70506-94 06/03/2005 1/40

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 3 2005

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

United Phosphorus Inc.
c/o Michael Kellogg
Pyxis Regulatory Consulting
11324 17th Ave. Ct. N.W.
Gig Harbor, WA 98332

Gentlemen:

Subject: Add New Uses and Revised Labeling
Clopyr AG Herbicide
EPA Registration No 70506-94
Your Submission Dated May 19, 2005

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. On the front panel and page 33 modify the application sites to specify the following:

> For use only on non-residential turf such as athletic and recreational sports fields, cemeteries, golf courses, industrial sites, non-cropland, parks, rights-of-way, and roadsides.

b. In the Non-Agricultural Use Requirements box delete "lawns". Proof read the label to assure that there are no implications that this product may be applied to homeowner lawns.

c. Modify the use restrictions wherever they appear on the labeling to read as follows:

- Do not use on residential turf
- Do not send clippings to a compost facility
- Do not collect grass clippings for mulch or compost
- Applicator must give notice to landowners/property mangers to not use grass clippings for composting.

d. On page 9 for clarity spell out "½ pint per acre per grown season".

e. Wherever it appears on the labeling delete "including" before a list of specify crops. This term implies that this product can be applied to crops not specified on the labeling.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. 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 bearing the amended labeling constitutes acceptance of these conditions.

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

If you have any questions concerning this letter please contact Mr. James Stone at 703-305-7391.

Sincerely yours,

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

Enclosure

CLOPYR AG

Herbicide

CLOPYR AG is a selective postemergence herbicide for control of broadleaf weeds in the following crops:

asparagus
barley (not underseeded to legumes)
broccoli
broccoli raab
Brussels sprouts
cabbage
canola
cauliflower
Cavalo broccolo
Chinese (Bok Choy) cabbage
Chinese broccoli
Chinese mustard cabbage
Chinese (Napa) cabbage
Christmas trees
collards
CRP acreage
fallow cropland
field corn
garden beet
mint
kale
kohlrabi
mint
mizuna
mustard greens
mustard spinach
oats (not underseeded to legumes)
popcorn
rape greens
spinach
stone fruit
sugar beet
sweet corn
turnip
wheat (not underseeded to legumes)

CLOPYR AG may also be used for selective postemergence control of broadleaf weeds and woody brush in the following non-crop applications:

non-residential turf, including grasses grown for seed
sod farms
select ornamental plantings in landscapes and nurseries
permanent grass pastures
rangeland
industrial manufacturing and storage sites
rights-of-way
forest sites
tree plantations, including Christmas trees
wildlife openings and grazed land within these areas

ACTIVE INGREDIENT:
clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt 40.9%
OTHER INGREDIENTS: 59.1%
TOTAL: 100.0%

Acid Equivalent: clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lb/gal)

Keep Out of Reach of Children

CAUTION PRECAUCION

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.)

For 24-Hour Emergency Contact, call CHEMTREC (1-800-424-9300)

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, then continue rinsing eye. • Call a poison control center or doctor for 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.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	

See inside label booklet for additional PRECAUTIONARY STATEMENTS.

EPA Reg. No. 70506-94

Manufactured For:

United Phosphorus, Inc.
Trenton, NJ 08611

ACCEPTED
with COMMENTS
In EPA Letter Dated:
JUN 3 2005
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
70506-94

EPA Est. No.

Net Contents:

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Shoes plus socks
- Protective eyewear

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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

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 cleaning equipment or disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes.

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 could 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.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read "Warranty Disclaimer," "Inherent Risks of Use," and "Limitation of Remedies" elsewhere on this label. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 800-424-9300.

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

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 12 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 gloves made of any waterproof material
- Shoes plus socks
- 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 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: For applications to fallow cropland, rangeland, pasture, non-crop areas, lawns, landscape areas, or golf courses: Do not enter treated areas until sprays have dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves made of any waterproof material, long-sleeved shirt, long pants, shoes and socks.

STATE SPECIFIC PRECAUTIONS AND RESTRICTIONS

Arizona: CLOPYR AG cannot be used on plants grown for agricultural/commercial production such as designated grazing areas.

California: The maximum application rate for CLOPYR AG is 2/3 pint per acre per growing season. Do not exceed a cumulative amount of 2/3 pint (0.25 lb active equivalent (a.e.)) of clopyralid per acre per crop year.

