**Cotton Producers Facing the Worker Protection Standard**

**A Practical Approach**

**Volume 1, Number 4**

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**SAMPLE LABELING**

**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), notification to workers, and restricted-entry interval. The requirements in this box apply to uses of this product that are within covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of hours. The REI is 72 hours in outdoor areas where average annual rainfall is less than 25 inches a year.

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 over long-sleeved shirt and long pants
- chemical-resistant gloves, such as barrier laminate or Viton
- chemical-resistant footwear plus socks
- protective eyewear
- chemical-resistant headgear

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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**Cotton Production: Late-Season**

It is late-season for cotton production, with the use of postemergence herbicides ending, but insecticides and miticides are being used frequently. Loading, mixing, and application of pesticides are common practices. Insecticides are now being applied for boll weevils, armyworm, bollworms, tobacco budworms, spider mites and other pests. Biological insecticides are also being used to aid in pesticide resistance management and reduce the risk of damage to beneficial insecticides, thus preserving better control of more difficult pests with insecticides.

Private agricultural crop advisors (consultants) and their scouts are aggressively monitoring cotton fields for insect pests and recommending control measures as needed. Bt cotton and refugia plots are requiring special attention in control recommendations and products used.

All of these activities relate to the Worker Protection Standard (WPS). Take this challenge, read this newsletter for tips and easier ways of implementing the WPS during the late-season pesticide use in cotton production.

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**Take a Minute and Consider Changes in the WPS**

**Time Saver** Biological insecticides, such as Biocot XL, Condor XL, Design, Dipel ES, Javelin WG and MVP II are used for management of early generations of bollworms and tobacco budworms.

**Good News!** The restricted entry interval (REI), which was once designated as 12 hours, has been reduced to 4 hours for most biologicals and some herbicides. Check the pesticide label of the product you plan to use to confirm this. Why is this important? This will allow workers to enter cotton fields more quickly and will require decontamination supplies when workers are present for only 7 days (rather than 30) after expiration of the REI or application.

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**What You Should Know about Handlers**

Since increased insect activity is often detected in cotton fields at this point in the season and handlers are more frequently loading, mixing and applying pesticides, think about the following easy steps in helping handlers be better protected and informed:

**Quick Checklist**

- Be sure your handlers are trained under the guidelines of the WPS and state laws. This must be done before beginning any handler tasks (ex. spraying).
- Be sure that the only people in the application area are properly trained and equipped pesticide handlers.
- Provide the handler with information from the pesticide labeling of the product to be used and make the pesticide labeling available when handling tasks are done. The
unpleasant and even dangerous (heat stress) when wearing PPE. Even though pesticides have been used for many years and pest control is essential, they can cause acute and/or chronic effects for users following exposure. The degree of injury may depend on the pesticide chemistry and other ingredients in the product, level of exposure, condition of the person exposed, period of time before decontamination, clothing and other factors.

**Why Should I have to Wear PPE or Force My Employees to Wear the PPE?**

**First** ... It’s a good idea! As a cotton producer, you are in the business to make money and you cannot make money if your employees or you are unable to work due to pesticide injury ... Everybody loses!

**Second** ... medical treatment and short-term or long-term recovery from any type of injury can be very unpleasant.

**Third** ... The WPS, established by federal law along with state laws and pesticide labeling, legally requires protection against the risk of injury from pesticides for workers and handlers.

**Fourth** ... It’s worth the effort and cost. ... It may require better planning of the time of day when applications are made, future modification of equipment, consideration of closed cab spray equipment (minimum PPE while inside of cab), more breaks for water consumption, specialized supplies to accompany PPE (ex. cool vests), pesticide choices and other approaches.

**Where Is the Required PPE Found?**

This is found on the pesticide label at two locations:

Applicators and Handlers:

**PRECAUTIONARY STATEMENTS**

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

FATAL IF SWALLOWED Causes cholineresterase inhibition. May be fatal or harmful by skin or eye contact or by breathing dust. Rapidly absorbed through skin or eyes. Do not get on skin or in eyes. Do not breathe dust. Keep away from domestic animals. Always load up-wind from hopper when loading.

SIGNs AND SYMPTOMS OF OVEREXPOSURE

Salivation, Muscle tremor, Nausea, Watery eyes, Difficult breathing, Vomiting, Pinpoint eye pupils, Excessive sweating, Diarrhea, Blurred vision, Abdominal cramps, Weakness, Headache.

