

## **NURSERY AND GREENHOUSE SOILS, SEED AND TRANSPLANT BEDS AND TURF: TOBACCO**

### General Information

SOIL FUMIGATION DIRECTIONS. Terr-O-Gas 57 may be used only for soil fumigation. The following precautionary procedures must be followed.

PRECAUTIONARY STATEMENTS. The following precautions must be followed PRIOR to soil fumigation.

- A) Comply with all local regulations and ordinances. Obtain an application permit from agricultural regulatory agencies as required.
- B) Never fumigate alone. It is imperative to always have an assistant present and proper protective equipment available in case of accidents.
- C) Persons in charge of all operations must advise other workers of all safety precautions and procedures. In addition, they must instruct their helpers in the mechanical operation of the equipment.
- D) Handle this fumigant in the open, with the operator “upwind” from the container where there is good ventilation.
- E) Check fumigant delivery system for leaks before beginning operation. Two trained persons must be present during introduction of the fumigant.
- F) When fumigating soil from a tractor, 5 gallons of water must be carried on the tractor and placed where it is readily accessible.

In addition to water available on the tractor, at least 5 gallons of additional water must be available from the service truck. This water must be potable and in containers marked “Decontamination water, not to be used for drinking”.

- G) All trash should be cleaned from the field before starting fumigation.
- H) Post all treated areas with warning signs.

The following precautions must be followed DURING the soil fumigation operation.

- A) Two trained persons must be present during introduction of the fumigant.
- B) Do not make application of this fumigant when there is little or no air movement or when there is an atmospheric inversion.
- C) Do not lift injection shanks to turn at the end of a pass until fumigant has been purged or drained from system following closure of shutoff valve.
- D) If trash is inadvertently pulled up by the shanks when fumigating, it must be covered with polyethylene film.
- E) When changing the cylinders, be certain they are turned off and fumigant system is not under pressure.

The following precautions must be followed AFTER soil fumigation.

- A) Keep pets, livestock, and other domestic animals out of the treated area during application, during the exposure period as specified for applications in the Directions for Use, and during removal of tarpaulin.
- B) Two trained persons must be present during removal of the tarpaulin.

APPLICATION METHODS. Terr-O-Gas 57 is to be used only as a preplant soil fumigant.

A. Tarpaulin Methods for Field, Nursery, Turf, Greenhouse, and Seed or Transplant Bed Soils.

NOTE: Fumigation may temporarily reduce nitrification in the soil thus increasing levels of ammonium nitrogen and soluble ammonium salts to potentially phytotoxic levels. Accumulation of ammonium is most likely to occur when maximum rates of fumigant and fertilizer are applied to soils that are acidic, wet, cold or high in organic matter. Apply only fertilizer containing at least 30% nitrate until the crop is well established and soil temperature is above 65°F., then fertilize as indicated by soil test. Acid soils should be limed before fumigation to stimulate nitrification and to reduce possible ammonium toxicity.

Pretreatment Soil Preparation. Plow, rip or otherwise till the soil to the depth to which effective treatment is required. The soil should be worked until free of clods or large lumps. Residue from previous crops should be worked into the soil to allow

for decomposition prior to fumigation. Soil moisture should be adequate for seed germination. Coarse textured soils can be fumigated with higher moisture content than fine textured soils. For best results, soil should be kept moist for at least four days prior to treatment. Do not fumigate if the soil temperature is below 50 F. For best results, fumigate when soil temperature is 60 F to 80 F at the depth of 6 inches.

1. Overall Application. Inject Terr-O-Gas 57 with a chisel type applicator having the chisels spaced no more than 12 inches apart and injecting the fumigant to a depth of 6-8 inches below the soil surface. The soil surface must be covered with polyethylene film immediately after treatment with simultaneous film laying equipment or by sealing with a roller or cultipacker and covered within 20 minutes with polyethylene film or other suitable cover. Consult dosage rate table for proper rates of application and exposure periods. At the end of the exposure period, remove tarpaulins and aerate for two weeks before introducing transplants or vegetative plant parts.

Crop seeds may be planted after 96 hours following end of exposure period.

#### Limitations, Restrictions, and Exceptions

Special Instructions for Greenhouse Soil Fumigation. The use of methyl bromide and chloropicrin in confined spaces presents a potential hazard to humans and plant life. Special precautions must be taken in order that these potential hazards be minimized.

It is the responsibility of the individual supervising the fumigation operation to see that all safety precautions are strictly observed.

Before the fumigation operation commences, the supervisor of the fumigation job shall have conducted proper training of all personnel involved in the fumigation (includes use of safety equipment), removed all persons from the area not directly involved in the fumigation, and inspected the equipment to ensure proper application.

Two persons trained in the use of this product must be present during introduction of the fumigant, initiation of aeration, and after aeration when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside the area being fumigated).

Application of Terr-O-Gas 57 to greenhouse soils is by the same methods as for field soils (see Sections A.1. and A.2.).

Consult dosage rate table for proper rates of application and exposure periods. If a wind is blowing, all injection should be made

upwind from a previous injection site. Immediately after injection of the fumigant and tarping, a qualified person, wearing respiratory

protective equipment, should monitor the tarped area with a halide detector. If excessive leaks are found, seal the source of

the leak immediately.

NOTES:

- Exposure time: 24-48 hr
- Use higher rates indicated for muck and heavy clay soils.
- Method of application is by injection with chisels plus covered with tarpaulin.

Method

[Injection](#)

[Soil application](#)

Rates

[field rates 0](#)

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Timings

[Preplant](#)