Turfgrass and lawn uses are limited to golf courses only.

New York: ***Not for Sale, Use or Distribution in Nassau and Suffolk Counties in New York State.***

The maximum application rate for CLOPYR AG is 2/3 pint per acre per growing season. Do not exceed a cumulative amount of 2/3 pint (0.25 lb active equivalent (a.e.)) of clopyralid per acre per crop year.

Oregon: Turfgrass and lawn uses are limited to golf courses, nurseries, and grass grown for seed or sod farms.

Washington: Turfgrass and lawn uses are limited to golf courses only.

APPLICATION SPECIFIC USE PRECAUTIONS AND RESTRICTIONS

- Do not apply this product through any type of irrigation system (chemigation).
- Do not use in greenhouses.
- This product is not recommended for use on golf course putting greens or tees.
- Grass clippings must not be sent to a composting facility and the applicator must notify landowners or property managers that grass clippings cannot be used for mulch or composting.
- Do not apply this product in a tank mix to woody ornamental plants.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not use this product on residential turf. Turfgrass and lawn uses are restricted to non-residential sites.

- Do not reseed turf for 3 weeks after application.
- Only spot and directed applications are permissible on ornamental plantings in commercial and residential landscape settings; do ***not*** make broadcast applications.
- Application to the exposed suckers of susceptible trees or shrubs, or the exposed roots of shallow rooted trees and shrubs such as legumes (pod bearing plants such as acacia, locust, mimosa, redbud, or mesquite) or littleleaf linden (*Tillia cordata* and other *Tilia* species) may result in injury.
- Do not use runoff water from treated areas as irrigation water.
- Do not transfer livestock from treated grazing areas (or feeding of treated hay) to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture (or feeding of treated hay). If livestock are transferred within less than 7 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.
- Use directions in United Phosphorus, Inc.'s supplemental labeling may supersede directions or limitations in this labeling

AERIAL APPLICATION

- CLOPYR AG may be applied by aircraft to spinach, canola (rapeseed), and crambe ***only***. Do not apply CLOPYR AG by aircraft to other labeled crops unless otherwise permitted by specific use directions, supplemental labeling or product bulletins.
- Do not apply by aircraft to non-residential turf sites.

RETREATMENT

- Retreatment is allowed, but do not exceed the listed maximum allowable rate per crop growing season.
- An application to fallow cropland preceding or following an application to dryland small grains (wheat, barley or oats) is allowed, but is not allowed preceding or following an application to irrigated small grains.

CROP ROTATION INTERVALS

The rotation intervals listed below are based on average annual precipitation, regardless of irrigation practices. Observing the recommended crop rotation intervals should result in adequate safety to rotational crops. However, CLOPYR AG is dissipated in the soil by microbial activity and the rate of microbial activity is dependent on several interrelating factors including soil moisture, temperature and organic matter. Therefore, accurate prediction of rotational crop safety is not possible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removal of plant residues, supplemental fall irrigation and deep mold-board plowing prior to planting the sensitive crop.

Susceptible crops that are planted in fields that have been previously treated with CLOPYR AG may be affected if the treated plants (including remaining crop residue and / or weeds) have not completely decayed. In order to prevent potential damage from occurring, the crop rotation intervals listed below should be observed and a field bioassay to ascertain the presence of residues is recommended.

Field Bioassay Instructions:

1) A field bioassay may be done at any time between harvest of the treated crop and planting of the rotational crop.
2) Plant test rows of the rotational crop so as to represent all different field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop.
3) Observe the test rows of crop for signs of herbicidal activity such as poor germination, chlorosis (yellowing), necrosis (dead leaves or shoots), or stunting (reduced growth).
4) The test crop can be grown if herbicidal effects are not observed. Do not plant the field to the desired rotational crop if any herbicidal activity is observed; only plant a crop listed in this label or a crop listed in the table below for which the rotational interval has been satisfied.

Crop Rotation Intervals for All States except California, Idaho, Nevada, Oregon, Utah and Washington

NOTE: A field bioassay is recommended prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following application.