In severe cases, convulsions, unconsciousness, and respiratory failure may occur.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear coveralls over short-sleeved shirts and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, protective eyewear, chemical-resistant aprons when cleaning equipment, mixing or loading and a dust/mist filtering respirator (MSHA/NIOSH – approval number prefix TC-21C). Follow manufacturer’s instructions for cleaning/measuring PPE. Keep and wash PPE separately from other laundry. Wash contaminated clothing in strong washing soda solution and rinse thoroughly before reuse.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements noted in the Worker Protection Standard (WPS) for Agricultural Pesticides (40 CFR 170.240(e)-(46)), the handler’s PPE requirements may be reduced or modified as specified in the WPS.

**Early Entry Workers:**

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label before using this product. This Supplemental Label must be in possession of the user at the time of pesticide application. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may enter treated areas during the restricted-entry interval (REI) of 48 hours. Workers may enter treated areas during the REI provided they follow the directions on the label.

**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), notifications to workers, and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. Exception: If the product is soil-incorporated or soil-injected, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if they will not be in contact with anything that has been treated. Once the REI has expired, do not allow persons to come into direct contact with treated soil as well as the results of the initial irrigation or rainfall after treatment unless they are wearing the PPE specified below 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 in coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.
What Types of PPE Are Required?

The type and amount of PPE which must be worn by the handler and early entry worker are specified on each pesticide label. The amount of PPE varies considerably by product, but the insecticides generally require more PPE than other pesticides.

Heat Stress Tip Under extremely hot conditions during the summer months, and if the pesticide product choices for control of a particular insect pest or pest complex are about equal, why not look at the PPE requirements on each product and choose the one which requires the least PPE, therefore reducing heat stress of your handlers?

Labels of pesticide products used on cotton require different combinations of PPE. The following checklist may be helpful:

Quick Checklist of PPE with Definitions

- Chemical resistant - allows no measurable movement of a pesticide through the material during use
- Waterproof - allows no measurable movement of water (or water-based solutions) through the material during use
- Coverall - A loose fitting one- or two-piece garment that covers, at a minimum, the entire body except head, hands and feet
- Gloves - hand coverings that are the type listed on the pesticide label
- Protective eyewear - goggles, face shield or safety glasses with front, brow and temple protection
- Chemical-resistant footwear - chemical-resistant shoes; chemical resistant boots; or chemical-resistant shoe coverings over shoes or boots
- Chemical-resistant headgear - chemical-resistant hood or chemical-resistant hat with a wide brim
- Chemical-resistant apron - chemical-resistant apron that covers the front of the body from mid-chest to the knees
- Chemical-resistant suit - coverall (as defined above) made of chemical-resistant material
- Respirator - A device that protects the respiratory system. Must be of the type listed on the pesticide label and must be appropriate for the pesticide product being used and for the activity being performed.

How and Where to Maintain PPE

Locations where PPE is likely to be maintained:

(1) Shop or Equipment Maintenance Building:
Look at your building design and plan an area in the building (where no pesticides are stored or other chemicals) which is clean and dry and can be used for storage of PPE.

$ Cost Savings Think about buying steel lockers (schools) or other containers with doors through salvage sales for PPE storage ... sometimes these can be purchased for under $10 each.

 Handlers and early entry workers will need a place to put on the PPE, take off the PPE following completion of the job and to store their personal clothing without pesticide contamination. Decontamination supplies and sufficient quality water to thoroughly wash following handling and early entry tasks are required. Plan a location for a container to deposit PPE which will require cleaning (follow the cleaning guidelines specified in the WPS regulation) and a container for disposal of PPE (comply with applicable federal, state, tribal and other regulations).

