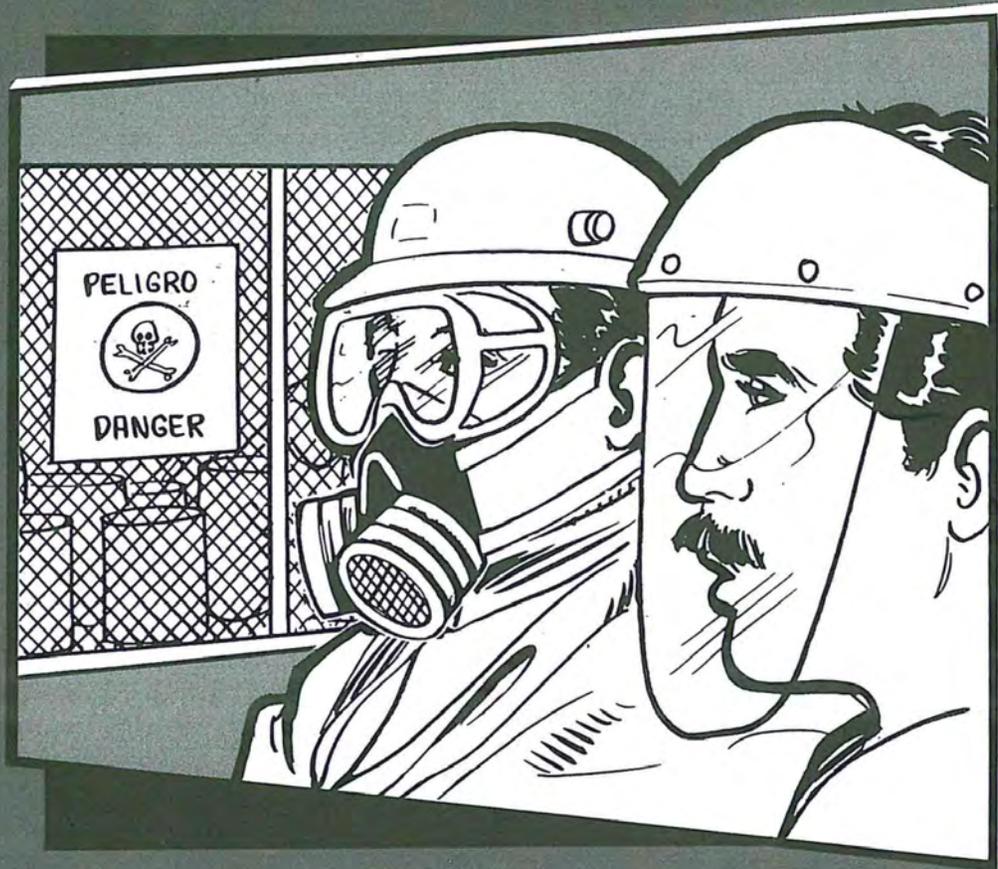


THE ILLUSTRATED GUIDE TO

Pesticide Safety



GUIA ILUSTRADA PARA

El uso seguro de pesticidas

Instructor's Edition

UNIVERSITY OF CALIFORNIA STATEWIDE INTEGRATED PEST MANAGEMENT PROJECT
AGRICULTURAL AND NATURAL RESOURCES PUBLICATION #21489

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Pesticide Safety

Instructor's Edition

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INTRODUCTION

THIS BOOKLET WILL help you provide the training you are required to give all employees who handle pesticides. After the training session, employees can keep their copies to refer to as needed. The booklets will also serve as a useful source of pesticide safety information for employees who do not handle pesticides. There are two editions: this is the trainer edition; the smaller edition, Publication 21488, is for workers.

State law requires employers to provide training to workers handling pesticides. Handlers include not only mixers, loaders, and applicators, but also flaggers and people involved in the cleaning, repair, and maintenance of pesticide application equipment. Training must be given for each pesticide before it is handled for the first time in a particular work season. So if a worker handles malathion at the beginning of the spray season, training specific to that pesticide must be given prior to handling. If later the worker is to use Roundup®, training in the proper handling of Roundup® must be provided.

The training you provide must include all the topics listed on the Pesticide Safety Training Record. A copy of the training record has been included at the front of this booklet. Use this booklet along with the training record. The booklet discusses all of the topics listed in the training record in a general way. Various tables, lists, and other informational sheets have been included in your

version to help you customize your training to the specific pesticide being discussed. When training workers, you should also have the product label on hand so you can refer to it.

Employers often have to provide pesticide training to workers who speak little or no English. Therefore the text is in both English and Spanish. The drawings serve as pictorial links between the English and Spanish captions, so that even if trainees speak and read only Spanish, the trainer will know what information they are reading.

Each time an employee is trained to handle a pesticide, the name of the pesticide and the date of training should be written on the training record in the first available vertical column. Each topic covered should have a check mark beside it in the column corresponding to the pesticide covered. You are required to keep records of employee training on file for two years. They must be made available on request to inspectors from the county Agricultural Commissioner's office or the California Department of Food and Agriculture.

The Pesticide Safety Training Record is provided in Spanish as well as English. You can photocopy the form for your employees to keep for their own records. Other informational sheets have also been included at the back of this booklet.

ACKNOWLEDGMENTS

THIS BOOKLET WAS produced under the auspices of the University of California Statewide Integrated Pest Management Project. It was prepared under the direction of Mary Louise Flint, Director, IPM Education and Publications, University of California, Davis; and an advisory committee composed of agricultural service industry representatives.

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REGISTRO DE ENTRENAMIENTO PARA EL USO DE PESTICIDAS

Nombre del empleado _____

Firma _____

Nombre del patrón _____

Firma del entrenador _____

Clase de trabajo:

- Mezclador/Cargador
- Aplicador
- Banderero
- Otro

PESTICIDAS

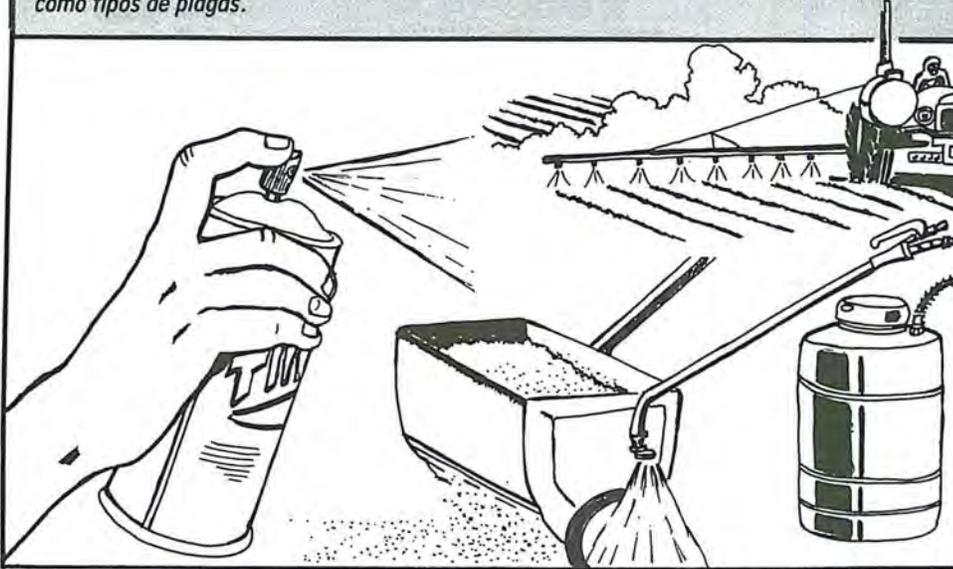
Iniciales de instructor
Iniciales del empleado
Fecha

LEA LA ETIQUETA: Palabra de señal, declaraciones de precauciones y primeros auxilios, cuánto pesticida se debe aplicar, cómo mezclar y aplicar el pesticida.										
PROCEDIMIENTOS SEGUROS: Cómo levantar, abrir y vaciar envases. Cómo manejar el equipo, etc.										
ROPA Y EQUIPO DE PROTECCION: Traje enterizo, guantes, gafas, botas, delantal, respirador, etc.										
EL RESPIRADOR: Uso y mantenimiento.										
SINTOMAS DE ENVENENAMIENTO CON PESTICIDAS: Reporte los síntomas inmediatamente.										
SI SE CONTAMINA: Quítese la ropa contaminada inmediatamente y lávese bien con agua y jabón. Si los ojos se contaminan, enjuáguelos inmediatamente.										
LAVESE BIEN LAS MANOS Y LOS BRAZOS CON AGUA Y JABON: Antes de comer, beber, fumar, o usar el escuzado.										
PONGASE ROPA DE TRABAJO LIMPIA CADA DIA.										
INFORMACION RELACIONADA CON EMERGENCIAS MEDICAS: El nombre, la dirección, y el número telefónico de la clínica, el médico, o la sala de emergencia y dónde está colocada ésta información.										
SUPERVISION MEDICA: Se requiere cuando se manejen carbamatos y organofósforos cuyas etiquetas tienen las palabras de señal "DANGER" (Peligro) o "WARNING" (Advertencia), durante más de seis días en un periodo de treinta días.										
ENJUAGUE LOS ENVASES TRES VECES INMEDIATAMENTE QUE SE VACIEN										
DESVIO: No permita que se desvíe el rocío fuera del área de aplicación. Evite la contaminación de personas, animales, y vías acuáticas. Tenga presente los problemas que podrían surgir por consecuencia del desvío. No aplique pesticidas si hace aire.										
ALMACENAMIENTO DE PESTICIDAS: Se deben guardar bajo llave, y con un rótulo de advertencia. Mientras no estén bajo llave, deben estar bajo la autorizada vigilancia de una persona.										
SISTEMA CERRADO: Es requerido cuando se mezcle un pesticida líquido de la Categoría I a menos que se usa un sólo envase original de un galón o menos por trabajador por día.										
FOLLETOS DE INFORMACION SOBRE EL USO SEGURO DE LOS PESTICIDAS.										

Chemicals that control pests are called pesticides. They include insecticides, which kill insects; herbicides, which kill weeds; and fungicides, which control plant diseases. There are as many kinds of pesticides as there are kinds of pests.

See Appendix 1.

Los productos químicos para controlar las plagas se llaman pesticidas. Comprenden los insecticidas, que matan insectos; los herbicidas, contra las malas hierbas o malezas; y los fungicidas, que combaten las enfermedades de las plantas. Hay tantos tipos de pesticidas como tipos de plagas.



Pesticides can be used safely, but remember that most pesticides control pests by poisoning them; if you are not careful, they can poison or injure you, too. If you handle pesticides, your employer must train you in how to handle each one you use. This booklet will help you learn how to work safely with pesticides.

Los pesticidas pueden usarse con seguridad, pero recuerde que la mayoría de los pesticidas envenenan a las plagas y si no se cuida, también podrían envenenarlo o dañarlo a Ud. Si Ud. trabaja con pesticidas, su empleador debe entrenarlo para el uso seguro de cada pesticida. Este folleto le ayudará a aprender a trabajar con estas sustancias químicas en forma segura.

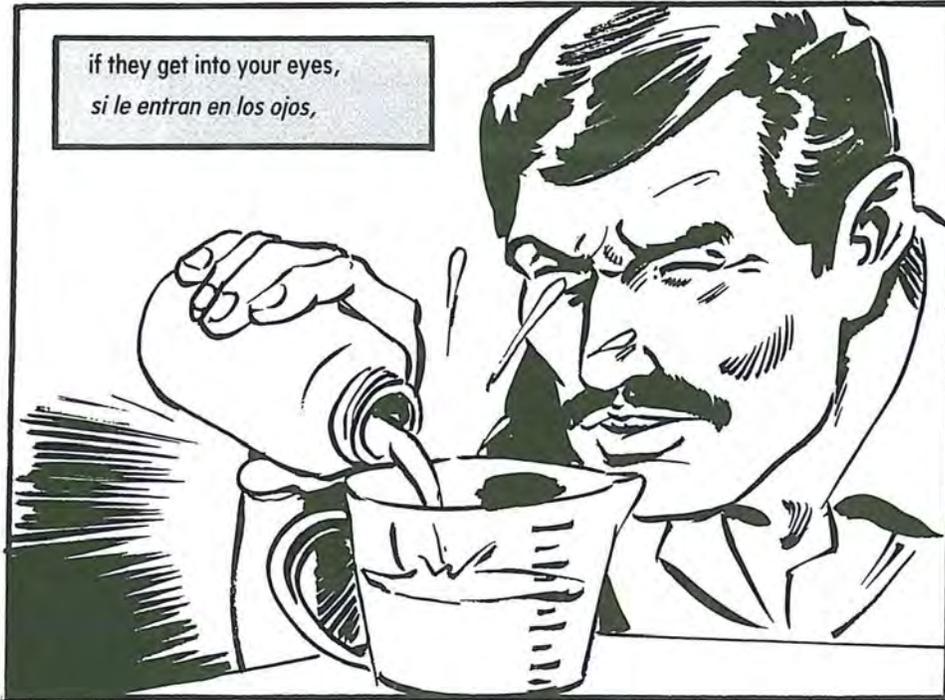


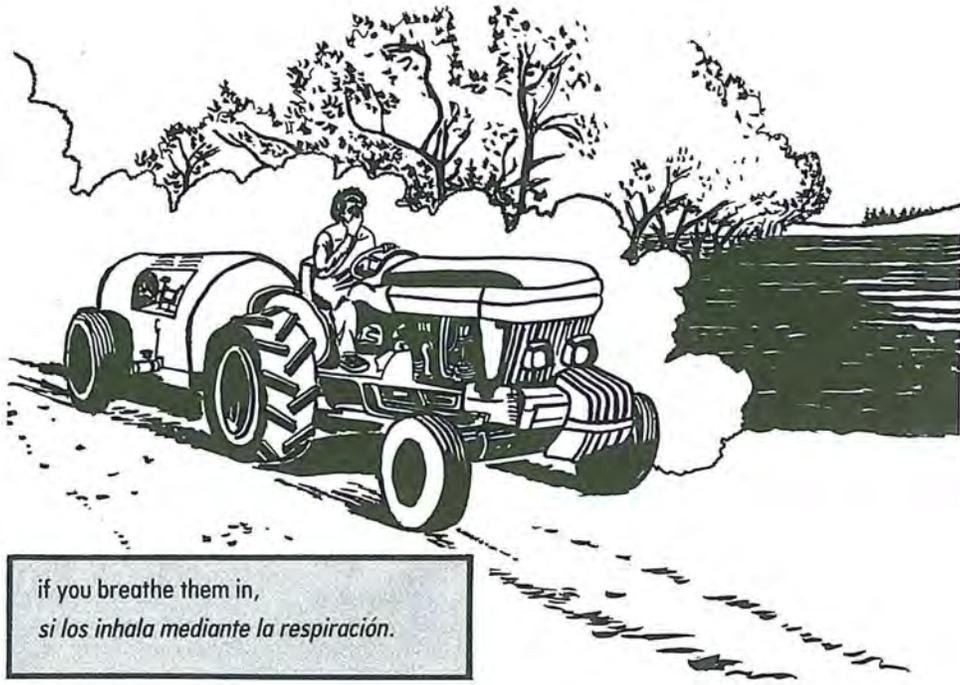


Pesticides have to get on or into your body before they can hurt you. This can occur if you swallow them,

Los pesticidas causan daño a las personas cuando entran en contacto con o penetran en el cuerpo. Esto ocurre si Ud. traga pesticidas,

if they get into your eyes,
si le entran en los ojos,





if you breathe them in,
si los inhala mediante la respiración.



or if they get on your skin. This can happen if a pesticide gets spilled or splashed on you, if the spray or dust touches you, or if you touch treated plants or animals too soon after treatment. Skin contamination is the most common cause of pesticide-related illness and injury for agricultural workers.

o si entran en contacto con la piel. Esto ocurre cuando hay un derrame o salpicadura de pesticida, si el polvo o el rocío lo alcanza o si Ud. toca plantas o animales tratados antes de lo debido. La contaminación por la piel es la causa más común de las enfermedades y lesiones causadas por los pesticidas a los trabajadores agrícolas.

See Appendix 2.

Once pesticides get inside you, they can make you sick right away,
Cuando los pesticidas penetran en su cuerpo, pueden enfermarlo inmediatamente,



or, in some cases, they may affect your health after many months or years have passed.
o, en ciertos casos, pueden afectar su salud después de muchos meses o hasta años.



Exposure to some of the most commonly used insecticides can cause tiredness, headache, dizziness, blurred vision, nausea and vomiting, or cramps and diarrhea.

La exposición a algunos de los insecticidas más comunes puede causar cansancio, dolores de cabeza, mareos, visión nublada, náuseas y vómitos o calambres y diarrea.



Consult the list in Appendix 3 and identify to trainees which of the materials listed are being used. If you are not training for organophosphates or carbamate pesticides, skip this section. NOTE: Because certain pesticides are sometimes eliminated from use or new ones added, you may be using organophosphates or carbamates not on this list. If label states that atropine and/or 2-PAM are antidotes, the material is either an organophosphate or an N-methyl carbamate.

ORGANOPHOSPHATES
AND
N-METHYL CARBAMATES
USED

See Appendix 4 for common pesticide poisoning symptoms.



A more serious poisoning with the same insecticide might cause excessive sweating, drooling, chest pains, difficulty breathing, convulsions, or unconsciousness.

Un envenenamiento más grave con el mismo insecticida puede causar sudor excesivo, babeo, dolores en el pecho, dificultad para respirar, convulsiones o pérdida del conocimiento.



Poisoning from these insecticides may make the pupils of your eyes look very small, like pinpoints.

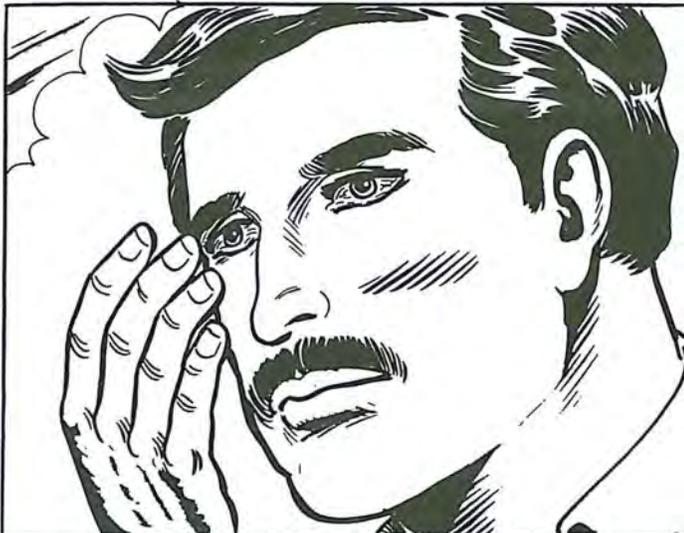
El envenenamiento con estos insecticidas pueden reducir la pupila del ojo al tamaño de la cabeza de un alfiler.



