

APPENDIX 1: “FY-2006 Guidelines for Treatment of Rangeland for the Suppression of Grasshoppers and Mormon Crickets”

Suppression Treatment on Federally Managed Rangeland

Subject to available funding, the United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (USDA-APHIS-PPQ) may contribute to the control of grasshoppers and Mormon crickets on federal rangeland in three ways: (1) conduct field surveys, (2) provide technical assistance to land managers, and (3) participate in suppression treatments when requested and necessary. In situations when traditional practices of land managers fail to maintain grasshopper and Mormon cricket populations below outbreak levels, USDA-APHIS-PPQ, at the request of the Federal land management agency or Tribal authority, when appropriate and subject to available funding, may conduct suppression treatments on federally managed rangeland or rangeland held in Trust by the federal government.

Rangeland eligible for cooperative suppression treatments for grasshoppers include: (1) large rangeland blocks (i.e., $\geq 10,000$ acres) that if treated would protect forage as well as prevent re-infestation from immigrant grasshoppers; (2) incipient populations (“hot spots”) of grasshoppers that if treated would prevent a wider spread of outbreaks; and (3) Federal or Trust land borders that if treated would prevent the movement of damaging populations of grasshoppers to adjacent private agricultural land. Rangeland cooperative suppression treatments for Mormon crickets may be conducted on a small or large scale. The final determination of whether a cooperative suppression treatment on federal rangeland is warranted and feasible (biologically, logistically, and economically) will be made by USDA-APHIS-PPQ, upon receipt of the land manager’s written request and based on the best available information.

Suppression Treatments on State and Private Rangeland

Subject to available funding, the USDA-APHIS-PPQ may contribute to the suppression of grasshoppers and Mormon crickets on State and private rangeland in three ways: (1) conduct field surveys, (2) provide technical assistance to landowners, and (3) participate in suppression treatments when requested and necessary. In situations when traditional practices of land managers fail to maintain grasshopper and Mormon cricket populations below outbreak levels, USDA-APHIS-PPQ, at the request of the State Department of Agriculture and/or private landowners, and subject to available funding, may conduct suppression programs on State and private rangeland.

State and private rangeland eligible for cooperative suppression treatments for grasshoppers include: (1) large rangeland blocks (i.e., $\geq 10,000$ acres) that if treated would protect forage as well as prevent re-infestation from immigrant grasshoppers; and (2) incipient populations (“hot spots”) of grasshoppers that if treated would prevent a wider spread of outbreaks. State and private rangeland cooperative suppression treatments for Mormon crickets may be conducted on a small or large scale. However, USDA-APHIS-PPQ will not participate in cooperative suppression programs for grasshoppers and Mormon crickets on private cropland, except when deemed necessary to maintain the integrity of a large spray block. Subject to available funding and as mandated by the Plant Protection Act (PPA) of 2000, APHIS will conduct surveys, provide technical assistance and conduct suppression programs on rangeland to control grasshoppers and Mormon crickets as warranted and feasible both biologically and logistically.

General Guidelines for Suppression Programs on Rangeland

1. Cooperative suppression treatments will be completed in accordance with the Plant Protection Act (PPA) of 2000 and Agency policy. Suppression treatments will follow guidelines within the Environmental Impact Statement (EIS), Site-Specific Environmental Assessment (EA), Section 7 Consultation of the Endangered Species Act, 2004 Environmental Monitoring Plan, pesticide label, and the 2006 Guidelines stated herein.
2. The Grasshopper Program will follow all requirements of the National Environmental Protection Act (NEPA). Environmental Assessments (EAs) for suppression treatments on rangeland will be completed in accordance with National and/or local Memoranda of Understanding (MOUs) between USDA-APHIS-PPQ and the Federal land management agencies and/or Tribes. Prior to treatments and per Section 7 Consultation, USDA-APHIS-PPQ and/or the Federal land manager and/or Tribe will consult locally with U.S. Fish & Wildlife Service (USFWS) and/or National Oceanic and Atmospheric Administration (NOAA) Fisheries in situations where: (1) threatened or endangered species occur in the area, or (2) pesticides or application procedures utilized have not been addressed in the Programmatic Biological Opinion of 1995 or in other Opinions. Upon completion of the EA, the State Plant Health Director of USDA-APHIS-PPQ or his/her designee will, if appropriate, sign a Finding of No Significant Impact (FONSI), after which suppression treatments may commence.
3. The Federal Government will bear 100% of the cost of treatment on federally managed or Trust land, up to 50% of the cost on State land, and up to 33% of cost on private land. The Federal Government’s participation in the cost share is contingent on allocation and availability of funds and written request

of land manager. First, USDA-APHIS-PPQ will conduct or fund surveys from the congressional appropriation, then may conduct suppression treatments with any remaining funds, and if requested. Additional sources of support for suppression treatments may include Contingency funds, Commodity Credit Corporation (CCC) funds, Land Management Agencies' funds, or other funding resources.

