

U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505C) 401 "N" St., S.W. Washington, D.C. 20460

NOTICE OF PESTICIDE:

x Registration
Reregistration

(under FIFRA, as amended)

BPA Reg.

Date of Issuance:

62719-337 MAR 1 6 2000

Term of Issuance:

Conditional

Name of Pesticide Product:

Redeem R&P

Name and Address of Registrant (include ZIP Code):

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Pungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration/ reregistration of your product when all registrants of similar products to submit such data.
- 2. Add the phrase "EPA Registration No. 62719-337" to your label before you release the product for shipment.
- 3. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Signature of Approving Official/

Date

3-16.00

SPA Pozn 9570-6

page 2 EPA Reg. No. 62719-337

A stamped copy of the label is enclosed for your records.

James A. Tompkins Product Manager (25) Herbicide Branch Registration Division (7505C)

Enclosure

00XXXXXX

(Base Label):

[Insert 2-Point Black Line]

(Logo) Dow AgroSciences LLC

# Redeem\* R&P

For the control of annual and perennial broadleaf weeds in rangeland and permanent grass pastures, non-crop areas such as fence rows, non-irrigation ditchbanks, roadsides and around farm buildings, and CRP acres.

Active Ingredients:

Acid Equivalent:

triclopyr - 23.7% - 2.25 lb/gal clopyralid - 7.9% - 0.75 lb/gal

ACCEPTED with COMMENTS In EPA Letter Dated:

MAR 1 6 2000

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

## 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.)

## **Precautionary Statements**

#### Hazards to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Skin Reaction In Some Individuals (Concentrate Product Only) • Harmful If Absorbed Through Skin, Or If Swallowed Or Inhaled

Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing vapor or spray mist. Note to Applicator: In the dilute mix, no skin reaction is expected when used as directed.

## Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant category A gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield or safety glasses)

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

#### **Engineering Controls**

When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protections 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.

#### First Aid

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, the continue rinsing. Call a poison control center or doctor for treatment advice.

**If on skin:** 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 swallowed: Call a physician or poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

#### **Environmental Hazards**

Do not apply directly to water, 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.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

## **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

XX XX

EPA Reg.	No. 62719-XXX	

EPA Est. \_\_\_\_\_\_

Superscripts correspond to places 7 & 8 of lot number 900-000000 / 00000000

\*Trademark of Dow AgroSciences LLC

Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

# Herbicide

Net Contents \_\_\_\_

[Insert Bar Code FPO]
[Insert DOT shipping classification and diamond(s)]

Lot

(Front cover of label booklet):

(Logo) Dow AgroSciences LLC

# Redeem\* R&P

For the control of annual and perennial broadleaf weeds in rangeland and permanent grass pastures, non-crop areas such as fence rows, non-irrigation ditchbanks, roadsides and around farm buildings, and CRP acres.

Active Ingredients:

triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, triethylamine salt ...... 12.1% Inert Ingredients ...... 54.9% Acid Equivalent:

triclopyr - 23.7% - 2.25 lb/gal clopyralid - 7.9% - 0.75 lb/gal

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XX XX EPA Est. EPA Reg. No. 62719-XXX Superscripts correspond to places 7 & 8 of lot number 900-000000 / 00000000

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# Herbicide

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(Page 2 through end):

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## Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- · Chemical-resistant category A gloves
- · Shoes plus socks
- · Protective eyewear (goggles, face shield or safety glasses)

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

## **Engineering Controls**

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

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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.
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#### First Aid

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#### **Environmental Hazards**

Do not apply directly to water, 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.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

#### **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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
- · Chemical-resistant category A gloves
- · Shoes plus socks
- Protective eyewear (goggles, face shield or safety glasses)

#### 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.

**Entry Restrictions for Non-WPS Uses:** When this product is applied to rangeland or grazed pastures (not harvested for hay), do not enter or allow worker entry into treated areas until sprays have dried, unless applicator and other handler PPE is worn.

### Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

Storage: Store above 28°F or agitate before use.

**Pesticide Disposal:** Pesticide wastes are toxic. 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 (Plastic): 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, after triple rinsing, may be incinerated if allowed by state and local authorities. If burned, stay out of smoke.

**Container Disposal (Metal):** Do not reuse container. 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.

General: Consult federal, state, or local disposal authorities for approved alternative procedures.

#### General Information

Redeem\* R&P herbicide is a broad-spectrum weed killer for control of broadleaf weeds in rangeland and permanent grass pastures, non-crop areas such as fence rows, non-irrigation ditchbanks, roadsides and around farm buildings, and CRP acres. A non-ionic surfactant cleared for use on growing crops at the manufacturer's recommended rate is recommended for all applications of this product. Use a higher recommended rate of surfactant in the spray mixture when applying lower spray volumes per acre.