ROTATION CROP	ROTATION INTERVAL	
	Soils greater than 2% Organic Matter ***and*** Rainfall greater than 15 inches in the 12 months following application	Soils less than 2% Organic Matter ***and*** Rainfall less than 15 inches in the 12 months following application
barley, canola (rapeseed), cole crops (*Brassica* species), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugar beets, sweet corn, turnip, wheat	Anytime	Anytime
alfalfa, asparagus, grain sorghum, mint, onions, safflower, strawberries	10½ months	10½ months
dry beans, soybeans, sunflowers	10½ months	18 months[1]
lentils, peas, potatoes (including potatoes grown for seed), and broadleaf crops grown for seed (excluding *Brassica* species)	18 months[1]	18 months[1,2]

1. An 18-month crop rotation is recommended due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 10.5 month rotation interval. Note: For these crops, a minimum 10.5 month rotation interval must be observed to avoid illegal residues in the harvested crop.
2. A field bioassay is also recommended prior to planting the listed crops under these conditions. See instructions above.

Crop Rotation Intervals for California, Idaho, Nevada, Oregon, Utah and Washington

NOTE: A field bioassay is recommended prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 12 months following application.

ROTATION CROP	ROTATION INTERVAL	
	Rainfall greater than 18 inches in the 12 months following application (not including irrigation)	Rainfall less than 18 inches in the 12 months following application (not including irrigation)
barley, canola (rapeseed), cole crops (includes *Brassica* species grown for seed), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugar beets, sweet corn, turnip, wheat	Anytime	Anytime
asparagus, grain sorghum, mint, onions, strawberries	12 months	12 months
alfalfa, dry beans, soybeans, sunflower	12 months	18 months[1,2]
broadleaf crops grown for seed (excluding *Brassica* species), carrots (2), celery (2), cotton (2), lentils, lettuce (2), melons (2), peas, potatoes (including potatoes grown for seed), safflower, and tomatoes (2)	18 months[1]	18 months[1,2]

1. An 18-month crop rotation is recommended due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 12 month rotation interval. Note: For these crops, a minimum 12 month rotation interval must be observed to avoid illegal residues in the harvested crop.
2. Crop injury and/or yield loss may occur up to 4 years after application. A field bioassay is also recommended prior to planting these sensitive crops. See instructions above.

Treatment of Plant Species not Listed on this Label (Nursery and Turfgrass Use Only)

Users may determine the suitability of CLOPYR AG for use on turfgrass species and ornamental plants not listed in this label by treating a small area of turf or a small sample of ornamental plants using application rates for similar plants. After a test application has been made, the treated plants should be observed for a period of 30 – 60 days for signs of injury such as reduced vigor, foliar damage or stand reduction. If no injury is observed, treatment to larger areas may be performed.

If CLOPYR AG is applied to any ornamental plant species not recommended in this label, the user assumes full responsibility for any damage.

Avoiding Injury to Non-Target Plants

Because CLOPYR AG can affect broadleaf plants by either foliar contact or root uptake, it should not be applied either directly or indirectly (via spray drift) to the following plants known to be sensitive to clopyralid:

Grapes	Lentils	Safflower
Flowers	Peas	Vegetables (not listed on this label)
Tomatoes	Alfalfa	Other susceptible broadleaf
Potatoes	Sunflowers	crops/ornamentals
Beans	Soybeans	

See the section above on Crop Rotation Restrictions for additional guidance for avoiding injury to sensitive plants.

Avoid Residues from Plants or Manure:

- Do not use hay or straw from treated areas or manure or bedding straw from animals that have grazed or consumed forage from areas treated with CLOPYR AG to compost or mulch where susceptible plants may be grown the following season.
- The decomposition of clopyralid (the active ingredient) in crop residues or manure is optimal in warm, moist soil conditions and may be enhanced by supplemental irrigation. To promote the decomposition of CLOPYR AG in plant residues or manure, the residues should be either burned or evenly mixed with the soil.

Avoid Movement of Treated Soil:

- While serious injury is unlikely, wind-blown dust containing clopyralid may produce visible symptoms on sensitive non-target plants such as epinasty (the downward curving or twisting of leaf petioles or stems).
- To minimize potential movement of clopyralid on wind-blown dust, avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants such as treatment of dry, powdery or light sandy soils until soil.

