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PM23

228-143

1/12

MAY 31 1996

Mr. Russell F. Sawyer
 Riverdale Chemical Company
 425 West 194th Street
 Glenwood, Illinois 60425-1584

Dear Mr. Sawyer:

SUBJECT: Label Amendment - Addition of Use on Rice in MS, Tank
 Mixes, and Other Minor Changes
 Riverdale MCPA-4 Amine
 EPA Registration No. 228-143
 Your Submission Dated April 24, 1996

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable, provided you make the following changes:

1. In the directions for tank mixing with **Harmony**, revise the second sentence to read as follows: "Use MCPA-4 Amine at a rate of 1/8 to 3/8 pound acid equivalent (a.e.) per acre."
2. In the directions for tank mixing with **Harmony Extra**, delete the comma between "Corn" and "Gromwell". Corn Gromwell is a single weed species.
3. In the directions for tank mixing with **Ally**, correct the following errors:
 - 3a. In the fourth sentence, which begins "Apply MCPA-4 Amine plus Ally after ..." change "five-week" to "five-leaf". Also, in the same sentence, insert the word "and" between "Duram" and "Wampum".
 - 3b. In the last sentence, insert the word "or" after "Wheat and Barley". The corrected sentence should begin "MCPA and ALLY can be tank mixed for use on Wheat or Barley or in pastures and rangelands"

RD:STANTON:PM Team 23:Rm. 235:CM-2:305-5218:Disk #2:S504595.LET

CONCURRENCES

SYMBOL ▶	7505C							
SURNAME ▶	S. Stanton							
DATE ▶	May 29, 1996							

4. In the directions for tank mixing with **Buctril**, delete the last sentence regarding applications to Conservation Reserve Program areas. This is not an approved use site for MCPA-4 Amine.
5. In the directions for tank mixing with **Banvel SGF**, revise the seventh sentence, which currently reads "For Spring and Fall-seeded Wheat, apply 6 to 8 fluid ounces of Banvel SGF with 1 to 2 pints of MCPA-4 Amine per acre" to read as follows:

"For Fall-seeded Wheat only, applications may be made at the rate of 6 to 8 fluid ounces of Banvel SGF plus 1 to 2 pints of MCPA-4 Amine per acre. Do not use unless potential crop injury will be acceptable."
6. In the directions for tank mixing with **Tordon 22K**, revise the text in parentheses to read "which is not flood or sub-irrigated and not rotated to broadleaf crops."
7. Revise the directions for tank mixing with **Avenge** to read as follows: "MCPA-4 Amine may be tank mixed with Avenge for use in Barley and Wheat." Wild oats must be deleted as a use site, since it is a weed pest, rather than a use site. At your discretion, you may add a statement or modify the above statement to indicate that this tank mix controls wild oats.
8. In the directions for tank mixing with **Poast** and **Buctril**, correct the following errors:
 - 8a. In the statement which begins "Mix these three products according to the rates recommended on the respective product labels, ...", correct the typographical error in the MCPA-4 Amine rate. It should read "or up to a maximum of 1/4 pound MCPA-4 Amine a.e. per acre."
 - 8b. Insert the missing words "are not" in the sentence which begins "Do not delay spraying...". The corrected sentence should read: "Do not delay spraying broadleaf weeds, even though grassy weeds are not in correct stage for treatment."
9. Add the statement "Nalco-Trol is a Registered Trademark of Nalco Chemical Company" to the section identifying other registered trademarks used on the label.
10. At your discretion, you may revise the application rate for new stands of clover from 1/4 to 1/2 pint per acre as on the cited product label (EPA Reg. No. 802-138).

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A stamped copy is enclosed for your records. Please submit (one) final printed copy of the above mentioned label before releasing the product for shipment.

