DRIFT INCIDENTS (TREAT SMART)

LOUIE GUERRA

DEPARTMENT OF PESTICIDE REGULATION

CENTRAL REGIONAL OFFICE (CLOVIS)

DRIFT (TREAT SMART)

OVERVIEW

- What is drift
- Regulations pertaining to Drift
- The Label and drift
- Examples of Safe and legal spraying
- Treat Smart

WHAT IS DRIFT?

Drift is the physical movement of a pesticide through the air away from the intended target. (Often referred to as "Off Target)

(DEFINITION CONTINUED) DRIFT

Drift occurs during or shortly after the pesticide is applied.

Post-application drift occurs after an application is completed.

Drift can be in the form of mist, particles, or vapor (gas) and is not limited to agricultural activities.

Spraying safely goes along with:

- Following the Laws

  FAC sections 12972 and 12973

- and Regulations

  3CCR 6000, 6600, and 6614

FAC 12972

- FAC 12972**. The use of any pesticide by any person shall be in such a manner as to prevent substantial drift to non-target areas.**

- **3CCR 6000. Definitions. "Substantial drift"** means the quantity of pesticide outside of the area treated is greater than that which would have resulted had the applicator used due care. This definition is applicable to **FAC 12972** and 3CCR **6614**)

FAC 12972. The use of any pesticide by any person shall be in such a manner as to prevent substantial drift to non-target areas.

(3CCR 6000. Definitions. "Substantial drift" means the quantity of pesticide outside of the area treated is greater than that which would have resulted had the applicator used due care. This definition is applicable to FAC 12972 and 3CCR 6614)

So what does "Substantial Drift" mean?

When you use a pesticide and you use due care, the amount outside the treatment site is not greater than the amount if you had not used due care.

(layman's terms – "being careful")

So, when does a drift become an incident?

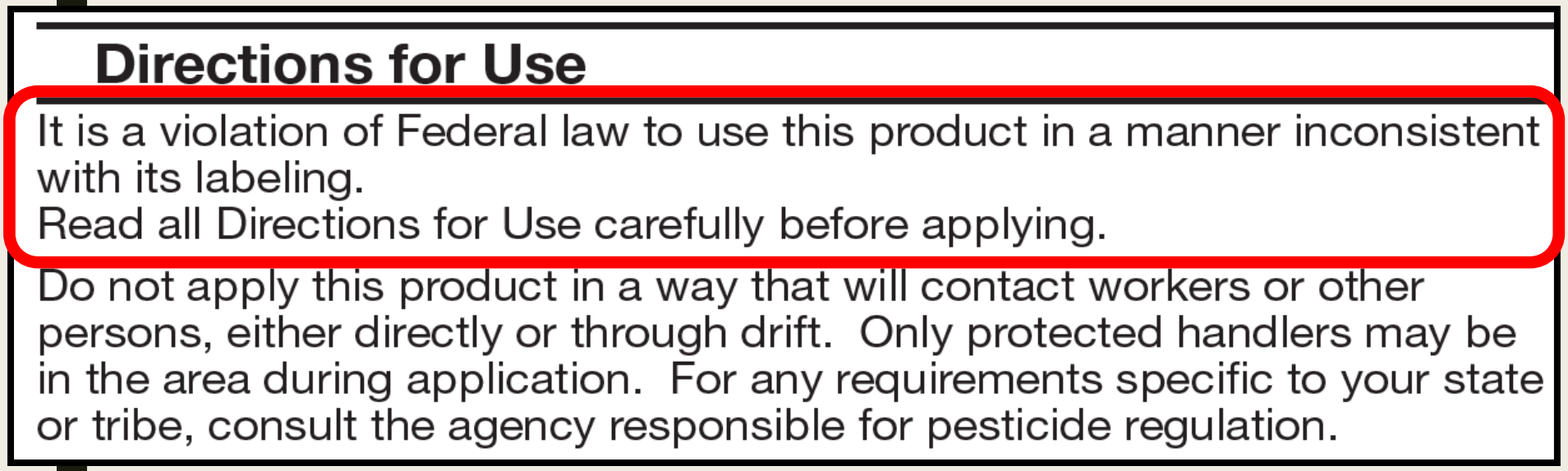
We'll get to that in a bit.

