



2,4-D BUTYL ESTER WEED KILLER

INGREDIENTS

ACTIVE INGREDIENTS:

Butyl ester of 2,4-dichlorophenoxyacetic acid* 56.5%

INERT INGREDIENTS 43.5%

Total 100.0%

*Equivalent to 45% 2,4-dichlorophenoxyacetic acid.

CONTAINS 4 POUNDS 2,4-D ACID EQUIVALENT PER GALLON.

CAUTION

KEEP OUT OF REACH OF CHILDREN

See Remainder of CAUTION Statement on Side Panel

EPA Reg. No. 1386-90

EPA Est. No. 228-IL-1

Net Volume

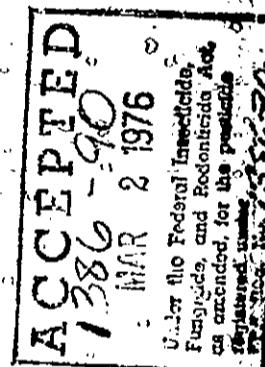
FC-247X-B-78

1 U.S. Gallon Liquid

PROD. 110

MANUFACTURED FOR

UNIVERSAL COOPERATIVES, INC., ALLIANCE, OHIO 44601



HARVEST
EVERYTHING
FERTILIZER
SEED
NOT STORE OR USE

Considerable care
sprays to avoid in-
net spray, direct
treats, chemicals
are additive to 2,4-D
drift onto them can
cause injury. Care
from this product
immediate vicinity
as best. A single
damaged, and/or
Do not consider
domestic and other
of 2,4-D and in
germination and

This product is
or pack.

Apply only for
in this label. Do not
drift of spray in
runoff, may occur
application equipment
and unused chemi-
cals from water supply

DESTROY EMP-
tainer for any pre-
viously prepared
water supplies, es-
pecially metal, punch-
holes of these
crushed containers
away from water
tainers.

Use only for
limitations, cau-

UNICO 2,4-D Butyl Ester Weed Killer

DIRECTIONS FOR USE

UNICO 2,4-D Butyl Ester Weed Killer should be used as a direct spray for selective control of susceptible weeds in small grain crops, corn, sorghum, established grasses, lawns and turf, or for non-selective control of certain weeds and in crops, such as roadsides, fence rows, and shrubland areas.

Apply UNICO 2,4-D Butyl Ester Weed Killer when intra-weeds are young and are in sufficiently densely growing conditions best results are obtained when soil moisture and temperature conditions are favorable for rapid growth of weed plants applied when weeds have stopped growing rapidly, or when they are affected by a lack of moisture in the soil, are not effective against any kinds of weeds. Spray perennial weeds after they are completely regreened, but before the bloom kill or weed may not be evident for 2 to 3 weeks after spraying. Regreening of areas treated with perennial weeds is necessary.

SMALL GRAIN CROPS (Wheat, Oats, Barley, Rye)-Use 1/2 pint per acre to 1000 gallons, or 1 gallon per acre to control susceptible broadleaved weeds, such as mustard, ragweed, lamb's-quarters, chickweed, pigweed, bindweed, and other annual weeds, wild radish, buckwheat, bell mustard, docks, dandelion, thistle, etc., and annual grasses. Apply to young plants which are well filled (usually 4 to 8 inches tall), but outside the boot stage. Do not apply during seedling stage, late in spring, or after heading begins. Do not use on grain interplanted with legumes, unless appreciable injury to the legume can be tolerated.

Do not forage or graze treated grain field within 14 days after treatment. Do not eat treated straw if harvested.

SORGHUM-Use UNICO 2,4-D Butyl Ester at the rate of 1/2 to 1 pint per acre on plants 6 to 12 inches high when their roots are well-established. Use drop nozzles when crop is over 10 inches high.

CORN-For pre-emergence treatment, use 1 to 4 pints per acre applied to the soil after planting, but before emergence of seedlings, to control annual grasses and broadleaved weeds, such as ragweed, foxtail, redroot, lamb's-quarters, chickweed, and other annual weeds. Do not use on sandy soil. Use lower rate of application on loam soils and higher rate on clay soils. Injury is more likely to occur if heavy rain closely follows application. Deep plowing of corn may provide some protection against damage.

