# Simplot SOILBUILDERS TELONE II SOIL FUMIGANT

#### **GENERAL INFORMATION**

Use TELONE II soil fumigant only as a preplanting soil treatment to control plant parasitic nematodes (root-knot, meadow (lesion), citrus, cyst formers (golden sugar beet, soybean), burrowing ring spiral, sting pin, stubby root stylet, dagger) also to control wireworms and garden centipedes (symphylans). Fumigate land to be planted to the crops listed below by applying TELONE II under the conditions and at the rates recommended under DIRECTIONS TOR USE DOSAGE AND USE RECOMMENDATIONS and USE PRECAUTIONS. Read the : label before using TELONE II.

yetable Crops: asparagus beans beets blackeyed peas broccoli Brussels sprouts cabbage cantaloupe carrots	cauliflower celery collards corn cowpeas cucumbers egg plant endive garlic	horseradish kale kohirabi leeks lettuce melons mustard greens okra onions	parsnips peas peppers pimemtoes potatoes pumpkins radishes rutabaga salsily	shallots spinach squash (summer) squash (winter) sweet potatoes Swiss chard tomatoes turnips watermelons
Field Crops:	_			
alfalfa barley birdsfoot trefoil buckwheat clover	corn cotton flax grasses hops lespedeza	millet milo mint oats pasture grass peanuts	popcorn rice rye safflower sorghum soybeans	sugar beets sugarcane tobacco vetch wheat
Citrus Fruit Tree Pla	nting Sites:			
grapefruit	kumquats lemons	lirnes	oranges tangerines	tangelos
Deciduous Fruit and	Nut Tree Plan	ting Sites.		
almonds apples apricots cashew nuts	cherries chestnuts dates figs filberts	hazelnuts hickory nuts nectarines olives peaches	pears pecans persimmons pineapple plums	pomegranates prunes quince walnuts
Bush and Vine Plan	ting Sites:			
blackbarries bluabarries boysenbarries	cranberries currants	dewberries gooseberries grapes	huckleberries loganberries	raspberries strawberries youngberries

issery Crops including floral plants, ornamentals, shrubs and bushes, forest ishade, fruit nut trees and vine and bramble fruits of all types

#### **DIRECTIONS FOR USE**

WHEN TO TREAT Apply TELONE II either in the spring or fall, whenever soil type and conditions permit. For best results with annual crops, treat the soil each year in northern states, late summer or early fall treatment (before October 15) is best for land to be planted to early spring crops, especially transplanted crops such as celery, tomatoes and nursery and orchard stock. Early fall treatment permits planting a fall cover crop. Note: Treat muck soils only in the early fall and plant as late as possible in the spring, treat fine textured (clay) soils only when they are near or at the wilting point. Do not use TELONE II to treat any type of soil when it is cold and or wet

**SOIL PREPARATION** TELONE If gives best results when conditions permit rapid diffusion of the furnigant through the soil and the soil surface can be sealed to prevent excessive furnigant loss during the exposure period. The soil should be in good seed bed condition, free of clods and undecomposed plant material, moisture at about one-half of field capacity and removerature between 40° and 80° F, at the depth of injection, If undecomposed plant debris is present, it should be plowed down and allowed to decompose before applying TELONE II Tillage deeper than 12 inches is necessary for good furnigant penetration in soils where a hard or "plow" pan occurs at plow depth. Where deep tillage is used, the tillage equipment may often be modified to simultaneously apply the furnigant and thus avoid going over the field twice.

APPLICATION: TELONE II may be applied either as an overall (broadcast) or row treatment, using suitable application equipment that will ensure placement of the furnigant as inset & to B inches halous the final and audient for author and

A CLEAN, CLEAR, NON-CLOGGING LIQUID FOR PREPLANT TREATMENT OF CROP LANDS TO CONTROL PLANT PARASITIC NEMATODES AND CERTAIN OTHER SOIL PESTS.

