



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 22, 2022

Marcia Trostle
Senior Advisor
Loveland Products Inc.
P.O. Box 1286
Greeley, CO 80632-1286

Subject: Registration Review Label Amendments Incorporating Mitigation from the National Marine Fisheries Services (NMFS) Biological Opinions on the Effects of Prometryn on Pacific Salmonids
Product Name: PROMETRYNE 4L HERBICIDE
EPA Registration Number: 34704-692
Application Date: 09/02/2021
Decision Number: 589212

Dear Marcia Trostle:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the NMFS' Biological Opinion on the effects of Prometryn on Pacific salmonids. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently

Page 2 of 2
EPA Reg. No. 34704-692
Decision No. 589212

approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Srijana Shrestha at shrestha.srijana@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a long horizontal flourish extending to the right.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure: Stamped Label



PROMETRYNE 4L

HERBICIDE

FOR SELECTIVE WEED CONTROL IN COTTON, CELERY, PARSLEY AND DILL.

ACTIVE INGREDIENT:

Prometryn: 2,4-bis (isopropylamino)-6-(methylthio)-s-triazine	44.4%
INERT INGREDIENTS:	55.6%
TOTAL	100.0%

PROMETRYNE 4L contains 4 lbs. active per gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

EPA REG. NO. 34704-692

EPA EST. NO. 34704-NB-2

NET CONTENTS 2½ GALS. (9.46 L)

ACCEPTED

Dec 22, 2022

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 34704-692

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

Remove contaminated clothing and wash clothing before reuse. Harmful if absorbed through skin. Causes moderate eye irritation. Harmful if swallowed. Avoid contact with skin, eyes, or clothing.

FIRST AID	
If Inhaled:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes:	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed:	Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<p>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils,
- Shoes plus socks.

In addition, mixers and loaders supporting aerial applications must wear:

- chemical-resistant apron and
- wear a minimum of a NIOSH-approved elastomeric half mask respirator with organic vapor (OV) cartridges; OR a NIOSH-approved full-face respirator with OV cartridges; OR a gas mask with OV canisters; OR a powered air purifying respirator with OV cartridges.

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 and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering controls statements:

Pesticide handlers must use closed systems when mixing and loading prometryn for aerial applications to cotton. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with 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.

ENVIRONMENTAL HAZARDS

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 washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call **1-800-222-1222**.

NON-TARGET ORGANISM ADVISORY STATEMENT: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift

DIRECTIONS FOR USE

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

Endangered Species Protection Requirements: It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

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 for celery and 12 hours for all other crops. Exception: if the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils,
- shoes plus socks.

Shake well before using.

For agricultural or commercial use only. Not for use by homeowners.

CHEMIGATION:

Refer to supplemental labeling entitled "APPLICATION THROUGH IRRIGATION SYSTEMS CHEMIGATION" for use directions for chemigation. Do not apply this product through any irrigation systems unless the

supplemental labeling on chemigation is followed.

SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 miles per hour at the application site. If wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NONTARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed.

AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas.)

PROMETRYNE 4L is a selective herbicide that may be applied either before or after weeds emerge for control of most annual broadleaf weeds and grasses, including groundcherry, lambsquarters, annual morningglory, malva, mustard, black nightshade, pigweed (carelessweed), purslane, Florida pusley, ragweed, smartweed, teaweed (prickly sida), barnyardgrass (watergrass), crabgrass, foxtail, goosegrass, junglerice, *Panicum* spp., signalgrass (and other *Brachiaria* spp.), and wild oats. PROMETRYNE 4L also controls shallow-germinating seedlings of cocklebur, coffeeweed, and sandbur. It does not control johnsongrass, bermudagrass, other established perennials, or sprangletop at selective rates.

When applied before weeds emerge, PROMETRYNE 4L enters weeds through their roots. Thus, its effectiveness depends on moisture to move it into the soil. Under very dry soil conditions after application, a shallow cultivation or rotary hoeing will generally result in better weed control.

When applied to emerged weeds, PROMETRYNE 4L provides foliar knockdown and/or residual control of later germinating weeds, depending on the rate applied.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected, we recommend the use of this product in combination with other registered herbicides which are not triazines. Consult with your State Agricultural Extension Service for specific recommendations.

