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.

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Subpart B – Policy

404.10 Pest Management Technical Assistance

A. Guidance and requirements in this Subpart describe the policy applicable to all NRCS technical assistance that involves pest management. All NRCS employees will follow this policy when providing technical assistance. Third Party Vendors/Technical Service Providers and other non-NRCS employees will follow this policy when assisting clients with conservation activities for which NRCS has technical responsibility.

B. Certification. NRCS personnel and partners providing conservation planning and practice application assistance for pest management must meet certification requirements established by the STC in accordance with GM, Title 180, Part 409, Section 409.9, and job approval authority policy.

C. NRCS may serve various roles in assisting clients with Pest Management. This does not mean all roles are required on all acres, or in order of the list below. Roles are driven by the conservation planning process and the client's objectives. All practice purposes or resource concerns do not need to be addressed. Potential NRCS roles in pest management are to offer clients assistance to:

(1) Adopt PAMS activities that protect natural resources, categorized as Prevention, Avoidance, Monitoring and Suppression (PAMS) activities.

(2) Evaluate environmental hazards associated with a client's probable pest management strategies.

(3) Mitigate the identified environmental hazards of pest management strategies through PAMS practices and activities.

(4) Inventory, assess, and suppress noxious and invasive weeds on non-cropland.

(5) Suppress weeds to ensure successful implementation and/or maintenance of permanent vegetative conservation practices.

D. Technical Assistance

(1) NRCS pest management assistance applies to all:

(i) land uses.

(ii) crops including organic, specialty crops, forage, trees etc.

(iii) pests including noxious and invasive species.

(iv) tactics: chemical, biological, genetic, cultural, mechanical/physical to varying degrees.

(2) Pest Management recommendations:

(i) Chemical. NRCS shall not develop chemical pest management recommendations or interpret pesticide label instructions for clients including specific pesticides formulation, rates, timing or application methods. The only exception is when NRCS personnel are professionally certified and/or licensed for pesticide application. They may make available a site-specific application rate recommendation within land grant

university guidance and the pesticide's label range when adequate reference source(s) are available to justify a specific rate.

(ii) Biological traditionally refers to introducing predators, parasites and diseases of pests. NRCS will not make biological tactic recommendations regarding introduction of this type. NRCS shall only develop biological pest suppression recommendations that utilize biological processes such as weed suppression utilizing grazing animals use of cover crops to outcompete and/or smother weed growth.

(iii) Genetic: Use of pest resistant plant varieties by plant breeding or genetic engineering may also include genetically modifying pests themselves, releasing sterile male insects. NRCS does not make genetic tactic recommendations but would inventory their use and assess impacts to natural resources.

(iv) Cultural, mechanical, physical: NRCS assists clients to develop appropriate cultural and mechanical/physical methods of pest suppression based on NRCS conservation practice standards.

(v) NRCS may provide clients with the most current pest management references. References will be based on reputable scientific research that is peer reviewed from land grant universities, Extension, Agricultural Research Service (ARS), Animal and Plant Health Inspection Service (APHIS) and non-profit non-government organizations such as biological and agricultural research centers, stations, and foundations. The recommendations in these references must be in accordance with all Federal, State, Tribal, local laws, and regulations.

(3) NRCS evaluates the environmental hazards of cultural, biological, and chemical pest management suppression activities selected by the clients using professional judgement and current agency tools. NRCS develops and recommends appropriate PAMS activities.

(4) When clients request assistance with PAMS activities that include pesticides, NRCS provides an evaluation of the pesticide hazard(s) for the planned pesticides and any pesticides that have lower hazard ratings.

(5) A Pest Management Conservation System many stand-alone under the CPS 595 or incorporate other standards such as Forest Stand Improvement, Herbaceous Weed Treatment, Brush Management and others.

(6) NRCS cooperates with the appropriate Federal, State, Tribal, and local agencies when assisting clients with pest management. NRCS pest management activities must follow all Federal, State, Tribal, and local environmental laws, regulations, and ordinances.

(7) NRCS cooperates with APHIS and appropriate State agencies when assisting clients with pests (e.g., invasive species), which may require quarantine or eradication to suppress the spread of the pest. Typical NRCS assistance may include providing available resource information such as soils and climate data.

