

Reg # 5905-501

PM-23

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WEED RHAP A-4D

2,4-D AMINE HERBICIDE

ACTIVE INGREDIENT:	BY WT.
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	46.7%
INERT INGREDIENTS:	53.3%
TOTAL	100.0%

Equivalent to 38.8% of 2,4-Dichlorophenoxyacetic acid or 3.8 lb/gal.
Isomer specific by AOAC Method 6.275, 13th Ed, 1980.

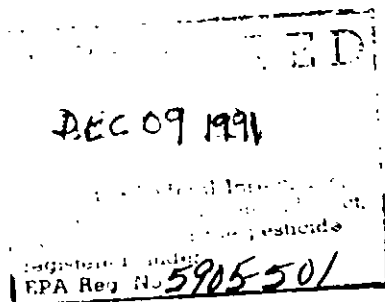
KEEP OUT OF REACH OF CHILDREN

CAUTION - CAUCION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA REG. NO. 5905-501
EPA EST. NO.



NET CONTENTS

MANUFACTURED BY
HELENA CHEMICAL COMPANY
MEMPHIS, TN 38119

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Avoid contact with skin, eyes or clothing. Harmful if swallowed. Avoid inhaling vapor or spray mist. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF SWALLOWED: Call a physician or poison control center. Drink 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

IF INHALED: Move victim to fresh air. Give artificial respiration if needed. Get medical attention.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not apply when weather conditions favor drift from target area. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. Do not contaminate water by cleaning of equipment or disposal of washwaters. This product will kill or seriously injure many desirable forms of vegetation. Do not apply directly to flowers, fruits, vegetables, grapes, ornamentals, cotton or other desirable plants. Do not use when there is hazard from drifting mists. (Coarse sprays are less likely to drift.) Vapors from this product may injure susceptible plants in the immediate vicinity. Avoid contamination of water used for domestic purposes and irrigation purposes. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth.

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water except as specified on this label. Do not contaminate water when disposing of equipment washwaters.

GROUNDWATER CONTAMINATION

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

PROTECTIVE CLOTHING

When handling this product, wear chemical resistant gloves.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

REENTRY STATEMENT

Do not enter treated area without protective clothing until sprays have dried (or, if appropriate, dusts have settled.)

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, periods of time field must be vacated and appropriate actions to take in case of accidental exposure.) When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

CAUTION

Area treated with 2,4-D Amine on (date of application).

Do not enter without appropriate protective clothing until sprays have dried. Refer to Statement of Practical Treatment section of this label in case of accidental exposure.

CHEMIGATION PROHIBITION

Do not apply this product through any type of irrigation system.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Protect from freezing. If stored below 32°F and crystals form, warm to 72°F for 24 hours, periodically rolling drum to reconstitute.

PESTICIDE DISPOSAL:

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate, is a violation of Federal Law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Metal Containers - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic Containers - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Performance of this product may be affected by local condition, crop varieties, and application method. User should consult local extension service, agricultural experiment, or university weed specialists, and state regulatory agencies for recommendations in your area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. Application rates lower than recommended will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the western states, where control is difficult, the higher recommended rates should be used.

When product is used for weed control in crops, the growth stage of the crop must be considered.

Some plants and weeds, especially woody varieties, are difficult to control and may require repeat applications. Application rates should be 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. In either case, use the same amount of 2,4-D recommended per acre. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended on label. To do so may reduce herbicides selectivity and could result in crop damage.

Aerial application should be used only when there is no danger of drift to susceptible crops. Many states have regulations concerning aerial application of 2,4-D formulations. Consult local regulatory authorities before making applications. This product contains the Dimethylamine salt of 2,4-D, one of the least volatile forms of 2,4-D. Vapors released by this product are insufficient to cause damage to adjacent susceptible crops.

Because coarse sprays are less likely to drift than fine, do not use equipment (such as hollow cone small orifice nozzles) or conditions (such as high pressure) that produce such sprays.

Product should not be allowed to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes, and other vegetables. Product should not be used in greenhouses. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

Users should note that herbicide treatment of public water requires a permit from appropriate state agencies in most states. Your state Conservation Department, or Game and Fish Commission will aid you in securing a permit in your state.

If stored below freezing, it may be necessary to warm product to 70°F and agitate before using. This does not affect the efficiency of the product.