FAILURE TO FOLLOW DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR PERFORMANCE, AND/OR ILLEGAL RESIDUES.

Equipment and Mixing

Thoroughly clean sprayer prior to use. Do not use a sprayer contaminated with 2,4D or other materials, as crop damage or sprayer clogging may result.

Use conventional spray equipment with hydraulic or mechanical agitation. Screens in nozzles and in suction and in-line strainers should be no finer than 50-mesh. Use a pump with capacity to maintain 35-40 psi at the nozzles, and provide sufficient agitation in tank to keep mixture in suspension. A centrifugal pump which provides propeller shear action is recommended for dispersing and mixing this product. Spray solution should be bypassed through a correctly positioned sparger tube or jets.

Nozzles: For preplant incorporated or preemergence application, use flat fan nozzle tips. For postemergence band application, use off-center nozzle tips. For postemergence broadcast application, use flat fan or off-center nozzle tips. Use flood nozzle tips only in Arizona and California for lay-by treatment in cotton at least 18 inches tall.

Mixing: (1) Fill spray tank $\frac{1}{2}$ to $\frac{3}{4}$ full with clean water. (2) Start agitation. (3) Pour the product directly from the container into the spray tank partially filled with water, and then add the rest of the water. (4) Provide agitation during mixing and application to maintain a uniform suspension.

Cleaning: Wash sprayer thoroughly with clean water immediately after use. Do not use the same sprayer on sensitive crops, as even small residues of PROMETRYNE 4L in the tank may cause injury to these crops.

Ground Application (All uses):

Use conventional ground sprayer equipped with nozzles that provide accurate and uniform application.

Calibrate sprayer before use. Unless otherwise specified, use a minimum of 20 gals. of spray mixture per acre for all preplant incorporated, preemergence, and postemergence applications with ground equipment.

Aerial Application (Cotton only):

Use aerial application only where broadcast applications are specified. Use a minimum of 5 gals. of spray mixture per acre. Avoid applications under conditions where uniform coverage cannot be obtained or where spray drift may occur.

To assure that spray will be controllable within the target area when used according to the label directions, make applications at a maximum height of 10 ft. above vegetation, using low drift nozzles at a maximum pressure of 40 psi., and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply this product at a minimum upwind distance of 400 ft. from sensitive plants.

WEED RESISTANCE MANAGEMENT

MODE OF ACTION (MOA)

Prometryne 4L herbicide contains the active ingredient prometryne.

- Prometryne inhibits photosynthesis at photosystem II (PSII, Site of Action Group 5)

Contact your local extension agent, crop advisor, or sales representative to find out if suspected resistant weeds to this MOA has been found in your region. Do not assume that each listed weed is being controlled by multiple mechanisms of action.

A given weed population may contain or develop resistance to an herbicide or herbicide MOA after repeated use. Appropriate resistance-management strategies should be followed to mitigate or delay resistance. If levels of control provided by applications of this product is reduced, and cannot be accounted for by factors such as misapplication, abnormal levels of target species or extremes of weather, it may be the case that target species have developed a strain resistant to applications of this product.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

If resistance develops, this product may not provide sufficient control of target species. Where you suspect target species are developing resistance, contact State/local agricultural advisors. Integrated weed management guidelines promote an economically viable, environmentally sustainable, and socially acceptable weed control program regardless of the herbicide(s) used. The highlights of successful integrated weed management include:

1. Correctly identify weeds and look for trouble areas within field to identify resistance indicators.
2. Rotate crops.
3. Start the growing season with clean fields.
4. Rotate herbicide modes of action by using multiple modes of action during the growing season and apply no more than 2 applications of a single herbicide mode of action to the same field in a 2-year period. One method to accomplish this is to rotate herbicide tolerant trait systems.
5. Apply listed rates of herbicides to actively growing weeds at the correct time with the right application techniques.
6. Control any weeds that may have escaped the herbicide application.
7. Thoroughly clean field equipment between fields.
8. Scout before and after application.

Contact your local agronomic advisor for more specific information on integrated weed management for your area. Users should report lack of performance to registrant or their representative. For mixtures including this herbicide note that each listed weed may not be controlled by multiple mechanisms of action. Refer to crop specific directions (below) for maximum application rates and number of applications.

