



PM 23 228-145 10814
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

APR 27 1995

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mr. Russel F. Sawyer
Riverdale Chemical Company
425 West 194th Street
Glenwood, IL 60425

Subject: Label Amendment Submission of 04/08/95 in Response to
PR Notice 93-7
EPA Reg. No. 228-145
Riverdale Weedestroy AM-40 Amine Salt

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.

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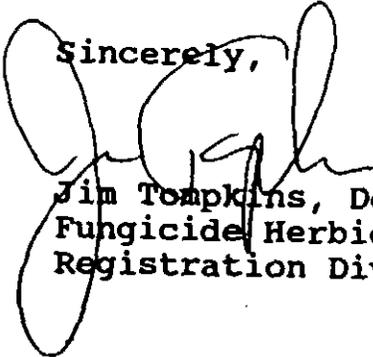
Submit the final printed labeling via the U.S. Postal
Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be
made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Fungicide Herbicide Branch
Registration Division (7505W)

Attachment

Russell F. Sawyer
Riverdale Chemical Company.

Comments for: EPA REG. NO. 228-145 Weedestroy AM-40

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

Add the heading "Personal Protective Equipment" under Precautionary Statements and just before NON-WPS TURF USES.

RIVERDALE

WEDESTROY® AM-40
AMINE SALT

A SELECTIVE WEED KILLER

For Control of Many Broadleaf Weeds in both Non-Crop Areas and Certain Crop Areas, Lawns, Ponds, Ditchbanks, Pastures, and Rangelands. Also for Control of Trees by Injection.

ACTIVE INGREDIENT:

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid*	47.3%
INERT INGREDIENTS:	52.7%
TOTAL	100.0%

Isomer Specific AOAC Method, Equivalent to:

*2,4-Dichlorophenoxyacetic Acid 39.3%, 3.8 lbs./gal.

Weedestroy® - Registered Trademark of Riverdale Chemical Co.

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que
se la explique a usted en detalle.
(If you do not understand label, find someone
to explain it to you in detail.)

**SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS
AND STATEMENT OF PRACTICAL TREATMENT**

NET CONTENTS GALS.

EPA REG. NO. 228-145

EPA EST. NO. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

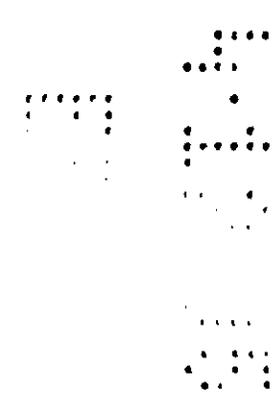
GLENWOOD, ILLINOIS 60425-1584

ACCEPTED
with COMMENTS
in EPA Letter Dated

APR 27 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

228-145



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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER - PELIGRO**

CORROSIVE: Causes irreversible eye damage. Do not get in eyes or on clothing. Avoid contact with skin. May cause skin irritation. Harmful if swallowed. Avoid inhaling vapor or spray mist. If this container is over one gallon and less than five gallons, then persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron. If this container is five gallons or more in capacity, then a mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

NON-WPS TURF USES: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural plant uses are covered by the WPS -- must wear: face shield, goggles or safety glasses and long pants, long-sleeved shirt, socks, shoes and rubber gloves. It is recommended that safety glasses include from brow and temple protection. In addition to the clothing and eye protection listed above, commercial mixers/loaders/applicators must wear chemical-resistant in place of rubber gloves except when the product is applied to a golf course. After using this product, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. The maximum number of broadcast applications to turf per treatment site is 2 per year.

NON-WPS INDUSTRIAL AQUATIC USES: When mixing, loading or applying this product or repairing or cleaning equipment used with this product, wear face shield or goggles and chemical-resistant gloves, long-sleeved shirt, long pants, socks and shoes. For aerial applicators in an enclosed cockpit and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required. Wash hands, face and arms with soap and water as soon as possible after mixing, loading or applying this product. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry.