For post-emergence treatment, use 1/2 pint (8 fluid ounces) per acre, or 1 gallon per 10 acres, to control susceptible leafy weeds, such as ragweed, lamb's-quarters, morning glory, lambsquarters, cocklebur, and pigweed, which are under control when the broadleaved weeds are more susceptible to control than at earlier or later stages. Avoid direct spraying of broadleaved weeds in corn 10 inches or more tall; use spray nozzles to keep spray off corn leaves. Avoid spraying immediately after a hot, moist weather. Injury to corn may occur when hot, dry weather closely follows treatment. Avoid cultivation during 10 days after spraying to reduce possibility of straw breakage. Do not apply from零售ing to the dough stage, hybrid corn is sprayed only if the cross or line is known to be tolerant to 2,4-D or the recommended dose, or after sprouting has started particular crosses or lines being grown to be tolerant to 2,4-D treatment.

ESTABLISHED GRASSES, GOLF FAIRWAYS AND PARKS-Use 1/2 to 1 pint per acre applied as a spray when grasses are 6 to 12 inches tall, but before reaching the boot stage, to control most susceptible broadleaved weeds. Do not apply to bent and crested grasses.

To control wild garlic and wild onion, two applications each year for 2 or more years are usually required. One application should be made during the fall period, October to December, and the other during the period February to May. This treatment is likely to cause injury to legumes interplanted with grass.

ROADSIDES, FENCE ROWS AND DRAINAGE DITCHBANKS-Use 1/2 to 1 pint per acre to control susceptible broadleaved weeds on unseeded areas, and apply during early stage of growth. It is necessary to maintain soil moisture. Application by knapsack sprayer may be made by using 1 to 2 teaspoonsfuls per gallon of water, except spray at rate of 30 gallons per acre.

To control certain broadleaved weeds, such as Johnsonweed, prickly lettuce, bindweed, poison ivy, shepherd's purse, chickweed, buttercup, wild carrot, docks, pokeweed, common mullein, etc., etc., control usually requires a considerably higher rate than is recommended for growing crops. Tolerant varieties should be controlled in vegetated areas or areas by 4 to 5 pints per acre (1 to 1½ tablespoonsfuls per gallon of water per square yard, when the plants are young and growing).

PREPARATION OF SPRAY AND APPLICATION-Always quantities of UNICO 2,4-D Butyl Ester Weed Killer should be added to water in the spray tank at time of application. Agitate or stir to assure a good mixture. If certain seeds are to be sown, the quantity of spray solution to make up will depend upon the amount to be sown. When using a low volume power sprayer, proper dosage should be applied in at least 5 gallons of water per acre. Always use the proper amount of UNICO 2,4-D per unit area in 15-40 gallons of water per acre.

SMALL QUANTITIES-For mixing and applying small quantities, use the following conversion:

Amount per 1,000 Sq. Ft.
1/2 Pint
1 Pint
2 Pints

1/2 Teaspoonful
1/4 Teaspoonful

The dosage rates applied with low-volume power sprayers in 15 gallons of water per acre may usually be applied by hand or knapsack sprayers in 3 to 4 gallons of water per 1,000 square feet.

CLEANING OF SPRAY EQUIPMENT-It is almost impossible to remove residues of 2,4-D from sprayers and spray equipment parts easily from non-metallic parts (wood, rubber, plastic, fiber glass, etc.). The same treatment for application materials to plants is effective.

UNICO 2,4-D Butyl Ester Weed Killer

DIRECTIONS FOR USE

UNICO 2,4-D Butyl Ester Weed killer should be used as directed below for selective control of susceptible weeds growing in small grain crops, corn, sorghum, established grasses, lawns and pastures, etc. It does not have control of certain weeds, not in growing crops, such as roadides, fence rows, and drainage ditches.

