6704-73, PM-K, 1/1

MAY 23 1985

300/18 148,564/2

300/18 148,735

Jan E. Riffe, Chief
Division of Wildlife Research
United States Department of the Interior
Fish and Wildlife Service
Washington, DC 20240

Dear Mr. Riffe:

Subject: Amendment - Update Label
Compound PA-14
EPA Registration No. 6704-73
Applications Dated April 1 and April 5, 1985

The amendment referred to above, submitted in connection with registration under FIFRA sec. 3(c)(7)(A) is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. Revise "Avain" to "Avian" in Avian Lethal Agent.

The "Instructions for Use of PA-14 Avian Lethal Agent" are acceptable.

3. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for

CONCURRENCES								
SYMBOL ▶								
SURNAME ▶								
DATE ▶								

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shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

William H. Miller
Product Manager (16)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

Enclosure

JOB:86736:Miller:CBI-85/02:tar:Kendrick & Co:898-1270:4/24/85:Del.5/1/85

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER

CORROSIVE. CAUSES EYE DAMAGE and skin irritation. Keep out of eyes, keep off skin and clothing. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed. Avoid food contamination. Keep all unprotected persons out of the operating area or vicinity where there may be danger of drift.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and other aquatic life at recommended application rates. Keep out of lakes, streams, ponds, and estuaries. Apply this product only as specified on this labeling.

ENDANGERED SPECIES CONSIDERATIONS

Notice: The killing of a member of an endangered species during roost treatment may result in a fine under the Endangered Species Act. Before treatment, the user is advised to contact the Regional U.S. Fish and Wildlife Service (Endangered Species Specialist) or the local Fish and Game Office for specific information on endangered species.

RESTRICTED USE PESTICIDE

For use only by or under the supervision of persons certified as applicators of Restricted Use Pesticides. Use of this product in avain population control is limited to situations approved by the U.S. Fish and Wildlife Service and must be supervised by government agency personnel trained in bird control.

COMPOUND PA-14
AVAIN LETHAL AGENT

For control of roosting red-winged blackbirds, rusty blackbirds, common grackles, brown-headed cowbirds, and starlings.

ACTIVE INGREDIENTS:

a-Alkyl (C_{11}-C_{15})-omega-hydroxypoly (oxyethylene); average poly (oxyethylene) content 9 moles*	99.4%

INERT INGREDIENT

water	0.5%

*ethoxylate of isomeric linear secondary alcohol

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT

In case of contact with eyes or skin, immediately flush affected area with plenty of water. Call a physician in case of eye contact. Remove and wash contaminated clothing.

If swallowed, promptly drink a large quantity of milk, egg white, or gelatin solution. If these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

PACKED FOR: UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH & WILDLIFE SERVICE
Washington, D. C. 20240
EPA EST. NO. 6704-ID-1
EPA REG. NO. 6704-73

NET CONTENTS 55 GALLONS LIQUID (460 lbs)

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS

For use directions, see "Instructions for Use of PA-14 Avian Lethal Agent." Do not use without reading instructions. For further information write to the U.S. Fish and Wildlife Service, Denver Wildlife Research Center, Building 16, Denver, Colorado 80225.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

STORAGE: Store in original container in a dry location at temperature below 50°C (122°F). In case of leakage or spills flush with water or cover with absorbent materials.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

ACCEPTED
with COMMENTS
In EPA Letter Dated:

MAY 23 1985

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 6704-73

3/12

4/12

INSTRUCTIONS FOR USE OF PA-14

AVIAN LETHAL AGENT

MAR 28 1985

ACCEPTED
with COMMENTS
In EPA Letter Dated:

MAY 23 1985

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
6704-23

United States Department of the Interior
Fish and Wildlife Service
Denver Wildlife Research Center
Denver, Colorado 80225

May 11, 198

INTRODUCTION

PA-14, a nonionic surfactant, enhances wetting by lowering the surface tension of water. It is useful in reducing the numbers of winter-roosting blackbirds and starlings if applied to roosts during or immediately preceding cold, wet weather. Wet plumage, resulting from the combination of surfactant application and water (either from sprinkler system or from rainfall or both), increases heat loss through conductivity and evaporation. If this loss continues, the body temperature of the bird drops, eventually to a lethal level.

GENERAL CONSIDERATIONS

Legal and Administrative Restrictions

Use of PA-14 in avian population control is limited to certified applicators (public, commercial, and private). Individuals in charge of roost treatments should have valid Federal and State migratory bird collecting permits. Overall coordination by the U. S. Fish and Wildlife Service is required. Nothing in these guidelines should be construed to circumvent or violate any applicable State or local law or regulation.