WPS USES: Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) -- in general, agricultural plant uses are covered -- must wear: coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, chemical resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing, or loading. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing of PPE must not be reused until it has been cleaned. If this container is over one gallon and less than five gallons, mixers and loaders who do not use a mechanical system (probe and pump) to transfer contents of this container must wear coveralls or a chemical resistant apron in addition to the other required PPE.

Engineering Controls Statements: If this container is five gallons or more in capacity, a mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Never give anything by mouth to an unconscious person.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

IF ON SKIN: Wash skin with soap and water.

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention, preferably an ophthalmologist.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system. Do not contaminate water used for irrigation or domestic purposes. Use care to avoid spray contact or drift to 2,4-D susceptible plants such as cotton, tomatoes, flowers, okra, grapes, fruit trees and ornamentals. Excessive amounts of this product in soil may temporarily inhibit seed germination and plant growth. Do not permit spray mist containing this product to drift onto them. Do not apply when a temperature air inversion exists. Such a condition is characterized by little or no air movement and an increase in air temperature with an increase in height. In humid regions, a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. If questions exist pertaining to the existence of an inversion, consult with local weather services before making an application. Do not spray when the wind is blowing towards susceptible crops or ornamental plants. Use coarse sprays to minimize drift. Spray drift can be lessened by keeping the spray boom as low as possible, by spraying when wind velocity is low, by decreasing the pounds of pressure at the nozzle tips, and by stopping all spraying when wind exceeds 6 to 7 miles per hour. Do not use the same spray equipment for applying other materials to 2,4-D susceptible crops as injury may result. It is best to use a separate sprayer for application of insecticides and fungicides.

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.

When using on (1) Pastures and Rangeland Grasses there is (a) 7 day pre-grazing interval for dairy cattle; (b) 30 day preharvest interval for grass cut for hay; and (c) 3 day pre-slaughter interval for meat animals. (2) Corn and small grains: Do not allow livestock to forage or graze treated fields within 14 days after treatment. Do not feed treated straw to livestock. (3) Sorghum: Do not allow livestock to graze treated areas within 14 days after treatment, and (4) Grass Seed Crops: Do not graze dairy animals within 7 days after treatment.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL DIRECTIONS BEFORE USING.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For Turf use, do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

GENERAL INFORMATION

RIVERDALE WEEDESTROY AM-40 will kill or control the following weeds in addition to many other noxious plants susceptible to 2,4-D. Alder, Alligator weed, American lotus, Arrowhead, Artichoke, Aster, Austrian fieldcress, Beggartick, Bident, Bindweed, Bitterweeds, Bitter winter cress, Blackeyed Susan, Blessed thistle, Blue lettuce, Box elder, Broomweed, Buckhorn, Bull thistle, Bulrush, Burdock, Bur ragweed, Buttercup, Canada thistle, Carpetweed, Catnip, Chickweed, Chicory, Cinquefoil, Cockle, Cocklebur, Coffee bean, Coffeeweed, Common sowthistle, Creeping jenny, Croton, Curly indigo, Dandelion, Devil's claw, Dock, Dogbane, Duckweed, Elderberry, Flea bane (daisy), Flixweed, Florida pusley, Frenchweed, Galinsoga, Goatsbeard, Goldenrod, Goosefoot, Ground ivy, Gumweed, Healall, Hemp, Henbit, Hoary cress, Honeysuckle, Horsetail, Indigo, Indiana mallow, Ironweed, Jerusalem artichoke, Jewelweed, Jimsonweed, Kochia, Knotweed, Lambsquarters, Locoweed, Lupine, Mallow, Many flowered aster, Marijuana, Marshelder, Mexican weed, Morningglory, Muskthistle, Mustard, Nettle, Nutgrass, Orange hawkweed, Parrot feather, Parsnip, Pennywort, Pennywort, Pepperweed, Pigweed, Plantain, Poison hemlock, Poison ivy, Pokeweed, Pocrjoe, Povertyweed, Prickly lettuce, Primrose, Puncture vine, Purslane, Ragweed, Rush, Russian thistle, Sagebrush, St. Johnswort, Salsify, Shepherdspurse, Sicklepod, Smartweed, Sneezeweed, Southern wild rose, Sowthistle, Spanishneedle, Spatterdock, Stinging nettle, Stinkweed, Sumac, Sunflower, Sweet clover, Tanweed, Tarweed, Thistle, Toadflax, Tumbleweed, Velvet leaf, Vervain, Vetch, Virginia creeper, Water hyacinth, Water lily, Water plantain, Water primrose, Water shield, Wild carrot, Wild garlic, Wild lettuce, Wild onion, Wild parsnip, Wild radish, Wild rape, Wild strawberry, Wild sweet potato, Willow, Witchweed, Wormseed, Yellow rocket.

