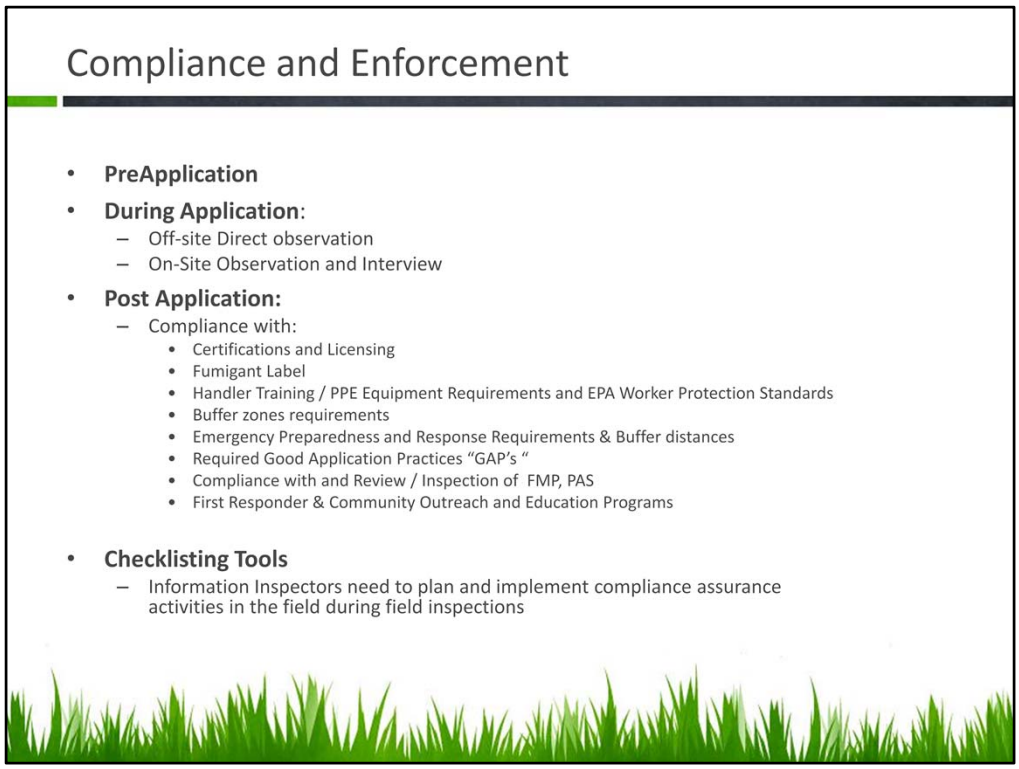
Welcome to Module 10, Compliance and Enforcement.



The content of this module is designed to serve as a training tool for local, state, and federal regulatory personnel charged with pesticide use inspection, enforcement, and label compliance assurance. This training information should also serve to illustrate to farm owners, operators, and certified applicators the importance of complying with Fumigant product labeling and the ways and means which regulatory personnel will monitor for and enforce new fumigant product labeling requirements.

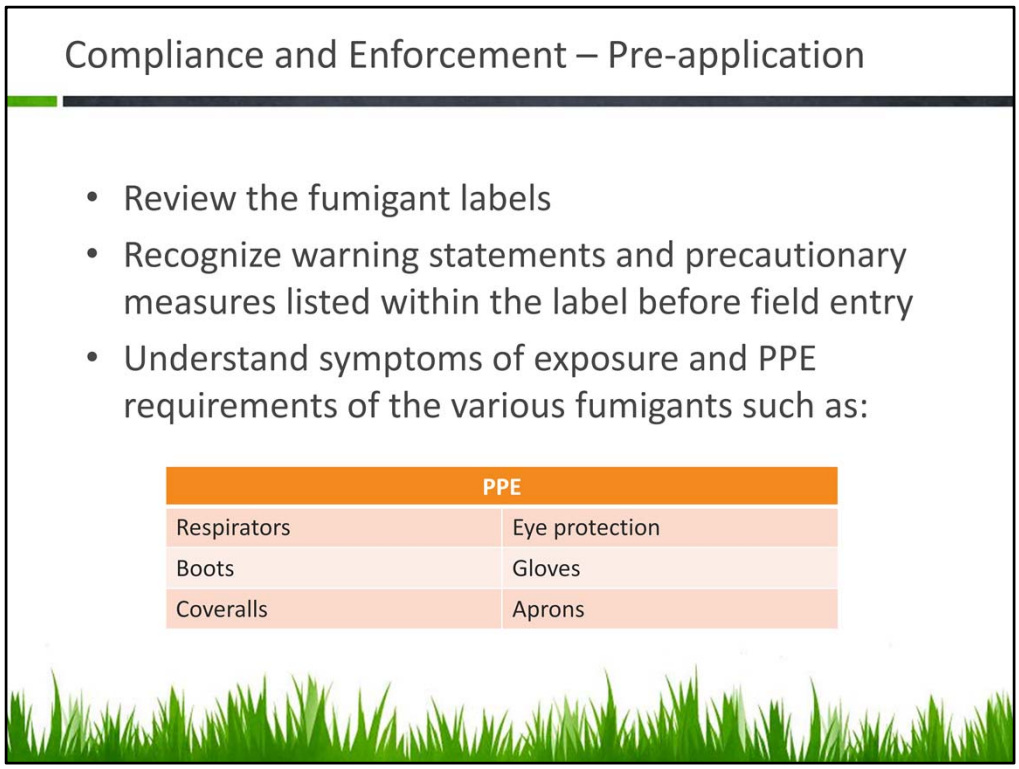
In general, Module 10 will discuss monitoring protocols, field observations, and inspections of fumigant use records conducted prior to, during, and post application of fumigants applied in the field. Post application compliance assurance activities principally involve on-site inspection of Site and Day Specific Fumigant Management plans and post application summaries, including certification and licensing requirements, fumigant label requirements, handler training, PPE requirements, Buffer zones and Compliance with mandatory Good Application Practices, and conclude with a few comments regarding Checklisting Tools inspectors need to plan and implement compliance assurance activities in the field during field inspections.

New Fumigant Labels

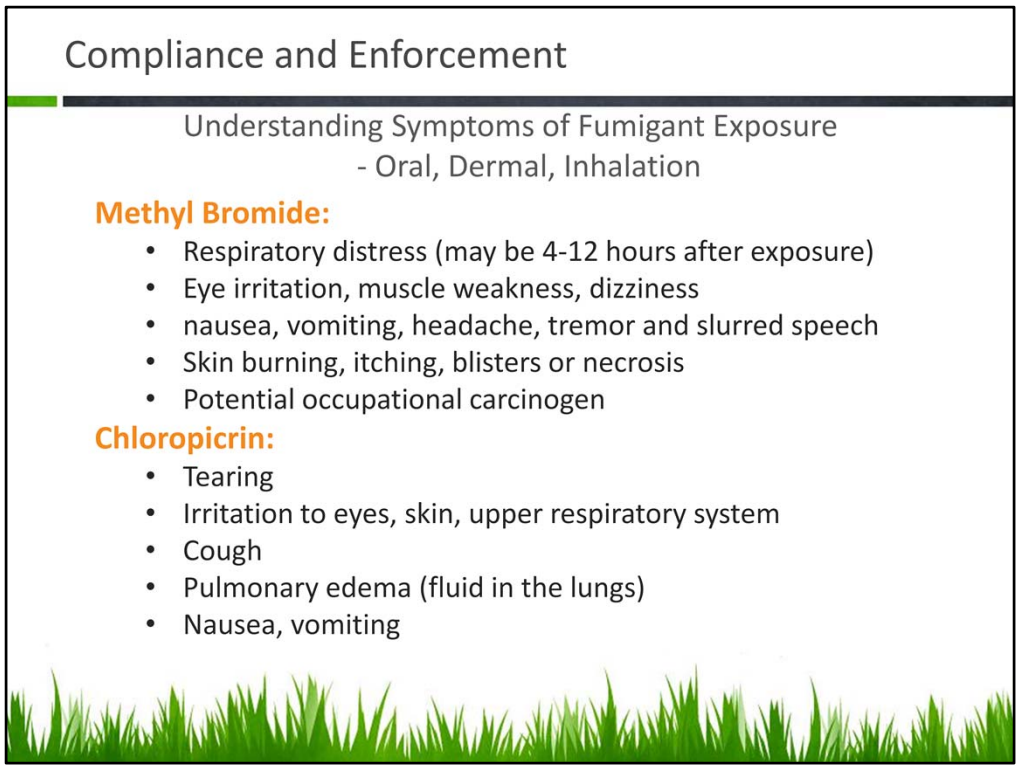
- With reregistration comes many new label changes:
  - New rules
  - Restrictions
  - Regulations
  - Applicator Requirements

With reregistration of the soil fumigants, many, many new changes to fumigant product labels must now be considered by applicators. Previous labels, typically composed of 8 to 9 pages are now represented by 40 to 50 pages booklets describing many new rules, restrictions, regulations, and applicator requirements. It is not possible to highlight all of the important label changes in this training module, so compliance and inspection personnel are encouraged to personally review the individual labels and Inspector checklists available from state and federal agency.

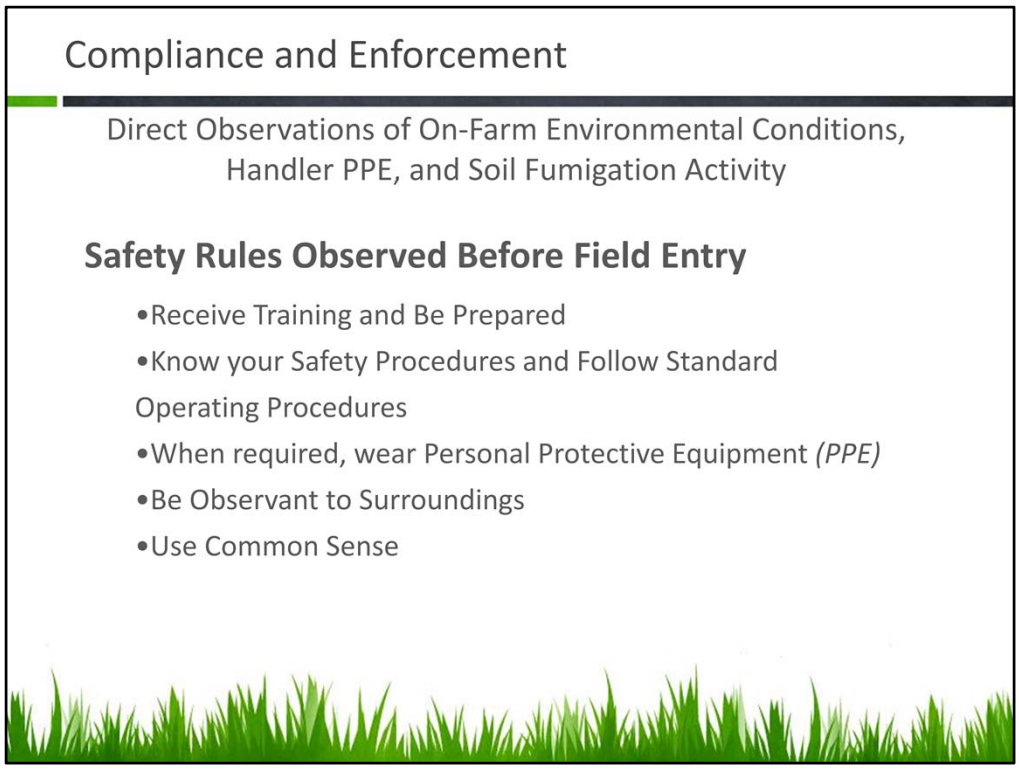
The extensiveness and complexity of changes made to the new labels will require additional time and study to understand the breadth of required change and new level of responsibility on the part of applicators to comply with new product label requirements. Inspectors are encouraged to carefully review the new product labels and MSDS sheets. Although this module has summarized many of the new label rules and restrictions, inspectors must also decide which restrictions published within the new product labels are important to confirm compliance and or to regulate.



As just indicated, Prior to entering any field where a fumigant has been or is being applied, compliance and inspection officers are strongly encouraged to review the individual fumigant labels and from that review,
recognize any and all warning statements and precautionary measures listed on the fumigant label before actual entry into the field occurs. Inspectors should understand typical symptoms of fumigant exposure and personal protective equipment requirements of the various fumigants. These could include, depending upon the particularly fumigant and method of application, half or full face respirators, goggles or chemical resistant eyeglasses, rubber boots and gloves, coveralls, and for mixing loading operations, a chemical resistant apron.



Exposure to fumigants can occur via a number of different pathways. These include oral or ingestion through the mouth, dermal or via skin contact, or via inhalation or through the lunges. In general, exposure by inhalation is the most common form of reported exposure to fumigants. Respiratory distress by inhalation may not be immediate, it may be expressed some 4 to 12 hours after exposure as respiratory distress with fluid buildup in lungs, and coughing. Other symptoms include nausea, vomiting, skin burning, itching, blistering of skin and muscle weakness. Tremors and slurred speech are also common symptoms of fumigant exposure.



Given the potentials for fumigant exposure, Certain safety rules and precautions should be observed prior to field entry. Inspectors should, after training, arrive prepared, with an understanding of appropriate safety protocol and standard operating procedure. While in the field, Inspectors must use common sense and be observant of environmental surroundings, including aspects of soil, workers in the field, and speed and direction of vehicular traffic. Inspectors should be prepared when required or appropriate to wear personal protective equipment to be compliant with the fumigant label or as a result of their own environmental monitoring and sensory perceptions.

DIFFERENT FUMIGANTS – DIFFERENT PPE REQUIREMENTS

Table 1. **Table 1**. Worker protection standard (WPS) and personal protective equipment (PPE) requirements for various soil fumigants according to new product labeling requirements within the State of Florida when handlers are not performing tasks with liquid contact potential.

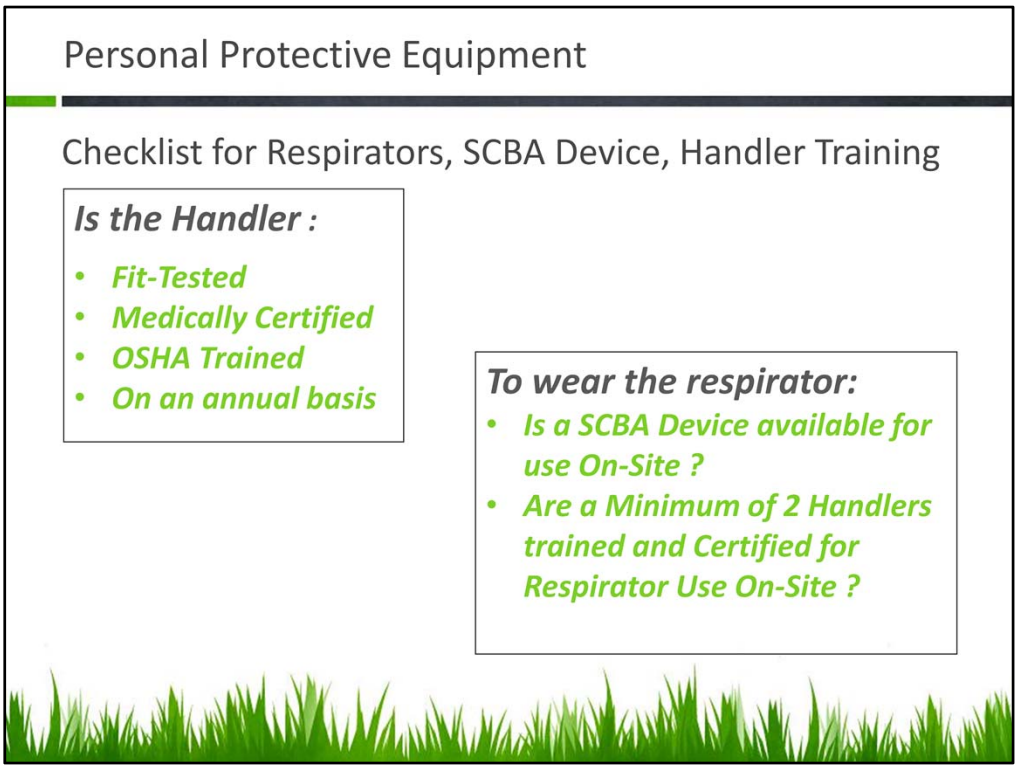
Type of PPE	Telone II®	Telone InLine® C35®	Pic Clor 60®	Vapam®	K-PAM®	Methyl Iodide	PIC	Methyl Bromide PIC 50 / 50
Long Sleeve Shirt Long pants Shoes & Socks	X	X	X	X	X	X	X	X
Chemical Resistant[2] Headgear	-	-	-	-	-	-	-	-
Special Clothing	-	-	-	-	-	-	-	-
Chemical Resistant[2] Footwear	-	-	-	-	-	-	-	-
Eye Protection[2]	-	-	-	-	-	**Safety Glasses**	-	-
Chemical Resistant[2] Gloves	-	-	-	-	-	-	-	-
Respirator [1] (Cartridge Numbers)	If sensory triggered Full Face TC 23C TC 14G	If sensory triggered Full Face TC 23C TC 14G	If sensory triggered Full Face TC 23C TC 14G	If sensory triggered Full Face TC 23C TC 14G	If sensory triggered Full Face TC 23C TC 14G	Must Wear Half Face 3M-60928 or TC 23C If sensory triggered Replace with Full face	If sensory triggered Full Face TC 14G TC 23C	[4]If sensory triggered Full Face 3M 60928
ReEntry [2] Interval(REI)	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**
Planting Interval[3] (Days Post Application)	Minimum **7 Days**	Minimum **7 days-C35 14days-InLine**	**7**	**14 -21**	**14-21**	**10-21 depending on soil moisture, texture, plastic mulch used**	**14 days**	**14 days**

[2]Consult EPA Chemical Resistance category for selection of appropriate personal protection equipment and materials.

