using a natural predator of your pest to keep the population down. In a greenhouse or polytunnel you can release predators into the environment as they will be contained. A common example is the tiny predatory wasp *encarsia Formosa* which parasitized whitefly eggs and keeps them under control. In the garden it is more difficult because you cannot keep flying predators contained but there are some useful biological controls that can be used outdoors such as *Bacillus thuringiensis* which parasitises caterpillars and larvae of a range of moths and butterflies and is useful against the larval stages of pests such as cabbage white butterfly and sawfly. It is widely available in France in Brico stores and garden centres. You can also buy nematodes which are microscopic worm-like creatures for control of slugs and vine weevil in soil and particularly in your containers.

In the garden you can also provide overwintering habitats for beneficial insects such as lacewings and ladybirds and attract birds that will feed on the insect pest population. (In the autumn we will be holding workshop days making insect hotels, bird feeders and bird boxes. Keep an eye on our website and Facebook page for upcoming events)

SHARE some of your produce with the wildlife! You may also have to accept some losses as an organic grower. To produce food in a chemical free system then we will inevitably lose some of our crops. Pest populations tend to fluctuate year on year and often a bad attack one year will not be repeated the following year as the predator population will also increase (on saying that there will be something else to challenge you the following year!) Peel off damaged skin, cut out the bad bits and accept a bit of a loss in some crops for the sake of eating better tasting, more nutritious and chemical free food, not to mention the benefits to the environment and wildlife.