#### **General Use Precautions and Restrictions**

**Maximum Application Rate:** Do not apply more than 4 pint per acre of Redeem R&P per annual growing season (1.125 lb ae of triclopyr plus 0.375 lb ae of clopyralid).

[Editor's note: The following statement is applicable if registered in CA, FL or NY.] In California, Florida and New York, the maximum use rate is 2 2/3 pints (0.75 lb ae triclopyr, 0.25 lb ae clopyralid) per acre per annual use season.

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

**Rotation to Broadleaf Crops:** Do not plant broadleaf crops such as tobacco, cotton, soybeans, sunflower, clover, alfalfa, and many others in treated areas until an adequately sensitive bioassay shows that clopyralid is no longer detectable in the soil.

Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. Field bioassay at any time prior to planting of the intended rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination) chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, wait one year before repeating bioassay or plant a crop tolerant to clopyralid such as barley, canola (rapeseed), grasses, field corn, oats, sugar beets, or wheat.

Do not contaminate water intended for irrigation or domestic purposes: To avoid injury to crops or other desirable plants, do not treat or allow spray drift to fall onto banks or bottoms of irrigation ditches or other channels that carry water that may be used for irrigation purposes.

**Tank Mixtures:** Observe label of other products used in tank mixtures and follow all applicable label recommendations.

Do not spray pastures if injury to existing forage legumes or other desirable broadleaf plants cannot be tolerated. This product will injure or kill legumes and most other broadleaf plants. However, the stand and growth of established perennial grasses is usually improved after treatment, especially when rainfall is adequate and grazing is deferred.

**Established grasses are tolerant to this product**, but newly seeded grasses may be injured until well established as indicated by tillering, development of a secondary root system, and vigorous growth.

# Grazing and Haying Restrictions Grazing or harvesting green forage:

- Lactating dairy animals
   Do not graze or harvest green forage from treated area for 14 days after treatment.
- Other Livestock No grazing restrictions.

#### Haying (harvesting of dried forage):

- Lactating dairy animals
   Do not harvest hay until the next growing season.
- Other LivestockDo not harvest hay for 7 days after treatment.

#### Slaughter Restrictions:

Withdraw livestock from grazing treated grass or consumption of treated hay at least 3 days before slaughter. This restriction applies to grazing during the season following treatment or hay harvested during the season following treatment.

Do not apply this product with a mistblower.

## **Avoiding Injury to Non-target Plants**

This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Therefore, do not apply this product directly to, or allow spray drift to come into contact with vegetables, ornamentals, various susceptible broadleaf crops, or other susceptible desirable non-target plants. Small areas of new legume seedlings should be established prior to seeding more extensive areas in order to determine if phytotoxic residues are present in the soil of previously treated areas at levels that could inhibit legume establishment.

Do not use plant materials from treated areas or manure from animals grazing treated areas for composting or mulching of desirable susceptible broadleaf plants or apply such materials to land used for growing broadleaf crops, ornamentals, orchards, or other susceptible desirable plants. Plant materials or manure may contain enough clopyralid to cause injury to susceptible plant species.

Residues in Plants or Manure: Do not use plant residues, including hay or straw from treated areas, or manure from animals that have grazed or consumed forage from treated areas for composting or mulching where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf crops. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

#### **Avoid Spray Drift**

Avoid spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible crops during active growth or dormant periods. Use coarse sprays to minimize drift. To aid in further reducing drift, a drift control or deposition agent suitable for agricultural use may be used with this product. If used, follow all use recommendations and precautions on the product label.

Ground application: With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by applying 10 gallons or more of spray per acre; by keeping the operating spray pressures at the manufacturer's minimum recommended pressures for the specified nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when the wind velocity is low (Follow state regulations). Avoid application under completely calm conditions which may be conducive to air inversion. In hand-gun applications, select the minimum pressure required to obtain adequate plant coverage without forming a mist. Do not apply with a mist blower.

**Aerial application:** With aircraft, drift can be lessened by using straight stream nozzles directed straight back; by using a spray boom no longer than 3/4 of the rotor or wing length of the aircraft; by using drift control systems or drift control additives, and by keeping spray pressures low enough to provide coarse spray droplets. Do not use a thickening agent with the Microfoil or the Thru-Valve booms, or other systems which cannot accommodate thick sprays. Spray only when the wind velocity is low (Follow state regulations). Avoid calm conditions which may be conducive to air inversions.

