

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PM 23

228-145

9-25-98

10719

Russell F. Sawyer
 Riverdale Chemical Co.
 425 West 194th St.
 Glenwood, IL 60425-1584

Dear Mr. Sawyer:

SUBJECT: Label Amendment
 Riverdale Weedestroy (R) AM-40 Amine Salt
 EPA Registration No. 228-145
 Your Application Dated April 3, 1998 Requesting a
 Data Review and Label Amendment

The Agency has reviewed the acute dermal and primary dermal irritation studies for the product referenced above. It has been determined that the studies are acceptable. The acute dermal toxicity and primary skin irritation studies are toxicity category IV, therefore we have no objection to amending the Statement of Practical Treatment to remove the dermal statement. However, we were only able to construct a partial acute toxicity profile, therefore, until proven otherwise, these studies are considered a data gap.

The labeling referred to above, submitted in accordance with registration under the Federal Insecticide, Fungicide, Rodenticide Act, as amended, is acceptable with the following provisions:

1. Due to the eye irritation toxicity category (I) the following statement should be placed on the front panel of the labeling to allay restrictive use: "For use by individuals/firms licensed or registered by the State to apply pesticide products. States may have mor restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your State prior to use of this product."
2. In the "Statement of Practical Treatment" in the oral statement add the following sentence and place at the beginning of the statement: "Call a doctor or get medical attention." In addition, revise the last sentence to read as follows: "Do no induce vomiting or give anything by mouth to an unconscious person."
3. Under the "Directions for Use" in the "Agricultural Use Requirements" box, revise the "early entry PPE requirements" to read as follows: "coveralls over long-sleeved shirt and long pants, socks and chemical resistant footwear, protective eyewear (goggles or face shield), and waterproof gloves."

CONCURRENCES

SYMBOL •	7505C							
SURNAME •	DMorgan							
DATE •	Sep 25, 1998							

20717

A stamped copy of the labeling is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

(Enclosure

28417

RIVERDALE

WEDESTROY® AM-40
AMINE SALT

A SELECTIVE WEED KILLER

FOR CONTROL OF MANY BROADLEAF WEEDS AND BRUSH CONTROL IN CORN,
SOYBEANS (PRE-PLANT), SMALL GRAINS, PASTURES, RANGELANDS, AND OTHER LISTED CROPS
AND IN NON-CROP AREAS SUCH AS LAWNS, DRAINAGE DITCHBANKS, FENCE ROWS, RIGHTS-OF-WAY.
ALSO FOR AQUATIC WEED CONTROL, CONTROL OF TREES BY INJECTION, AND TANK MIXES.

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 the label, find someone
to explain it to you in detail.)

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

EPA REG. NO. 228-145

NET CONTENTS

GALS.

EPA EST. NO. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

GLENWOOD, ILLINOIS 60425-1584

ACCEPTED
with COMMENTS
In EPA Letter Dated

SEP 25 1998

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
228-145

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER - PELIGRO

CORROSIVE: Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if swallowed. Avoid inhaling vapor or spray mist. Remove saturated clothing as soon as possible and shower. 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, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) 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 front, brow and temple protection. In addition to the clothing and eye protection listed above, commercial mixer/loader/applicators must wear chemical-resistant in place of rubber gloves except when the product is applied to a golf course. After using this product, rinse gloves before removing, 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, goggles or safety glasses and chemical-resistant gloves, long-sleeved shirt, long pants, socks and shoes. It is recommended that safety glasses include front, brow and temple protection. 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: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, protective eyewear, 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 or 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 (such as a probe and pump or spigot) 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, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) 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.

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

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, 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.

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. Avoid spray drift by (1) keeping the spray boom as low as possible, (2) applying at 20 pounds or less nozzle pressure using nozzles that produce a coarse spray pattern, and (3) applying when conditions such as wind, air stability and temperature inversions are not a factor. 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 BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

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, waterproof gloves, shoes plus socks, and protective eyewear.

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

This product is a water dilutable amine especially prepared for use on crops and weeds where a susceptible crop in the near vicinity may be injured by a more volatile product. It is recommended for control of numerous broadleaf weeds and certain 2,4-D susceptible woody plants without injury to most established grasses. In cropland, 2,4-D is more effective than amines for controlling hard-to-kill weeds such as Bindweed, Thistle, Smartweed, Wild garlic, Curly dock, Tansy ragwort, and Wild onions. For best results, apply this product as a water or oil spray during warm weather when young succulent weeds or brush are actively growing. Application under drought conditions often will give poor results. The lower recommended rates 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.