Apply UNICO 2,4-D Butyl Ester Weed Killer when the weeds are young and are succulent, in dry growing condition, since best results are obtained when soil moisture and temperature conditions are favorable for rapid growth of weed plants. Spray applied when weeds have stopped growing rapidly, or when they are affected by a lack of sunlight in the sun, are often not effective against many kinds of weeds. Spray perennial weeds after they are completely emerged but before the bloom stage. Kill of weeds may not be evident for 2 to 3 weeks after spraying. Reapplication of areas where 2 to 3 week perennial weeds may be necessary.

SMALL GRAIN CROPS (Wheat, Oats, Barley, Rye)—Use ½ pint per acre (D 1-2 ounces), or 1 gallon on 16 acres, to control susceptible broadleaved weeds, such as mustard, ragweed, lamb's-quarters, cocklebur, bindweed, morning glory (Ipomoea), hairy bindweed, field bindweed, wild radish, buckhorn, bull thistle, burdock, plantain, etc., and others, as soon as they appear in the spring after grain plants are well established (usually 4 to 8 inches tall), but before the seed heads begin to form, during heading, flowering stage, or when ripe, or after heading begins. Do not use on grain interplanted with corn, unless previous injury to the legume crop can be tolerated.

Do not graze or allow treated grass to lie within 14 days after treatment of the pastures treated areas in livestock.

SORGHUM—Use UNICO 2,4-D Butyl Ester at the rate of .25 lb. 1 gallon per acre on plants 6 to 12 inches high when secondary roots are well established. Use drop nozzles when crop is 10 inches high.

CORN—For pre-emergence treatment, use 2 to 4 pints per acre applied to the soil after planting, but before emergence of corn seedlings, to control annual grasses and broadleaved weeds, such as ragweeds, textile, ragweed, common lambsquarters, cocklebur, and pigweed. DO NOT use on sandy soil. Use lower rate of application on loam soils and higher rate on clay soils. Injury to corn is likely to occur if heavy rain closely follows application. Do not plant corn until at least 5 days after application.

For post-emergence treatment, use 1/2 pint (8 fluid ounces) per acre, or 1 gallon in 16 acres, to control smoothbrome broad-leaved weeds, such as soweed, leafy spurge, morning glory (annual), common chickweed, and broadleaf bindweed. Apply when weeds are up, but still small, and when it is 4 to 10 inches tall. Look at 4 to 5-1/2 foot stage of maize, or when 10 to 12 inches tall, and the broadleaved weeds are more susceptible to control than at earlier or later stages. Avoid direct spraying at growing point of corn. In corn 10 inches or more tall, use drop nozzles to keep spray off corn leaves. Avoid spraying immediately after a period of hot, moist weather; injury to corn may occur when hot, dry weather closely follows treatment. Avoid application for 10 to 12 days after spraying to reduce possibility of stalk breakage. Do not apply from roadside to the edge of a field. Hybrid corn should be sprayed only if the cross or line is known to be tolerant to 2,4-D at the recommended dosage, or if its experience has shown that particular crosses or lines being grown are tolerant to 2,4-D treatment.

ESTABLISHED GRASSES, GOLF FAIRWAYS AND PARKS-Use 1 to 1½ pints per acre applied as a spray after grasses are well established, but before reaching the boot stage, to control most susceptible broadleaved weeds. Do not apply in the seedling or heading stages. Do not apply to bent and ryegrass grasses.

To control wild garlic and wild onion, two applications each year for 2 or more years is usually required. One application should be made during the fall period, October to December, and the other during the period, February to May.

ROADSIDES, FENCE ROWS AND MAINTAINAGE DITCHBANKS—Use $1\frac{1}{2}$ to 2 pounds per acre to control susceptible broadleaf weeds on unplanted areas, and apply during early stage of growth. Repeat as necessary to keep them control. Application by hand or knapsack sprayer may be made by using 1 to 2 teaspoonsfuls per gallon of water, spray evenly at rate of 1 gallon per square yard.

