

Part 404 – Pest Management

Subpart A – General

404.0 Purpose

This directive sets forth Natural Resources Conservation Service (NRCS) policy for pest management. This pest management policy applies to all pests.

404.1 Background

A. A memorandum of understanding between the National Institute of Food and Agriculture (NIFA) (formerly the Cooperative State Research, Education and Extension Service CSREES) and NRCS (formerly the Soil Conservation Service) outlines various roles and responsibilities for NIFA and NRCS.

B. Pest management policy is applied within the conservation planning process.

404.2 Authorities

The following laws and initiatives support U. S. Department of Agriculture (USDA) component agencies to reduce both the use and the risks of pesticides, and to promote sustainable agriculture that reduces contamination of the Nation's natural resources:

- (1) Food Security Act of 1985 as amended.
- (2) Executive Order 13112 of February 3, 1999, Invasive Species, as amended.
- (3) Inter-Departmental Clean Water Action Plan, February 14, 1998, (i.e., signed by USDA and the Environmental Protection Agency (EPA), and updates.
- (4) Safe Drinking Water Act of 1996, as amended.
- (5) Food Quality Protection Act of 1996.
- (6) EPA's Pesticide Environmental Stewardship Program of 1994.
- (7) USDA's 1993 Integrated Pest Management (IPM) Initiative.
- (8) Cooperative Forestry Assistance Act of 1978, as amended.
- (9) Section 404.4 of the Secretary's Memorandum No. 1929, dated December 12, 1977, which provides the Department's policy statement on management of pest problems.
- (10) Endangered Species Act of 1973, as amended.
- (11) Clean Water Act of 1972, as amended.
- (12) Clean Air Act of 1970, as amended.
- (13) National Environmental Policy Act of 1969, as amended.
- (14) USDA Non-point Source Water Quality Policy (DR 9500-007).
- (15) USDA Ground Water Policy (DR 9500-008).
- (16) Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) 1996
- (17) Pesticide Registration Improvement Act (PRIA) 2003.

404.3 Definitions

A. Avoidance – one of IPM's four strategies: Prevention, Avoidance, Monitoring, and Suppression (PAMS). Avoidance is the "A" in the PAMS strategy for IPM. It is used to avoid pest impacts (e.g., using pest-resistant varieties, crop rotation, rotational grazing trap crops, delaying planting, etc.). Practiced when pest populations exist in a field or site but the impact of the pest on the crop may be avoided through cultural, mechanical, or biological processes.

- B. Biological Pest Suppression – The process of conserving, augmenting, managing, or introducing beneficial living organisms to reduce a pest population or its impacts. It includes the use of insects, nematodes, mites, plant pathogens, plants, vertebrates (including herbivores), and other living organisms. It may include targeted grazing and cover crops. Biological pest suppression is an activity in the PAMS approach to IPM.
- C. Biological Pest Suppression Recommendation – A written or spoken instruction that includes specifics on approved suppression agents, methods of release, and management.
- D. Brush Management – The management or removal of woody (nonherbaceous or succulent) plants including those that are invasive and noxious. Code 314. May be used alone or as part of a pest management conservation system.
- E. Chemical Drift - The airborne movement of chemicals from an area of application to any unintended site.
- F. Chemical Pest Suppression – The use of pesticides such as herbicides, insecticides, or fungicides to reduce a pest population or its impacts. Chemical pest suppression is an activity in the PAMS approach to IPM.
- G. Chemical Pest Suppression Recommendation – A specific written or spoken instruction that includes pesticide formulation, application rate, form, timing, and method of application. At a minimum, a chemical pest suppression recommendation must follow the pesticide label instructions and any special label requirements pertaining to the location of application.
- H. Cultural Pest Suppression – The use of practices other than chemical or biological suppressions to reduce a pest population or its impacts. It includes practices and activities such as narrow row spacing or optimized in-row populations, alternative tillage approaches such as no-till or strip-till, cover crops or mulches, or using crops with allelopathic potential.
- I. Environmental Risk – The potential to negatively impact ecosystem values and functions.
- J. Forest Stand Improvement – The manipulation of species composition, stand structure, or stand density by cutting or killing selected trees or understory vegetation to achieve desired forest conditions or obtain ecosystem services. May be used alone or as part of a pest management conservation system.
- K. Genetic Pest Suppression – Use of pest-resistant plant varieties by classical plant breeding or through genetic modification. Pests may also be modified such as a sterile male insect release.
- L. Herbaceous Weed Treatment – The removal or control of herbaceous weeds including invasive, noxious, prohibited, or undesirable plants. Conservation Practice Standard Code 315. May be used alone or as part of a pest management conservation system.
- M. Integrated Pest Management (IPM) - IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. (7 U.S.C. 136r). IPM includes the use of Prevention, Avoidance, Monitoring and Suppression (PAMS) strategies to manage pest populations.

N. Invasive Species – A species:

- (1) Non-native (or alien) to the ecosystem under consideration; and
- (2) Whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112).

