ENDOSULFAN 50 WP INSECTICIDE

ACTIVE INGREDIENT: Endosulfan (Hexachlorohexahydrome --thano-2,4,3 - benzodioxathiepin oxide) **50% INERT INGREDIENTS: 50%** 100% TOTAL ACCEPTED EPA REG. NO. 2749-241 9-29-72 NET WEIGHT 50 LBS. UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND ROLENTICIDE ACT WARNING: KEEP OUT OF REACH OF CHILDREN AND WARNING PORTEGISTER TO THE BOMMENTS.

HAZARDOUS IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. DO NOT BREATHE DUST OR SPRAY MIST. DO NOT GETIN EYES, ON SKIN, OR ON CLOTHING. IN CASE OF CONTACT, IMMEDI-ATELY REMOVE CONTAMINATED CLOTHING AND FLUSH SKIN OR EYES WITH PLENTY OF WATER. FOR EYES GET MEDICAL ATTEN-TION. WASH THOROUGHLY WITH SOAP AND WATER AFTER HAND-LING AND BEFORE EATING OR SMOKING. WEAR CLEAN CLOTHING. DURING COMMERCIAL OR PROLONGED EXPOSURE IN SPRAY-MIXING AND LOADING OPERATIONS, WEAR CLEAN SYNTHETIC RUBBER GLOVES AND A MASK OR RESPIRATOR OF A TYPE PASS-ED BY THE U.S. BUREAU OF MINES FOR ENDOSULFAN PROTEC-TION. DO NOT APPLY OR ALLOW TO DRIFT TO AREAS OCCUPIED BY UNPROTECTED HUMANS OR BENEFICIAL ANIMALS.

WORKERS ENTERING TREATED FIELDS WITHIN 24 HOURS AFTER APPLICATION SHOULD WEAR PROTECTIVE CLOTHING.

NOTE TO PHYSICIAN: ENDOSULFAN 50 WP IS A CENTRAL NER-**VOUS SYSTEM STIMULANT AND MAY CAUSE CONVULSIONS. THERE** IS NO SPECIFIC ANTIDOTE. BARBITURIC ACID DERIVATIVES MAY **BE USED IN TREATMENT.**

THIS PRODUCT IS TOXIC TO FISH AND WILDLIFE. KEEP OUT OF ANY BODY OF WATER. BIRDS FEEDING ON TREATED AREAS MAY BE KILLED. APPLY THIS PRODUCT ONLY AS SPECIFIED ON THIS LABEL.

DO NOT APPLY WHERE RUNOFF IS LIKELY TO OCCUR. DO NOT CONTAMINATE WATER BY CLEANING OF EQUIPMENT OR DISPOSAL OF WASTES. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT FROM AREAS TREATED.

THIS PRODUCT IS TOXIC TO BEES AND SHOULD NOT BE APPLIED WHEN BEES ARE ACTIVELY VISITING THE AREA.

DISPOSE OF WASTES BY BURYING IN NON-CROP LANDS AWAY FROM WATER SUPPLIES. CONTAINER SHOULD BE DISPOSED OF BY BURYING WITH WASTES OR BY BURNING. KEEP OUT OF SMOKE.

DIRECTIONS FOR USE:

NOT FOR USE OR STORAGE IN OR AROUND THE HOME

Apply the listed amount per acre when insects first appear and repeat as required to maintain effective control. Use in sufficient water for thorough coverage, unless otherwise noted for listed crops. Coverage of upper and lower leaf surfaces is essential for good control. Observe use limitations. If insect control is required beyond the following use patterns, supplement the control program with other suitable pesticides. Observe days interval between last application and harvest indicated by number in () following the crop.

<u>APPLES</u> (30): <u>Apple Rust Mite</u>, <u>Woolly Apple Aphid</u> – Use 1 lb. per 100 gals.; 8 lbs. per acre. DO NOT EXCEED 2 applications during the fruiting period. <u>Apple Aphid</u>, <u>Rosy</u> <u>Apple Aphid</u> – Use 1 lb. per 100 gals.; 4-5 lbs. per acre. No limitations on number of application. DO NOT FEED pomace from treated apples to livestock.