Some fungicides and herbicides, as well as certain other pesticides, can give you skin rashes,

Algunos fungicidas y herbicidas, además de ciertos otros pesticidas, pueden causar erupciones o sarpullidos en la piel,

Check Appendix 5 to see if a specific material is listed. Appendix 8 has been included so that you can list the pesticides handled by your workers that pose special hazards. Also check the precautionary statement on the product label for any mention of skin irritation.



or they may irritate or damage your eyes.

o pueden irritar o dañar los ojos.

Check Appendix 6 to see if a specific material is listed. Appendix 8 has been included so that you can list the pesticides handled by your workers that pose special hazards. Also check the precautionary statement on the product label for mention of hazards to the eyes.

Fumigants such as methyl bromide and aluminum phosphide can be very dangerous if you breathe them in or if they penetrate your skin. They can damage your lungs and other organs or affect your nervous system.

Los fumigantes, como el bromuro de metilo y el fosforo de aluminio, pueden ser muy peligrosos si los inhala o si lo penetran por la piel. Pueden dañar los pulmones y otros órganos o afectar el sistema nervioso.

See Appendix 7. Appendix 8 has been included so that you can list the pesticides handled by your workers that pose special hazards.



People who have been poisoned by a fumigant may talk and act as if they are drunk.

Las personas envenenadas con un fumigante pueden hablar y portarse como si estuvieran borrachas.

If you are careful when you use pesticides or work in areas where pesticides have been applied, you are much less likely to be exposed to them.

Si Ud. pone atención y tiene cuidado al usar pesticidas o al trabajar en áreas tratadas, las posibilidades de contaminación se reducen.



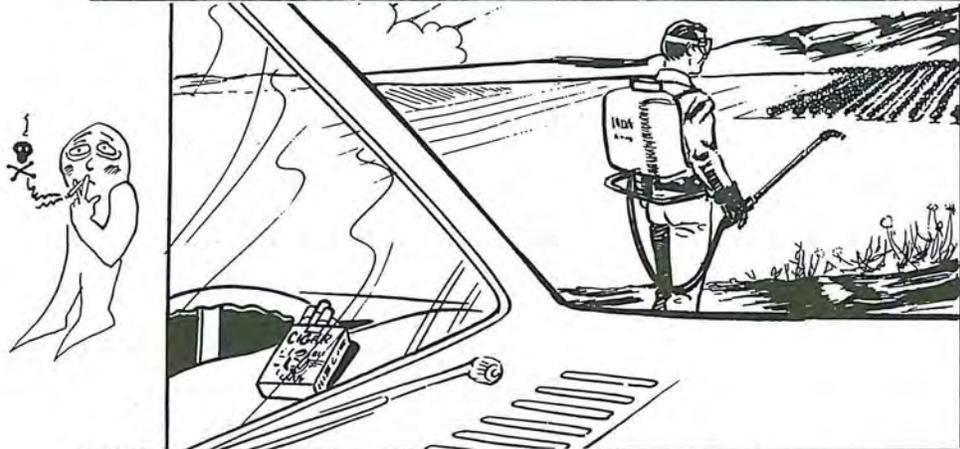
For example, if you have been handling pesticides or working in treated areas, wash your hands with soap and water before you eat, drink, smoke, put on makeup, or use the bathroom. Never eat in areas where pesticides are stored, mixed, or applied.

Por ejemplo, si Ud. ha estado trabajando con pesticidas o en áreas tratadas, lávese las manos con agua y jabón antes de comer, beber, fumar, ir al baño o maquillarse. Nunca coma, beba ni fume en áreas donde se guardan, mezclan o aplican pesticidas.



Tobacco will absorb pesticides, so if you are a smoker don't carry your cigarettes when you work with pesticides. Leave them somewhere where they won't get contaminated. Otherwise you may find yourself smoking pesticide-laced cigarettes!

El tabaco absorbe los pesticidas. Si Ud. fuma, no lleve sus cigarrillos cuando va a trabajar con pesticidas. Déjelos en un lugar seguro donde no se contaminen. ¡De otro modo, puede fumar cigarrillos envenenados!



Even if you never handle pesticides, you work around treated crops, and your clothes can pick up small traces of pesticides. So change your work clothes every day and wash them before wearing them again.

Aun cuando no maneje pesticidas, Ud. trabaja cerca de cultivos tratados y su ropa puede contaminarse con pequeñas cantidades de pesticidas. Por eso, cámbiese la ropa de trabajo todos los días y lávela antes de usarla otra vez.



Don't let other people touch your dirty work clothes.
No permita que nadie toque su ropa de trabajo sucia.



Shower and put on clean clothes right after work.
Apenas termine de trabajar, báñese en ducha y póngase ropa limpia.





Never eat anything from the field until you have checked with your boss to see if it is safe. Crops that are still in the field sometimes have enough pesticide on them to make you sick if you eat them.

Nunca coma nada del campo sin preguntarle a su patrón si es seguro. Los cultivos del campo a veces tienen suficiente pesticida como para enfermarlo al tragarlos.



For the same reason, don't bring food from the field home to your family unless you know it is safe to eat.

Por la misma razón, no traiga nada del campo a su casa, a menos que sepa que su familia puede comerlo sin peligro de envenenarse.

See Appendix 9. All workers should be informed of preharvest intervals that could affect them.



When certain pesticides are applied, you have to wait a long time before going into the treated area. If there is a warning sign telling you not to enter, going in could make you sick. Sometimes no warning signs are used, so always check with your boss before you enter a new field.

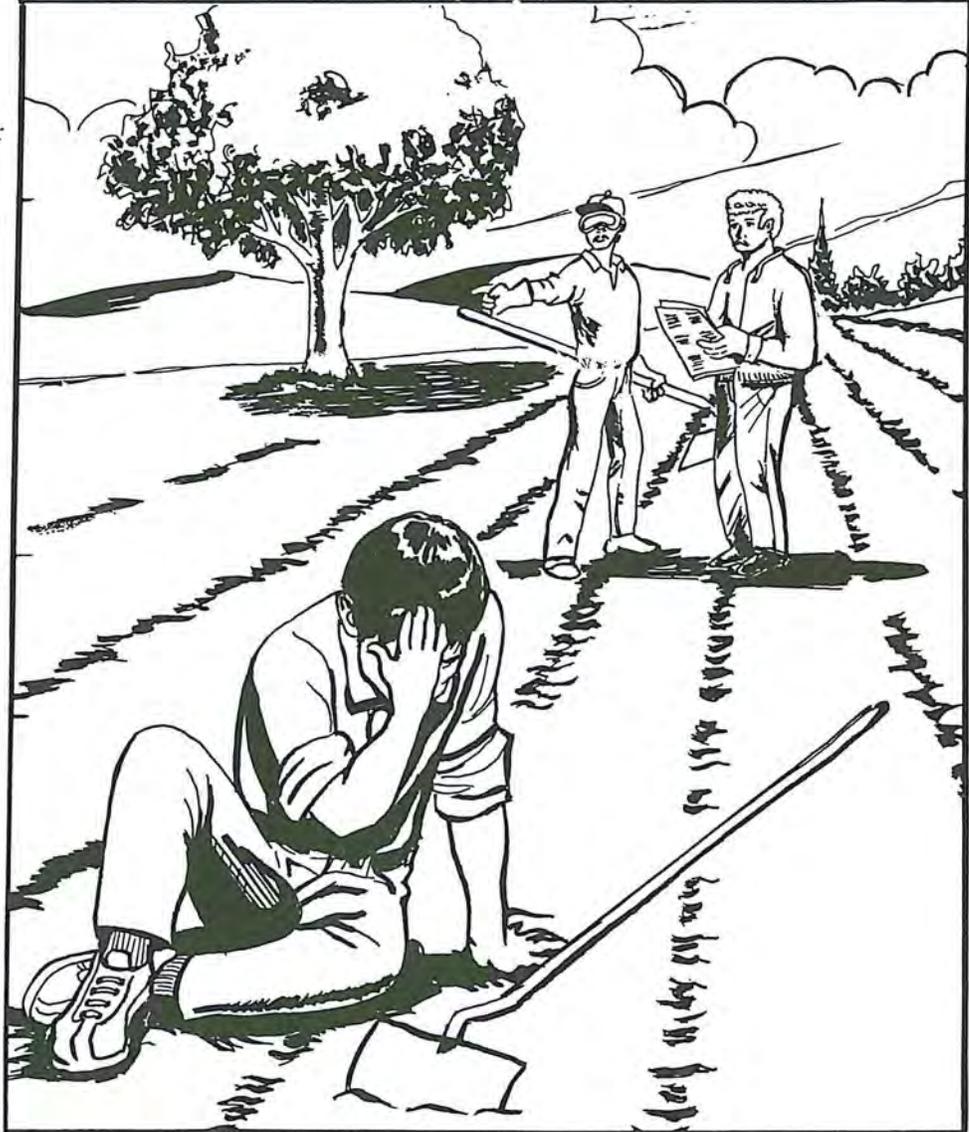
Cuando se aplican ciertos pesticidas, es necesario esperar mucho tiempo antes de regresar al área tratada. Si hay un cartel de aviso prohibiendo la entrada al campo, Ud. puede enfermarse si entra. A veces no hay carteles de aviso. Pregúntele siempre a su patrón antes de entrar a un campo nuevo.

See Appendix 10. Workers should be shown what a reentry sign looks like.

If you or someone else starts to feel sick while working, tell your supervisor right away. Your supervisor should know what to do in case of a pesticide-related emergency. Your employer must put a list of emergency phone numbers and addresses near a phone in your work area. Learn where this information is posted and be prepared to use it.

Si Ud. o alguna otra persona comienza a sentirse mal durante el trabajo, avísele a su supervisor inmediatamente. Su supervisor sabe lo que se debe hacer en caso de emergencia por contaminación con pesticidas. Su empleador debe colocar una lista con números telefónicos y direcciones de emergencia cerca de un teléfono en su área de trabajo. Fíjese dónde está la información y aprenda a usarla.

See Appendix 11. Regulations require that employers arrange for emergency medical care for employees *before* they start handling pesticides. Workers, and especially supervisors, should be made aware of these arrangements. The telephone number and address of the emergency facility should be posted at the workplace—or on the pesticide application vehicle, when that is more practical. The number should be placed close to a telephone that workers can use in case of an emergency. You must show the workers where the information is posted.



If a pesticide gets on someone's clothes, take the clothing off immediately and wash the person's skin with lots of soap and water. The faster you act, the less likely it is that someone will get sick or injured.

Si un pesticida entra en contacto con la ropa de una persona, quítele la ropa inmediatamente y lava la piel con mucha agua y jabón. Cuanto más rápido actúe, menos posibilidades hay de que la persona se enferme o se lastime.



If pesticides get into someone's eyes, rinse them with a steady, gentle stream of cool, clean water for 15 minutes.

Si el pesticida entra en contacto con los ojos de una persona, enjuáguelos con un chorro suave y constante de agua fresca y limpia durante 15 minutos.

Show workers the location of eye
rinse apparatus. Location:



Show workers first aid equipment
and tell them where it is kept.

Location: _____



If a pesticide is swallowed, check the label to see if there are first aid instructions that should be followed while getting medical help.

Si alguien traga un pesticida, lea la etiqueta para ver si hay instrucciones de primeros auxilios que deben administrarse mientras se llama al médico.

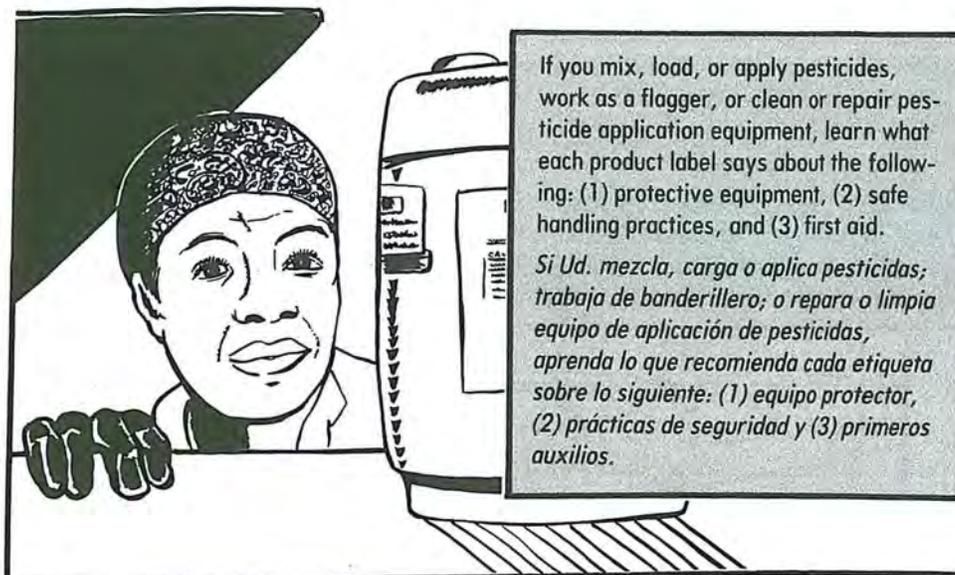
If a pesticide is swallowed or gets into someone's eyes, or if there is a serious spill on the skin, the victim should be taken to see a doctor immediately. The person must not go to the doctor's office alone. Someone must go along and do the driving. Pesticide poisoning victims may suddenly become very ill without any warning.

Quando un pesticida entra en los ojos, se traga o se derrama gravemente sobre la piel, la víctima debe ser llevada a ver a un médico inmediatamente. La víctima no debe ir al médico sola. Alguien debe acompañar a la víctima y conducir el vehículo. Las personas envenenadas con pesticidas pueden ponerse graves súbitamente sin ningún aviso.



Take along the pesticide label or at least know the name of the pesticide. The doctor has to know what made the person sick in order to provide the correct treatment.

Lleve la etiqueta del pesticida consigo, o por lo menos sepa el nombre del pesticida. El médico debe saber cuál es el veneno que afectó a la persona p. a. proveer el tratamiento adecuado.



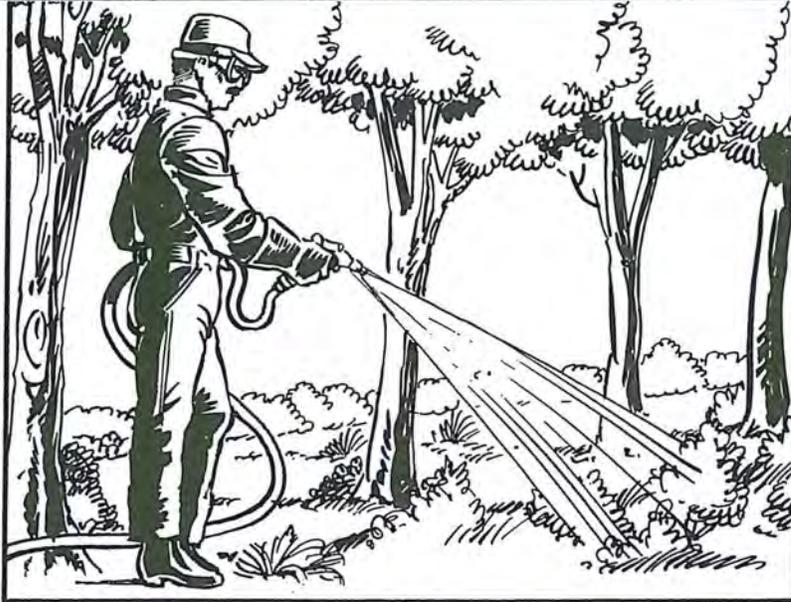
Above all, pay attention to the signal word included on every pesticide label. This signal word tells you how dangerous the pesticide is.

Sobre todo, preste atención a la palabra de señal incluida en cada etiqueta. Esta palabra le avisa cuán peligroso es el pesticida.

See Appendix 12 (sample label, in English and Spanish, with an explanation of label parts also in English and Spanish).

The word CAUTION is used for the least dangerous pesticides. Even so, these pesticides can still harm you if you aren't careful.

La palabra CAUTION se usa para los pesticidas menos peligrosos. Pero, aun asi, estos pesticidas pueden afectar su salud si no los usa con cuidado.



Look at the label and find the signal word. Point it out to trainees and relate it to the degree of hazard. Also see Appendix 13. For general training, this is a good time to go over all labels of materials used and point out the signal words and their significance.

The word WARNING means that the pesticide can be fairly dangerous. Swallowing from a teaspoonful to an ounce could be fatal.

La palabra WARNING significa que un pesticida puede ser bastante peligroso. El tragar de una cucharadita a una onza puede ser fatal.



The word DANGER, and sometimes POISON, means the pesticide is very dangerous if it is not handled carefully. A couple of drops might be enough to kill or seriously injure you.

La palabra DANGER, y a veces POISON, significa que el pesticida es muy peligroso si no se lo usa con cuidado. Unas pocas gotas pueden causar la muerte o enfermar gravemente a una persona.



Certain special rules must be followed when you work with pesticides that have the signal word DANGER. If you are applying these pesticides, your employer or supervisor must have someone talk to you once every 2 hours, either in person or on the phone or radio, to make sure you are okay. At night, contact has to be made every hour.

Al trabajar con pesticidas que tienen la palabra DANGER, Ud. debe seguir ciertas reglas especiales de seguridad. Mientras Ud. aplica estos pesticidas, su empleador o supervisor debe establecer contacto con Ud. cada 2 horas--personalmente, por teléfono o por radio--para asegurarse de que Ud. está bien. Por la noche, el contacto debe llevarse a cabo cada hora.

If Category I materials are used, discuss the person-to-person contact method used at your operation.



All Category I liquids (signal word "Danger") should be listed here if they are used in quantities requiring a closed system.

PESTICIDES REQUIRING A CLOSED SYSTEM

A closed transfer system must be used to load liquids with the word DANGER on the label into the spray tank. The only exception is if you are loading a single original container of 1 gallon or less that day.

