

Soil Fumigant Mitigation Factsheet:

Worker Protection Measures

EPA is requiring important new safety measures for soil fumigant pesticides to increase protections for agricultural workers and bystanders -- people who live, work, or otherwise spend time near fields that are fumigated. These measures are for the soil fumigants chloropicrin, dazomet, metam sodium/potassium, and methyl bromide.

This fact sheet summarizes new requirements to protect fumigant handlers and other workers from fumigant exposures. When new fumigant labels appear in the market place in 2010, fumigant users will need to comply with these new requirements.

Handler activities on labels

To address risks to fumigant handlers and workers, EPA is requiring:

A clear description of handler activities on labels

All persons performing fumigant-handler activities must be trained and equipped as handlers in accordance with the requirements in the WPS (40 CFR Part 170). Handler activities include:

- Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovelers, cross ditchers, or as other direct application participants (note: the application starts when the fumigant is first introduced into the soil and ends after the fumigant has stopped being delivered/dispensed to the soil);
- Monitoring fumigant air concentrations;
- Cleaning up fumigant spills (this does not include emergency personnel not associated with the fumigation application);
- Handling or disposing of fumigant containers;
- Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may contain fumigant residues;
- Installing, repairing, operating, or removing irrigation equipment in the application block or surrounding buffer zone during the buffer zone period;
- Entering the application site or surrounding buffer zone during the buffer zone period to perform scouting or crop advising tasks;
- Installing, perforating (cutting, punching, slicing, poking), removing, repairing, or monitoring tarps:
 - until 14 days after application is complete if tarps are not perforated and removed during those 14 days, or
 - until tarp removal is complete if tarps are both perforated and removed less than 14 days after application; or
 - until 48 hours after tarp perforation is complete if tarps will be perforated but not removed within 14 days after application.

On-site supervision and training

On-site supervision and training

- Direct, on-site supervision by certified applicators during most fumigant applications
- New training provided by registrants for certified applicators who supervise fumigant applications
- New training information for other handlers.

Respiratory protection requirements

Tarp perforation and removal requirements

Entry-restricted period requirements

Respiratory protection requirements

- Handlers must either stop work and leave the area or use air-purifying respirators if they experience sensory irritation (this does not apply to formulations with less than 20% chloropicrin)
- For methyl bromide formulations with less than 20% chloropicrin, handlers must wear air-purifying respirators during handling activities
- Air monitoring while handlers use respirators to ensure concentrations do not exceed the upper working limit of respirators
- All handlers who will wear a respirator must be fit-tested, trained, and medically examined to ensure they do not have health problems such as a heart condition that could make use of a respirator dangerous
- An air purifying respirator with the appropriate cartridges must be available for each handler who will wear a respirator.

Tarp perforation and removal requirements

- If tarps are used, they may not be perforated until at least 5 days (120 hours) have elapsed after the fumigation is complete unless a weather condition exists that necessitates early removal
- Tarp removal may not begin until at least 2 hours after tarp perforation is complete and tarp removers must follow respiratory protection requirements
 - For methyl bromide, air monitoring with direct-read instruments is required before tarp removal can begin
- If tarps are not removed, planting may not begin until at least 48 hours after tarp perforation is complete
- If tarps are left on the soil for at least 14 days after the fumigation is complete, planting may begin when the tarps are being perforated
- Tarps must be perforated using mechanical methods (e.g., all-terrain vehicles with cutting implements) except for small areas (less than 1 acre), at the start of a row, and during flood prevention activities.

Entry-restricted period requirements

- Entry into treated fields (including early entry that would otherwise be permitted under the WPS) by any person other than a trained and equipped handler is prohibited from the start of the application until
 - 5 days (120 hours) after application has ended for untarped applications, or
 - After tarps are perforated and removed if tarp removal is completed less than 14 days after application, or
 - 48 hours after tarps are perforated if they will not be removed at least 14 days after the application, or
 - 5 days (120 hours) after application is complete if tarps are not perforated and removed 14 days after the application is complete.

Entry Restricted Period by Scenario

	If the application is [____]	and Tarp is [____]	[____] days after application is completed	workers may enter [____]
1.	Untarped	-----	-----	5 days after application is complete
2.	Tarped	Perforated and Removed	Within 14 days	After tarp is removed
3.	Tarped	Perforated BUT NOT Removed	Within 14 days	48 hours after perforating tarps
4.	Tarped	Perforated and/or Removed	More than 14 days	5 days after application is complete

For additional information, please see EPA's Web page on risk mitigation measures for the soil fumigants, http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/.