



# GROWER RESOURCE GUIDE: PESTICIDE USE

*The San Joaquin Sustainable Farming Project has created a grower resource guide to help growers navigate useful topics and ideas and sustainable practices from on-line resources. Each topic contains general information and where to find current and pertinent materials and web links to that information. We hope you will find these documents worthwhile and convenient to use.*

## **What is a pesticide?**

“Pesticide” is an umbrella term that includes many kinds of chemicals, natural and synthetic. A pesticide is any substance intended to control, destroy, repel, or attract a pest. Any living organism that causes damage, economic loss, transmits or produces disease may be the target pest.

The [California Department of Pesticide Regulation \(CDPR\)](#) has the most extensive pesticide use reporting system in the United States and supports one of the most comprehensive pesticide regulatory programs in the world.

The [University of California Statewide IPM Program](#) defines IPM as an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.

For water quality impacts from pesticides, UC IPM offers [UC IPM WaterTox](#), a water toxicity database that allows growers to evaluate the risk that pesticides will move with water and eroded soil or organic matter and affect nontarget organisms. It helps pesticide users consider the long-term hazard to humans and fish from leaching and runoff when they make pest management decisions that involve pesticides.

Another useful tool from UC IPM is the [“Mitigating pesticide hazards”](#), which can help growers determine the pesticide impacts on natural enemies and pollinators, water quality, air quality, aquatic invertebrates, chemical mode of action and endangered species.

The SJSFP has prepared Pesticide Choice Worksheets that outline the choices growers can make for specific pests and determine the least toxic alternatives that are still effective. These worksheets can be found on the [Sustainable Cotton Project website](#).

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