Sincerely yours,

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

Enclosure

(Front Panel)

RIVERDALE

MCPA-4 AMINE

4/12

For Selective Postemergent Control of Many Broadleaf Weeds
In Wheat, Oats, Barley, Rye, Rice, Peas, Flax,
Established Grasslands and Non-Crop Areas.

See Label for Tank Mixes

ACTIVE INGREDIENT:

Dimethylamine Salt of 2-Methyl-4-Chlorophenoxyacetic Acid*	48.58%
INERT INGREDIENTS:	51.42%
TOTAL	100.00%

Isomer Specific AOAC Method, Equivalent to:

*2-Methyl-4-Chlorophenoxyacetic Acid 39.67%, 3.7 lbs./gal.

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. 228-143

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
MAY 31 1996

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

228-143

(Inside Booklet)

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER - PELIGRO

Corrosive, causes irreversible eye damage. Do not get in eyes, on skin, or clothing. Avoid inhalation of spray mists. Harmful if swallowed, inhaled or absorbed through skin.

NON-WPS 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: eye protection and rubber gloves.

WPS USES: Personal Protective Equipment - 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, long pants, waterproof gloves, shoes plus socks, and protective eyewear. 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.

Engineering Controls Statements: 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.

STATEMENT OF PRACTICAL TREATMENT

- IF IN EYES:** Immediately flush eyes with plenty of water for 15 minutes and get medical attention at once.
- IF SWALLOWED:** Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.
- IF ON SKIN:** Wash promptly with soap and water and rinse thoroughly. Get medical attention.
- IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

ENVIRONMENTAL HAZARDS

Drift or run-off may adversely affect 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 or rinsate nor pour washwaters on the ground; spray or drain over a large area away from wells and other water sources. Do not apply this product through any type of irrigation system. Do not contaminate domestic or irrigation waters. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. This product will kill or seriously injure many desirable forms of vegetation. Do not apply directly to flowers, fruits, grapes, tomatoes, ornamentals, cotton or other desirable plants. Vapors from this product may injure susceptible plants in the immediate vicinity. Do not apply when weather conditions favor drift from target area. Avoid use of small-diameter nozzles. Coarse sprays are less likely to drift. A spray thickening agent, such as Nalco-Trol®, may be used with this product to aid in reducing spray drift. If used, follow all use recommendations and precautions on both product labels. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth.

Determine air movement and direction before foliar application. Use a smoke generator or other means at or near the application site for the detection of air movement, air stability, or temperature inversions. Such a condition exists when there is little or no wind and air temperature is lower near the ground than at higher levels. Use appropriate drift control measures or avoid application when smoke is moving toward nearby desirable susceptible plants or sensitive areas.

Most cases of groundwater contamination involving phenoxy herbicides such as MCPA have been associated with mixing/loading and disposal sites. Caution should be exercised when handling MCPA pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing and 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.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its label. 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. Do not enter treated areas until spray has dried.

GENERAL INFORMATION

MCPA is effective on a large number of broadleaf weeds and is useful for controlling these weeds in certain crops. Several crops, such as flax, rice, oats, and small grains underseeded to legumes, are more tolerant of MCPA than they are of 2,4-D. Crop varieties vary in response to MCPA, and some may be easily injured. Apply this product only to varieties known to be tolerant to MCPA. Injury to crops may occur from this pesticide. If you are not prepared to accept some degree of crop injury, do not use this product. If you are uncertain concerning tolerant varieties or local use situations that may affect crop tolerance to MCPA, contact your seed company or State Agricultural Extension Service for advice.

NOTE: Adding oil, wetting agent or other surfactant to the spray may reduce selectivity to crops, possibly resulting in crop injury.

