NATURAL RESOURCES CONSERVATION SERVICE
PACIFIC BASIN AREA
CONSERVATION PRACTICE STANDARD

PEST MANAGEMENT

(Hectare, Acre)
CODE 595

DEFINITION

Managing agricultural pest infestations (including weeds, insects, and diseases) to reduce adverse effects on plant growth, crop production, and environmental resources.

PURPOSE

To develop a pest management program that is both consistent with selected crop production goals and environmentally acceptable. It includes appropriate cultural, biological, and chemical controls, and combinations thereof to:

- Reduce insect damage to desirable crops, when applicable:
- Reduce plant competition from undesirable vegetation, when applicable; and,
- Reduce disease induced damage to desirable crops.

CONDITIONS WHERE PRACTICE APPLIES

On cropland and other land where pest control is needed.

PLANNING CONSIDERATIONS

Use integrated pest management principles, some major features of which are incorporated in subsequent items.

Consider the use of crop rotations, crop varieties resistant to the target pest(s), and adjusting planting dates to help control weed, insect, and disease problems.

Consider mechanical cultivation and biological controls, where appropriate, to control pests such as host crops and beneficial insects.

Consider the effect of adequate plant nutrients and soil moisture, favorable pH, and good soil condition to reduce plant stress and improve plant vigor.

Consider use of hand weeding for small, isolated areas, or on larger areas where labor costs are not prohibitive. Spot spraying rather than full-coverage spraying is another alternative.

Consider the economic threshold of crop damage before spraying for insects. Some insect damage may not actually reduce crop yield.

Consider pesticide characteristics such as solubility, toxicity, degradation products, mobility, persistence, adsorption, and efficacy, and relationships to site characteristics such as soil, geology, depth to water table, proximity to surface water, topography, climate, and sensitive environmental elements to determine the potential impact on water quality.

Practice timing of pesticide application in relation to present soil moisture, anticipated weather conditions, and irrigation to achieve greatest efficiency and reduce potential for offsite transport. The method of pesticide application, such as ground or aerial spraying, wicking, granules, etc., is important since the degree of drift and volatilization can vary considerably.

Consider the effects of erosion control practices, including subsurface water management, used to reduce soil loss and subsequent runoff and transport of adsorbed and dissolved pesticides.

Consider the effects of repetitive use of the same or similar pesticides on pest resistance and shifts in the pest types.

Consider effects of pest control measures on non-target soil organisms, and on aquatic and terrestrial life. Special care should be

afforded to threatened and endangered species of plants and animals.

Consider effects of the seasonal water budget on potential pesticide loss from the plant environment to surface or ground water.

SPECIFICATION GUIDE

Pesticide applicators will identify the target pest(s), determine the life cycle periods when it is most vulnerable to control, and the best mechanical, biological, or chemical control method or combinations prior to application.

Develop and use a water budget when planning the use of this practice that will take into account distribution of water resources under the appropriate soil-cropmanagement system.

Describe specifications for any pest management measure consistent with local regulations. Appropriate land grant university publications concerning pesticide use and properties will be maintained and updated as part of the Field Office Technical Guide (Reference location in Section I. All recommendations for specific pesticides, level of crop tolerance, and effectiveness ratings for the target pest(s) shall be in accordance with these publications.

Determine potential pesticide loss to surface runoff and leaching using the approved NRCS pesticide rating tool or other locally appropriate ratings for soils and pesticides in Section II of the Field Office Technical Guide. This information can be used to rank the various pesticides in terms of their potential to contaminate water resources and to consider other management options.

Include a reference section at the end of the specifications that contains those sources used in developing the specifications to provide easy access to more in-depth technical information.

All specifications will be consistent with Federal (U.S. Territories and Commonwealth), National Law (U.S. Compact Nations) and local regulations and pesticide label.

OPERATION AND MAINTENANCE

Prepare a chemical management plan.

Maintain mechanical equipment in food working condition and calibrate application equipment to ensure recommended rates are applied. Replace worn components of pesticide application equipment as well as other pest management implements.

Operators of equipment must be alert at all times to avoid bodily injury and unnecessary exposure to chemicals.

Pesticide users must read and follow label directions, maintain appropriate Material Safety Data Sheets (MSDS), and be certified to apply restricted use pesticides.

Apply chemicals during periods of minimum potential for drift.

Minimize exposure to chemicals, wear protective clothing, and use safety equipment as appropriate.

Ensure that the pesticide applicator knows the exact field location to be treated. Post signs according to label directions or state and Federal laws around fields that have been treated. Follow the established reentry time as stated on the MSDS.

Properly locate chemical mixing and equipment rinsing stations relative to potential for contamination of ground or surface water. Extreme care must be taken to follow loading and mixing procedures. Provide for managing-accidental spills.

Properly rinse equipment and re-use rinsate for subsequent batches of the same pesticide, where possible.

Store pesticides in original containers in a locked, well ventilated weather resistant building. Post warning signs on or around the building. Locate the building so that accidental spills will create minimal environmental effects. Dispose of pesticide containers according to label directions and adhere to local or state regulations.

Provide emergency wash stations for personnel who might be accidentally exposed to chemicals, and formulate a safety plan complete with information about locations of

emergency treatment centers for personnel exposed to chemicals.

Ensure that backflow prevention devices are installed and operating properly on irrigation systems used for applying pesticides.

Recognize the dangers from excessive exposure to pesticides and take appropriate precautionary measures. This is especially important for farm workers who spend long hours in the field.

Have an emergency response plan and necessary equipment and supplies on hand to contain and clean up a chemical spill.