TRI-FORM™ 1,3-D

Soil Fumigant / Grondberokingsmiddel

Reg. No. / Nr. L11985 Act No. 36 of 1947 / Wet Nr. 36 van 1947

READ THE LABEL BEFORE USE / LEES DIE ETIKET VOOR GEBRUIK

KEEP OUT OF REACH OF CHILDREN AND ANIMALS / HOU BUITE BEREIK VAN KINDERS EN DIERE

INSECTICIDE GROUP	8A	INSEKDODERGROEP
Tri-Form 1,3-D is a ready-to-use broad spectrum liquid soil fumigant for the pre-plant treatment of soil to control soil-borne pests.		**Tri-Form 1,3-D** is 'n gereed-vir-gebruik, breëspektrum, vloeibare grondberokingsmiddel vir die voor-plant behandeling van grond om grondgedraagte peste te beheer.

SIGNAL WORD:

DANGER

GHS CLASSIFICATION FOR PRODUCT:

ADDITIONAL GHS CLASSIFICATION FOR PRODUCT WHEN PACKAGED IN A CYLINDER:

GHS HAZARD STATEMENTS:

- Flammable liquid and vapour.
- Toxic if swallowed, in contact with skin, or if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- Suspected of causing cancer by the oral route.
- May cause respiratory irritation.
- May be fatal if swallowed and enters airways.
- Very toxic to aquatic life and with long lasting effects.

[ADDITIONAL GHS HAZARD STATEMENT WHEN PRODUCT IS PACKAGED IN A CYLINDER:

- Flammable chemical under pressure: May explode when heated.]

GHS PRECAUTIONARY STATEMENTS:

PREVENTION

- Obtain, read, and follow all safety instructions before use.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges.
- Avoid breathing gas or vapours.
- Wear protective gloves, protective clothing, and eye protection. [See Section 8 of SDS]
- Wash hands and face thoroughly after handling. Do not touch eyes.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment, [except for authorized use].

RESPONSE

- **IF SWALLOWED**: Get emergency medical help immediately. Rinse mouth. Do NOT induce vomiting.
- **IF INHALED**: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.
- **IF IN EYES**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

	○ **IF ON SKIN (or hair)**: Take off immediately all contaminated clothing. Wash with plenty of water. Wash contaminated clothing before reuse. ○ IF exposed or concerned, get medical advice. ○ If eye irritation or if skin irritation or rash occurs: get medical help. ○ Get medical help if you feel unwell. ○ In case of fire: Use dry sand, dry chemical or synthetic foams (including AFFF type) or protein foam to extinguish. ○ Collect spillage. **STORAGE** ○ Store in a well-ventilated place. ○ Keep cool.. ○ Keep container tightly closed. ○ Store locked up. ○ Protect from sunlight. {This statement can be eliminated if product is packaged in a cylinder} **DISPOSAL** ○ Dispose of contents and container in accordance with government regulations. **[ADDITONAL GHS PRECAUTIONARY STATEMENTS WHEN PRODUCT IS PACKAGED IN A CYLINDER** ○ Do not spray on an open flame or other ignition source. ○ In case of leakage, eliminate all ignition sources. ○ Stop leak if safe to do so.]

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL:

1,3-Dichloropropene / 1,3-Dichloropropeen ....970 g/kg (minimum)

Net mass / Netto massa : [range of / reeks van 33-523 kgs]

Registered by / Geregistreer deur:
Trical Crop Protection Africa (Pty) Ltd
Mpy. Reg. Nr. 2011/130873/07
P.O. BOX 46036
DURBANVILLE
CAPE TOWN
7551
REPUBLIC OF SOUTH AFRICA
Tel +27 861 111 998

Batch No…………………………. Lot Nr.………………………

Date of Manufacture …………………… Datum van Vervaardiging.......................

UN No. 2903 / VN Nr. : 2903

IN CASE OF POISONING, CALL THE FOLLOWING NUMBER (24/7): 0861-555-777
IN GEVAL VAN VERGIFTIGING, SKAKEL DIE VOLGENDE NOMMER (24/7): 0861-555-777

EMERGENCY NUMBER (For Chemical Emergency—Spill, Leak, Fire, Exposure, or Accident):
CHEMTREC: 0-800-983-611 (24 hours)
NOODNOMMER (Vir Chemiese Noodgevalle--Storting, Lekkasie, Brand, Blootstelling, of Ongeluk):
CHEMTREC: 0-800-983-611 (24 uur)