ACTIVE INGREDIENT:		
1,3-Dichloropropene	<b>9</b> .	2%
INERT INGREDIENTS:		8%
	10	0%

#### DOSAGE AND USE RECOMMENDATIONS to Control Nematodes, Symphylans' and Wireworms:

•		!	( Dosage		
Type of Treatment	Soil Ty	/pe	Gallons Per Acre <sup>1</sup>	Row Per Chis Fl. Oz /1000 f	
D 4 314	Miner	ai į	45 to 6	46 to 62	
150W (4Z)	Muck or	Peat	9 tr 12	93 to 123	
Overa	Miner	Mineral I 9 t		26 to 44	
Broadcast)	Muck or	Peat	24 to 36	71 to 106	
Overall Mineral		rat	24 to 36	71 to 106	
Rew (42")	•	;	6	62	
Overa i	M-nei	al	12 tr 15	35 to 44	
Row (42.1)		•	9	93	
Overall			12 to 18	35 to 53	
Row	Mineral		24 to 36	•	
Overall	Mineral		36	106	
Overall Gallons Per Acre to Penetrate Various Depths					
Mineral Soils	3 ft	4 ft	5 ft	6 ft	
Sand	15	21	;   27	33	
Sandy Loam	21	30	36	48	
Silt Loam	42	51	63	75	
Clay Loam	54	69	1 84	102	
	Overall Row (42") Overall Row (42") Overall Row Overall Row Overall Sand Sandy Loam	Treatment Soil Ty  Miner  Row (42)  Overall Muck or  Overall Miner  Row (42)  Overall Miner  Row (42)  Overall Miner  Overall Gallons Per  Mineral Soils 3 ft  Sand 15  Sandy Loam 27  Silt Loam 42	Treatment Soil Type  Mineral Muck or Peat  Overal Mineral Muck or Peat  Overall Mineral  Row (42")  Overall Row Mineral  Overall Mineral  Overall Alineral  Overall Solverall  Alineral  Overall  Overall  Alineral  Overall  Alineral  Overall  Overall  Alineral  Overall  Overall  Alineral	Type of Treatment   Soil Type   Per Acre!     Mineral   45 to 6     Muck or Peat   9 tr 12     Overal   Mineral   9 to 152     Broadcast   Muck or Peat   241 to 36     Overal   Mineral   24 to 36     Row (421)   6     Overal   Mineral   12 tr 15     Row (421)   9     Overal   Mineral   24 to 36     Overal   Mineral   12 tr 15     Row   Mineral   24 to 36     Overall   Mineral   36     Overall   Gallons Per Acre to Penetrate Variant     Mineral   Soils   3 ft   4 ft   5 ft     Sand   15   21   27     Sandy Loam   27   30   36     Silt Loam   42   51   63     Silt Loam   42   51   63     Overall   Soils   3 ft   4 ft   5 ft     Sandy Loam   27   30   36     Silt Loam   42   51   63     Overall   Silt Loam   5 ft   5 ft     Overall   Overall   5 ft   5 ft	Type of Treatment   Soil Type   Per Acre   Per Acre   Ft. Oz./1000   Per Acre   Per Acre   Ft. Oz./1000   Per Acre   Pe

Use the higher rates in heavier soil.

- 2 For cyst-forming nematodes increase dosage to 18 gallons per acre (53 fl. oz. 1000 fl. row.
- For muck soils containing less then 30% organic matter use 18 gallons per acre.
- 4 For Hawaiian pineapple, application may be made at time of or just before planting.
- S For burrowing nemetode in citrus inject on 18-inch centers 12 inches deep. Keep free of plants susceptible to burrowing nematodes for 2 years before replanting to citrus. fill flow treatment is not recommended for potatory in irrigated areas of western and
- northwestern states. Tree planting sites prepared by backhosing may be treated by pouring 27 fl. oz. of TELONE II INTO THE HOLE DURING RACKEII I Mild. For base require managed and treat in the

IMPORTANT -- Note Carefully: Fumigation may temporarily raise the level of arr nitrogen and soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and furnigant are applied to soils that are either cold, wet, acid or high in organic matter. To avoid injury to plant roots, fertilize as indicated by soil tests made after furnigation. To avoid ammonia injury or nitrate starvation, or both, to crops on high organic soils do not use fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65° F.