EFFECTIVENESS ON WEEDS: Riverdale MCPA-4 Amine is effective on a large number of broadleaf weeds. On Mustard, Thistle, and White top or Hoary cress, it has superiority over

2,4-D. The following are some of the weeds killed: Beggartick, Bindweed, Burcucumber, Burdock, Buttercup, Canada thistle, Carpetweed, Catsear, Cocklebur, Corn cockle, Croton (goatweed), Daisy, Dandelion, Dock, Dragonhead mint, Dwarf nettle, Fat hen, Fennel, Field bindweed, Galinsoga, Goatsbeard, Goldenrod, Halbertleaved salt bush, Hempnettle, Hoary cress, Honeysuckle, Jimsonweed, Knotweed, Kochia, Lambsquarter, Marshelder, Mexican poppy, Mustard, Narrow leaf plantain, Nutgrass, Pennycress, Pepperweed, Perennial morningglory, Pigweed, Plantain, Poison hemlock, Prickly lettuce, Puncturevine, Purslane, Ragweed, Red root, Redstem, Sheperdspurse, Sicklepod, Small plantain, Sneezeweed, Sow thistle, Spanish needle, Stinging nettle, Stinkweed, Sunflower, Thistle, Thornapple, Tree-of-heaven, Vetch, White top, Whitebrush, Wild carrot, Wild gooseberry, Wild jute, Wild marigold, Wild petunia, Wild radish, Wild sage, Witchweed, Yellow charlock-mustard, Yellow daisy, Yellow rocket.

SELECTIVE SPRAYING:

NOTE: When using on grain, flax, grasslands, and pastures - do not forage or graze dairy and meat animals on treated areas within seven days of slaughter and/or treatment. Do not grow crayfish or catfish in treated rice fields.

Wheat, Oats, Barley and Rye - Not underseeded with legumes - Apply as a water mix spray by ground sprayer or airplane. Use 1/2 to 1 pint per acre for the more susceptible weeds after crop has reached the 3 to 4 leaf stage up to boot stage. Use up to 3 pints per acre for less susceptible weeds after crop has tillered and up to early boot stage. Do not spray from boot to dough stage.

Wheat, Oats, Barley and Rye - Underseeded with legumes - Alfalfa, Alsike, Birdsfoot Trefoil, Lespedeza, Red and White clover: For emergency control of serious infestations of Mustard, Yellow rocket and other susceptible broadleaf weeds, apply 1/4 to 1/2 pint per acre. The 1/4 to 1/2 pint per acre rate can produce injury to legumes. **Balance the severity of your weed problem against the possibility of crop damage.**

Make application after cereal is well tillered in the 4-leaf stage (4 to 8 inches tall) when legumes are 2 to 3 inches tall. Do not spray grain in the boot to dough stage. The nurse crop and weeds should provide a protecting canopy which, together with the use of low gallonage applied at low pressure, will reduce the risk of damage to the legumes. Do not apply to small grains underseeded with Vetch or Sweet clover, which are very susceptible. There is a definite risk to other legumes if only thinly protected by a canopy.

When applying to small grains use a minimum of 10 gallons of water per acre for ground application and at least 2 gallons of total spray per acre for aerial application.

EMERGENCY CONTROL IN WHEAT - Use 3-1/4 pints per acre for perennial broadleaf weeds. Apply when weeds are approaching bud stage, but do not spray grain in the boot to dough stage. The 3-1/4 pints 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 effect of crop injury.

WEED CONTROL IN ESTABLISHED ALFALFA AND RED CLOVER: For control of Yellow rocket and other susceptible annual weeds such as Pennycress or Fanweed, use 1 pint per acre of MCPA-4 Amine. Only use 1/4 pint per acre on new stands after Clover has two or more true leaves. Old stands of Red clover may be retarded by application of MCPA. Apply in late Fall following frosts when the legumes are dormant before active growth starts. The temperature at the time of spraying should be above 40°F.