(8) NRCS assists clients who request an assessment of pest management hazards to beneficial organisms (e.g., native pollinators, honeybees, parasitic wasps, lady beetles, etc.) and to develop appropriate mitigation.

(9) NRCS shall not provide assistance in suppressing pests in or on animals (e.g., fly suppression for livestock, worm suppression for goats).

(10) It is the clients', or their representatives', responsibility to ensure that all pesticides applied are currently registered for their intended use at their location by EPA, and that the application of the pesticides are not further restricted by State or other local laws or ordinances. The product label must contain specific instructions for the proposed use; or the proposed use must be permitted by special local needs registration or emergency exemptions from registration.

(11) On NRCS-operated properties, such as Plant Material Centers (PMCs), personnel who apply or supervise the application of approved pesticides must follow all label instructions and be trained and certified according to State pesticide applicator regulations and wear the appropriate Personal Protective Equipment.

(12) NRCS will cooperate with Federal and State (and equivalent) conservation agencies and the private sector to identify research needs for pest management and mitigation that reduce environmental hazard.

(13) Pest types include diseases, vertebrate and invertebrate pests, and weeds. NRCS pest management does not focus on large vertebrate pests such as feral swine and deer. These are often managed through targeted programs by other agencies and departments.

(14) NRCS may withdraw technical assistance for pest management that will result in a negative effect on natural resources, onsite or offsite. See 440-M-525.4.

404.11 Pest Management Environmental Hazard Analysis

A. Resource Concerns, selected by the client will be evaluated in the conservation planning process including:

(1) The potential impacts of pesticides on ground water, surface water, air (chemical drift and volatilization), humans and non-target plants and animals.

(2) The potential impacts of mechanical pest suppression activities on on-site soil loss and potential offsite resource effects.

(3) The potential impacts of biological pest suppression activities on natural resources.

(4) The potential impacts of cultural pest suppression activities (e.g., burning) on natural resources, specifically air and soil quality resources.

B. Pest management impacts on natural resources will be evaluated with current agency tools, procedures and professional judgment. NRCS may use land grant university publications and other peer reviewed literature.

C. States (or equivalent) utilizing pesticide environmental hazard screening tools other than current agency tools, need to coordinate their use with the Director of the ESD and the National Pest Management Specialist of the ESD.

D. If an appropriate analysis tool or procedure is not available for a proposed pest management method, the environmental hazard analysis is left to the professional judgment of the planner. Analysis inputs and results should be documented in the conservation plan to justify the need for mitigation.

E. When pest suppression activities have significant potential to impact identified resources negatively, appropriate mitigation shall be discussed with the client for their decisions. Mitigation includes most PAMS activities:

(1) Conservation practices such as Filter Strip, Conservation Crop Rotation, Residue Management, Irrigation Water Management, Windbreak, etc.

(2) Activities such as harvest timing, delayed planting, resistant varieties, transgenic crops, application timing, precision application, lower volatility product etc.

F. The client selected PAMS conservation practices and activities will be planned and documented in the conservation plan.

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Subpart C – Responsibilities

404.30 Department of Agriculture

A. Responsibilities, as described in a June 3, 1988, memorandum of understanding between NIFA and NRCS, are as follows:

(1) NIFA agrees to provide assistance to NRCS in support of the development and use of site-specific information and to address water quality issues.

(2) NIFA and NRCS agree to cooperate in encouraging each State's (or equivalent) Extension and NRCS organizational unit to develop guidelines and appropriate pesticide components for use in landowners'/operators' conservation plans.

(3) NRCS agrees (as outlined in a USDA companion document to the June 3, 1988, memorandum of understanding between NIFA and NRCS) to:

(i) ". . . provide site-specific resource data and planning assistance with regard to pesticide use and impacts on water quality to pesticide users and others making land use and management decisions."

(ii) ". . . assist landowners with the implementation of acceptable pesticide management practices."

B. Additionally, to meet the requirements of the Food Quality Protection Act of 1996, NRCS is committed to promoting IPM that provides both economic and environmental benefits.

404.31 NRCS National Headquarters Office

A. The Deputy Chief for Science and Technology, under the direction of the Chief, is responsible for providing national leadership for policy and procedures for NRCS pest management and identifying pest management research and technology development needs.

B. The Director of the Ecological Sciences Division (ESD) is responsible for developing, implementing, and evaluating NRCS pest management policy and procedures, in coordination with USDA's Office of Pest Management Policy.