(2) Equipment (tractor, high-clearance sprayer, truck, other)
Purchase a chemical resistant container and store PPE in the container during handling or early entry tasks. The container should be maintained during the handling and early entry task on the equipment (tractor, spray coupe) or truck which is being used along with the decontamination supplies (protected in chemical resistant container).
Product | EPA Number | Active Ingredient | Signal Word | Non-REI fication | PPE | Entry PPE | Early Use | Seasonal Use
--- | --- | --- | --- | --- | --- | --- | --- | ---
Admire 2F | 3125-422 | imidacloprid | yes caution | 12+ oral | aeg | beg | I | Bayer
Admire 2E | 279-3047 | imidacloprid | yes caution | 12 oral | cflg | cflg | I | DuPont
Admire W/SB | 279-3064 | imidacloprid | yes caution | 12 oral | ag | beg | I | FMC
Admire XL | 582-615 | imidacloprid | yes caution | 12 oral | afg | bgf | I | FMC
Aerothol | 3125-151 | cyfluthrin | yes danger | 12 oral | afg | bgf | I | Bayer
Bostil 6 | 3125-321 | sulprofos | no warning | 24 oral,post | cflklm | cflj | I | Bayer
Capture 2 EC | 279-3069 | bifenthrin | yes warning | 12 oral | afg | bg | LM | FMC
Captiva 2 EC | 279-3114 | fenpropathrin | yes warning | 12 oral | afg | bg | LM | FMC
Cementia | 400-104 | propargite | no danger | 48 oral,post | cflklm | cflj | M | Unomedical
Conte II | 400-158 | propargite | no danger | 48 oral,post | cflklm | cflj | M | Unomedical
Cryon | 100-609 | proplfenos | yes warning | 48 oral,post | cfljl | cflj | LM | Ciba
Cyathion | 5905-196 | malathion | no caution | 12 oral,post | afg | bgf | LM | Helena
Cythion | 5905-280 | malathion | no caution | 12 oral | afg | bg | LM | Helena
Danitol 2.4 EC | 5963-35 | fenpropidrin | yes danger | 24 oral | afg | bg | LM | Valent
Design 2 | 3125-172 | disulfoton | yes danger-poison | 48 oral,post | cflklm | cflj | LM | Bayer
De-Syston 8 | 3125-207 | disulfoton | yes danger-poison | 48 oral,post | dhjklm | dhjl | LM | Bayer
Dibrom 8 | 59639-13 | naled | no danger | 24 oral | afg | bgf | LM | Virginia
Dimethoate (EC) | 5903-493 | dimethoate | no warning | 48 oral | afg | bgf | LM | Helena
Dimethoate 5% EC | 5903-497,3767 | dimethoate | no warning | 48 oral | afg | bgf | LM | Helena
Dimilin 25W | 37300-4-400 | dicofol | yes caution | 12 oral | ag | bg | IGR | Unomedical
Dipel 2X | 275-37 | BT | no caution | 4 oral | afg | beg | I | Abbott
Dipel 48A | 275-116 | BT | no caution | 4 oral | afg | beg | I,LM | Abbott
Dipel 4L | 275-36 | BT | no caution | 4 oral | afg | bg | I,LM | Abbott
Dipel DF | 275-153 | BT | no caution | 4 oral | afg | bg | I,LM | Abbott
Dipel ES | 275-65 | BT | no caution | 4 oral | afg | bg | I,LM | Abbott
Dipel ES4 | 275-93 | BT | no caution | 4 oral | afg | bg | I,LM | Abbott
Paraquat 4E | 279-2767 ZC | carbofuran | yes danger-poison | 48 oral,post | afgm | bg | MN | FMC
Fury 1.5 EC | 279-3125 | zeta-cypermethrin | yes warning | 12 oral | afg | bg | I | FMC
Guthion 2L | 3125-102 | azinphos-methyl | yes danger-poison | 48 oral | fhjn | fhjn | I | Bayer
Guthion 3E | 3125-338 | azinphos-methyl | yes danger-poison | 48 oral | fhjn | fhjn | I | Bayer
Guthion 3S; 50% WP | 3125-301 | azinphos-methyl | yes danger- | 48 oral | fhjn | fhjn | I | Bayer
Imidan 70-WSB | 10163-184 | phosmet | no danger | 24 oral | aeglm | aegl | I | Covance
Javelin WG | 10182-90 | lambda-cyhalothrin | yes danger | 24 oral | afg | bgf | I | DuPont
Karat | 707-202 | disulfoton | yes danger | 24 oral | afg | bgf | M | BASF
Kunitos DF | 7909-61 | sulfor | no caution | 24 oral | aeg | bg | M | Elanco
Lannate 1V | 352-348 | methomyl | yes danger-poison | 48 oral | afg | bg | I | DuPont
Lannate LF | 352-384 | methomyl | yes danger-poison | 48 oral | afg | bg | I | DuPont
Legend | 3125-351 | cyfluthrin | yes danger | 12 oral | afg | bg | I | Bayer
Legane Surplus 6 | 5905-437 | chlorpyrifos | no caution | 24 oral | afg | bg | I | Hercules
Lock-Off | 62719-79 | chlorpyrifos | no warning | 12 oral | afg | bg | I | DowElanco
Lorsban 4E | 62719-80 | chlorpyrifos | no warning | 12 oral | afg | bg | I | DowElanco
Malathion 57EC | 34704-108 | malathion | no caution | 24 oral | afg | bg | I | UAP
Malathion 40% | 5905-493 | malathion | no caution | 24 oral | afg | bg | I | UAP
Methyl Parathion 4E | 34704-10 | methyl parathion | yes danger- | 48 oral | dhjklm | dhjl | LM | UAP
Methyl Parathion 40% | 5905-15 | methyl parathion | yes danger-poison | 48 oral,post | dhjklm | dhjl | LM | UAP
Microcyst Special | 4581-136 | malathion | no caution | 24 oral | afg | beg | M | Eliattchem
Monitor 4 | 3125-180 | methomyl | no caution | 24 oral | afg | beg | M | Bayer
Mustang 1.5 EW | 279-3126 | zeta-cypermethrin | yes warning | 12 oral,post | afg | bg | I | FMC