Seedbed Preparation

To insure proper placement of PROMETRYNE 4L, seedbeds must be well prepared and as free as possible from trash and clods. A firm seedbed is best for obtaining effective weed control. Uniformity in height and width of seedbed is essential for proper postemergence applications of PROMETRYNE 4L. Beds should be low and

flat. Take care to avoid planter marks. Wide planter packing wheels or rollers are recommended. Wheel furrows should be uniform in depth. Mount the sprayer so that it follows the same rows as the planter.

Band Treatment

For band treatment, calculate the amount of PROMETRYNE 4L needed by the formula:

$$\frac{\text{Band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field .}$$

COTTON

PROMETRYNE 4L may be applied preplant incorporated or preemergence and/or postemergence as recommended in the following tables. The postemergence applications may follow preplant incorporated or preemergence treatments of PROMETRYNE 4L.

Do not use on glandless cotton varieties or crop injury will occur.

Note: Do not feed treated forage to livestock, or graze treated areas.

Preplant Incorporation (Arizona, California, and New Mexico)

Apply PROMETRYNE 4L at the appropriate rate in Table 1 as a broadcast or band treatment. If broadcast, treat the flat soil surface prior to listing. If banded, apply over partially finished or finished beds. Incorporate up to 4 inches deep immediately after application with PTO-driven equipment, double disk, rolling cultivator, or bed conditioner.

Table 1: Preplant Incorporation

Region	Soil texture	Broadcast rate per acre
Arizona, California, and New Mexico	sand, loamy sand	Do not use
	sandy loam (AZ & CA only)	2.4-3.2 pts.
	sandy loam, loams (NM only)	3.2 pts
	silt loam, clay	4.8 pts.

Precautions: Do not use PROMETRYNE 4L in cut areas of newly leveled fields, in areas of excess salt, or in areas where flooding over the beds is likely to occur or crop injury may result. Do not plant cotton in tractor wheel depressions or crop injury may result. On mulch planted cotton, water back only after cotton seedlings are well established. In New Mexico, apply either preplant incorporated or preemergence (not both) see Preemergence section.

Preemergence

Apply at planting or shortly after planting at the appropriate rate in Table 2. PROMETRYNE 4L may be used on cotton planted flat, on beds, or in furrows. To avoid concentration of PROMETRYNE 4L in the seed furrow, do not make broadcast applications to cotton planted in furrows deeper than 2 inches. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow. If banded, do not cover treated bands with soil while cultivating untreated row middles. Do not use on sand or loamy sand, on shallow soils with caliche subsoils, or in areas with caliche outcroppings.

Cotton may be replanted in soil previously treated with PROMETRYNE 4L. Do not apply a second preemergence application of PROMETRYNE 4L or injury may occur.

Table 2: Preemergence

Region	Soil texture	Broadcast rate per acre
Mid-South and Southeast other than Mississippi River Delta in Mississippi	sandy loam	3.2-4 pts.
	silt and clay loam	4.8 pts.
	Sharkey clay (Arkansas only)	5.6 pts.
Mississippi River Delta in Mississippi	sandy loam	4-4.8 pts.
	silt and clay loam	5.6 pts.
	Sharkey clay	Do not use
Blacklands of Texas and Okla., Texas Gulf Coast, and Texas Coastal Bend	loam	2.4 pts.
	clay	4.8 pts.
Rio Grande Valley of Texas*	loam	3.2 pts.
	clay	4.8 pts.
High Plains, Rolling Plains and Edwards Plateau of Texas, Southwest Texas and New Mexico**	sand, loamy sand	Do not use
	sandy loam	1.6 pts.
	loam, sandy clay loam	2.4 pts.
	other clay soils	3.2 pts.
Arizona and California	Do not use	

***Rio Grande Valley of Texas**—Furrow irrigation cotton If adequate rain does not fall soon after application, a shallow cultivation will insure good weed control.