**USE PRECAUTIONS** 

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Certain crops including cotton, sugarcane and pineapple are tolerant to ammonia and the above rule does not apply to them. When using high rates of TELONE II as required by certain state nursery regulations, liming of highly acid soils before furnigation may stimulate nitrification and reduce the possibility of ammonia toxicity. Certain nursery crops such as citrus seedlings, Comus sp., Crataegus sp., spruce and vegetable crops such as cauliflower have shown evidence of phosphorus deficiency following furnigation. To avoid this possible effect, it is suggested that additional phosphate fertilizer be used on soils where experience indicates a deficiency may occur.

Attention: To avoid reinfestation of treated soil do not use irrigation water, transplants, tools, seed pieces or crop remains that could carry soilborne pests from infested land. Clean equipment carefully before using.

Since TELCNE II soil furnigant is corrosive under certain conditions, flush all applicators with fuel oil or keroeene immediately after use. DO NOT USE WATER. Do not use containers. pumps or other transfer equipment made of aluminum, magnesium or their alloys, as under certain conditions TELONE II may be severely corrosive to such metals. Common protective clothing, such as rubber gloves and boots, etc., may be penetrated readily by this material. Polyethylene provides a good barrier. For field operations cover shoes and hands with polyethylene bags. Store TELONE II in tightly closed containers in a cool place away from dwellings in outside storage. Store drums on their sides to avoid accumulation of rain viater in the top or bottom recessed areas.

Do not allow contamination of seeds, plants, fertilizers or other pesticide chemicals. Do not contaminate food, feedstuffs or domestic water supplies.

To avoid injury to fish and other wildlife, do not spill or empty TELONE II into streams, ponds or other bodies of water.

Rinse equipment and containers and dispose of wastes by burying in non-crop lands away from water supplies. Dispose of empty containers by punching holes in them and burying

Use this product only as specified on this label.

#### AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, or Clothing

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente. TRANSLATION - TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.

### DANGER Keep Out of Reach of Children HAZARDOUS LIQUID AND VAPOR

beens beets blackeyed peas broccoli Brussels sprouts cabbage cantaloupe carrots	colory collards corn cowpeas cucumbers egg plant endive garlic	kale kohirabi leeks lettuce melons mustard greens okra onions	pees peppers pimemtoes potatoes pumpkins radishes rutabaga salsily	spinech squash (summer) squash (winter) sweet potatoes Swiss chard tomatoes turnips waterinelons
Field Crops				
alfalfa barley birdsfoot trefoil buckwheat clover	corn cotton flax grasses hops lespedeza	millet milo mint oats pasture grass peanuts	popcorn rice rye safflower corghum soybeans	sugar beets sugarcane tobacco vetch wheat
Citrus Fruit Tree Pla grapefruit	nting Sites: kumquats lemons	limes	oranges tangerines	tangelos
Deciduous Fruit and	Nut Tree Plan	ting Sites:		
almonds apples apricots cashew nuts	cherries chestnuts dates figs filberts	hazelnuts hickory nuts nectarines olives peaches	pears pecans persimmons pineapple plums	pomegranates prunes quince walnuts
Bush and Vine Plant	ting Sites.			
blackberries bluebarries boysenberries	cranbarries currants	dewberries gooseberries grapes	hucklebernes loganbernes	raspberries strawberries youngberries

'sery Crops including floral plants, ornamentals, shrubs and bushes, forest, shade, fruit rites and vine and bramble fruits of all types.