Spray equipment used to apply 2,4-D should not be used for any other purpose until thoroughly cleaned with a suitable chemical cleaner.

CROPS:

SMALL GRAINS NOT UNDERSEEDED WITH A LEGUME (BARLEY, OATS, WHEAT, RYE): See table for recommended use rates.

Spray when weeds are small after grain begins tillering but before boot stage (usually 4 to 8 inches tall). Do not apply before the tiller stage nor from early boot through milk stage. To control large weeds that will interfere with harvest or to suppress perennial weeds, preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

Spring Planted Oats: Apply in sufficient water to give good coverage. Apply after the fully tillered stage, except during the boot to dough stage.

Fall Planted Oats: Apply after full tillering but before early boot stage. Some difficult weeds may require higher rates of 1 to 1 1/2 pints per acre for maximum control, but injury may result. Do not spray during or immediately following cold weather.

Note: Oats are less tolerant to 2,4-D than wheat or barley and more likely to be injured. Do not forage or graze treated grain fields within 2 weeks after treatment with 2,4-D. Do not feed treated straw to livestock.

CORN: See table for recommended use rate.

Preemergence: Apply Weed Rhap A-4D from 3 to 5 days after planting but before corn emerges. Do not use on very light, sandy soils. Use the higher rates on heavy soils. Plant corn as deep as practical.

Post Emergence: Best results are usually obtained when weeds are small and corn is 5 to 18 inches tall. When corn is over 8 inches tall, use drop nozzles. Do not apply from tasseling to dough stage. If corn is growing rapidly and temperature and soil moisture content is high, use 1/2 pint per acre rate to reduce possibility of crop damage. Delay cultivation for 8 to 10 days to prevent stalk breakage due to temporary brittleness caused by 2,4-D. Application rates of up to 1 pint/acre may be used to control some hard to control weeds. However, the possibility of injury to the corn is increase.

If corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. Do not use with oil, atrazine, or other adjuvants. Since the tolerance to 2,4-D of individual hybrids varies, consult your local Extension Service, Agricultural Experiment Station, or University Weed Specialist for information.

Pre-Harvest: After the hard dough or denting stage, apply 1 to 2 pints of Weed Rhap A-4D per acre by air or ground equipment to suppress perennial weeds, decrease weed seed production, and control tall weeds such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower, velvetleaf, and vines that interfere with harvesting. Do not forage or feed corn fodder to livestock for 7 days following application.

SORGHUM (Milo): See table for recommended rate. Apply to sorghum when crop is 4 to 12 inches high with secondary roots well established. Use drop nozzles when crop is over 10 inches high. Do not apply from flowering to dough stage. Rates of up to 1 pint per acre may be used to control some hard to control weeds. However, the chance of crop injury is increased with the higher rates. Do not use with oil. Use lower rate if conditions of high temperature and high soil moisture exist.

RICE: See table for recommended rate. Apply the product in sufficient water to cover one acre when weeds are in active growth stage. Rice plants are sensitive to 2,4-D in early stages of growth; therefore, it is advisable to delay spraying until the second or third week after flooding. Water in the field should be shallow enough to permit direct application of the spray material to the weeds. Make all treatments well in advance of heading.

SUGARCANE: See table for recommended rate. Apply as a pre- or post-emergent spray in the spring after canes emerge and through lay-by. Consult local Agricultural Experiment or Extension Service Weed Specialists on specific use of this product, or in combination with Dowpon M, to control broadleaved weeds.

RECOMMENDED RATE OF WEED RHAP A-4D PER ACRE

Dosage Per Acre**

Crop	Normal Rates (usually safe to crop)	Higher rates for Special Situations* (more likely to injure crop)
<i>Small Grains</i>		
Spring Postemergence		
wheat, barley, rye	2/3 to 1-1/3 pints	2 to 3 pints
oats	1/2 to 1 pint	1 1/2 to 2 pints
Preharvest (dough stage)		
wheat, barley, oats	1 to 2 pints	2 to 3 pints
<i>Corn</i>		
Preemergence	2 to 4 pints	
Emergence	1 pint	1 1/2 pints
Postemergence		
up to 8 inches tall	1/2 to 1 pint	
8 inches to tasseling (use only directed spray)	1 pint	1 1/2 to 2 1/2 pints
Preharvest	1 to 2 pints	
<i>Sorghum</i>		
Postemergence		
6 to 8 inches tall	2/3 to 1 pint	
8 to 15 inches tall (use only directed spray)	1 pint	1 1/2 to 2 pints
<i>Rice</i>		
	1 to 2 1/2 pints	2 to 3 pints
<i>Sugarcane</i>		
	2 to 4 pints	