****New Mexico**—Apply either preplant incorporated or preemergence—(not both) See Preplant Incorporation section.

Winter And Early Spring Weed Control in AL, AR, LA, MO, MS, and TN

For control of winter and early spring germinating annual weeds (including henbit, common chickweed, sibara, and Palmer amaranth), apply 1.5-2 pts. of PROMETRYNE 4L after bedding (e.g., stale seedbed) from November 1 until 30 days before planting cotton. Use the high rate for early applications and the low rate for applications nearer to cotton planting. Applications may be made before or after weeds emerge. For control of emerged weeds preferably less than 2 inches in height, add a suitable and approved crop oil concentrate or surfactant according to its label.

In the event weeds exceed 2 inches in height at the time of treatment, apply PROMETRYNE 4L in tank mixture with a contact herbicide (e.g., Gramoxone® Extra or Roundup®). Refer to the label of the contact herbicide for rates of application, additives and for weed height restrictions at time of application.

After applying PROMETRYNE 4L, do not mechanically till the seedbed prior to the cotton planting process, as this will encourage germination of weed seeds.

Follow with a preemergence herbicide program for cotton. In the event that a subsequent application of PROMETRYNE 4L is made, do not exceed the total rate of PROMETRYNE 4L that may be applied to a single cotton crop.

Winter Weed Control in CA

For control of winter weeds on fall bedded cotton land, apply PROMETRYNE 4L after bedding either preemergence or postemergence to weeds less than 2 inches tall. Winter weeds controlled include:

- | | | |
|------------|---------------|--------------------|
| chickweed | London rocket | redmaids |
| fiddleneck | mustards | sheperdspurse |
| filarees | pineappleweed | sowthistle, annual |

On sandy loam soil, apply 3.2 pts./A; on medium or fine soil, apply 4 pts./A. To avoid crop injury, do not use on sand or loamy sand. For postemergence weed control, add a suitable surfactant, such as X-77, at 0.5% of spray volume or an emulsifiable oil at 1.0% of spray volume. Rainfall or sprinkler irrigation is necessary to activate the preemergence activity of PROMETRYNE 4L.

After pre-irrigation and before planting in the spring, knock off the top 1/3-1/2 of the seedbed. Then make a preplant application of PROMETRYNE 4L over the surface of the seedbed using a power-tiller, rolling cultivator, or similar implement that will provide uniform incorporation. Refer to Table 1 for preplant incorporation rates of PROMETRYNE 4L in CA. To avoid crop injury, do not cultivate treated soil back toward the cotton until after cotton emergence and just before the first irrigation.

Precaution: To avoid crop injury, do not use PROMETRYNE 4L for winter weed control in areas of excess salt or calcareous soil.

Note: To avoid illegal residues, do not use more than 10.3 pts. of PROMETRYNE 4L on sandy loam soil or 11.9 pts. of PROMETRYNE 4L on medium or fine soil per acre per year, including winter weed control, preplant incorporation, chemical hoe, and lay-by applications.

Winter Weed Control In Texas

For control of Winter weeds *only*, such as henbit (purpletop) and seedling dock on fall bedded cotton land in the Texas Gulf Coast and Blacklands of Texas, apply 1.2-1.6 pts. of PROMETRYNE 4L per acre in the Fall or Winter to land that will be planted to cotton the following Spring. For best results, apply before weeds emerge. PROMETRYNE 4L will give effective control of emerged henbit if applied before it reaches 4-6 inches tall. For postemergence henbit control, add a suitable surfactant, such as X-77® , at 0.5% of spray volume or an emulsifiable oil at 1.0% of spray volume to the spray tank.

Postemergence Directed

Be especially careful in applying PROMETRYNE 4L postemergence to prevent contact of the spray with cotton leaves, or injury may occur. Use precision application equipment so the spray is accurately directed to the base of the cotton plants and still thoroughly covers the soil and weeds beneath the cotton plants. Apply during calm periods to prevent drift. Use leaf lifters or shields if leaf contact cannot be avoided merely by directing the spray. Apply only when all plants have exceeded the minimum recommended height. Apply to level, well prepared surfaces such as relatively clod-free beds made with bed-shapers.

Do not apply to furrow-planted cotton until furrows are leveled (plowed in). Do not treat cotton under stress from drought, cultivator damage, or fertilizer application.

When applying to emerged weeds, add 2 qts. of surfactant per 100 gals. of spray mixture. Use a surfactant that is compatible with PROMETRYNE 4L when applied in cotton and is approved by EPA for use on food and feed crops. Examples include X-77, Tronic® and Triton®.

