

Understanding Pesticide Labels

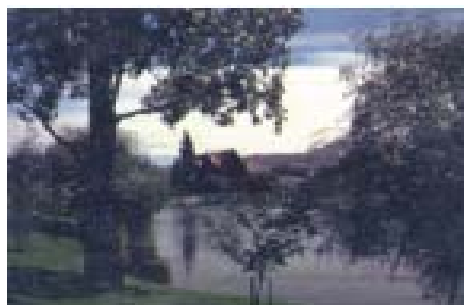
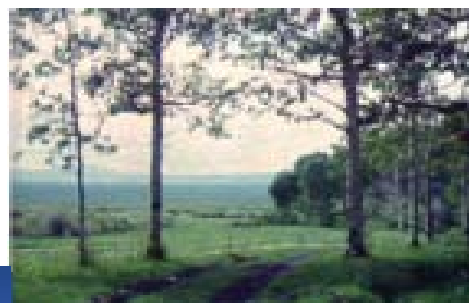
Protects:



*Livestock
& Crops*



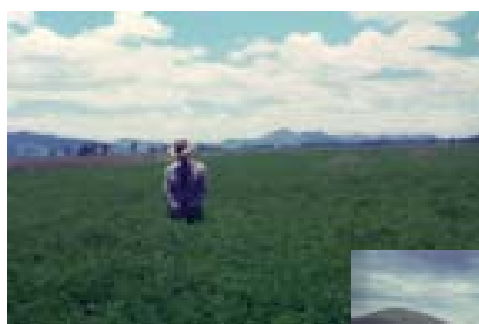
Recreation



Landscapes



*The
Environment*



*The Applicator
& Others*



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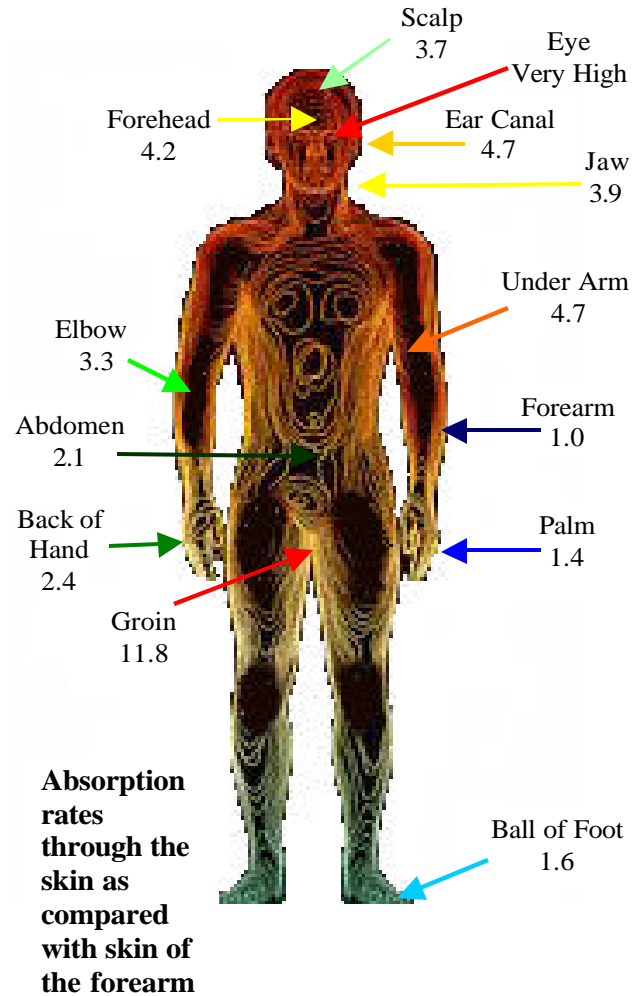
Nevada Department of Agriculture Cooperating
SP 00-13

Risk = Toxicity X Exposure

Knowing how toxic a product is and understanding in what ways a person can be exposed to it, allows him or her to lower the risk of poisoning him or herself and to work more safely (see below). The rate at which chemicals are absorbed through the skin varies with the location on the body (see the picture to the right). Absorption can be kept low when exposure is managed. Wearing the right protective clothing and equipment (PPE) reduces your risk of exposure to a chemical. Of course, this is only true if you wear the PPE properly, according to the manufacturer's instructions on the label.

The toxicity of a pesticide cannot be changed, but the risk of using it can be reduced. First, you must know the toxicity of the pesticide and its potential to poison (see the table on page 3).