Permission

Permission to conduct a roost treatment should be obtained from the landowner and/or tenant. This should be in the form of a waiver or cooperative license agreement prepared in duplicate. In obtaining permission, the Government representative should inform the landowner of his rights and of the possible hazards involved in the treatment. Residents in the immediate area of a roost treatment site should also be informed of the operation and attendant hazards.

Aquatic Toxicity of Pa-14

PA-14 is toxic to many aquatic life forms, and application to surface waters, ground waters, and drainage areas where runoff and flooding could contaminate water bodies is strictly prohibited by this registration.

Phytotoxicity of PA-14

PA-14 can be toxic to some actively growing plants, thus application to valuable timber or nursery stock should be restricted to the dormant period.

Hazards to Nontarget Wildlife

Some nontarget birds, such as robins and cardinals, may be killed since they sometimes roost on the edges of blackbird-starling roosts. Restricting application of PA-14 to the blackbird-starling roost area proper will reduce this hazard. No known hazards exist for mammalian species.

Histoplasmosis Precautions

If the roost is in an urban or suburban area, local health authorities should be consulted on the possibility of the roost being positive for the histoplasmosis fungus, Histoplasma capsulatum. If the site is positive, and a large kill results from the spray operation necessitating a cleanup, bulldozing of the dead birds will risk occurrence of a histoplasmosis outbreak.

Personnel selected to work in a roost should be skin-tested for histoplasmosis prior to entering the roost. Those testing negative should be especially cautious and, if possible, not enter the roost if it has been occupied by birds for longer than 1 winter. Personnel should be informed of the symptoms of histoplasmosis and be cautioned to wear respirators capable of filtering particulate matter smaller than 2 microns.

Weather Parameters

Successful use of PA-14 is predicated on the occurrence of temperatures below 50°F, and in the case of aerial application, at least 0.5" of rainfall falling after PA-14 application, but before dawn.

Storage of PA-14

All containers of PA-14 should bear the label registered with the U. S. Environmental Protection Agency, and, where required, State labels. For ready use, PA-14, undiluted or diluted with water, should be stored at temperatures between 60°F and 120°F. If diluted so that ethanol or isopropanol make up 14% of the solution, PA-14 can be stored in temperatures as low as 10°F. If PA-14 is held undiluted in temperatures colder than 60°F, it must be heated before being combined with alcohol or water.

GROUND APPLICATION

General Description

This technique involves the application of PA-14 and water through a system of irrigation pipes and overhead sprinklers erected in the target blackbird-starling roost. The water is normally supplied from a fire hydrant and is pumped by a fire truck through fire hoses to the sprinkler system. The PA-14 is introduced into the system by a proportioning device.

Placement of System

The roost to be treated should be mapped so that the sprinkler system can be placed most effectively in the roost area. When the system layout has been tentatively chosen, water pressure needed to overcome the pipe friction and to provide an adequate water supply to the sprinklers (while ensuring that the pressure does not exceed recommended levels) must be computed from a "Pipe Friction Loss Table".

Lanes that conform to the layout of the system must be cut through the roost vegetation, and the irrigation pipe laid horizontally in these lanes. Risers, generally placed on 60' centers, are then erected on the irrigation pipe so the height of the sprinklers corresponds with the height of the vegetation or slightly exceeds it. Ropes are used to guy the risers in place.

Using a siamese fire hose connection, one or two 2 1/2" hose lines can be connected with the system, supplying a maximum of 500 GPM of water. The proportioning device is generally placed in one of the lines near the fire truck, which is positioned at a distance from the roost so as to not disturb the birds.

Operation of System

On the day that treatment appears likely, the PA-14 is heated just prior to the time of treatment for mixing with alcohol or water in a ratio of approximately 7 parts of PA-14 to 3 parts of alcohol (isopropyl or ethyl) or hot water in a holding tank adjacent to the eductor. Before beginning the operation, the sprinkler system should be cleared of debris and checked for leaks and breaks.

For best results, the sky should be dark (rainy, overcast, or clear with no more than a crescent moon). The temperature at spraying time should be above 32^{o}F. Spraying can be accomplished if the predictions are for the temperature to drop below 50^{o}F before dawn.

The spray operation can commence as soon as the birds have settled in the roost. Water is eased into the system with enough pressure to allow water to drip from all sprinklers. Once the birds have quieted down, the pressure is raised incrementally 3-5 times, pausing after each rise to allow bird flushing to subside before continuing.

When full pressure (determined by monitoring the water pressure gauge at the fire hose-irrigation pipe connection) has been reached and bird flushing has again subsided, PA-14 application can begin by opening the metering valve on the proportioning device. The rate of application must be no more than 20 gallons of actual PA-14 per acre. Regardless of the concentration of PA-14 used, flushing by birds is likely to occur if the PA-14 mix is introduced steadily into the system. Generally, a 10-sec burst of 1% PA-14 once a minute prevents most flushing. This release time can then be lengthened incrementally (so long as it does not result in bird flushing) to the point that the PA-14 mix is being introduced steadily.