Avoid Spray Drift:

- Because very small quantities of this product can severely injure sensitive or susceptible crops during their active growth or dormant periods, avoid spray drift from coming in contact with these crops.
- Use as coarse a spray as possible to minimize drift.
- To aid in reducing spray drift, use a drift control or deposition agent suitable for agricultural applications with this product. Follow all use recommendations and precautions on the product label.

When applying with ground equipment, spray drift can be reduced by doing the following:

- **Do not under any circumstances apply with a mist blower**.
- Apply 10 or more gallons of spray per acre
- Keep the spray boom as low as possible
- Keep 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)
- Spray when the wind velocity is low (follow all state regulations), but avoid applications in completely calm conditions which may lead to air inversions.
- In hand-gun applications, use the minimum pressure necessary to obtain adequate plant coverage without forming a mist.

When applying with aircraft, spray drift can be reduced by doing the following:

- **Do not apply by aircraft when an air temperature inversion condition exists.** This situation is characterized by little or no wind and 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.
- Use straight stream nozzles directed straight back
- Use a spray boom no longer than ¾ the wing span of the aircraft
- Use drift control systems or drift control additives, however, do not use a thickening agent with systems that cannot handle thick sprays (such as the Microfoil or Thru-Valve booms).
- Keep spray pressures low enough to provide coarse spray droplets.

- Spray only when wind velocity is low (follow all state regulations), but avoid applications in completely calm conditions which may lead to air inversions.

Sprayer Clean-Out:

To avoid injury to desirable plants, equipment used to apply CLOPYR AG should be thoroughly cleaned before re-using to apply any other chemicals.

1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of all rinse water by application to treatment area or apply to non-cropland area away from water supplies.
2. During the second rinse, add 1 qt of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min). 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.

MIXING INSTRUCTIONS

Water Dilution – To prepare a water dilution of CLOPYR AG:

Note: Allow time for thorough mixing of each spray ingredient before adding the next.

1. Add ¾ of the water volume to the spray tank and begin agitation.
2. Add the amount of CLOPYR AG for your specific use as indicated in this label.
3. Add any surfactants, crop oils, or other adjuvants according to manufacturer's label(s).
4. If needed to control drift, add any spray thickening agents according to the manufacturer's label.
5. Continue agitation during final filling of the spray tank and maintain agitation during application. If allowed to stand after mixing, agitate the spray mixture before use.

Oil-Water Emulsion (only for use on pasture/rangeland grass in Arizona, New Mexico, Oklahoma, and Texas)

Spray mixtures prepared as oil-water emulsions perform more dependably than water or water plus surfactant dilutions. Either diesel fuel, fuel oil or kerosene may be used. **NOTE: For either ground or aerial applications, do not use more than 1 gallon of oil per acre.**

- For aerial application, add oil to the spray mix at the ratio of 1 part oil to 5 parts water. Use an appropriate agricultural spray emulsifier (such as Sponto 712 or Triton X-100) according to the manufacturer's recommended rate.
- For ground application, add oil to the total spray mix at the rate of 5 to 10 percent of total volume up to a maximum of 1 gallon of oil per acre.

Suggested Mixing and Application Procedure for Oil-Water Emulsions

NOTE: Maintain continuous, vigorous mechanical, jet or by-pass agitation during the entire process:

1. Add ½ the amount of water to be used to the spray mixing tanks.
2. Add the label indicated amount of CLOPYR AG required for the total volume of spray being mixed.
3. With agitation operating, add the oil-emulsifier premix slowly to the mixing tank.
   NOTE: Any oil and / or emulsifier to be added must be premixed. Refer to the manufacturer's label for use directions and confirm the amount of emulsifier that should be used with a preliminary jar test (see below).
4. Finally, add the remaining amount of water required to bring the spray batch to the desired volume. If using a drift control additive, meter this ingredient into the water being added during this final filling stage and check spray mixture for complete dispersion.

Maintain agitation in the spray tank during application.

Tank Mixes

This product may be applied with other products in a tank mix as long as the following conditions are met:

1. The tank mix partners are labeled for the timing and method of application for the use site to be treated; and,
2. Tank mixing is not prohibited by the label of the other tank mix partners.