Next, you must properly handle the pesticide; that includes wearing PPE to keep you safe. The proper care and disposal of PPE, when contaminated, is also critical. Refer to the pesticide label and *Laundering Pesticide Work Clothing*, Nevada Cooperative Extension Fact Sheet 95-46, for more details.



Pesticide poisoning symptoms are similar to influenza and may include:

Mild	Fatigue, headache, dizziness, blurred vision, excessive sweating, nausea and vomiting, stomach cramps, diarrhea.
Moderate	Unable to walk, weakness, chest discomfort, muscle twitches, slight rashes, pupil constrictions.
Severe	Rashes, unconsciousness, sometimes severe pupil constriction, muscle twitches, body secretions, breathing difficulty.

Understanding Pesticide Labels

The pesticide label gives the information necessary for each product's safe, effective, and lawful use. Remember, the label is the law. Failure to read and follow the labeled directions is a violation that may result in fines or legal action being taken against the applicator. It makes good sense to follow the label; by doing so, risk to the applicator, others and the environment is greatly reduced or eliminated! Supplemental label information is often attached to the product or is also available from your dealer to explain such items as the Worker Protection Standard and the Endangered Species Program. For your protection and the protection of others, all pesticide labels have signal words that identify the acute toxicity of the product.

Pesticide toxicity labeling information

Group	Signal Word	Toxicity Rating	DEATH (Lethal Dose) for a 160 lb. Human ^b
I	DANGER ^a	Highly Toxic	Drops to 1 Tsp ^c (less than 5 ml)
II	WARNING	Moderately Toxic	1 Tsp to 1 Tbsp (5 ml - 15 ml)
III	CAUTION	Slightly Toxic	1 Tbsp to a Pint (15 ml - 473 ml)
IV	CAUTION	Relatively Non-Toxic	More than a Pint (greater than 473 ml)

^a The word Danger may appear with the word Poison and the skull and crossbones.



“DANGER” indicates acute effects of a pesticide exposure by the mouth (oral), the skin (dermal), breathing (inhalation) and the eyes. “**POISON**” warns that the product is highly toxic and causes acute illness through oral, dermal and inhalation exposure. Products with acute skin and eye irritation potential may only exhibit “DANGER” without “**POISON**” and the skull and crossbones.

^b A 40 lb. child could be poisoned by one-fourth the amount of a pesticide toxic to a larger adult.

^c Tsp = teaspoon (4.9 ml); Tbsp = tablespoon (14.8 ml); 2 Tbsp = 1 fluid ounce (29.57ml)

INSTRUCTIONS FOR STUDY QUESTIONS:

A typical pesticide label for a fictitious **NO-PEST EXTRA** insecticide is given on the next page. From the toxicity information you just read and from the fictitious **NO-PEST EXTRA** label, answer the study questions beginning on page 5.

STATEMENT OF PRACTICAL TREATMENT

Call a doctor (physician), clinic, or hospital immediately. Explain that the victim has been exposed to galactothion and describe his/her condition. After first aid is given, take the victim to a clinic or hospital. If breathing has stopped, start artificial respiration immediately and continue it as necessary until the doctor sees the victim. If swallowed—drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention. In case of contact, immediately flush the skin with plenty of water while removing contaminated clothing and shoes. See doctor immediately. Galactothion is an organophosphate pesticide that inhibits cholinesterase.

NOTE TO PHYSICIAN

Antidote—administer atropine di-sulfate in large doses—two to four mg. intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. **2-PAM** chloride is also antidotal and may be administered in conjunction with atropine. **DO NOT GIVE MORPHINE OR TRANQUILIZERS.** Galactothion is a strong cholinesterase inhibitor affecting the central and peripheral nervous system and producing cardiac and respiratory depression. At the first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of the poison may occur and fatal relapses have been reported after initial improvement. **VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.**

PRECAUTIONARY STATEMENTS

Hazards to humans & domestic animals

DANGER: Fatal if absorbed through skin, fatal if swallowed, and poisonous if inhaled. Do not breathe vapors or spray mist. Do not get on skin or clothing. May be irritating to eyes and may cause mild skin sensation. Keep away from domestic animals. Discontinue use if an allergic reaction occurs.

Signs and symptoms of overexposure

Salivation, muscle tremors, nausea, watery eyes, difficulty breathing, pinpoint eye pupils, excessive sweating, diarrhea, blurred vision, abdominal cramps, weakness, headache.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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.