CANNING PEAS: Use MCPA-4 Amine at 1/4 to 3/4 pint per acre. Apply in at least 2 to 10 gallons of total spray for aerial application and 5 to 30 gallons of water for ground equipment. Apply to peas after the 3 node stage and before the first pea flowering. Use when peas are 4 to 6 inches tall. Do not apply during bloom period of crop. To control Canada thistle, use 1/2 to 3/4 pint per acre. Peas may be injured somewhat at the higher rate of application, but if Thistle growth is heavy, control will more than compensate for injury to peas. Do not spray peas that are stressed from lack of moisture or when temperatures are over 90°F. Do not graze treated fields or feed treated vines to livestock.

RICE IN CALIFORNIA: For early season broadleaf weed and sedge control in rice, apply 1 to 1-1/2 pints of MCPA-4 Amine herbicide per acre by air in 8 to 10 gallons of total spray volume when rice is in the 3 to 4 leaf stage, and with well established root systems, usually 18 to 24 days after planting. Applications made during hot weather or at the higher dosage range may cause temporary stunting of the rice. For maximum effectiveness the

weeds should be exposed at the time of treatment. If retreatment is necessary, usually 35 to 65 days after planting, the total amount per acre of MCPA-4 Amine applied in the two applications must not exceed 3 pints in one season.

RICE IN MISSISSIPPI: Apply Riverdale MCPA-4 Amine at the rate of 2 to 3 pints per acre in 10 to 30 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 the EPA registered label for Riverdale MCPA-4 Amine or your local University or Agricultural Extension Service specialists for more specific information on weeds controlled, application rates, and application timing. **Restrictions:** Applications of Riverdale MCPA-4 Amine 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 MCPA-4 Amine, 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 MCPA-4 Amine 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.

RICE In Other Areas: For the control of certain broadleaf weeds and sedges. 7 to 10 weeks after planting, apply 2 to 3 pints of MCPA-4 Amine in 10 to 30 gallons of water per acre for ground equipment and at least 2 to 5 gallons of water per acre for aerial application. Use the higher rate where sedges or bulrushes are the major problem, use the lower rate for control of Arrowhead, Water plantain, and Redstem. Treat when rice is fully tillered and 6 to 8 inches above water, usually 35 to 65 days after planting. Do not treat when rice is in the early seedling, boot or early heading stages, or when air temperature is over 90°F. Some rice varieties may be less tolerant to MCPA than others. Consult your Agricultural Experiment Station or Extension Service Weed Specialists for appropriate rates and timing of MCPA spray and on tolerance of rice varieties.

FLAX - Use 1/4 to 1/2 pint of Riverdale MCPA-4 Amine in 5 to 20 gallons of water per acre by ground equipment and at least 2 to 5 gallons of water per acre by air. Apply only when weeds are up and when flax is 2 to 8 inches high and before it comes into bud stage. Treatment after early bud stage may result in severe damage. If Canada thistle is present it may be necessary to go as high as 3/4 pint per acre to prevent seed head production. Some injury to the flax may result.

RANGE AND TIMBER LANDS: For control of Whitebrush - Use 1-1/4 quarts and sufficient water to make 8 gallons of solution per acre. To increase effectiveness, 1 gallon of diesel oil may be added after MCPA has been diluted. Diesel oil must be added with agitation. Spray mixtures with diesel oil must be kept agitated during spraying to avoid separation in the tank. Apply in Spring or Fall under good moisture conditions, full leaf, before blossoms begin to fall.

GRASSES:

Established Lawns, Golf Courses and Similar Turf Grasses - Use 1 to 4 pints per acre in 10 to 120 gallons of water to give thorough coverage. Use higher rate for White top and Canada thistle. On smaller areas, use 1 fluid ounce (4 tablespoonfuls) mixed in 1 to 3 gallons of water and apply uniformly over 1,000 square feet. Do not exceed specified application dosages for any area. Avoid applying during excessively dry or hot periods unless irrigation (watering) is used before treatment. For best results, 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. Spring and Fall are best times to treat. Do not use on lawns of creeping grasses, such as bent, except for spot spraying, nor on freshly-seeded turf until the grass has become well established, usually after the third mowing.