DISCLAIMER: ALTHOUGH THIS REMEDY HAS BEEN EXTENSIVELY TESTED UNDER A LARGE VARIETY OF CONDITIONS, THE REGISTRATION HOLDER DOES NOT WARRANT THAT IT WILL BE EFFICACIOUS UNDER ALL CONDITIONS BECAUSE THE ACTION AND EFFECT THEREOF MAY BE AFFECTED BY FACTORS SUCH AS ABNORMAL SOIL, CLIMATIC AND STORAGE CONDITIONS, QUALITY OF DILUTION WATER, AND COMPATIBILITY WITH OTHER SUBSTANCES NOT INDICATED ON THE LABEL, AS WELL AS BY THE METHOD, TIMING AND ACCURACY OF APPLICATION. THE REGISTRATION HOLDER FURTHERMORE DOES NOT ACCEPT RESPONSIBILITY FOR DAMAGE TO CROPS, VEGETATION, THE ENVIRONMENT, OR HARM TO MAN OR ANIMAL OR FOR LACK OF PERFORMANCE OF THE REMEDY CONCERNED DUE TO FAILURE OF THE USER TO FOLLOW THE LABEL INSTRUCTIONS OR TO THE OCCURRENCE OF CONDITIONS WHICH COULD NOT HAVE BEEN FORESEEN IN TERMS OF THE REGISTRATION. CONSULT THE SUPPLIER IN THE EVENT OF ANY UNCERTAINTY.

ADDITIONAL PRECAUTIONS:
- This fumigant is a highly hazardous material and must be handled with care by persons wearing the proper protective clothing and equipment, including a face shield.
- If a handler/applicator experiences sensory irritation (tearing or burning of the eyes or nose), an approved respirator must be worn.
- Never use mouth to blow out clogged lines, nozzles, etc.
- DO NOT use containers or application equipment made of magnesium, aluminium, or their alloys, as this fumigant may be corrosive to such metals.
- DO NOT use water to clean equipment; use diesel oil.

SYMPTOMS OF HUMAN POISONING:
Early symptoms of overexposure are lachrymation, respiratory distress, and vomiting. Pulmonary edema may develop later.

FIRST AID TREATMENT: See **RESPONSE** section.

IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY. TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.

NOTES TO PHYSICIAN: No specific antidote known. Treat symptomatically. Vomiting may cause aspiration pneumonia.

USE RESTRICTIONS:
- DO NOT use when soil temperature is below 5°C.
- DO NOT use when soil temperature is above 30°C.
- DO NOT apply during unfavourable weather conditions. [Unfavourable weather conditions block upward movement of air, which results in trapping fumigant vapours near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist within an hour prior to sunset and continue past sunrise and may persist as late as noontime. Unfavourable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.]
- DO NOT fumigate when soil is very wet or very dry.
- DO NOT fumigate soils with greater than 25% clay content.
- DO NOT fumigate within 50 cm of roots of desirable vegetation.
- DO NOT plant or sow for at least 10 days after punching holes in or removing the polyethylene sheeting (plastic fumigation film), if used.
- DO NOT plant or sow if odour is present.

- DO NOT apply this product to soils more frequently than once each year.
- RE-ENTRY INTERVAL – Entry by unauthorized persons into the application block is prohibited from the start of the application until 5 days after the application is complete.

MODE OF ACTION: Direct toxicity to soil organisms, fungi, bacteria, insects and plants/seeds.

DIRECTIONS FOR USE – Use only as directed.

APPLICATION TIMING:

Tri-Form 1,3-D is a pre-plant soil fumigant; it must be used prior to planting the crop, as it will cause injury to plants present at the time of fumigation and until the active ingredient has completely dissipated. Tri-Form 1,3-D can be applied at any time of the year when soil conditions permit. Conditions that allow rapid diffusion of the fumigant as a gas through the soil normally give the best results. Tri-Form 1,3-D does not provide residual control of soil pests, and thus will only kill pests present in the soil at the time of fumigation. The following soil temperature, preparation and moisture conditions should exist at time of application. Failure to meet these conditions may result in unsatisfactory product performance.

SOIL CONDITIONS:

Optimal temperatures for application are between 15°C and 25°C at the intended depth of fumigation.

SOIL PREPARATION:

For best results, the area to be fumigated should be tilled to where control is desired and <u>at a minimum</u> the depth of application (20 to 50 cm). The surface should be generally free of large clods. Large clods can prevent effective soil sealing and reduce effectiveness of Tri-Form 1,3-D. Plant residues should be thoroughly incorporated into the soil prior to treatment, to avoid interfering with the application. Undecomposed plant material may harbour pests that will not be controlled by fumigation. Little or no crop residue should be present on the soil surface. Crop residue that is present should lie flat to permit the soil to be sealed effectively. Compacted soil layers within the desired treatment zone should be fractured before or during application of the fumigant. Deviation from the above conditions may result in unsatisfactory results.

SOIL MOISTURE:

It is critical to manage soil moisture properly before fumigation. Plan fumigation for seasons, crop rotations, or irrigation schedules which leave moisture in the soil. For fumigation depths of 40 to 45 cm, the soil should be moist within a 40 cm radius upwards from the point of injection as determined by the feel method (see below). For all other applications, the soil must be moist from the soil surface to at least 30 cm deep as determined by the feel method (see below). The amount of moisture needed in this zone will vary according to soil type. If irrigation is not available and there is adequate soil moisture below 15 cm, it may be brought to the surface by disking or ploughing before or during the injection.

