The Pesticide Stewardship Alliance
February 21-23, 2010

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Background

- President - National Agricultural Aviation Research and Education Foundation
- President of the NAAA 2006
- Ag Pilot since 1981
- Second Generation Ag Operator
- Hale Dusting Service, Inc. established 1955.
Presentation Goal

To explain the decision making processes made by the aerial applicator from the time the order is placed until the spraying is completed.

Application orders are frequently the result of a crop consultant’s recommendation.
Preliminary Decisions

Product Label Interpretation

• Labeled for the crop?
• Labeled for the pest?
• Proper stage of each?
• Are surfactants required?
• Total volume per acre by the label?
• Pre-harvest restrictions?
• Reentry period & other WPS requirements?
**RESTRICTED USE PESTICIDE**
Tools to fish and aquatic organisms
For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

**HOTLINE NUMBER**
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call 1-800-331-3448 for emergency medical treatment information.

**PRECAUTIONARY STATEMENTS**
Hazard to Humans (and Domestic Animals)

**Warning**
May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

**Personal Protective Equipment:**
Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

- **Handers who may be exposed to the dilute through application or other tasks must wear:** Long-sleeved shirt and long pants, Chemical-resistant gloves, such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate, and shoes plus socks.
- **Handers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear:** Long-sleeved shirt and long pants, Chemical-resistant gloves, such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate, shoes plus socks, and Protective eyewear.
- **Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washable, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Environmental Hazards**
This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment or wash waters.

**Physical/Chemical Hazards**
This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area.

**Insecticide**
**EPA Reg. No. 273-3249**
**EPA Est. 273-FL-1**

**Active Ingredients:**
- 5-Cyanomethyl (3-phenylphenoxy)carboxylate 9.6% By Wt.
- cis/trans 3-(2,2-Dichloroethenyl) 2,2-dimethylcyclopropane carboxylate 90.4%

**Inert Ingredients:**
- Contains 0.8 pounds active ingredient per gallon, 90.0%
- Contains Petroleum Distillates
- Contains Petroleum Distillates
- U.S. Patent No. Pending

**KEEP OUT OF REACH OF CHILDREN**
**WARNING**
**AVISO**
Si usted no entienda el etiqueta, busque a alguien que se le explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**FIRST AID**
If swallowed: Call a poison control center or doctor immediately for treatment advice. If accidental exposure to water makes the material swell, do not dilute or pour away. Do not discard clothing unless told to do so by the poison control center or doctor. Do not dilute by mixing with anything other than water.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in Eyes: Hold eye open and rinse slowly under running water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

Call a poison control center or doctor for treatment advice.

**Note to Physicians**
Vomiting should be supervised by a physician or the professional staff because of the possible pulmonary damage by aspiration of the solvent.

For Emergency Assistance Call (800) 331-3448.
See other panels for additional precautionary information.

**FMC Corporation**
**Agricultural Products Group**
**Philadelphia PA 19103**
**Mustang MAX_3_4-16-2003**
Looking At Labels

• Label instructions are enforceable
• Label information is required on records
• Labels require aerial applicators to comply with Worker Protection Standard regs
• Some language is enforceable, while other is advisory – which is which?
• Some language details how to prevent damage to crops, protect nearby sites, and achieve quality pest control
Worker Protection Standard

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

restricted-entry interval (REI)  12 hours

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical resistant gloves Category A, such as butyl rubber, or natural rubber, or neoprene rubber
- Shoes plus socks
Preliminary Decisions

Product Use Concerns

• Safe for the job?
• Drift concerns?
• Odor?
• Is product adequate for need?
• Tank mix concerns?
• Sensitive areas & adjacent crops?
• Safety to loading crew?
Compatibility With Other Chemicals

Tank mix applications of Stam M4 with other herbicides, insecticides, spray adjuvants or liquid fertilizers may reduce crop tolerance and/or weed control or impair mixing properties. Use of these products in tank mix applications with Stam M4 is done at the user’s risk.

Do not apply in tank mix combination with 2,4-D, MCPA, Shark (carfentrazone) or Londax (bensulfuron). Reduced grass control may result if Clincher CA is applied in tank mix combination with or immediately following other herbicides not listed above, especially if applied under conditions of plant stress and/or advanced weed growth stages.
Preliminary Decisions

Equipment

- Do I have the proper equipment?
- Is any special equipment needed?
- Is equipment set properly for the job?
- How long will the job take?
- How many loads?
- How much fuel will be required?
- Do I have enough time to do it?
Engineering Controls

A closed system must be used for mixing and loading for aerial application. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
Preliminary Decisions

Site Decisions

- Can I locate the field?
- Can the field be sprayed safely?
  - Obstructions
  - People
  - Water
  - Animals
Avoid Environmental Hazards

Environmental Hazards
This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark except when treating rice fields as specified in this product label. Drift from ground or aerial applications is likely to result in damage to sensitive aquatic organisms in water bodies adjacent to the treatment area. Do not contaminate water when disposing of equipment wash waters or rinsate.

Surface Water: This chemical can contaminate surface water through spray drift from aerial and ground application equipment. Treated rice paddy water can contaminate surface water through accidental release or overflow, or by deliberate release due to normal growing practices, including interim or final release of flood water at harvest.

Groundwater: This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.
Avoid Environmental Hazards

This product is highly toxic to bees exposed to direct treatment or residues on crops. **Do not apply this product or allow it to drift** to blooming crops or weeds if bees are visiting the treatment area. Protective information may be obtained from your Cooperative Agricultural Extension Service.
Preliminary Decisions

Site Decisions

• Do I need to contact someone before spraying?
• Is a certain wind direction needed?
• Other weather conditions?
  • Rain
  • Humidity
  • Temperature
  • Fog
  • Inversions
The spray job must be done while adhering to many safety and legal concerns
**GUST**
A sudden significant increase in or rapid fluctuations of wind speed. Peak wind must reach at least 16 knots (18 miles per hour) and the variation between peaks and lulls is at least 10 knots (11.5 miles per hour). The duration is usually less twenty seconds.

**GUST**
A brief sudden increase in wind speed. Generally the duration is less than 20 seconds and the fluctuation greater than 10 mph.

**DO NOT** apply when wind velocity is greater than 10 mph for ground application or 5 mph for aerial application, when temperature inversion conditions exist, or when spray may be carried to sensitive crops. Sensitive crops include, but are not limited to, leafy vegetables, cotton and non-CELB variety rice varieties.
Drift Precautions for Sensitive Areas

In the State of New York, a 25 ft. vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 ft. vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

1. Do not apply within 100 feet of any desirable vegetation or crops.

2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.

3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.
Do not apply this product by air earlier than 30 minutes prior to sunrise or later than 30 minutes after sunset. Fresno County Ag Commissioner
Label Restrictions and Limitations

**AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.**

Do not exceed 25 psi nozzle pressure.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
Thank You to the TPSA!

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