C. The National Pest Management Specialist of the ESD provides national leadership for pest management policy, environmental hazard technologies, and training. Including:

(1) Assisting agency leadership in formulating and recommending national policies, procedures, and standards.

(2) Technical leadership and guidance for all things related to pest management.

(3) Quality assurance and quality control.

(4) National coordination of pest management related deliberations with other pest management discipline leads.

(5) Promoting and maintaining relations with groups and agencies that have common interest in pest management in all landuses.

(6) Technology transfer and direct technical support to States and State staff.

(7) Provide training and guidance to the National Technology Support Center Specialists charged with supporting Pest Management activities in the agency.

D. The National Pest Management Specialist along with the National Agronomist and the National Nutrient Management Specialist are responsible for leadership on NRCS agronomy-related activities. (M 190 Part 500 Subpart 500C)

E. The National Water Quality and Quantity Team provides the technology development and technical assistance for pest management environmental hazard analysis technologies.

F. The Director of the Soil Survey Division is responsible for maintaining the soil database to support interpretations for pesticide leaching, solution runoff, and adsorbed runoff loss potentials.

404.32 NRCS National Technology Support Centers (NTSC)

NTSC Directors will provide technical assistance to STCs/Directors of the Pacific Islands and Caribbean Areas for pest management assistance in their respective areas.

404.33 NRCS State Offices (or Equivalent)

STCs/Directors of the Pacific Islands and Caribbean Areas are responsible for:

(1) Targeting pest management technical assistance to specific resource concerns and locations within their respective States/Areas. For example, watersheds with pesticide-impaired sources of drinking water, pesticide Total Maximum Daily Load requirements, air quality non-attainment areas, or highly vulnerable areas that may contribute to future pest suppression-related contamination, increase risk of fire, and livestock production reduction.

(2) Supplementing the pest management guidance and requirements in appropriate directives, as necessary, making it applicable to local conditions and providing a copy to the Director, ESD.

(3) Ensuring that appropriate training is provided to all NRCS personnel who provide pest management technical assistance and establishing a process to provide continuing education to maintain employee certifications.

(4) Making certain that all NRCS personnel who provide pest management technical assistance to the public meet the applicable requirements for their positions and the State or local testing requirements as required by law.

(5) Working in consultation with respective State Technical Committees to address State-specific pest management issues.

(6) Utilize current technology to evaluate pest management environmental hazard. Environmental hazard assessment tools must be reviewed by the National Pest Management Specialist.

(7) Providing assistance, training, and technical tools (with support of NTSC) to NRCS field service centers so that they are able to provide assistance to clients to recognize, inventory, assess, and suppress weeds in non-cropland.

404.34 NRCS Field Service Centers (or Equivalent)

A. NRCS field service center technical leaders (e.g., District Conservationists and Team Leaders) are responsible for providing local leadership with implementation of the pest management policy.

B. NRCS field service center (or equivalent) employees are responsible for:

(1) Evaluating environmental hazards associated with the client's chosen pest management concerns.

(2) Providing technical assistance to clients to mitigate identified environmental hazard of pest management strategies with conservation practices (NRCS FOTG practices) and/or Prevention, Avoidance, Monitoring and Suppression (PAMS) activities recognized by the local land grant university or regional IPM center as being a viable PAMS activity.

(3) Assisting clients to adopt PAMS activities that protect natural resources in addition to those activities used solely for the mitigation purposes above. When the client works with qualified individual(s) (e.g., University Extension, Certified Crop Advisor/Pesticide Control Advisor, etc.) to evaluate and select PAMS activities, the field office staff should document which activities were adopted.

(4) Providing assistance to clients to recognize, inventory, assess, and suppress pests in non-cropland. The field office staff will bring to the client's attention any population of pests in non-cropland that may prevent the successful establishment of a desired plant community, conservation practice, or degrade the resource base to the extent that the land cannot support its intended use. Additionally, field office staff may refer the client to qualified individuals (e.g., University Extension, Certified Crop Consultants, State or county pest coordinator, etc.) for pest management recommendations, or provide the client with pest suppression references. Field office staff shall encourage producers to work with their State and/or county pest management program.

(5) Identifying pest management needs and informing STCs/Directors of the Pacific Islands and Caribbean Areas, or designee(s), of these needs, as appropriate.