

### Getting the Spray on the Lower Leaf Surface - the V Lance

Most farmers spraying with a backpack lever-operated sprayer hold the nozzle above the crop and spray downwards. Research has shown that this gives excellent spray coverage on the upper leaf surfaces but virtually none underneath on the lower side of the leaf. Some pests such as red spider mites, aphids and whitefly spend most of their time underneath leaves, so targeting the spray on the lower surface as well as the upper surface gives improved control. In tests it was found that better underleaf cover can be achieved if the nozzle is held near the base of the crop being sprayed and pointed upwards into the crop. Some of the spray then impacts on the lower surface of the leaves, and the spray that misses the leaves on the way up will land on the upper surface of the leaves as it falls under the influence of gravity. The V lance is a name given to an adaptation of the spray lance on a lever operated knapsack sprayer, which allows the direction of the spray to be altered using a swivel adapter between the lance and the nozzle. The swivel allows the angle of the spray leaving the sprayer to be altered. When adjusted into the V position it is easy to spray upwards into crops such as eggplant, tomatoes and other crops. Spray distribution on the crop is improved compared with plants sprayed from above.

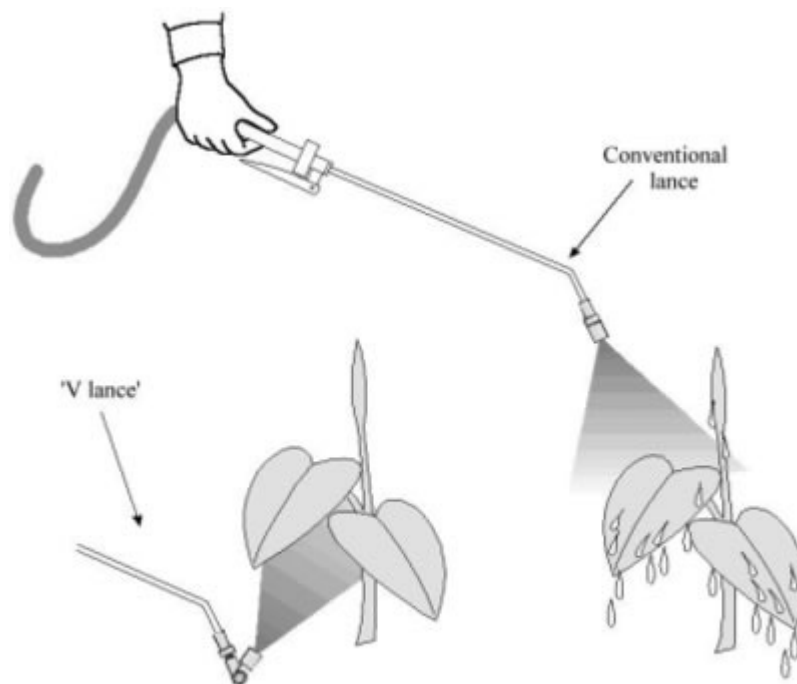


Diagram of the v lance and a conventional lance configuration.