Los pesticidas líquidos con la palabra DANGER en la etiqueta deben ser sacados del envase original y añadidos al tanque de rociar a través de un sistema cerrado. La única excepción es la carga de un solo envase original de 1 galón o menos cantidad por día.



No one under the age of 18 should handle a pesticide that requires the use of a closed system, a respirator, or full body protection.

Ninguna persona menor de 18 años puede manejar pesticidas que requieren el uso de un sistema cerrado, una respirador o la protección total del cuerpo.

Remember, pesticides can make you sick if you get them on you. Your employer must give you all the protective clothing and equipment you need, but it is up to you to use the right protective equipment and clothing for the pesticide you are using and the job you are doing.

Recuerde, los pesticidas pueden enfermarlo si entran en contacto con Ud. Su empleador debe darle toda la ropa y el equipo protector que necesite, pero Ud. tiene que usar el equipo y la ropa adecuados para el pesticida que maneja y el trabajo que hace.



See Appendix 14. You may want to make a copy of this for your workers.



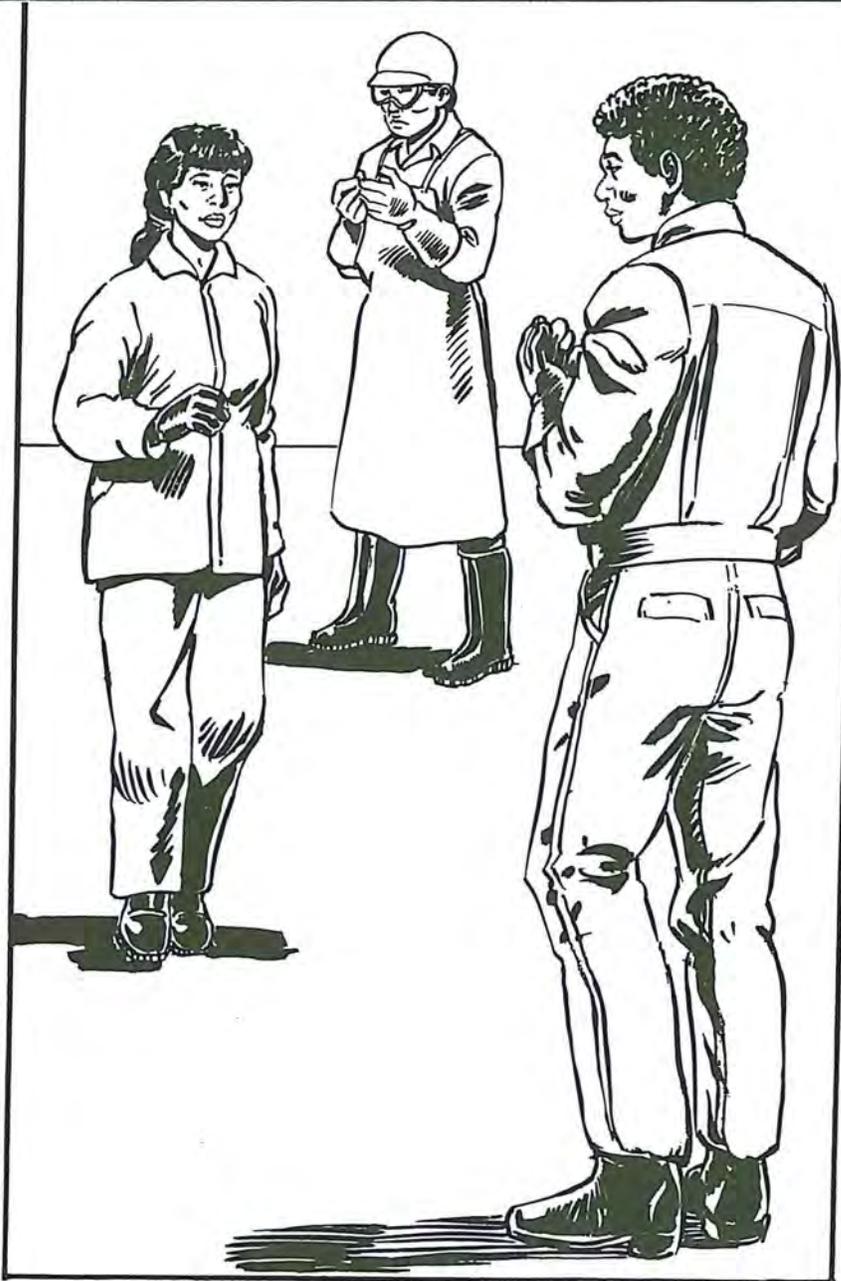
Chemical-resistant gloves and eye protection are necessary for almost all handling situations, even when they are not mentioned on the label. Sometimes, but not always, the label lists all the equipment you need to wear. When in doubt wear more protection, not less.

Aun cuando no se mencione en la etiqueta, Ud. debe usar guantes resistentes a los productos químicos y protectores para los ojos en casi todas las situaciones en las cuales se manejan pesticidas. A veces, pero no siempre, la etiqueta indica el equipo protector que necesita usar. Si tiene dudas, use más equipo protector, nunca menos.

See Appendix 14.

Protective equipment can include a plastic or Tyvek suit, a chemical resistant apron, or maybe just cloth overalls with water resistant boots and gloves and special safety glasses.

El equipo de seguridad puede incluir un traje de plástico o Tyvek, un delantal resistente a los productos químicos o, quizás, simplemente un traje enterizo de tela con botas y guantes de hule y lentes especiales de seguridad.



The trainer must connect the label statements with the information in Appendix 14 and tell trainees exactly what they need to wear for the pesticide they will be handling.

It may include goggles or a face shield and a respirator specially designed to let you breathe safely while working with pesticides.

También puede incluir gafas o una máscara para la cara y un respirador especialmente diseñado para poder respirar con seguridad mientras se trabaja con pesticidas.



See Appendix 15. Employers are required to train employees in how to use, clean, and maintain their respirators. Trainers should obtain "Respiratory Protection," Pesticide Safety Information Series A-5, from the local Agricultural Commissioner. It is available in English and Spanish and contains the information needed to adequately train workers to use and care for respirators.



Respirators come with filter cartridges. The cartridges only last for a limited time so change them every 8 hours--or sooner, if you start to smell pesticides while using the respirator. Unless you use your respirator only briefly on any given day, it is best to put in new cartridges daily.

Los respiradores tienen filtros de cartucho que sólo duran unas horas. Cámbielos cada 8 horas--o más pronto, si comienza a oler pesticida mientras usa el respirador. A menos que use el respirador durante muy poco tiempo en un día determinado, es preferible cambiar los cartuchos todos los días.



Most respirators must fit your face closely to work properly, so they don't work if you have a beard, sideburns, or other facial hair that comes between your skin and the mask. Your employer must teach you how to keep your respirator in working order.

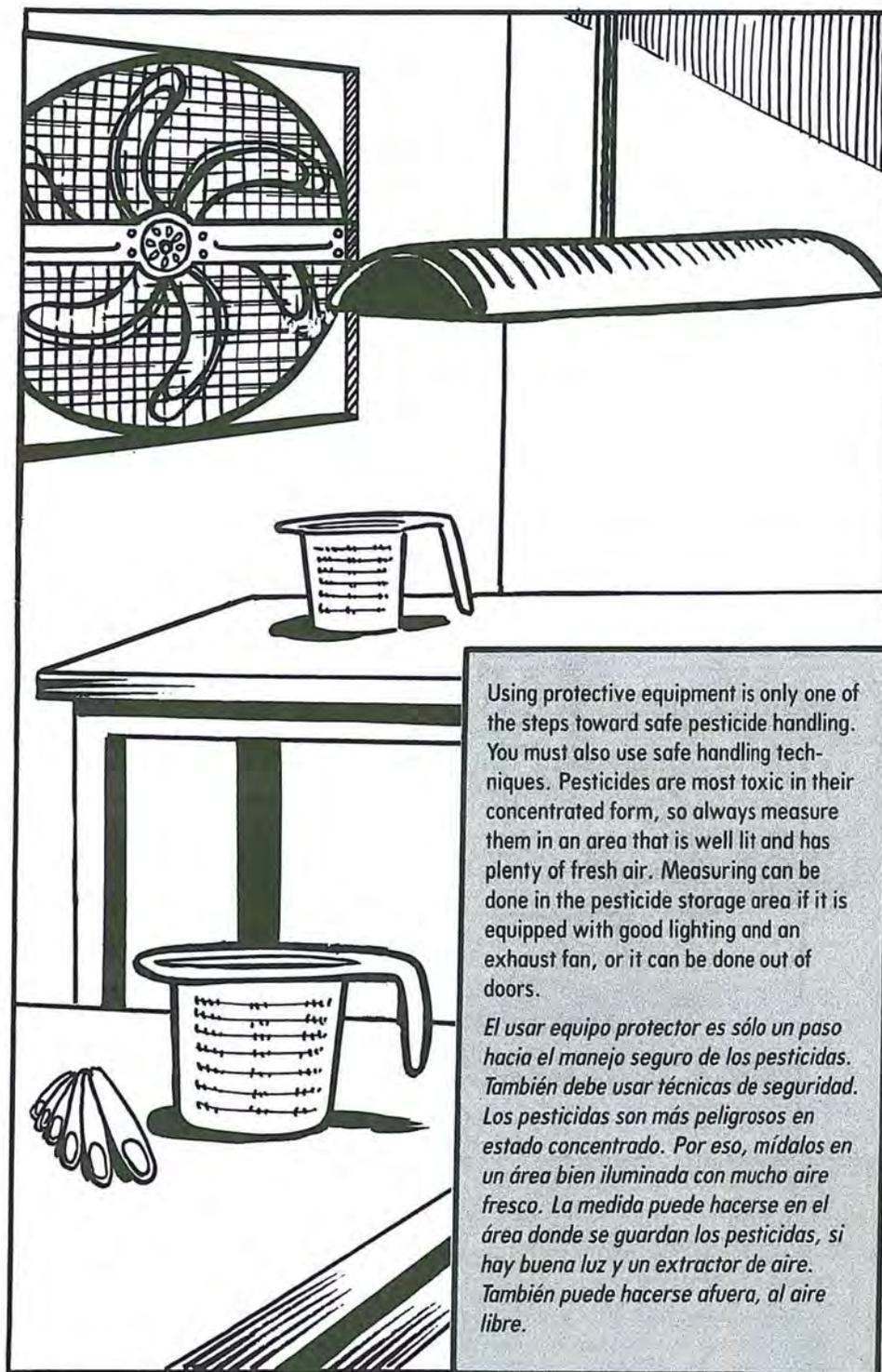
Para funcionar bien, la mayoría de los respiradores deben adecuarse a su cara y ajustarse perfectamente. No funcionan bien si Ud. tiene barba, patillas u otro vello facial entre la máscara y su piel. Su empleador debe enseñarle a mantener el respirador en buenas condiciones de funcionamiento.



If you are going to do work that requires a respirator, your employer must have you sign a form saying you can wear it without any breathing difficulty. If you think you might have a medical condition that affects your breathing, ask your doctor before you sign the form.

Si Ud. va a hacer un trabajo que requiere un respirador, su empleador debe darle a firmar un formulario donde se indica que Ud. puede usar el respirador sin dificultades para respirar. Si Ud. cree que su salud puede afectar su respiración, consulte a su médico antes de firmar el formulario.

The forms are included; see Appendices 16 and 17.



Using protective equipment is only one of the steps toward safe pesticide handling. You must also use safe handling techniques. Pesticides are most toxic in their concentrated form, so always measure them in an area that is well lit and has plenty of fresh air. Measuring can be done in the pesticide storage area if it is equipped with good lighting and an exhaust fan, or it can be done out of doors.

El usar equipo protector es sólo un paso hacia el manejo seguro de los pesticidas. También debe usar técnicas de seguridad. Los pesticidas son más peligrosos en estado concentrado. Por eso, mídalos en un área bien iluminada con mucho aire fresco. La medida puede hacerse en el área donde se guardan los pesticidas, si hay buena luz y un extractor de aire. También puede hacerse afuera, al aire libre.

Discuss the mixing and measuring area with trainees. If measuring or mixing is done inside, show them where light and fan switches are located.

Keep a special pair of scissors or a sharp knife in the pesticide storage area for opening paper containers. If you rip a bag open, dust can come flying out and get on your skin or into your mouth and lungs.

Guarde tijeras especiales o un cuchillo filoso en el área de almacenamiento de los pesticidas para abrir los envases de papel. No rompa ni rasgue las bolsas. Córtelas para que el polvo no vuele y le contamine la piel, la boca o los pulmones.



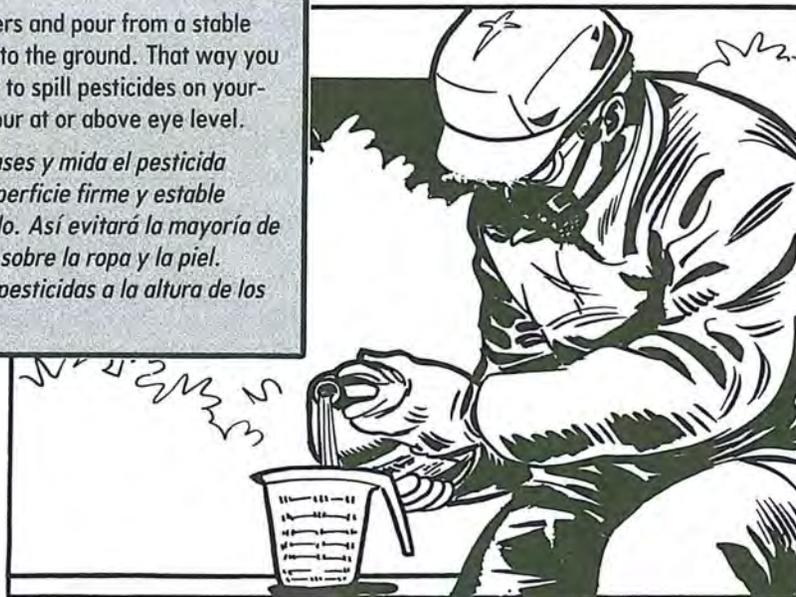
Show workers the cutting tool to be used when opening bags of pesticides.

Location: _____



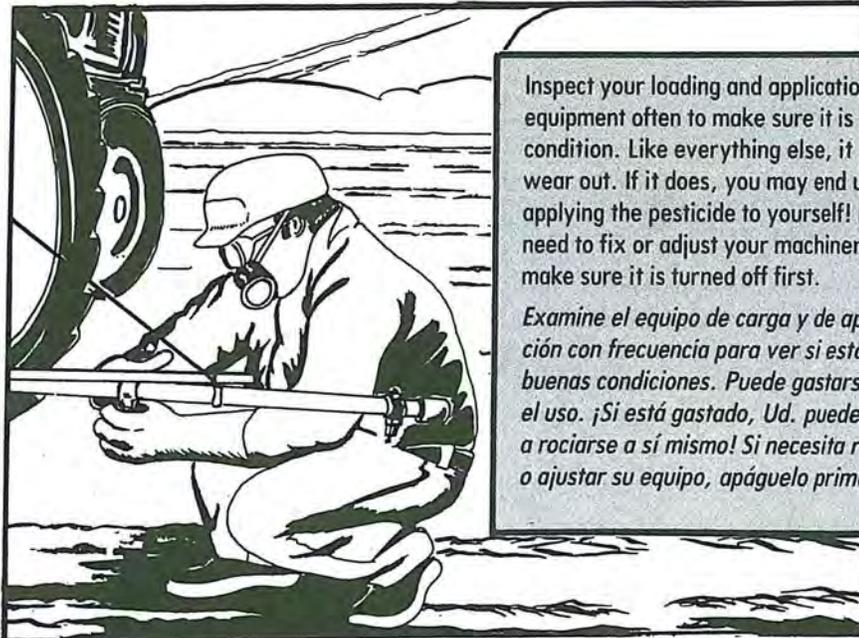
Open containers and pour from a stable surface close to the ground. That way you are less likely to spill pesticides on yourself. Never pour at or above eye level.

Abra los envases y mida el pesticida desde una superficie firme y estable cerca del suelo. Así evitará la mayoría de los derrames sobre la ropa y la piel. Nunca vierta pesticidas a la altura de los ojos.





Never try to lift a container too large or heavy for you to control. Get someone to help you.
Nunca trate de levantar un envase demasiado grande o pesado que no puede controlar. Pida ayuda.



Inspect your loading and application equipment often to make sure it is in good condition. Like everything else, it can wear out. If it does, you may end up applying the pesticide to yourself! If you need to fix or adjust your machinery, make sure it is turned off first.

Examine el equipo de carga y de aplicación con frecuencia para ver si está en buenas condiciones. Puede gastarse con el uso. ¡Si está gastado, Ud. puede llegar a rociarse a sí mismo! Si necesita reparar o ajustar su equipo, apáguelo primero.

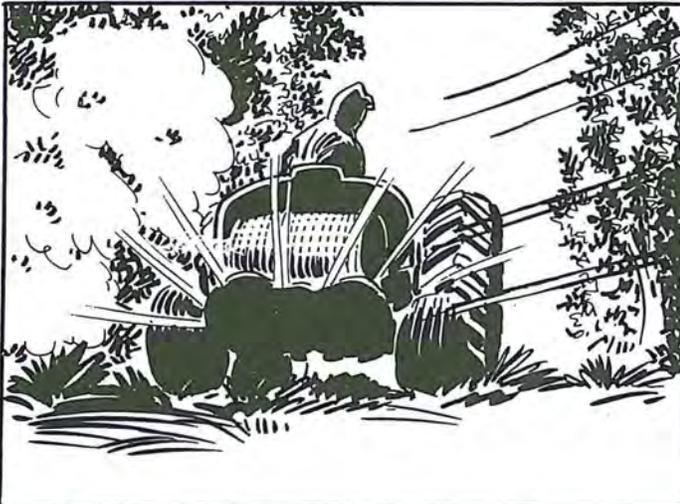
Tell trainees where and to whom to report equipment problems.

NAME OF PERSON:



Use a toothpick or some other nonmetallic object to clean spray nozzles. A sharp metal object can ruin the nozzle. Never try to clear a nozzle opening by blowing on it! Incidentally, don't save the toothpick to clean your teeth after lunch.

Use un palillo de dientes o algún objeto similar que no sea de metal para limpiar las boquillas de rociar. Los objetos metálicos pueden arruinar las boquillas. ¡Nunca trate de limpiar una boquilla soplándola! Y, a propósito, ¡no guarde el palillo para escarbarse los dientes después de comer!