#### **DIRECTIONS FOR USE**

WHEN TO TREAT: Apply TELONE II either in the spring or fall, whenever soil type and conditions permit. For best results with annual crops, treat the soil each year in northern states; late summer or early fall treatment (before October 15) is best for land to be planted to early spring crops, especially transplanted crops such as celery, tomatoes and nursery and orchard stock. Early fall treatment permits planting a fall cover crop. Note: Treat muck soils only in the early fall and plant as late as possible in the spring, treat fine textured (clay) soils only when they are near or at the wilting point. Do not use TELONE II to treat any type of soil when it is cold and/or wet.

SOIL PREPARATION: TELONE II gives best results when conditions permit rapid diffusion of the furnigant through the soil and the soil surface can be sealed to prevent excessive furnigant loss during the exposure period. The soil should be in good seed bed condition, free of clods and undecomposed plant material, moisture at about one-half of field capacity and temperature between 40° and 80° F. at the depth of injection. If undacomposed plant debris is present, it should be plowed down and allowed to decompose before applying TELONE II. Tillage deeper than 12 inches is necessary for good furnigant penetration in soils where a hard or "plow" pan occurs at plow depth. Where deep tillage is used, the tillage equipment may often be modified to simultaneously apply the furnigant and thus avoid going over the field twice.

APPLICATION: TELONE II may be applied either as an overall (broadcast) or row treatment, using suitable application equipment that will ensure placement of the fumigant at least 6 to 8 inches below the final soil surface. For overall application use either plowsole or chisel equipment with the chisels spaced 12 inches apart. When the fumigant is injected at a depth of 12 inches or more (deep tillage), the chisel spacing may be up to twice the application depth but should not exceed 30 inches. Application may be made in the same direction or at an angle to the direction of the planting row, whichever is most convenient. For row application, use chisel equipment with one chisel per row or two chisels spaced 12 inches apart to treat only the soil where the crop is to be planted. When one chisel per row is used, adjust the fumigant flow rate to distribute about 1 % times more fumigant per chisel than is recommended for overall application. When two chisels are used per row, apply at the same flow rate per chisel as for overall. In both cases, the amount of furnigant required per acre will decrease as the distance between rows is increased and vice versa. At time of planting avoid placing the seed row directly over the furrow left by the applicator chisel. When a single chisel is used per row place the seed 3 to 4 inches to one side of the chisel. furrow; when two chisels are used, plant in the center of the area between the chisel furrows.

**SEALING:** Immediately after application, compact the soil surface to prevent excessive fumigant loss. After chisel application, use a roller cultipacker or similar sealing device. After plowsole application, disc the land, then compact it by floating or rolling. Sealing after row application can be accomplished by the tractor wheel, by listing, or by bedding so that the fumigant will be 12 to 14 inches below the top of the bed. When fumigating listed rows, seal in the fumigant with ring rollers, press sealers, or by re-listing.

**EXPOSURE PERIOD:** After application and sealing, leave the soil undisturbed for 7 to 14 days. A longer exposure period will be required if the soil becomes excessively cold or wet during the exposure period.

AERATION AND PREPARATION OF SOIL BEFORE PLANTING. At the end of the exposure period allow the soil to aerate completely before planting the crop. Aeration is usually complete when the odor of TELONE II is no longer evident. Under optimum soil and weather conditions, allow one week of aeration time for each 10 gallons of TELONE II applied per acre. When TELONE II is used for treating deep-rooted tree and shrub planting sites, a 3 to 6 months aeration period should be allowed. To hasten aeration, especially if heavy rains or low temperatures occur during the exposure period, work the soil to the depth of the treatment zone. After row treatment use a knife like chisel in the bed without turning the soil, thus reducing possible recontamination of the treated soil. To hasten aeration after overall treatment, plow or deep cultivate to the depth of the treatment zone. This is especially desirable in northern states after fall furnication of muck soils.