RIVERDALE WEEDDESTROY 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, Bittercress, Bitterweed, Bitter wintercress, Blackeyed Susan, Blessed thistle, Blue lettuce, Box elder, Broomweed, Buckhorn, Bullnettle, Bull thistle, Bulrush, Burdock, Bur ragweed, Buttercup, Canada thistle, Carolina geranium, Carpetweed, Catnip, Chickweed, Chicory, Cirquefoil, 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, Horseshoe, Indigo, Indiana mallow, Ironweed, Jerusalem artichoke, Jewelweed, Jimsonweed, Kochia, Knotweed, Lambsquarter, Locoweed, Lupine, Mallow, Many flowered aster, Marijuana, Marshelder, Mexican weed, Morningglory, Mousetail, Muskthistle, Mustard, Nettle, Nutgrass, Orange hawkweed, Parrot feather, Parsnip, Pennycress, Pennywort, Pepperweed, Pigweed, Plantain, Poison hemlock, Poison ivy, Pokeweed, Poorjoe, Povertyweed, Prickly lettuce, Primrose, Puncture vine, Purslane, Ragweed, Red clover, Rush, Russian thistle, Sagebrush, St. Johnswort, Salsify, Shepherdspurse, Sicklepod, Smartweed, Sneezeweed, Southern wild rose, Sowthistle, Spanishneedle, Spatterdock, Speedwell, Stinging nettle, Stinkweed, Sumac, Sunflower, Sweet clover, Tanweed, Tarweed, Thistle,

Toadflax, Tumbleweed, Velvet leaf, Vervain, Vetch, Virginia copperleaf, 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 young, 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 Weeddestroy AM-40 during warm weather when weeds are young and growing actively. Unless otherwise recommended, suggested application rates may be from 1 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's 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 quart) 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.

SELECTIVE WEEDING IN CROPS

USE IN LIQUID NITROGEN SOLUTIONS: For late season application in corn, pastures, or small grains in one operation for control of your Smartweed, Cocklebur, Annual morningglory 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 1 pint of Riverdale Weeddestroy 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 3 to 4 inches 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.

CORN (Field, Sweet and Popcorn):

Pre-plant	- 1 to 2 pints
Pre-emergent	- Average Conditions - 2 to 4 pints
Emergent	- 1 pint
Post-emergent	- Average Conditions - 1/2 to 2 pints
	Dry Conditions* - 1/2 to 1 pint
Pre-harvest	- 1 to 2 pints

*For Western States - Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming

All with recommended amounts of water to make per acre applications. Use lower rates of product for easily-killed weeds, on inbreds, and when corn is growing rapidly. Do not cultivate for about 2 weeks after treatment while corn is brittle.

Pre-plant: Apply in 15 to 30 gallons of water per acre 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 control of less susceptible weeds or cover crops, such as alfalfa.

Pre-emergent: (For annual grasses and broadleaf weeds) - Apply in 15 to 30 gallons of water per acre. Apply product to emerged weeds 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. Product will not control weeds which have not emerged.

Emergent - Apply 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-emergent - (For broadleaf weeds) - Apply 1/2 to 1 pint in 8 to 15 gallons of water per acre. Use low rates on inbreds. Best results are usually obtained when weeds have germinated and corn is 4 to 18 inches tall. As soon as corn is over 8 inches tall, or beyond the 5-leaf stage, use drop nozzles to keep spray off corn foliage as much as possible; direct spray over tops of weeds but not over the corn. Corn is susceptible to injury shortly after emergence and after unfolding of leaves. Do not spray during this period nor after first tassels appear to dough stage. If corn is growing rapidly and temperature and soil moisture is high, use 1/2 pint per acre 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 per acre may be used to control some hard-to-control weeds. 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 to 10 days to allow the corn to overcome any temporary brittleness. However, the possibility of injury to the corn is increased. Do not use with Atrazine, oil or other adjuvants, unless approved by seed company. Since the tolerance to 2,4-D of individual hybrids varies, consult your seed supplier, 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 in 1 to 5 gallons of water per acre by air or 5 to 30 gallons of water by 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. The high rate will be needed for tough weeds under stress.

SORGHUM (Milo): Post-emergent control in average conditions, use 2/3 to 1 pint when sorghum is 5 to 8 inches tall. Use 1 pint when sorghum is 5 to 15 inches tall with suggested volume of 5 gallons of water by air or 6 to 20 gallons with ground equipment to make per acre applications. For dry conditions (Western States), use 1/2 to 1 pint. Apply to sorghum when crop is 5 to 15 inches high to top of canopy with secondary roots well established. If sorghum is taller than 8 inches, use drop nozzles to keep the spray off the foliage as much as possible. Do not apply during boot, flowering or early dough stage. Reduce spray drift by keeping the boom and spray nozzles as low as possible. 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 higher rates. Do not use with oil. Because temporary injury may occur if conditions of high temperature and high soil moisture exist, use lower rate. If it is necessary to apply Weeddestroy AM-40 under these conditions, use no more than 2/3 pint per acre. Varieties vary in tolerance to 2,4-D and some hybrids are quite sensitive. Spray only varieties known to be tolerant to 2,4-D. Contact seed company or your Agricultural Experiment Station or Extension Service weed specialist for this information.

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.

SMALL GRAINS (Barley, Oats, Wheat, Rye), not underseeded with a legume: Wheat, Barley, Rye

- Annual Weeds -	Average Conditions - 1/2 to 1 pint
	Dry Conditions (Western States) - 1 to 2 pints
- Perennial Weeds -	Average Conditions - 1 pint
	Dry Conditions (Western States) - 1-1/4 to 2 pints
Pre-harvest -	Average Conditions - 1 to 2 pints
Oats - - -	Spring - 1/2 and Fall - 1/2 to 1 pint

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.