PREPARATION OF SPRAY AND APPLICATION—Above quantities of UNICO 24 D Fungicidal Water Killer should be added to water in the spray tank at time of application. Agitate or stir to assure a uniform mixture, and continue same operation during application. The quantity of spray solution to make up will depend upon the conditions to be treated, and the UNICO 24 D Fungicidal Water Killer should be applied at the rate of 4 to 5 pints per acre (1 to 1½ tablespoonsfuls per gallon of wintergreen oil).

proper dosage should be applied in at least .5 gallons of water per acre. Always use the proper amount of water per unit area in 15-40 gallons of water per acre.

QUANTITIES--For mixing and applying small quantities, use the following equivalents:	
Dosage Per Acre	Amount per 1,000 Sq. Ft.
1/2 Pint	1-1/2 Teaspoonsful
1 Pint	3-1/2 Teaspoonsful
2 Pints	7-1/2 Teaspoonsful
3 Pints	11-1/2 Teaspoonsful

The dosage rates applied with lowvolume power sprayers in 15 gallons of water per acre may usually be applied by means of hand or knockdown sprayers in 3 to 4 gallons of water per 1,000 sq. ft.

CLEANING OF SPRAY EQUIPMENT—It is almost impossible to remove residues of 2,4,D from sprayers and spray equipment particularly from non-metallic parts (wood, rubber, fibreglass) and it is best to use this as so the spray equipment for applying oil.

NOTIC

Use only for the purpose and
cautions or warnings stated on this label.

UNICO

INSTRUCTIONS FOR USE

DO NOT SPRAY ON:

Small grain crops, wheat, oats, barley, rye, corn, soybeans, cotton, tobacco, and other fruit trees and shrubs. If weeds have been sprayed on the lawn, do not spray again until 10 days later or until new growth is necessary.

SMALL GRAIN CROPS: WHEAT, OATS, BARLEY, RYE, CORN, SOYBEANS, COTTON, TOBACCO, AND OTHER FRUIT TREES AND SHRUBS.

DO NOT SPRAY ON:

FRUIT TREES AND SHRUBS: DO NOT SPRAY ON PLUMS, CHERRIES, OR PEARS. DO NOT SPRAY ON APPLES, BANANAS, COCONUTS, GUAVAS, LIMONS, MANGOES, MELONS, OR PINEAPPLES. DO NOT SPRAY ON CITRUS FRUIT TREES.

DO NOT SPRAY ON:

CORN: DO NOT SPRAY ON CORN. DO NOT SPRAY ON CORN IF IT HAS BEEN PLANTED IN A FIELD WHERE IT WAS PREVIOUSLY SPRAYED WITH 2,4-D. DO NOT SPRAY ON CORN IF IT HAS BEEN PLANTED IN A FIELD WHERE IT WAS PREVIOUSLY SPRAYED WITH 2,4-D.

DO NOT SPRAY ON:

PLUMS, CHERRIES, OR PEARS: DO NOT SPRAY ON PLUMS, CHERRIES, OR PEARS. DO NOT SPRAY ON APPLES, BANANAS, COCONUTS, GUAVAS, LIMONS, MANGOES, MELONS, OR PINEAPPLES. DO NOT SPRAY ON CITRUS FRUIT TREES.

AVOID SPRAYING ON PLANTS THAT ARE SENSITIVE TO 2,4-D. AVOID SPRAYING ON PLANTS THAT ARE SENSITIVE TO 2,4-D. AVOID SPRAYING ON PLANTS THAT ARE SENSITIVE TO 2,4-D. AVOID SPRAYING ON PLANTS THAT ARE SENSITIVE TO 2,4-D.

DO NOT SPRAY ON:

PLUMS, CHERRIES, OR PEARS: DO NOT SPRAY ON PLUMS, CHERRIES, OR PEARS. DO NOT SPRAY ON APPLES, BANANAS, COCONUTS, GUAVAS, LIMONS, MANGOES, MELONS, OR PINEAPPLES. DO NOT SPRAY ON CITRUS FRUIT TREES.