1 Respirator requirements, unless specifically required, are triggered by sensory irritation being experienced by handler(s) in the field. Air concentrations of these fumigants will determine when respirators must be worn and or removed in the field, or whether field operations must cease and workers must exit the field and buffer zone until safe levels are restored. All respirator cartridges must be replaced daily or when odor or irritation from the product becomes apparent, whichever is sooner. All handlers who must wear an air purifying respirator must be appropriately certified as OSHA trained; fit tested, and medically qualified to safely wear a respirator.
2 ReEntry period is the time after application when field entry by any person other than correctly trained and PPE equipped is prohibited. Times after application is complete if tarps are not perforated and not removed before 14 after application. Consult the individual product labels for other ReEntry Interval restrictions which may be required when soil is tarped or untrarped, and after tarp perforation / removal procedures.
3 Planting Interval is the period in which planting must be delayed so as to allow fumigant to dissipate from soil after application to avoid plant injury.
4 Field application of formulations of methyl bromide chloropicrin with greater than or equal to 80 percent total content methyl bromide mandatorily require use of a respirator and hourly air monitoring of fumigant concentrations in the breathing zone of field workers.

From summary of the following table of personal protective equipment requirements for commercially available fumigants, it should be clear that different fumigants have different personal protective equipment requirements. When handlers in the field are not performing tasks with direct contact activity, chemical resistant boots, gloves, coveralls are not required for any of the fumigants. Some fumigants such as methyl iodide (marketed as Midas 98/2 and Midas 50/50) require handlers to wear chemically resistant safety glasses with brow and side protection, as well as a half face respirator. So unless specifically required by the label, as for methyl iodide, mandatory use of a respirator by a handler in the field is not required unless triggered by sensory irritation being experienced by any handler in the field. If sensory irritation is experienced by any complaining handler in the field during fumigation activity, then a full face respirator with appropriate cartridge is required for use of all fumigants. Inspectors should consult the labels of all of the fumigant products being used in the field to determine which fumigant has the most stringent requirement for specific PPE, and whether these PPE requirements were being met within the field of application.

The above table also shows that the reentry interval, the period in which unauthorized or PPE unprotected handlers must not be allowed to enter the fumigated field, is 5 days. The planting interval, the minimum number of days in which planting must be delayed following fumigant application varies between 7 to 21 days, depending upon soil temperature, moisture, and frequency of rainfall events.



As the previous slide illustrates, some fumigant products required the use of air purifying respirators by applicators and handlers in the field as part of the personal protective equipment requirement for use of the fumigant in the field. In addition, EPA has determined, and the new labels require that respiratory protection is needed if fumigant concentrations in air reach a certain level that causes sensory irritation to any worker in the field. In this situation where sensory irritation is reported by a handler in the field, the certified applicator can decide to cease application operations and exit the field, or demand handlers wear respirators. The certified applicator cannot ask handlers to wear a respirator unless the handler has been trained and fit-tested according to OHSHA standard, and is medically certified to ensure the handlers physical ability to safely wear the respirator. Each year, employers must ensure that any handler who uses a respirator is annually recertified, and if respirators are to be used in the field, the certified applicator must inform handlers of this, as well as the health effects, early signs of exposure, and respiratory protection and PPE requirements for products applied in both the application block in which they are working and the other application blocks in close proximity where buffer zones exist.

In general, and as part of the Compliance checklist for Personal Protective Equipment, inspectors who observe respirators in use should determine if Handlers were fit tested, medically certified, and OSHA trained. Were a minimum of 2 handlers trained and certified for respirator use on-site during fumigation. Finally, was a air rescue devise such as a self contained breathing apparatus SCBA devise on-site and ready for use in the event of an emergency.

Compliance and Enforcement

Upon Field Entry/During Application:

- Be Cautious
- Be Observant of Surroundings
- Be Respectful of Growers Time and of Field Laborers

Upon arriving in the field during a fumigant application, Inspectors should be cautious and observant of their surroundings. Tractors and supply vehicles are moving back and forth through the field, and dangers exist. If contact is made with the certified applicator within the field, provide your business card with name and contact information and announce the purpose and intent of your visit. Be courteous and respectful of the growers time and that of the field laborers. Delays cost the applicator and or farming operation time and money in labor and tractor fuel. Be succinct in your information requests and try not to delay or disrupt the fumigation operation for to long or unnecessarily.

Direct Observations of On-Farm Soil Fumigation Activity

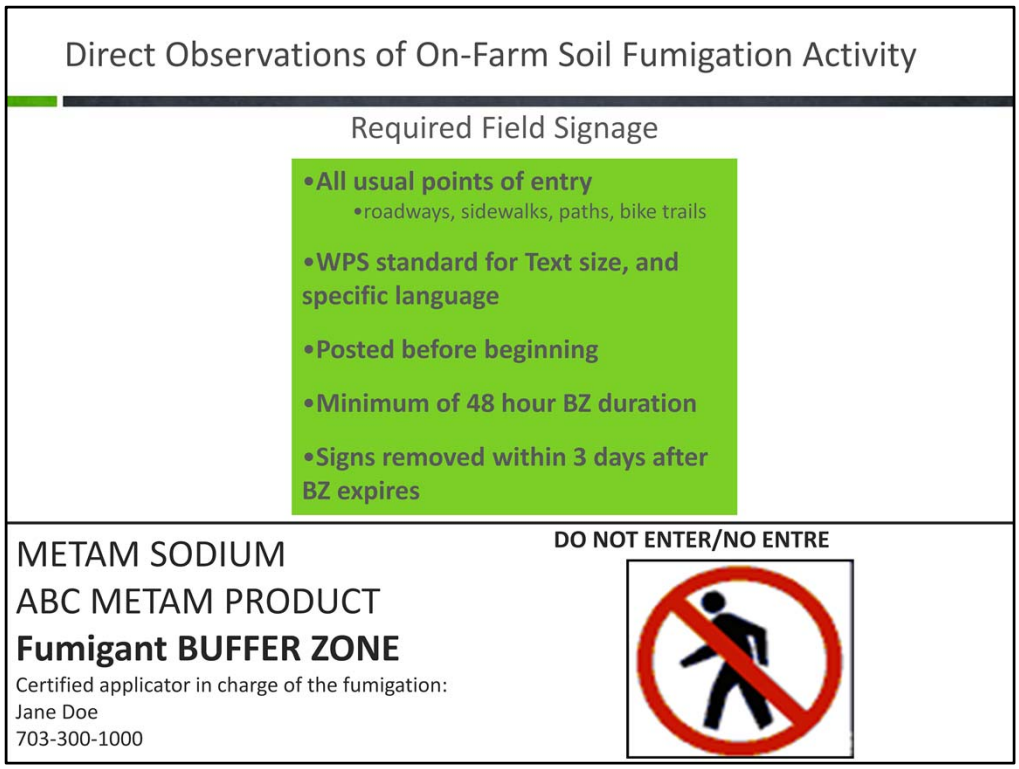
Required Field Signage

-- "DANGER/PELIGRO,"
-- "Area under fumigation, DO NOT ENTER/NO ENTRE,"
-- "[*Name of fumigant*] Fumigant in USE,"
-- the date and time of fumigation,
-- the date and time entry prohibition is lifted
-- Name of the product, and
-- Name, address, and telephone number of the certified applicator in charge of the fumigation.

Fumigant Warning Sign must bear skull & crossbones

As inspectors enter fields, they should be aware of their surrounding and cognizant of required field signage. Two different signs are required, a buffer zone and a Treated area sign, each of which must contain specific language and information. In this example, the fumigant Warning / Treated area sign must bear the Skull and Crossbones symbol and Danger / Peligro Area under fumigation, the sign must also contain the name of the Fumigant in use, the date and time of fumigation, the date and time the reentry prohibition period will expire, the name of the product and the name, address, and telephone number of the certified applicator in charge of the fumigation. The treated area sign must be placed prior to the start of fumigation and removed within 3 days of the date in which the reentry prohibition expires.

The treated area posted signs must remain posted for no less than the duration of the entry restricted period after treatment.
Treated area signs must be removed within 3 days after the end of the entry-restricted period.
Signs must meet the general standards in the WPS for placement, text size, and location (40 CFR §170.120).



The buffer zone signs must also be posted and contain specific language and information. For example, the buffer zone sign must include the - Do not walk symbol, "DO NOT ENTER /NO ENTRE. It must include the name of the fumigant, and contact information for the certified applicator in charge of the fumigation. The signs must be placed at all usual points of entry and along likely routes of approach from areas where people not under the land operator's control may approach the buffer zone. Some examples of these possible points of entry include, but are not limited to, roadways, sidewalks, walking paths, and bike trails. Signs must be posted before the application begins and remain posted until the 48 hour buffer zone period has expired. The buffer zone sign must be removed within 3 days of the date in which the reentry prohibition expires (usually 5 days).
Signs must be posted before the application begins and remain posted until the buffer zone period has expired.

Compliance and Inspection personnel who make visits to the farm while soil fumigation activities are being conducted should be observant of surroundings and field opertions and activities, including direct observations of on-farm environmental conditions, handler PPE and other soil fumigation activities. Some of the examples illustrated within this slide include the recognition of potentially dry soil conditions within the field illustrated by the dust clouds enveloping the tillage equipment, the lack of long sleeve shirts and long pants by some handlers in the field, or mentally recording the fact that other handlers, without exception were in respirators but not necessarily WPS equipped with long sleeve shirts. The presence of specific PPE being worn by handlers in the field should provide guidance to the inspector to what PPE he or she might want to consider prior to enter the immediate fumigation area.

With this in mind, and as part of the Compliance Checklists, Inspectors may want to take note of whether handlers were WPS compliant by wearing long sleeve shirts and pants, whether respirators were being worn, and whether dry soil conditions were apparent in the field at the time of application.

Within the Fumigant Management Plan, a written tarp plan must be included which describes a specific timetable and procedures for checking tarps for damage, tears, and other problems. The FMP must also describe plans for determining when and how repairs to tarps will be made, and by whom. Applicators must define a minimum time following soil injection of the fumigant that the tarp will be repaired, including the minimum size of tarp damage that will be repaired.

With this in mind and as part of the Compliance Checklist for tarp repair, inspectors **should be observant of their surroundings** and should record whether there was any evidence of tarp loss or damage, and how quickly repair was made to the damage mulch.

Compliance and Enforcement

Pesticide Storage

STORAGE REQUIREMENT	Fumigant
Store in tightly closed original container in cool place away from dwellings. Prolonged exposure of containers to direct sun should be avoided.	Telone II Telone Inline Telone C35
Do not use or store near heat or open flame. Store in tightly closed original container in cool place away from dwellings.	Pic Clor 60 Pic Clor 60EC
Store upright, in cool, dry, well-ventilated locked area. Post as a pesticide area.	Chloropicrin
Do not expose to extreme temperature. Do not stack more than 4 drums high.	Metam Sodium Metam Potassium
Store in a dry, cool, well-ventilated area under lock and key. When appropriate to prevent tipping, store cylinders upright, secured to a rack or wall. Post as a pesticide storage area.	Midas 98/2 Midas 50/50
Store upright in a secure, well ventilated location. Post as pesticide storage area. Store cylinders upright, secured to a rack or wall to prevent tipping.	Methyl Bromide / Chloropicrin

Different fumigants, different requirements *(lock and Key not required for all)*

- Were fumigant cylinders stored in a cool place, away from dwellings?
- Were fumigant cylinders stored under lock and key and posted as a pesticide storage area?

Whether On-site prior to, during, or post fumigant application, inspectors should also **Be Observant of their Surroundings** regarding fumigant label requirement for proper pesticide storage. The table illustrated here defines current label language describing specific storage requirement for most of the different soil fumigants currently available for preplant use in commercial agriculture. It should be obvious after review of the table presented, that different fumigants have different storage requirement, and lock and key storage is not required for fumigants others than Midas (i.e., methyl iodide) or Chloropicrin, and formulations of methyl bromide. . As part of the compliance checklist for Pesticide Storage, inspectors must determine if fumigant cylinders or containers were stored in a cool, dry , well ventilated area away from dwellings and extreme temperatures. When appropriate, other considerations such as whether fumigant cylinders were stored under lock and key, and in some cases whether the locked containment area was posted with required signage as a pesticide storage area.

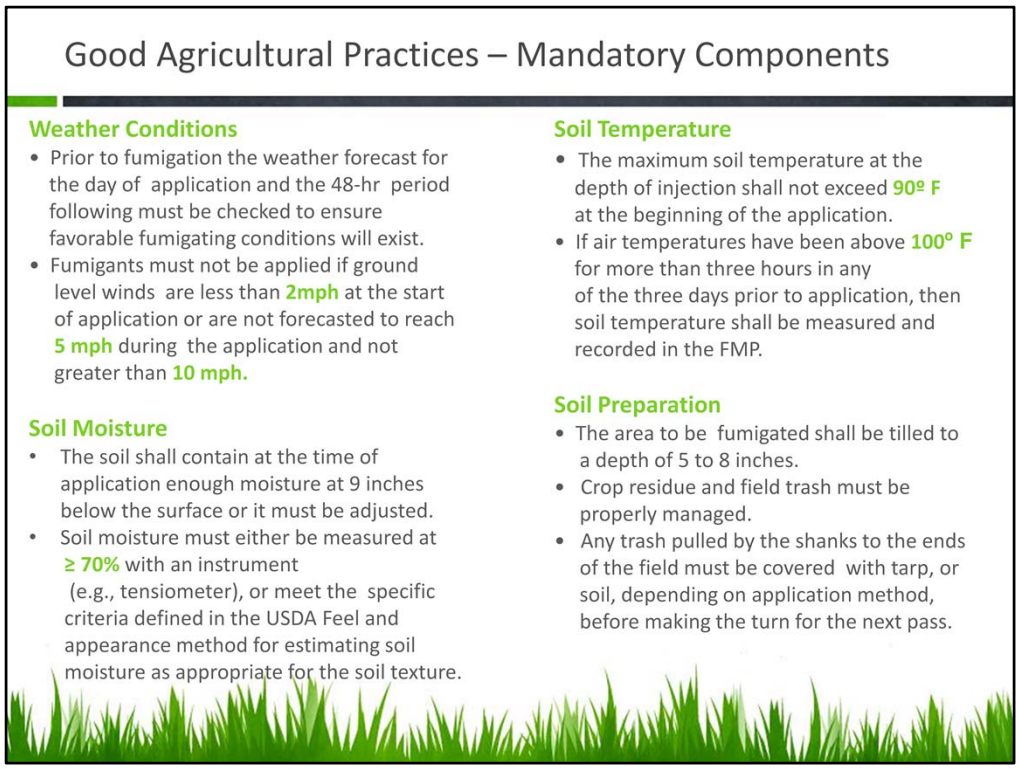
Good Application Practices (GAPs)

A nice, firm, moist, compact bed to minimize emissions, improve efficacy, utilize buffer zone reducing credit

Mandatory Good Agricultural Practices:

EPA has determined that Certified Applicators must record and report soil conditions present at the time of application. EPA has also set minimum standards of temperature and moisture which must be present before fumigation can proceed.