Make application in the Spring when the grain is fully tillered or stooled (usually about 4 to 8 inches high), but before jointing. Do not spray before the tiller stage nor from early boot to dough stage.

Use lower rate of product for easily-killed seedling weeds, and higher rate for older and more tolerant weeds. Do not treat grains underseeded with legumes, and do not spray Winter grains in the Fall. To control large weeds that will interfere with harvest or to suppress perennial weeds, pre-harvest treatment can be applied when grain is in the dough stage. Higher rates may be needed to handle difficult weed problems in certain areas such as under dry conditions, especially in Western areas. However, do not use unless possible crop injury will be acceptable. 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 Weeddestroy 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 (under-seeded with legumes)** - Apply 1/4 to 1/2 pint after grain is 8 inches 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. For the high rates on Spring wheat and barley as well as Winter wheat and rye, consult State Agricultural Experiment Station or Extension Service weed specialist for recommendations or suggestions to fit local conditions.

Spring Seeded Oats: Use 1/2 to 1 pint per acre with recommended amount of water to give good coverage. Apply after the fully tillered stage, except during the boot to dough stage.

Fall Seeded Oats (Southern): Apply 1/4 to 1 1/4 pints per acre with recommended amount of water after full tillering but before early boot stage. Some difficult weeds may require the higher rates of 1 to 1-1/4 pints per acre for maximum control but injury may result. Do not spray during or immediately following cold weather.

Pre-harvest Treatment: Apply 1 to 2 pints with recommended amount of water per acre when grains are in the hard dough stage to control large weeds that may interfere with harvest. Best results will be obtained when soil moisture is sufficient to cause succulent weed growth.

Note: Oats are less tolerant to 2,4-D than wheat or barley and more likely to be injured. **Wheat and Barley:** Control of Wild garlic and Wild onion. For improved control of difficult weeds, including Wild garlic and Wild onion, apply 1 to 2 pints of product per acre. Since these rates may injure the crop, do not use unless possible crop damage is acceptable. For the higher rates on Spring wheat and barley, consult your local State Agricultural Experiment Station or Extension Service weed specialist for recommendations or suggestions to fit local conditions.

Control of Wild Garlic in Stubble Grain and Corn Fields: Following the harvest of small grains and corn, Wild garlic often produces new Fall growth. This should be sprayed with 4 to 6 pints of product in 20 to 40 gallons of water per acre. This is a useful practice as one part of a Wild garlic control program. Do not plant any crop for three months after treatment.

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 justifies the grain damage risk. Do not apply Weeddestroy AM-40 to grain in the seedling stage. For aerial application on grain, apply this product 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 1-1/2 to 2 pints in 10 to 30 gallons of water. Apply when cane is 1 to 2 feet tall.

Consult local Agricultural Experiment or Extension Service weed specialist on specific use

of this product or in combination with Dalapon to control broadleaved and grass weeds.

RICE: Use 1-1/2 to 2-1/2 pints of Weeddestroy 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 1/2 inch 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.

RICE (In Mississippi): Apply Riverdale Weeddestroy AM-40 at the rate of 1-1/2 to 2 pints per acre in 5 to 10 gallons of water when rice is in the late tillering stage of development, at the time of first joint development. Do not apply after panicle, boot, or heading stages. Consult your local University or Agricultural Extension Service Specialist for more specific information on weeds controlled, application rates and application timing.

Restrictions: Applications of Weeddestroy AM-40 shall not be made to rice if commercial plantings of cotton, tomatoes, grapes or other highly susceptible crops are within 1/4 mile of the application site unless these susceptible crops are owned by the applicator or person for whom the application is being made. Air movement, air stability, and wind directions are to be determined before application by using a smoke generator or other means at or near the site of application. Avoid applications during calm conditions (less than 2 miles per hour). Do not spray when wind velocity exceeds 5 mph.

To aid in reducing spray drift when applying Riverdale Weeddestroy AM-40, use a minimum spray volume of 20 gallons of mixed spray per broadcast acre. Use a spray pressure of not more than 25 psi measured at the spray boom nozzle. The height of the spray boom must be no more than 20 inches above the canopy of the target vegetation or crop, whichever is taller. Do not apply Riverdale Weeddestroy AM-40 using mist blowers, mini-spin, CDA, or other mist-producing equipment. Use of a drift control agent such as Nalco-Trol or equivalent is recommended.

CROP STUBBLE: To control annual broadleaf weeds, apply 1 to 2 pints per acre. Use the lower rate when weeds are small (2 to 3 inches 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.

FALLOW LAND: Use 2 to 6 pints of this product in a recommended minimum of 10 gallons water per acre for ground application and recommended minimum of 2 gallons for aerial application of water per acre on annual broadleaf weeds and up to 6 pints per acre on established perennial species such as Canada thistle and Field bindweed. Use lower rate when annual weeds are small (2 to 3 inches tall) and growing actively. Use the higher rate on older and drought-stressed plants. Spray Musk thistles and other biennial species while in seedling to rosette stage, and before flower stalks are initiated. The lower rate can be used in Spring during rosette stage. In Fall or after flower stalks have developed, use highest rate. Spray perennial weed in bud to bloom stage, or in good vegetative growth. Do not disturb treated area for at least 2 weeks after treatment, or until weed tops are dead. Do not plant any crop for 3 months after treatment or until chemical has disappeared from soil.