<u>APPLES</u> (21): <u>Apple Aphid</u>, <u>Rosy Apply Aphid</u> — Use 1 lb. per 100 gals., 4-5 lbs. per acre. If necessary may use 1½ lbs. per 100 gals. rate prior to petal fall. DO NOT EX-CEED 3 applications during the fruiting period. DO NOT FEED pomace from treated apples to livestock.

<u>APRICOTS</u> (30), <u>NECTARINES</u> (30), <u>PEACHES</u> (30): <u>Catfacing Insects</u> (Stink Bug Type), <u>Green Peach Aphid</u>, <u>Black Cherry Aphid</u>, <u>Black Peach Aphid</u>, <u>Rusty Plum Aphid</u>, <u>Perch Twig Borer</u> – Use 1 lb. per 100 gals. 4-5 lbs. per acre. <u>Peach Silver Mite</u> – Use ½ lb. per 100 gals. <u>Lesser Peach Tree Borer</u> – Use 1½ lbs. per 100 gals. DO NOT EXCEED 2 applications during the fruiting period. For lesser Peach Tree Borer control, through wetting of trunks and main branches is important.

APRICOTS (21), <u>NECTARINES</u> (21), <u>PEACHES</u> (21): <u>Peach Tree Borer</u> – Use 1½ lbs. per 100 gals. Spray all bark areas from ground level to scaffold limbs as required to maintain effective control. 3

<u>CHERRIES</u> (21): <u>Black Cherry Aphid</u>, <u>Plum Rust</u> (Nursery Mite) – Use 1 lb. per 100 gals. 4-5 lbs. per acre. <u>Peach Tree Borer</u> – Use 1½ lbs. per 100 gals. Spray all bark areas from ground level to scaffold limbs. Time applications with moth flight. Lesser Peach Tree Borer – Use 1½ lbs. per 100 gals. 4-5 lbs. per acre. Thorough wetting of trunks and main branches is important. DO NOT EXCEED 2 applications after shuck is split.

<u>CHERRIES</u> (Michigan only): <u>Mineola Moth</u> – Use 2 lbs. per 100 gals. Apply in delayed dormant period.

<u>CHERRY, PEACH, PLUM, NURSERY STOCK</u>: Peach Tree Borer — Use 4 lbs. per 40 gals. of water. Mix thoroughly. Wear rubber gloves during dipping operation. Immerse trees so that roots and crowns are covered well above grafting bud scar. Plant immediately or dry before returning stock to storage.

CITRUS, NURSERY AND NON BEARING STOCK: Citrus Aphid -- Use ½ lb. per 100 gals., 5 lbs. per acre. DO NOT APPLY to bearing trees or to trees that will bear fruit within 12 months.

PLUMS (7), PRUMES (7): Peach Tree Borer, Lesser Tree Borer – Use 1½ lbs. per 100 gals. 4-5 lbs. per acre. Spray all bark areas from ground level to scaffold limbs as required to maintain control. For control of Lesser Peach Tree Borer, apply thoroughly to trunk and main branches. Hop Aphid, Leaf Curl Plum Aphid, Thistle Aphid – Use 1 lb. per 100 gals. 4-5 lbs. per acre. Apply when eggs hatch during prebloom or petal fall. Summer applications should be made before leaves curl.

<u>GRAPES</u> (7): Grape Leafhopper, Rose Chafer — Use 1 lb. per 100 gals. 2-3 lbs. per acre. Do not use on Concord variety of grapes as severe injury is likely to occur.

PEARS (7): Consperse Stink Bug, Pear Rust Mite – Use 1 ib. per 100 gals. 4-5 lbs. per acre. DO NOT EXCEED 2 applications during the fruiting period. Stink Rugs must be wet by spray to obtain control. Pear Psylla – Use 1½ lbs. per 100 gals, b ibs. per acre. To control second generation apply when nymphs are small and repeat in 7-10 days, if necessary. DO NOT EXCEED 2 applications during the fruiting period. Pear Leaf Blister Mite – Use ½ to 1 lb. per 100 gals. of water. Apply as a post-harvest or dormant treatment. <u>STRAWBERRIES</u> (4) Tarnished Plant Bug, Meadow Splittlebug, Strawperry Aphid – Use 2 lbs. per acre. Do not re-apply within 15 days or more than twice during any 35-day period when fruit is present. Cyclamen Mite – Use 1 lb. per 100 gals. 4 lbs. per acre. Apply 400 gals. of spray per acre to thoroughly wet the stem and crowns of the plant. For multiple applications, DO NOT APPLY at intervals less than 35 days during the fruiting period.