In general, no irrigation should immediately precede subsoiling or fumigation. However, when irrigation is available and surface soil moisture conditions are not likely to provide an adequate seal against fumigant loss, a very light sprinkler irrigation to wet the top 2.5 to 5 cm of soil may be used to bring soil moisture content to the desired level.

The following descriptions will aid in determining acceptable soil moisture conditions by the "feel method".
For coarse soils (sand and loamy sand), there must be enough moisture to allow formation of a weak ball when compressed in the hand. Due to soil texture, this ball is easily broken with little disturbance. In loamy, or medium textured soils (coarse sandy loam, sandy loam and fine sandy loam), a soil sample with the proper moisture content can be formed into a ball which holds together with moderate disturbance, but does not stick between the thumb and forefinger. Fine textured soils (clay loam, silty clay loam, sandy clay, silty clay, sandy clay loam and clay), should be pliable and not crumbly, but should not form a ribbon when compressed between the thumb and forefinger.

PLACEMENT OF FUMIGANT:

Tri-Form 1,3-D may be applied as either a broadcast (overall) or row (bed) treatment. For shank applications, it should be injected at least 20 cm below the final soil surface, although placement to 30 cm below the final soil surface is recommended. Deeper placement is recommended when fumigating soil to be planted to deep-rooted plants, or to control deeply distributed pests.

- Tarped bed and broadcast: The injection point should be a minimum of 20 cm from the nearest final soil/air interface (i.e., top of bed, for bed applications).
- Non-tarped bed: The injection point should be a minimum of 30 cm from the nearest final soil/air interface.
- Non-tarped broadcast: The injection point should be a minimum of 30 cm from the nearest final soil/air interface.
- Non-tarped deep broadcast: The injection point should be 40-45 cm from the nearest final soil/air interface.

APPLICATION METHODS AND EQUIPMENT:

Shank (chisel) injection rig or switch plough application

- Before fumigation, be sure that the application equipment is properly calibrated.
- For shallow (injection depth 20 to 40 cm) broadcast work, use a shank spacing of 25 to 30 cm.
- For deep applications (injection depth 40-45 cm), a shank spacing of up to 60 cm may be used; however, it is recommended that the shank spacing not exceed 45 cm.

SOIL SEALING (for shank applications):

Sealing the soil after application is very important. The soil should be sealed immediately after injection. There are various methods to seal the surface of the soil, as follows.

- For shallow (injection depth 20 to 40 cm) broadcast and/or wide-bed applications, the soil should be sealed with a bed-press, ring-roller, or polyethylene sheeting (plastic fumigation film/tarp).
- For deep applications (injection depth 40-45 cm), seal with polyethylene sheeting or by means of a disk followed by a roller, cultipacker, or similar equipment.
- For row and/or narrow-bed applications, sealing can be accomplished with polyethylene sheeting or by use of a bed press, ring roller, or similar equipment.
- For non-tarped applications, the soil surface should be capped with irrigation, by saturating the top 20 mm of soil with water. Repeated irrigation may be required during the treatment period, to reduce cracking of the soil cap.

TREATMENT/EXPOSURE PERIOD:

If used, the polyethylene sheeting may be removed after 5 days. For all other seals, leave the soil undisturbed for 7 days before cultivating to aerate the soil. If the polyethylene sheeting is to be left in place as a mulch, holes for planting can then be punched. Cold and/or wet soil conditions may require a longer treatment/exposure period. Do not cultivate the soil if it is too wet for proper tillage.

DAYS TO PLANTING:

Do not plant for at least 10 days after the plastic fumigation film has been removed or after holes have been punched. For all other seals, do not plant for 7 days after the initial cultivation. Longer aeration periods may be required if soils are wet, cold, or heavy (high clay/silt content).

DO NOT PLANT if odour is present. If odour is present after the aeration period, it may be necessary to cultivate the soil multiple times before planting or sowing. Break the crust of the soil, if necessary, by cultivating with a clean implement, thus allowing the soil to aerate.

FERTILIZATION:

Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. To avoid ammonia injury and/or nitrate starvation to crops, avoid using fertilizers containing ammonia salts and use only fertilizers containing nitrates until after the crop is well established and the soil temperature is about 20°C. Liming highly acid soils before fumigation stimulates nitrification and may also reduce the possibility of ammonia toxicity.

RECONTAMINATION:

- Avoid re-infestation of treated soil. Do not use transplants, tools, or crop remains infested with soil-borne plant parasitic pests and weed seeds. Clean application equipment carefully before and after use.
- Do not contaminate fumigated areas by walking from non-fumigated to fumigated soil.
- If the treated area is in a location where flooding or surface runoff of water is possible after rains, make sure that there is adequate drainage in the treated area.

- This product cannot be expected to control pests found at soil depths which exceed the effective depth of fumigation, nor can it be expected that this product will control pests outside the effective fumigation zone.