Note: The higher rates as recommended above may be necessary to control difficult weed problems, such as dry conditions in the Western States. They should not be used, however, unless possible crop injury is acceptable. User should consult local Extension Service or Agriculture Experiment Station Weed Specialist for recommendations on special conditions.

*Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming.

**If band treatment is used, base the dosage rate on the actual area sprayed.

ORNAMENTAL TURF: Use 1 to 3 pints of Weed Rhap A-4D in enough water to give good coverage to one acre on established stands of perennial grasses, depending on type of weeds and stage of growth. Do not use on creeping grasses such as Bent except for spot spraying. Newly seeded turf should not be treated until after the second mowing and the lower dosage rate should be used. Keep dairy animals off treated areas for 7 days. Do not cut grass for hay for 30 days after treatment. Do not slaughter for meat animals for 3 days after treatment.

GRASS SEED CROPS: Apply 1 to 4 pints of Weed Rhap A-4D per acre in the Spring or Fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 3/4 to 1 pint per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4 pints per acre can be used to control hard to kill annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth. Do not use on Bent unless injury can be tolerated. Keep dairy animals off treated areas for 7 days. Do not cut grass for hay for 30 days after treatment. Do not slaughter for meat animals for 3 days after treatment.

FALLOW LAND: On established perennial species such as Canada thistle and Field bindweed, apply up to 3 quarts of Weed Rhap A-4D per acre. For annual broadleaf weeds, apply 1 to 2 quarts per acre. Do not plant any crop for 3 months after treatment or until 2,4-D has disappeared from soil.

ESTABLISHED PASTURES AND RANGELANDS: Use 1 to 4 pints of Weed Rhap A-4D in sufficient water to give good coverage to one acre depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Keep dairy animal off treated areas for 7 days. Do not cut grass for hay for 30 days after treatment. Do not slaughter for meat animals for 3 days after treatment.

GENERAL WEED CONTROL: (Airfields, Roadsides, Vacant Lots, Drainage Ditch Banks, Fence Rows, Industrial Sites and similar areas): Use 1 to 3 quarts of Weed Rhap A-4D per acre. Usually 2 quarts per acre will give adequate control. Do not use on herbaceous ground covers or creeping grass such as Bent. Legumes will usually be damaged or killed. Deep-rooted perennials may require repeat applications. Do not use on freshly seeded turf until grass is well established. Delay reseeding for 3 months or until 2,4-D has disappeared from soil.

WOODY PLANT CONTROL: To control woody plants susceptible to 2,4-D, such as alder, buckbrush, elderberry, sumac, and willow on non-crop areas, use 2 to 3 quarts of Weed Rhap A-4D per acre in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of run off. Higher volumes of up to 400 gallons per acre are necessary where the brush is very dense and over 6 to 8 feet high. Applications are more effective when made on actively growing plants. Treatment should not be made during time of severe drought or in early Fall when leaves lose their green color. Hard to control species may require re-treatment next season.

TREE INJECTION: For the control of unwanted hardwoods such as elm, oak, hickory, and sweetgum in forest and other non-crop areas, apply undiluted Weed Rhap A-4D by injecting 1 ml through the bark, using one injection per inch of trunk diameter measured at breast height (4 1/2 feet). For harder to control species (ash, maple, dogwood), use 2 ml of undiluted Weed Rhap A-4D per injection. All injections should be as near the root collar as possible and should be evenly spaced around the trunk. Injections may be made at any time of the year but are most effective during the growing season. Maples should not be treated during the spring sap rise.

AQUATIC APPLICATIONS

WEED AND BRUSH ON IRRIGATION CANAL DITCHBANKS - *Seventeen Western States:* Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming.

