

JIRDON AGRI CHEMICALS, INC.

# TELONE<sup>®</sup> II SOIL FUMIGANT

**ACTIVE INGREDIENT:**  
1,3-Dichloropropene ..... 92%  
**INERT INGREDIENTS:** ..... 8%  
**E.P.A. Registration No. 11684-3**  
**E.P.A. Est. NO. 11684NB01**

\* TELONE<sup>®</sup> - Trademark of The Dow Chemical Company

## AGRICULTURAL CHEMICAL

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

**PRECAUCION AL USUARIO:** Si usted no lee inglés, 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 • MAY BE FATAL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED • CAUSES BURNS 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 Reuse. **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 soap 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.

### 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 string 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 FOR USE, DOSAGE AND USE RECOMMENDATIONS and USE PRECAUTIONS. Read the entire label before using TELONE II.

#### Vegetable Crops:

asparagus	cauliflower	horseradish	parsnips	shallots
beans	celery	kale	peas	spinach
beets	collards	kohlrabi	peppers	squash (summer)
blackeyed peas	corn	leeks	pimentos	squash (winter)
broccoli	cowpeas	lettuce	potatoes	sweet potatoes
brussels sprouts	cucumbers	melons	pumpkins	swiss chard
cabbage	egg plant	mustard greens	radishes	tomatoes
cantaloupe	endive	okra	rutabaga	turnips
carrots	garlic	onions	salsify	watermelons

#### Field Crops:

alfalfa	flax	oats	sorghum
barley	grasses	pasture grass	soybeans
birdsfoot trefoil	nops	peanuts	sugar beets
buckwheat	lespedeza	popcorn	sugarcane
clover	millet	rice	tobacco
corn	milo	rye	vetch
cotton	mint	safflower	wheat

#### Citrus Fruit Tree Planting Sites:

grapefruit	kumquats	lemons	limes	oranges	apricots	tangerines
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#### Deciduous Fruit and Nut Tree Planting Sites:

almonds	dates	olives	plums
apples	figs	peaches	pomegranates
apricots	hibernuts	pears	prunes
cashews nuts	hazelnuts	pecans	quince
cherries	hickory nuts	persimmons	walnuts
chestnuts	nectarines	pineapple	

#### Bush and Vine Planting Sites:

blackberries	currants	huckleberries	youngberries
blueberries	dewberries	loganberries	
boysenberries	gooseberries	raspberries	
cranberries	grapes	strawberries	

**Nursery Crops** including floral plants, ornamentals, shrubs and bushes, forest and vine and bramble fruits of all types, shade fruit and nut trees

### DIRECTIONS FOR USE

**WHEN TO TREAT:** Apply TELONE II either in the spring or fall, whenever the weather and conditions permit. For best results with annual crops, treat the soil each year. In northern states, summer or early fall treatment (before October 15) is best for land to be planted to early spring crops, such as celery, tomatoes, and nursery and orchard stock. Early fall treatment of crop. **Note:** Treat muck soils only in the early fall and plant as late as possible. In 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 diffusion of the fumigant through the soil and the soil surface can be sealed to prevent excessive fumigant loss during the exposure period. The soil should be in good seed bed condition, free of clods and moisture at about one-half of field capacity and temperature between 40° and 60° F. At the depth of injection if un-decomposed 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 fumigant penetration in soils where a hard pan occurs at plow depth. Where deep tillage is used, the tillage equipment should be adjusted to simultaneously apply the fumigant 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 inches below the final soil surface. For overall application use either plowsole or chisel equipment with 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. Apply in the direction or at an angle to the direction of the planting row, which will ensure the soil where the crop is to be planted. When one chisel per row is used, distribute about 1 1/2 times more fumigant per chisel than is recommended. When two chisels are used per row, apply at the same flow rate per chisel as for one chisel. The amount of fumigant required per acre will decrease as the distance between rows of planting is increased. Avoid placing the seed row directly over the furrow left by the chisel. Place the seed 3 to 4 inches to one side of the chisel plant in the center of the area between the chisel furrows.