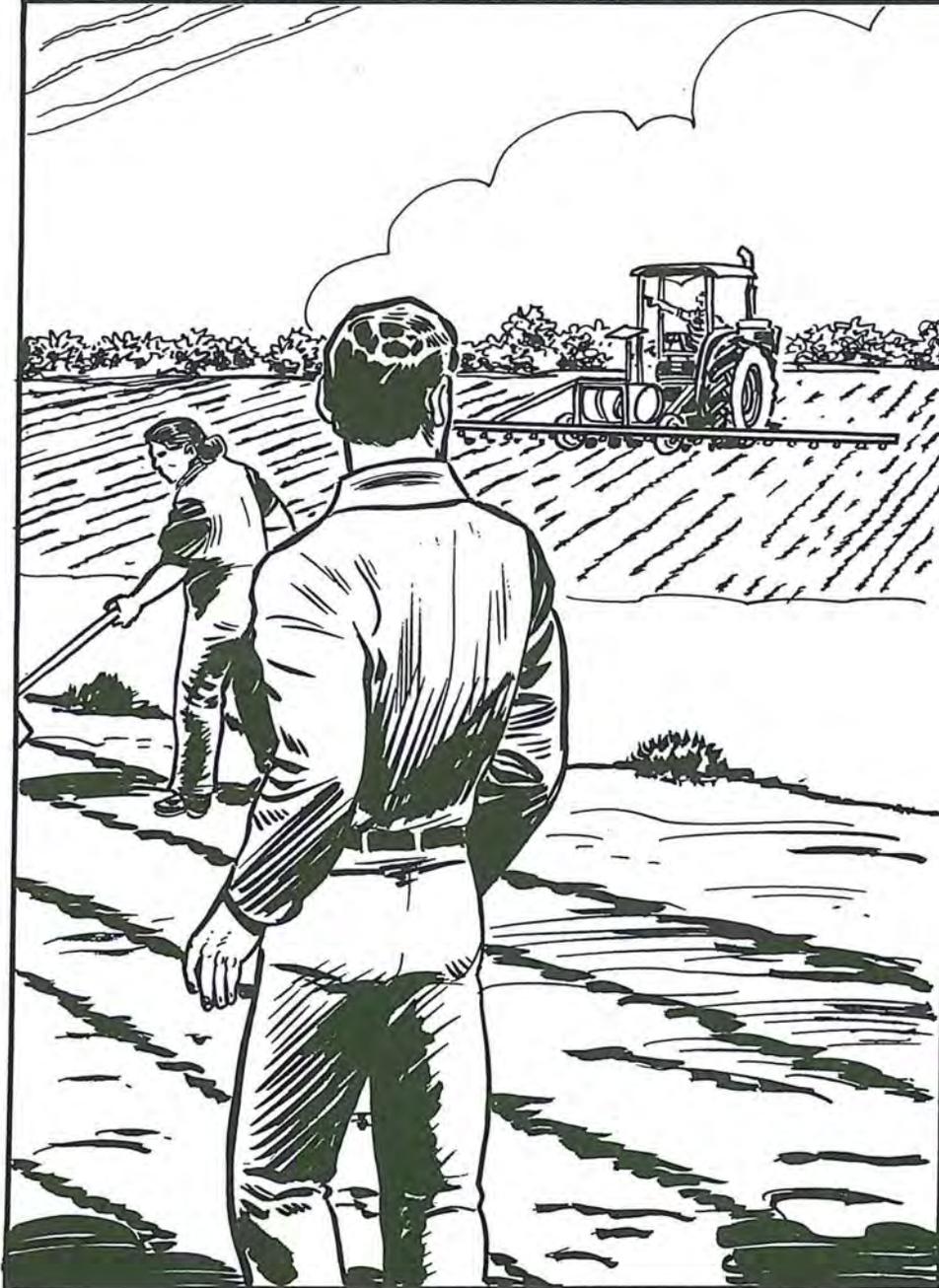
Never apply pesticides when there is a moderate or strong wind. It is dangerous and illegal. Even a light breeze can cause pesticides to drift.

Nunca aplique pesticidas cuando hay viento moderado o fuerte. Es peligroso e ilegal. Aun una brisa leve puede ocasionar arrastres de pesticidas.

See Appendix 18.

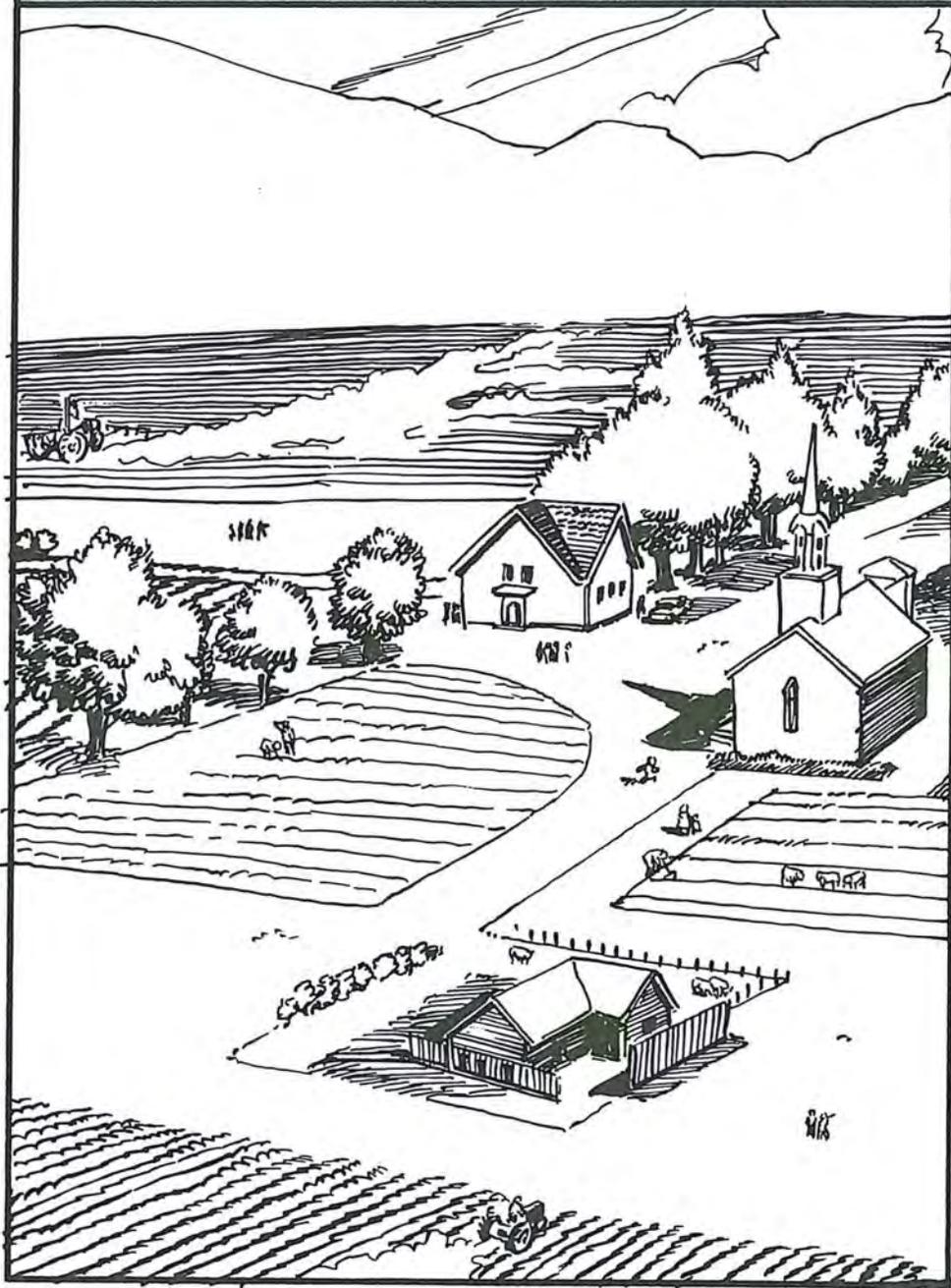
When you are ready to apply pesticides, make sure that there is no one around the area where you will be working. Do not leave packages of pesticides unattended.

Cuando esté listo para aplicar pesticidas, asegúrese de que no hay nadie en el área de trabajo. No deje paquetes de pesticidas abandonados.



It is up to you to make sure that people, animals, and property don't get exposed during an application.

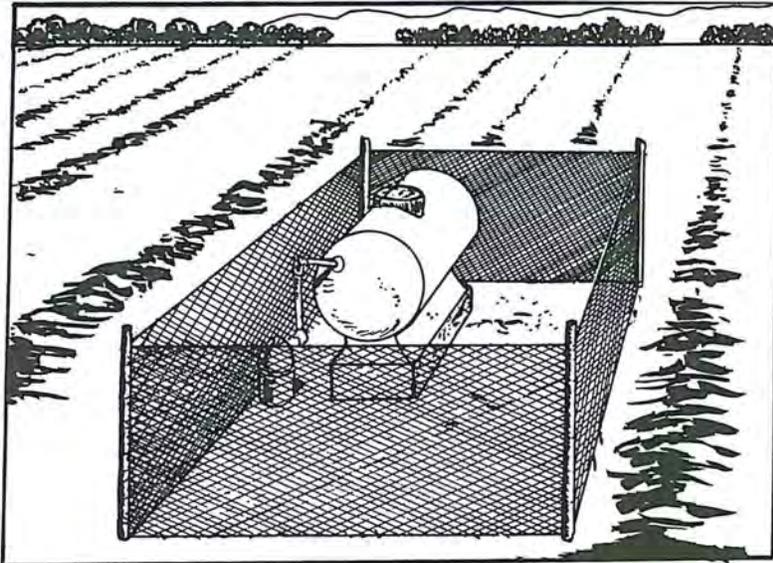
Durante la aplicación, asegúrese de que los pesticidas no contaminan a personas, animales o propiedades.





Don't let pesticides get into water supplies. Never apply a pesticide in such a way that it could drift into ponds, rivers, or other bodies of water. And do not mix and load pesticides or clean contaminated equipment near wells. Pesticides can--and do--get into groundwater.

No permita que los pesticidas contaminen las vías de agua. Nunca aplique pesticidas de tal modo que puedan arrastrarse a lagunas, ríos u otras fuentes de agua. No mezcle ni cargue pesticidas, ni limpie equipo contaminado, cerca de pozos de agua. Los pesticidas pueden penetrar en las aguas subterráneas.

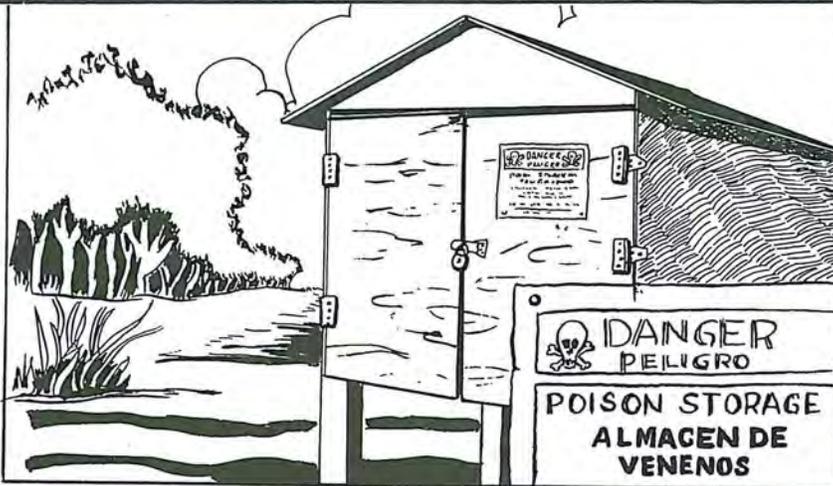


If there are wells on the property, point out their locations to employees and emphasize that mixing, loading, and equipment cleaning should not be done near the wells.

Store pesticides in their original containers. The pesticide storage area should be locked at all times, and there should be a warning sign on the door to let everyone know that toxic substances are being stored there.

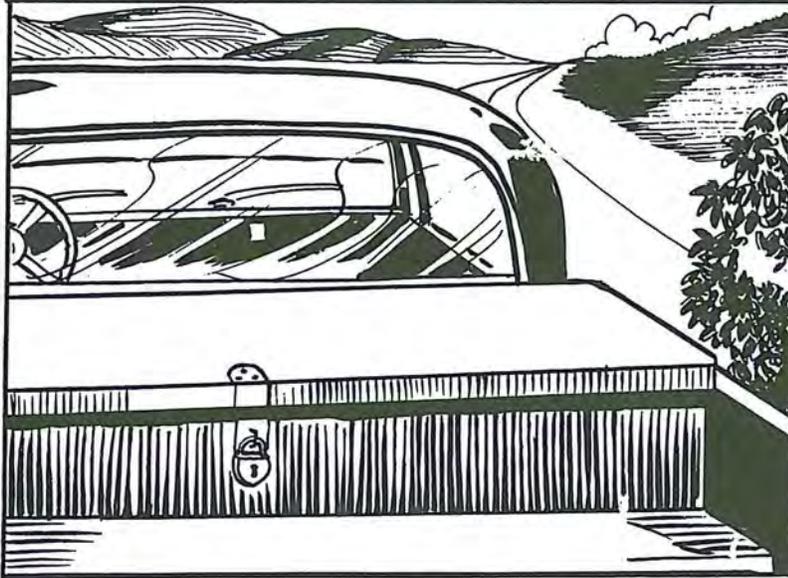
Guarde los pesticidas en sus envases originales. El área donde se los guardan debe estar cerrada con llave siempre. También debe haber un cartel en la puerta avisando al público que allí se guardan sustancias tóxicas.

Show the storage area to trainees.



Never carry pesticides in the passenger compartment of a vehicle. Carry them, well secured, in a place where no one will get contaminated if there is a spill.

Nunca lleve pesticidas en el compartimiento para pasajeros de un vehículo. Asegúrelos bien en un lugar donde nadie pueda contaminarse si se derraman.



Show workers how to secure containers in the back of a vehicle if they are to be transported.



Tell trainees how to handle empty containers after triple-rinsing them and what to do with containers when their contents are no longer needed.

When a pesticide container is empty, it must be disposed of properly. Your supervisor should give you specific instructions, but here are some general guidelines that everyone must follow.

Los envases vacíos deben eliminarse adecuadamente. Su supervisor debe darle instrucciones específicas, pero hay reglas generales que todos deben cumplir.

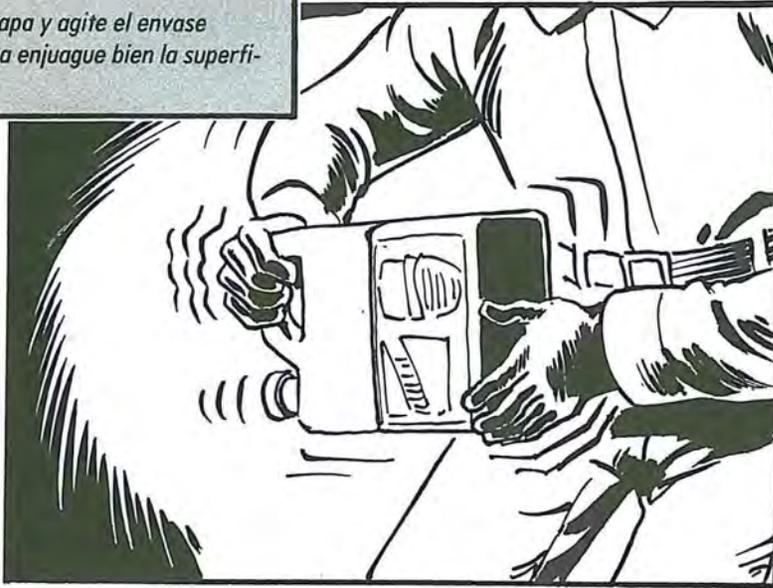
Most liquid containers must be rinsed three times when empty. Add the rinse water to the tank along with the last of the pesticide from the container. Fill containers of 5 gallons or less a quarter full with water.

La mayoría de los envases que contienen líquidos deben enjuagarse tres veces cuando están vacíos. Agregue el agua de enjuague al tanque de rociar junto con el último resto del pesticida. Llene los envases de 5 galones o menos con un cuarto de su volumen de agua.



Put the cap on tightly, and shake the container so that the water reaches all inner surfaces.

Ajuste bien la tapa y agite el envase para que el agua enjuague bien la superficie interior.

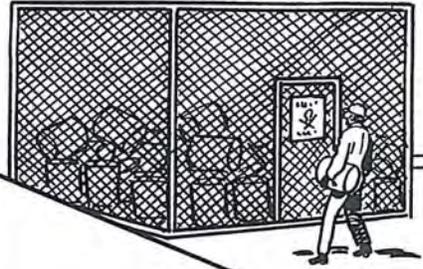


Pour this water into the spray tank. Repeat this procedure two more times. For containers of more than 5 gallons the procedure is the same, except that you should fill the container only one-fifth full each time. Because these containers will be too heavy to shake, roll them along the ground to rinse the inner surfaces.

Vierta esta agua dentro del tanque de rociar. Repita este procedimiento dos veces más. Para los envases de más de 5 galones, el procedimiento es el mismo, pero debe llenar el envase con sólo un quinto de su volumen de agua cada vez. Como estos envases son demasiado pesados para agitarlos, hágalos rodar por el suelo para enjuagar la superficie interior.



Even triple rinsed containers may still contain traces of pesticide so never try to use them for another purpose. They should be stored in a locked area until they can be disposed of by your employer. Paper containers can be burned in many cases, but remember that the smoke will be poisonous. Don't breathe it.