Generally the lower dosages given will be satisfactory for your, succulent growth of sensitive weed species. For less sensitive species and under conditions where control is more difficult, the higher dosages will be needed. Apply Weedestroy AM-40 during warm weather when weeds are young and growing actively. Unless otherwise recommended, sug-

gested application rates may be up to 10 gallons of total spray by air or 5 to 25 gallons by ground application equipment. If band treatment is used, base the dosage rate on the actual area to be sprayed. Although water quantities may vary due to different types of application equipment, sufficient water must be used to provide for complete and uniform coverage. Higher water gallonage may be used if desired to improve spray coverage. In all cases, use the same recommended amount of 2,4-D per acre. When product is used for weed control in crops, the growth stage of the crop must be considered. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended on label. To do so may reduce herbicide's selectivity and could result in crop damage. If you are not prepared to accept some degree of crop injury, do not use this product. Crop varieties vary in response to 2,4-D and some are easily injured. Apply this product to varieties known to be tolerant to 2,4-D. If you are uncertain concerning tolerant varieties or local use situations that may affect crop tolerance to 2,4-D, consult your seed company, State Agricultural Extension Service or qualified crop consultant advice.

Aerial applications 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. Do not apply when temperature exceeds 90°F. Read and follow all directions and precautions on this label and on the labels of any products for which a tank mixture is being considered.

COMPATIBILITY: If AM-40 is to be tank mixed with fertilizers or with other pesticides, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt.) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing.

TO PREPARE THE SPRAY: Mix AM-40 only with water. Add about half the water to the mixing tank, then add the AM-40 with agitation, and finally the rest of the water with continuing agitation. Note: Adding oil, wetting agent, or other surfactant to the spray may increase effectiveness on weeds, but also may reduce selectivity to crops resulting in crop damage.

CORN (Field, Sweet and Popcorn): Pre-plant - Apply 1 to 2 pints per acre in 15 to 30 gallons of water to control emerged broadleaf weed seedlings or existing cover crops prior to planting corn, apply 7 to 14 days before planting. Do not use on light, sandy soil, or where soil moisture is inadequate for normal weed growth. Use high rate for less susceptible weeds or cover crops such as alfalfa.

Pre-emergence (For annual grasses and broadleaf weeds) - Apply 2 to 4 pints in 15 to 30 gallons of water per acre to soil any time after planting but before corn emerges. Do not use on light sandy soil, or where soil moisture is low.

Emergence - Apply 1 pint in 5 to 30 gallons of water per acre ground application, 1 to 5 gallons of water by air, just as corn plants are breaking ground.