Do not apply by aircraft when an air temperature inversion exists: Such a condition is characterized by little or no wind and with lower air temperature near the ground than at higher levels. The use of a smoke device on the aircraft or continuous smoke column at or near the site of application will indicate air direction and velocity, and whether a temperature inversion is present, as indicated by horizontal layering of the smoke.

#### **Sprayer Clean-Out**

To avoid injury to desirable plants, equipment used to apply Redeem R&P should be thoroughly cleaned before reusing to apply any other chemicals.

- 1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of rinse water in non-cropland area away from water supplies.
- 2. During the second rinse, add 1 qt of household ammonia for every 25 gal of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 minutes). Let the solution stand for several hours, preferably overnight.
- 3. Flush the solution out of the spray tank through the boom.
- 4. Rinse the system twice with clean water, recirculating and draining each time.
- 5. Remove nozzles and screens and clean separately.

# **Spray Drift Management**

Avoid spray drift at the application site. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

- 1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory**. [This information is advisory in nature and does not supersede mandatory label requirements.]

#### **Aerial Drift Reduction Advisory**

**Information On Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling Droplet Size:**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produced larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature And Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the 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.

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).

## **Mixing Directions**

Water Dilution - To prepare a water dilution of Redeem R&P:

- 1. Add 3/4 of the required spray volume to the spray tank and start agitation.
- 2. Add the required amount of Redeem R&P.
- 3. Add any surfactants, crop oils, or other adjuvants according to manufacturer's label.
- 4. Add any spray thickening agent, if needed to control drift, according to the manufacturer's label.
- 5. Agitate during final filling of the spray tank and maintain sufficient agitation during application to ensure uniformity of the spray mixture.

**Note:** Allow time for thorough mixing of each spray ingredient before adding the next. If allowed to stand after mixing, agitate spray mixture before use.

# **Application Directions**

#### **Application Timing**

Apply to actively growing weeds. Extreme growing conditions such as drought or cold temperatures prior to, at or following application may reduce or delay weed control. Only weeds which are emerged at the time of application will be controlled. Wet foliage at the time of application may decrease control. Applications of this product are rain-fast within 2 hours after application.

#### Application Rates

Generally, application rates at the lower end of the recommended rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds) the higher rates within the rate range will be needed. Weeds growing in the absence of crop competition generally require higher rates to obtain satisfactory control or suppression.

#### **Use of Surfactants**

A non-ionic surfactant cleared for use on growing crops at the manufacturer's recommended rate is recommended for all applications of this product. Use a higher recommended rate of surfactant in the spray mixture when applying lower spray volumes per acre.

#### Coverage

Apply in 3 or more gallons per acre by air or 10 or more gallons per acre by ground equipment. Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Inadequate spray volume and coverage may result in decreased weed control. As vegetative canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use larger nozzle tips or decrease spraying speed to increase spray volume rather than increasing boom pressure. Refer to manufacturer's recommendations for information on relationships between spray volume, and nozzle size and arrangement.

#### **Spot Application**

To prevent misapplication, it is recommended that spot applications be applied with calibrated equipment or with hand sprayers according to directions provided below.

Hand-Held Sprayers: Hand-held or backpack sprayers may be used for spot applications. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1,000 sq ft. Mix the amount of this product (fl oz or ml) corresponding to the desired broadcast rate in one or more gallons of spray. To calculate the amount of product required

for larger areas, multiply the table value (fl oz or ml) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3,500 sq ft, multiply the table value by 3.5 (calc.  $3,500 \div 1,000 \approx 3.5$ ). An area of 1000 sq ft is approximately 10.5 X 10.5 yards (strides) in size.

Amount of Redeem R&P to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1,000 sq ft)			
1 pt/acre	2 pt/acre	3 pt/acre	4 pt/acre
0.37 fl oz	0.75 fl oz	1.1 fl oz	1.5 fl oz
(11 ml)	(22 ml)	(33 ml)	(44 ml)

 $<sup>^{\</sup>dagger}$ 1 fl oz = 29.6 (30) ml

#### **Weeds Controlled and Use Rates**

#### **General Recommendations**

- Use the higher rates when hard to control species are prevalent, when applications are made to mature weeds in advanced stages of growth, or during periods of drought stress or low temperatures.
- Rates in the lower end of the rate range are recommended only where grass response (competition) will help to suppress weed growth following treatment.
- This product is not recommended for control of woody plants, however, suppression or short-term control of woody plants in treated areas may be observed at application rates recommended for control of annual and perennial weeds.