E.P.A. Registration No	11682-25
E.P.A. Est No	

## DOSAGE AND USE RECOMMENDATIONS to Control Nematodes, Symphylans and Wireworms

100%

CROPS (consult ' ** of individual	!			Dosage		
crops unual General Information)	Type of Treatment	Soil Ty	pe	Galions Per Acre <sup>1</sup>	Row Per Chicel Fl. Oz./1000 Ft.	
Sharrow Rooted Plants		Miner	al	45 to 6	46 to 62	
Field Crops Floral Crops	Row (42)6	Muck or	Peat	9 tc 12	93 to 123	
Grasses and Turf Small Fruits	Overa	Mineral 9 to		9 to 15 <sup>2</sup>	26 to 44	
Vegetables Ornamentae	Broadcast)	Muck or	Muck or Peat   2		71 το 1 <b>06</b>	
Strawberries	Overan	Miner	a) į	24 to 36	71 to 1 <b>06</b>	
Sugar Beets	Row (42")	•	!	6	62	
Root Knot Nematode	Overail	Mineral		12 .5	35 to <b>44</b>	
Sugar Beets	! Row (421)	•	!	9	93	
Nematode	: Overail			12 to 18	35 to 53	
Pineapple <sup>4</sup>	Row	Miner	ai	24 to 36	-	
Citrus Firmida <sup>©</sup>	Overall	Overall Mineral		36	106	
Nursery and Field?	Overall Gallons Per Acre to Penetrate Various Di			ous Depths		
Citrus Fruit Trees Deciduous Fruit Trees Forest Trees	Mineral Soils	3 ft.	4 ft.	5 ft	6 ft	
Grapes	Sand	15	21	27	33	
Nut Trees Ornamentals	Sandy Loam	27	30	36	48	
(deep rooted)	Silt Loam	42	51	63	75	
	Clay Loam	54	. 69	84	102	

- 1 Use the higher rates in heavier soil.
- <sup>2</sup> For cyst-forming nematodes increase dosage to 18 gallons per acre (53 fl. oz. 1000 fl. row per chisel).
- <sup>3</sup> For muck soils containing less than 30% organic matter use 18 gallons per acre.
- 4 For Hawaiian pineapple, application may be made at time of or just before planting.
- 5 For burrowing nematode in citrus inject on 18-inch centers 12 inches deep. Keep free of plants susceptible to burrowing nematodes for 2 years before replanting to citrus.
- 6 Row treatment is not recommended for potatoric in irrigated areas of western and northwestern states.
- Tree planting sites prepared by backhoeing may be treated by pouring 27 fl. oz. of TELONE II INTO THE HOLE DURING BACKFILLING. For best results prepare and treat sites in the fall and plant in the spring.
- \*Use TELONE II as an aid in the control of bacterial canker and decline of peach trees by application as a preplant overall treatment of light (sandy) soils at the rate of 24 to 36 gallons per acre (71 to 106 ft. oz. row per chisel) preferably in the fall when the soil is warm (50-85° F. at 6-inch depth) and moist inject the furnigant at a depth of 10 to 12 inches with chisels mounted on 12-inch centers. Follow directions for soil preparation, sealing exposure and aeration as specified elsewhere on this label.
- <sup>1</sup> NOTE: To control symphylans (garden centipedes) use only overall at 18 or more gallons per acre and apply during late summer or early fall when the soil is warm. To control wireworms use the higher dosages recommended for nematodes in overall or broadcast treatments.

White Potatoes in Northwestern States: Use TELONE II as a spring or preferably a fall treatment to control quackgrass and for suppression of the damaging effects of Verticillium wilt in fields to be planted to white potatoes. Apply as an overall treatment according to the following directions.