Post-emergence - (For Broadleaf weeds) - Apply 1/2 to 1 pint in 8 to 15 gallons of water per acre, when most weeds have germinated. Spray after corn emerges and until 8" tall. Spray sweet corn before 6" in height. Use low rates on inbreds. Corn is susceptible to injury shortly after emergence and after unfolding of leaves. Do not spray during this period nor after first tassels appear. When corn is over 8" tall or beyond the 5-leaf stage, use drop nozzle to keep spray off corn foliage. Spray must strike tops of weeds but should not drench corn plants. Do not apply from tasseling to dough stage. Injury to corn is most likely to occur if Weedestroy AM-40 is applied when corn is growing rapidly under high temperatures and high soil moisture conditions. In such conditions, use the low rate. For resistant weeds, use up to 2 pints per acre though corn injury may result. Do not use higher rates unless possible crop injury will be acceptable. After application, delay cultivation for 8-10 days to allow the corn to overcome any temporary brittleness. During Post emergent application do not use this product with atrazine, oil, or other adjuvants unless approved by seed company.

Preharvest: After the hard dough or denting stage, apply 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. Use 1 or 2 pints in 1 to 5 gallons of water per acre by air or 5 to 30 gallons of water by ground equipment.

SORGHUM (Milo): Post-emergence - Apply 2/3 to 1 pint with suggested water at 5 gallons of water by air or 5 to 20 gallons with ground equipment per acre when sorghum is 6" to 8" tall. Use 1 pint when sorghum is 8" to 15" tall. Treat only after the sorghum is 6 inches high preferably before it is 15 inches high. Do not treat during the boot, tasseling, or early dough stages. Reduce spray drift by keeping the boom and spray

nozzles as low as possible. If crop is taller than 8 inches, use drop nozzle to keep the spray off the leaves. Temporary spray injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply Weedestroy AM-40 under these conditions, use no more than $\frac{1}{2}$ pint per acre.

NOTE: Corn & Sorghum Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only varieties known to be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed Specialist for this information.

WITH LIQUID NITROGEN SOLUTIONS: For late season application in corn, pastures, or small grains in one operation for control of your smartweed, cocklebur, annual morning-glory and other annual broadleaf weeds less than 1 inch high. Field should be as clean as possible and corn 20 to 30 inches tall. Apply 1 pint with 80 to 120 lbs. Nitrogen per acre; the spray must be prepared by first adding the required amount of liquid nitrogen solution to spray tank. Next dilute one pint of Riverdale Weedestroy AM-40 with 2 quarts clean water for each acre to be treated with one tankful. Start the tank agitator and slowly add the diluted 2,4-D solution. Spray immediately, maintaining continuous agitation until spray tank is empty. Direct the spray to lower 2" to 4" of corn stalk. Use spray equipment designated to handle corrosive liquid nitrogen solutions. After spraying, remove any remaining solution and rinse rig thoroughly with water. Mix only one tank at a time. Do not spray during or immediately following cold, near freezing weather.

BARLEY, WHEAT, OATS AND RYE: Spring Post-emergence (not underseeded with legumes) - In Spring grown grains, spray after grain begins tillering and before the boot stage (Usually 4" to 8" tall) and weeds are small. Apply $\frac{1}{2}$ to 1 pint of Weedestroy AM-40 per acre. For aerial application on grain, it is suggested to use this product in 1 or more gallons of water per acre and for ground application use a minimum of 10 gallons of water per acre. Oats are more sensitive to 2,4-D than other grains and should be sprayed in the Spring when well established and tillered and before jointing after crop has reached the dough stage. In Winter grains, use 1 to 2 pints of Weedestroy AM-40 to control large weeds that will interfere with harvest or to suppress perennial weeds. Fall seeded oats for grain planted in Southern U.S. - apply after full tillering but before the early bud stage. Do not spray during or immediately following cold weather. Spring Post-emergence (underseeded with legumes) - Apply $\frac{1}{2}$ to $\frac{1}{4}$ pint after grain is 8" tall. Do not spray grain in boot to dough stage. Do not spray alfalfa or sweet clover unless the infestation is severe and injury to these legumes can be tolerated. 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.