GRASSES IN CONSERVATION RESERVE PROGRAM AREAS: To control annual broadleaf weeds, apply when weeds are actively growing. Use 1/2 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 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 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.

GRASSES: IN ESTABLISHED PASTURES AND RANGELANDS - Use 1 to 4 pints of 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 3/4 to 1 fluid ounce (1-1/2 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.

Bitterweed, Broomweed, Croton, Docks, Kochia, Marshelder, Musk thistle and Other Broadleaf Weeds: Use 4 to 4.2 pints of this product in 10 to 30 gallons of water per acre. If weeds are young and growing actively, 2 pints per acre will provide control of some species. Deep-rooted perennial weeds may require repeated treatments in the same year or in subsequent years.

Weed control in Newly Sprigged Coastal Bermudagrass: Apply 2 to 4.2 pints of this product in 20 to 100 gallons of water per acre pre-emergence and/or post-emergence.

Wild Garlic and Wild Onion Control: Apply 4 to 4.2 pints of product per acre making three applications, Fall-Spring-Fall or Spring-Fall-Spring, starting in the late Fall or early Spring.

SOUTHERN WILD ROSE: Use a maximum of 4.2 pints of this product 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.

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.

NO-TILL APPLICATION: Weedestroy AM-40 may be used in the broadcast method with a normal boom or with direct pipes set 12 inches apart in 36 inch rows. When using AM-40, refer to specific rate directions for the individual crop sites. Maintain uniform pressure and speed when applying.

**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-cutleaf, Garlic-wild*, Horseweed or marestalk, 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

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planted seed is completely covered.

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

SELECTIVE WEEDING IN NON-CROP AREAS

ORNAMENTAL TURF such as Lawns, Golf Courses (Fairways, Aprons, Tees and Roughs), Sod Farms, Cemeteries, and Parks: Use 2 to 4.2 pints of product per acre per application per site in 40 to 180 gallons of water to give good coverage to one acre on established stands of perennial grasses. Usually 4 pints per acre provides good weed control under average conditions. The maximum number of broadcast applications per treatment site is 2 per year. Treat when weeds are young and actively growing. Do not apply to newly seeded grasses until well established. Use higher rate for hard-to-kill weeds. Use higher rate when using higher volume of water per acre. Do not exceed specified application dosages for any area. Deep-rooted perennial weeds may require repeated spot treatments in the same season or in subsequent years. Avoid applying during excessively dry or hot periods unless irrigation (watering) is used before treatment. Do not apply if rainfall is expected within 48 hours, nor should lawns be irrigated for 48 hours following application. For optimum results, turf should not be mowed for 1 to 2 days before and after application. Reseed no sooner than 3 to 4 weeks after application of this product. Adding oil, wetting agent, or other surfactant to the spray may be used to increase effectiveness on weeds, but doing so may reduce selectivity to turf resulting in turf damage. Maximum kill of weeds will be obtained by applying in Spring and early Fall when weeds are actively growing. Do not use on golf greens nor on dichondra or other broadleaf herbaceous ground covers. Do not use on creeping grasses such as bent and St. Augustine except for spot treating, nor on newly seeded turf until grass is well established.

SPOT TREATMENT IN NON-CROP AREAS: To control broadleaf weeds in small areas with a hand sprayer, use 1/4 pint of Weedestroy AM-40 in 3 gallons of water and spray to thoroughly wet all foliage.

GENERAL WEED CONTROL (Airfields, Roadsides, Vacant Lots, Drainage Ditchbanks, Fencerows, Industrial Sites, Rights-of-Way, Utility Power Lines, Railroads, and similar areas): Use 1/2 to 1 gallon of product per acre. Apply when most annual broadleaf weeds are still young and growing vigorously. Apply when perennial and biennial weeds are actively growing and near the bud stage, but before flowering. Thoroughly wet weeds when applying this mixture. For best results on Tansy ragwort and Musk thistle, treat in rosette stage, before bolting. Treat Wild onion or garlic in early Spring and in Fall when they are young and growing actively. Mix 1/2 to 1 gallon of this product in 100 gallons of water. Apply 300 to 500 gallons of spray per acre, depending on the stand. The addition of a wetting agent (spray adjuvant) is suggested. Usually 4 pints 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 such as Bindweed, Whitetop, Perennial sowthistle, Blue lettuce, Nettle, bur ragweed, Canada thistle and other noxious perennials somewhat resistant to 2,4-D may require repeat applications to kill... Do not use on freshly seeded turf until grass is well established. Delay reseeding for 30 days.

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.