Time of Treatment	Gallons Per Acre	Fl. Oz./1000 Ft. Row Per Chisel
Spring	17 to <b>25</b>	50 to 73
Fall	25 to 34	73 to 100

Mint in Northwestern States: Use 59 gallons of TELONE II per acre (173 fl. oz./1000 ft, row per chisel) as an overall treatment in the spring or preferably in the fall, to aid in the reduction of the damaging effects of Verticillium wilt in disease infested land to be used for mint production. After treatment allow at least 7 to 8 weeks or until the odor of the furnigent has left the soil before planting. Consult State Agricultural Experiment Station or State Extension Service Specialists for the use of other practices such as flaming the stubble, weed control and cultural practices when using TELONE II as an aid to reducing damage caused by Verticillium wilt.

## J. R. SIMPLOT COMPANY Minerals & Chemical Division

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P.O. Box 912 • Pocatello, Idaho 83201

certain state nursery regulations, liming of highly acid soils before furnigation may stimulate nitrification and reduce the possibility of ammonia toxicity. Certain nursery crops such as citrus seedlings, Carnus sp., Crategus sp., spruce and vegetable crops such as cauliflower have shown evidence of phosphorus deficiency following furnigation. To avoid this possible effect, it is suggested that additional phosphate fertilizer be used on soils where experience indicates a deficiency may occur.

Attention: To avoid reinfestation of treated soil do not use irrigation water, transplants, tools, seed pieces or crop remains that could carry soilborne pests from infested land. Clean equipment carefully before using.

Since TELONE II soil furnigent is corrosive under certain conditions, flush all applicators with fuel oil or kerosene immediately after use. DO NOT USE WATER. Do not use containers, pumps or other transfer equipment made of aluminum, magnesium or their alloys, as under certain conditions TELONE II may be severely corrosive to such metals. Common protective clothing, such as rubber gloves and boots, etc., may be penetrated readily by this material. Polyethylene provides a good barrier. For field operations cover shoes and hands with polyethylene bags. Store TELONE II in tightly closed containers—a cool place away from dwellings in outside storage. Store drums on their sides to avoid accumulation of rain water in the top or bottom recessed areas.

Do not allow contamination of seeds, plants, fertilizers or other pesticide chemicals. Do not contaminate food, feedstuffs or domestic water supplies.

To avoid injury to fish and other wildlife, do not spill or empty TELONE II into streams, ponds or other bodies of water.

Rinse equipment and containers and dispose of wastes by burying in non-crop lands away from water supplies. Dispose of empty containers by punching holes in them and burying with wastes

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#### **AGRICULTURAL CHEMICAL**

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# DANGER Keep Out of Reach of Children

HAZARDOUS LIQUID AND VAPOR
MAY BE FATAL IF INHALED, ABSORBED THROUGH SKIN,
OR SWALLOWED • CAUSES BURN OF SKIN OR EYES

#### COMBUSTIBLE

Do not get in eyes, on skin, or on clothing. Wear eye and skin protection necessary to prevent contact when handling this material. Wash thoroughly after handling and before eating and smoking. Wash contaminated clothing and air contaminated shoes thoroughly before re-use. DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME. Use only with adequate ventilation. Do not breathe vapor.

IN CASE OF CONTACT: Immediately remove contaminated clothing and shoes and wash skin with sosp and plenty of water; for eyes, flush with flowing water for at least 15 minutes and get medical attention.

IN CASE OF SPILLAGE INDOORS: Have available an approved full face mask equipped with a fresh black canister meeting specifications of the U.S. Bureau of Mines for organic vapors, a full face self-contained breathing apparatus, or full face air-supplied respirator.

IF INHALED: Remove to fresh air. Use artificial respiration if breathing has stopped. Get immediate medical attention. Keep patient absolutely quiet.

IF SWALLOWED: Call a doctor. Induce vomiting by giving an emetic such as 2 tablespoonfuls of table salt in a glass of warm water.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

<sup>\*</sup>TELONE II . Trademark of The Dow Chemical Company