As part of the new mandatory requirements for Good Application Practices,



As indicate in Module 5 or this training series, Good agricultural Practices are mandatory requirement for uses of all fumigants. Certified applicators must check the weather forecasts for the day of application and 48 hr period which follows to ensure favorable conditions will exist before commencing with any fumigation activity. Specific wind conditions, soil moisture and temperature must be present and above threshold levels before fumigations can proceed. The soil must be tilled and if any crop residue or field trash is pulled by shanks to the ends of the field, it must be covered with soil or plastic mulch before the Fumigation tractor makes its next pass through the field.
With regard to environmental conditions present within the field, inspectors must be observant of their surroundings, noting whether any wind conditions existed, whether adequate soil moisture conditions were evident or whether clouds of dusts appeared to emanate off the tractors as they proceeded back and forth through the field.

Compliance & enforcement

Direct Observations of On-Farm Environmental Conditions, Handler PPE, and Soil Fumigation Activity

1. *Describe Soil moisture conditions (wet, dry)? Dust Clouds present?*
2. *Has field been recently disked?*
3. *Are wind speeds of **2mph** or more present?*
4. *What type of Fumigation Equipment was used? (shank or drip)*
5. *Was handler PPE being worn? (boots, gloves, coveralls, glasses*
6. *Are odors detectable? Do they constitute sensory irritation?*
7. *Is SCBA gear on site? Potable water?*
8. *Any crop residue/field trash present in significant quantity in the field?*
9. *Is field trash being covered with soil/plastic at row ends?*
10. *Were any unrepaired tears of perforations observed in the mulch film?*
11. *Is the fumigation occurring close to housing?*
12. *Are buffer zone signs present? Do not enter Treated area signs?*

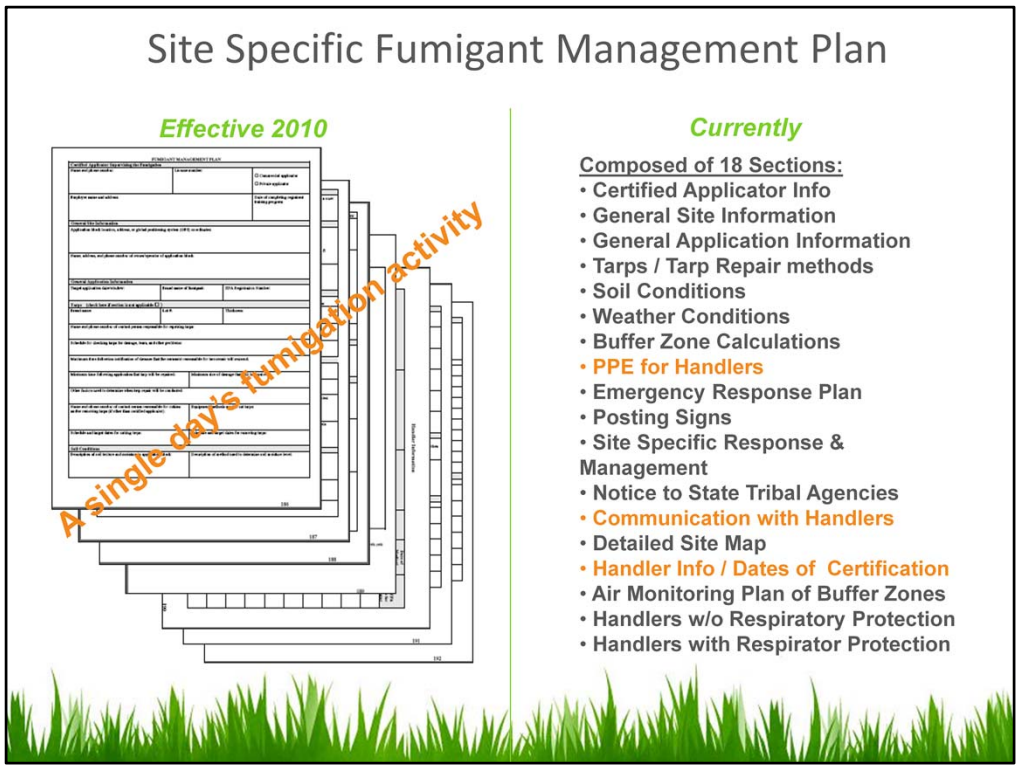
In general, and as part of the Compliance checklist for new Mandatory Good Agricultural Practices, inspectors must be prepared to describe soil moisture conditions as wet or dry and whether dust cloud surrounding tractors was evident in the field
Whether the Field had been recently disked ?
Did the inspector believe wind speeds of 2mph or more were present in the field at the time of application?
Was it a Shank or drip application of the fumigant
Were handlers required to wear any particular PPE?
Were fumigant odors detectable within the application block? Did they constitute sensory irritation to the inspector?
Is SCBA gear available on site in the case of an emergency? Is there 5 gallons of Potable Water on Site?
Is there any crop residue or field trash present in significant quantity in the field?
Was field trash being covered with soil or plastic at the row ends?
Were any unrepaired tears or perforations observed in the mulch film?
Is the fumigation occurring close to housing?
In 2011, inspectors should determine whether Buffer Zone signs are Present?
As well as Do Not Enter Fumigant Treated Area Signs .

As part of the compliance and inspector checklist for Good Agricultural Practices, inspectors in the field should be ready to confirm from observation or from review of the Fumigant management plan whether required GAP's such as favorable weather, soil moisture and temperature conditions, and wind speeds of more than 2mph were observed during fumigation. Were soil temperatures at the start of fumigation and at the depth of injection measured? Did measured soil temperatures exceed 90 F? Was soil moisture measured at a depth of 9 inches within 48 hours prior to fumigation? And finally, Was any trash pulled to the ends of rows immediately covered with soil or plastic mulch?

Requests to View or Obtain Copies of the FMP from the Certified Applicator During or Post fumigant Application

Inspectors in the field at the time of fumigation can request to view or to obtain copy of the FMP from the farm owner or certified applicator.

In addition to viewing and recording observations and environmental conditions, Inspectors in the field at the time of fumigation can request to view or to obtain copy of the Fumigant Management Plan from the farm owner or certified applicator who must be present in the field at the time fumigation begins until the time fumigation ends within the application block.



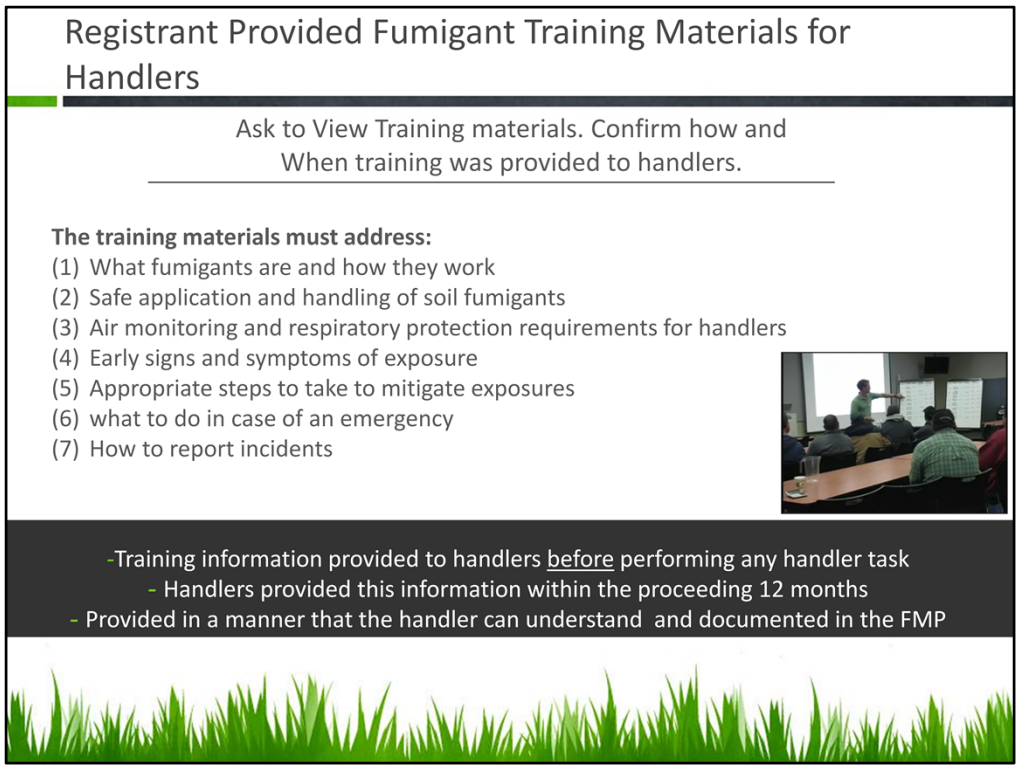
What is the Fumigant Management plan. As part of Fumigant reregistration and new labeling of soil fumigants, Certified applicators are now required to develop a written site specific FUMIGANT MANGEMENT PLAN for each days fumigation activity. THE fumigant management plan requires the certified applicator to satisfy information requirements for 18 different categories including general information regarding the applicator, the application site, and fumigants involved including the rate, method of application, and whether a tarp will be used and how it will be repaired if damaged during fumigation. It will require the applicator to document soil and weather conditions, buffer zone distances and method of calculation, personal protective equipment requirements.

Mandatory Training Certifications

- Valid certified pesticide applicator *and* if a commercial applicator, must have the soil and greenhouse fumigation category
- Current product stewardship training certification obtained from registrant or state approved training program @ 3 years
- 2 handlers with additional Worker Protection Training, respirator fit-testing and medical Certifications.
- Certified Applicators delivering Registrant Training Info to Handlers regarding Fumigant safety, worker risks and reporting

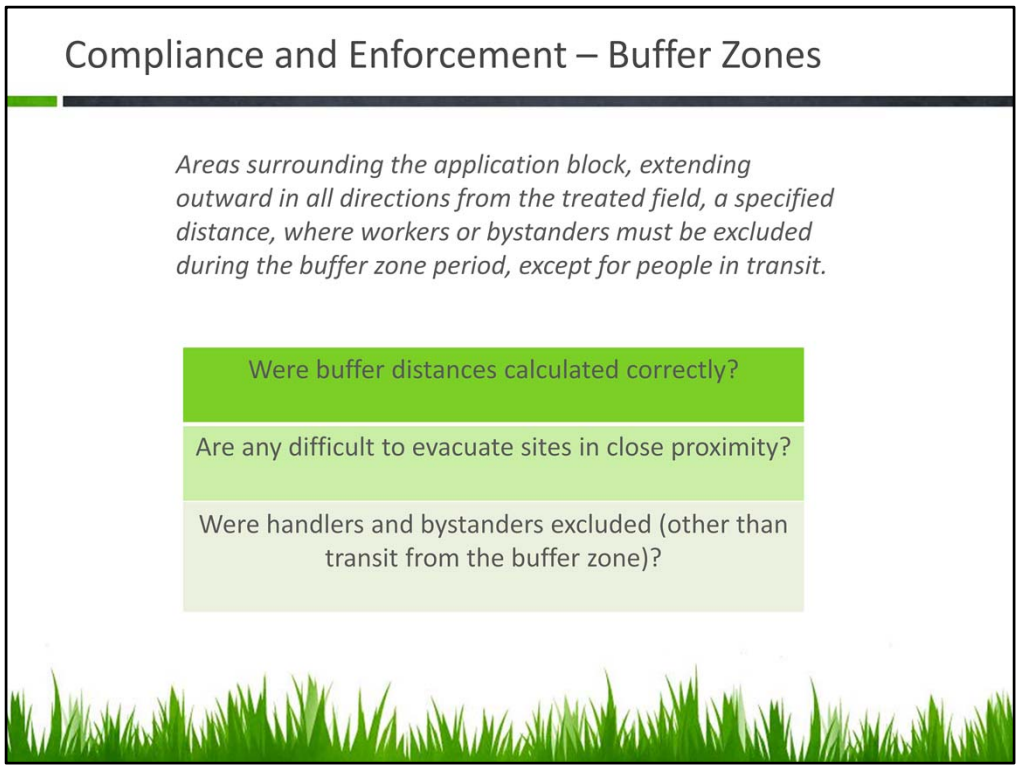
Within the FMP, the certified applicator must provide written documentation that the applicator has a valid certified pesticide applicators license. The applicator must also indicate dates of completion for product stewardship training from registrant or state approved training program at least every 3 years. The applicator must show that at least 2 handlers in the field at the time of the fumigation activity have additional worker protection training, respiratory fit testing and medical certifications to wear respirators in the field. Finally, the certified applicator must certify that all handlers in the field have received additional Registrant provided training materials regarding Fumigant safety, worker risks, and reporting.

In this regard and as part of the compliance and inspector checklist for Mandatory Training Certifications, inspectors should be ready to confirm:
Whether the applicator has a valid certified pesticide applicators license?
Whether he applicator has a Commercial RUP Applicator License with the Soil and Greenhouse Fumigation Category on license?
Or whether the applicator is current with required Fumigant Product training requirements of every 3 years.
The inspector would be wise to determine whether the applicator provided registrant provided soil fumigation training at least annually and whether handlers have received WPS training and whether the dates for completion of this training are provided for every handler working in the field during fumigation.



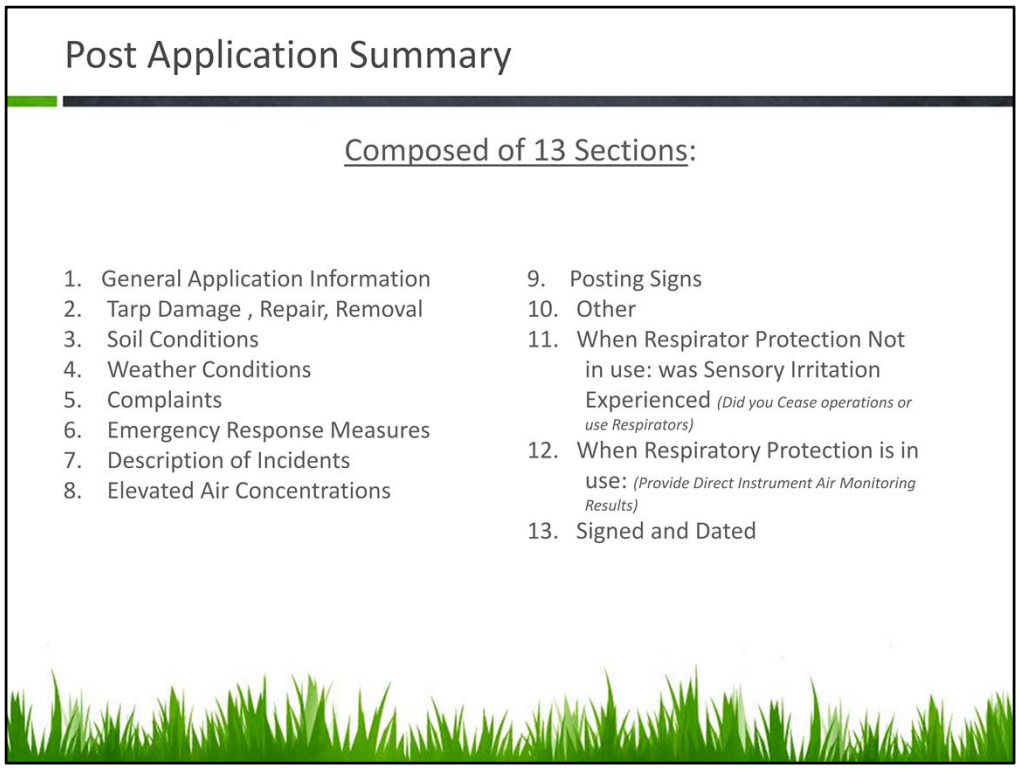
EPA has determined that registrants must prepare and disseminate training information and materials for handlers who are working under the supervision of the certified applicator in charge of fumigation. The training materials must address, at minimum, the following elements: (1) what fumigants are and how they work, (2) safe application and handling of soil fumigants, (3) air monitoring and respiratory protection requirements for handlers, (4) early signs and symptoms of exposure, (5) appropriate steps to take to mitigate exposures, (6) what to do in case of an emergency, and (7) how to report incidents. Registrants must provide this training information through channels open to the public (e.g., via a website).

