

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION GUIDELINE
INTEGRATED PEST MANAGEMENT**

**(acre)
CODE 595**

1. Scope

Utilizing environmentally sensitive prevention, avoidance, monitoring, and suppression strategies to manage weeds, insects, diseases, animals, and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance.

2. Minimum Specifications

The following components shall be included in the pest management plan. Those items marked with an asterisk (*) will be recorded as minimum documentation requirements.

- ***Document resource concerns, problems, and practice objective**
- ***Aerial photo, map, or sketch of the site**
- ***Extent in acres**
- ***Soil map of the site**

Soil type with the most limiting features will be used in evaluation of environmental impact of the pesticide management. (Note to planner: Field can be subdivided into subfields, if necessary, to provide improved planning options.)

- ***Land use; crop sequence/rotation information**

The crop sequence or rotation should describe the sequence of crops for at least five years. Start with last year's crop and project the crop rotation for the next four years. Circle the current crop. In non-cropland areas, identify producer management decisions which mostly have contributed to pest development.

- ***Identify target pest(s)**

Use field scouting and treatment thresholds to determine if pest controls should be used. The method used to determine treatment threshold will be documented in the conservation plan. Examples: no. of pests/ac; no. of pests/ft. of row length; no. of pests/plant; stem count decision method, etc.

- ***Identify the pest control method**

Cultural methods. Cultural methods of pest control break the infestation cycle by making the environment less suitable for pest survival. This is accomplished by:

- Reducing favorable habitat of pests
- Altering planting patterns to disrupt in time and space the food and other habitat resources required by the pest
- Diverting mobile pests away from the crop
- Enhancing the vigor of the crop to better tolerate pest injury

Biological controls. Biological controls use living organisms (natural enemies) to suppress populations of other pests. These include:

- Predators—free living animals (insects, arthropods, birds, reptiles and mammals) that eat pests
- Parasitoids—insect parasites of other insects (most parasitoids are small wasps or flies)
- Pathogens—disease causing microorganisms, including viruses, bacteria, fungi, and nematodes

Mechanical control. These include temperature manipulations, screens placed in irrigation ditches to reduce weed seed movement, insect traps, and frightening devices to repel birds and mammal pests. Mechanical control also includes tillage, rouging, and manual pulling of weeds.

Host resistance. Planting varieties tolerant of or resistant to pest attack is an economical and safe method of pest control.

Chemical control. Once the decision has been made to use a chemical pest control method, select a product based on its suitability to control the identified target pest.

- ***Product, rate, application method, timing and form**

Select a pesticide for your crop and pest problem that is listed in the current pesticide guides provided by Kansas State University Cooperative Extension Service (2011 Chemical Weed Control for Field Crops, Pastures, Rangeland and Non-cropland). The use of a professional crop consultant trained in Integrated Pest Management (IPM) methods is encouraged, especially in identified sensitive water quality areas. Do not apply pesticides that carry ground-water warnings on the label to soils that are vulnerable to ground-water contamination (high leaching potential). Post-emergence applications of pesticides should be discouraged immediately prior to anticipated rainfall to prevent surface water contamination and poor control of target pests. Avoid repetitive use of the same pesticide or pesticides of similar chemistry to reduce the potential for pesticide resistance development. Time pesticide applications in relation to present soil moisture and anticipated rainfall conditions. Irrigation should be managed to achieve the greatest efficiency and reduce potential for off-site transport. Determine the method of application, such as ground or aerial spraying, wicking, or granules. This is important since application method impacts the degree of drift, volatilization, environmental hazard to surface and ground-water, and effectiveness to control target pest.

