

Jays Pest Solution

Ultra Low Volume Technique in Public Health

Considerable advances have been made in the application equipment used for insect control. Progress has been made from conventional high volume pressurised sprayers and thermal foggers to ultra low volume dispersal systems, which use insecticides more efficiently, by breaking them down into very low particles.

The term UVL was first used in connection with locust control techniques in the 1950s and since then has been extensively employed in the application of pesticides for crop protection. The world health organization has defined UVL treatments as those employing less than 5 Litres/hectare, however, this definition is of limited application in the public health and stored product areas of pest control where an earlier WHO definition seems more appropriate viz: "ultra-low volume spraying utilises the minimum volume of insecticide formulation required to produce the desired biological effect with maximum economy." The principle advantages arise from the reduced droplet size, ensuring the even application of the low volume of insecticide.

One might expect that if small droplets are more efficient than the smaller the droplet the better the treatment.

However, this is not the case. Research data indicate that droplets of less than 5 microns tend to be deflected around the target insect rather than hitting and impinging upon it.

The majority of droplets produced by a thermal fogger are well below this 5micron limit. The optimum size of droplet has been demonstrated using laser holography to be around 15 microns.

Our ULV applicator's produces almost every droplet in the optimal range. ULV spraying thus provides several distinct advantages over thermal fogging.

ULV applicators provide good penetration of insecticides into harbourages and cracks and crevices. The droplets are carried in on air currents and insects are flushed out into contact with more insecticide.

Furthermore, as it treats the whole area, insects cannot avoid encountering insecticide deposits.

ULV may be used as a complementary treatment to a residual insecticide in the control of crawling insects, notably cockroaches fleas and bed bugs. Pyrethrins applied as a ULV spray flush out cockroaches; irritate them so that they are less discerning as to what deposits they encounter and they thus quickly pick up a lethal dose of insecticide. This combined technique is particularly useful in areas where a residual spray will be of limited persistence , e.g. in areas that are

washed down frequently and those where deposit of organic material on treated surfaces rapidly break down insecticides.

ULV applications allow treatment of large spaces, such as warehouses, food stores, bakeries, containers, aircrafts and residential properties against flying and crawling insects alike. They are also ideal in treating difficult areas such as sub floor spaces, roof voids and chimney's.

ULV treatment gives no long lasting residual effect but ideal for controlling insects on exposed surfaces such as carpets and ducts and also insects on the wing. Furthermore treated areas can be entered after just one hour.