Pesticide labels will require that applicators supervising fumigations provide this training information to handlers under their supervision before they perform any fumigant handling task, or they must ensure that handlers have been provided the required information within the preceding 12 months. The label will also require that the training information be provided in a manner that the handler can understand. Applicators supervising fumigations must ensure the FMP includes how and when the required training information was provided to the handlers under their supervision.

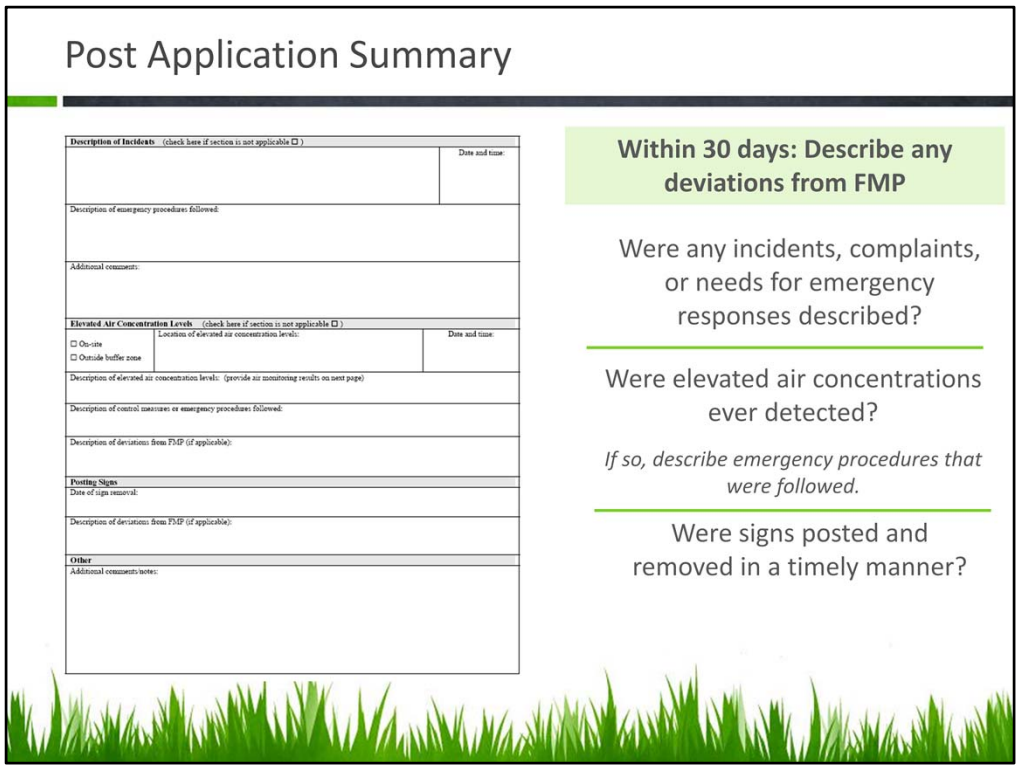


Beginning in 2011, buffer zones will become mandatory requirement for fumigant use. Buffer zones are untreated areas surrounding the application block or fumigant treated field where workers or bystanders must be excluded, except for people in transit, during the 2 day buffer zone period. Buffer zone distances extending out from the perimeter of the treated field will be determined by a number of different factors including the rate and method of fumigant application, how many acres were treated per day, and whether any buffer zone reducing credits such as use of a high barrier, emission reducing plastic mulch plastic was used to cover the soil after fumigant application. Applicators are required to post buffer zone signs at all points of field entry, and other areas where people are most likely to enter including roads and footpaths or trials and at likely routes of approach such as the perimeter of a buffer that faces a housing development. The new fumigant labels require that all treatment areas and buffers be clearly posted with proper signage to ensure handlers entering a treatment area are aware of previous treatments and the existence of buffers.

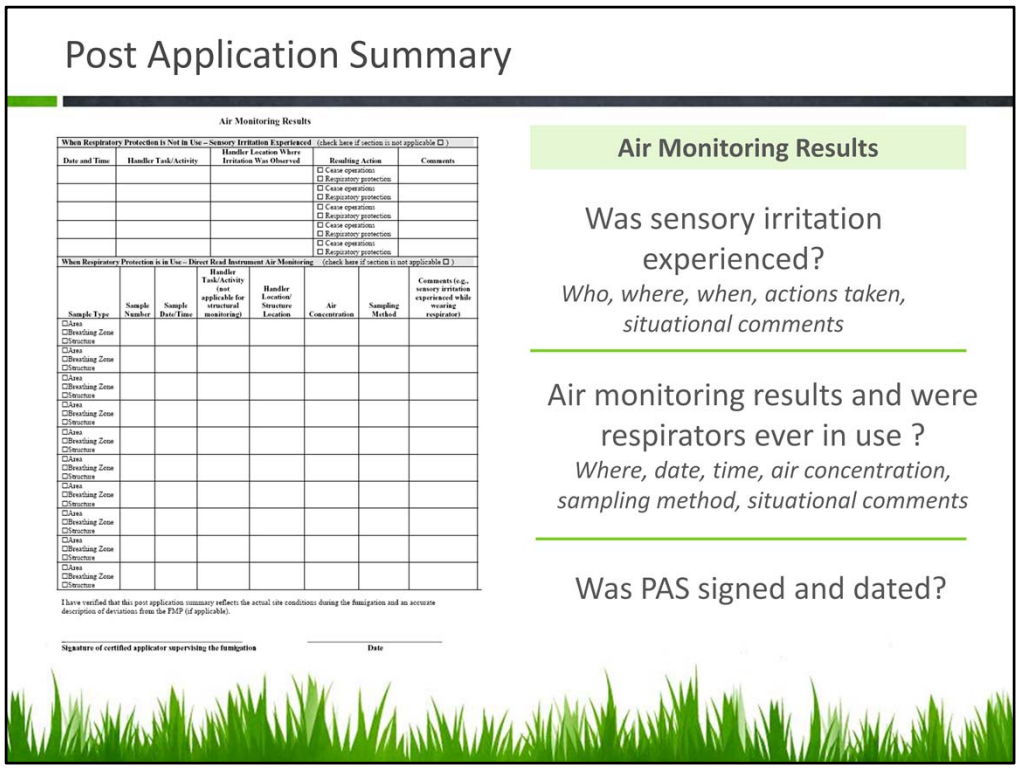
In this regard and As part of the compliance and inspector checklist for buffer Zones, inspectors should be ready to confirm whether buffer zone distances were calculated correctly, Whether there were any Difficult to Evacuate Sites in close proximity, and whether Handlers and bystanders, other than those in transit, were excluded from entry into the buffer zone.



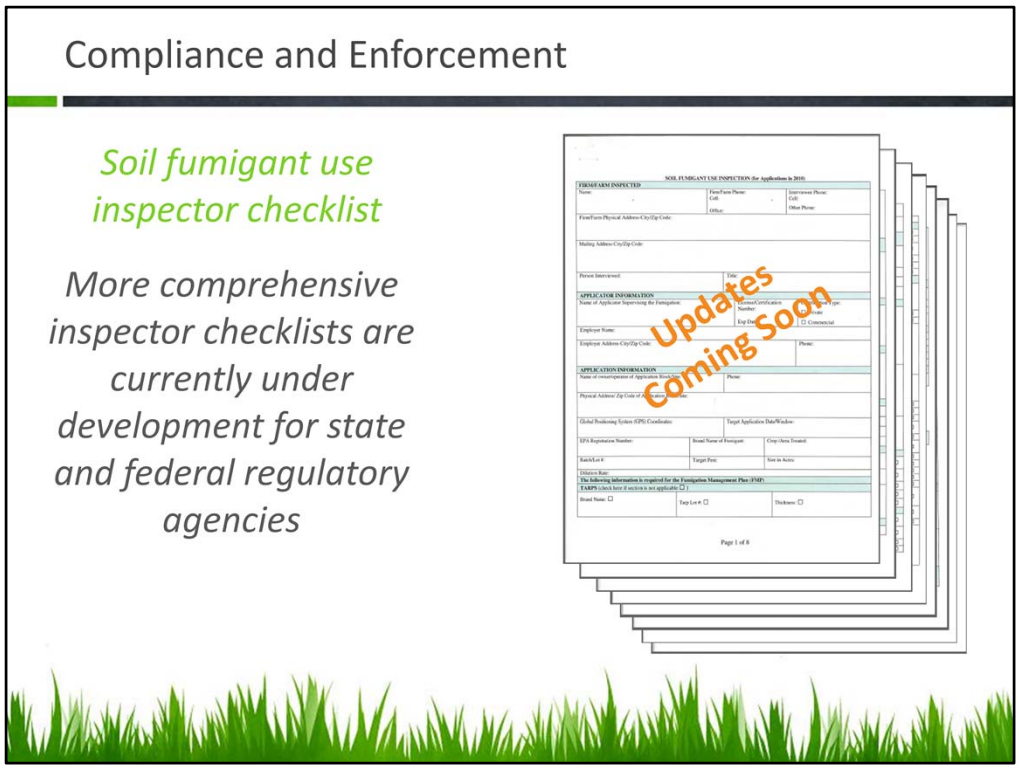
In addition to the Site Specific Fumigant Management Plan, the new fumigant product labels will require certified applicators in charge of each days fumigation activity to complete a post-fumigation, post application summary for that days fumigation activity, describing any deviations from the FMP. The Post-Application Summary which must be signed, dated, and archived by the certified applicator for at least 2 years after application must contain the following components or information sections. These include general applicator and application information, measurements and reports of soil and weather conditions taken to comply with GAPs, The location and results of the air monitoring, and information about any problems such as complaints or incidents that occurred as a result of the fumigation must be recorded in the post-application summary report. The Post application summary must be completed within 30 days of any given days fumigation activity.



As part of the Post Application Summary interview and Document review, Inspectors should consider the following checklist. Inspectors should determine whether any incidents, complaints, or needs for emergency response were needed and described within the post application summary report. Were elevated air concentrations ever detected on-site in the field or within the buffer zone? Were any emergency procedures ever needed or described within the PAS. Were buffer zone and treated area signs posted and removed in a timely manner with the fumigant treated area?



As part of the Post Application Summary interview and Document review, Inspectors should also determine whether sensory irritation was experience by anyone in the field during the day of fumigation and where and when any actions were taken. Does the certified applicator report any air monitoring results or whether respirators were ever in use by handlers in the field. Finally, Was the Post Application Summary Report signed and dated by the certified applicator responsible for supervising the fumigation?



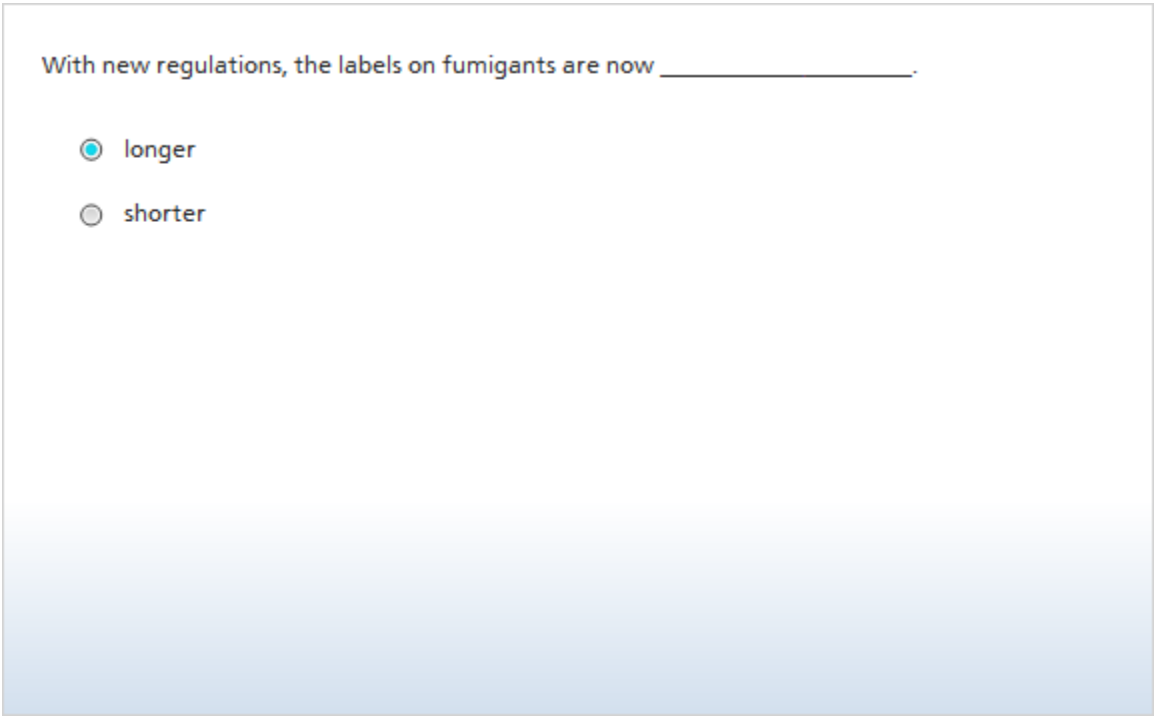
A significant amount of information has been presented in this module. As indicated in other training modules, EPA has mandated the addition of many new changes to fumigant labels which inspectors must consider to include a variety of new risk mitigation measures in a 2 year stepwise approach. Some of the new label requirements will be implemented in 2010, while others will be required from a second round of new labels which will appear in 2011. In addition, all of the fumigants will undergo reregistration again in 2013, which will again require inspectors and compliance officers to reconsider many new use restrictions and label requirements.

Ensuring that inspectors and compliance officers understand the new label requirements is an important prerequisite which must precede any on-site inspection activity. A variety of different education materials are being developed and will be periodically updated to assist inspectors in this regard, including a more comprehensive checklist, to assist the inspector during on-site visits and facilitate the inspection and compliance process. EPA, in collaboration with State agencies, will be issuing and periodically updating a Soil Fumigant-Use Inspector Checklist to help guide routine inspections of agricultural establishments and used to verify compliance with the new soil fumigant regulations.