4. Land managers are responsible for the overall management of rangeland under their control to prevent or reduce the severity of grasshopper and Mormon cricket outbreaks. It is recommended that the land managers have exhausted all Integrated Pest Management systems before USDA-APHIS-PPQ is asked to assess the suppression treatment of grasshopper and Mormon cricket outbreaks. USDA-APHIS-PPQ and/or its designated cooperator may conduct suppression treatments on Federal/Tribal lands if requested in writing by the Federal land manager and/or Tribal authority for Trust lands.
5. USDA-APHIS-PPQ, when requested by the land manager, may conduct border treatments on Federal or Trust rangeland in situations when damaging populations of grasshoppers and Mormon crickets threaten private agricultural land. Border treatments can only be justified when the potential for damage from grasshoppers and Mormon crickets migrating into private agricultural lands constitutes a legitimate and justifiable threat.
6. At the written request of the respective State Department of Agriculture, and/or private landowner, USDA-APHIS-PPQ and/or the designated cooperator may conduct cooperative suppression programs on State and/or private rangeland, as permitted by regulations and available funding.
7. In the absence of available USDA-APHIS-PPQ funding, the Federal land management agency, Tribal authority or other party may opt to reimburse USDA-APHIS-PPQ for suppression treatments. Interagency agreements or reimbursement agreements must be completed prior to the start of treatments.
8. For rangeland programs conducted by the Federal government, USDA-APHIS-PPQ and/or cooperating personnel (i.e., cooperative agreement) will provide overall direction and monitoring of aircraft calibration, pesticide inventory and application, and will maintain records of pesticides used and acres treated. In a suppression program that requires a Contracting Officer (CO) a Contracting Officer Representative (COR) will be required, and a letter of authority issued. In other smaller programs it is recommended that a properly trained Grasshopper/Mormon Cricket manager be responsible for the program, and he or she will have received the necessary training as prescribed by PPQ.

9. In some cases, rangeland treatments may be conducted by other Federal agencies (e.g., Forest Service, Bureau of Land Management, or Bureau of Indian Affairs) or by non-Federal entities (e.g., Grazing Association or County Pest District). USDA-APHIS-PPQ may choose to assist these groups in a variety of ways, such as: (1) loaning equipment; (2) providing materials and pesticides; and (3) and contributing in-kind services such as surveys, determination of insect species and instars, and treatment monitoring. A cooperative agreement is needed when the assistance by USDA-APHIS-PPQ represents significant monetary value (e.g., providing pesticide or loaning equipment). Finally, the USDA-APHIS-PPQ State Plant Health Director (SPHD) is responsible for ensuring that any cooperative treatments on State or private rangeland adhere to the cost-share ratios in the Plant Protection Act and NEPA, as applicable.
10. Prior to initiating treatments funded by or through USDA-APHIS-PPQ, the SPHD's office will prepare a Detailed Work Plan (including a map), which then must be approved by the USDA-APHIS-PPQ Western Regional Office. In addition, the USDA-APHIS-PPQ State office will provide a weekly update to the Western Regional Office on acres treated and pesticides used. Upon completion of each grasshopper or Mormon cricket suppression program, the USDA-APHIS-PPQ State office will prepare a summary for the Federal land manager or Tribal authority and will submit a Post Treatment Report to the Western Regional Office.
11. The State Registered Beekeepers shall be notified in advance of proposed rangeland treatments so that beekeepers may remove their bees before a suppression program begins. Observation aircraft may be used to check for bees in the proposed area. Registered bee locations must be documented on the treatment map. Non-treated buffer zones should be determined for pollinators (e.g., alkali, leafcutter or honey bees) based on the EA and the pesticide labels [See 2006 Operational Procedures below].
12. In accordance with the EIS, the following pesticides may be used for rangeland treatments of grasshoppers and Mormon crickets: Sevin XLR Plus, Carbaryl bait, Dimilin 2L, and Malathion ULV. All pesticides must be used in accordance with the label, NEPA documents, Biological Opinion, local Section 7 Consultation, 2006 Operational Procedures, and any pertinent local decisions that are more restrictive.
13. Treatment contracts will adhere to the 2006 Prospectus.