Established Grassland and Pastures - Use 1 to 4 pints per acre in sufficient water (2 to 120 gallons) in airplane or ground sprayer application and give thorough coverage. Use higher rate for White top, Canada thistle and other hard-to-kill weeds; spray perennials in early bud to full bloom stage and regrowth in Fall. Other weeds in Spring or Fall.

FALLOW LANDS: For control of susceptible weeds in fallowlands, use 6 pints of product per acre in enough water to give sufficient coverage. Do not plant any crop for 3 months after treatment or until chemical has disappeared from soil.

Grasses Grown for Seed - Use 2 to 4 pints per acre in 2 to 120 gallons of water by air or ground sprayer application. Use higher rate where weed stands are heavy. In established grasses apply in Spring before head comes into boot stage and on seedling grass after grass has tillered.

NOTE: For weed control in grasses, repeat treatment may be needed for less susceptible weeds. White clover and other legumes may be temporarily injured or killed. In some areas, bent, buffalo, carpet, centipede, dichondra and St. Augustine grasses may also be injured by the treatment.

NON-CROP SPRAYING: Canada thistle, White top and Meadow buttercup - (In Non-Crop Areas such as Roadsides, Fence rows, Rights-of-way and similar places): Use 6 pints of product per acre in enough water to give sufficient coverage.

SPOT TREATMENT: For weed control in pastures, rangelands and in non-crop areas such as fencerows, farmyards, shelterbelts, and roadsides: Use 1/4 pint to 3 to 4 gallons of water or 3/4 gallon per acre in 12 to 20 gallons of water to control weeds such as Canada thistle, Whitetop, Meadow buttercup, and Texas blueweed giving coverage for most extensive areas. Spray to wet weeds thoroughly when in bud to early bloom and again on Fall regrowth.

STORAGE AND DISPOSAL

STORAGE: Always use original container to store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. Store at temperature above 32°F. If allowed to freeze, warm to at least 40°F and remix before using. Freezing 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 and disposal.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. 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. 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 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 use of this chemical. Consult State Agricultural Extension or Experiment Station weed specialists for specific recommendations for local weed problems and for information on possible lower dosages.

WARRANTY: Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risk of use, storage or handling of this material not in strict accordance with directions given herewith. (PR933&11 042194/RV 042496)

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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 MCPA-4 Amine label, do not use as a tank mix with MCPA-4 Amine. All intended tank mix combinations should be used only in recommended areas on the same broadcast weed species found on both labels. For application methods and other use specifications, use the most restricted limitations from labeling of both products.

MCPA-4 Amine may be tank mixed with **Harmony**® for selective post-emergence control of certain weeds on Wheat and Barley. Use Harmony at a rate of 1/8 to 3/8 pound active ingredient per acre. Surfactant may be added at 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 a.e. rate of MCPA-4 Amine. Use the 1 pint rate of surfactant with 1/4 to 3/8 pound a.e. of MCPA-4 Amine. Higher rates of MCPA-4 Amine may be used, but do not exceed highest rate allowed on the label. Always mix Harmony in water prior to adding MCPA-4 Amine and surfactant.

MCPA-4 Amine may be tank mixed with **Harmony**® **Extra** for use on Wheat, Barley, and Oat. For best results, add MCPA-4 Amine to the tank at 1/8 to 3/8 pound a.e. per acre. Surfactant may be added to mixture at 1 to 2 pints per 100 gallons of spray volume; however, adding surfactant may increase the potential for crop injury. In tank mixes containing 1/8 pound a.e. per acre of MCPA-4 Amine per acre, add 1 to 2 pints of surfactant; in tank mixes containing 1/4 to 3/8 pound a.e. per acre, add 1 pint of surfactant. Higher rates of MCPA-4 Amine may be used, but do not exceed the highest rate allowed by this label. Always mix Harmony Extra with water prior to adding MCPA, and add the surfactant last. MCPA-4 Amine may also be tank mixed with Harmony Extra for the control of Corn, Gromwell, Wild buckwheat, and Vetch (common and hairy). In Oats, also controls Vetch (common and hairy), Wild garlic, and Wild radish.