Module 10 Review Questions

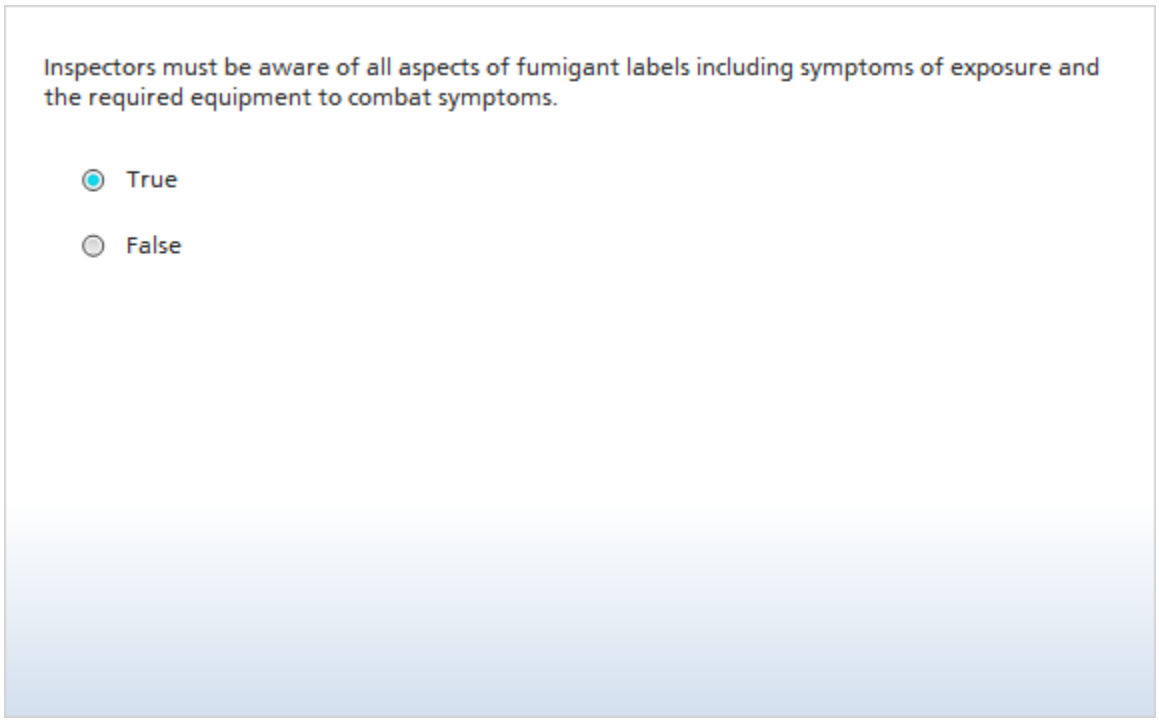
Questions

1. With new regulations, the labels on fumigants are now _____.



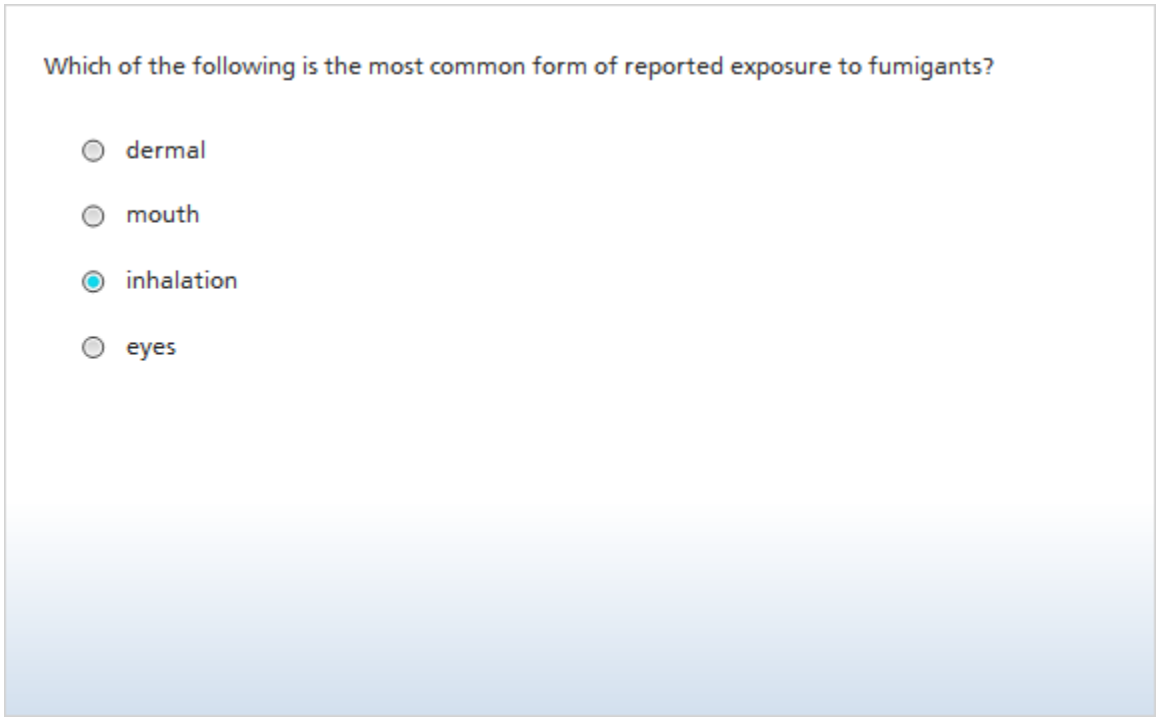
Correct	Choice
X	longer
	shorter

2. Inspectors must be aware of all aspects of fumigant labels including symptoms of exposure and the required equipment to combat symptoms.



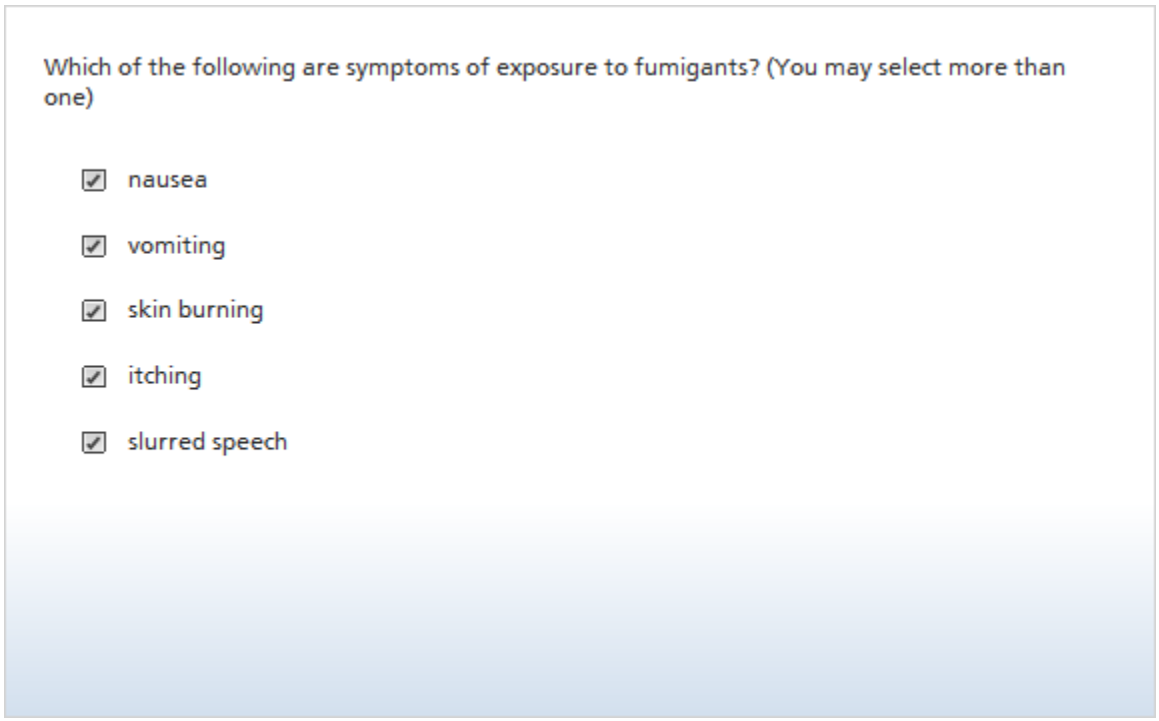
Correct	Choice
X	True
	False

3. Which of the following is the most common form of reported exposure to fumigants?



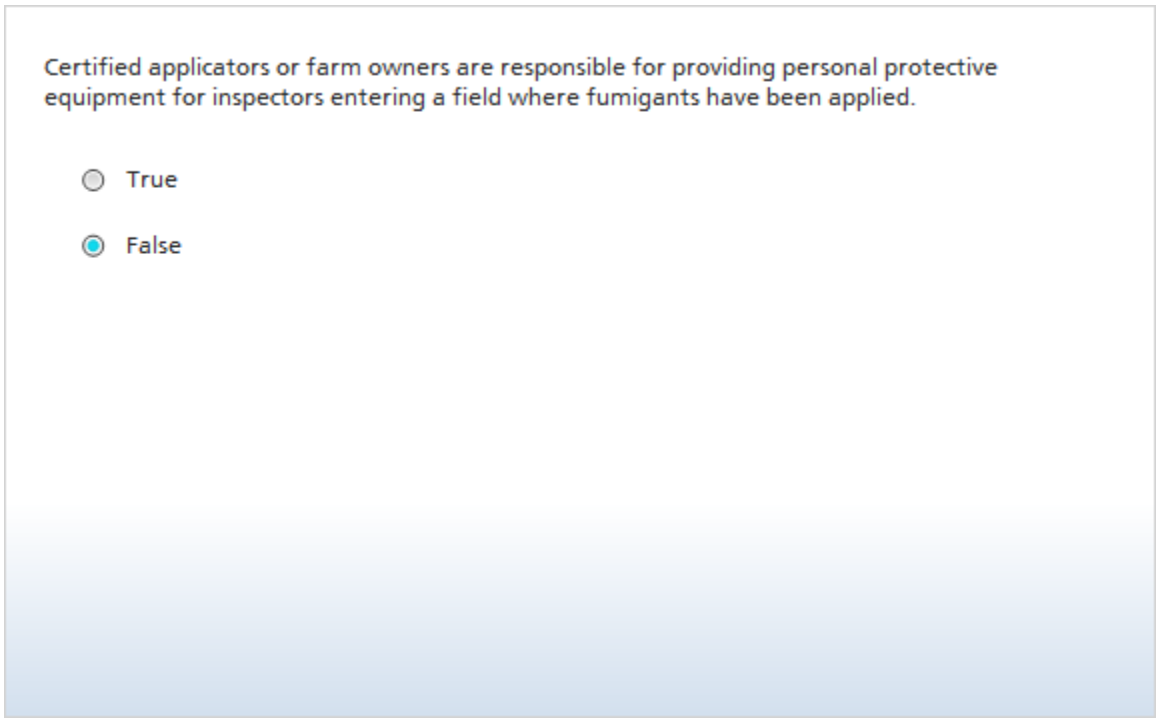
Correct	Choice
	dermal
	mouth
X	inhalation
	eyes

4. Which of the following are symptoms of exposure to fumigants? (You may select more than one)



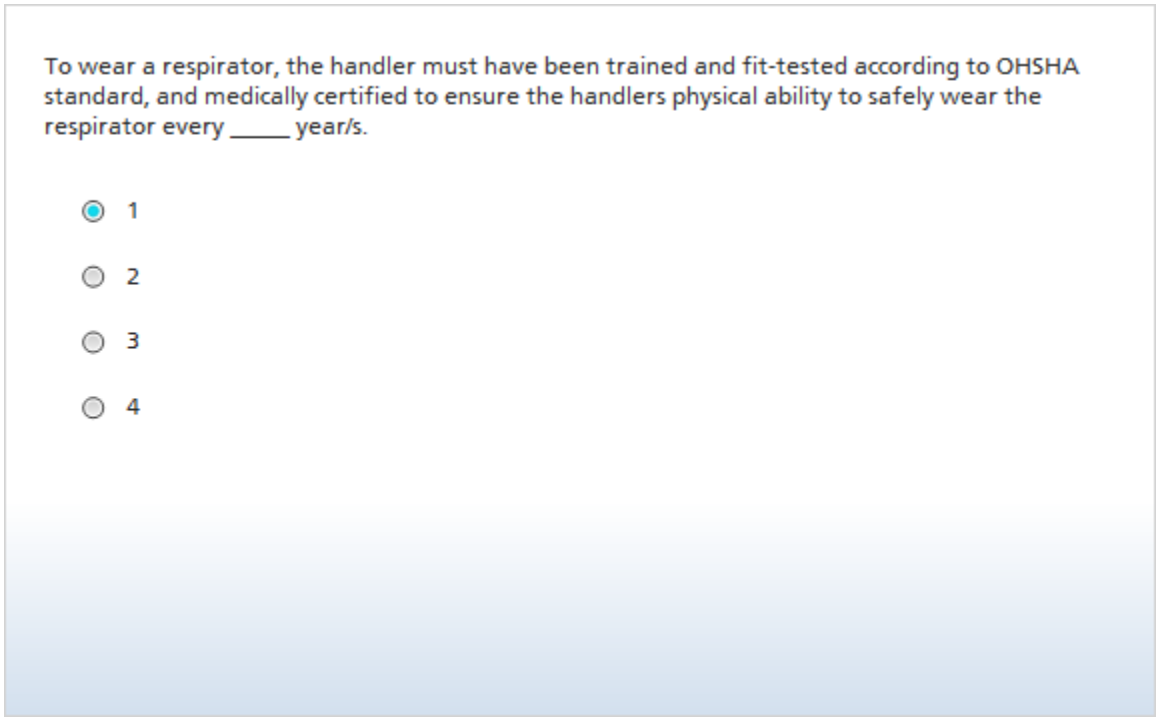
Correct	Choice
X	nausea
X	vomiting
X	skin burning
X	itching
X	slurred speech

5. Certified applicators or farm owners are responsible for providing personal protective equipment for inspectors entering a field where fumigants have been applied.



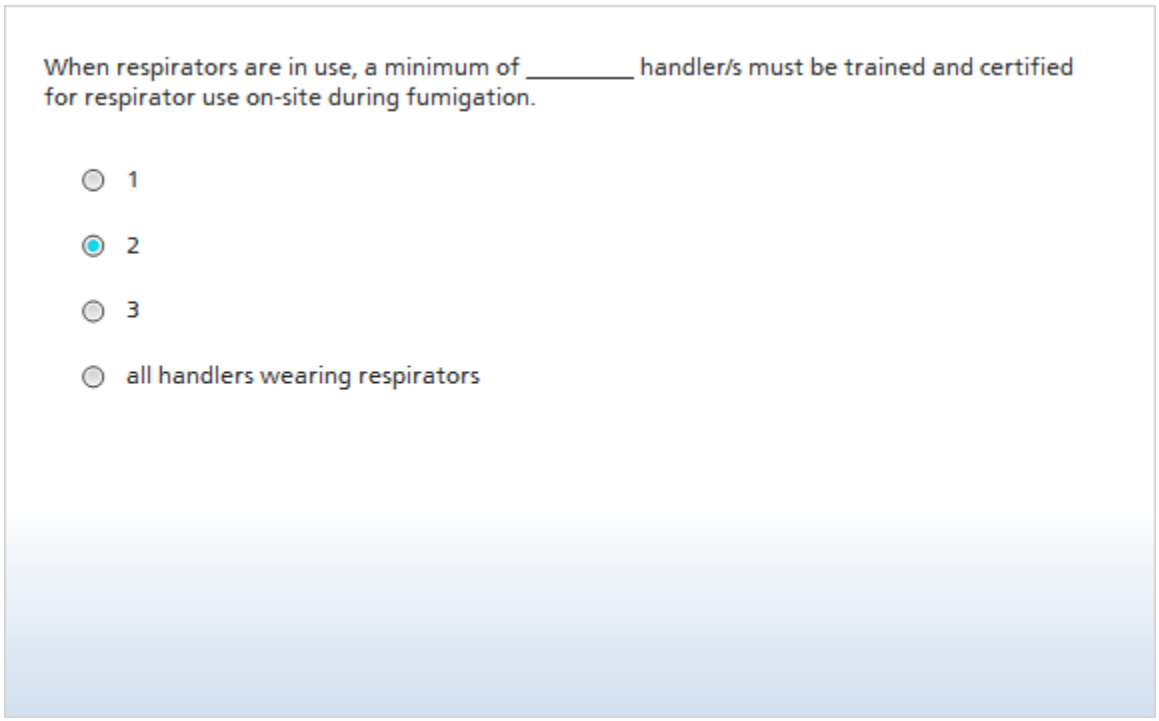
Correct	Choice
	True
X	False

6. To wear a respirator, the handler must have been trained and fit-tested according to OHSHA standard, and medically certified to ensure the handlers physical ability to safely wear the respirator every _____ year/s.