**SEALING:** Immediately after application, compact the soil surface to prevent fumigant loss. Use a roller, cultipacker, or similar sealing device. After chisel application, use a roller, cultipacker, or similar sealing device. A land, then compact it by floating or rolling. Sealing after row application should be by listing or by bedding so that the fumigant will be 12 to 14 inches below the soil surface. Seal in the fumigant with ring rollers, press seals, or similar equipment.

**EXPOSURE PERIOD:** After application and sealing, leave the soil under the treatment for the exposure period which will be required if the soil becomes excessively cold or dry.

**AERATION AND PREPARATION OF SOIL BEFORE PLANTING:** At the time of planting, the soil to be aerated completely before planting, the crop. Aeration is not required if TELONE II is no longer evident. Under optimum soil and weather conditions, aeration is not required for each 10 gallons of TELONE II applied per acre. When TELONE II is applied to row and shrub planting sites, a 3 to 6 months aeration period should be allowed. If heavy rains or low temperatures occur during the exposure period, aeration should be done. After row treatment use a knife-like chisel in the bed with possible recontamination of the treated soil. To hasten aeration after overexposure to the depth of the treatment zone. This is especially desirable in the case of muck soils.

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

Crops (consult list of individual crops under General information)	Type of Treatment	Soil Type
Shallow Rooted Plants		
Field Crops	Row (42")	Mineral
Floral Crops		Muck or Peat
Grasses and Turf		
Small Fruits	Overall (Broadcast)	Mineral
Vegetables		Muck or Peat
Ornamentals		
Strawberries	Overall	Mineral
Sugar Beets		
Root-Knot Nematode	Row (42")	
	Overall	Mineral
Sugar Beet Nematode	Row (42")	
	Overall	
Pineapple <sup>a</sup>	Row	Mineral
Citrus - Florida <sup>a</sup>	Overall	Mineral
Nursery and Field <sup>b</sup>	Overall	Gallons Per Acre to
Citrus Fruit Trees		Mineral Soils
Deciduous Fruit Trees <sup>c</sup>		Sand
Forest Trees		Sandy Loam
Grapes		Silt Loam
Nut Trees		Clay Loam
Ornamentals (deep rooted)		

<sup>a</sup> Use the higher rate of 15 gallons per acre. <sup>b</sup> For muck soils, use 15 gallons per acre. <sup>c</sup> For muck soils, use 15 gallons per acre. For organic matter use 10 gallons per acre.

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# II SOIL FUMIGANT

A Clean, Clear, Non-Clogging Liquid for Preplant Treatment of Crop Lands to Control Plant Parasitic Nematodes and Certain Other Soil Pests

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 1/2 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 fumigant 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 plow-sole application, disk 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 fumigation of muck soils.

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

Crops (consult list of individual crops under General Information)	Type of Treatment	Soil Type	Dosage	
			Gallons Per Acre <sup>1</sup>	Fl. Oz. 1000 Ft. Row Per Chisel
Shallow Rooted Plants, Field Crops, Floral Crops, Grasses and Turf, Small Fruits, Vegetables, Ornamentals	Row (42") <sup>2</sup>	Mineral	4.5 to 6	46 to 62
		Muck or Peat	9 to 12	93 to 123
	Overall (Broadcast)	Mineral	9 to 15 <sup>2</sup>	26 to 44
		Muck or Peat	24 <sup>2</sup> to 36	71 to 106
Strawberries	Overall	Mineral	24 to 36	71 to 106
Sugar Beets Root-Knot Nematode	Row (42")	Mineral	6	62
	Overall		12 to 15	35 to 44
Sugar Beet Nematode	Row (42")		9	93
	Overall		12 to 18	35 to 53
Pineapple <sup>4</sup>	Row	Mineral	24 to 36	-
Citrus — Florida <sup>5</sup>	Overall	Mineral	36	106
Nursery and Field <sup>3</sup> Citrus Fruit Trees Deciduous Fruit Trees <sup>6</sup> Forest Trees Grapes Nut Trees Ornamentals (deep rooted)	Overall Gallons Per Acre to Penetrate Various Depths			
	Mineral Soils	3 ft	4 ft	6 ft
	Sand	15	21	33
	Sandy Loam	27	30	48
	Silt Loam	42	51	75
Clay Loam	54	69	102	

<sup>1</sup>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 ft. row per chisel).  
<sup>3</sup>For muck soils containing less than 30% organic matter use 18 gallons per acre.