**Quick Pesticide Check**

**Cotton Insecticides**

**Seasonal Use**
- Cotton Insecticide
- Non-REI
- PPE
- Early Use

**Product** | **Function** | **Company**
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Admire 2F | Imidacloprid | Bayer
Admire 3E | Imidacloprid | DuPont
Admire W/SB | Imidacloprid | FMC
Admire XL | Imidacloprid | FMC
Aerothol | Cyfluthrin | Bayer
Bostil 6 | Sulprofos | Bayer
Capture 2 EC | Bifenthrin | FMC
Captiva 2 EC | Fenpropathrin | FMC
Cementia | Propargite | Unomedical
Conte II | Propargite | Unomedical
Cryon | Malathion | Ciba
Cythion | Malathion | Helena
Danitol 2.4 EC | Fenpropidrin | Valent
Design 2 | Disulfoton | Bayer
De-Syston 8 | Disulfoton | Bayer
Dibrom 8 | Naled | Virginia
Dimethoate (EC) | Dimethoate | Helena
Dimethoate 5% EC | Dimethoate | Helena
Dimilin 25W | Dicofol | Unomedical
Dipel 2X | BT | Abbott
Dipel 48A | BT | Abbott
Dipel 4L | BT | Abbott
Dipel DF | BT | Abbott
Dipel ES | BT | Abbott
Dipel ES4 | BT | Abbott
Paraquat 4E | Carbofuran | FMC
Fury 1.5 EC | Zeta-Cypermethrin | FMC
Guthion 2L | Azinphos-Methyl | Bayer
Guthion 3E | Azinphos-Methyl | Bayer
Guthion 3S; 50% WP | Azinphos-Methyl | Bayer
Imidan 70-WSB | Phosmet | Covance
Javelin WG | Lambda-Cyhalothrin | DuPont
Karat | Disulfoton | BASF
Kunitos DF | Sulfor | Elanco
Lannate 1V | Methomyl | DuPont
Lannate LF | Methomyl | DuPont
Legend | Cyfluthrin | Bayer
Legane Surplus 6 | Chlorpyrifos | Hercules
Lock-Off | Chlorpyrifos | DowElanco
Lorsban 4E | Chlorpyrifos | DowElanco
Malathion 57EC | Malathion | UAP
Malathion 40% | Malathion | UAP
Methyl Parathion 4E | Methyl Parathion | UAP
Methyl Parathion 40% | Methyl Parathion | UAP
Microcyst Special | Malathion | Eliattchem
Monitor 4 | Methomyl | Bayer
Mustang 1.5 EW | Zeta-Cypermethrin | FMC

**PPE**
- Biological Risk
- Chemical Risk
- Physical Risk
- Radiation Risk

**Information Provided**
- Biological Risk
- Chemical Risk
- Physical Risk
- Radiation Risk

**Address Service Requested**
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- ADDRESS SERVICE REQUESTED