DOSAGE / RATE TABLE
TRI-FORM 1,3-D SOIL FUMIGANT

CROP	PROBLEM / PEST	DOSAGE	REMARKS
ALL ANNUAL CROPS, **Including:** Potatoes, Vegetables, and Tobacco	Plant Parasitic Nematodes, Symphylans, Wireworms	104 to 195 kg/ha (94 to 176 L/ha) (101 to 189 kg/ha AI)	Pre-plant soil fumigation. Apply no more than once per year. Use lower rates on lighter soils. (< 10% clay, such as sand or sandy loam) Use higher rates on heavier soils. (10-25% clay, such as silt or clay loam)
ALL PERENNIAL CROPS, **Including:** Fruit and Nut Trees, Strawberries			

ADDITIONAL INSTRUCTIONS FOR CONTAINER STORAGE, HANDLING AND SHIPPING:
Store containers upright, secured to a rack or wall, to prevent tipping. DO NOT subject containers to rough handling or mechanical shock, such as dropping, bumping, dragging, or sliding. DO NOT use ropes, slings, hooks, tongs, or other similar handling devices for unloading containers. Transport containers using a hand truck, fork truck, or other device to which the containers can be firmly secured. Open containers only in a well-ventilated area. For cylinders, remove the valve protection bonnet and safety cap only when fumigant is about to be removed from the cylinder; then re-secure the bonnet and cap when the cylinder is not in use or is empty. For drums, the bung(s) must be kept secured in place when the drum is not in use. DO NOT ship containers without safety caps and valve protection bonnets or bungs secured. Return all empty or partially used containers to registrant or distributor; DO NOT use for any other purpose.

SPILL AND LEAK PROCEDURES:
Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problems, wear the proper protective clothing and equipment. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upwind, if possible. Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Dispose of contaminated material on site or at an approved disposal facility. Only correctly trained and equipped handlers are permitted to perform such cleanup. DO NOT permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be 0.15 ppm or less.

GHS-GEVAARSTELLINGS:

- Vlambare vloeistof en damp.
- Giftig indien ingesluk, in kontak met vel, of indien ingeasem.
- Veroorsaak velirritasie.
- Veroorsaak ernstige oogirritasie.
- Kan 'n allergiese velreaksie veroorsaak.
- Word vermoed dat dit kanker langs die mond veroorsaak.
- Kan respiratoriese irritasie veroorsaak.
- Kan dodelik wees as dit ingesluk word en in lugweë ingaan.
- Baie giftig vir waterlewe en met langdurige effekte.

[BYKOMENDE GHS GEVAARVERKLARING WANNEER PRODUK IN 'N SILINDER VERPAK WORD:

- Vlambare chemikalieë onder druk: Kan ontplof as dit verhit word.]

GHS VOORSORGSTELLINGS:
VOORKOMING

- Verkry, lees en volg alle veiligheidsinstruksies voor gebruik.
- Hou weg van hitte, warm oppervlaktes, vonke, oop vlamme en ander ontstekingsbronne. Geen rook nie.
- Grond/verbind houer en ontvangtoerusting. Gebruik ontploffingsvaste elektriese/ventilasie-/beligtingstoerusting. Gebruik gereedskap wat nie vonkel nie. Neem aksie om statiese ontladings te voorkom.
- Vermy asemhaling van gas of dampe.
- Dra beskermende handskoene, beskermende klere en oogbeskerming. [Sien Afdeling 8 van SDS.]
- Was hande en gesig deeglik na hantering. Moenie aan oë raak nie.
- Moenie eet, drink of rook wanneer hierdie produk gebruik word nie.
- Gebruik slegs buite of in 'n goed geventileerde area.
- Besoedelde werksklere moet nie uit die werkplek toegelaat word nie.
- Vermy vrystelling na die omgewing, [behalwe vir gemagtigde gebruik].

REAKSIE

- **INDIEN INGESAEM:** Verwyder persoon na vars lug en hou gemaklik om asem te haal. Kry onmiddellik mediese noodhulp.
- **INDIEN INGESLUK:** Kry onmiddellik mediese noodhulp. Spoel mond uit. MOENIE braking veroorsaak nie.
- **INDIEN IN OË:** Spoel versigtig uit met water vir 'n paar minute. Verwyder kontaklense, indien teenwoordig en maklik om te doen. Gaan voort met spoel.
- **INDIEN OP DIE VEL (of hare):** Trek onmiddellik alle gekontamineerde klere uit. Was met baie water. Was gekontamineerde klere voor hergebruik.
- **INDIEN** dit blootgestel of bekommerd is, kry mediese advies.
- Indien oogirritasie of as velirritasie of uitslag voorkom: Kry mediese hulp.
- Kry mediese hulp as jy onwel voel.
- In geval van brand: Gebruik droë sand, droë chemiese of sintetiese skuim (insluitend AFFF tipe) of proteïenskuim om te blus.
- Versamel gemors.

BERGING

- Berg in 'n goed geventileerde plek.
- Hou houer dig toe.
- Hou koel.
- Stoor toegesluit.
- Beskerm teen sonlig. [Hierdie stelling kan uitgeskakel word as produk in 'n silinder verpak is.]

