



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**Insect Growth Regulators for Insect Pest Control\***

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**Abstract:** Insecticides with growth regulating properties (IGR) may adversely affect insects by regulating or inhibiting specific biochemical pathways or processes essential for insect growth and development. Some insects exposed to such compounds may die due to abnormal regulation of hormone-mediated cell or organ development. Other insects may die either from a prolonged exposure at the developmental stage to other mortality factors (susceptibility to natural enemies, environmental conditions etc) or from an abnormal termination of a developmental stage itself. Insect growth regulators may come from a blend of synthetic chemicals or from other natural sources, such as plants. The chemical composition of hormones indigenous to insects is now being studied and used as a basis for developing analogs or mimics against insects. The similarities, however, in certain aspects of biochemistry among vertebrates and invertebrates may result in the limited development of IGRs. Environmental contamination also creates a hurdle as well as a challenge for industries to develop compounds that provide a more environmentally or ecologically sound insect pest control.

**Key Words:** Insect growth regulators, insect pests, insect hormones, diflubenzuron

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