BEANS (SUCCULENT & DRY) (SOUTHERN FIELD PEAS) (3) Black Bean Aphid, Bean Leaf Skeletonizer, Cucumber Beetles, Green Stink Bug, Mexican Bean Beetle, Cowpea Curculio – Use 1-2 lbs. per acre. Do not exceed three applications per season. Do not feed treated threshings to livestock or allow to graze in treated fields. Do not use on Lima Beans that are to be removed from the field for processing. For control of cowpea curculio make 3 applications at 5-day intervals starting when the pods are ½ inch long.

BROCCOLI (7), CABBAGE (7), BRUSSELS SPROUTS (14), CAULIFLOWER (14) – Cabbage Aphid, Cabbage Looper, Imported Cabbage Worm, Diamondback Moth Larvae, Cross-stripped Cabbage Worm, Flea Beetles, Harlequin Bugs, Stink Bugs – Use 2 lbs. per acre.

CARROTS (7): Green Peach Aphid – Use 1 or 2 lbs. per acre. Do not use tops for food or feed. Do not exceed 2 applications.

CELERY (4): Green Peach Aphid, Cabbage Looper – Use 1 to 2 lbs. per acre. Do not exceed 3 applications OR (7) Green Peach Aphid – Use 1 lb. per acre. Unlimited number of applications.

COLLARDS (21): Cabbage Looper, Diamondback Moth Larvae, Harlequin Bug, Imported Cabbage Worm – Use 1½ lbs. per acre. Do not exceed one application.

COTTON: Cotton Leaf Perforator – Use 2 lbs. per acre. Do not apply after bolls open. Do not graze meat or dairy animals in treated fields. Do not plant root crops other than carrots, potatoes, and sweet potatoes as follow-up crops.

CUCUMBERS (0), MELONS (0), SUMMER & WINTER SOUASH (0): Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm (on watermelons), Squash Beetle, Squash Bug, Squash Vine Borer – Use 1 to 2 lbs. per acre. For Vine Borer control, apply weekly to flowerbuds, stems and vines beginning when moths first appear. For Cabbage Looper and Omnivorous Leaf Roller on Melons, use 2 lbs. per acre.

EGGPLANTS (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly – Use 1 lb. per acre.

KALE (21): Cabbage Flea Beetle, Imported Cabbage Worm, Harlequin Bug – Use 1½ lbs. per acre. DO NOT EXCEED one application.

LETTUCE (14) Cabbage Looper, Diamondback Moth Larvae, Green Peach Aphid, Imported Cabbage Worm – Use 2 lbs. per acre. On Head Letterce, do not exceed 3 applications after thinning. Remove wrapper leaves at harvest. Do not feed crop refuse to livestock. On Leaf Lettuce, do not exceed 2 applications per season.

MUSTARD GREENS (21), TURNIP GREENS (21); Aphids, Cabbage Looper, Imported Cabbage Worm – Use 1½ lbs. per acre. Do not exceed one application.

PEAS (SUCCULENT (0): Pea Aphid, Pea Weevil – Use 1-2 lbs. per acre. Do not exceed 2 applications during the fruiting period. Use only on peas to be harvested by combine. Do not feed treated vines to livestock or allow to graze in treated fields.

PEPPERS (4)* Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggoi - Use 1 to 2 lbs. per acre. *1 day if no more than 1 lb. per acre is used.

POTATOES (0): Aphids, Colorado Potato Beetle, Green Stink Bug, Leaf-footed Bug, Potato Flea Beetle, Potato Leafhopper, Potato Tuberworm, Southern Armyworm, Whitefly – Use 1 to 2 lbs. per acre. European Corn Bore:, Potato Psyllid – Use 1½ to 2 lbs. per acre. False Chinch Bug - Use 2 lbs. per acre. Threelined Potato Beetle – Use 1 lb. per acre. Do not plant root crops other than carrots, potatoes, and sweet potatoes as follow-up crops.