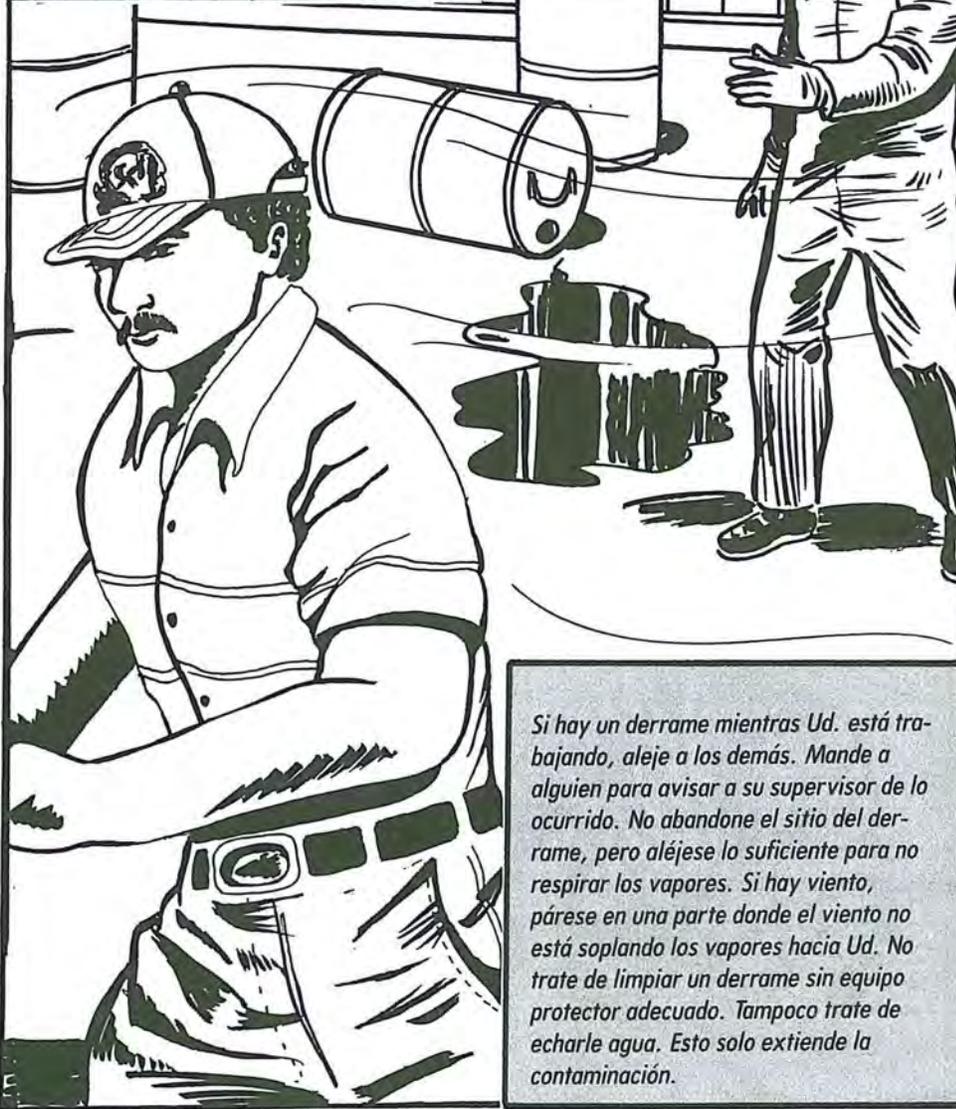


Aun los envases que se enjuagan tres veces pueden contener restos de pesticida. Por eso no los use jamás para otro fin. Deben guardarse en un área cerrada con llave hasta que su empleador los elimine. En algunos casos pueden quemarse las bolsas de papel, pero recuerde que el humo producido al quemar estas bolsas es venenoso. No lo respire.



Show workers the disposal holding area. Also show them the area where paper container burning can be done.

If a pesticide spill occurs while you are working, keep other people away. Send someone to tell your supervisor what has happened. Don't leave the site of the spill, but stand far enough away that you don't breathe in the vapors. If there is a wind, stand upwind. Never try to clean up a spill without adequate protective equipment and never try to hose down the spill; this will spread the contamination.

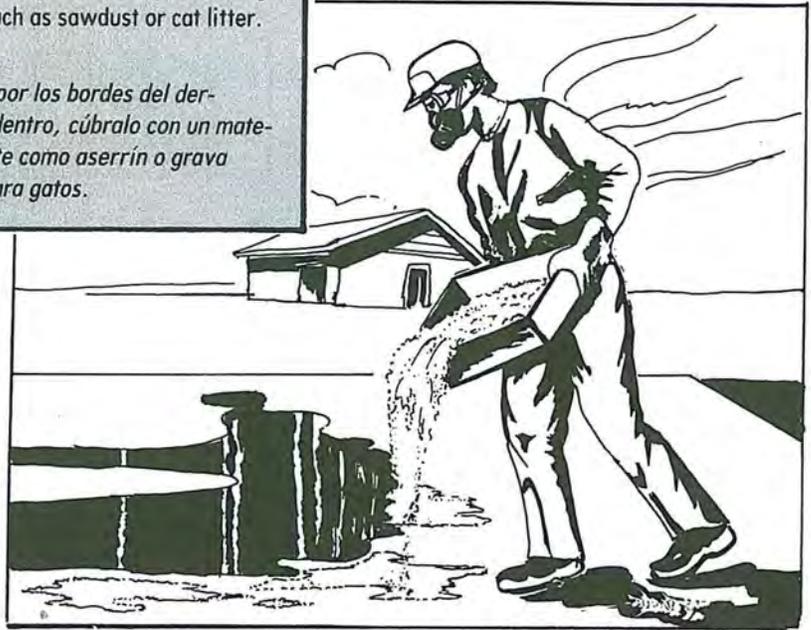


Si hay un derrame mientras Ud. está trabajando, aleje a los demás. Mande a alguien para avisar a su supervisor de lo ocurrido. No abandone el sitio del derrame, pero aléjese lo suficiente para no respirar los vapores. Si hay viento, párese en una parte donde el viento no está soplando los vapores hacia Ud. No trate de limpiar un derrame sin equipo protector adecuado. Tampoco trate de echarle agua. Esto solo extiende la contaminación.

Describe to workers your emergency plan for dealing with spills. Tell them where absorbent material and the special broom for cleanup are kept and whom to contact to help with cleanup (include phone numbers). Tell employees about CHEMTREC (see Appendix 11).

Starting at the edges of the spill and working inward, cover it with something absorbent, such as sawdust or cat litter.

Comenzando por los bordes del derrame hacia adentro, cúbralo con un material absorbente como aserrín o grava absorbente para gatos.



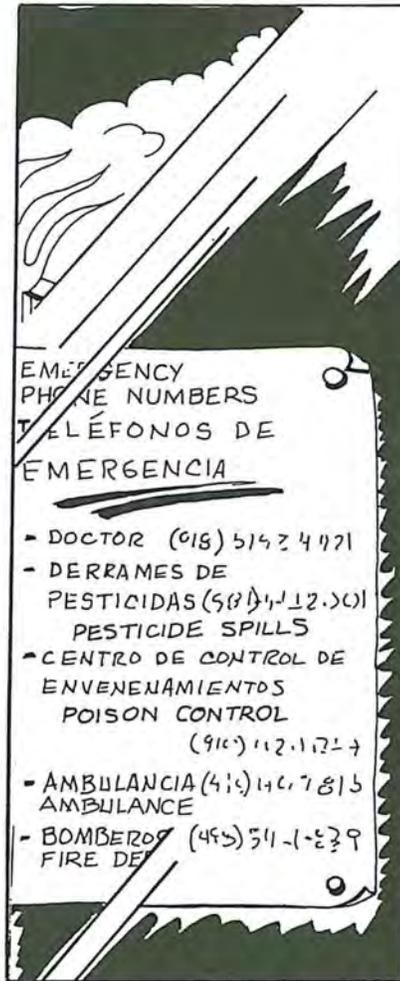
Sweep this into sealable plastic bags. If the pesticide is highly toxic or if the spill is large, a professional spill team should be called to do the cleanup.

Barra el material contaminado y póngalo en bolsas de plástico que puedan sellarse. Si el pesticida es muy tóxico o si el derrame es extenso, debe llamarse a un equipo profesional para que realice la limpieza.



Fires involving pesticides are very dangerous because they produce toxic smoke. Trained firemen should be called to deal with these fires. They will have the proper protective equipment.

Los incendios con pesticidas son muy peligrosos porque producen humo tóxico. Debe llamarse a bomberos entrenados para estos casos. Ellos tienen el equipo protector necesario.



EMERGENCY
PHONE NUMBERS
TELÉFONOS DE
EMERGENCIA

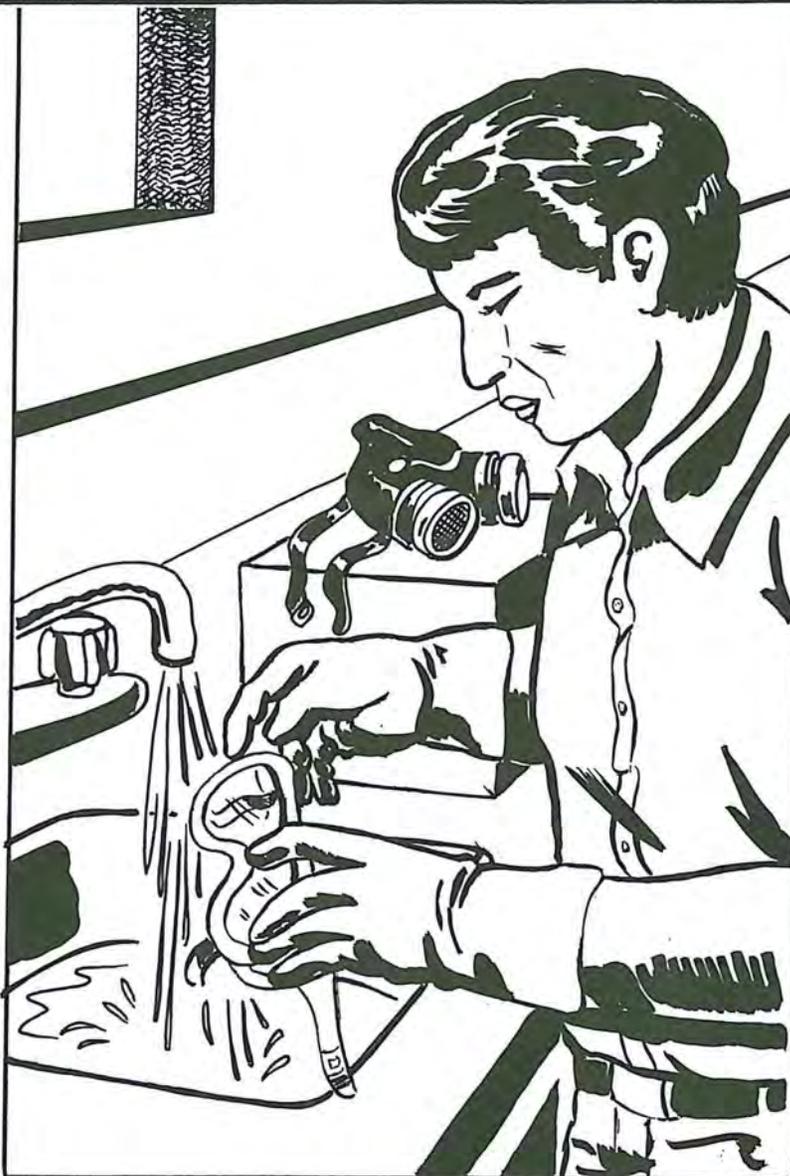
- DOCTOR (018) 5143 4171
- DERRAMES DE PESTICIDAS (57) 412.001
PESTICIDE SPILLS
- CENTRO DE CONTROL DE ENVENENAMIENTOS
POISON CONTROL
(910) 112.112-4
- AMBULANCIA (410) 146.7815
AMBULANCE
- BOMBEROS (495) 51-1-839
FIRE DEPT.



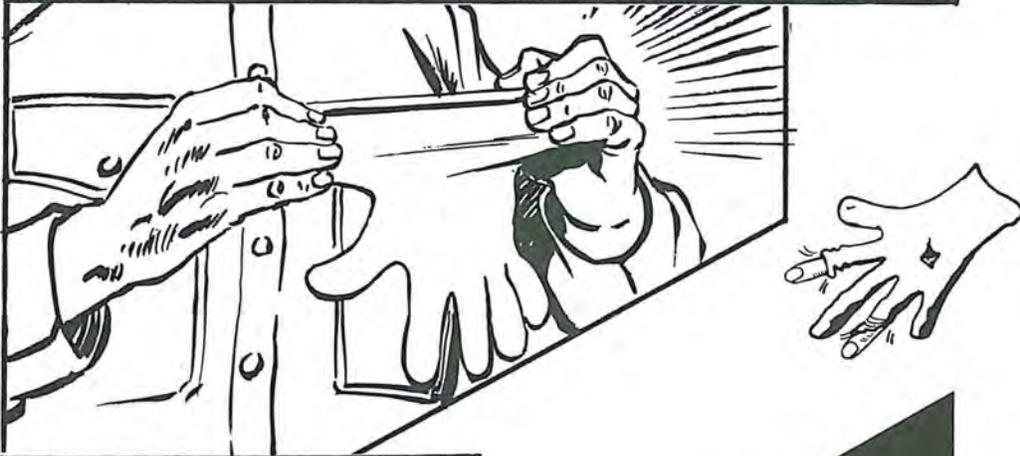
Remind workers that the fire department's number is listed among the other emergency numbers (see Appendix 11).

Clean your protective equipment with soap and water after each use. Keep your gloves on while cleaning the other equipment; wash the outsides of the gloves before taking them off, and the insides afterward. Let the equipment dry in a place where no pesticides are stored. Don't put equipment with rubber parts in the sun to dry. Sunlight can ruin rubber.

Después de cada uso, lave su equipo protector con agua y jabón. Use sus guantes mientras limpia el resto del equipo. Luego lave la parte exterior de los guantes. Al quitarlos lave la parte interior. Deje secar el equipo en un lugar donde no haya pesticidas guardados. No seque el equipo con piezas de goma al sol. La luz solar puede dañar la goma.



Keep your equipment in good condition. Check your gloves for holes. Examine your respirator regularly to make sure that the valves are intact, the straps are not losing their elasticity, and the mask still fits your face tightly. If something needs replacing, tell your supervisor. Don't work with defective protective equipment.



Mantenga su equipo en buen estado. Examine los guantes para ver si tienen agujeros. Examine su respirador con regularidad para asegurarse de que las válvulas están intactas, las correas no han perdido elasticidad y la máscara se ajusta bien a su cara. Si necesita reemplazar alguna pieza de equipo, avísele a su supervisor. No trabaje con equipo protector defectuoso.



Show the personal cleanup and protective equipment storage facility to trainees. Show them where equipment such as gloves and respirators can be left to dry after washing. Show them where to find new respirator cartridges, gloves, and other equipment that will require occasional replacement.

Store your protective equipment in a pesticide-free place.

Guarde su equipo protector en un lugar libre de pesticidas.



Change out of your work clothes at the end of the day. Your outer protective clothing should be laundered by your employer and you should be given a clean set every day. Your employer may give you disposable suits which must be thrown away as soon as they get contaminated.

Quítese la ropa de trabajo al final del día. La ropa protectora exterior debe ser lavada por su empleador, quien debe darle una muda limpia cada día. Su empleador puede darle trajes descartables que deben eliminarse tan pronto como se contaminan.

Show workers where to put soiled work clothes and where to find clean clothing at the beginning of the day. For your own information, see Appendix 19.

Shower and wash your hair as soon as you can.

Tome una ducha y lávese el pelo tan pronto como pueda.



Point out the personal washing facilities.

When you work with certain pesticides, your employer must send you to get occasional blood tests. Exposure to some pesticides can show up in certain kinds of blood tests long before you start feeling sick, so these tests help make sure that your work is not affecting your health.

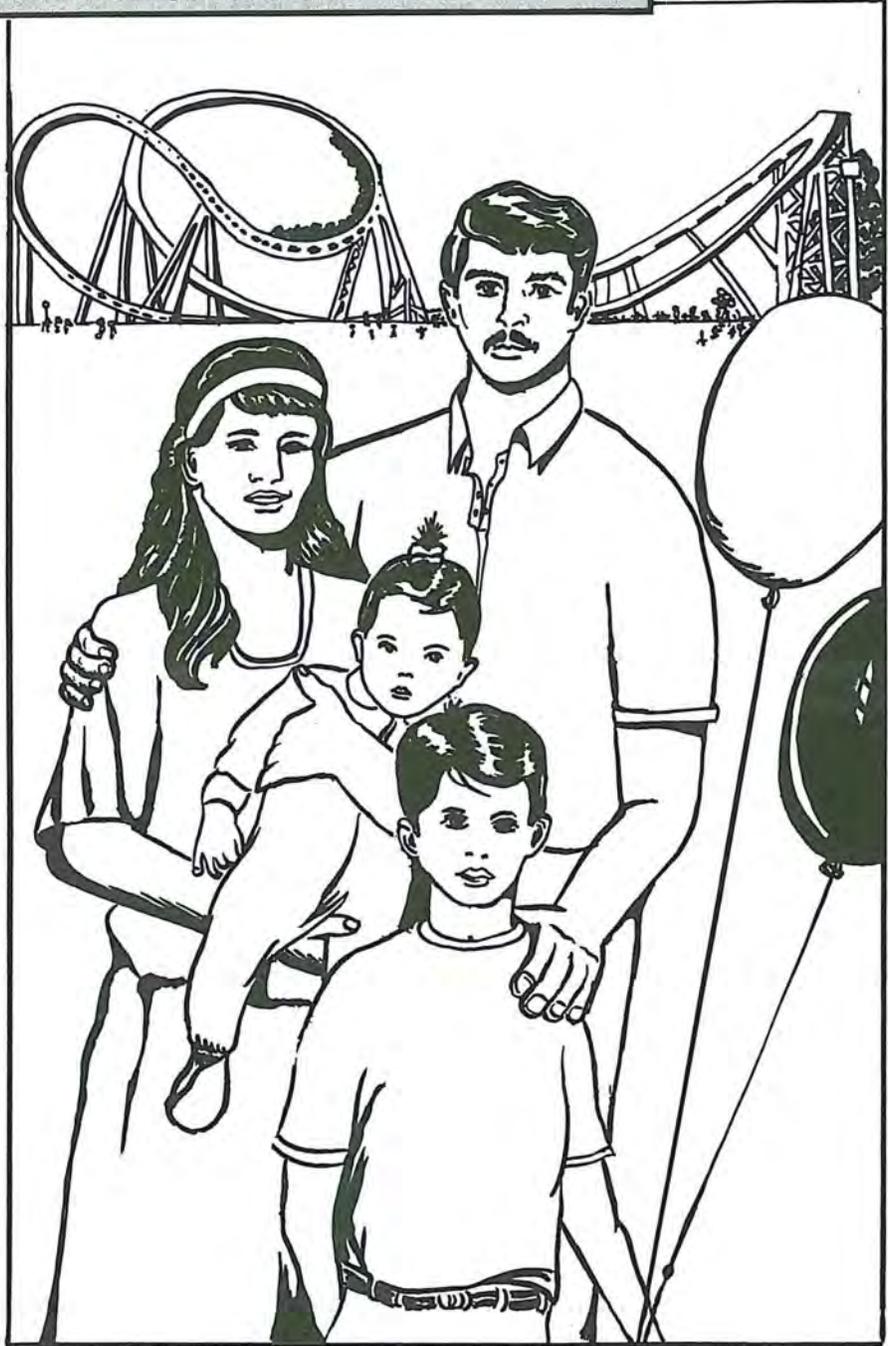


Al trabajar con ciertos pesticidas, su empleador debe mandarlo al médico para análisis de sangre periódicos. La exposición a ciertos pesticidas puede revelarse en algunos tipos de análisis de sangre antes de que Ud. comience a sentirse mal. Estos análisis le ayudan a estar seguro de que su trabajo no afecta su salud.