<sup>4</sup>For Hawaiian pineapple, application may be made at time of or just before planting.  
<sup>5</sup>For burrowing nematode in citrus, inject on 18 inch centers, 12 inches deep. Keep trees of plants susceptible to burrowing nematodes for 2 years before replanting to citrus.  
<sup>6</sup>Row treatment is not recommended for potatoes in irrigated areas of western and northwestern states.  
<sup>7</sup>Tree planting sites prepared by backhoeing may be treated by pouring 2 1/2 fl. oz. of TELONE II into the hole during backhoeing. For best results prepare and treat sites in the fall and plant in the spring.  
<sup>8</sup>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 fl. oz. 1000 ft. row per chisel) preferably in the fall when the soil is warm (50-85 F. at 6 inch depth) and moist. Inject the fumigant 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>9</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 25	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 fumigant 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.

## USE PRECAUTIONS

**Important — Note Carefully.** Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and fumigant 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 fumigation. To avoid ammonia injury or nitrogen starvation or both, to crops on high organic soils do not use fertilizers containing ammonium salts and use only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 55 F.

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 fumigation may stimulate nitrification and reduce the possibility of ammonia toxicity. Certain nursery crops such as citrus seedlings, *Cornus* sp., *Crataegus* sp., spruce, and vegetable crops such as cauliflower have shown evidence of phosphorus deficiency following fumigation. 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 fumigant 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 in a cool place away from dwellings. If outside storage, store drums on their sides to avoid accumulation of rain water in the top or bottom recessed areas.

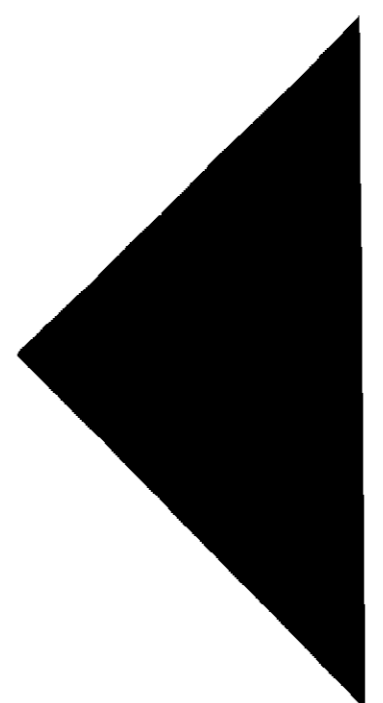
Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals. Do not contaminate food, feedstuffs, or domestic water supplies.

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.

Use this product only as specified on this label.

**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 reasonably foreseeable to seller, and buyer assumes the risk of any such use.



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# TELONE II FUMIGANT

FLAMMABLE  
LIQUID  
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**Clear, Non-Clogging Liquid for Preplant Treatment of Crop  
Control Plant Parasitic Nematodes and Certain Other Soil Pests**

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Dosage	
	Fl. Oz. 1000 Ft. Row Per Chisel
1	46 to 62
2	93 to 123
3	26 to 44
4	71 to 106
5	71 to 106
	62
5	35 to 44
	93
8	35 to 53
	106
Soil Varieties and Depths	
	6 ft.
	33
	48
	75
	102

- \*For Hawaiian pineapple application may be made at time of or just before planting.
- \*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.
- \*Row treatment is not recommended for potatoes 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 fl. oz. 1000 ft. row per chisel) preferably in the fall when the soil is warm (50-85 F at 6-inch depth) and moist. Inject the fumigant 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.
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**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, a fumigant, 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 in 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.

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Distributed By:

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