Once the PA-14 has been delivered, the more water that can be applied the better. Rainfall increases the effectiveness of the operation. Between 0.5" and 0.75" of water is adequate, but for operations at the upper end of the temperature range (45^{o}-50^{o}), 1" or better is desirable. At 500 GPM, 0.75" of water can be applied to 4 acres in less than 2.75 h, including PA-14 application time.

AERIAL APPLICATION

General Description

This technique involves the nocturnal application of PA-14 by means of a properly-outfitted helicopter or agricultural spray plane. The application should be made prior to an expected rainfall of 0.5" or more, falling before dawn, and accompanied by temperatures that will drop below 50^{o}F. If temperatures remain cold enough to prevent bathing by treated birds, some mortality at the roost can be expected from cold rains occurring up to 3 nights post treatment.

Aircraft and Pilot

The responsibility of contracting with a qualified aerial applicator belongs to the State or local agency in charge of the roost spraying operation. The spray pilot must hold a commercial license (preferably with instrument rating) and an Agricultural Aircraft Operator's Certificate (FAR 137), and carry adequate liability insurance. The insurer should be contacted to determine if the policy is valid under proposed flight conditions.

The aircraft involved must have day and night VFR equipment. Additionally, IFR equipment is desirable. FAA regulations should be checked to verify that the aircraft has at least minimum instrumentation and required equipment. Radio communication with ground observers is helpful.

The pilot must obtain permission and, if necessary, a waiver to conduct each operation from the appropriate FAA General Aviation District Office. This should be done as far in advance as possible to allow time for FAA approval.

If the U. S. Fish and Wildlife Service has direct responsibility for a particular roost operation, regulations applying to Fish and Wildlife Service flight operations must be followed. These are available from the Regional Pilot at the appropriate Regional office of the U. S. Fish and Wildlife Service.

PA-14 Application Procedures

The pilot should become thoroughly familiar with the roost area and any attendant hazards. Battery-powered, steady-burning lights delineating the roost outline or spray patterns are helpful beacons. Whether pre-determined swaths or only visible concentrations of birds are to be sprayed should be determined beforehand.

If air temperatures are below 35°F, or if concentrations of PA-14 greater than 15% are to be sprayed, up to 5% (based on final solution) isopropyl or ethyl alcohol can be added as a thinner and to prevent freezing. Use of warm or hot water enhances mixing. If cold water must be used, isopropyl or ethyl alcohol (up to 5% of final solution) should be mixed with PA-14 before adding water.

Treatment must not exceed 20 gallons of actual PA-14 per acre, but effective concentrations may vary from 8 to 25% actual material depending on the application technique used. Two application methods are recommended:

1. Single-pass. If roosting birds are likely to flush to another area during a spray pass, treatment should be made in a series of single contiguous swaths beginning at one edge of the roost and moving toward the opposite edge. A high concentration of PA-14 (e.g., 25%) should be used, and the volume necessary to apply the correct amount of PA-14 (e.g., 80 GPA) may be best obtained through use of a venturi spreader, perforated-wing spray apparatus, or helicopter.
2. Multiple-pass. If birds are not expected to flush appreciably under the spray plane, better distribution of the material is obtained by using a lower PA-14 concentration and by making repeated passes over a given area until the total 20 GPA of actual material is delivered. For example, using an 8% solution, treatment might be made in 10 passes at 25 GPA with a boom and nozzle sprayer or in 3 passes of 80 GPA with a perforated-wing sprayer. Helicopters are especially effective with the multiple-pass technique.

Actual delivery should occur at an altitude high enough to minimize bird reaction and reduce danger of collision with birds. This height will vary with different roosts and aircraft, but usually will be approximately 75 to 125 feet above the roost vegetation. The pilot should be kept aware of wind

velocity and direction throughout the spray application. For maximum safety, treatment should not be made in the rain, and to prevent spray drift, spraying should not be carried out when wind velocities exceed 10 mph.

EVALUATION OF ROOST KILLS

Estimates of roost kills should be made to fulfill requirements of collecting permits and to evaluate the success of the roost treatments. Tabulating dead birds in randomly selected plots or transects will provide the best evaluation of kills in the roost proper. If substantial kills occur outside the roost proper, random sampling of these populations should also be conducted, where feasible.

SOURCE OF INFORMATION

For more specific information, contact the U. S. Fish and Wildlife Service, Denver Wildlife Research Center, Denver Federal Center, Building 16, Denver, Colorado 80225, (303) 234-2283.