See Appendix 20. If it is applicable, describe arrangements for blood testing. Tell employees where it is to be done and how often it should be repeated. Determine which pesticides used will require cholinesterase testing. List those pesticides here:

Pesticides are part of your job. Learn how to work safely around them; you'll be glad you did!

Los pesticidas son parte de su trabajo. Aprenda a trabajar con ellos en forma segura. ¡Le conviene!



APPENDICES

APPENDIX 1

Types of pesticides

PESTICIDE TYPE	PESTS CONTROLLED
acaricide	mites
algaecide	algae
attractant	attracts pests
avicide	birds
bactericide	bacteria
defoliant	removes plant foliage
desiccant	removes water from arthropod pests
fungicide	fungi
growth regulator	regulates plant or animal growth
herbicide	weeds
insecticide	insects
molluscicide	snails or slugs
nematicide	nematodes
piscicide	fish
predacide	mammal predators
repellent	repels animals or invertebrates
rodenticide	rodents
silvicide	trees and woody shrubs

APPENDIX 2

Oral LD₅₀ values for some pesticides

(LD₅₀ values may vary due to formulation types. These values are shown for comparative purposes only. Some chemicals listed may no longer be in use as pesticides.)

CHEMICAL	TRADE NAME	LD ₅₀	TYPE OF PESTICIDE
aldicarb	Temik®	0.79	Insecticide
parathion		3	Insecticide
azinphos-methyl	Guthion®	11	Insecticide
paraquat	Gramoxone®	150	Herbicide
diazinon		300	Insecticide
2,4-D		375	Herbicide
carbaryl	Sevin®	500	Insecticide
copper hydroxide	C-O-C-S®	1000	Fungicide
pendimethalin	Prowl®	1250	Herbicide
malathion		1375	Insecticide
ziram		1400	Fungicide
propargite	Omite®	2200	Acaricide
iprodione	Rovral®	3500	Fungicide
trifluralin	Treflan®	3700	Herbicide
glyphosate	Roundup®	4300	Herbicide
simazine	Princep®	5000	Herbicide
captafol	Difolatan®	6200	Fungicide
captan		9000	Fungicide
benomyl	Benlate®	>10,000	Fungicide
chlorothalonil	Bravo®	>10,000	Fungicide
oryzalin	Surflan®	>10,000	Herbicide
B. thuringiensis	Dipel®	15,000	Insecticide
methoprene	Precor®	34,600	Insect Growth Regulator

APPENDIX 3

Organophosphate and N-methyl carbamate pesticides

ORGANOPHOSPHATES	N-METHYL CARBAMATES
Azodrin®	Baygon®
Bidrin®	Carzol®
Cygon®	Furadan®
Dasanit®	Ficam®
Def®	Lannate®
diazinon®	Mesuro®
Dibrom®	Sevin®
dimethoate	Temik®
Di-Syston®	Vydate®
Dursban®	
Dyfonate®	
Dylox®	
ethion	
Fenthion®	
Folex®	
Guthion®	
Imidan®	
Lorsban®	
malathion	
Meta Systox-R®	
methyl parathion	
Mocap®	
Monitor®	
Nemacur®	
Orthene®	
parathion	
Phosdrin®	
phosphamidon	
Rabon®	
Ravap®	
Supracide®	
Thimet®	
Vapona/DDVP®	
Zolone®	

APPENDIX 4

Common pesticide poisoning symptoms

Possible symptoms related to skin contact with pesticide dust, liquid, or vapors:

- Staining of the skin
- Reddening of skin in area of contact
- Mild burning or itching sensation
- Painful burning sensation
- Blistering of the skin
- Cracking and damage to nails

Possible symptoms related to eye contact with pesticide dust, liquid, or vapors:

- Discomfort, including watering and slight burning
- Severe, painful burning
(Permanent eye damage may occur.)

Possible symptoms related to inhaling or swallowing pesticide dust, liquid, or vapors:

- Sneezing
- Irritation of nose and throat
- Nasal stuffiness
- Swelling of mouth or throat
- Coughing
- Breathing difficulties
- Shortness of breath
- Chest pains

APPENDIX 5

Pesticides that can cause skin irritation or rash

- chlorine
- cyanuric acid
- fluazifop-butyl (Fusilade®)
- glyphosate (Roundup®)
- metam-sodium (Vapam®)
- methyl bromide
- naled (Dibrom®)
- phenolic disinfectants
- propargite (Omite®, Comite®)
- pyrethrins mixed with piperonyl butoxide (Pyrenone®)
- quaternary ammonia compounds
- sodium hypochlorite (bleach)
- sulfur
- trifluralin (Treflan®)

APPENDIX 6

■
Pesticides that can cause eye irritation or injury

- 1,3 dichloropropene (Telone II®, Telone C17®)
- calcium hypochlorite
- chlorine
- chlorpyrifos (Lorsban®, Dursban®)
- copper sulfate
- cyanuric acid
- diazinon
- dicofol (Kelthane®)
- dimethoate
- ethylene glycol monomethy
- formaldehyde
- gluteraldehyde
- glyphosate (Roundup®)
- hydrogen chloride
- metam-sodium (Vapam®)
- paraquat (Gramoxone®)
- phenolic disinfectants
- phosmet (Imidan®)
- pine oil
- propargite (Omite®, Comite®)
- propoxur (Baygon®)
- pyrethrins mixed with piperonyl butoxide (Pyrenone®)
- quaternary ammonia compounds
- sodium hypochlorite (bleach)
- sulfur
- sulfur dioxide

APPENDIX 7

■
Fumigants

- aluminum phosphide
- carbon disulfide
- chlorpicrin
- 1,3 dichloropropene (Telone II®, Telone C17®)
- formaldehyde
- methyl bromide
- metam sodium (Vapam®)
- Vorlex®

APPENDIX 8

■
Pesticides posing special hazards

Use this list to write in the names of pesticides used at your operation which present specific hazards other than toxicity.

EYE DAMAGE:

RASH OR SKIN IRRITATION:

OTHER:

PESTICIDE

HAZARD

<hr/>	<hr/>
<hr/>	<hr/>

How to determine the reentry interval when two or more organophosphates are combined.

For all other pesticide combinations, the reentry interval is the same as the longest reentry interval among the individual pesticides in the mix.

PESTICIDE "A"

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
4				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
5					8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
6						9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
7							11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
8								12	13	14	15	16	17	18	19	20	21	22	23	24	25
9									14	15	16	17	18	19	20	21	22	23	24	25	26
10										15	16	17	18	19	20	21	22	23	24	25	26
11											17	18	19	20	21	22	23	24	25	26	27
12												18	19	20	21	22	23	24	25	26	27
13													19	21	22	23	24	25	26	27	28
14														21	22	23	24	25	26	27	28
15															23	24	25	26	27	28	29
16																24	25	26	27	28	29
17																	26	27	28	29	30
18																		27	28	29	30
19																			29	30	31
20																				30	31
21																					32

Locate reentry interval for first pesticide along top row. Locate reentry interval for second pesticide along left column. The new reentry interval is found where these intersect.

APPENDIX 11



Emergency phone numbers

These numbers should be posted for workers to use in case of a pesticide-related emergency.

Clinic, physician, or emergency room

Ambulance Service

Fire Department

Poison Control Center (see below for one nearest you)

CHEMTREC (in case of spills)

(800) 424-9300

County Agricultural Commissioner

Police

California regional poison control centers

REGION 1: 1-800-523-2222

Counties: Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Napa, San Francisco, San Mateo, Sonoma

REGION 2: 1-800-342-9293

Counties: Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lake, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Sierra, Siskiyou, Solano, Stanislaus, Sutter, Tehama, Trinity, Tuolumne, Yolo, Yuba

REGION 3: 1-800-662-9886

Counties: Monterey, San Benito, San Luis Obispo, Santa Clara, Santa Cruz

REGION 4: 1-800-346-5922

Counties: Fresno, Kern, Kings, Madera, Mariposa, Merced, Tulare

REGION 5: 1-800-544-4404

Counties: Inyo, Mono, Orange, Riverside, San Bernardino

REGION 6: 1-800-777-6476

Counties: Los Angeles, Santa Barbara, Ventura

REGION 7: 1-800-876-4766

Counties: Imperial, San Diego

**SACATE
HERBICIDE**

ACTIVE INGREDIENT:

2,4-Dichlorophenoxyacetic acid, dimetilamine salt 70%

INERT INGREDIENTS..... 30%

ACID EQUIVALENT:

2,4-Dichlorophenoxyacetic acid..... 58% – 720 gms. x liter
(6 pounds/gallon)

KEEP OUT OF REACH OF CHILDREN

WARNING

Can cause eye and skin irritation.
Avoid eye, skin and clothing contact.

If in eyes, rinse them with large quantities of water for at least 15 minutes, then get medical attention. If spilled on skin, wash the skin with soap and sufficient water. Remove contaminated clothing and wash them adequately prior to reuse. Do not wear contaminated shoes.

For emergencies involving this product where there is a threat to life or property, call 000-0000 collect.

CHEMICAL AGRICULTURAL PRODUCT
Do not transport or store with food, animal feed, medicines or clothing.

GENERAL INFORMATION The lower rates usually provide satisfactory control of younger or more tender, succulent weeds. Resistant weeds and adverse control situations will require the use of the larger recommended doses. Use the amount of SACATE recommended per acre or hectare in sufficient water to provide a uniform distribution of the herbicide.

Along roadsides and in non-crop areas: Apply 1 to 1.75 liters/ha (1 to 1.5 pints/acre) in sufficient water to provide for a uniform spray delivery using the available application equipment.

For crop use: Consult the Recommendation Table or other available weed control information.

WEED LIST The herbicide SACATE is recommended for the control of many broad-leaf weeds along roadsides and railroad rights-of-way. Provides good control of pigweed, purslane, clover, mustard and many other weeds.

INSTRUCTIONS Local conditions can affect the effectiveness of herbicides. We believe that the following instructions are correct, but you should follow the weed control recommendations provided by experiment stations and agricultural extension specialists regarding use rates.

PRECAUTIONS Do not apply directly to crops. Do not permit the herbicide to come into contact with vegetable crops, flowers, grapes, fruit trees, ornamentals, papaya, cotton or other desirable plants. Do not apply when windy. Do not contaminate irrigation ditches or potable water sources. Do not store near fertilizers, insecticides, seed or normally growing plants.

Note: A tablespoon in two gallons of water is the approximate equivalent of 1 pound in 100 gallons of water. 20 grams of formulation in 10 liters of water is approximately equivalent to 635 grams of 2,4-D in 500 gallons of water.

RECOMMENDATION TABLE

Crop	Application rate per acre	Spray volume liters/Ha	Timing	Gallons/Ha	Liters/Ha
RICE	1 to 2 pints	1.2 to 1.9	Post-emergence	5 to 10	50 to 100
CORN	1 to 2 qts	1.5 to 3.1	Pre-emergence	10 to 20	100 to 200

The pesticide label

1. **The product name.** The product name is the commercial name of the pesticide. It is usually the largest and most noticeable word on the label.
2. **Type of pesticide.** Pesticides are classified according to the kind of pest they control. For example herbicides control weeds, insecticides kill insects, fungicides control fungus diseases, etc. The label also contains a list of the specific pests which the pesticide will control.
3. **Percent of active ingredient.** The active ingredient is the part of the pesticide formulation which is responsible for controlling or killing the pest. The other ingredients are considered inert.
4. **Signal words.** These are the words which show how dangerous the pesticide is, or reflect a special hazard such as severe skin irritation or eye damage.

TOXICITY OR DANGER LEVEL	SIGNAL WORD(S)	
	ENGLISH	SPANISH
Very dangerous or poisonous	DANGER-POISON	PELIGRO-VENENO
Moderately dangerous or poisonous	WARNING	ADVERTENCIA
Slightly dangerous or poisonous	CAUTION	PRECAUCION

5. **First aid instructions and emergency telephone numbers.** The label may not list an emergency telephone number.
6. **Precautionary statements.** These are the specific precautionary measures which must be taken when applying, storing or otherwise handling the pesticide. These may include instructions for the protection of nontarget plants, animals, people and the environment. Protective clothing and equipment instructions may also be included in this section.
7. **Recommendations table.** This is a list of the crops or sites for which the pesticide may be used. This section also provides application instructions.

SÁCATE HERBICIDA

INGREDIENTE ACTIVO:
 Sal dimetilamina del ácido 2,4-diclorofenoxiacético 70%
 INGREDIENTES INERTES 30%
 EQUIVALENTE EN ACIDO:
 Acido 2,4-diclorofenoxiacético 58% — 720 gms × litro
 (6 libras/galón)

MANTÉNGASE FUERA DEL ALCANCE DE LOS NIÑOS

AVISO

Causa irritación de la piel y los ojos.
 Evítese el contacto con ojos, piel y ropa.

Si entra en los ojos, lávelos con bastante agua por lo menos durante 15 minutos y obtenga atención médica. Si lo derrama en la piel, lávela con jabón y suficiente agua. Quítese la ropa contaminada y lávela antes de volver a usarla. No use zapatos contaminados.

En caso de una emergencia relacionada con este producto en que peligre la vida o la propiedad, llámese a cobrar al teléfono 000-0000.

PRODUCTO QUÍMICO AGRÍCOLA

No transporte ni almacene junto con alimentos para personas o animales, medicamentos o ropa.

INFORMACIÓN GENERAL Las dosis menores son generalmente satisfactorias para controlar malezas jóvenes, tiernas y jugosas. Para las malezas más resistentes y en condiciones donde su control es difícil, se deberán usar las dosis más altas. Use la cantidad de SÁCATE recomendada por acre o hectárea con el agua suficiente para lograr una distribución uniforme del herbicida.

Para orillas de caminos y áreas no cosechadas: Aplíquese de 1 a 1,75 l/ha (1 a 1½ pintas/acre) con el agua suficiente para rociar uniformemente toda el área con el equipo disponible.

Para uso en áreas cultivadas: Consulte la Tabla de Recomendaciones y cualquier otra información al respecto.

PRECAUCIONES No aplique el herbicida SÁCATE directamente, ni permita que entre en contacto con verduras, flores, uvas, árboles frutales, plantas ornamentales, papayo, algodón u otras plantas deseables. Evite que el rocío se desvíe en el aire, pues puede dañar las plantas deseables. No lo aplique cuando hace mucho viento. No contamine las zanjas de riego ni el agua para uso doméstico. No lo almacene cerca de fertilizantes, insecticidas, semillas o en lugares cercanos a las plantas que crecen normalmente.

Nota: Una cucharada grande en 2 galones es aproximadamente igual a 1 libra en 100 galones de agua. 20 gramos de formulación en 10 litros de agua es aproximadamente igual a 635 gramos de 2,4-D en 500 litros de agua.

LISTA DE MALEZAS El herbicida SÁCATE se recomienda para el control de muchas malezas de hoja ancha a lo largo de carreteras y derechos de paso de ferrocarriles. Entre otras, controla bien las siguientes malezas: quelite, verdolaga, trébol, mostazas.

INSTRUCCIONES Las condiciones locales pueden afectar el uso de los herbicidas. Creemos que las siguientes instrucciones son precisas, pero deben seguirse las recomendaciones de las estaciones experimentales, y de los especialistas de los servicios de extensión agrícola para el control de malezas, en lo que se refiere a la cantidad de agua y de SÁCATE que deberán usarse por hectárea.

TABLA DE RECOMENDACIONES

Cultivo	Cantidad por acre	Litros de SÁCATE por hectárea	Cuándo debe usarse	Galones de rocío por hectárea	Litros de rocío por hectárea
ARROZ	1 a 2 pintas	1,2 a 1,9	Post-emergencia	5 a 10	50 a 100
MAÍZ	1 a 2 cuartos	1,5 a 3,1	Pre-emergencia	10 a 20	100 a 200
	1 cuarto	1,5	Emergencia	5 a 10	50 a 100

La etiqueta de un pesticida

1. **La marca.** La marca es el nombre comercial del pesticida. Casi siempre es la palabra más grande y visible en la etiqueta.
2. **La clase de pesticida.** El pesticida se clasifica según la plaga que controla. Por ejemplo, los herbicidas controlan malezas, los insecticidas controlan insectos, los fungicidas controlan enfermedades causadas por hongos, etc. También en la etiqueta se encuentra una lista de plagas específicas controladas por el pesticida.
3. **Porcentaje de ingrediente activo.** Un pesticida contiene una mezcla de sustancias químicas. El ingrediente activo es el ingrediente que mata o controla la plaga. Los demás ingredientes se consideran ingredientes inertes.
4. **Palabras de señal.** Estas son las palabras que indican el peligro del pesticida o la tendencia que tiene para causar daños específicos, tales como el sarpullido o daños a los ojos.

GRADO DE VENENOSIDAD O PELIGRO	PALABRA(S) DE SEÑAL	
	INGLES	ESPAÑOL
Muy peligroso o venenoso	DANGER— POISON	PELIGRO— VENENO
Moderadamente peligroso o venenoso	WARNING	ADVERTENCIA
Poco peligroso o venenoso	CAUTION	CUIDADO

5. **Primeros auxilios y número de teléfono en caso de emergencia.** Muchas veces no viene un número telefónico para las emergencias en la etiqueta.
6. **Declaración de precauciones.** Estas son las precauciones específicas que se tienen que tomar para aplicar, almacenar o tratar el pesticida. Aquí se incluyen instrucciones para evitar daños a las plantas deseables, los animales, las personas y el medio ambiente. También a veces se encuentran aquí instrucciones para el uso de ropa y equipo de protección.
7. **Cuadro de recomendaciones.** Esta es la lista de cultivos en los cuales se puede usar el pesticida junto con las instrucciones para su aplicación.

