

Pest Management

Pest Management is utilizing environmentally sensitive prevention, avoidance, monitoring, and suppression strategies to manage weeds, insects, diseases, animals, and other organisms that directly or indirectly cause damage or annoyance.

Pest management includes--

- assessment of environmental risks of pest management
- mitigation alternatives to minimize environmental risks
- adoption of Integrated Pest Management (IPM)
- implementation of the pest management component of the conservation plan.

A pest management plan is for a specific site on which strategies are applied to control organisms causing damage or annoyance. The plan shall consist of the following components:

- **Site (field) map and soil map**
- **Interpretation of the environmental risk analysis and identification of appropriate mitigation techniques**
- **Location of sensitive resources and setbacks**
- **Integrated pest management components**
- **Environmental risk analysis for probable pest management recommendations by crop and by pest**
- **Operation and maintenance requirement**



The lady bug beetle is an example of a beneficial insect

Integrated Pest Management (IPM) is a systems approach to pest control that combines cultural/mechanical, biological, and other alternatives to chemical controls with the judicious use of pesticides. The objective of IPM is to maintain pest levels below economic thresholds, while minimizing negative impacts to human health and natural resources.

Guidelines

- Identify and quantify pests by scouting
- Develop a pest management strategy as part of a conservation plan
- Determine if control of the pest is economically feasible (economic threshold)
- Evaluate available pest control methods and consider cultural/mechanical or biological controls before chemical controls.

Cultural/Mechanical Control	Biological Control	Chemical Control
Fertility/pH management Planting and harvest dates Rotations Residue management Cultivation Mowing, pruning Row covers and netting Cleaning equipment Flame	Preserving beneficials Predators (Ladybugs, Green Lacewings, Praying Mantis, Parasitic Wasps, Rosette Weevils, etc.) Pathogens (Bacillus thuringensis, Milky Spore) Resistant Plant Varieties	Pesticides: Herbicide-weeds Insecticide-insects Laticide-larvae Nematicide-nematodes Rodenticide-Rodents Fungicide-Fungi

South Carolina

Job Sheet



Pest Management

**Natural Resources
Conservation Service
Columbia, SC
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- Utilize necessary control methods.

✓ **Prevention** - Control undesirable plant hosts, maintain clean equipment, manage residue, pure seed and plant materials, etc.

✓ **Avoidance** - Genetic resistance, crop rotation, use of trap crops, early maturing varieties, etc.

✓ **Monitoring** - Scouting, surveying, trapping, diseases, sample soil, etc.

✓ **Suppression** - Pesticides, biological controls, tillage practices, cultivation, row spacing, mowing, cover crops, beneficial insects, resistance management, etc. Diversify control methods to minimize pest resistance. If chemical controls are selected, contact the Clemson University Cooperative Extension Service, Certified Crop Advisor, or chemical dealer for pesticide recommendations.

- Evaluate the impacts of each pesticide on the environment and human health. Consider those with the lowest potential to negatively impact the environment. If a pesticide is chosen with greater toxicity or persistence, consider management techniques that avoid or reduce negative impacts. For assistance in evaluating the impacts, contact your local USDA Service Center for help with a Windows Pesticide Screening Tools Computer Program (WIN-PST). This program is also available at www.wcc.nrcs.usda.gov and click on Pest Management, then WIN-PST Tool.

Over for worksheet...

Pest Management Worksheet

Tract No. _____ Field Nos. _____ Acres _____ Crop _____

Pest of Concern: _____

Pesticide Environmental Risk Assessment (WIN-PST)

Soil Map Unit	Pesticide (formulation)	Toxicity	Soil Hazard Rating			Pesticide Environmental Risk			Soil/Pesticide Interaction Rating		
			SLP	SSRP	SARP	PLP	PSRP	PARP	ILP	ISRP	IARP

PLP = Pesticide Leaching Potential SLP = Soil Leaching Potential ILP = Soil/Pesticide Interaction Leaching Potential
 PSRP = Pesticide Solution Runoff Potential SSRP = Soil Solution Runoff Potential ISRP = Soil/Pesticide Interaction Solution Runoff
 PARP = Pesticide Adsorbed Runoff Potential SARP = Soil Adsorbed Runoff Potential IARP = Soil/Pesticide Interaction Adsorbed Runoff Potential

X = Very High H = High I = Intermediate L = Low V = Very Low

Pesticide Application			
Pesticide	Planned Rate	Applied	Method of Application
Mitigation Measures Planned			Applied (YES/NO)

Operation and Maintenance

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|---|---|
| <ul style="list-style-type: none"> -Follow recommendation of Clemson University Cooperative Extension Service (http://cufan.clemson.edu/pmguide, Certified Crop Adviser, or other approved specialists in selection pesticides. -Follow label recommendations and maintain appropriate material safety data sheets see (http://entweb.cleson.edu/pesticid). Handle pesticides with cautions and wear appropriate protective clothing. -Follow the requirements of the Worker Safety Protection Standard, including post signs around treated fields according to label directions and federal, state, and local laws. -Calibrate application equipment before use. -Replace worn nozzle tips, cracked hoses, faulty gauges, etc. -Properly clean application equipment and dispose of rinsate an containers. | <ul style="list-style-type: none"> -Avoid open mixing of chemicals near a well, surface water body or other sensitive areas. -Prevent back siphoning by installing back-flow prevention device or air gap. -Follow all setback requirements for environmentally sensitive areas. -Maintain required records for restricted use pesticides. (For recordkeeping and pesticide certification, contact the Clemson University Cooperative Extension Service). -Re-evaluate and retreat for resurgence o f pests as necessary. Keep records of pest populations. -For Human exposure questions, contacts the Palmetto Poison Center at (800) 922-1177, the USC College of Pharmacy at (803) 777-7909, or the Agromedicine Program, Division of Public Health, Medical Univ. of S.C. at (843) 792-2281 or the National Pesticide Telecommunications Network (NPTN) at (803) 424-7378. -For advice and assistance with emergency spills that involve agrichemicals, contact SCDHEC at (803) 253-6488 or the national 24-hour CHEMTREC telephone number at (800) 424-9300. |
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