Tank Mixing Precautions:

- *Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.*
- Carefully read and follow all applicable use directions, precautions, and limitations on the respective product labels, *always following the most restrictive label requirements.*
- Do not exceed recommended application rates for any of the tank mix partners.
- Do not tank mix products packaged in water soluble packaging with products containing boron, or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned. (See instructions for Sprayer Clean-Out.)
- Always perform a compatibility or jar test to ensure the compatibility of products to be used in tank mixture (see below).

Tank Mix Compatibility Testing (JAR TEST):

A jar test is recommended prior to tank mixing to ensure compatibility of CLOPYR AG and other pesticides.

1. Using a clear glass quart jar with lid, mix the tank mix ingredients in their relative proportions.
2. Thoroughly shake the jar to mix the ingredients.
3. For the next 30 minutes, observe the mixture for signs of balling-up, formation of flakes, sludges, gels, oily films or layers, or other precipitates. If any of these are observed, it is not compatible and the tank mix combination should not be used.

APPLICATION DIRECTIONS

General Information:

Apply to actively growing weeds. **Only weeds that have emerged at the time of application will be affected.**

Conditions such as drought or near freezing temperatures prior to, at, and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth.

Control may be decreased if foliage is wet at the time of application. CLOPYR AG applications will be rainfast within 6 hours after application.

Application Rates:

In general, use the lower labeled application rates for young, succulent growth of susceptible weed species. Use the higher labeled rates for more tolerant species, perennials, weeds in dense stands or in advanced stages of growth, or under conditions of plant stress such as drought or extreme temperatures. Weeds in areas where competition from crops does not occur (such as in fallow land) will generally require higher rates for control or suppression. Note: Do not exceed maximum rate listed in rate ranges below per growing season (unless otherwise indicated).

Crop or Use Site	Application Rate Range (pints/acre)
asparagus	½ to 2/3
barley, oats, wheat	¼ to 1/3
Brassica (Cole) Leafy Vegetables, including: broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo broccolo, Chinese (Bok Choy) cabbage, Chinese broccoli, Chinese mustard cabbage, Chinese (Napa) cabbage, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens	¼ to ½ *
Christmas tree and cottonwood/poplar and eucalyptus tree plantations, fallow cropland, field corn, grasses grown for seed, sugar beets	¼ to 2/3
garden beet, canola (rapeseed), crambe	¼ to ½
mint, stone fruits, popcorn, sweet corn	1/3 to 2/3
turnip	1/3 to 1 1/3

Crop or Use Site	Application Rate Range (pints/acre)
permanent grasses on CRP land, noncropland, non-leguminous trees, rangeland and permanent grass pastures	1/3 to 1 1/3
spinach	1/6 to 1/3**

* In New York and California – the maximum application rate for CLOPYR AG is 2/3 pint/acre per growing season. Do not exceed the cumulative amount of 2/3 pint [0.25 lb. acid equivalent (a.e.)] of clopyralid per acre per crop year.

** Maximum use rate for spinach is ½ pt/acre/growing season.

For medium to heavy populations of Canada thistle, the following general descriptions describe the levels of control that can be expected from each rate of application. Control of lighter infestations may be better than the descriptions below:

- A rate of 1/3 pint per acre will suppress top growth of Canada thistle for 6 to 8 weeks with some regrowth possible by the end of the season. The amount of regrowth should not interfere with crop harvesting.
- A rate of 1/2 pint per acre will generally provide season long control of Canada thistle. Not all rhizomes will be killed, and some regrowth may occur by the end of the growing season.
- A rate of 2/3 pint per acre will provide season long control of Canada thistle plus suppression into the following season, resulting in a reduction of the total number of Canada thistle plants in the treated area.

Spray Coverage:

- Use sufficient spray volume to provide thorough and uniform spray coverage of target weeds.
- Do not broadcast apply in less than 2 gallons of total spray volume per acre.
- For best results and to minimize spray drift, apply in a spray volume of 10 or more gallons per acre.
- In general, spray volume must be increased as crop canopy, height and weed density increase in order to obtain equivalent weed control.
- Only use nozzle types and spray equipment designed for herbicide application.
- To reduce spray drift, follow precautions under "Avoiding Injury to Non-target Plants".

Use of Adjuvants:

- Unless otherwise directed on this label, addition of surfactants, crop oils, or other adjuvants is not usually necessary when using CLOPYR AG.
- Adding a surfactant to the spray mixture may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress.
- If an adjuvant is added to the spray solution, follow all manufacturer use guidelines.