MCPA-4 Amine may be tank mixed with **Ally**® after weeds have emerged. For best results, use 1/10 ounce of Ally per acre; add MCPA-4 Amine herbicide to the tank at 1/4 to 1/2 pound a.e. per acre. Surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution; however, adding surfactant may increase the potential for crop injury. Apply MCPA-4 Amine plus Ally after three to five-week stage, but before boot (with Durum Wampum varieties, do not apply before tillering). Always mix Ally in water prior to adding MCPA-4 Amine and surfactant. Always add surfactant last. MCPA and Ally can be tank mixed for use on Wheat or Barley in pastures and rangelands for the control of Blue mustard, Flixweed, Tansy mustard, Canadian thistle, Sowthistle, Corn gromwell, Prostate knotweed, Sunflower (common/volunteer), and Wild buckwheat.

MCPA-4 Amine may be tank mixed with **Express**® for use on Wheat and Barley. For best results, add MCPA-4 Amine to the tank at 1/8 to 3/8 pound a.e. per acre. Surfactant may be added to the mixture at 1 to 2 pints per 100 gallons of spray volume; however, adding surfactant may increase the potential for crop damage. Tank mixes containing 1/8 pound a.e. MCPA-4 Amine per acre, add 1 to 2 pints of surfactant; in tank mixes containing 1/4 to 3/8 pound a.e. of MCPA-4 Amine per acre, add 1 pint of surfactant. Higher rates of MCPA-4 Amine may be used, but do not exceed the highest rate allowed on the label. Always mix Express and water prior to adding MCPA and add the surfactant last. MCPA-4 Amine and Express may also be used to control Vetch (common and hairy), Wild garlic, and Wild rice.

MCPA-4 Amine may be used annually with **Glean**® **FC** after weeds have emerged. For best results, use 1/6 to 1/3 ounce of Glean FC per acre; add MCPA-4 Amine to the tank at 1/4 to 1/2 pound a.e. per acre. Surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution; however, adding surfactant may increase the potential for crop injury. Do not add a surfactant when Glean FC and MCPA-4 Amine are tank mixed with a liquid fertilizer. Apply MCPA-4 Amine plus Glean FC after the three to five-leaf stage, but before boot. Applying a tank mixture of MCPA-4 Amine and Glean FC, with fertilizer when temperatures are below freezing or when the crop is stressed in cold weather just prior to winter dormancy, can result in severe foliar burn and/or crop injury. Do not apply MCPA-4 Amine plus Glean FC in combination with organophosphate insecticides.

MCPA-4 Amine may be tank mixed with **Finesse**® in Wheat and Barley for post-emergent broadleaf weed control. For best results, use 1/5 to 2/5 ounce of Finesse per acre; add MCPA-4 Amine to the tank at 1/4 to 1/2 pound a.e. per acre. Surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution; however, adding surfactant may increase the potential for crop injury. Do not add surfactant when MCPA-4

Amine and Finesse are applied with liquid fertilizer. Apply MCPA-4 Amine plus Finess after the three to five-leaf stage, but before boot stage. Applying a tank mixture of MCPA-4 Amine, Finesse, and a liquid fertilizer when temperatures are below freezing or when the crop is stressed from cold weather, just prior to Winter dormancy can result in foliar burn and/or crop injury. Do not apply MCPA-4 Amine plus Finesse in combination with organophosphate insecticides.