Applicators and other handlers must wear:

Coveralls over long-sleeve shirt & long pants. Chemical-resistant gloves such as barrier laminate, vitron, nitrile or neoprene. Chemical-resistant footwear plus socks. Protective eyewear. Chemical-resistant headgear for overhead exposures. Respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number TC-14G).

Chemical – resistant apron – when cleaning equipment, mixing, or loading:

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacture's instructions for cleaning and maintaining PPE. It there are no such instructions for washables, 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. Remove PPE immediately after handling this product. Wash the outside of the gloves before removing them.

RESTRICTED USE PESTICIDE

Due to very high toxicity to humans and birds. 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 certificate.

**NO-PEST EXTRA®
INSECTICIDE**

ACTIVE INGREDIENTS:
galactothion (0,0-diethylmethyl phosphorothiate).....20.9%
related isomers.....1.1%
INERT INGREDIENTS:.....78.0%
TOTAL 100.0%

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.

KEEP OUT OF REACH OF CHILDREN

DANGER



POISON

PELIGRO

TÓXICO

Si usted no entiende la etiqueta, busque a alguien para se la explique a Usted en detalle. If you do not understand this label, find someone to explain it to you in detail.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame. Not for use or storage in or around the home.

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); Some materials that are chemically 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.

Applicators and other handlers must wear:

Coveralls over long-sleeve shirt & long pants. Chemical-resistant gloves such as barrier laminate, vitron, nitrile or neoprene. Chemical-resistant footwear plus socks. Protective eyewear. Chemical-resistant headgear for overhead exposures.

Respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number TC-14G).

Chemical-resistant apron – when cleaning equipment, mixing, or loading:

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacture's instructions for cleaning and maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Notification-to-workers, and restricted-entry intervals: The requirements in this box only apply to uses of these products that are covered by the Worker Protection Standard. Do not enter or allow worker entry to treated areas during the Restricted-Entry Interval (REI) of 48 hours. The REI is 72 hours in outdoor areas where the 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 & long pants
 - 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.

EPA Reg. No. 12345-10 EPA Est. No. 56787-CO-3

VIP Chemical Company
2527 South VIP Drive
Sometown, NE 12345

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact people or off-target sites, 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.

GENERAL DIRECTIONS

Spray Preparation: To assure a uniform product, agitate or shake all containers of this product prior to use. Use 50 mesh screens or equivalent slotted strainers in spray system. To prepare for spraying, fill tank to ½ the needed volume of water. Add the required amount of this insecticide and mix thoroughly by mechanical or hydraulic agitation. Finish filling tank with water to desired volume and thoroughly mix. Do not store spray mixture for prolonged periods. If tank mixes are to be used, NO-Pest Extra must be fully dispersed in water first, followed by addition of the intended tank-mix material. **DO NOT USE MIXTURES THAT CURDLE, PRECIPITATE OR BECOME GREASY.** Note: Do not add VIP No-Pest to water with pH values below 3.0 or above 8.5.

DIRECTIONS FOR AERIAL OR GROUND SPRAY APPLICATION

Application timing: Begin application when insect populations reach economic threshold levels. Consult Cooperative Extension, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.
Application instructions: Apply a minimum finished spray volume of 2 gallons per acre by air or 5 gallons per acre by ground unless otherwise directed under

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to aquatic invertebrates and wildlife. Birds in treated areas may be killed. Shrimp and other aquatic organisms may be killed at recommended application rates. Do not contaminate water by cleaning of equipment or disposal of wastes near or into waterways.

Crop	Insect	Pint/A
Alfalfa	Pea aphid,	1 1/2 - 2
	Alfalfa weevil larvae	
Corn (field)	Corn earworm	1 - 2
	Flea beetles	
	Variagated cutworm	
Soybean	Green cloverworm	1/2 - 1
	Mexican bean beetle	
	Bean leaf beetle	

Pints/A	Do Not Cut or Graze Alfalfa Within:
1	7 days
1 1/2	14 days
2	28 days

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.
STORAGE: Do not store below temperature of 0° F. Do not store under conditions which might adversely affect the container or its ability to function properly.
CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedure approved by state and local authorities.

Understanding Pesticide Labels: Study Questions

The following questions are intended to stimulate discussion. There may be no best answer.

1. How do you know that the **NO-PEST EXTRA** label is registered with the Environmental Protection Agency?

2. **NO-PEST EXTRA** is registered with the Environmental Protection Agency. Who can purchase it from a Nevada pesticide dealer? Explain.