FOR EMERGENCY WEED CONTROL IN WHEAT - Perennial broadleaf weeds - apply 3 pints per acre when weeds are approaching bud stage. Do not spray grain in the boot to dough stage. The 3 pint per acre application can produce injury to wheat. Balance the severity of your weed problem against the possibility of crop damage. Where perennial weeds are scattered, spot treatment is suggested to minimize the extent of crop injury. Use lower rate if small annual and biennial weeds are the major problem. Use the higher rate if perennial weeds or annual and biennial weeds are present which are in the hard-to-kill categories as determined by local experience. The higher rates increase the risk of grain injury and should be used only where the weed control problem justifies the grain damage risk. Do not apply AM-40 to grain in the seedling stage. For aerial application on grain, apply Weedestroy AM-40 in 1 to 5 gallons of water per acre. For ground application, use a minimum of 5 gallons of water per acre.

SUGARCANE: **Pre-emergence** - Use 4 pints in 15 to 20 gallons of water per acre as a blanket spray through lay-by, to aid in control of Johnsongrass seedlings and susceptible broadleaf weeds. **Post-emergence** - Use $1\frac{1}{2}$ to 2 pints in 10 to 30 gallons of water. Apply when cane is 1' to 2' tall.

RICE: Use $1\frac{1}{2}$ to $2\frac{1}{2}$ pints of Weedestroy AM-40 in 5 to 10 gallons of water per acre to control curly indigo and other broadleaf weeds. Apply in the late tillering stage of rice development, at the time of first joint development (first to second green ring), usually 6 to 9 weeks after emergence. Do not apply after panicle initiation, after rice internodes exceed $\frac{1}{2}$ " at early seeding, early panicle, boot, flowering or early heading growth stages. Do not apply nitrogen during 7 to 21 days before application of 2,4-D. Do not use in rice paddies where shellfish are of economic importance or where flood water is used for irrigation of other crops.

NOTE: Some rice varieties under certain conditions can be injured by 2,4-D. Therefore, before spraying, consult local Extension Service or University specialist for appropriate rates and timing of 2,4-D sprays.

CROP STUBBLE AND FALLOW LAND: To control annual broadleaf weeds apply 1 to 2 pints per acre. Use the lower rate when weeds are small (2 to 3" tall) and actively growing. Use the higher rate on older and drought-stressed plants. To control biennial broadleaf weeds apply 1 to 2 quarts per acre. Spray while musk thistles or other biennial species are in the seedling to rosette stage and before flower stalks become apparent. The lower rate can be used in the Spring during rosette stage. Use the highest rate in the Fall or after flower stalks have developed. To control perennial broadleaf weeds such as Canada thistle and field bindweed, apply 1 to 3 quarts per acre. Spray weeds in bud to bloom stage, or while in good vegetative growth. Do not disturb treated areas for at least 2 weeks after treatment, or until weed tops are dead. To control Wild Garlic and Onion in crop stubble, apply 2 to 3 quarts per acre to prevent new growth of garlic following harvest.

NOTE: Do not forage for 14 days following application. Apply to weeds actively growing. Do not plant any crop for 3 months after treatment or until chemical has disappeared.

GRASSES: IN ESTABLISHED PASTURES AND RANGELANDS - use 1 to 2 quarts Riverdale Weedestroy AM-40 in 1 to 30 gallons of water per acre. Use the light rate on more easily injured grasses. For small areas, use $\frac{1}{4}$ to 1 fluid ounce ($1\frac{1}{2}$ to 2 Tablespoons) per 1,000 square feet; mix 1 to 3 gallons of water and apply uniformly over the area. Apply preferably when weeds are small and growing actively before bud stage. Fall or Spring is the best time to treat. Repeated treatments may be needed for less susceptible weeds. Treatment will kill or injure alfalfa, sweet clover and other legumes. White clover (including Ladino) may be injured by light application but recovers; repeated treatments will kill it. In some dichondra, bentgrasses, carpet, buffalo, and St. Augustine grasses may be injured. Usually colonial bents are more tolerant than creeping types; velvets are most easily injured. Where bentgrass predominates, make 2 applications of 1 pint per acre at 3 week intervals.

