

**Section VIII**  
**Mites & Sap-sucking Insects**

**IMIDACLOPRID APPLIED THROUGH A SUBSURFACE DRIP IRRIGATION SYSTEM  
REDUCES HOP APHID NUMBERS THE YEAR FOLLOWING APPLICATION**

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Several systemic insecticides were applied to a hop yard through a subsurface drip irrigation system from 1992 through 1997. We compared the number of hop aphids in untreated plots in one year with the treatments they received the previous year. The plots treated with imidacloprid had fewer aphids than plots treated with other systemic insecticides. Moreover, plots receiving imidacloprid in the previous year averaged fewer aphids than current year treatments of other insecticides when those insecticides were considered as one treatment. These results indicate that imidacloprid residues are remaining in the soil or the plants for at least one year. Yearly applications may lead to the accumulation of imidacloprid in the soil or in the plants. However, this danger should be minimized if growers apply imidacloprid only when aphid numbers approach injurious levels.