Chemical Hoe (Emerged Weeds only): Apply PROMETRYNE 4L at the appropriate rate in Table 3, two or three times if necessary. In cotton 3-6 inches tall, be extremely careful to avoid spray contact with cotton leaves by applying PROMETRYNE 4L with a precision applicator equipped with fenders or shields such as Bell Row Shield, Dickey Fenders, or W&A Fenders. In cotton less than 10 inches tall, apply only if cotton is bed or flat-planted.

Table 3: Chemical Hoe

Height of cotton and area of use	Height of weeds	Broadcast rate per acre
3 to 6 inches (Arkansas, Louisiana, Mississippi, Missouri, Tennessee, and Texas)	Less than 1 inch	1 pt.
6 or more inches (all regions)	Less than 2 inches	1-1.3 pts.

Lay-by (Emerging Weeds and Germinating Weeds): Apply PROMETRYNE 4L at the appropriate rate in Table 4, once per season when cotton is at least 12 inches tall (18 inches where flood nozzles are used in Arizona and California). Apply before weeds are 2 inches tall.

Table 4: Lay-by

Region	Soil texture	Broadcast rate per acre
Mid-South and Southeast	sandy	2.4 pts.
	loam	2.8 pts.
	clay	3.2 pts.
Blacklands of Texas and Oklahoma	loam	1.6 pts.
	clay	3.2 pts.
High Plains of Texas and New Mexico	sandy	1.6 pts.
	loam and clay	2.4 pts.
Southwest Texas	loam	2.4 pts.
	clay	3.2 pts.
Rio Grande Valley of Texas		Do not use
Arizona and California	sand and loamy sand	Do not use
(Do not use in the Coachella Valley)	sandy loam	2.4-3.2 pts.
	loam	3.2 pts.

Rotational Crops

The following vegetable and cover crops may be planted in the Fall when PROMETRYNE 4L was applied on cotton by no more than one of these methods that year; preplant incorporated, preemergence, or only one chemical hoe treatment.

Vegetables

Cabbage, okra, peas, sweet corn

Cover Crops (must be plowed down and not used for food or feed) Oats, sorghum, Winter barley, Winter rye, Winter wheat

Onions and red beets may not be planted within eight months of applying PROMETRYNE 4L.

Spring-seeded crops in California and Arizona and Spring-seeded vegetables in the Rio Grande Valley of Texas should not be planted until after April 1.

PROMETRYNE 4L Combinations for Cotton

Prowl® (Arizona, California, New Mexico, and the upper and lower El Paso Valley of Texas)

This preplant incorporated tank mixture controls all weeds listed on this label and on the Prowl cotton label.

Apply prior to listing or over partially finished or finished beds and incorporate immediately. Refer to the Prowl label for specific mixing, spraying, and incorporation methods. Continuous agitation in the spray tank is required to keep the material in suspension. Apply the tank mixture with ground equipment in at least 10 gals. of water per acre, or by air in at least 5 gals. of water per acre, at the appropriate rates from Table 5.

Table 5: Tank Mixture with Prowl

Soil texture	Broadcast rate per acre	
	Prowl	PROMETRYNE 4L
sand, loamy sand	Do not use	
sandy loam	1-1.5 pts.	2.4-3.2 pts.
loam	1.5-2 pts.	3.2 pts.
silt loam, silt, sandy clay loam	1.5-2 pts.	3.2-4.8 pts.
clay loam, silty, clay loam, clay	1.5-2 pts.	3.2-4.8 pts.

Use the high rate for each soil texture above if heavy weed populations are anticipated. Use the 3 pt. rate of Prowl for heavy clay soils.

Precautions: Do not use in cut areas of newly leveled fields, in areas of excess salt, or in areas where flooding over the bed is likely to occur as crop injury may result. Do not plant cotton in tractor wheel depressions or crop injury may result. Do not use this tank mixture when cotton is irrigated up as crop injury may result. On mulch planted cotton, water back only after cotton seedlings are well established.

Note: Do not feed treated forage to livestock, or graze treated areas.

Rotational Crops: If treated crop is lost, cotton may be replanted. Do not rework the soil. Refer to the Cotton section of this label for rotational crop restrictions.