For control of annual and perennial broadleaf weeds, apply 1 to 2 quarts of Weed Rhap A-4D per acre in approximately 20 to 100 gallons of total spray. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder to control weeds, a repeat spray may be needed after 3 to 4 weeks for maximum results, using the same rates.

Apply no more than 2 treatments per season. For woody brush and patches of perennial broadleaf weeds, mix one gallon of Weed Rhap A-4D in 150 gallons of water. Wet foliage thoroughly, using approximately 1 gallon of spray solution per square rod.

SPRAYING INSTRUCTIONS: Low pressure (10 to 40 psi) power spray equipment should be used and mounted on a truck, tractor, or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is calm, 5 mph or less. Do not use on small canals (less than 10 CFS) where water will be used for drinking purposes.

Boom spraying onto water surface must be held to a minimum and no cross-stream spraying to opposite banks should be permitted. When spraying shoreline weeds, allow no more than 2-foot overspray onto water with an average of less than one-foot overspray to prevent introduction of greater than negligible amounts of chemical into the water.

Do not allow dairy animals to graze on treated areas for at least 7 days after spraying. Water within treated banks should not be fished.

For Aquatic Weeds in Lakes, Ponds, Drainage Ditches, and Marshes: Use 2 1/2 to 4 1/2 pints of Weed Rhap A-4D in 50 to 100 gallons of water per acre. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed above water line and plants are actively growing. Your State Conservation Department or Game and Fish Commission will assist you in determining the best time and rate for application under local conditions.

DO NOT APPLY to more than 1/3 to 1/2 of a lake or pond in any one month because excessive decaying vegetation may deplete oxygen content of water, and kill fish.

Do not contaminate water used for irrigation or domestic purposes.

Perennial and other hard to control weeds may require a repeat application to give adequate control.

**CONDITIONS OF SALE - LIMITED WARRANTY
AND LIMITATIONS OF LIABILITY AND REMEDIES**

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against the Company exceed the price of the product which causes the alleged loss, damage, injury, or other claim. The Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income.

The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

Spray Preparation: Add the recommended amount of Weed Rhap A-4D to approximately one-half the volume of water to be used for spraying. Agitate well, then add the remainder of the water. Continue agitation during application until spray tank is empty.

Use in Liquid Nitrogen Fertilizer: Weed Rhap A-4D may be combined with liquid nitrogen fertilizer suitable for foliar application of corn, grass, pastures, or small grains in one operation. Use Weed Rhap A-4D according to directions on this label for those crops. Use liquid nitrogen fertilizer at rates recommended by supplier or extension service specialist. Mix the product and fertilizer according to the following instructions:

Fill the spray tank approximately 1/2 full with the liquid nitrogen fertilizer. In a separate container, mix the amount of Weed Rhap A-4D to be used with an equal amount of water. Add Weed Rhap A-4D mixture to the spray tank while agitating. Add the remainder of the fertilizer while continuing to agitate. Apply immediately maintaining agitation during application until tank is empty. DO NOT APPLY DURING COLD (NEAR FREEZING) WEATHER. Spray mixture must be used immediately and may not be stored.

NOTE: Pre-mixing the product with an equal amount of water is important.

WHERE TO USE

This product is used to control broadleaved weeds in cereal crops, corn, sorghum; weeds and brush in rangeland, pastures, rights-of way, and similar noncrop uses; tree injection; and for aquatic weed control.

PLANTS CONTROLLED

Product will kill or control the following in addition to many other noxious plants susceptible to 2,4-D: arrowhead, artichoke, bindweed (hedge, field, and European), bitter wintercress, box elder, buckhorn, bull thistle, bulrush, burdock, bur ragweed, ground ivy, hemp, hoary cress, honeysuckle, indigo, ironweed, jimsonweed, lambsquarters, locoweed, Mexican weed, morningglory, mustard, parrot feather, pennywort, pigweed, plaintain, poison ivy, pokeweed, povertyweed, buttercup, Canada thistle, catnip, chickweed, chickory, cocklebur, coffee bean, creeping jenny, curly indigo, duckweed, elderberry, goldenrod, puncture vine, purslane, rush, Russian thistle, sagebrush, shepherdspurse, smartweed, sow thistle, stinkweed, sumac, sunflower, Virginia creeper, water hyacinth, water lily, water primrose, wild garlic, wild lettuce, wild onion, wild radish, willow, witchweed.