GRASSES IN CONSERVATION RESERVE PROGRAM AREAS: To control annual broadleaf weeds, apply when seeds are actively growing. Use $\frac{1}{4}$ to 1 pint per acre when weeds are small; use higher rates on older weeds. Excessive injury may result if applied to young grasses with fewer than 6 leaves or prior to grasses being well established. To control biennial and perennial broadleaf weeds in established grasses, apply at a rate of 1 to 2 quarts per acre. Apply to actively growing weeds. Treat when biennial weeds are in the seedling to rosette stage and before flower stalks become apparent. Treat perennial weeds in the bud to bloom stage.

NOTE: Suggest at least 2 gallons of water per acre by air and 5 gallons of water per acre by ground. Do not harvest or graze treated Conservation Reserve Program areas. Do not apply to grasses in the boot to dough stage if grass seed production is desired.

GRASS SEED CROPS: Use 1 to 4 pints of product in up to 30 gallons of water per acre by air or ground equipment in Spring or Fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to the milk stage. Spray seedling grass only after the five leaf stage, using $\frac{1}{4}$ to 1 pint per acre to control small seedling weeds. After the grass is well established higher rates of up to 4 pints can be used to control hard-to-kill annual or perennial weeds. For best results, do not use on bentgrass unless grass injury can be tolerated.

CONTROL OF SOUTHERN WILD ROSE: On roadsides and fencerows, use 1 gallon of Weedestroy AM-40 plus 4 to 8 ounces of an agricultural surfactant per 100 gallons of water and spray thoroughly as soon as foliage is well developed. Two or more treatments may be required. On rangeland, apply a maximum of 2.1 quarts of Weedestroy AM-40 per acre per application.

STONE FRUIT AND NUT ORCHARDS (Except in California): To control annual broadleaf weeds on the orchard floor apply 3 pints per acre using coarse sprays and low pressure in sufficient volume of water to obtain thorough wetting of weeds. Treat when weeds are small and actively growing. Do not use on light, sandy soil.

NOTE: Do not apply (1) to bare ground as injury may result, (2) to newly established or young orchards. Trees must be at least 1 year old and in vigorous condition, (3) during bloom, (4) more than twice a year, (5) immediately before irrigation and withhold irrigation for 2 days before and 3 days after treatment. Also, do not allow spray to drift onto or contact foliage, fruit, stems, trunks of trees or exposed roots as injury may result. Do not graze or feed cover crops from treated orchards. Pre-harvest intervals: Do not harvest stone fruit within 40 days of application nor nuts within 60 days of application.

**FOR USE IN CROP RESIDUE MANAGEMENT SYSTEMS
IN SOYBEANS (Preplant only)**

GENERAL INFORMATION: Riverdale Weedestroy AM-40 Amine Salt is a herbicide that provides control of many emerged susceptible annual and perennial broadleaf weeds. Riverdale Weedestroy AM-40 Amine Salt may be applied prior to planting soybeans to provide foliar

burndown control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. Riverdale Weedestroy AM-40 Amine Salt should only be applied preplant to soybeans in situations such as reduced tillage production systems, where emerged weeds are present. Apply only according to the application instructions given below. Do not use any tillage operations between application of Riverdale Weedestroy AM-40 Amine Salt and planting soybeans.

MIXING INSTRUCTIONS: Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may increase the herbicidal effectiveness of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product.