BEWYSING

- Gooi inhoud en houer weg in ooreenstemming met plaaslike / streeks / nasionale / internasionale regulasies.

[BYKOMENDE GHS VOORSORGSTELLINGS WANNEER PRODUK IN 'N SILINDER VERPAK WORD

- Moet nie op 'n oop vlam of ander ontstekingsbron spuit nie.

- o In geval van lekkasie, skakel alle ontstekingsbronne uit.
- o Stop lek as dit veilig is om dit te doen.]

VRYWARING: ALHOEWEL HIERDIE MIDDEL OMVATTEND ONDER 'N GROOT VERSKEIDENHEID TOESTANDE GETOETS IS, WAARBORG DIE REGISTRASIEHOUER NIE DAT DIT ONDER ALLE TOESTANDE DOELTREFFEND SAL WEES NIE AANGESIEN DIE WERKING EN EFFEK DAARVAN BEÏNVLOED KAN WORD DEUR FAKTORE SOOS ABNORMALE GROND-, KLIMAATS- EN BERGINGSTOESTANDE, KWALITEIT VAN VERDUNNINGSWATER, VERENIGBAARHEID MET ANDER STOWWE WAT NIE OP DIE ETIKET AANGEDUI IS NIE EN DIE, SOWEL AS DIE METODE, TYD EN AKKURAATHEID VAN TOEDIENING. VERDER AANVAAR DIE REGISTRASIEHOUER NIE VERANTWOORDELIKHEID VIR SKADE AAN GEWASSE, PLANTEGROEI OF DIE OMGEWING, OF VIR NADELIGE EFFEK OP MENS OF DIER, OF VIR GEBREK AAN PRESTASIE AS GEVOLG VAN DIE VERSUIM VAN DIE GEBRUIKER OM ETIKETAANWYSINGS NA TE KOM, OF AS GEVOLG VAN DIE ONTSTAAN VAN TOESTANDE WAT NIE KRAGTENS DIE REGISTRASIE VOORSIEN KON WORD NIE. RAADPLEEG DIE VERSKAFFER IN DIE GEVAL VAN ENIGE ONSEKERHEID.

BYKOMENDE VOORSORGMAATREëLS:

- Hierdie berokingsmiddel is uiters gevaarlik en moet met uiterste sorg hanteer word deur persone wat geskikte beskermende klere en toerusting gebruik; insluitend beskerming vir die gesig.
- Wanneer 'n hanteerder/toediener sensoriese irritasie ervaar (tranerigheid of branderigheid van die oë of neus), moet 'n goedgekeurde asemhalingstoestel gedra word.
- Moet nooit die mond gebruik om verstopte pype, spuitpunte, ens. uit te blaas nie.
- MOENIE houers of toedieningsapparate gebruik wat van magnesium, aluminium of enige verwante metale/metaalallooie gemaak is nie, aangesien hierdie berokingsmiddel die metale mag wegvreet.
- MOENIE water gebruik om die spuittoerusting skoon te maak nie; gebruik diesel / diesel oil.

SIMPTOME VAN MENSLIKE VERGIFTIGING

Vroeë simptome van oormatige blootstelling is tranerige oë, respiratoriese nood en braking. Ophoping van vloeistof in die longe (pulmonêre edeem) mag later ontwikkel.

NOODHULP BEHANDELING: Sien Reaksie Afdeling.

IN ALLE GEVALLE VAN OORMATIGE BLOOTSTELLING MOET MEDIESE HULP ONMIDDELLIK GESOEK WORD. NEEM DIE PERSOON NA 'N DOKTER OF NA 'N NOODGEVALLE-BEHANDELINGFASILITEIT.

NOTA AAN GENEESHEER

Geen spesifieke teenmiddel is bekend nie. Behandel volgens simptome. Braking mag aspirasie pneumonie veroorsaak.

GEBRUIKSBEPERKINGS:

- MOENIE gebruik wanneer die grondtemperatuur laer as 5°C is nie.
- MOENIE gebruik wanneer die grondtemepratuur hoër as 30°C is nie.
- MOENIE toedien gedurende ongunstige weerstoestande nie. [Ongunstige weerstoestande blokkeer die opwaartse beweging van lug, wat dan veroorsaak dat die berokingsmiddel se dampe naby aan die grond vasgevang word. Die gevormde lugmassa kan vanaf die perseel in onvoorspelbare rigtings wegbeweeg. Hierdie toestande kom tipies voor binne 'n uur voor sonsondergang, tot ná sonsopkoms, en mag voortduur tot so laat as die namiddag. Ongunstige toestande is algemeen op aande met beperkte wolkbedekking en ligte tot geen wind. Die teenwoordigheid van hierdie toestande kan aangedui word deur lae mis of rookmis (ground fog or smog) en kan ook geïdentifiseer word deur rook van 'n grondbron wat grondwaarts afplat onder 'n plafonlaag en dan in 'n gekonsentreerde wolk sywaarts beweeg.
- MOENIE berook wanneer die grond baie nat of baie droog is nie.
- MOENIE grond berook wat meer as 25% klei-inhoud het nie.
- MOENIE berook binne 50 cm vanaf wortels van gewenste plantegroei nie.
- MOENIE plant of saai vir ten minste 10 dae ná poliëtileen-bedekking (plastiek berokingsfilm) verwyder is nie, indien gebruik.
- MOENIE plant of saai indien daar steeds 'n reuk teenwoordig is nie.
- MOENIE hierdie produk meer as een keer per jaar op dieselfde grond toedien nie.