FAC 12973 (The Label)

The use of any pesticide *shall not conflict with labeling* registered pursuant to this chapter which is delivered with the pesticide or with any additional limitations applicable to the *conditions of any permit issued by the director or commissioner.*

Basically, the label is the law **AND** follow the conditions the Commissioner places on the permit.

(FAC 12973) Law - Label Statements



Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

- Not following the product label is a violation of Federal Law

(FAC 12973) Law - Label Statements Extracts

Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

Do not allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.

- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.

- The applicator also must use all other measures necessary to control drift.

(FAC 12973) Law - Label Statements

- **Label with pollinator protection statement.**

BEE CAUTION: This product is highly toxic to honeybees and other bees exposed to direct treatment or residues on crops or weeds in bloom. This product may show residual toxicity to honeybees, especially in humid climates and under slow drying conditions.

Notifying beekeepers within 1 mile of treatment area at lest 48 hours before product is applied will allow them to take additional steps to protect their bees. Limiting application to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to bees.

FAC 12973- Permit Conditions

- Are you aware of the conditions that the Commissioner places **on your permit**?

VI. **ALMOND – BEE PROTECTION POLICY**

Because of the necessity for bees to pollinate almonds and the need to treat crops nearby, the following procedures will be in effect: Applications of Carbaryl (Sevin®) shall not be made within one mile of almond orchards that are being pollinated by bees, except when there are no blooming plants (including weed bloom) in the treatment area. (A statement of this condition must be on the PCA's written recommendation). For all other applications of pesticides toxic to bees, the applicator shall follow label directions.

FAC 12973- Permit Conditions (examples)

THE FOLLOWING CONDITIONS APPLY TO ALL KERN COUNTY RESTRICTED MATERIALS PERMITS EXCEPT THOSE SPECIFICALLY CONDITIONED OTHERWISE.

I. **DRIFT PREVENTION**

a. No pesticide application shall be made or continued if the material is unable to be confined to the target area.
b. The applicator is responsible for utilizing buffer zones and other mitigation measures to prevent drift or other hazards.
c. Apply only when wind speed is less than 10 mph at application site.
d. Discharge shall start only after entering site.
e. Discharge shall stop prior to exiting site.

II. **SCHOOL BUFFER ZONES and RESTRICTIONS**

a. **No applications of Restricted Materials are to be made within ¼ mile of a school in session or during school sponsored activities when children are present.**
b. No restricted material may be applied at a school site while school is in session or during school sponsored activities when children are present.
*Notice of Intents must document communication with school personnel confirming that the school will not be in session and no school sponsored activities will be taking place during the time of the proposed application or the NOI will be denied.

FAC 12973- Permit Conditions (examples)

IV. **AERIAL APPLICATIONS**

No aerial applications of Restricted Materials are to be made within 1/4 mile of:

- a residential area
- occupied labor camp
- other areas designated by the Commissioner

VII. ***NEW* 48 HOUR NOTICE OF INTENT REQUIRED TO APPLY RESTRICTED MATERIALS IN KERN COUNTY**

The "Pilot Project to Protect Agricultural Workers" was established as a means to improve communication between agricultural neighbors in an attempt to reduce pesticide related incidents. Due to the success of the program, as of January, 1, 2018, it will apply to all of Kern County. The Kern County Department of Agriculture and Measurement Standards will notify adjacent growers of applications of Restricted Materials requiring a Notice of Intent (NOI). Growers proposing applications of Restricted Materials will be provided with information regarding their agricultural neighbors. Notices of Intent to apply Restricted Materials in Kern County must be submitted 48 hours prior to the proposed application.

IX. **ALUMINUM AND MAGNESIUM PHOSPHIDE USE**

Use of Aluminum and Magnesium Phosphide for burrowing rodent control is strictly prohibited within 100 feet of a building that is or may be occupied by people or domestic animals.

Regulation

3CCR 6000 – Definition

Substantial Drift – the quantity of pesticide outside the target area is greater than which would have resulted had the applicator used due care.