Correct	Choice
X	1
	2
	3
	4

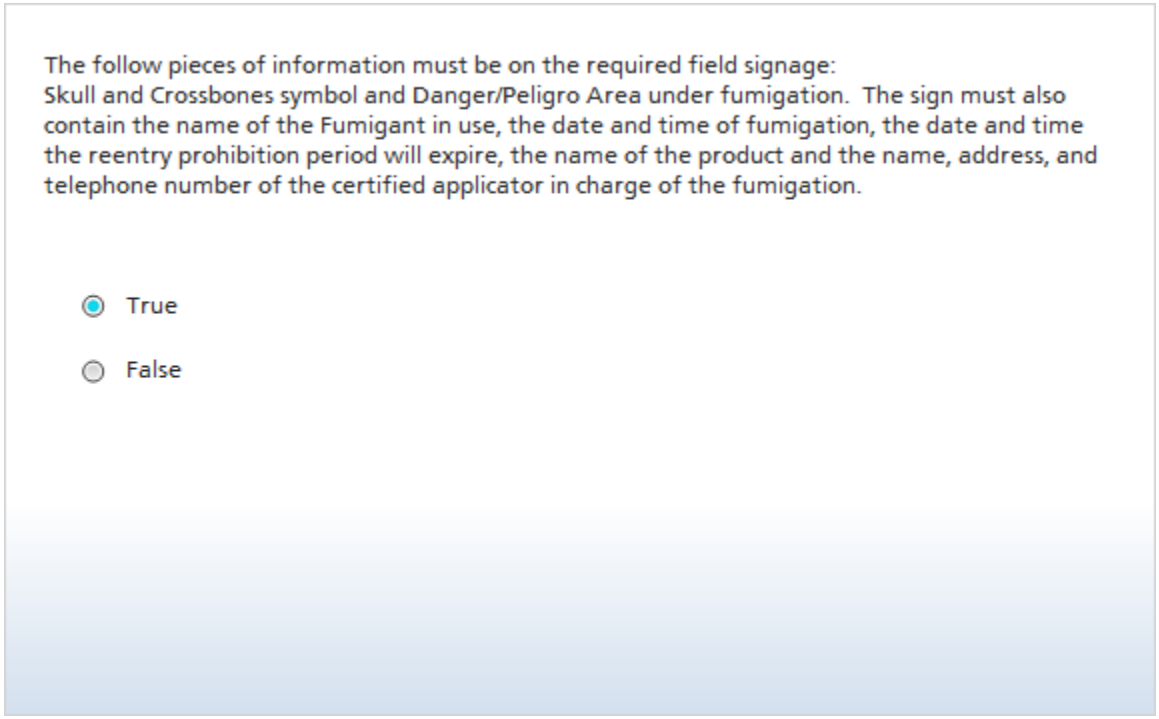
7. When respirators are in use, a minimum of _____ handler/s must be trained and certified for respirator use on-site during fumigation.



Correct	Choice
	1
X	2
	3
	all handlers wearing respirators

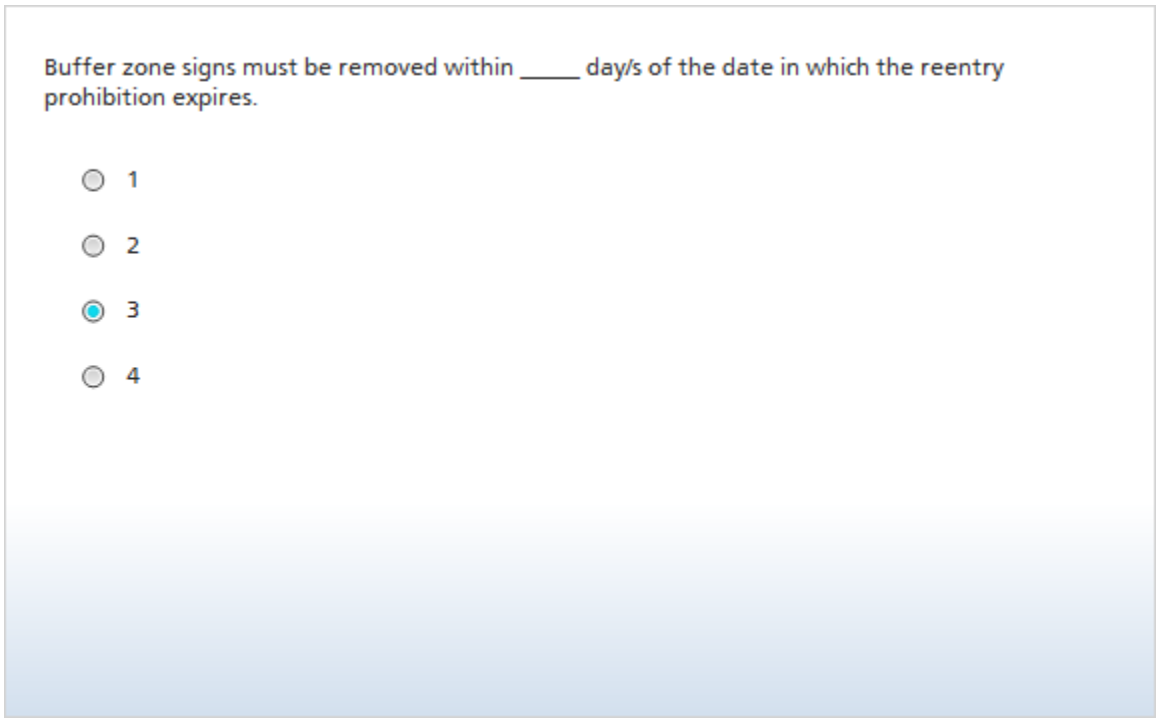
8. The follow pieces of information must be on the required field signage:

Skull and Crossbones symbol and Danger/Peligro Area under fumigation. The sign must also contain the name of the Fumigant in use, the date and time of fumigation, the date and time the reentry prohibition period will expire, the name of the product and the name, address, and telephone number of the certified applicator in charge of the fumigation.



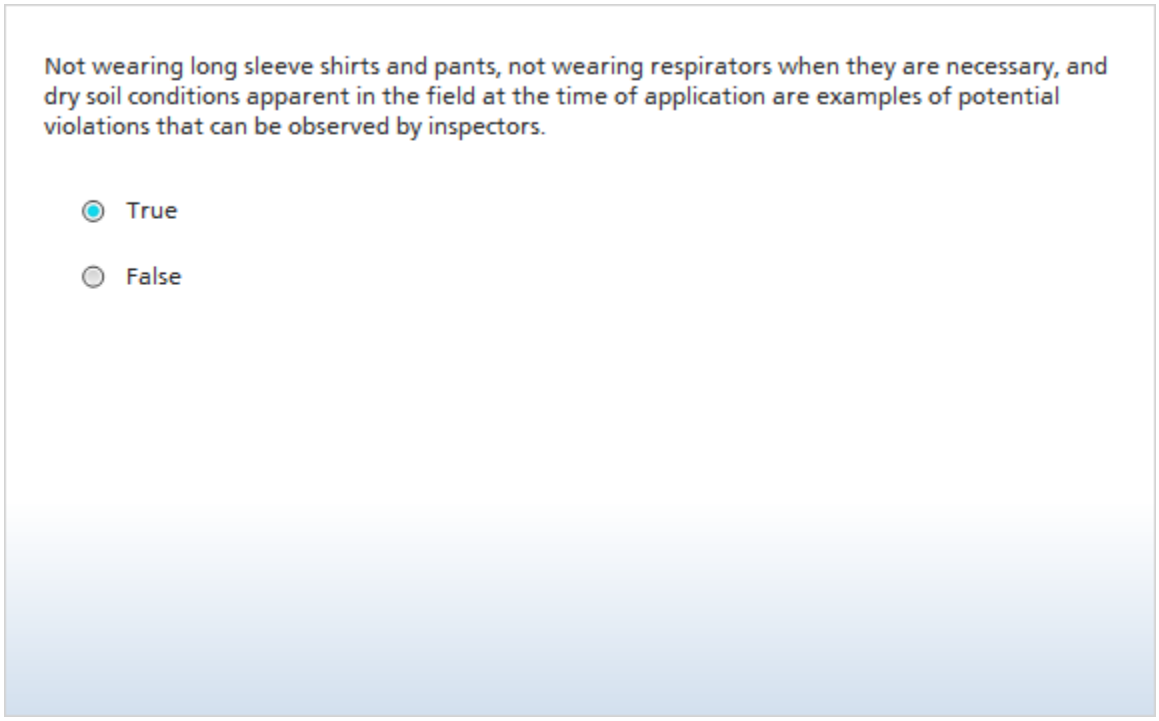
Correct	Choice
X	True
	False

9. Buffer zone signs must be removed within _____ day/s of the date in which the reentry prohibition expires.



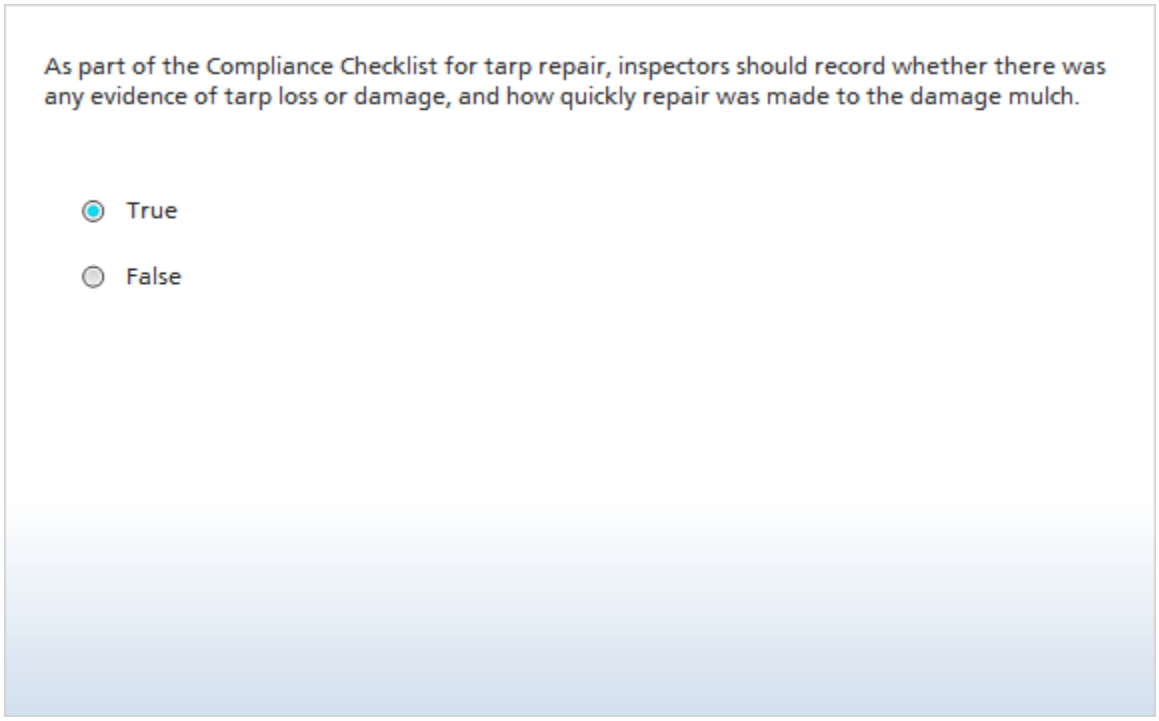
Correct	Choice
	1
	2
X	3
	4

10. Not wearing long sleeve shirts and pants, not wearing respirators when they are necessary, and dry soil conditions apparent in the field at the time of application are examples of potential violations that can be observed by inspectors.



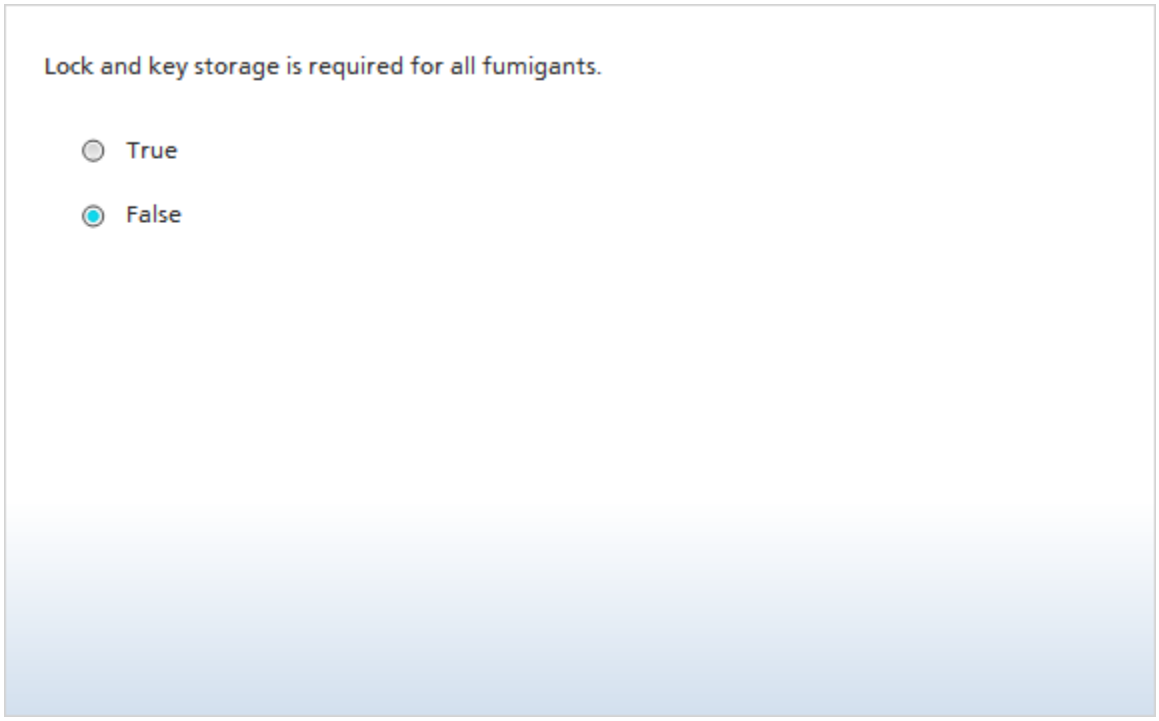
Correct	Choice
X	True
	False

11. As part of the Compliance Checklist for tarp repair, inspectors should record whether there was any evidence of tarp loss or damage, and how quickly repair was made to the damage mulch.