2006 Operational Procedures

GENERAL PROCEDURES FOR ALL AERIAL AND GROUND APPLICATIONS

1. Follow all applicable Federal, State, Tribal and local laws and regulations in conducting grasshopper and Mormon cricket suppression treatments.
2. Conduct scoping programs to allow public participation in the decision making process.
3. Notify Federal, State and Tribal land managers and private cooperators of grasshopper and Mormon cricket infestations on their lands. Describe estimated boundaries, severity of the infestation, and treatment options. This notification will request the land manager to advise USDA-APHIS-PPQ of any sensitive areas (e.g., parks, recreation areas, etc.) that may exist in the proposed treatment areas.
4. Obtain request(s), in writing, from land managers or landowners for suppression treatments to be undertaken on their land.
5. Notify residents within treatment areas, or their designated representatives, prior to proposed operations. Advise them of control method to be used, proposed method of application, and precautions to be taken.
6. Avoid residences and other premises whose occupants are opposed to their property being treated. In cases when State law requires treatment, but landowners or occupants are opposed to the treatments, USDA-APHIS-PPQ will cooperate to the extent possible and as authorized by Federal and State laws.
7. Instruct program personnel in the use of equipment, materials and procedures; supervise to ensure procedures are properly followed.
8. USDA-APHIS-PPQ employees who plan, supervise, recommend, or have the potential to perform pesticide treatments must be certified and trained under the USDA-APHIS-PPQ Pesticide Applicator Certification [Policy](#). They are also required to fulfill any additional qualifications or pesticide use requirements of the State wherein they perform these duties. State Plant Health Directors have the option for seasonals to take the Pesticide Certification core training without the 2 day fumigation workshop. This only certifies that the seasonal had core Pesticide Certification training. Pesticide Applicator status is available to the seasonals with completed core pesticide training and the 2 day workshop as indicated by their supervisor. CFR 40 171.6 standard defines Supervision of a non certified pesticide applicator as; The availability of the certified applicator must be directly related to the hazard of the situation. In many situations, where the certified applicator is not required to

be physically present, “direct supervision” shall include verifiable instruction to the competent person, as follows: (1) Detailed guidance for applying the pesticide properly, and (2) provisions for contacting the certified applicator in the event he is needed. In other situations, and as required by the label, the actual physical presence of a certified applicator may be required when application is made by a non certified applicator.

9. Strictly follow all EPA and State approved label instructions for insecticides.
10. Do not apply insecticides directly to water bodies (defined herein as reservoirs, lakes, ponds, pools left by seasonal streams, springs, wetlands, and perennial streams and rivers). Furthermore, provide the following buffers for water bodies: 500-foot buffer with aerial liquid insecticides; 200-foot buffer with aerial bait; and 50-foot buffer with ground bait.
11. Require unprotected workers to stay out of treated areas, according to the label re-entry requirements or until the insecticide has dried, whichever period is longer.
12. Protective clothing and equipment will be worn and used by all pilots, loaders, and field personnel, as specified on the label.
13. All insecticide containers must be stored and disposed of properly according to the label. Rinse solution for drums may be used as diluents in preparing spray tank mixes, or it may be collected and stored for subsequent disposal in accordance with label instructions. Use one of the following disposal methods (in order of preference):
 - a) Use full service contracts and require the contractor to properly store and dispose of pesticide containers.
 - b) Require chemical companies, distributors, or suppliers to accept the triple-rinsed containers.
 - c) Crush and/or puncture the empty triple-rinsed containers, report on Form AD-112 to Property Services, Field Servicing Office, Minneapolis, MN, and dispose of as scrap metal.
 - d) Other suitable methods as approved locally in concurrence with Safety, Health and Environmental Security (SHES; Bill Benson, 301-734-5577).
14. Conduct mixing, loading, and unloading in areas where an accidental spill would not contaminate a water body. In the event of an accidental spill, follow the procedures set forth in PPQ Guidelines for Managing Pesticide Spills

(USDA APHIS, *Treatment Manual*, 1996, pages 11.17-11.26) and the 1996 Aerial Application Manual (4.37-4.39).