(Basically means, that there is more drift off target than if you would have been careful or “There is off-sight movement because you weren’t careful”)

Regulations

3CCR sec. 6600. Gen. Standards of Care (summary)

Each person performing pest control use:

- Equipment in good repair and safe to operate
- Perform it in a careful and effective manner
- Use methods & equipment to insure proper application
- Perform under climatic conditions to insure proper application
- Reasonable precautions to avoid contamination of the environment

Regulations

3CCR sec. 6600. Gen. Standards of Care (summary)

Each person performing pest control use:

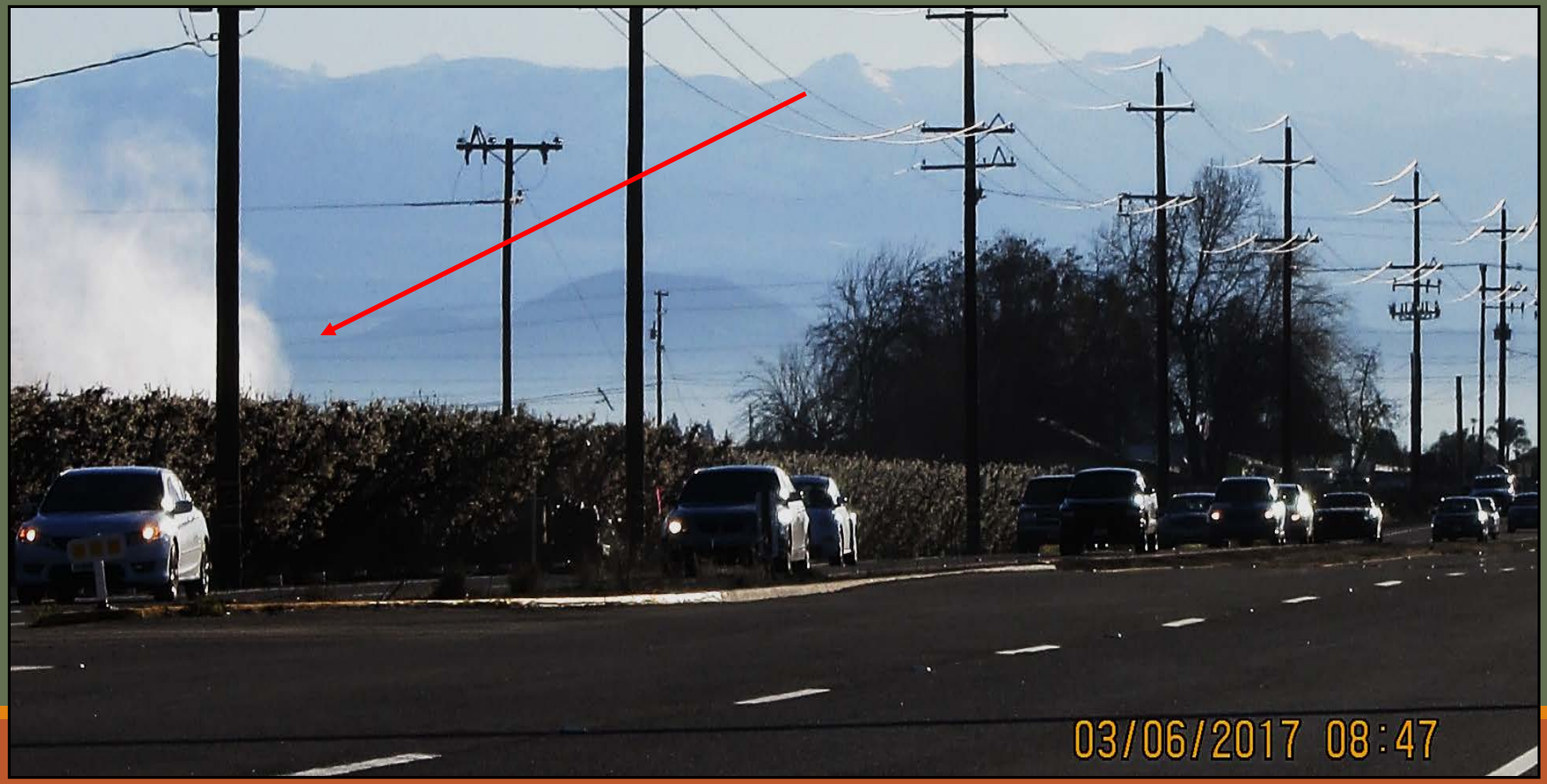
- Equipment in good repair and safe to operate