APPLICATION PROCEDURES: Apply using air or ground equipment in sufficient gallonage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

APPLICATION TIMING AND USE RATES

2,4-D Formulation Used	Maximum Rate (per acre)	When to Apply (Days prior to planting Soybeans)
Weedestroy AM-40 Amine Salt	1 pint (16.8 fl. oz.) (0.5 lb. a.e./acre)	NOT LESS THAN 15 DAYS
	2 pints (33.6 fl. oz.) (1.0 lb. a.e./acre)	NOT LESS THAN 30 DAYS

WEEDS CONTROLLED: Alfalfa*, Bindweed*, Bullnettle, Bittercress-smallflowered, Buttercup-smallflowered, Carolina geranium, Cinquefoil-common and rough, Clover-red*, Cocklebur-common, Dandelion*, Eveningprimrose-butleaf, Garlic-wild*, Horsetweed or marestail, Ironweed, Lambsquarters-common, Lettuce-prickly, Morningglory-annual, Mousetail, Mustard-wild, Onion-wild*, Pennycress-field, Peppergrass*, Purslane-common, Ragweed-common, Ragweed-giant, Shepherdspurse, Smartweed-Pennsylvania*, Sowthistle-annual, Speedwell, Thistle-Canada*, Thistle-bull, Velvetleaf, Vetch-hairy*, Virginia copperleaf.

*These species are only partially controlled.

For best weed control at time of treatment, weeds should be small, actively growing and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of individual weed species to Riverdale Weedestroy AM-40 Amine Salt is variable. Consult your local county or state Agricultural Extension Service or crop consultant for advice.

APPLICATION RESTRICTIONS AND PRECAUTIONS: Important Notice - Unacceptable injury to soybeans planted in fields treated with Riverdale Weedestroy AM-40 Amine Salt may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.

Do not use on low organic sandy soils (<1.0%).

Apply a maximum of one application per growing season regardless of the treatment rate.

Do not apply Riverdale Weedestroy AM-40 Amine Salt when weather conditions such as temperature air inversions or wind favor drift from treated areas to susceptible plants.

Livestock Grazing Restriction: Do not feed hay, forage or fodder. Restrict livestock from grazing treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.

In fields treated with Riverdale Weedestroy AM-40 Amine Salt, plant soybean seed as deep as practical or at least 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is completely covered.

Do not apply Riverdale Weeddestroy AM-40 Amine Salt prior to planting soybeans if you are not prepared to accept the results of soybean injury, including possible loss of stand and yield.

Do not replant fields treated with Riverdale Weeddestroy AM-40 Amine Salt in the same growing season with crops other than those labeled for 2,4-D use.

BROADLEAF WEED CONTROL IN NON-CROPLAND GRASS AREAS SUCH AS LAWNS, GOLF COURSES, CEMETERIES AND PARKS, AIRFIELDS, RIGHTS-OF-WAY, FENCEROWS, ROADSIDES, VACANT LOTS, DRAINAGE DITCHBANKS, INDUSTRIAL SITES, AND SIMILAR PLACES: Do not use on dichondra or other herbaceous ground covers. Do not use on creeping grasses such as bent except for spot treatment nor on freshly seeded turf until grass is well established. Reseeding of lawns should be delayed following treatment. With Spring application, reseed in the Fall. With Fall application, reseed in Spring. Legumes are usually damaged or killed. Thoroughly wet weeds when applying this mixture. Bindweed, Whitetop, Perennial sow thistle, Blue lettuce, Bur ragweed, Canada thistle and other noxious perennials somewhat resistant to 2,4-D will require repeated treatments to kill.

Use $\frac{1}{2}$ to 1 gallon of this product in 15 to 50 gallons of water per acre. Treat when weeds are young and growing well. On turf, apply a maximum of 4.2 pints of this product per acre per application per site. To control small areas of woody plants, such as Willows, Honeysuckle, Virginia creeper, Alders and others susceptible to 2,4-D, use $\frac{1}{2}$ to 1 gallon in 100 gallons of water; spray to thoroughly wet plants when in full leaf. Re-treat as necessary for control of regrowth and seedlings. In general, it is better to cut tall woody growth and spray suckers when 2 to 4 feet high.

SPOT TREATMENT IN NON-CROP AREAS: To control broadleaf weeds in small areas with a hand sprayer, use $\frac{1}{2}$ pint of Weeddestroy AM-40 in 3 gallons of water and spray to thoroughly wet all foliage.

