

Fumigation

Categories 1b - Agricultural Fumigation and 7c - Structural Fumigation

Category 1-B Agricultural Fumigation covers the use of pesticide gases in enclosed areas used for the production, storage, or transportation of agricultural commodities or to the contents of any structure used for the production, storage, or transportation of agricultural commodities.



(Photo: Kentucky Pest News)

Fumigators must be familiar with the general considerations of pesticide use:

- the laws and regulations governing pesticide registration and application
- safety
- environmental effects of pesticides
- pest biology and pest recognition
- labels and labeling.

Soil Fumigant Training for Certified Applicators

Updated soil fumigant product labels require that certified applicators successfully complete an EPA-approved training program that covers the new soil fumigant provisions. A training manual is available at: http://www.ctaginfo.org/pdf-documents/Fumigation_low.pdf

The EPA-approved training program for certified applicators using methyl bromide, chloropicrin, chloropicrin and 1,3-dichloropropene, dazomet, metam sodium, and metam potassium is available at <http://www.fumiganttraining.com/>

The EPA-approved training program for certified applicators using dimethyl disulfide (DMDS) – can be found at <http://paladin.trainingmine.com/>

This training must be completed every three years. Kentucky does not have additional certified applicator training options or requirement for soil fumigators.

Introduction

Fumigants are gases or chemicals that become gases soon after release. They can kill many kinds of pests when applied at a high enough concentration for a sufficient time. Fumigant molecules are much smaller than spray droplets or mists so they can penetrate even seemingly solid items like brick, concrete, and wood. **The effectiveness of a fumigant is lost if it is not confined to the treatment area for a sufficient time and these products do not provide residual protection.** New pests can attack as soon as a treated commodity or structure has been aerated.

Fumigation is one of the quickest and most effective ways to eliminate pests in stored commodities, shipping containers, or structures. In addition, the process is used in quarantine situations to prevent pests from being moved from one location to another.

Fumigants are some of the most toxic pesticides in the world. Many are fast acting, odorless, and invisible. Small amounts can kill people and non-target animals. Some are highly flammable; others are corrosive. **Skill and training are critical for safe use of this group of pesticides.**

Laws and Regulations

The Environmental Protection Agency (EPA), the Kentucky Department of Agriculture (KDA), and the Occupational Safety and Health Administration (OSHA) regulate the use of fumigants. Fumigators must follow their directives as well as all instructions on the fumigant label. There are fines or penalties for misusing a fumigant or for failing to properly use and maintain protective equipment.

This section **contains only selected portions from the KDA pesticide regulations covering fumigation.** The complete official regulations are available online at: http://www.kyagr.com/consumer/documents/ES_UnofficialPesticideRegulations.pdf

Fumigation Crew

At least two (2) individuals are required for the release of any fumigant.



Fumigators must work in pairs (fumigationzone.com)

Notification

Each fire and police department that has jurisdiction over the location where a fumigation is to be performed must be notified in writing at least three (3) hours prior to the time stated in the notice for the release of the fumigant.

The **fumigation notice** must include:

1. Location of the structure or enclosed space, its character and use
2. The fumigant to be used
3. The date and time of fumigant release and approximate exposure period
4. The name and day and night telephone numbers of the operator in charge

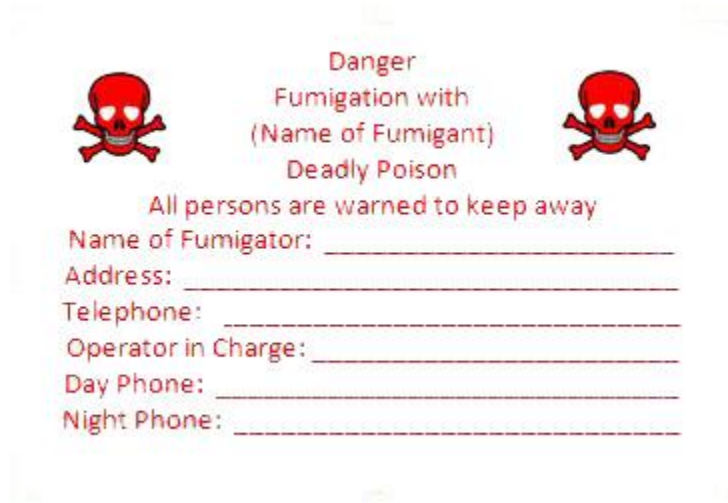
If trucks, railcars, or other common carriers are in-transit during the fumigation operation, the carrier and the receiver must be notified that fumigation has taken place.

The operator in charge must carefully inspect all parts of the structure to be fumigated and structures or enclosed spaces physically joined to or in contact with it. The operator must verify that no humans or domestic animals remain in the structure and that all necessary precautions have been taken to safeguard the lives and health of all persons.

Notice of Warning

The occupants of the structure or enclosed space to be fumigated must be warned no later than three (3) hours in advance of any fumigation operation. The notice must be left with a responsible adult person or be attached in a conspicuous manner on the entrance or entrances of the structures or enclosed spaces occupied by human beings.

Before releasing the fumigant, **danger signs must be posted** at the ground level on all doors or entrances as follows:



The signs must be printed in indelible red ink or insoluble paint on a white background. The words "Danger" and "Deadly Poison" must be in block letters two (2) inches high and all other letters shall be in proportion.

Guard Required



During the fumigation period, and until the structure has been ventilated and declared safe, at least one (1) capable, alert guard, must be on duty at the structure or enclosed space being fumigated. One (1) guard is sufficient for each fumigation operation unless the operator-in-charge judges that the conditions and circumstances necessitate additional guards.

(image: Formfonts.com)

The guard will keep unauthorized people from entering during the exposure period and while the structure or enclosed space is being ventilated. Unless specified, the guard requirement does not apply if a warning agent is used. Spot fumigation does not require a guard unless the operator-in-charge determines it is necessary.

The following procedures are **not considered fumigation operations** if non-restricted use pesticides are used according to label directions:

- (a) aerosol dispersions; and
- (b) any equipment or device that produces a fog, smoke, or mist.

Fog, smoke, mist, or aerosol application of a non-restricted use pesticide is not considered to be a fumigation.



(photo: Fumigation Services)

Commercial structural pest control or fumigation licenses must be renewed by June 30 of each year and are subject to all the terms and conditions of other licenses issued under KDA Pesticide Regulations.

According to federal and state law, a pesticide label is a legal document; using a pesticide in a manner that is inconsistent with label directions is illegal. **Fumigants can only be used on sites or commodities listed on the label, labeling, or the applicator manual.** Product label directions list the factors that affect the fumigant's efficiency on a particular commodity. Anyone who violates the Federal Insecticide, Fungicide, and Act may face civil penalties up to \$5,000 for each offense. Criminal penalties may be as much as \$25,000, one year in prison, or both. It is unlawful to transfer a fumigant from its original container to another unmarked container.