Spot Treatments:

Hand-held sprayers may be used for spot applications of CLOPYR AG if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application. To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand / backpack sprayers according to the following directions:

NOTE: Application rates in the table are based on an area of 1000 sq ft.

Mix the amount of CLOPYR AG (fl oz or ml) corresponding to the desired broadcast rate in one or more gallons of spray. To calculate the amount of CLOPYR AG required for larger areas, multiply the table value (fl oz or ml) by the area to be treated in "thousands" of square feet. For example, if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (3500 ÷ 1000 = 3.5). An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

Amount of CLOPYR AG per gallon of spray to Equal Specified Broadcast Rate					
¼ pt/acre	1/3 pt/acre	½ pt/acre	2/3 pt/acre	1 pt/acre	1 1/3 pt/acre
1/10 fl oz (2.7 ml)	1/8 fl oz (3.6 ml)	1/5 fl oz (5/4 ml)	¼ fl oz (7.3 ml)	3/8 fl oz (11 ml)	0.5 fl oz (15 ml)

1 fl oz = 29.6 (30) ml

Use the following table for converting pints to fluid ounces.

Conversion Chart – Pints to Fluid Ounces	
Pints	**Fluid Ounces**
1/3	5
¼	4
½	8
2/3	11

Band Application:

CLOPYR AG may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated acre.

Band width in inches / Row width in inches	x	Broadcast rate per treated acre	=	Band rate per treated acre
Band width in inches / Row width in inches	x	Broadcast volume per treated acre	=	Band volume per treated acre

Cut Surface Treatments:

Apply CLOPYR AG in rights-of-way and other non-crop areas to control unwanted trees and vines in the legume family such as mimosa, locust, redbud, or wisteria. CLOPYR AG can be used either undiluted or diluted in a 1 to 1 ratio with water, as directed below.

Tree Injector Method	At any convenient height, inject ½ milliliter of undiluted CLOPYR AG or 1 milliliter of diluted solution through the bark at 3 to 4 inches intervals between centers of the injector wound. The injections should completely surround the tree. **Note:** No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.
Hack and Squirt Method	Using a hatchet or other similar equipment at a convenient height, make cuts at 3 to 4 inch intervals between centers around the tree trunk. Spray ½ milliliter of undiluted CLOPYR AG or 1 milliliter of diluted solution into each cut
Frill or Girdle Method	At a convenient height, make a single girdle through the bark completely around the tree. Wet the cut surface with undiluted or diluted CLOPYR AG solution.
Stump Treatment	As soon as the tree or vine has been cut, spray or paint the cut surfaces with a 50/50 mix of CLOPYR AG and water, being sure to wet the cambium area next to the bark.

WEEDS CONTROLLED

Refer to use directions for specific crop or use site for additional information on application timing and application rates.

ANNUALS:

buckwheat, wild
horseweed
buffalobur*
jimsonweed
sicklepod
smartweed, green*
chamomile, false (scentless)
chamomile, mayweed (dogfennel)
sowthistle, annual
clover, black medic
clover, hop
ladysthumb*
lettuce, prickly
starthistle, yellow
sunflower
marshelder
cocklebur, common
nightshade, black
coffeeweed
nightshade, Eastern black
cornflower (bachelor button)
nightshade, cutleaf
vetch
nightshade, hairy
volunteer beans
galinsoga
pineappleweed
volunteer lentils
ragweed, common
volunteer peas
hawksbeard, narrowleaf
ragweed, giant

BIANNUALS:

salsify, meadow (goatsbeard)	clover, sweet	teasel, common
burdock, common	thistle, bull	groundsel, common
knapweed, diffuse	thistle, musk	wormwood, biennial (not in CA)
knapweed, spotted		

PERENNIALS:

artichoke, Jerusalem	locoweed, Lambert	dandelion
hawkweed, yellow	clover, red	volunteer alfalfa (from seed only)
knapweed, Russian (not in CA)	locoweed, white	dock, curly
sorrel, red	clover, white	oxeye daisy
sowthistle, perennial (not in CA)	thistle, Canada	hawkweed, orange

- These weeds may only be suppressed resulting in a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during and after the time of treatment. For perennial weeds such as Russian knapweed and perennial sowthistle, CLOPYR AG will control the top growth and inhibit regrowth during the season of application (season-long control). At higher rates shown on this label, CLOPYR AG may cause a reduction in shoot regrowth in the season following application; however, plant response may be inconsistent due to the inherent variability in shoot regrowth from perennial root systems.