Trifluralin Tank Mixture (Arizona, California, New Mexico and the upper and lower El Paso Valley of Texas)

Any EPA registered 4 to 5 lbs. per gallon Trifluralin product may be used for this tank mix.

This combination controls weeds listed on this label and on the Trifluralin label. This combination also controls shallow-germinating seedlings of cocklebur and coffeeweed.

Follow procedures on the Trifluralin label for soil preparation and incorporation. Apply the tank mix combination to the flat soil before disking.

Pour PROMETRYNE 4L directly into spray tank one-half to three-fourths full of water, allow it to disperse with agitation, add Trifluralin, and then add the rest of the water. Continuous agitation in the spray tank is required to keep the material in suspension. Apply the tank mixture in at least 20 gals. of water per acre, or by air in at least 5 gals. of water per acre, at the appropriate rates from Table 6.

Table 6: Tank Mixture with Trifluralin

Soil texture	Broadcast rate per acre	
	Trifluralin	PROMETRYNE 4L
sand, loamy sand	Do not use	
sandy loam	1 pts.	2.4-3.2 pts.*
medium soils	1 ½ pts.	4 pts.
fine soils	2 pts.	4 pts.
muck or peat	Do not use	

*Use less than 3.2 pts. per acre only in Arizona and California.

Precautions: Do not use in cut areas of newly leveled fields, in areas of excess salt, or in areas where flooding over the bed is likely to occur or crop injury may result. Do not plant cotton in tractor wheel depressions or crop injury may result. On mulch planted cotton, water back only after cotton seedlings are well established.

Note: Do not feed treated forage to livestock, or graze treated areas.

Rotational Crops: Cabbage, celery, okra, and peas may be planted in the fall after a Spring application of Trifluralin + Prometryn. Winter barley, rye and wheat can be planted in the Fall if they are plowed down and not used for food or feed. Onions and red beets may not be planted within eight months of applying PROMETRYNE 4L. Refer to the Trifluralin label for other directions and precautions.

Trifluralin Split Application (Arizona and California)

Apply a preplant incorporated application of Trifluralin as directed on that label, except use the appropriate rate from Table 6. Do not apply Trifluralin before January

1. Follow at planting or just before planting with a preplant incorporated treatment of PROMETRYNE 4L as directed in the Cotton section of this label, except use the appropriate rate from Table 6.

DSMA or MSMA

For faster knockdown of the weeds controlled by PROMETRYNE 4L alone, apply 1-1.3 pts. of PROMETRYNE 4L plus 3 lbs. active ingredient of DSMA or 2 lbs. active ingredient of MSMA per acre, following the same directions, precautions, and limitations as given on this label for PROMETRYNE 4L applied alone postemergence directed (chemical hoe.) If needed, make a second application 1-3 weeks after the first application. Do not apply after first bloom.

Several formulations of DSMA and MSMA are available under various trade names from several manufacturers. Observe the directions, limitations, and precautions on the label of the product used.

CELERY

Restriction for All Applications to Celery

Maximum Single Application Rate: 4.0 pts. per acre (2 lb prometryne active ingredient).

Seedbeds (Florida)

Broadcast 1.2-1.6 pts. in a minimum of 20 gals. of water per acre after celery has 2-5 true leaves. Application may be made over the celery. Apply only after seedbed covers have been removed from seedbeds for at least one week. Apply only once per year to seedbeds.

Direct-seeded Celery (California only)

Apply PROMETRYNE 4L at rates given below in a minimum of 20 gals. of water per acre. Within the rate ranges given, use the lower rates on coarse-textured soils and soils low in organic matter; use the higher rates on fine-textured soils and soils high in organic matter.

Preemergence: Broadcast 2.4-3.2 pts. per acre at planting or shortly after planting before celery emerges.

Postemergence: Broadcast 1.6-2 pts. per acre after celery has 2-5 true leaves. Application may be made over the celery. Apply before weeds are 2 inches tall.

Precaution: To Avoid Injury to Direct-seeded Celery: (1) Make either one preemergence or one postemergence application (not both) per celery crop. (2) Do not use on sand or loamy sand. (3) Do not apply if celery is under water stress. (4) Do not apply postemergence treatments of PROMETRYNE 4L with other pesticides. Apply only after foliar applications of other pesticides are dry. (5) Do not apply within two weeks after an application of a herbicidal oil, such as "carrot" oil.