Regulations

3CCR sec. **6600. Gen. Standards of Care**

Each person performing pest control use:

- In a careful and effective manner



Regulations

3CCR sec. **6600. Gen. Standards of Care**

Each person performing pest control use:

- Methods and equipment to insure proper application

Regulations

3CCR sec. **6600. Gen. Standards of Care**

Each person performing pest control use …

- Under climatic conditions to insure proper application

Regulations

3CCR sec. **6614. Protection of Persons, Animals, and Property**.

- (a) An applicator **prior to** and **while applying** a pesticide **shall evaluate** all the equipment to be used, meteorological conditions, the property to be treated, and surrounding properties to determine the likelihood of harm or damage.

This is the big one where most violations are issued when a drift incident occurs

Regulations

3CCR sec. **6614. Protection of Persons, Animals, and Property** (summary)

(a) An applicator **prior to** and **while applying** a pesticide **shall evaluate**

- ✓ all the equipment to be used
- ✓ meteorological conditions
- ✓ the property to be treated
- ✓ and surrounding properties

… to determine the likelihood of harm or damage

Regulations

3CCR sec. **6614. Protection of Persons, Animals, and Property** (summary)

(a) "An applicator **prior to** and **while applying** a pesticide **shall evaluate"**

WHAT DOES THIS MEAN?

- **Check** equipment and type of equipment
- **Check** the weather (wind, inversions, rain, temperature etc.)
- **Check** the property (workers around?)
- **Check** the surrounding properties (neighbor's workers, surface water, bee hives, sensitive crops, etc.)

… to determine the likelihood of harm or damage

WHEN do you check?

Before and during the application

Regulations

6614. **Protection of Persons, Animals, and Property**
(summary)

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is …

"Notwithstanding" basically means "it does not matter" or "regardless"

"*It does not matter if*" substantial drift would have been prevented, no pesticide application …

Regulations

6614. **Protection of Persons, Animals, and Property**
(summary)

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is:

A **reasonable** possibility of

1) contamination of the bodies or clothing of persons…

2) damage to crops, animals, or other public or private property; or

3) contamination of public or private property, including the creation of a health hazard, preventing normal use of such property…

Regulations

6614. Protection of Persons, Animals, and Property

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is:

1) A reasonable possibility of contamination

of the bodies

or

clothing of

persons…

Regulations

6614. Protection of Persons, Animals, and Property

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is:

1) A reasonable possibility of damage to crops, animals, or other public or private property

Regulations

6614. Protection of Persons, Animals, and Property

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is:

1) A reasonable possibility of damage of public or private property, including the creation of a health hazard, preventing normal use of such property…

How does someone spray safely?

Following the pesticide label

Following the law

Following the regulations

When does a drift incident usually occur?

Perception

- **What is the general perception of field workers to the use of pesticides where they work?**
  - All pesticides are dangerous
  - The smell (odor) of a pesticide means that they have been exposed and will get sick

What is the general perception of the general public?

Some examples of PIR's (Pesticide Incident Report). But first, what is a PIR?

A PIR is sent to DPR on any incident that may be pesticide related. Upon receipt of a PIR, the CAC initiates an illness investigation

What is the general perception of the general public?

Here is an example of a PIR.

Some examples of non-agricultural related PIR's.

- In the past few of months, some PIR's that have come with home use include: 4 RAID, 3 Spectracide, 1 Ortho Home insecticide, 1 Wasp and Hornet spray, 2 Black Flag Roach Killer, and a Tom Cat Mouse and Rodent Aerosol. And one hospital visit due to spraying Roundup on foot (March '19 – Sept. '19)

Substances**********

1.00 Substance: TERRO ANT KILLER
Mdx: Terro Ant Killer Spray 2
Generic Match: OTHER INSECTICIDE

UNKNOWN / KG

History

pt used Terro ant killer spray ~10AM. Doesn't know if indoors or out but a breeze kicked up and blew the spray back onto his face. c/o SOB, dizziness, dry mouth, h/a since.