1

PUMPKINS (0): Aphids, Cucumber Beetle, Squash Vine Borer - Use 1 to 2 los. per acre. For vine borer, apply weekly to flower buds, stems and vines beginning when moths first appear.

SAFFLOWER: Green Peach Aphid -- Use 2 lbs. per arre. Do not apply after flower heads open.

SPINACH (21): Green Peach Aphid, Crown Mite - Use 1½ lbs. per acre. Do not exceed one application.

SUNFLOWER (0): Sunflower Moth -- Use 2 lbs. per acre. Do not exceed three applications. Make the first application at the onset of bloom and make two more applications at 4 to 7 day intervals. Do not feed treated forage to livestock.

SWEET POTATOES (South Central Sterus Only): Banded Cucumber Beetle larvae (aids in control of) - Apply 2-4 lbs. per acre broadcast, or 2/3 to 1-1/3 lbs. per acre in a 16" band over the row (48" spacing). Work into the soil to a depth of approximately 3". A single treatment should be made just prior to plant set. Do not feed treated potatoes to livestock.

TOBACCO, TOBACCO SEED, FIELD, PLANT BED TOBACCO (5): Budworm, Cabbage Looper, Flea Beetle, Green Peach Aphid, Hornworm - SEED BED: Use 1 lb. per 100 gals. Apply about 6 gallons of finished spray per 100 square yds. FIELD: Use 1-2 lbs. per acre to control above insects. For Stink Bugs - Use 2 to 3 lbs. per 100 gals. PLANT BED: Green June Bug Larvae - Use 1/2 lb. per 100 gals. drenching at rate of 1 gal. per sq. yd.

TOMATOES (FIELD AND GREENHOUSE) (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid - Use 1 lb. per acre. Hornworm - Use 1 to 2 lbs. per acre. Tomato fruitworm. Yellow-stripped Armyworm - Use 2 lbs. per acre. Cabbage Looper, Stink Bugs - Use 11/2 to 2 lbs. per acre. Whitefly - Use 1 lb. per 100 gals., 100-200 gals, per acre.

FILBERTS (0): Filbert Aphid - Use 1 lb. per 100 gals. or 3-4 lbs. per acre. Filbert Leafroller - Use 3-4 lbs. per acre. Do not graze livestock in treated groves. Do not apply more than 4 lbs. per acre.

MACADAMIA NUT (0): Southern Green Stink Bug - Use 2 lbs. per 100 gals. Do not graze livestock in treated groves. Do not apply more than 30 lbs, per acre.

PECANS: Black Pecan Aphid, Pecan Nut Casebearer, Spittlebug -- Use 1% lbs. per 100 gals. Do not apply after shuck split. Do not graze livestock ir. treated groves. Do not apply apply more than 20 lbs. per acre.

WALNUT: Walnut Aphid - Use 3-4 lbs. per acre. Do nc. apply after husk split. Do not graze livestock in treated groves.

DOGWOOD, LILACS: Dogwood Borer, Lilac Borer - Use 1 to 2 lbs. per 100 gals. Apply in early June and repeat in 10-14 days. Drench all bark areas down to the ground level.

LEATHERLEAF FERN: Leatherleaf Fern Borer - Use 1 lb. per 100 gals. Begin treatment when first larvae is feeding in the mid-vein area at the base of the leaflets. Repeat at intervals of 2-3 weeks as necessary.

ORNAMENTALS (greenhouse and out-of-doors): Aphid, Cyclamen Mite, Rose Chafer, Whitefly - Use 1 lb. per 100 gals. On Chrysanthemums, best results will be obtained if applied before plant flowers. DO NOT USE ON BIRCH TREES. In greenhouse, wear mask or respirator approved by the U.S. Bureau of Mines for ENDOSULFAN protection.

May cause injury on bonnafon de luxe and certain other varietics of chrysantheniums.

TAXUS: Taxus Bud Mite - Use 1 lb. per 100 gals. Apply 3-5 applications beginning in mid-May. Spray foliage twigs and bark. Black Vine Weevil - Use 2 lbs. per 100 gals. Spray thoroughly and drench soil under plants. Apply when weevils first appear. Repeat in 14 days.



AGRICULTURAL CHEMICALS DIVISION