BRUSH CONTROL

The maximum application rate for forestry site preparation is 1 gallon of fluid 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, Cherokee rose, Japanese honeysuckle, Virginia creeper, Wild grape and Willow on non-crop areas such as rights-of-way, fence rows, roadsides and along ditchbanks, use 2 to 3 quarts of product per acre in 30 to 100 gallons of water. Lower volume of water can be used unless applying through such equipment as Directa-Spra, Wobbler, Mini Wobbler, or Spirometer. Spray brush 5 to 8 feet tall after Spring foliage

is well developed. Wet all parts of the plants thoroughly, including stem and foliage, to the point of runoff. Higher volumes of up to 300 to 500 gallons of spray per acre may be necessary where the brush is very dense and over 6 to 8 feet high. Spraying can be effective at anytime up to 3 weeks before frost as long as soil moisture is sufficient for active growth of the brush. Control will be less effective in mid-Summer during hot, dry weather when soil moisture is deficient and plants are not actively growing. A wetting agent may be added to the spray if needed for increased effectiveness. Hard-to-control species may require re-treatment next season. In general, it is better to cut tall woody plants and spray sucker growth when 2 to 4 feet tall.

SAND SHINNERY OAK AND SAND SAGEBRUSH: On the oak, use 2-1/4 pints of this product in 5 gallons of water per acre. Apply by aircraft between May 15 and June 15. On the sagebrush, use 2-1/4 pints in 3 gallons of water per acre and apply by aircraft when foliage is fully expanded and the brush is actively growing.

BIG SAGEBRUSH AND RABBITBRUSH: Use 2-1/4 to 6-3/4 pints in 2 to 3 gallons of water. For rabbitbrush, the 6-3/4 pints rate is usually required. Brush should be leafed out and growing actively when treated. Retreatment may be needed. Chamise, Manzanita, Buckbrush, Coastal Sage, Coyotebrush and certain other Chaparral Species: Use 2-1/4 to 6-3/4 pints per acre in 5 to 10 gallons of water. Make applications by aircraft or ground equipment to obtain uniform spray coverage. For effective control, the brush must be fully leafed out and growing actively when sprayed. Retreatment may be needed. Consult State or local brush control specialists for most effective rate, volume and timing of spray application.

CATTAILS, TULE (BULRUSH), AND OTHER RUSHES: Mix 4 pints of Weeddestroy AM-40 and 100 gallons of water (1-1/2 to 2-1/2 quarts of AM-40 in 400 to 800 gallons of spray per acre). Addition of a wetting agent may be advisable. Apply in the Spring during flower head emergence. Spray to wet all foliage. Re-spray if needed when regrowth is 3 to 5 feet tall.

USES IN FOREST MANAGEMENT

Conifer Release: For control of Alder, apply 1-1/2 to 2 quarts of product per acre in 8 to 25 gallons of water, and apply as a foliage spray. Treat when 3/4 of the brush foliage has attained full size leaves and before new conifer growth reaches 2 inches in length. This is usually between early May and mid-June. Adjust treatment date depending on stage of growth and brush species. This may cause leader deformation on exposed firs, but they should overcome this during the second year after spraying. To control susceptible brush species such as ceanothus spp., chinquapin, madrone, manzanita, oak and tanoak and to release Douglas fir, hemlock, Sitka spruce or grand fir, apply 3 quarts of product per acre before new growth on Douglas fir is 2 inches long.

To control manzanita and ceanothus in ponderosa pine, apply 3 quarts of AM-40 before pine growth begins in Spring.

To increase performance, add suitable approved agricultural surfactant at recommended label rate.

After Northern conifers, Jack Pine, Red Pine, Black Spruce, and White Spruce cease growth and "harden off" (usually in mid-July), a spray of 1-1/2 to 3 quarts of product in 8 to 25 gallons of water per acre may be applied by air to control certain competing hardwood species such as Alder, Aspen, Birch, and Willow. Since this treatment may cause occasional conifer injury, do not use if such injury cannot be tolerated. Consult your regional or extension forester or State herbicide specialist for recommendations to fit local conditions.

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 AM-40 in a concentrate tree injector calibrated to apply 1 to 2 ml. per injection. Space injections 2 inches 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 1-1/2 inches 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.

Dormant Application (other than pine): For the control of susceptible deciduous brush species such as Alder, Cascara, Cherry Poplar and Service Berry, apply up to 3 quarts of product per acre in sufficient diesel, fuel oil or kerosene for good coverage. Application may be made by ground or air and should be made before conifer bud break.

Pine Only: Make application while pine buds are still dormant. Apply 2 quarts of product per acre in sufficient water for good coverage by air or ground equipment. Do not use

this application unless some pine injury is acceptable. Use of diesel, kerosene, or other oil, or addition of surfactants to spray mix may cause unacceptable pine injury.

Herbaceous Weed Control: To control over-wintering susceptible weeds such as False dandelion, Klamath weed, Plantain, Tansy ragwort, apply 1 to 3 quarts of product in sufficient water for good coverage. Make application at rates and timing indicated above if pines are present. For control of hazel brush and similar species in the Lake States area, apply 2 quarts of product per acre in 8 to 25 gallons of water, when new shoot growth of Hazel is complete (usually mid-July).

Site Preparation: (As Budbreak Spray) - For control of Alder prior to planting seedlings, apply 2 to 4 quarts of product per acre in 8 to 25 gallons of water, after Alder budbreak but before foliage is 1/4 full size. Application may be made by air or ground. (As Foliage Spray) - For control of Alder prior to planting seedlings, apply 2 quarts of product per acre in 8 to 25 gallons of water, after most Alder leaves are full size. To increase penetration, a suitable approved agricultural surfactant at recommended label rates, may be added to spray mixture.