Weeds Controlled or Suppressed	Application Rate (pint/acre)	Weed-Specific Comments
chickweed, common Clover, red	1.5	Apply when weeds are actively growing.
Clover, white cocklebur, common		
dandelion, false (spotted catsear)		
henbit sunflower, common		
teasel, common vetch		
vetch, common wormwood		

	r	
burdock	1.5 – 2	Apply when weeds are actively growing.
coffeeweed	}	Increase the application rate within the rate
cornflower (bachelor button)		range as plant size increases.
daisy, oxeye		
dandelion, common	1	
groundsel, common		
horseweed		
jimsonweed		
lambsquarters		
lettuce, prickly		
locoweed		
nightshade		
pepperweed, Virginia	]	
plantain, broadleaf		
plantain, narrowleaf		
(buckhorn)		
ragweed, common		
shepherd's-purse		
sorrel, red		
sorrel, sheep		
broomweed, annual	1.5 pt	
croton	Redeem R&P	
ironweed	+	
ragweed, western	1-2 pt 2,4-D	
sneezeweed, bitter	(3.8 lb/gal)	
salsify, meadow	1.5 -2.0	Apply from the rosette to early bolt stage of
sowthistle, annual	1.5 -2.0	growth. For application timing from mid bolt
•		to early flower, tank mix with 1 pint of 2,4-D
thistle, bull		7
thistle, musk		(3.8 lb/gal).
thistle, plumeless	45.05	Anni fi an alla annatta da calla la la sanca d
knapweed, diffuse	1.5 -2.5	Apply from the rosette to early bolt stage of
knapweed, spotted		growth. For application timing from mid bolt to
starthistle, yellow		early flower, tank mix with 1 pint of 2,4-D (3.8
		lb/gal).
amaranth, spiny (S) (pigweed)	2.5 - 4	Apply from rosette to bud stage when all plants
dogfennel (S)		have emerged and weeds are actively
hawkweeds	1	growing.
horsenettle (S)	[	
perennial sowthistle		
ragwort, tansy		
sodaapple (S)	1	·
thistle, Canada		
thistle, wavyleaf		
skeletonweed, rush	2.5 – 4	Apply from rosette to 4 inch bolt stage of
1	l .	l growth.
knapweed, Russian	2.5 to 4	growth.  Apply early bud to early flower stage of growth.

S = Suppression

## Rangeland and Permanent Grass Pastures

**Broadcast (Ground or Air) and Spot Application:** For control of listed broadleaf weeds, apply Redeem R&P as a broadcast spray or spot application at 1 1/2 to 2 pt per acre for control of annuals and up to 4 pt per acre for control of deep-rooted perennial broadleaf weeds. Use a total spray volume of 10 or more gallons per acre for ground broadcast or 3 or more gallons per acre by air. Refer to "Application Directions" for "Spot Application".

On rangeland and permanent grass pastures, do not apply more than 4 pt/acre of Redeem R&P per year.

# Non-cropland Areas (such as fence rows, non-irrigation ditchbanks, roadsides and around farm buildings)

Broadcast Application (Ground Only) and Spot Application: For control of listed broadleaf weeds, apply Redeem R&P as a broadcast spray at 1 1/2 to 2 pt per acre for control of annuals and up to 4 pt per acre for control of deep-rooted perennial broadleaf weeds. Use a total spray volume of 10 or more gallons per acre for ground broadcast application. Refer to "Application Directions" for "Spot Application".

On non-cropland areas, do not apply more than 4 pt/acre of Redeem R&P per year.

# Treatment of Conservation Reserve Program (CRP) Acres (Established Permanent Grass Stands)

Use Redeem R&P on CRP acres only after perennial grasses are well established (see precaution for newly seeded grasses under "General Use Precautions").

Broadcast Application (Ground or Air) and Spot Application: For control of listed broadleaf weeds, apply Redeem R&P as a broadcast spray at 1 1/2 to 2 pt per acre for control of annuals and up to 4 pt per acre for control of deep-rooted perennial broadleaf weeds. Use a total spray volume of 10 or more gallons per acre for ground broadcast or 3 or more gallons per acre by air. Refer to "Application Directions" for "Spot Application".

**Restrictions:** When applying to CRP lands, follow all applicable state and federal regulations. Follow the most severe grazing restriction imposed by the pesticide label or by the USDA Acreage Conservation Reserve Program. After that time period, follow local (CRP) guidelines regarding cropping and haying restrictions. Do not use Redeem R&P if damage or loss of existing legumes or other desirable broadleaf plants cannot be tolerated.

On CRP acres, do not apply more than 4 pt per acre of Redeem R&P per annual use season.

# Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

#### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes),

presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

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The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

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