3. If you wanted to accurately identify this product, how would you best do so? Which name would you use: chemical name or brand name?

4. **NO-PEST EXTRA** is a **Restricted Use Pesticide (RUP)**. How do you know whether a pesticide product is a **General Use Product (GUP)** or a RUP? When is it required that a pesticide applicator be certified to use a pesticide in Nevada?

5. What is the signal word on the **NO-PEST EXTRA** label? What toxicity category is this—High, Moderate or Low? Why is this word used? What does it mean? Why does this product also contain the word “**POISON**” and the skull and cross bones symbol?

6 *Understanding Pesticide Labels*

6. How do the **Personal Protective Equipment (PPE)** requirements for the **NO-PEST EXTRA** label differ between individuals who apply this product and those who mix or load it?

7. Can **NO-PEST EXTRA** be applied to field corn to control black cutworms?

8. What is the **Restricted-Entry Interval (REI)** for **NO-PEST EXTRA** if the application is made near Fallon? Seattle? Why?

9. If you wanted to control alfalfa weevil in 8 acres of alfalfa (at 1.5 pints/acre) and variegated cutworm in 320 acres of field corn, how much **NO-PEST EXTRA** would you need to purchase?

10. What are the grazing restrictions on alfalfa for question #9?

Understanding Pesticide Labels: Answers

The following questions are intended to stimulate discussion. There may be no best answer.

1. What provides the clue that the **NO-PEST EXTRA** label is registered with the Environmental Protection Agency?

EPA Reg. No. 12345-10 & EPA Est. No. 56787-CO-3

2. **NO-PEST EXTRA** is registered with the Environmental Protection Agency. Who can purchase it from a Nevada pesticide dealer? Explain.

A certified pesticide applicator and his or her designees, but they have to provide the certification number of the certified applicator at purchase. The certified applicator can use or must directly supervise the application of a restricted use pesticide.

3. If you wanted to accurately identify this product, how would you best do so? Which name would you use: chemical name or brand name?

To identify product look at the label. Use both the chemical and brand name.

4. **NO-PEST EXTRA** is a Restricted Use Pesticide (RUP). How do you know whether a pesticide product is a General Use Product (GUP) or a RUP? When is it required that a pesticide applicator be certified to use a pesticide in Nevada?

The label will tell you if the pesticide is either RUP or GUP, see second box. Pesticide certification is required when using RUP products.

5. What is the signal word on the **NO-PEST EXTRA** label? What toxicity category is this-High, Moderate or Low? Why is this word used? What does it mean? Why does this product also contain the word “**POISON**” and the skull and crossbones symbol?

*Danger. High. It is used to warn the user. This product is highly toxic. The word “**POISON**” and the skull and crossbones symbol are used to further illustrate the toxicity and warn the user.*

6. How do the Personal Protective Equipment (PPE) requirements for the **NO-PEST EXTRA** label differ between individuals who apply this product and those who mix or load it?

The same PPE is required for both, except the handler must wear a chemical-resistant apron too. See the fourth box. Always use PPE when handling pesticides.

7. Can **NO-PEST EXTRA** be applied to field corn to control black cutworms?

Yes, because the application site is on the label. However, black cutworm is not mentioned in the crop and pest application table; this product may not control black cutworm.

8. What is the Restricted-Entry Interval (REI) for **NO-PEST EXTRA** if the application is made near Fallon? Seattle? Why?

REI is 72 hours in outdoor areas where the rainfall is less than 25 inches a year, 48 hours for other areas.

9. If you wanted to control alfalfa weevil in 8 acres of alfalfa (at 1.5 pints/acre) and variegated cutworm in 320 acres of field corn, how much **NO-PEST EXTRA** would you need to purchase?

$$8 \text{ acres} \times 1.5 \text{ pt/ac} = 12 \text{ pt.}$$

$$320 \text{ acres} \times 2 \text{ pt/ac} = \underline{640 \text{ pt.}}$$

652 pints or 81.5 gallons

10. What are the grazing restrictions on alfalfa for question #9?

Do not cut or graze within 14 days, see second table under “Environmental Hazards”.

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Precaution: All pesticides have both benefits and risks. Maximize the benefits and minimize the risks by following the label. Labeled information contains both instructions and limitations. Pay close attention to the directions for use and the precautionary statements. Pesticide labels are legal documents and it is a violation of both federal and state laws to use a pesticide in a manner inconsistent with its labeling. The pesticide applicator is legally responsible for the proper use of a pesticide. Always read and follow the label!

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