MCPA-4 Amine may be used with **Buctril®** in Wheat, Barley, Oats, and Rye in the four-leaf stage, but before jointing. This tank mix improves control of Mustards, Pigweed, and Kochia. Apply to weeds up to four-leaf stage, two inches in heights to one inch in diameter, whichever comes first. Use at a rate of 1/4 to 1/2 pound a.e. per acre of MCPA-4 and 1 to 2 pints per acre of Buctril. This tank mix can also be applied to Conservation Reserve Program areas after grasses have reached the three-leaf stage. Do not use this tank mixture in areas where Alfalfa or other legumes have been planted.

MCPA-4 Amine may be tank mixed with **Banvel® Herbicide** for Fall and Spring-seeded wheat. Applications to Fall-seeded wheat must be made prior to jointing stage and to Spring-seeded wheat before wheat exceeds the five-leaf stage. Apply 2 to 4 fluid ounces of Banvel Herbicide and 8 to 12 fluid ounces of MCPA-4 Amine per acre. For use on Fall-seeded wheat only, apply 3 to 4 fluid ounces of Banvel Herbicide with 1 to 2 pints of MCPA-4 Amine per acre. Do not use unless potential crop injury will be acceptable. For Fall-seeded Barley, apply 2 to 4 fluid ounces of Banvel Herbicide with 8 to 12 fluid ounces of MCPA-4 Amine per acre. This mixture must be applied to Fall-seeded Barley prior to jointing stage. For Spring Barley varieties that are seeded during the Winter months or later, follow the rates and timings given for Spring-seeded Barley. For Spring-seeded Barley, application must be made before Barley exceeds the four-leaf stage. Apply 2 to 3 fluid ounces of Banvel Herbicide with 8 to 12 fluid ounces of MCPA-4 Amine per acre. For Fall and Spring-seeded Oats, application must be made before Spring-seeded Oats exceed the five-leaf stage. Applications to Fall-seeded Oats must be made prior to the jointing stage. Use 2 to 4 fluid ounces of Banvel Herbicide with 8 to 12 fluid ounces of MCPA-4 Amine per acre.

For grasses grown for seed, such as Bermudagrass, Bluegrass, Fescue, and Ryegrass, application must be made after the grass seed crop begins to joint. For the best performance, make applications when weeds are in the two to four-leaf stage and rosettes are less than two inches across. Use the higher level of listed ranges when treating more mature weeds or dense vegetative growth. Apply 1/2 to 2 pints of Banvel Herbicide with 1 to 2 pints of MCPA-4 Amine per acre.

Herbicides other than Sulfonylureas, such as MCPA-4 Amine, tank mixed with **Banvel® SGF** will offer more consistent control of sulfonylureas-resistant weeds. Surfactants are not recommended when applying this tank mix on small grains. This tank mix must be applied to Fall-seeded Wheat prior to the jointing stage. For Spring-seeded Wheat, applications must be made before wheat exceeds the five-leaf stage. Apply 4 to 8 fluid ounces of Banvel SGF with water before adding 8 to 12 fluid ounces of MCPA-4 Amine per acre. Always add MCPA-4 Amine after diluting Banvel SGF. For Spring and Fall-seeded Wheat, apply 6 to 8 fluid ounces of Banvel SGF with 1 to 2 pints of MCPA-4 Amine per acre. For Fall-seeded Barley, application must be made prior to jointing stage. Apply 4 to 8 fluid ounces of Banvel SGF with 8 to 12 fluid ounces of MCPA-4 Amine per acre. For Spring Barley varieties that are seeded during the Winter months or later, follow the rates and timing given for Spring-seeded Barley. Spring-seeded Barley must be applied before Barley exceeds the four-leaf stage. Apply 4 to 6 fluid ounces of Banvel SGF with 8 to 12 fluid ounces of MCPA-4 Amine per acre. For Fall and Spring-seeded Oats, this tank mix must be applied before Spring-seeded Oats exceed the five-leaf stage. Applications to Fall-seeded Oats must be made prior to the jointing stage. Apply 4 to 8 fluid ounces of Banvel SGF with 8 to 12 fluid ounces of MCPA-4 Amine per acre. For grasses grown for seed, such as Bermudagrass, Bluegrass, Fescue, and Ryegrass, tank mixes with Banvel SGF and MCPA-4 Amine may be used to control broadleaf weeds.