- HERTOEGANGSINTERVAL – Betreding deur ongemagtigde persone aan die aansoekblok is verbied vanaf die begin van die aansoek tot 5 dae nadat die aansoek voltooi is.

MODE VAN AKSIE: Direkte toksisiteit vir grondorganismes, swamme, bakterieë, insekte en plante/sade.

GEBRUIKSAANWYSINGS - Gebruik slegs soos aangedui.

TYDSBEREKENING VIR TOEDIENING:
Tri-Form 1,3-D is ’n voor-plant grond berokingsmiddel; dit moet gebruik word voordat die gewas geplant word, aangesien dit die bestaande plante kan beskadig wanneer beroking toegepas word, en totdat die aktiewe bestanddeel heeltemal versprei het. Tri-Form 1,3-D kan enige tyd van die jaar toegedien word, indien grondtoestande dit toelaat. Toestande wat die vinnige diffusie van die berokingsmiddel as ’n gas deur die grond moontlik maak, lewer normaalweg die beste resultate. Tri-Form 1,3-D verskaf nie beheer van agtergeblewe grondpeste nie en sal dus slegs peste in die grond doodmaak wanneer die beroking uitgevoer word. Die ondergenoemde grondtemperatuur, -voorbereiding en -vogtoestande behoort teenwoordig te wees wanneer toediening plaasvind. Indien nie aan hierdie voorwaardes voldoen word nie, kan dit op onbevredigende produkprestasie uitloop.

GROND TOESTANDE:
Optimale temperature vir toediening is tussen 15 °C en 25 °C op die gemeende berokingsdiepte.

GRONDVOORBEREIDING:
Vir die beste resultate moet die area wat berook gaan word, bewerk word tot waar beheer verlang word en op ’n minimumdiepte van toediening (20-50 cm). Die oppervlak moet in die algemeen sonder groot kluite wees. Groot kluite kan doeltreffende grondverseëling voorkom en Tri-Form 1,3-D se doeltreffendheid verminder. Plantreste moet voor behandeling deeglik in die grond ingewerk word ten einde inmenging met die toediening van die berookingsmiddel te vermy. Onafgebreekte plantmateriaal kan peste bevat wat nie deur beroking beheer sal word nie. Baie min of geen gewasreste behoort op die grondoppervlak teenwoordig te wees. Gewasreste wat wel teenwoordig is, moet plat lê sodat die grond doeltreffend verseël kan word. Gekompakteerde grondlae binne die verlangde behandelingsone moet voor of tydens toediening van die berokingsmiddel opgebreek word. Indien daar van die bogenoemde voorwaardes afgewyk word, sal dit tot onbevredigende resultate.

GRONDVOG:
Dit is van kardinale belang dat die grondvog behoorlik voor beroking bestuur word. Beplan beroking vir seisoene, gewaswisseling of besproeiingskedules wat vog in die grond sal laat agterbly. Vir berokingsdieptes van 40-45 cm (soos vir die herplant van appels) moet die grond binne ’n radius van 40 cm en meer vanaf die toedieningspunt klam wees, soos bepaal deur die voel-metode (sien hieronder). Vir alle ander toedienings moet die grond vanaf die grondoppervlak minstens 30 cm diep klam wees, soos bepaal deur die voel-metode (sien hieronder). Die hoeveelheid vog wat in hierdie sone nodig is, sal ooreenkomstig die grondsoort wissel. Indien besproeiing nie beskikbaar is nie en daar wel voldoende grondvog van minder as 15 cm is, kan dit na die oppervlak gebring word deur die grond voor of tydens die toediening te eg of te ploeg.

In die algemeen behoort geen besproeiing onmiddellik voor grondbreking of beroking plaas te vind nie. Wanneer besproeiing egter beskikbaar is en die toestand van die oppervlakgrondvog waarskynlik nie ’n voldoende seël teen berokingsverlies sal verskaf nie, kan ’n baie ligte sprinkelbesproeiing gegee kan word om die boonste 2.5-5 cm grond nat te maak sodat die grondvoginhoud die verlangde vlak kan bereik.

