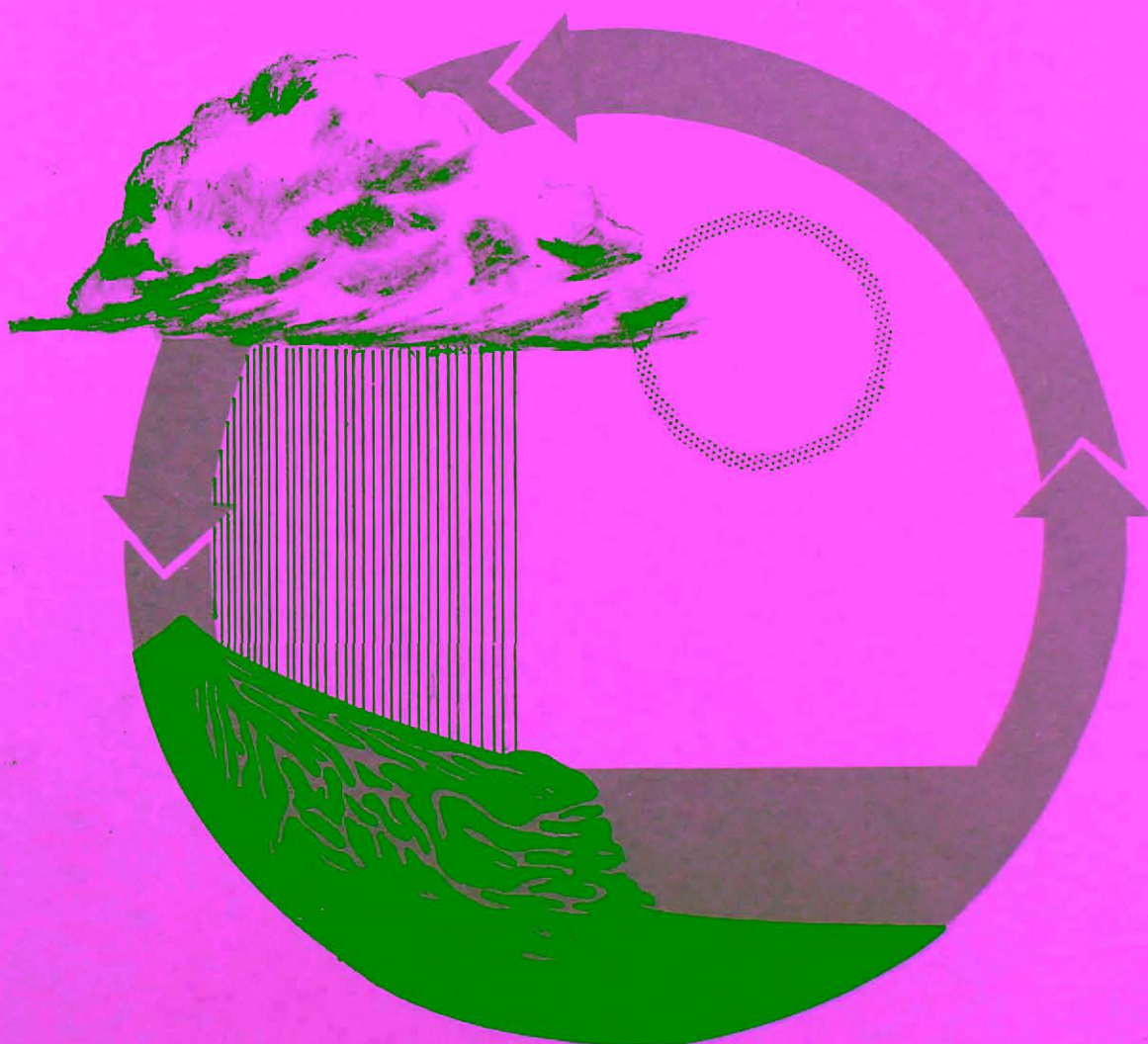




ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF WATER PROGRAMS



THE EFFECTS OF AGRICULTURAL PESTICIDES IN THE AQUATIC ENVIRONMENT
IRRIGATED CROPLANDS, SAN JOAQUIN VALLEY

PESTICIDE STUDY SERIES - 6

THE EFFECTS OF AGRICULTURAL PESTICIDES IN
THE AQUATIC ENVIRONMENT, IRRIGATED CROPLANDS,
SAN JOAQUIN VALLEY

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EPA Review Notice

This report has been reviewed by the Office of Water Programs of the Environmental Protection Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Environmental Protection Agency, or does mention of trade names or commercial products constitute endorsement or recommendation for use.

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Summary

Estimates of the environmental impact of pesticides in the San Joaquin Valley of California are limited by the amount of reliable information available on pesticide use in the area, the extent of scientific knowledge on the effects of pesticides released into the environment, and the applicability of this knowledge to field conditions in the valley. Achieving an optimum balance between the competing needs for food and fiber production, on the one hand, and environmental quality, on the other, will further require an understanding of the conflicting interests and responsibilities bearing on pesticide use in the region, and the probable impacts of alternative practices and policies.

This present case study attempts to assess the impact of agricultural pesticides on the aquatic environment of the San Joaquin Valley, and to point out some possible courses of action. The following approaches were used: 1) University scientists and officials of federal, state, and county agencies were interviewed for information and expert opinions. 2) The literature of pesticides was surveyed and reviewed, relying primarily on the unique collection, files, and services of the Environmental Toxicology Library of the Food Protection and Toxicology Center at the University of California at Davis. 3) Information of pesticide use was retrieved from a data bank containing files of detailed records in machine-readable form.

The study embraces the following topics; 1) description of the study area; 2) inventory of uses; 3) application techniques and types of pesticide material being used; 4) routes of pesticide entry into the aquatic environment; 5) the degradation, metabolism, and persistence of pesticides in the aquatic environment; 6) impacts of pesticide pollution on the aquatic environment; 7) alternatives to pesticides for pest control; 8) laws and regulations governing agricultural pesticide use in the San Joaquin Valley.