POPLAR/COTTONWOOD TREES GROWN FOR PULP IN OREGON AND WASHINGTON - BROADLEAF WEED CONTROL:

Riverdale Weedestroy AM-40 Amine Salt may be applied through wick applicators or conventional ground sprayers. NOTE: WHEN IRRIGATING WITH OVERHEAD SPRINKLERS, DO NOT APPLY THIS PRODUCT BEFORE AN IRRIGATION AND WITHHOLD IRRIGATION FOR 2 DAYS BEFORE AND 3 DAYS AFTER TREATMENT. Do not allow Riverdale Weedestroy AM-40 Amine Salt to contact leaves or green bark of the tree. Use 1/2 pint to 3 pints per acre in enough water to provide uniform coverage prior to or after planting of Poplar/Cottonwood trees. Application during warm weather is preferred. Apply when weeds are actively growing, preferably before bud stage. Repeat treatment may be necessary for less susceptible weeds; re-apply as needed. Accord® may be mixed with Riverdale Weedestroy AM-40 Amine Salt to increase weed control. Follow both labels to determine correct rates. Two quarts or more of Wilbur-Ellis R-11 Spreader Activator per 100 gallons of spray solution may be added to improve herbicide performance.

Accord® is a Trademark of Monsanto Company.

AQUATIC APPLICATIONS

FOR AQUATIC WEEDS SUCH AS WATER HYACINTH IN WATERS THAT ARE QUIESCENT OR SLOW MOVING (LAKES, PONDS, RESERVOIRS, CANALS, RIVERS, BAYOUS, STREAMS, DRAINAGE DITCHES, MARSHES, ETC.): Aerial Application - Use 1 gallon of Weedestroy AM-40 in 5 to 15 gallons of water to cover one surface acre. Use drift control spray equipment or thickening agents mixed into the spray solution. Apply through standard boom systems with a minimum of 5 gallons of spray mix per acre. Surface Application - Use 2 to 4 quarts of Weedestroy 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. Use power sprayers operated with a boom or spray gun mounted on a boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. For DIRECTA-SPRAY™ operation, use this product with 1 pint of drift control agent in 50 to 100 gallons of water. For other applications, follow the drift control agent label for mixing directions. 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 1/3 to 1/2 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. For large bodies of weed infested waters, leave buffer strips of at least 100 feet wide and delay treatment of these strips for 4 to 5 weeks or until the dead vegetation has decomposed. Repeat as necessary to kill regrowth and plants missed in previous application.

IRRIGATION: Delay the use of treated waters for irrigation for three weeks after treatment unless an approved assay shows that the water does not contain more than 0.1 ppm 2,4-D acid. Do not treat irrigation ditches in areas where water will be used to overhead sprinkler irrigate susceptible crops, especially grapes, tomatoes, and cotton.

POTABLE WATER: Delay the use of treated water for domestic purposes for a period of three weeks or until such time as an approved assay shows that the water contains no more than 0.1 ppm 2,4-D acid.

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 to 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 to 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 to 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.

TANK MIXES

Read and follow the manufacturer's label recommendation of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions. If these recommendations conflict with this Weedestroy AM-40 label, do not use as a tank mix with Weedestroy AM-40.

Using AM-40 and **Harmony®** or **Harmony® Extra** for selective post-emergence control of certain weeds on wheat (including Durum) and barley: Use Harmony Extra plus 1/8 to 3/8 pound active ingredient 2,4-D. Surfactant may be added 0.125 to 0.25% vol/vol (1 pint to 1 quart per 100 gallons of spray volume); however, the addition of surfactant may increase the chance of crop injury. Use the 1 pint rate of surfactant with 1/4 to 3/8 pound active ingredient of 2,4-D. Higher rates of 2,4-D may be used, but do not exceed highest rate allowed on the label. Always mix Harmony Extra or Harmony in water prior to adding 2,4-D. Always add surfactant last.

Using AM-40 and **Ally®** for selective weed control in wheat (including Durum), barley and in grasses in acreage enrolled in the Conservation Reserve Programs (CRP) - also for resistant weed management: Use Ally at 1/10 ounce/A plus 1/4 to 1/2 pound active ingredient 2,4-D. Surfactant may be added at one to two pints per 100 gallons of spray volume; however, the addition of surfactant may increase the chance of crop injury. Always mix Ally in water prior to adding 2,4-D and surfactant. Always add surfactant last.

Using AM-40 and **Express®** tank mixtures for weed control in wheat and barley: Use Express plus 1/8 to 3/8 pound active ingredient 2,4-D. Surfactant may be added at 0.125 to 0.25% vol/vol (1 to 2 pints per 100 gallons of spray volume); however, the addition of surfactant may increase the chance of crop injury. Use the 1 to 2 pint rate of surfactant with 1/8 pound active ingredient of 2,4-D. Use the 1 pint rate of surfactant with 1/4 to 3/8 pound active ingredient of 2,4-D. Higher rates of 2,4-D may be used, but do not exceed highest rate allowed on the label. Always mix Express in water prior to adding 2,4-D and surfactant.