MCPA-4 Amine may be tank mixed with **Tordon® 22K**, a restricted-use pesticide. For use on Barley, Oats, and Wheat not underseeded with a legume (which is not or floor or sub-irrigated, and not rotated to broadleaf crops).

MCPA-4 Amine may be tank mixed with **Curtail®**. Apply Curtail at a rate of 2 to 2-2/3 pints plus MCPA-4 Amine using up to 1/2 pint per acre in the Spring to actively growing Wheat or Barley once four leaves have unfolded on the main stem and tillering has begun up to the jointing stage (first node of main stem detectable). To control or supress weeds, make application at the maximum emergence of the target weeds, but before they exceed three

inches in height or diameter (four rosettes). To obtain season-long control of perennial weeds, such as Canada thistle, apply after the majority of the weed's basal leaves have emerged from the soil, but before bud stage. A late timing of application (when the grain is between the jointing and boot stages) may be used to treat later-emerging weeds; however, do not apply unless the risk of injury is acceptable. Do not apply after the boot stage.

NOTE: Higher rates of Curtail or any application of Curtail following a Spring post-emergence treatment with MCPA may increase risk of crop injury.

MCPA-4 Amine may be tank mixed with **Stinger**® for weed control in Wheat, Barley, and Oats. Apply 1/4 to 1/3 pint of Stinger plus 1/2 to 1 pint of MCPA-4 Amine per acre from the three-leaf stage up to early boot stage of growth. For control of perennial weeds, such as Canada thistle, 1/3 pint of Stinger per acre should be used. Russian knapweed will only be suppressed at this rate.

MCPA-4 Amine may be tank mixed with Stinger for application in grasses grown for seed. Apply only to established grasses before the boot stage. Application in the boot stage and beyond can increase injury. Do not apply to Bentgrass unless injury can be tolerated. For control of late emergent Canada thistle, a pre-harvest treatment may be made after the grass seed is fully developed. Treatment of Canada thistle at the bud stage or later may result in less consistent control. Post-harvest, Fall treatments may be made to actively growing Canada thistle after the majority of basal leaves have emerged. Use 2 to 4 pints of MCPA-4 Amine with 1/4 to 2/3 pint of Stinger per acre. For control of annual weeds and Canada thistle - treat as necessary, do not exceed 2/3 pint of Stinger per acre per season.

NOTE: Do not tank mix Stinger with MCPA-4 Amine unless the risk of injury is acceptable.

MCPA-4 Amine may be tank mixed with **Avenge**® for use in Barley, Wheat and Wild oats.

MCPA-4 Amine may be used in combination with **Poast**® and **Buctril**® for grass and broadleaf weed control in Flax. Controls a mixed population of grasses and broadleaf weeds listed as susceptible on the respective product labels. Prepare the tank mix by adding MCPA-4 Amine to half the final water volume, then oil concentrate or Dash HC spray adjuvant, then Poast, then Buctril, and bring the mixture to the final volume. Agitation must be continuous from the time of mixing through spraying. Mix these three products according to the rates recommended on the respective product labels, up to a maximum of one pint of Buctril equivalent per acre, or up to a maximum 1/4 pound MCPA-4 Amine a.e. per acre. Do not delay spraying broadleaf weeds, even though grassy weeds in correct stage for treatment. Buctril or Poast applied with MCPA-4 Amine may cause leaf burn, retarded growth, and delayed maturity of the crop. Some reduced grass control may be experienced with this tank mix. Do not add ammonium sulfate or UAN solutions to this tank mix.

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Curtail, Stinger, and Tordon are Registered Trademarks of DowElanco

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