O. Mechanical/Physical Pest Suppression –Pest suppression that utilizes physical methods to reduce a pest population or its impacts. Mechanical suppression methods include cultivation, hoeing, hand weeding, mowing, pruning, root plowing, roller chopping, vacuuming, and physical barriers. Mechanical pest suppression is an activity in the PAMS approach to IPM. Cultural and mechanical/physical suppression activities may overlap.

P. Mitigation – The process of minimizing the potential for harmful impacts of pest management activities on soil, water, air, plant, animals, and humans through the application PAMS activities including conservation practices such as Filter Strip, Conservation Crop Rotation, Residue Management, and Irrigation Water Management, and/or management activities such as harvest timing, delayed planting, using resistant varieties, transgenic crops, pheromones etc.

Q. Monitoring – Proper identification of pests and beneficial organisms, the extent of their populations, and/or the probability of future populations. Examples includes scouting, soil testing, the use of pest models, and weather forecasting. Records are kept of modeling results, pest incidence and distribution for each field or site. These become the basis for crop rotation planning, economic threshold, and suppressive actions. Monitoring is conducted after suppression actions to determine the effectiveness of the treatment. Monitoring is the "M" in the PAMS strategy for IPM.

R. Organic crop – An agricultural commodity that is produced consistent with Section 2103 of the Organic Foods Production Act of 1990 (7 U.S.C. 6052).

S. PAMS – an acronym of the for fours strategies in an IPM plan (Prevention, Avoidance, Monitoring, and Suppression)

T. PAMS Activities – individual components within each PAMS Strategy. Activities may include conservation practices.

U. Pest – A weed, invertebrate, disease, animal, or other organism (including invasive and non-invasive species) that directly or indirectly causes damage or annoyance by destroying or devaluing food and fiber products, causing structural damage, or creating a poor environment for other organisms.

V. Pest Suppression Reference – Written recommendations by the Extension Service, Agricultural Research Service (ARS) and other reputable sources that publish peer-reviewed documents which include, but are not limited to, bulletins, IPM guides, manuals, crop protection guides, brochures, fact sheets, computer software, and Web-based materials.

W. Pesticide – A substance or mixture of substances intended for preventing, destroying, repelling, or mitigating pests; or a substance or mixture of substances intended for use as a plant growth regulator, defoliant, or desiccant. Pesticide applications are suppression activities in the PAMS approach to IPM.

X. Pest Management – A land manager’s methods used to manage disease, invertebrates, nematode and weed populations. NRCS assistance to clients conducting pest management considers how to optimally apply prevention, avoidance, monitoring and suppression (PAMS) activities to minimize adverse impacts to natural resources. It includes the evaluation of environmental hazards associated with a client’s probable pest suppression strategies for a target pest management issue identified by the client. It includes assistance to clients to apply PAMS strategies and/or conservation practices to mitigate identified environmental hazards. On other land uses, pest management may facilitate the successful implementation of other conservation practices such as Herbaceous Weed Control and Brush Management.

Y. Pest Management Conservation System (PMCS) – A system that combines an integrated pest management (IPM) decision-making process with natural resource conservation to address pest and environmental impacts. It may stand alone or include other practices such as Forest Stand Improvement, Herbaceous Weed Treatment or Brush Management.

Z. Pest Management Environmental Hazard Analysis – An evaluation of the client’s potential pest management activities to impact the off-site and on-site ecosystems. This is accomplished using current agency tools, prediction models, and other approved tools as needed to evaluate impacts to natural resources.

AA. Prevention – The practice of keeping a pest population from infesting a field or site. Prevention activities include, but are not limited to, using pest-free seeds and transplants, cleaning tillage harvesting and other equipment between fields and/or farms, feeding weed free roughage to livestock, applying management activities that maintain or improve plant community resilience and resistance to pests, scheduling irrigation to avoid situations conducive to disease development, and eliminating alternate hosts or sites for insect pests or disease organism, etc. Prevention is the “P” in the PAMS strategy for IPM.

AB. Professionally certified – Refers to individuals meeting the requirements for local, State agency and Tribal certification and/or licensing relevant to make pesticide and/or pest management recommendations. This may include additional criteria established by the State Conservationist (STC). Those professionally certified as described demonstrate an understanding of pest identification and pest control alternatives through programs such as the Certified Crop Adviser, Pest Control Advisor, Certified Range Management Consultant or comparable programs.

AC. Specialty Crop – Fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture), as per Specialty Crop Competitiveness Act of 2004, Public Law 108-465-December 21, 2004.

AD. Suppression – Inhibiting a pest population or its impacts using cultural, biological, or chemical pest suppression. Suppression is the "S" in the PAMS strategy for IPM. Suppression activities can:

- (1) Directly suppress a pest through tillage or chemical applications and potentially negatively impact natural resources; or
- (2) Optimize a direct suppression activity through timing, precision etc., to mitigate the impacts to natural resources.

AE. Volatilization of pesticides - The movement of pesticide vapors through the air.