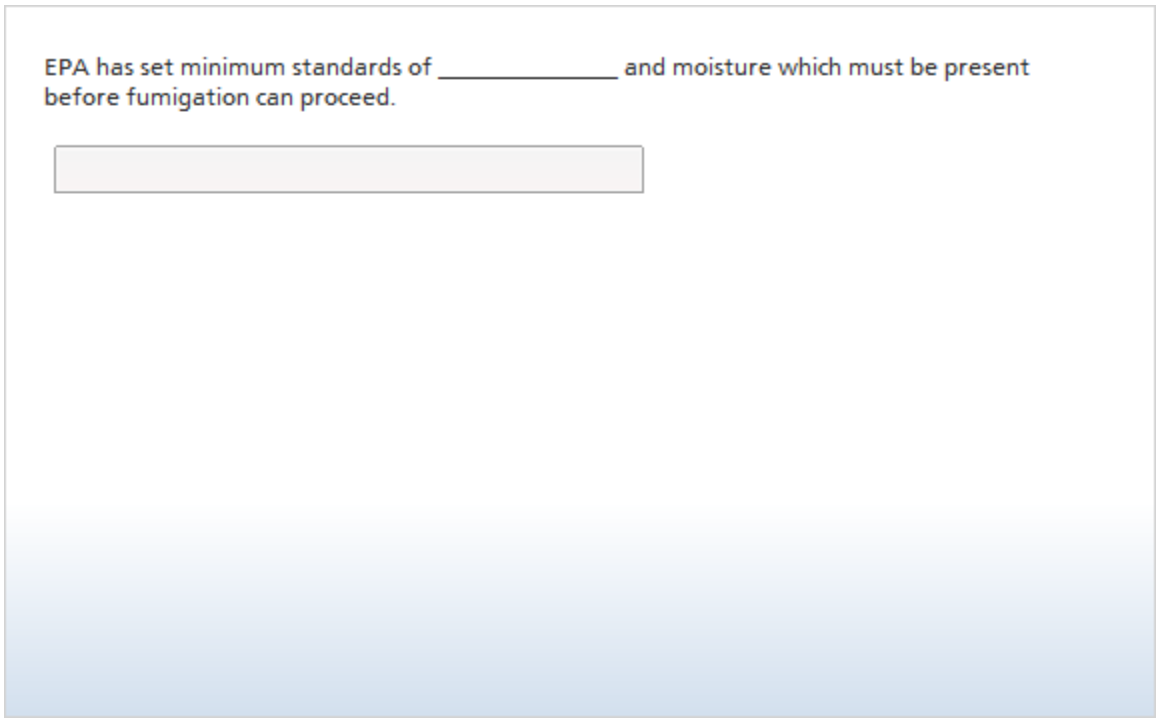
Correct	Choice
X	True
	False

12. Lock and key storage is required for all fumigants.



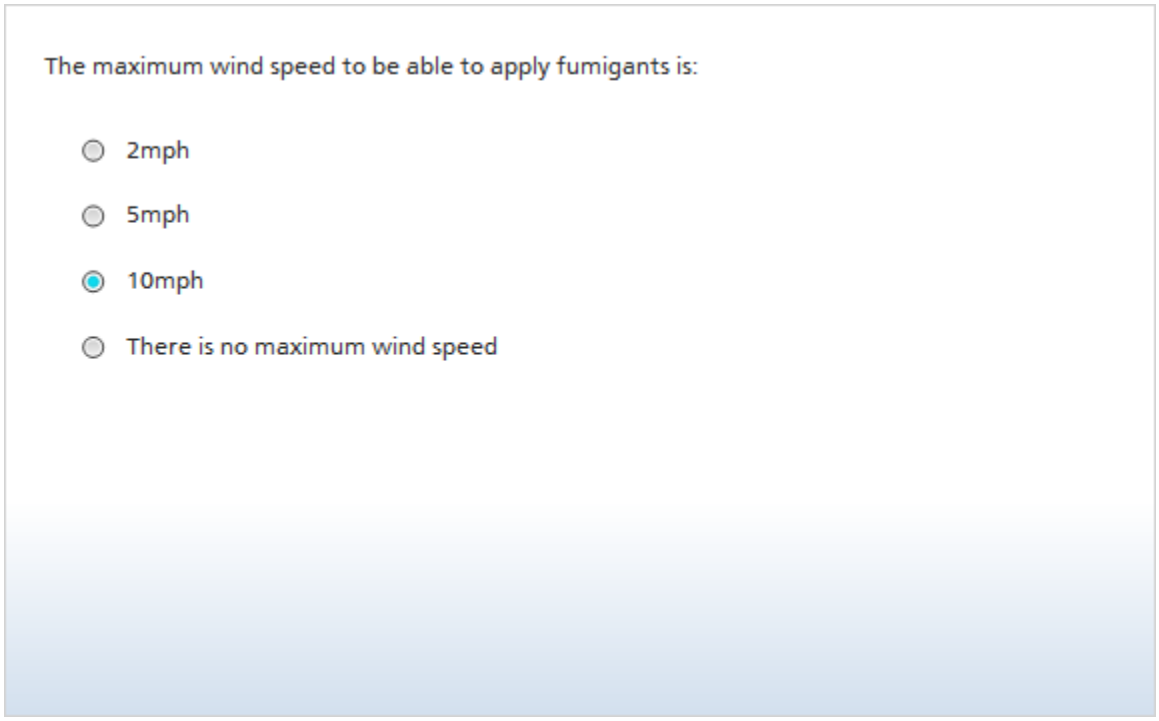
Correct	Choice
	True
X	False

13. EPA has set minimum standards of _____ and moisture which must be present before fumigation can proceed.



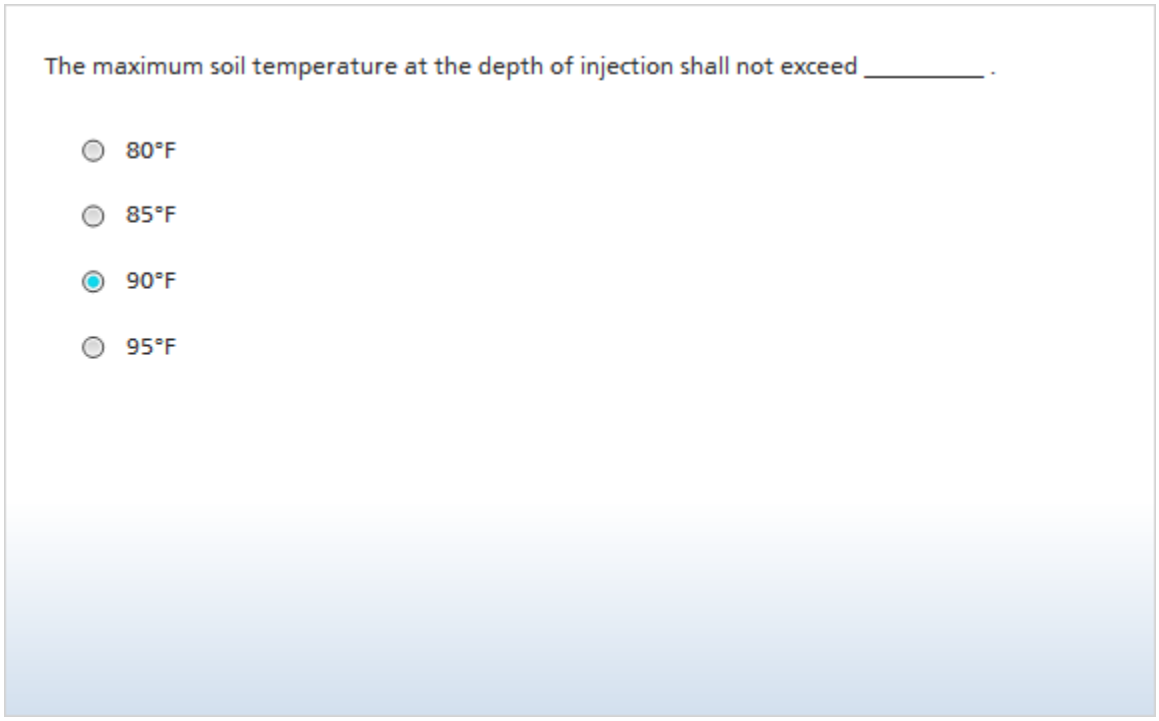
Choice
temperature
temp

14. The maximum wind speed to be able to apply fumigants is:



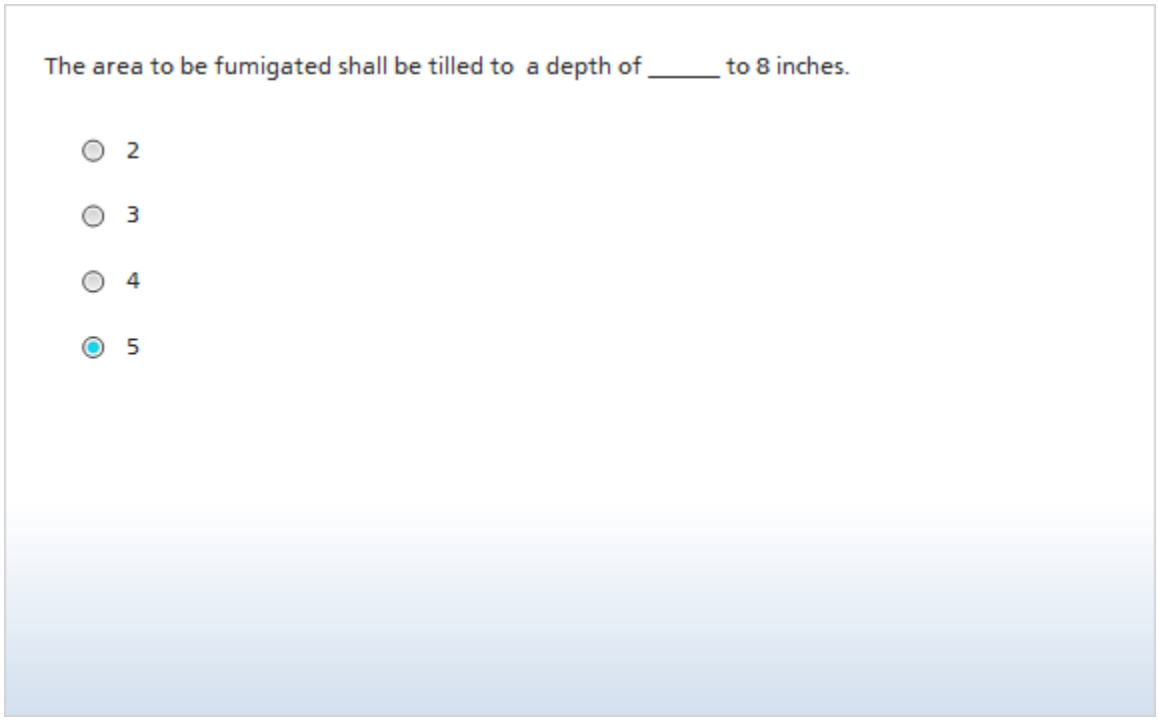
Correct	Choice
	2mph
	5mph
X	10mph
	There is no maximum wind speed

15. The maximum soil temperature at the depth of injection shall not exceed _____ .



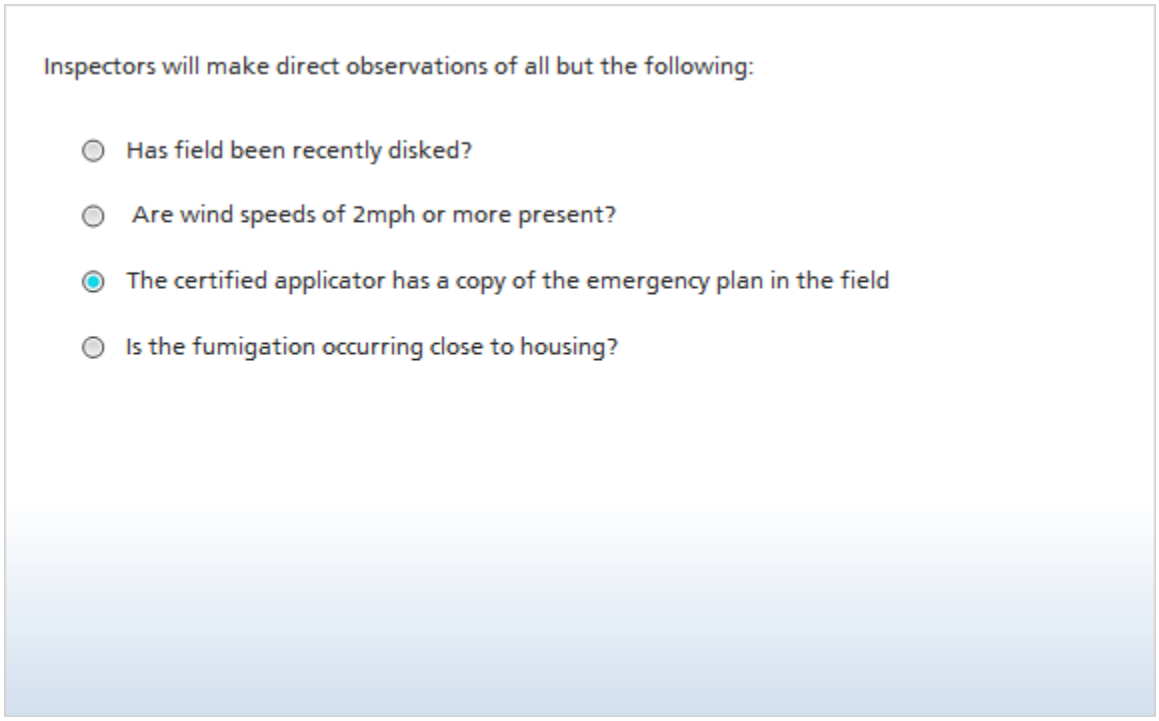
Correct	Choice
	80°F
	85°F
X	90°F
	95°F

16. The area to be fumigated shall be tilled to a depth of _____ to 8 inches.



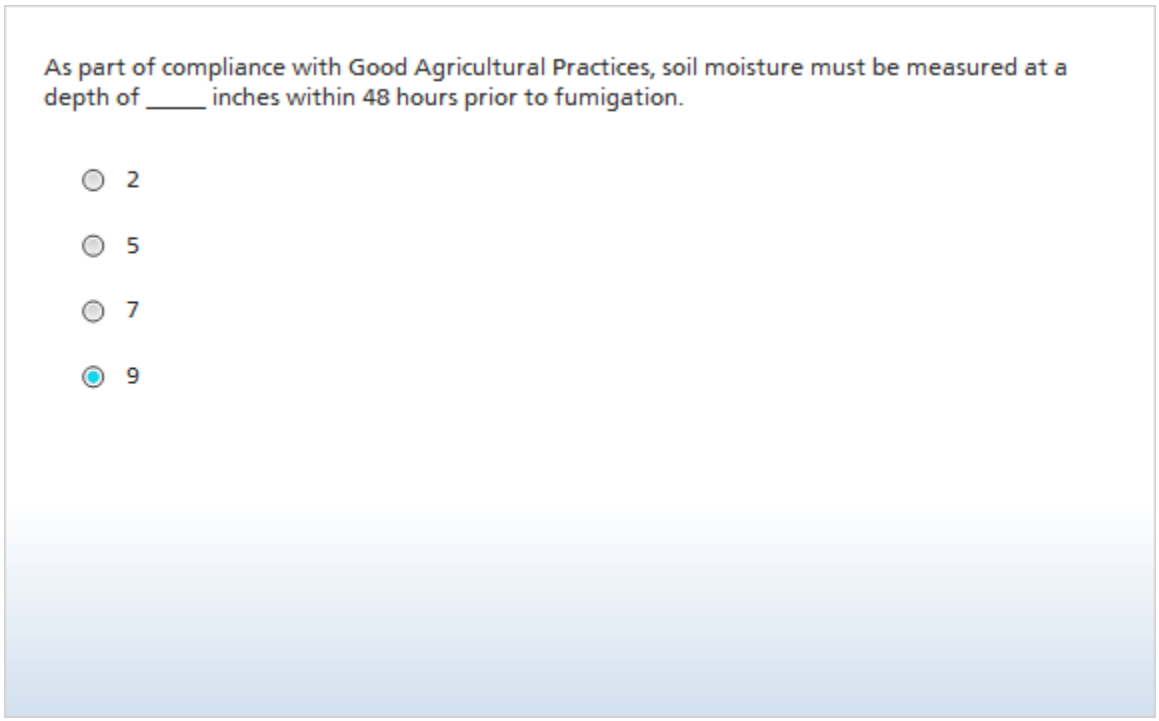
Correct	Choice
	2
	3
	4
X	5

17. Inspectors will make direct observations of all but the following:



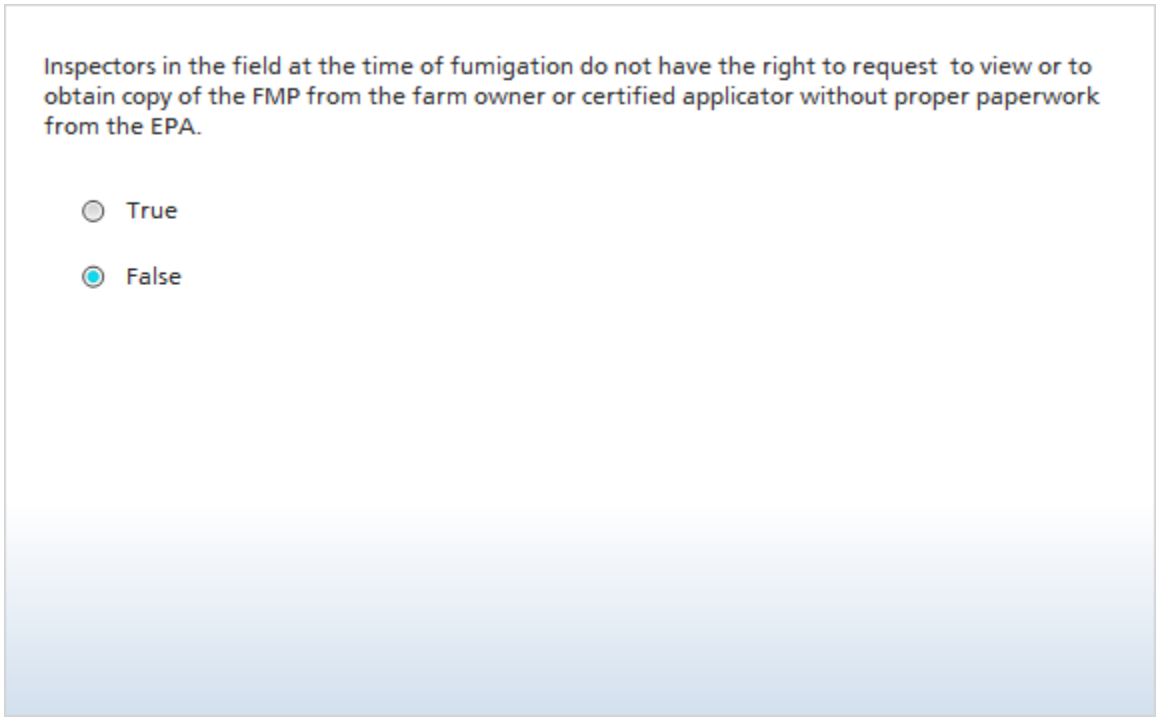
Correct	Choice
	Has field been recently disked?
	Are wind speeds of 2mph or more present?
X	The certified applicator has a copy of the emergency plan in the field
	Is the fumigation occurring close to housing?