TREE INJECTIONS (Pine Release): To control hardwoods, such as Oaks, Hickory, Maple, Pecan, Elm, Sumac, Sweetgum and Hawthorn in forest and other non-crop areas, apply undiluted Weeddestroy AM-40 in a concentrate tree injector calibrated to apply 1 ml. per injection. Space injections 2" apart, edge to edge, completely around the tree and close to the base. The injector bit must penetrate the inner bark. On hard-to-kill species such as Hickory, Dogwood, Red maple, Blue beech and Ash make injections 1 to 1 $\frac{1}{2}$ " apart, edge to edge. Treatment may be made at any time of the year. For best results, injections should be made during growing season, May 15 to October 15. For dilute injections, mix 1 gallon of AM-40 in 19 gallons of water.

AQUATIC APPLICATIONS

FOR AQUATIC WEEDS IN STILL LAKES, PONDS, DRAINAGE DITCHES AND MARSHES: Aerial Application - Use 4 $\frac{1}{2}$ pints Weeddestroy AM-40 in 5 to 15 gallons of water to cover one surface acre. Boat Application - Use 4 $\frac{1}{2}$ pints of Weeddestroy AM-40 in 50 to 100 gallons of water per acre. Uniform coverage is essential. Avoid submerging plants after treatment. Application should be made when leaves are fully developed above water line and plants are actively growing. Consult your State Game and Fish Department or Water Control Agency prior to application of this product for aquatic weed control. Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat $\frac{1}{2}$ to $\frac{1}{3}$ of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatments along the shore and proceed outwards in bands to allow fish to move into untreated areas.

BRUSH CONTROL

The maximum application rate for forestry site preparation is 1 gallon 6 ounces per acre per application per site.

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 product per acre in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of runoff. 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 the green color. Hard to control species may require re-treatment next season.

WEEDS 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 and Wyoming. For control of annual and perennial broadleaf weeds, apply 1-2 quarts of Weedestroy AM-40 per acre in approximately 20 to 100 gallons of water per acre. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder-to-control weeds, a repeat spray after 3-4 weeks using the same rates may be needed for maximum results. Apply no more than two treatments per season. For woody brush and patches of perennial broadleaf weeds, mix 1 gallon of Weedestroy AM-40 in 150 gallons of water. Wet foliage thoroughly using about 1 gallon of solution per square rod.

SPRAYING INSTRUCTION: Apply with low pressure (10-40 psi) power spray equipment mounted on truck, tractor or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is fairly 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 surfaces 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 two-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. Water within treated banks should not be fished.

AM-40 & Garlon[®] Tank Mix

RIGHTS-OF-WAY: For less susceptible perennial broadleaf weeds and difficult to control woody species, use a combination of 2 gallons of product plus 1-4 quarts of Garlon[®] 3A herbicide per acre. For ground application, apply in 20-400 gallons of water, depending on the height of the weeds and brush. Use the higher volumes of up to 400 gallons per acre for dense brush 6 feet tall or higher. For aerial application, use 10-30 gallons per acre total spray volume.

Garlon[®] is a registered trademark of Dow Chemical.

STORAGE AND DISPOSAL

STORAGE: Always store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. Store at temperatures above 32°F. If allowed to freeze, rewarm to 40°F, remix thoroughly before using. This does not alter this product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate ground water. 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: 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 also disposable by incineration, or if allowed by State and local authorities by burning. If burned, stay out of smoke.

Local conditions may affect the uses of this chemical as shown on this label. Consult State Experiment Station or Extension Service Weed Specialist for specific recommendations for local weed problems and for information on possible lower dosages.

WARRANTY

Riverdale Chemical warrants that this herbicide conforms to the chemical description on its label. When used in accordance with label directions under normal conditions, this herbicide is reasonably fit for its intended purposes. Since timing, method of application, weather, plant and soil conditions, mixture with other chemicals, and other factors

affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label directions or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.

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