

## Implementation

### Best Management Practices for Orchard Spraying: Protecting Water Quality in the Hood River Basin

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*Abstract:* In 1999, water quality monitoring conducted by the Oregon Department of Environmental Quality indicated exceedances of state water quality standards for chlorpyrifos and azinphosmethyl in Hood River area streams. Spray drift from orchard spraying and runoff from mixing and loading sites were recognized as likely modes of water contamination. The Hood River Grower-Shipper Association and OSU Mid-Columbia Agricultural Research and Extension Center conducted an intensive outreach program supporting grower adoption of orchard pest management practices designed to protect water quality while providing effective orchard pest management. Outreach efforts focused on BMPs for pesticide handling and application and IPM programs for key orchard pests through presentations during annual grower meetings, field days, pesticide trainings, one-on-one field visits, newsletters, and a website. One of the main outputs is the grower handbook *Best Management Practices for Pesticide Use*. A survey of growers conducted in 2004 indicated increased knowledge and adoption of BMPs. Water quality monitoring subsequent to 1999 indicated generally reduced frequency and concentration for chlorpyrifos detections but increased incidence of azinphosmethyl detections exceeding water quality standards. The BMPs, IPM programs, and improved pesticide spray application technologies are considered important components of an overall long-term program for reducing pesticide loading of the environment and effective pest management.