18. As part of compliance with Good Agricultural Practices, soil moisture must be measured at a depth of _____ inches within 48 hours prior to fumigation.



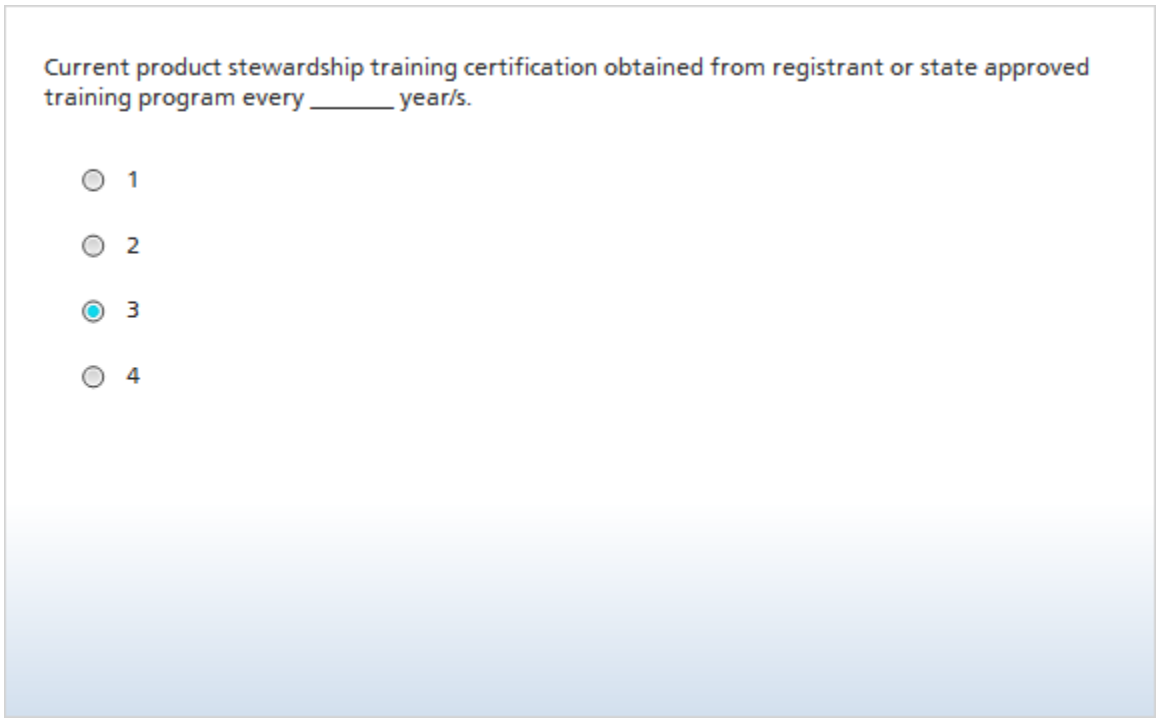
Correct	Choice
	2
	5
	7
X	9

19. Inspectors in the field at the time of fumigation do not have the right to request to view or to obtain copy of the FMP from the farm owner or certified applicator without proper paperwork from the EPA.



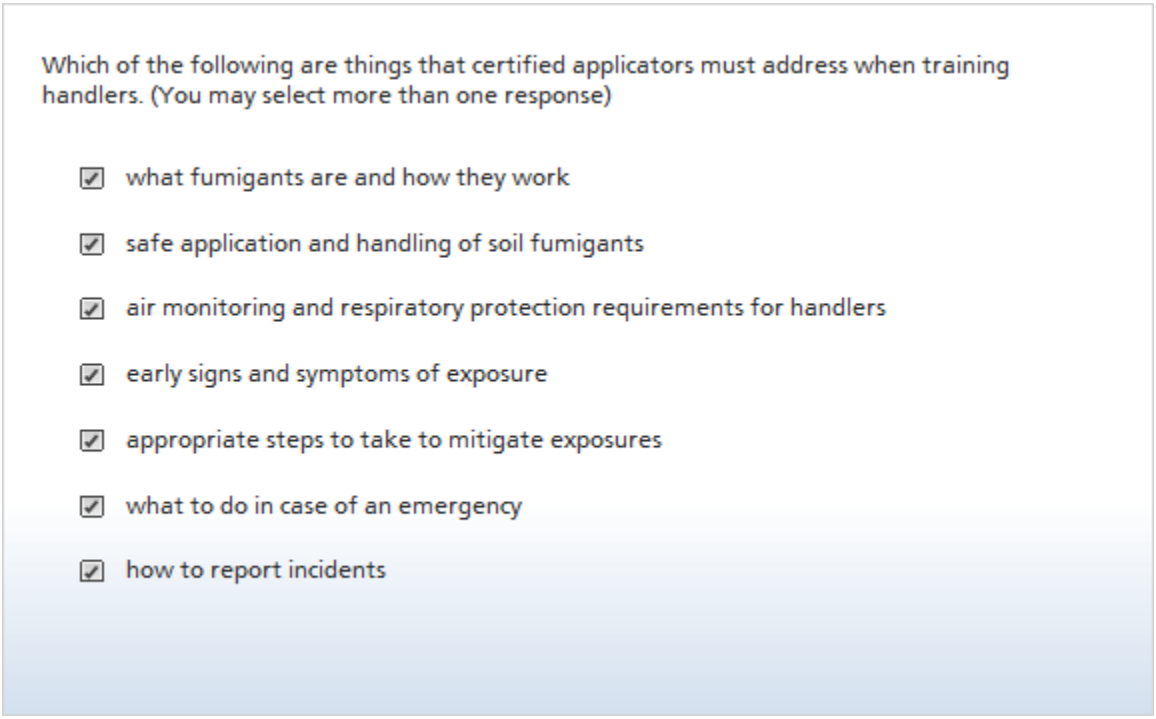
Correct	Choice
	True
X	False

20. Current product stewardship training certification obtained from registrant or state approved training program every _____ year/s.



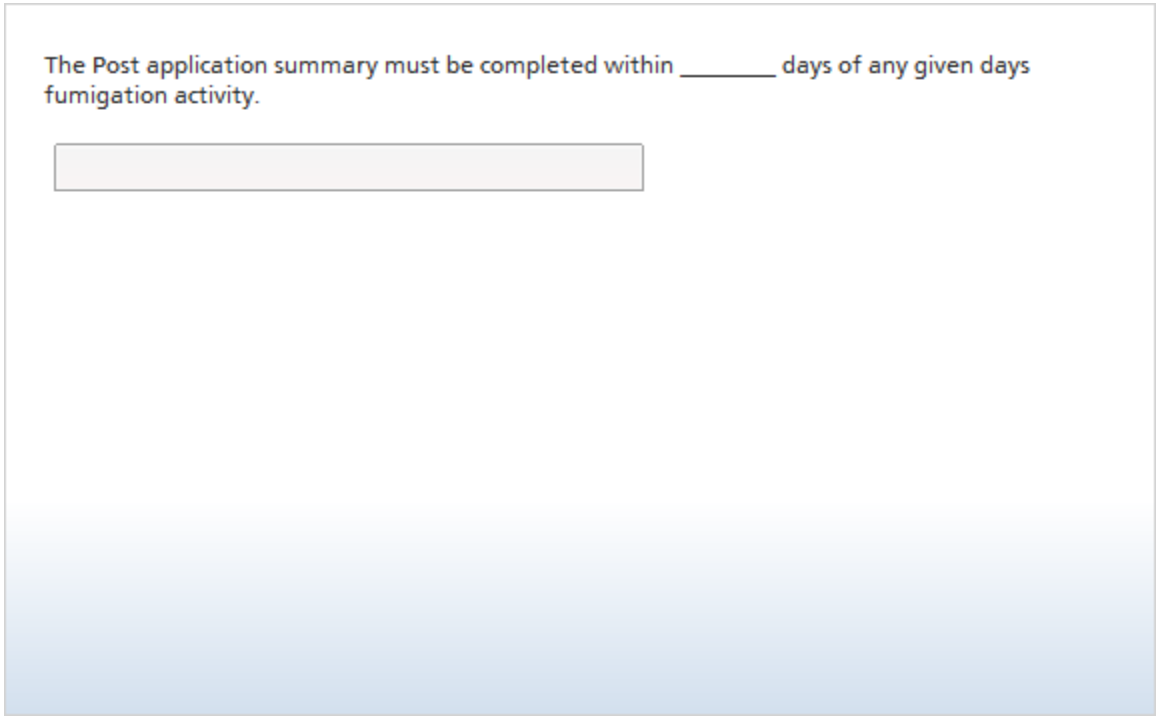
Correct	Choice
	1
	2
X	3
	4

21. Which of the following are things that certified applicators must address when training handlers. (You may select more than one response)



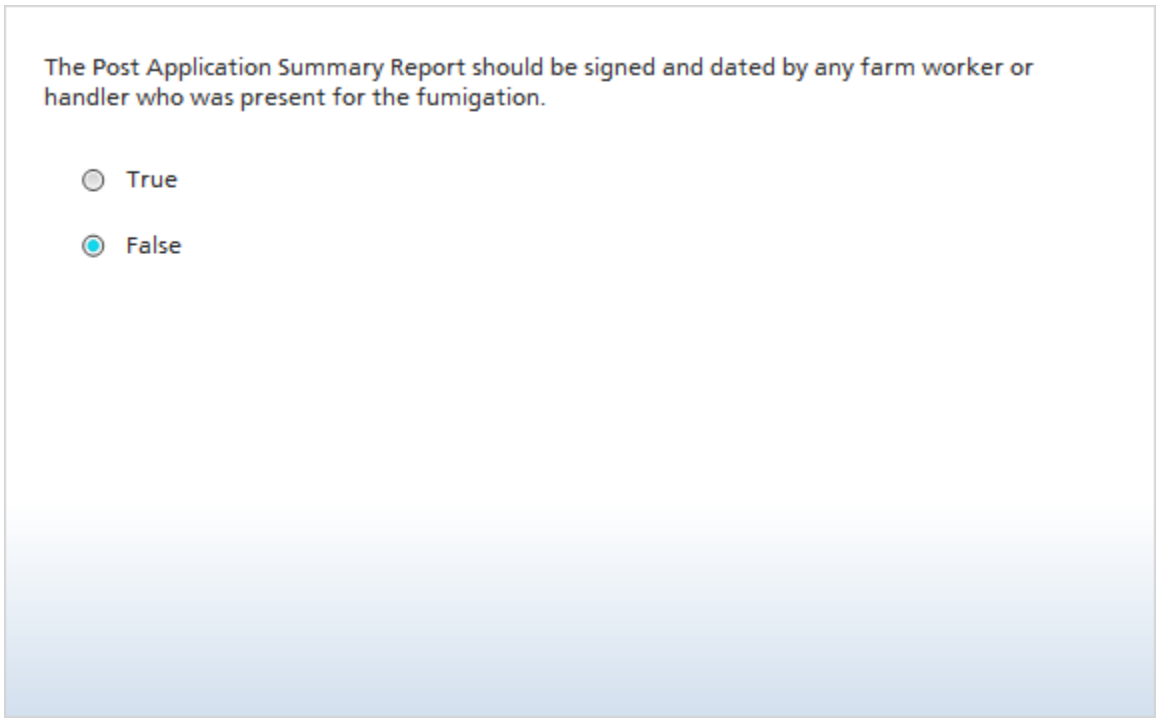
Correct	Choice
X	what fumigants are and how they work
X	safe application and handling of soil fumigants
X	air monitoring and respiratory protection requirements for handlers
X	early signs and symptoms of exposure
X	appropriate steps to take to mitigate exposures
X	what to do in case of an emergency
X	how to report incidents

22. The Post application summary must be completed within _____ days of any given days fumigation activity.



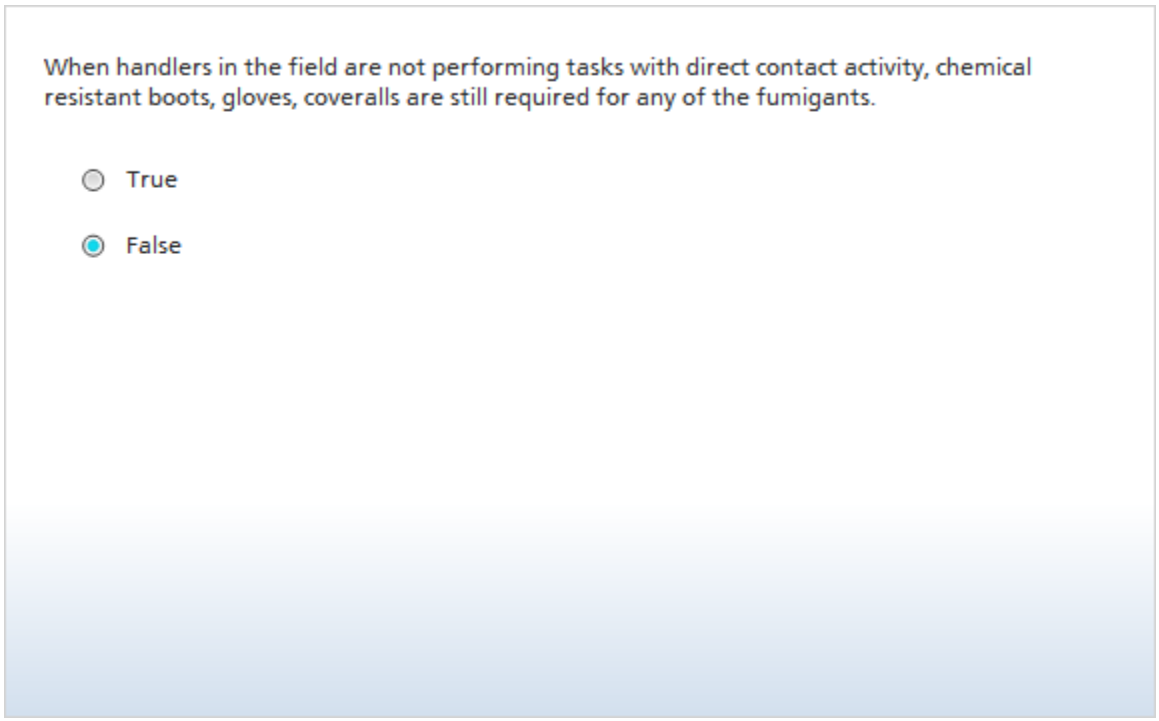
Acceptable numeric values	
Equal to	30

23. The Post Application Summary Report should be signed and dated by any farm worker or handler who was present for the fumigation.



Correct	Choice
	True
X	False

24. When handlers in the field are not performing tasks with direct contact activity, chemical resistant boots, gloves, coveralls are still required for any of the fumigants.



Correct	Choice
	True
X	False