Die volgende beskrywings sal meehelp om aanvaarbare grondvogtoestande deur middel van die voel-metode te bepaal:

Vir growwe grondsoorte (sand en leemgrond) moet daar voldoende vog wees om die vorming van ’n sagte bal moontlik te maak wanneer dit in ’n mens se hand saamgepers word. Hierdie bal breek maklik met slegs ’n bietjie steurnis op grond van die grondtekstuur. In leemgrond of grond met ’n medium tekstuur (growwe sandleem, sandleem en fyn sandleem) sal ’n grondmonster met die verlangde voginhoud in ’n bal gevorm kan word wat

nie met matige steurnis sal verkrummel nie, maar wat nie tussen die duim en voorvinger sal vasklou nie. Grond met ’n fyn tekstuur (kleileem, slikagtige kleileem, sandklei, slikagtige klei, sandkleileem en klei) behoort soepel en nie krummelrig nie te wees, maar behoort nie ’n lint te vorm wanneer dit tussen ’n mens se duim en voorvinger saamgepers word.

PLASING VAN BEROKINGSMIDDEL:
Tri-Form 1,3-D kan as óf ’n uitspreidings- (algehele) óf ’n ry- (bedding-) behandeling toegedien word. Dit behoort minstens 20 cm onder die finale grondoppervlak ingespuit te word, hoewel plasing tot 30 cm onder die finale grondoppervlak aanbeveel word. Dieper plasing word aanbeveel wanneer die grond waarin plante met diep wortelstelsels geplant gaan word, of om peste wat diep onder die grond is, te beheer.

- Bedding en uitspreiding met plastiekbedekking: Die inspuitpunt behoort ’n minimum van 20 cm vanaf die naaste finale grond- /lugkoppelvlak te wees (d.i. bo-op beddings, vir toediening in beddings).
- Bedding sonder plastiekbedekking: Die inspuitpunt behoort ’n minimum van 30 cm vanaf die naaste finale grond-/lugkoppelvlak te wees.
- Uitspreiding sonder plastiekbedekking: Die inspuitpunt behoort ’n minimum van 30 cm vanaf die naaste finale grond-/lugkoppelvlak te wees.
- Diep uitspreiding sonder plastiekbedekking: Die inspuitpunt behoort ’n minimum van 40-45 cm vanaf die naaste finale grond-/lugkoppelvlak te wees.

TOEDIENINGSMETODES EN TOERUSTING:

BEITELPLOEG-BEROKINGSIMPLEMENT OF OMSLAGPLOEG METODE:
- Maak seker dat die toedieningstoerusting behoorlik gekalibreer is voordat beroking gedoen word.
- Wanneer vlak toedieningswerk (inspuitingdiepte 20 tot 40 cm) gedoen word, gebruik ‘n skagspasiëring van 25 tot 30 cm.
- Dieper toedienings word aanbeveel vir diep-gewortelde plante. Vir diep toedienings (inspuitingdiepte 40 – 45 cm), kan ’n skagspasiëring van tot en met 60 cm gebruik word; hoewel dit nie aanbeveel word dat die skagspasiëring 45 cm oorskry nie.

GRONDVERSEËLING:
Verseëling van die grond ná toediening is baie belangrik. Die grond moet onmiddellik verseël word ná inspuiting. Daar is verskeie metodes om die oppervlak van die grond te seël:
- Vir vlak toediening (inspuitingdiepte van 20 tot 40 cm) vol oppervlak en/of wye-bedding toedienings, moet die grond verseël word met ‘n bedding-perser, roller, of poliëtileen-versperringsfilm (plastiek berokingsfilm/seil).
- Vir diep toedienings (inspuitingdiepte van 40 - 45 cm), verseël met poliëtileen-versperringsfilm of deur middel van ’n sny-eg, gevolg deur ’n roller, roller-kompakteerder of soortgelyke toerusting.
- Met ry- en/of nou-bedding toedienings kan verseëling met poliëtileen-versperringsfilm gedoen word of deur middel van ‘n bedding-perser, roller, of soortgelyke toerusting.
- In die geval van onbedekte toedienings, moet die grondoppervlak deur middel van besproeiing geseël word deur die boonste 20 mm grond te deurdrenk met water. Herhaaldelike besproeiing mag verlang word gedurende die toedieningsperiode om te voorkom dat die boonste grondlaag kraak.

BLOOTSTELLINGSPERIODE:
Indien die poliëtileen-versperringsfilm gebruik is, kan dit na 5 dae afgehaal word. Wanneer enige ander verseëling gebruik is, los die grond onversteurd vir 7 dae voor bewerking om die grond te deurlug. Indien die poliëtileen-versperringsfilm as ’n deklaag gebruik word, kan plantgate na deurlugting gemaak word. Koue en/of nat grond sal ‘n langer blootstellingsperiode benodig. Moenie die grond bewerk indien die grond te nat is om behoorlik omgeploeg te word nie.

DAE VOOR PLANT:
- Moenie plant vir ten minste 10 dae nadat die poliëtileen-versperringsfilm verwyder is of gate gepons is nie.
- Vir enige ander tipe verseëlig wat gebruik is, moenie vir 7 dae ná die aanvanklike bewerking geplant word nie. Langer deurlugting mag benodig word waar die grond nat, koud of ‘n hoë klei- of slik-inhoud het.