Using AM-40 and **Glean®** for post-emergent weed control in wheat, barley and oats: Mixtures of 2,4-D and Glean are recommended when weeds are large and/or stressed due to adverse environmental conditions (cold temperature, low soil moisture, dry, dusty field conditions) or when dense crop canopy makes it difficult to obtain thorough spray coverage. Use 1/4 to 1/2 pound active ingredients 2,4-D plus 1/6 to 1/3 ounce/A of Glean. Surfactant may be added at 1/2, but not more than 1 quart/100 gallons of spray; however, the addition of surfactant may increase the chance of crop injury. Glean should be mixed in water with agitator running prior to adding 2,4-D. For resistant weed management, see Glean label rates for different regional applications.

Using AM-40 and **Bladex® 4L** or **Bladex® 90DF** tank mixtures for early preplant or pre-emergence weed control for land going into production of corn under conservation tillage programs when burning down existing weeds: Where weeds are present at the time of application, add AM-40 Amine plus Ortho X-77 surfactant at 1 quart/100 gallons of diluted

spray, or other suitable surfactant at its recommended rate. At planting time, AM-40 and Bladex can also be used in combination when heavy crop residue exists. See pre-emergence section of Bladex label for appropriate rates. Tank mixes of AM-40 with Bladex 90DF can be used where broadleaf weeds are present at the above rate for Early Preplant or Post-Harvest weed control in continuous Winter wheat and for fallow cropland. Use the high rate when weeds are over 4 inches tall or for control of hard-to-kill weed species, such as perennials. In all instances, add the 2,4-D to the spray tank last. See directions for corn for the recommended application rates of AM-40.

Using Riverdale AM-40 and **Buctril® ME4** for weed control on cereal grains (wheat, barley and rye): Buctril ME4 Broadleaf Herbicide will control some annual weeds that are resistant to AM-40 and may be tank mixed with AM-40 for broader spectrum weed control on small grains. In cereal areas except Washington, Oregon and Idaho, use 1/2 to 1 pint of AM-40 plus 1/2 to 3/4 pint of Buctril ME4 per acre. In Washington, Oregon and Idaho: use 1/2 to 1 pint of AM-40 plus 3/4 to 1 pint of Buctril ME4 per acre. First mix the AM-40 in water then add the Buctril ME4. Use the higher rates for larger weeds or where weed growth is slow due to dry or cold weather. Apply before weeds are 6 inches high. Use 10 to 20 gallons total spray volume per acre with ground equipment or 5 to 10 gallons total spray volume with air application. Use higher volume on larger weeds. AM-40 and Buctril ME4 can also be tank mixed for field and popcorn. See both product labels for rates of application.

Using Riverdale AM-40 and **Garlon® 4** or **Garlon® 3A** tank mixtures for Non-Crop Areas: Broadleaf Weed Control - Use 2 to 4 pints of AM-40 plus 2 to 6 pints of Garlon 4 (or 3 to 8 pints of Garlon 3A) per acre. For wider spectrum control of broadleaf weeds and woody plants, apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing. Woody Plant total Broadcast Foliar Spray - Use 1 to 2 gallons of AM-40 plus 1-1/2 to 3 quarts of Garlon 4 (or 2 to 4 quarts of Garlon 3A) per acre. Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when woody plants are actively growing. Woody Plant Control High Volume Leaf-Stem Treatment with Ground Equipment - Use 1 to 2 gallons of AM-40 plus 1-1/2 to 12 pints of Garlon 4 (or 2 to 16 pints of Garlon 3A) per acre. Mix 1 to 3 quarts of AM-40 plus 1-1/2 to 3 pints of Garlon 4 (or 2 to 4 pints of Garlon 3A) in enough water to make 100 gallons of spray. Apply at a volume of 100 to 400 gallons of total spray per acre depending on size and density of woody plants. Thoroughly wet all leaves, stems, and root collars of plants to be controlled. Woody Plant Control Aerial Application (Helicopter only) - Use 1 to 2 gallons of AM-40 plus 3 to 4 quarts of Garlon 4 (or 4 to 6 quarts of Garlon 3A) per acre. Apply in total spray volume of 10 to 30 gallons per acre using drift control equipment such as Microfoil boom or an effective drift control agent such as Lo-Drift Spray Additive. Use the higher rates and volumes when plants are dense or under drought conditions.