3. Guidelines applicable for all purposes

Pest management activities shall comply with all applicable federal, state, local laws, regulations, management plans for invasive pest species, noxious weeds, and disease vectors. Pest management plans shall be compatible with other components of a conservation plan and include appropriate mitigation techniques to reduce environmental risk. **Persons who review or approve plans for pest management shall be certified through any certification program acceptable to the NRCS.** Planners will identify fields or areas of fields that are susceptible to surface or ground-water contamination. An evaluation will be made for each field with an identified surface or ground-water resource. Important groundwater resources are identified by reviewing the state map, Ground Water Sensitive Areas (<http://www.kcc.state.ks.us/maps/groundwater.htm>), and/or local United States Geological Survey (USGS) water resource reports, or additional compiled aquifer information located in Section I of the electronic Field Office Technical Guide (eFOTG). For surface water protection, fields bordering a semi-permanent wetland, lake, river, stream, or that contain a conveyance to these waters, should be considered to have a potential to contribute contaminants to surface waters. A conveyance may be defined as a drainage ditch, tile inlet, intermittent stream, waterway, or un-vegetated channel. When an important ground-water resource is identified or a field has a potential to contribute to surface water contamination, the field will be evaluated with Windows Pesticide Screening Tool (WIN_PST) or other tools that utilize the databases and matrixes of this model.

4. Operation and maintenance

The pest management component of a conservation plan shall include appropriate operation and maintenance items for the client. These include:

- Reviewing and updating the plan periodically in order to incorporate new IPM technology, respond to cropping system and pest complex changes, and avoid the development of pest resistance.
- Maintaining mitigation techniques identified in the plan in order to ensure continued effectiveness.
- Developing a safety plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers for individuals exposed to chemicals and the telephone number for the nearest poison control center.

The National Pesticide Information Center (NPIC) telephone number in Corvallis, Oregon, may also be given to provide information to:

- Help callers interpret and understand toxicology and environmental chemistry information about pesticides
- Access pesticide label information
- Direct callers for pesticide incident investigation, emergency human and animal treatment, safety practices, clean-up and disposal, and laboratory analysis
- Supply general information on regulation of pesticides in the United States

1-800-858-7384

Monday - Friday

6:30 a.m. to 4:30 p.m. Pacific Time

For advice and assistance with emergency spills and other emergencies that involve pesticides, use the following phone numbers:

Involving human health/injury:

911

Involving roads or right of ways:

Kansas Highway Patrol

1-785-296-6800

All other spills: Kansas Department of Health and Environment

785-296-1679 during work-week hours,

or **785-296-0614** during weekends or after hours

Kansas Poison Control Center:

1-800-222-1222

Emergency TDD **1-913-588-6639**

The national 24-hour CHEMTREC telephone number is:

1-800-424-9300

Prevent back-siphoning of pesticide mixture into water supply. When adding water to spray tanks, keep air space between water-supply hose and spray tank.

When chemigating, user must obtain necessary permits. All chemigation systems must be equipped with the appropriate safety equipment to prevent backflow of chemicals into the water source. Pesticides used in chemigation shall be labeled for this method of application.

Pesticides shall be stored in original labeled containers according to label requirements.

Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS).
<http://www.greenbook.net/> or <http://www.cdms.net/pfa/LUpdateMsg.asp>

Accurately measure and mix all pesticides. Mix only the amount needed to eliminate storing and disposing of excess. Triple rinse pesticide containers and empty the water used to rinse pesticide containers into the spray tank.

Dispose of leftover pesticides and containers according to label requirements and never re-use them for other purposes. Return unopened pesticides to the supplier.

The pesticide user must be fully trained and must obtain pesticide applicator certification to apply restricted use pesticides. Information on obtaining this permit may be obtained from the Department of Agriculture or local Cooperative Extension Service.

Refer to plans and specifications section of this standard and practice documentation guide for detailed guidance on record-keeping requirements.

REFERENCES

C & P Press Product Labels and MSDS sheets

<http://www.greenbook.net/>

Crop Data Management Systems

<http://www.cdms.net/pfa/LUpdateMsg.asp>

EPA's Endanger Species Program and county bulletins

<http://www.epa.gov/espp/kansas/kansas.htm>

Kansas State University Extension and Research Circulars, including those on pest management, pesticides management, and protecting natural resources

<http://www.ksre.ksu.edu/library/DesktopDefault.aspx>

The Worker Protection Standard

<http://www.ksre.ksu.edu/pesticides-ipm/DesktopDefault.aspx?tabid=22>

Kansas Department of Agriculture's Pesticide and Fertilizer Program

http://www.ksda.gov/pesticides_fertilizer/

Kansas Farm/Home*A*Syst

http://www.sbeap.org/homeasyst/Water_qual_prot_assess_form.PDF