- Vir alle toedienings, MOENIE PLANT indien daar nog 'n reuk teenwoordig is nie. Indien die reuk steeds teenwoordig is nadat deurlugting toegepas is, mag dit nodig wees om die grond verskeie kere te bewerk voor daar geplant of gesaai kan word. Om deurlugting van die grond moontlik te maak,kan die bolaag/kors van die grond gebreek word deur gebruik te maak van skoon toerusting.

BEMESTING:
Beroking mag die vlak van ammoniakstikstof en oplosbare soute in die grond tydelik verhoog. Om ammoniak-skade en/of nitraatverhongering van gewasse te vermy, vermy die gebruik van bemestingstowwe wat ammoniak-soute bevat en gebruik slegs bemestingstowwe wat nitrate bevat totdat die oes goed gevestig is en die grond-temperatuur omtrent 20°C is. Deur grond wat baie suur is eers te kalk voor beroking, word nitrifikasie gestimuleer en kan die moontlikheid van ammoniak-toksisiteit ook verminder word.

HERBESMETTING:
- Voorkom herbesmetting van behandelde grond. Moenie verplante materiaal, gereedskap, of oesoorblyfsels wat besmet is met grondoordraagbare plantparasiete en onkruidsaad gebruik nie. Maak die toedieningstoerusting deeglik skoon voor en ná gebruik.
- Moenie berookte areas kontamineer deur vanaf onberookte grond na berookte grond te stap nie.
- Indien die behandelde area op 'n plek is waar vloede moontlik is ná reën, ploeg 'n sloot rondom die area vir doeltreffende dreinering.
- Hierdie produk kan nie verwag word om plae te beheer wat onder die diepte van effektiewe beroking is nie, en dit kan ook nie verwag word dat hierdie produk plae buite die effektiewe beroking sone sal beheer nie.

TOEDIENIGSTABEL
TRI-FORM 1,3-D GRONDBEROKINGSMIDDEL

GEWASSE	PROBLEEM / PESTE	DOSIS	OPMERKINGS
ALLE EENJARIGE GEWASSE **Insluitende:** Aartappels, Groente, en Tabak	Plantparasiete Nematode, "Symphylans", Ringwurms	104 tot 195 kg/ha (94 tot 176 L/ha)	Voor-plant grondberokingsmiddel Moenie meer as een maal per jaar toegedien word nie Gebruik laer dosisse op ligter grondtipes. (< 10% klei, soos byvoorbeeld sand of sandleem) Gebruik hoër dosisse op digter grondtipes. (10-25% klei, soos byvoorbeeld slik of kleileem)
ALLE MEERJARIGE GEWASSE **Insluitende:** Vrugte en Neute bome, Aarbeie		(101 tot 189 kg/ha AI)	

ADDISIONELE INSTRUKSIES VIR BERGING, HANTERING EN VERSKEPING VAN HOUERS:
Stoor houers regop, vasgemaak teen 'n muur of op 'n rak om te voorkom dat dit omval. MOENIE houers aan rowwe hantering of meganiese skok onderwerp nie, soos om te laat val, te stamp, te sleep of te gly. MOENIE toue, hake, tange of soortgelyke voorwerpe gebruik om die houers af te laai nie. Vervoer houers met 'n handvragmotor, vurkvragmotor of ander toestel waaraan die houers stewig vasgemaak kan word. By silinders moet die beskermingsklep eers verwyder word wanneer berokingsmiddel daaruit verwyder gaan word; plaas die beskermingsklep en die veiligheidsklep terug op die silinder ná gebruik of wanneer dit leeg is. By dromme moet die proppe stewig in plek gehou word wanneer die drom nie gebruik word nie. MOENIE die houers vervoer indien die beskermingsklep en veilgheidsklep of prop nie deeglik vasgemaak is nie. Stuur alle leë of halfgebruikte houers terug aan die verspreider of registrasiehouer; MOENIE die houer vir enige ander doel hergebruik nie.

PROSEDURES VIR STORTING EN LEKKASIE:
Ontruim die onmiddellike area waar die lekkasie voorkom. Wanneer die besoedelde area herbetree moet word om die lekkasie reg te maak, maak seker dat die korrekte beskermende klere en toerusting, gedra word. Skuif

die silinders wat beskadig is of lek na buite of na ‘n geïsoleerde area. Volg streng veiligheidsmaatreëls. Werk windop, indien moontlik. Laat die gemorsde berokingsmiddel verdamp of laat dit geabsorbeer word deur droë sand, grond, vermikuliet of soortgelyke absorberingsmiddel. Raak ontslae van die besmette materiaal op die perseel of by ‘n goedgekeurde stortingsfasiliteit. Slegs korrek-opgeleide en toegeruste hanteerders mag toegelaat word om so ‘n skoonmaakproses uit te voer. MOENIE toegang tot die gekontamineerde area deur enige ander persoon toelaat totdat die konsentrasie van chloropikrien gemeet is en 0.15 ppm of laer is nie.