Using Riverdale AM-40 and **Banvel® Herbicide** tank mixtures for Non-Crop Areas: Annual broadleaf weeds - Use 2 to 4 pints of AM-40 plus 1/2 to 1-1/2 pints of Banvel. For wider spectrum control of broadleaf weeds and woody plants - Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing. Use the higher rates when treating dense or tall vegetative growth. **Perennial and Biennial Broadleaf Weeds** - Use 3 to 6 pints of AM-40 plus 1/2 to 6 pints Banvel. Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing but prior to flowering. Use the lower rates for biennials less than 3 inches rosette diameter. Use the higher rates for perennial weeds or for biennial weeds past the 3 inch rosette stage. **Woody Plant Control Broadcast, High Volume, Stem Foliage or Aerial Application** - Use 1 to 2 gallons of AM-40 plus 2 to 8 quarts of Banvel. Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre or apply as a high volume stem foliage spray in enough volume to thoroughly wet leaves, stems and root collars (100 to 400 gallons per acre) or apply aerially in enough water to deliver total spray volume of 10 to 30 gallons per acre using drift control equipment such as the Microfoil Boom or an effective drift control agent such as Lo-Drift Spray Additive. Use the higher rates and volumes when plants are dense or under drought conditions. Tank mixing 2,4-D with Banvel Herbicide will improve control of late, post-emergent applications in corn, Fall and Spring seeded wheat, Fall seeded barley, pastures, rangelands, non-crop use, turfs and lawns. AM-40 may be tank mixed with **Banvel SGF®** for control of grasses or additional broadleaf weeds in Fall seeded wheat and barley. AM-40 may be tank mixed with **Veteran 720** or **Banvel 720** for broader spectrum control for non-crop uses (e.g. railroad, highway, pipelines, etc. including forest management applications). Add water to spray tank prior to addition

of tank mix products. Do not pre-mix concentrates. Since both **Veteran 720** and **Banvel 720** also contain 2,4-D, do not exceed 16 lbs. total 2,4-D acid equivalent per treated acre per growing season.

For control of Quackgrass and listed weeds in annual cropping systems, pastures and sods, this product may be mixed with **Ranger®** - refer to specific product label for use rates.

AM-40 may be tank mixed with **Tordon® 22K**. For use on areas having mixed species in non-cropland range, pasture wheat, barley, oats and fallow cropland.

Using Riverdale Weeddestroy AM-40 and **Round Up®** will control annual grasses and broadleaf weeds listed for Round Up alone plus the following broadleaf weeds: Lambsquarter, Prickly lettuce, Red root, Pigweed, Russian thistle, Velvet leaf. Fallow and reduced tillage areas only. Apply 12 to 16 ounces of Round Up plus 1/2 pound acid equivalent of AM-40 plus 1/2 to 1% nonionic surfactant by total spray volume per acre to control dense populations of the aforementioned weeds when less than 6 inches in height. Follow use directions as given in the "low-volume broadcast application" section of the Round Up label.

For high-volume broadcast applications.

When weeds are less than 6 inches tall, increase the quantity of Round Up to 1 quart; when weeds are over 6 inches tall, use 1-1/2 quarts of Round Up per acre. In both instances, water volumes should be 10 to 40 gallons per acre for ground applications. If weeds have been mowed, grated, or cut, allow adequate time for new growth to recommended stages prior to treatment. These rates will also provide control of weeds listed in the low-volume broadcast application section in addition to the following: Fivehook bassia, Broom fiddleneck, Flaxleaf fleabane, Fleabane, Kochia, Prickly lettuce, Panicum, Common ragweed, Giant ragweed, Pennsylvania smartweed, Annual sowthistle, Sunflower, Russian thistle, Velvetleaf. For Balsam Apple, apply with hand-held equipment only. A tank mix of Round Up and AM-40 will also control most perennial weeds. See Round Up label for specifics. For additional tank mixes in fallow and reduced tillage systems for control of annual weeds prior to emergence of crops, please see Round Up RT label.

For additional non-crop weed control benefits, up to 1-1/2 quarts per acre of AM-40 may be added to tank mixes of Round Up plus **Telar®**, Round Up plus **Oust®**, Round Up plus **Escort®** for the suppression of tall Fescue growth and seed heads and control, or partial control, of some annual weeds. For the suppression of Smooth brome growth and seed heads and control or partial control of some annual weeds, 1-1/2 quarts per acre AM-40 may be added to a tank mix of Round Up plus Oust.

Using Riverdale AM-40 and **Acclaim® 1 EC Herbicide** may be made to provide broadleaf weed and annual grassy weed control in Turfgrass including sod farms, commercial and residential turf. Apply before grassy weed tillering at a rate of 32 ounces of Acclaim per acre (or 0.73 ounces per 1,000 square feet) when mixing with AM-40 at a rate of 3/4 to 3 pints per acre (or 0.9 - 1.1 ounces per 1,000 square feet). Apply by means of a pressurized hydraulic sprayer using 30 to 60 psi and 30 to 60 gpa. Thorough spray coverage is important. Flat fan nozzles are recommended. Always follow use directions in accordance with respective labels. No label dosage rates should be exceeded.

Using Riverdale AM-40 and **Escort®**, **Oust®** and **Telar®**: To improve control of some target species, this product may also be tank mixed with Escort, Oust, and Telar herbicides for non-crop, post-emergent weed control. Tank mixes have shown improved control where resistant biotypes are present.

NOTE: All intended tank mix combinations should be used only in recommended areas on the same broadleaf weed species found on both labels. For application methods and other use specifications, use the most restricted limitations from labeling of both products.

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), adding rinsate to spray tank. 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 are 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.

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WARRANTY

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to seller, and buyer and the limit of liability of any such use. The exclusive remedy of user or buyer and the limit of liability of Riverdale Chemical Company is the purchase price paid for the quantity of product involved.
(ERP 102393) (PR933&11 042194/RW 040398)

