

Wasps – (*Vespula vulgaris*)



Control of Wasps

Wasps – *Vespula* species – belong to the same order of insects as Ants – the *Hymenoptera*. They are a highly evolved order of insects with a caste system, where workers (sterile females) build the nests, raise the young and forage for food under the direction of the Queen Wasp.

All pest wasps have a narrow waist which gives the abdomen great mobility, elbowed antennae, mouthparts with powerful mandibles and fore and hind wings, linked by minute hooks. They also have a characteristic black and yellow colour and the ovipositor is modified to form as sting.

The Importance of the Control of Wasps

- 1 Prevention of contamination e.g. wasps in food products.
- 2 Loss of goodwill. Adverse publicity due to prosecution or the presence of wasps in restaurants etc.
- 3 Prosecution for selling contaminated foodstuffs.
- 4 Discontent. Staff working in premises infested by wasps are agitated by them.

- 5 Fear and discomfort. Wasp stings are unpleasant and painful and can be dangerous – especially in susceptible people.

There are two common wasp species – *Vespula vulgaris* (the Common Wasp) and *Vespula germanica* (the German Wasp). Both species prefer to form their nest or colony in the ground, but become pests when they nest in eaves, outhouses and cavity walls. Wasps also achieve pest status when they forage for food around waste containers and manufacturing areas of confectionery and preserve factories and cake shops.

Life Cycle

A single fertilised female or 'Queen' begins each colony in the spring. Having mated the previous autumn she emerges from her winter hiding place and seeks a suitable site to nest. This is usually in April, depending upon the weather conditions. The queen scrapes shavings of wood from fence posts, dead trees etc. and chews them to make 'wasp paper'. The wood fragments bound together with adhesive saliva form a thin but strong paper when dry.

The female begins her nest with a few hexagonal cells suspended at the end of a small stalk or pedestal attached to a ceiling or upper surface. Over this is an umbrella-like cover.

The queen lays her eggs, one in each of these cells. They hatch in 3-5 days. When the grubs emerge she feeds them with fragments of insects she has captured. The life cycle from egg to adult takes between 3 and 4 weeks.

The next generation emerges as sterile workers who take over the work of nest building and food gathering. New cells are formed in a horizontal layer of "comb". When this has reached a certain size a similar layer is constructed, suspended from the preceding layer by short columns of stalks. Six or seven "combs" may be formed and covered by an envelope of paper.

The shape of the nests vary and each cell may be used two or three times. An average nest may produce 25,000 – 30,000 wasps during the season.

In the summer months special large cells are constructed, containing the grubs destined to become "Queens". At the end of summer the "Queen" lays unfertilised eggs. Some workers also reproduce without fertilisation. These unfertilised eggs all develop into males and mate with the young "Queens". Fertilised young "Queens" fly away to find a resting-place to hibernate. The rest of the colony dies out in autumn. The nest is never re-used the next year.

Foraging workers seek food for the larvae and for themselves. The grubs require protein for growth; the workers collect insects, meat or fish – either fresh or decaying. The grubs promote the activity of the workers with a sticky secretion in exchange for their nutrient.

Workers require sugar for energy, which they obtain from nectar or from fresh or processed fruits – hence their attraction to farms, jam factories or fruit canneries.