DO NOT SPRAY ON:

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2,4-D BUTYL ESTER WEED KILLER

INGREDIENTS

ACTIVE INGREDIENTS:

Butyl ester of 2,4-dichlorophenoxyacetic acid* ..

INERT INGREDIENTS

56.5%

43.5%

100.0%

Total

*Equivalent to 45% 2, 4-dichlorophenoxyacetic acid
CONTAINS 4 POUNDS 2,4-D ACID EQUIVALENT PER GALLON

CAUTION

KEEP OUT OF REACH OF CHILDREN

See Remainder of CAUTION Statement on Side Panel

EPA Reg. No. 1386-90

EPA Est. No. 223-11

Net Volume

5 U.S. Gallons Liquid

FC 240C 2-70

PRC 1-10

MANUFACTURED FOR

UNIVERSAL COOPERATIVE, INC., ALLIANCE, OHIO 44601

UNICO

2,4-D BUTYL ESTER WEED KILLER

INGREDIENTS

ACTIVE INGREDIENTS:

Butyl ester of 2,4-dichlorophenoxyacetic acid*	56.5%
INERT INGREDIENTS	43.5%
Total	100.0%

*Equivalent to 45% 2, 4-dichlorophenoxyacetic acid.
CONTAINS 4 POUNDS 2,4-D ACID EQUIVALENT PER GALLON.

CAUTION

KEEP OUT OF REACH OF CHILDREN

See Remainder of CAUTION Statement on Side Panel!

EPA Reg. No. 138690

EPA Est. No. 22811-1

Net Volume

F C - 248C 2-26

5 U.S. Gallons Liquid

PRINTER'S MARK

MANUFACTURED FOR

UNIVERSAL COOPERATIVES, INC., ALLIANCE, OHIO 44601

PREPARATION OF SPRAY AND APPLICATION-Add 1 quart of water to 1 lb. of 2,4-D. After Weed King is added, stir well for 10-15 minutes. The spray tank must be cleaned after each use. Stir to assure a uniform mixture at continual time again before each application. Then add 1 qt. Staywell to each quart of prepared spray. Do not use Staywell longer than 12 hours after spraying. The spray may be applied to a resistant tree or shrub by a bowie knife or by means of a mist of the 2,4-D weed killer as outlined in Table 3, page 8-10.

SMALL QUANTITIES - multiplying and applying small quantities, etc. the following equations.

Dosage Per Acre	Amount Per 1,000 Sq. Ft.
12 lbs.	1.8 lbs. control
1 P. m.	21.4 less powerful
4 lbs.	4.2 less powerful

The coverage rates obtained with 6 volume power sprayers in 15 gallons of water per acre were 100 to 110 feet. Coverage rates of hand or knapsack sprayers in 3 to 4 gallons of water per acre were 100 to 110 feet.

CLEANING OF SPRAY EQUIPMENT It is our opinion, based upon experience, that a 4% solution of sodium hypochlorite will effectively clean most spray equipment. This solution may be prepared by dissolving 1/2 cup of household bleach in one gallon of water.

CAUTION

HARMFUL IF SWALLOWED AND ON CONTACT WITH THE SKIN. DO NOT STORE NEAR FOODS, DRUGS OR COSMETICS. IN CASE OF EYESIGHT LOSS, SEE AN EYE SPECIALIST.

The population of the state increased by 1,122,400 between 1900 and 1910, and the
destructive plants increased from 1,000 to 1,200,000, though, it is true, the increase
in the number of destructive plants was not as great as the increase in the population.
Indeed, the number of destructive plants decreased during the period, but the
decrease was not so great as the increase in the population, so that the per cent
of increase in the number of destructive plants was greater than the per cent
increase in the population.

The following table gives the number of inter-specific hybrids found in each of the 1000 families.

As the first step in the development of the system of analysis, a
series of experiments were conducted to determine the effect of the
various factors on the rate of conversion.

19. The following table gives the results of the experiments made by the author on the effect of the different factors on the rate of absorption of water by the soil.

WOLKE