15. Local law enforcement agencies and fire officials will be notified of pesticide storage areas and treatment blocks. Be sure MSDS sheets are available to local law enforcement, local medical and to application personnel.
16. All APHIS project personnel will have baseline cholinesterase tests before the first application of AChE inhibiting insecticides, such as organophosphates or carbamates (i.e., no testing required for dimilin usage), and on a routine basis as described in the *APHIS Safety and Health Manual*. It is recommended that contract, State, and private project personnel also participate in a cholinesterase monitoring program.
17. Endangered Species Act Compliance
 - a) a. Formal consultations with US Fish and Wildlife Service up through July 21, 1995 guide the program on a national basis through biological assessments and biological opinions. For Federal Threatened, Endangered, and Proposed Species issues which have arisen since 1995, local informal consultation with Fish and Wildlife Service and/or NOAA Fisheries is required.
 - b) b. State-listed endangered and threatened species, Federal candidate species, and other sensitive areas may be addressed in the site-specific EA.
18. USDA-APHIS-PPQ will assess rangeland programs for the efficacy of the treatment, to verify that control programs have properly been implemented and treatments fall within our guidelines and control levels.

SPECIFIC PROCEDURES FOR AERIAL APPLICATIONS

1. Aircraft, dispersal equipment and pilots that do not meet all contract requirements of the 2006 Prospectus will not be allowed to operate on the Program.
2. Use Global Positioning System (GPS) coordinates or shape files if available, for pilot guidance on the parameters of the spray block. Ground flagging or markers should accompany GPS coordinates, when necessary, in delineating the project area and in omitting areas from treatment (e.g., boundaries and buffers for bodies of water, habitats of protected species, etc.).

3. Utilize two-way communication equipment for appropriate field personnel. Communication will be available for continuous contact between pilots and the COR.
4. Pre-spray reconnaissance flights or ground orientation trips may be conducted to ensure that pilots are familiar with program area boundaries, buffers, and areas that are not to be treated.
5. Make the following available to all personnel in advance of any treatment: First Aid kits, pesticide spill kits, thermometers, flagging material, wind gauges, spray-deposit samplers, and daily aircraft records. Examples of contents of the first aid and Pesticide spill kits are in the GH Manual.
6. No treatments will occur over congested urban areas. Whenever possible, plan aerial ferrying and turnaround routes to avoid flights over congested areas, water bodies, and other sensitive areas that are not to be treated.
7. To minimize drift and volatilization, do not conduct aerial applications when any of the following conditions exist in the treatment area: wind velocity exceeds 10 miles per hour (unless lower wind speed required under State law); air turbulence could seriously affect the normal spray pattern; and temperature inversions could lead to off-site movement of spray. Also, suspend aerial applications when the following weather conditions occur and will seriously impede pesticide efficiency: rain (present or imminent), fog, or wet foliage.
8. Weather conditions at the treatment area will be monitored by trained personnel before and during application. Operations will be suspended at any time that weather conditions could jeopardize the safe and/or effective placement of the spray on target areas.
9. Weather plays an important role in aerial application. Winds may displace the pesticide within the target area. High temperatures combined with low humidity may cause fine sprays to evaporate and drift away without reaching the target. The best weather for spraying is usually from dawn through mid-morning. A simple indicator of time-to-quit is soil/air temperature difference. The soil temperature should be taken by placing the thermometer probe on an un-shaded site while shading the thermometer for three minutes before reading. Air temperature should be taken five feet above the surface, in the open but with the thermometer shaded. When the soil temperature rises above the air temperature, the spray pattern normally starts breaking up, at which time treatment operations should cease. Constant monitoring of the spray deposit pattern is the best method of determining the effects of weather factors.

10. Do not apply while school buses are operating in the treatment area. Do not apply within 500 feet of schools or recreational facilities.

11. Protection of Bees:

a) When off-season or early-season planning indicates an area may require treatment, send early notification letters and maps of the proposed treatment areas to all registered apiarists in the State or near the area.

b) Pre-spray reconnaissance flights may be conducted to ensure that honey bees and other bees used as commercial crop pollinators have been moved or protected.

12. When using aerial bait, do not apply the bait directly to water bodies (defined as reservoirs, lakes, ponds, pools left by seasonal streams, springs, wetlands, and perennial streams and rivers), and provide a 200-foot buffer.

SPECIFIC PROCEDURES FOR GROUND APPLICATIONS (BAIT and LIQUIDS)

1. Do not apply ground bait directly to water bodies (defined as reservoirs, lakes, ponds, pools left by seasonal streams, springs, wetlands, and perennial streams and rivers). Furthermore, provide a 50-foot buffer.

2. Safety will be an integral part of each treatment project, contact Western Region Safety Officer for additional information and guidance.