Single Pre-Transplant Application

Apply one application at the appropriate rate from table 7 in a minimum of 20 gallons of water. Make the application up to 21 days prior to transplanting. Make the application to a weed-free bed and do not disturb the treated area between application and transplanting. Note: A post-transplant application will not be allowed if the pre-transplant application was made at the maximum allowable use rate (see table 7).

Split Pre-Transplant and Post Transplant Application

Make the application at the appropriate rate from table 7 in a minimum of 20 gallons of water.

Make the pre-transplant application up to 21 days prior to transplanting. Make the application to a weed-free bed and do not disturb the treated area between application and transplanting. A second application may be made during the 2 to 6 week period after transplanting and before weeds are two inches tall. The total amount of PROMETRYNE 4 L applied to the crop (pre-transplant plus post-transplant applications) cannot exceed the maximum allowable use rate (see table 7).

Post Transplant Application

Apply one application at the appropriate rate from Table 7 in a minimum of 20 gals. of water per acre during the 2-6 week period after transplanting. Within the rate ranges given, use the lower rate on relatively coarse-textured soils and soils low in organic matter; use the higher rate on relatively fine-textured soils and soils high in organic matter. Application may be made over the celery. Apply before weeds are 2 inches tall.

Table 7: Transplanted Celery

State	Soil	Broadcast rate per acre
Florida	sandy or muck	1.6-3.2 pts.
California	coarse-textured	2.0-3.2 pts.
	fine-textured	3.2-4.0 pts.
Hawaii	coarse-textured	3.2-4.0 pts.
	fine-textured	4.0 pts.
Michigan	fine-textured or muck	2.0-4.0 pts.
Wisconsin	fine-textured	3.2-4.0 pts.

Rotational Crops:

The following crops may be seeded 5 months after applying no more than 4 pts. PROMETRYNE 4L per acre on celery: Cabbage, celery, corn, and peas. Onions and red beets may not be planted within eight months of applying PROMETRYNE 4L.

DILL (CALIFORNIA ONLY)

Apply one preemergence or one postemergence application at the rate of 3.2 pints per acre in a minimum of 20 gallons of water per acre. Postemergence application must be made before weeds are two inches tall. Do not harvest within 48 days of application.

Precaution: To Avoid Injury to Dill:

(1) Make either one preemergence or one postemergence application (not both) per dill crop. (2) Use on sand or loamy sand may cause crop injury. (3) Do not apply if dill is under water stress. (4) Do not apply preemergence treatment of PROMETRYNE 4L with other pesticides. Apply only after foliar application of other pesticides are dry. (5) Do not apply within two weeks after an application of a herbicidal oil.

Rotational crops:

The following crops may be seeded 5 months after applying PROMETRYNE 4L on dill: cabbage, celery, corn, cotton, and peas. Onions and red beets may not be planted within eight months of applying PROMETRYNE 4L.

PARSLEY-FOR USE IN CALIFORNIA ONLY

For control of cheeseweed, burning nettle and shepherd's purse, apply by ground, 1-2 quarts of product per acre (or 1-2 pounds ai/acre) in a minimum of 30 gallons of water per acre. Use the lower rate on coarse texture soils and soils low in organic matter. Use the higher rate on fine texture soils and soils high in organic matter.

Precaution: To Avoid Injury to Parsley:

(1) Make one preemergence application per parsley crop. (2) Do not use on sand or loamy sand soil. (3) Do not apply if parsley is under water stress. (4) Do not apply within two weeks after an application of a herbicidal oil, such as "carrot" oil.

Preemergence: Apply as a single application following planting, before parsley emerges. Do not enter treated areas until spray residues have dried. Do not apply within 84 days of harvest.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly. Such conditions include, but are not limited to, positioning of the container in storage, storage temperature, potential for crushing or damage due to stacking, and penetration of moisture.

STORAGE: Store in a safe manner. Store in original container only. Store in cool, dry place. Reduce stacking height where local conditions, such as humidity or pallet overhang can affect package strength.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. 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: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.

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BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

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