APPENDIX 13

■ Pesticide toxicity/hazard categories

CATEGORY	SIGNAL WORD(S)
CATEGORY I	DANGER/POISON
CATEGORY II	WARNING
CATEGORY III	CAUTION

List here the pesticides used at your place of business according to category:

CATEGORY I:

CATEGORY II:

CATEGORY III:

Protective clothing and equipment requirements

SUMMARIZED LABEL STATEMENT <i>Toxicity Category</i>	MIXER-LOADER		APPLICATOR	
	I-II	III	I-II	III**
Precautions should be taken to prevent exposure.				
Protective clothing or protective equipment is to be worn.				
Clean clothing is to be worn.				
Contact with clothing should be avoided.				
Contact with shoes should be avoided.				
Rubber boots or rubber foot coverings are to be worn.				
Contact with skin should be avoided.				
A cap or hat is to be worn.				
An apron is to be worn.				
Rubber gloves are to be worn.				
Contact with eyes should be avoided				
Goggles or faceshield is to be worn.				
Avoid inhalation.				
A respirator is to be worn.				



A daily change of clean coveralls or clean outer clothing. Wear waterproof pants and jacket if there is any chance of becoming wet with spray.

Disposable suits made of Tyvek can be used in some, but not all, situations. Uncoated Tyvek can be worn in place of coveralls or long-sleeved shirt and pants. It will not take the place of waterproof outer clothing. Tyvek that has been coated with polyethylene can be worn in place of waterproof clothing in some situations, but not with organophosphate liquids. The solvents in these pesticides will break down the polyethylene coating. Saranex-coated Tyvek suits can be used effectively with organophosphates. Neither uncoated or Saranex-coated Tyvek adequately protects against chlorinated hydrocarbons such as methoxychlor.



Waterproof apron made from rubber or synthetic material. Use for mixing liquids.



Waterproof boots or foot coverings made from rubber or synthetic material.



Faceshield, goggles, or full face respirator. Goggles with side shields or a full face respirator is required if handling or applying dusts, wettable powders, or granules or if being exposed to spray mist. Safety glasses with brow and temple protection may be worn if the label does not specify goggles or face shield.



Waterproof, unlined gloves made from rubber or synthetic material.



Waterproof, wide-brimmed hat with nonabsorbent headband or a hood if wearing a waterproof plastic rainsuit with hood attached.



Cartridge type respirator approved for pesticide vapors unless label specifies another type of respirator such as a dust mask, canister type gas mask, or self-contained breathing apparatus.

*Use this equipment when there is a likelihood of exposure to spray mist, dust, or vapors.

**If the Category III pesticide application is being made in an enclosed area such as a greenhouse, or if the application consists of a concentrate spray of 100 gallons-per-acre or less in a grove, orchard, or vineyard, then use the protective equipment guidelines for Category I-II pesticides.

A respirator program

A respirator program should cover:

- Hazard assessment
- Hazard control
- Written operating procedures
- Selection
- Issuance
- Training and education
- Facepiece fit testing
- Inspection and maintenance
- Sanitization
- Storage
- Medical surveillance
- Program surveillance and evaluation

Respirator fitting

Four steps:

1. Face fit
2. Positive and negative pressure fit test
3. Irritant smoke test
4. Record keeping

When to check the fit

- At the time of issuance
 - Face fit
 - Positive and negative pressure fit test
 - Irritant smoke test
- Each day before using
 - Face fit
 - Positive and negative pressure fit test

Types of qualitative fit tests

- Positive pressure fit test
 - Block exhalation valve with hand or other material
 - Breathe out into mask
 - Check for air leakage around edge of mask
- Negative pressure fit test
 - Block inhalation valve with hand or other material
 - Attempt to inhale
 - Check for air leakage around edge of mask
- Isoamyl acetate and irritant smoke tests
 - Challenge with isoamyl acetate or smoke
 - Reject fit if wearer smells isoamyl acetate or senses irritation from smoke

Respirator maintenance

Regular cleaning and inspection of the respirator is not only a legal requirement, it is vital to your health. Wearing a soiled or malfunctioning respirator can be irritating and, in some cases, harmful. Respirators shall be inspected prior to use, cleaned regularly, and stored properly.

INSPECTION

- Facepiece** — look for cuts, tears, holes, melting, stiffening, crushing
- Headband** — look for breaks, frays, tears, rigidity, missing hardware
- Exhalation** — look for damage, dirt, distortion, valve condition
- Inhalation** — look for dust, nicks, cuts, pliability, valve flaps
- Cartridge** — look for wear, appropriateness, thread cracks, replacement

CLEANING

- Clean regularly** — (or more often, if necessary)
- Wash in warm water, scrub with a soft brush until all foreign matter is removed from all surfaces
- Disinfect**
- Rinse in clean, warm (120° F) water
- Air dry on clean surface or hang

STORAGE

- Store in proper container**
- Protect from**
 - * extreme temperature
 - * sunlight
 - * dust
 - * excessive moisture
 - * contaminating chemicals

APPENDIX 16

Employee statement of medical condition

Declaración del empleado sobre su condición médica

Print Employee Name

(Nombre del empleado en letra de molde)

In accordance of Section 6738 of the California Code of Regulations, to the best of my knowledge, I [] have, [] have no medical conditions which would interfere with wearing a respirator while engaged in hazardous exposure situations. I understand that heart disease, high blood pressure, lung disease or presence of a perforated ear drum require specific medical evaluation by a physician before safe use of a respirator can be determined.

De acuerdo con la Sección 6738 del Código de Reglamentos de California, que yo sepa, yo [] tengo, [] no tengo una (ninguna) condición médica que podría afectar mi habilidad de usar un respirador mientras estoy expuesto a vapores peligrosos. Entiendo que si yo tengo una condición cardíaca, la alta presión de la sangre, una enfermedad de los pulmones o un tímpano perforado, es necesario que un médico determine si yo puedo trabajar con un respirador sin ariesgos.

Signature of Employee

(Firma del Empleado)

Date

(Fecha)

APPENDIX 17

Report of medical evaluation

In accordance with Section 6738 of the California Code of Regulations, the employee listed above has been given an examination by me and at this time there is no medical contraindication to the employee named above wearing a respirator to allow working in hazardous exposure environments.

Other Comments:

[Blank lines for other comments]

Print Physician's Name

Physician's Signature

Date

APPENDIX 18

■
Calculating wind speed

For a practical means of estimating low wind velocities near the ground, toss a handful of dust into the air and walk downwind with the cloud of dust. If you can keep up with it in a slow walk, the wind is approximately 2 mph. If you can just barely keep up with it in a fast walk, the wind is approximately 4 mph. A lively run is approximately 10 mph, and only a well-trained athlete can dash 20 mph.

WIND VELOCITY Miles Per Hour	OBSERVATIONS
Less than 1	Smoke rises almost vertically.
1 to 3	Direction of wind shown by smoke drift, but not by wind vanes.
4 to 7	Wind felt on face; leaves rustle; ordinary wind vane moved by wind.
8 to 12	Leaves and small twigs in constant motion, wind extends light flag.
13 to 18	Raises dust and loose paper, small branches are moved.
19 to 24	Small trees in leaf begin to sway; crested wavelets form on inland water.

APPENDIX 19

■
Techniques for washing pesticide-contaminated clothing

1. Keep pesticide-contaminated clothing separate from all other laundry.
2. Do not handle contaminated clothing with bare hands; wear rubber gloves or shake clothing from plastic bag into washer.
3. Wash only small amounts of clothing at a time. Do not combine clothing contaminated with different pesticides—wash these in separate loads.
4. Before washing, presoak clothing:
 - a. Soak in tub, automatic washer, or spray garments out-of-doors with a garden hose.
 - b. Use a commercial solvent soak product, or apply prewash spray or liquid laundry detergent to soiled spots.
5. Wash garments in washing machine, using hottest water temperature, full water level, and normal (12 minute) wash cycle. Use maximum recommended amount of liquid laundry detergent. Neither bleach or ammonia seem to affect the removal of most pesticides.
6. If garments have pesticide odor, visible spots, or stains before washing, rewash one or two more times as in step 5.
7. Clean washing machine before using for other laundry by repeating step 5, using full amount of hot water, normal wash cycle, laundry detergent, but no clothing.
8. Hang laundry outdoors on clothesline to avoid contaminating automatic dryer.

Do not attempt to wash heavily contaminated clothing; destroy it by burning or by transporting to an approved disposal site.

APPENDIX 20

■
Blood test requirements

Mandatory blood tests are required for persons handling any of the following materials for more than six (6) days (any part of the day) within a thirty (30) day period.

ORGANOPHOSPHATES	HAZARD CATEGORY	STATUS*
Azodrin®	I	R
Bidrin®	I	R
Cygon®	II	NR
Dasanit®	I	R
Def®	I	R
diazinon	II	NR
Dibrom®	I	NR
dimethoate	II	NR
Di-Syston®	I	R
Dursban®	II	F
Dylox®	II	NR
ethion	II	R
Fenthion®	II	NR
Folex®	II	NR
Guthion®	I	R
Imidan®	II	NR
Lorsban®	II	NR
Meta Systox-R®	II	R
methyl parathion	I	R
Mocap®	I	R
Monitor®	I	R
Nemacur®	I	R
parathion	I	R
Phosdrin®	I	R
phosphamidon	I	R
Supracide®	I	R
Thimet®	I	R
Vapona®	I	NR
Zolone®	II	NR

CARBAMATES	HAZARD CATEGORY	STATUS*
Baygon®	II	NR
Carzol®	I	NR
Furadan®	I	R
Ficam®	II	NR
Lannate®	I	R
Mesurool®	II	NR
Sevin®	II	R
Temik®	I	R
Vydate®	I	F

*Status: R = Restricted
 NR = Non-restricted
 F = Federally Restricted

SUPPLEMENTAL INFORMATION

■ Cholinesterase laboratories list by counties

ALAMEDA COUNTY

Pathology Institute
2920 Telegraph Ave.
Berkeley, CA 94705
(415) 540-7550

Smith Kline Bio-Science Laboratory
6511 Golden Gate Drive
Dublin, CA 94568
(415) 828-2500

COLUSA COUNTY

Colusa Hospital Laboratory
199 E. Webster St.
Colusa, CA 95932
(916) 458-5821

FRESNO COUNTY

M-B Medical Laboratory
125 E. Barstow, #110
Fresno, CA 93710
(209) 224-6911

Medical Science Laboratory
2029 Divisadero Street
Fresno, CA 93710
(209) 486-8161

Pathological and Clinical Laboratory
P.O. Box 11866
Fresno, CA 93775
(209) 226-3550

Laboratory Location
2111 E. Dakota
Fresno, CA 93775

Roche Biomedical Laboratories
3636 N. First - Suite 101
Fresno, CA 93726

Valley Children's Hospital and Guidance Center
3151 N. Millbrook
Fresno, CA 93703
(209) 225-3000

IMPERIAL COUNTY

Pioneers Memorial Hospital Laboratory
207 West Legion Rd.
Brawleys, CA 92227
(714) 344-2120

KERN COUNTY

Delano Regional Medical Center
1401 Garces Highway
Delano, CA 93215
(805) 725-4800

Physicians Automated Laboratory, Inc.
2801 H Street
Bakersfield, CA 93301
(805) 325-0744

KINGS COUNTY

Avenal District Hospital
317 Alpine St.
Avenal, CA 93204
(209) 386-5278

Corcoran District Hospital Laboratory
P.O. Box 758
Corcoran, CA 93212
(209) 992-3124
Laboratory Location
1310 Hanna Ave.
Corcoran, CA 93212

LOS ANGELES COUNTY

Central Analytical Laboratory Services, Inc.
8432 Birchbark Avenue
Pico Rivera, CA 90660
(213) 806-2588

MetWest Clinical Laboratory
18408 Oxnard St.
Tarzana, CA 91356
(213) 996-7300

Pacific Toxicology Laboratories
1545 Pontius Avenue
Los Angeles, CA 90025
(213) 479-4911

SmithKline Bio-Science Laboratories
7600 Tyrone Ave.
Van Nuys, CA 91405
(818) 989-2500

MADERA COUNTY

Madera Community Hospital Laboratory
1250 East Almond Avenue
Madera, CA 93637

MERCED COUNTY

Los Banos Community Hospital Laboratory
520 West I St.
Los Banos, CA 93635
(209) 826-0591

Merced Community Medical Center
301 East 13th St.
Merced, CA 95340
(209) 383-7125

MONTEREY COUNTY

George L. Mee Memorial Hospital
300 Canal Street
King City, CA 93930
(408) 385-5491

Salinas Clinical Laboratories, Inc.
P.O. Box 1290
Salinas, CA 93902
(408) 757-8032

Laboratory Location
230 San Jose St., Suite 80
Salinas, CA 93901

Salinas Valley Memorial Hospital Laboratory
450 E. Romie Lane
Salinas, CA 93901
(408) 757-4333 ext. 257

Two-Twelve San Jose Street Laboratory
Two-Twelve San Jose Street, Suite 101
Salinas, CA 93901
(408) 424-1461

ORANGE COUNTY

Pacific Clinical Laboratories, Inc.
1000 W. La Veta, Suite 11
Orange, CA 92668
(714) 835-3360

Dept. of Pathology
U.C. Irvine Medical Center Pathology Laboratory
101 City Drive South
Orange, CA 92668
(714) 634-5024

RIVERSIDE COUNTY

Palo Verde Hospital Laboratory
250 No. First St.
Blythe, CA 92226
(714) 922-4115

SACRAMENTO COUNTY

Physicians Clinical Laboratory, Inc.
3195 Folsom Blvd.
Sacramento, CA 95816
(916) 452-7432

Roche Biomedical Laboratories, Inc.
3714 Northgate Boulevard
Sacramento, CA 95834
(916) 927-9900

SAN BERNARDINO COUNTY

Loma Linda University
Faculty Medical Laboratory
P.O. Box 966
Loma Linda, CA 92354
(714) 796-4816

Laboratory Location
11370 Anderson St., #2900
Loma Linda, CA 92354

SAN DIEGO COUNTY

American Clinical Laboratory
7323 Engineer Road
San Diego, CA 92111
(619) 453-9191

Poisonlab, Inc.
7272 Clairemont Mesa Blvd.
San Diego, CA 92111
(619) 279-2600

San Diego Institute of Pathology
2970 5th Ave.
San Diego, CA 92103
(619) 291-6980

SAN FRANCISCO COUNTY

Chemistry Laboratory
Department of Public Health
City and County of San Francisco
1001 Potrero Ave.
San Francisco, CA 94110
(415) 821-5155

SAN JOAQUIN COUNTY

Dameron Hospital Laboratory
525 W. Acacia
Stockton, CA 95203
(209) 944-5550

SAN LUIS OBISPO COUNTY

San Luis Obispo General Hospital
2180 Johnson Avenue
San Luis Obispo, CA 93401
(805) 543-1500 x277

SANTA BARBARA COUNTY

Health Care Services
County of Santa Barbara
300 San Antonio Rd.
Santa Barbara, CA 93110
(805) 681-5380

Medical Group Pathology Laboratory, Inc.
2410 Fletcher Avenue
Santa Barbara, CA 93105
(805) 687-6601

Primus Laboratories
3130 Skyway Drive #308
Santa Maria, CA 93455
(805) 534-1500

SANTA CLARA COUNTY

Allied Medical Laboratories, Inc.
20392 Town Center Lane
Cupertino, CA 95014
(408) 252-8338

Laboratory Services
967 Mabury Road
San Jose, CA 95133
(408) 288-9850

San Jose Clinical Laboratories
2016 Forest Ave.
San Jose, CA 95128
(408) 293-5406

SANTA CRUZ COUNTY

Watsonville Community Hospital Laboratory
P.O. Box 310
Watsonville, CA 95076
(408) 724-4741

Laboratory Location
298 Green Valley Road
Watsonville, CA 95076

SONOMA COUNTY

Laboratory Services — Central Pathology Laboratory
P.O. Box 1709
Santa Rosa, CA 95402
(707) 546-3733

Laboratory Location
1110 North Dutton Avenue
Santa Rosa, CA 95401

STANISLAUS COUNTY

Modesto Medical Sciences Laboratory
1700 McHenry Village Way, Suite 15
Modesto, CA 95350
(209) 576-2497

TULARE COUNTY

RSI-Fridlund Clinical Laboratory
478 West Putman, Suite 7
Porterville, CA 93257
(209) 781-7877

Tulare District Hospital
869 Cherry Street
Tulare, CA 93274
(209) 688-0821

Visalia Pathology Laboratory, Inc.
215 South Willis
Visalia, CA 93291
(209) 625-7251

VENTURA COUNTY

Damon Reference Laboratory
1011 Rancho Conejo Blvd.
Newbury Park, Ca 91320
(805) 498-3138

Institute of Laboratory Science
P.O. Box 6831
Ventura, CA 93006
(805) 656-1088

Laboratory Location
1672 Donlon St.
Ventura, CA 93006

Medical Laboratory Network, Central Facility
P.O. Box 42
Ventura, CA 93002
(805) 656-8080

Laboratory Location
1899 Palma Drive
Ventura, CA 93003

YOLO COUNTY

Valley Toxicology Service
P.O. Box 427
West Sacramento, CA 95691
(916) 371-5440

Laboratory Location
2401 Port Street
West Sacramento, CA 95691

Woodland Memorial Hospital Laboratory
1325 Cottonwood St.
Woodland, CA 95695
(916) 662-3961

YUBA COUNTY

Rideout Memorial Hospital Laboratory
726 Fourth Street
Marysville, CA 95901
(916) 742-7381

■ Pesticide application checklist

Personal:

- Medical checkup and necessary blood tests?
- Properly trained for this type of application?

Pesticide:

- Read and thoroughly understood label?
- Checked to be sure use consistent with target pest and application area?
- Read Material Safety Data Sheet for information on hazards?
- Obtained necessary permits?
- Know proper rate of pesticide to be applied?