What does the general public think when they see this?

- White suits
- Rubber Gloves and Boots
- Goggles or Safety Glasses
- Respirator

The perception of the field worker is the same as the general public's.

- **With that in mind, how do you incorporate that knowledge into your pest treatment programs?**

Treat Smart

- Take into consideration:
  - The smell (odor) of the pesticide
  - The proximity of field workers/public
  - Time of application
  - Weather conditions
  - Method of Application

Treat Smart

- Is there anything really wrong with this application?

No one around, fairly early morning.

What would be a smarter treatment?

How about, reducing the pressure? Less off-sight movement

Treat Smart

- What could make this treatment smarter?

How about checking to see if the material is toxic to bees, covering the bees, or notifying the beekeeper?

Treat Smart

- **What do you think of this application ?**

(Spring ‘19 phone video placed on Facebook and Twitter)

This application is actually ½ mile away but the narration on the video presented a different picture. No incident from this application, but…

Treat Smart

- This looks like a well maintained fence line… except the adjoining property owner did not want his property sprayed and complained to the CAC.

Treat Smart, either keep the spray on your own property or communicate with your neighbor

Treat Smart

Imagine if this was the scenario?

- **Communicate with the residence**

Treat Smart

Transline and Milestone herbicides

Suggestions?

- Use a different material
- Apply so as to not drift
- Be aware of weather conditions

Treat Smart

Another phone video (Spring ‘19 phone video placed on Facebook and Twitter)

Treat Smart

- What are the chances that this application will not result in a drift incident? Otherwise known as a 6614.

Treat Smart

- Remember this picture from earlier?

  Here is the uncropped version.

Is this treating smart?

Treat Smart?

Some more examples:

- **A grower applied Onager and Reaper to his stone fruit which surrounded a vineyard. He was finishing up his last orchard at about the time a fieldworker crew arrived at the vineyard.**

A short time later, 8 workers developed nausea headaches, and vomiting and complained of an odor. No one saw an application or felt any drift.

Lab Results: Onager results 0.027ppm, 0.051 ppm, 0.27 ppm

Reaper: none

Treat Smart?

Onager results: 0.027ppm, 0.051 ppm, 0.27 ppm

Reaper: none

By looking at the lab results, was the applicator careful? YES

But, 6614 says, regardless of substantial drift some, no application shall be made or continued if there is reasonable possibility of contamination to a person

Treat Smart?

Example Spring 2019:

A grower was spraying his orchard with only the nozzles facing the trees on while driving along the dirt avenue while over 70 workers were harvesting stone fruit across the dirt avenue. 7 persons developed headache symptoms.

All investigative samples came up positive for the pesticides sprayed

Treat Smart?

Example Spring 2019:

An aerial applicator made an application catty corner to a harvesting crew of 100+. The crew complained of a "bad" smell and over 13 developed symptoms of scratchy throat and itchy eyes.

The reaction of the fieldworkers to pesticides is not any different than that of the general public,

… with that in mind, spray safely and Treat Smart.

How to Treat Smart

- Thinking ahead and taking into account how the application may impact neighboring areas during and after the application is complete.

- Some suggestions to consider:

  Proximity of neighboring properties to the treatment site (continued on next slide)

How to Treat Smart

- Harvestable stage of neighboring commodities that might increase the likelihood of workers being present and impacted during and after a pesticide application;
- Timing (day, hour) of a pesticide application to minimize any impact on neighboring operations; and
- Evaluation of pesticide(s) to be used and their impact on neighboring properties during and after the pesticide application (e.g., tendency of the material to drift, volatilize, or create odors that may lead to persons becoming ill).

So, when does a drift (substantial drift) become an incident?

- When the pesticide applied causes a health or environmental effect regardless of the amount detected to have moved off-sight.

- This past Spring, in a 7 week period, there were 8 priority illness investigations in which 5 or more persons developed symptoms . Most were within a ¼ mile of the people affected.

How could most of them been avoided?

By Treating Smart

The End

Questions?