Equipment:

- Proper personal protective equipment (boots, gloves, respiratory equipment, protective clothing, eye protection, headwear)?
- Necessary measuring and mixing equipment?
- Suitable application equipment for this job (tank capacity, pressure range, volume of output, nozzle size, pump compatible with formulation type)?
- Application equipment properly calibrated?
- Emergency water and first aid supplies?
- Necessary supplies to contain spills or leaks (absorbent materials, cleaning supplies, holding containers)?

Transporting:

- Can transport pesticides safely to application site?
- Pesticides and containers secured from theft or unauthorized access?
- Vehicles properly marked and permits obtained, if necessary, for transporting hazardous materials and hazardous wastes?

Mixing and Loading:

- Safe mixing and loading site located?
- Obtained clean water for mixing?
- Water pH tested?
- Proper adjuvants obtained for correcting pH, preventing foaming, and improving deposition?
- Checked compatibility of pesticide tank mixes or fertilizer-pesticide combinations?
- Liquid containers triple rinsed with rinsate put into spray tank?

Treatment Site:

- Boundaries of treatment site inspected?
- Environmentally sensitive areas within and around treatment area identified?
- Notified people working or living in or near treatment area, including field-workers and their supervisors in agricultural applications?
- Treatment site properly posted with required signs?
- Soil types determined and noted, if these are factor in pesticide efficacy?

- Livestock, pets, honey bees, other animals properly protected?
- Aspects of groundwater determined, if applicable?
- Hazards within treatment site identified, including electrical wires and outlets, ignition sources, obstacles, steep slopes, and other dangerous conditions?
- Plants in treatment area in proper condition for pesticide application (correct growth stage, not under moisture stress, other requirements as specified on pesticide label)?

Weather Conditions:

- Weather is suitable for application (low wind, proper temperature, lack of fog or rainfall)?

Application:

- Application pattern established suitable for treatment area, hazards, and prevailing weather conditions?
- Application rate selected which will give most uniform coverage?
- Equipment frequently checked during application to assure that everything worked properly and provided a uniform application?

Clean-Up:

- Application equipment properly cleaned and decontaminated after application?
- Personal protective equipment safely stored and then cleaned or laundered according to approved methods?
- Disposable materials burned or disposed of in approved way?

Disposal:

- Paper pesticide containers burned or disposed of according to local regulations.
- Plastic and metal containers triple rinsed?
- Plastic and metal containers properly stored until disposed of in suitable disposal area?

Storage:

- Unused pesticides returned to supplier or stored in locked facility for later use?
- Storage facility is suitable for pesticides?

Reports:

- Necessary reports filed with requesting agency?

Follow-Up:

- Treatment areas inspected after application to assure that pesticide controlled target pests without causing undue damage to nontarget organisms or surfaces of items in treatment area?

Damage:

- Damage, if it occurred, promptly reported?

■
**Medical supervision
written agreement**

I, _____,
Physician

agree to provide medical supervision for the employees of

Grower or Company

I possess a copy of and aware of the contents of the document "Medical Supervision of Pesticide Workers: Guidelines for Physicians."

Physician

Address

City, State, Zip

Telephone

Signed

Grower or Company

Address

City, State, Zip

Telephone

Signed

(One copy of this document is required to be in the employer's file and a copy is required to be filed with the Agricultural Commissioner's office prior to any employees working with Category I or II organophosphates or carbamates.)

■ English and Spanish pesticide safety training materials

A number of slide sets, leaflets and booklets discuss the safe use of agricultural pesticides. Much of this material is available in Spanish and English, and some of it is free. The following is a partial list of what is available and how to obtain it.

SLIDE SETS AND VIDEOS

A. University of California Cooperative Extension has developed a pesticide safety slide set for field workers and non-certified pesticide handlers called "Safe Handling of Pesticides". It is approximately a half hour long and comes with a taped script. It is available in English and Spanish.

"Safe Handling of Pesticides" (84-128)

"El uso seguro de los pesticidas" (84-129)

Also available is a Cooperative Extension slide set which describes the science of toxicology to the lay person. It explains what poisons are and how they work.

"Toxicology: The Science of Poisons" (83-106)

These sets can be borrowed or purchased through University of California — Davis Cooperative Extension Visual Media Library. The handling fee is \$5.00 for the first day and \$3.00 each additional day. Out-of-state borrowers pay \$7.00. The price for purchasing 84-128 or 84-129 is \$74.00. The price for the Toxicology slide set (83-106) is \$52.00. If purchased in California, add sales tax. All prices include postage. For further instructions on ordering, call the Visual Media Library (916) 757-8980 during regular working hours, or write to:

Visual Media
University of California
Davis, California 95616

Use the call number as well as the title when ordering. Include a contact phone number and an address appropriate for UPS delivery. Allow 2 weeks for delivery.

B. The Environmental Protection Agency (EPA), in cooperation with the University of Florida at Gainesville, has developed a series of pesticide safety slide sets. There are two sub-series, one for non-certified mixers, loaders and applicators, and the other for fieldworkers who don't actually handle pesticides. Each sub-series is further divided into three modules as follows:

"Pesticide Safety for Non-Certified Mixers, Loaders and Applicators":

Part I: "Formulations, Label and Protective Clothing" (84-109)

Part II: "Safety Measures for Mixing/Loading or Application" (Call No. 84-110)

Part III: "Pesticide Disposal and Transportation" (84-111)

"Farmworkers Pesticide Safety Program":

Part I: "Introduction and Pesticide Safety Program" (84-112)

Part II: "First Aid and Prevention" (84-113)

Part III: "Daily Living with Pesticides" (84-114)

These sets come with taped scripts in both Spanish and English. These slide sets can be borrowed from the UCD Visual Media Library. The handling fees are the same as for "Safe Handling of Pesticides". Use call numbers when ordering. To purchase these slide sets, contact:

University of Florida
IFAS — Bldg. 803, Rm. 4
Gainesville, Florida 32611

The sets sell for \$42.00 for each three-part subseries. The call numbers given refer only to the University of California's cataloging systems, so they should not be used when dealing directly with the University of Florida.

Information regarding tapes and slide sets can also be obtained from:

Pesticide Farm Safety Staff (TS-757)
Office of Pesticide Programs U.S. Environmental
Protection Agency
401 M Street
Washington, D.C. 20460
(703) 557-4460

A booklet, "Pesticide Safety for Farmworkers", is also available from the above address.

C. The California Institute for Rural Studies offers a slide set called "Pesticides: A Guide for Farmworkers." There is a California and a federal version in Spanish and English. They come with a 15-minute taped script and cost \$115.00 plus \$3.00 for shipping. Rental is \$20/month plus \$75 refundable deposit. When ordering, specify the California or the national version. To obtain the sets, write to:

California Institute for Rural Studies
P.O. Box 530
Davis, CA 95617

or call (916) 756-6555.

D. Cooperative Extension, University of California has four videos on pesticide safety in the commercial greenhouse nursery, two in English, with two Spanish versions.

"Pesticide Safety in the Greenhouse" (V/86-AJ)

"El uso seguro de los pesticidas dentro del invernadero" (V/86-AK) — Spanish translation of V/86-AJ

"Training Greenhouse Workers to Handle Pesticides Safely" (V/86-AL)

"El entrenamiento de los trabajadores . . ." (V/86-AM) (Spanish translation of V/86-AL)

"Training Greenhouse Workers to Handle Pesticides Safely" (V/89-0) (Japanese translation of V/86-AL)

V/86-AJ and V/86-AK are intended for managers and supervisors. They provide a discussion of the problems inherent in greenhouse pesticide use and offer suggestions on how to insure pesticide safety. The video runs approximately 21 minutes.

V/86-AL, V/86-AM and V/89-0 are designed to provide part of the training that greenhouse workers need before working with pesticides. They can also be shown to other workers as a general safety presentation.

There is another video in English and Spanish on pesticide safety in the egg and poultry industry.

"Safe Use of Pesticides and Disinfectants in the Poultry Industry" (V89-AX)

"El uso seguro de los pesticidas y desinfectantes dentro de la industria gallinera" (V89-BF)

V/89-AX is for pesticide handlers and other poultry industry workers. V/89-BF is the Spanish translation.

There is also a video for grape pesticide handlers available in English and Spanish. The title is:

"Pesticide Safely in the Vineyard" (Z/88-AE)

The Spanish and English versions are on the same cassette.

The video version of the toxicology slide set listed on the first page has the same title but a different call number:

"Toxicology: The Science of Poisons" (V/87-AV)

All of these videos are available as 1/2" VHS cassettes. They can be borrowed or purchased through University of California-Davis, Cooperative Extension Visual Media Library. There is a \$5.00 handling fee for in-state borrowing and a \$7.00 fee when loaned outside California. The poultry and greenhouse videos cost \$40.00 per cassette. The grape and toxicology videos cost \$20.00 per cassette. To order, call the Visual Media Library at (916) 757-8980 or write to:

Visual Media
University of California
Davis, CA 95616

Please use the call number and title when ordering.

E. The Agricultural Personnel Management Association and the California Agricultural Aircraft Association have jointly developed two videos. "Pesticide Safety Training for Agriculture" (V/88-BD) is aimed at helping agricultural employers meet California requirements for pesticide handler training. "Pesticide Safety Training for

Agricultural Supervisors" (V/89-BH) is designed for field level supervisors, such as crew leaders. Both videos are available in Spanish and English. The handler video is 22 minutes long, the supervisor video is 12 minutes long. Both come with an Instructor's Guide. The video costs \$69.50. For both the English and Spanish version on a single cassette the cost is \$89.50. Postage and handling costs are \$8.50. To order, send a check or cash to this address:

Agricultural Personnel Management Association
P.O. Box 1350
Clovis, CA 93613-1350

The videos can be borrowed from the University of California — Davis Cooperative Extension. There is a \$5.00 handling fee for in-state borrowing and a \$7.00 out-of-state fee. Call the Visual Media Library at (916) 757-8980 during regular business hours, or write to the following:

Visual Media
University of California
Davis, CA 95616

Use the call number and title when ordering.

F. National Agricultural Chemicals Association (NACA) has a pesticide safety production available as either a slide set or a video. It is titled "Farm Chemical Safety is in Your Hands" (see booklets listed for NACA in the next section). The presentation is 12 minutes long. The slide set with cassette costs \$19.50. The video costs \$26.50 for 3/4" VHS, and \$16.50 for either 1/2" VHS or 1/2" Beta.

G. The USDA Office of Transportation have a 15 minute video in English only, called "Be Prepared, Just in Case: A Guide to Transporting Pesticides." This dramatization tells the viewer how to safely transport agricultural chemicals on public roads, and what to do in case of a spill. The cost is \$9.00 plus \$2.75 for shipping.

To order, write to:
Commonwealth Films
1500 Brook Road
Richmond, VA 23220

For more information call (804) 649-8611

LEAFLETS AND OTHER PRINTED INFORMATION

A. The University of California Statewide IPM Project has completed Volume I of the new *Pesticide Application Compendium*, a training and reference tool for pesticide handlers and instructors. The title is:

"The Safe and Effective Use of Pesticides" (Publication # 3324) \$30.00

B. The University of California Cooperative Extension has leaflets on pesticide safety available in Spanish. Single copies can be ordered free of charge:

"El uso seguro de los pesticidas agricolas" (Leaflet No. 2769)

"El uso seguro de los pesticidas en la casa y el jardin" (Leaflet 21214)

"Informacion basica para el trabajador del campo sobre el uso de los pesticidas agricolas" (Leaflet No. 21216)

To order, call (415) 642-2431 or write to:

Publications
Division of Agriculture and Natural Resources
University of California
6701 San Pablo Avenue
Oakland, CA 94608-1239

Please use leaflet numbers when ordering, and, if ordering more than one at a time, list them in numerical order. California residents may also obtain these publications from their local Cooperative Extension office or from the Public Service Office at the UC Berkeley and UC Davis campuses.

C. The Tulare County Cooperative Extension Office in Visalia offers a booklet which was put together in 1975 in cooperation with the College of the Sequoias and the Tulare County Agricultural Commissioner's office. The booklet is available in English and Spanish and is free. The title is

"Pesticide Worker Safety Guide" ("Guia de seguridad para las personas que trabajan con pesticidas").

To order, call (209) 733-6363 or write to this address:

Cooperative Extension
Agricultural Building
County Civic Center
Visalia, CA 93291

D. California Department of Food and Agriculture (CDFA) has published a pesticide information series which discusses first aid, pesticide storage, transportation and disposal, and pesticide use regulations; it also describes the health hazards associated with some of the more toxic agricultural pesticides used in California. The series is available in Spanish and English and is free. It is called the Pesticide Information Series. To request it, call (916) 445-8474 or write to the following:

California Department of Food and Agriculture
Worker Health and Safety Branch
1220 N Street, Room 316
Sacramento, CA 95814

E. Channing L. Bete Co., Inc. puts out a booklet called "On-the-Job Respiratory Protection" with information about face masks and other types of respirators. It is

available only in English, in a minimum order of 25 copies. The copies cost \$.72 each, plus sales tax. To order, write to:

Channing L. Bete Co., Inc.
200 State Road
South Deerfield, Mass. 01373

F. Mobay Chemical Company has an English/Spanish booklet available free to users of its products, the "First Aid and Decontamination Guide for Mobay Agricultural Products." To order it, call (816) 242-2000 or write:

Mobay Chemical Corp.
P.O. Box 4913
Kansas City, MO 64120
Attn: Jackie Anderson, Advertising Department

G. The California Institute for Rural Studies has an English publication called "Pesticides: A Guide for Farmworker Agencies." It cost \$12.50 plus \$1.50 for handling.

To order, call (916) 756-6555 or write to the following:
California Institute for Rural Studies
P.O. Box 530
Davis, CA 95617

H. The Agricultural Workers' Health Centers, Inc. in Stockton makes several publications available in Spanish and English. A booklet titled "Pesticides" (in Spanish, "Pesticidas") discusses pesticide safety and workers' rights. It lists agencies which can provide assistance or information to farmworkers. A series called "Pesticides and Your Health" includes brochures specific to grape; strawberry; tomato; melon; lettuce; peach and nectarine; citrus and orange; and broccoli, cauliflower and Brussels sprouts. Two additional booklets are available: "Protecting You and Your Unborn Baby in the Fields" and "Pesticides: A Guide to Rights and Protections for Farmworkers in California." Prices vary according to the publication and the size of the order.

To order call (209) 468-2085 or write to:
Agricultural Workers' Health Centers, Inc. (AWHC)
230 North California Street
P.O. Box 779
Stockton, CA 95201

I. EPA publishes a number of pesticide safety leaflets. Some are available from the Washington, D.C. office and others can be obtained at the California branch in San Francisco. Those that can be ordered from California are:

"Farm Workers Pesticide Safety" (No. 1702741000)
"Farmers' Responsibilities under the Federal Pesticide Law" (No. 1704034000)
"Sobre Plaguicidas (translation of "About Pesticides") (No. 1704980000)

To obtain these leaflets, call (415) 556-6415 or write to:

U.S. Environmental Protection Agency
Library — Information Center
75 Hawthorn Street
San Francisco, CA 94105

The leaflets available from the Washington office are:

- “Six Steps to Safer Use of Pesticides”
- “No deje al alcance de sus niños ningún producto venenoso” (“Don’t Leave Poisonous Chemicals Within the Reach of Children”)
- “All Farmworkers in California Have the Right . . .” (Spanish and English versions included in same leaflet)
- “Pesticide Safety Tips”
- “Farmers’ Responsibilities Under the Federal Pesticide Law”
- “Farm Workers; Pesticide Safety” (May be available in Spanish)

To obtain these leaflets, call (703) 557-4460 or write:
Public Information Center
U.S. Environmental Protection Agency
820 Quincy St., N.W.
Washington, D.C. 20011

Single copies will be sent free of charge.

J. The EPA, in conjunction with University of Florida Cooperative Extension, has written three illustrated manuals. Both Spanish and English texts are included.

- “Pesticide Safety for Non-Certified Mixers, Loaders and Applicators”
- “Pesticide Safety for Farmworkers”
- “Pesticide Safety Tips”

To obtain free copies, call (800) 858-7378 or contact:
Document Management Section (H75026) ISB/PMDS
Office of Pesticide Programs
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Specify how many copies you need.

K. The EPA also offers two posters:

- “Protective Clothing for Pesticide Users” (English only)
- “Be Safe with Pesticides/Use pesticidas con cuidado” (bilingual)

Both are free and can be ordered by calling (800) 858-7378 or by writing to:

Pesticide Information Center, PM-211B
Office of Pesticide Programs
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20410

Specify how many copies you need.

L. NACA has published several leaflets and booklets about pesticide use and safety.

“Farm Chemical Safety is in Your Hands” (\$.75 a copy)

“Empty Container Disposal” (\$.75 a copy)
“Work Smart, Work Safely with Farm Chemicals”
(This booklet has a Spanish and English text included) (\$.50 a copy)

To order, call (202) 296-1585 or write to:

NACA Communications Department
1155 15th Street, N.W.
Washington, D.C. 20005

M. A Belgian-based international organization called GIFAP publishes a booklet and poster that can be obtained free of charge in Spanish, English, and a number of other languages. The booklet and the poster are called “Guidelines for the Safe and Effective Use of Pesticides”

To order, write to:

GIFAP
Ave. Hamoir 12
1180 Brussels, Belgium

N. A Spanish “fotonovela,” resembling a comic book but with photographs of people instead of drawings, is available. It is titled “El angel de la muerte” (“The Angel of Death”). It was produced by the Consortium for International Crop Protection - USA (CICPE). It can be obtained free by calling (301) 454-5147 or writing to this address:

Consortium for International Crop Protection
4321 Hartwick Rd., Suite 404
College Park, MD 20740

O. A pesticide safety training course is offered by the Professional Agricultural Safety School in Imperial County for noncertified pesticide handlers. The course is three hours long and is given in both English and Spanish. The cost is \$35.00 for one enrollee, and \$25.00 for each additional enrollee. For enrollment information, call (619) 344-3933 or write:

Nancy Kellogg
P.A.S.S.
420 W. Main Street
Brawley, CA 92227

General safety precautions for pesticide use are fairly standard. However, keep in mind when reading or viewing information aimed at national audiences that regulations governing specific procedures—for example pesticide container disposal, or field re-entry—may vary from state to state. Make sure that your instructions are appropriate for California and always read the label before using any pesticide.



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Zavala, Melanie.

The illustrated guide to
pesticide safety

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The principles described apply to agricultural, structural, landscape maintenance, greenhouse and nursery, right-of-way, forest, aquatic, demonstration and research, public health, and regulatory pesticide use situations.

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