CROP USES

Asparagus

Use Precautions:

- Following application wait a minimum of 48 hours before harvesting and at least 2 weeks before cultivating.
- A second application may be made for control as long as the total amount applied does not exceed 2/3 pint per acre in a single growing season.
- When CLOPYR AG is applied during the cutting season, some crooking (twisting) of asparagus spears may occur. Do not apply during the cutting season if crooking cannot be tolerated. Clear-cutting of spears just before application of CLOPYR AG may reduce the occurrence of crooking.
- Malformed ferns may result from application when spears are longer than 3 inches or with open seed heads.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Annual Weeds	½ - 2/3 in a total spray volume of 10 – 40 gallons of water	Before or during asparagus cutting season, or after harvest but prior to fern growth. Postharvest (layby) applications should be made as soon as possible after cutting provided weeds are in proper stage of growth for treatment.	Treat annual weeds before they send up a flower stalk.
Perennial Weeds			For more effective control, use higher rates listed. Apply after the majority of basal leaves have emerged up to bud stage.
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides registered for use on asparagus. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Barley, Oats and Wheat

Use Precautions:

- ***Do not apply to barley, oats or wheat that is underseeded with legumes.***
- Do not permit lactating dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 1 week after treatment.
- Do not harvest hay from treated grain fields.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Annual Weeds	¼ - 1/3	When the crop is between the 3-leaf stage until the early boot stage of growth.	
Perennial Weeds			For best control, use 1/3 pint per acre. Russian knapweed will only be suppressed at this rate.
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other products registered for wheat, barley and oats. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Brassica (Cole) Leafy Vegetables

Including: Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Cauliflower, Cavalo Broccolo, Chinese (Bok Choy) Cabbage, Chinese Broccoli, Chinese Mustard Cabbage, Chinese (Napa) Cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens

Use Precautions

- Following application wait a minimum of 48 hours before harvesting and at least 2 weeks before cultivating.

<table>
<tr><th>Weeds Controlled</th><th>Application Rate (pints / acre)</th><th>Application Timing</th><th>Comments</th></tr>
<tr><td>Buckwheat, wild
Chamomile
Clover
Cocklebur, common
Dandelion
Galinsoga
Lettuce, prickly
Pineappleweed
Ragweed
Smartweed</td><td>¼ - ½ in 10 to 40 gallons of water.</td><td rowspan="2">Make 1 to 2 broadcast applications per crop per year, not to exceed 2/3 pint per acre per year in New York or California, or ½ pint per acre per year in all other states.

Apply at least 30 days prior to harvest.</td><td></td></tr>
<tr><td>Supression of:
Sowthistle, annual
Thistle, Canada</td><td>1/3 – ½ in 10 to 40 gallons of water.</td><td>For Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage.</td></tr>
<tr><td colspan="4">Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on mustard greens. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.</td></tr>
</table>

Canola (Rapeseed) and Crambe

(Not registered for use in California)

Use Precautions

- Do not apply within 50 days of harvest.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Buckwheat, wild Chamomile, false Chamomile, mayweed Dandelion Dock, curly Nightshade species Smartweed, green Sowthistle, annual Sunflower Wormwood, biennial	¼ - ½ in 10 to 20 gallons of water. May be applied with ground or aerial equipment (minimum of 5 gallons / acre by air).	Make one broadcast application per crop per year at the 2-6 leaf stage of crop growth.	
For season-long control of: Sowthistle, perennial Thistle, Canada	½ in 10 to 20 gallons of water. May be applied with ground or aerial equipment (minimum of 5 gallons / acre by air).		For Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage.
For top growth suppression of Canada Thistle	1/3 in 10 to 20 gallons of water. May be applied with ground or aerial equipment (minimum of 5 gallons / acre by air).		
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on canola and crambe. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Christmas Tree Plantations

CLOPYR AG can be safely applied over the top of actively growing balsam fir, blue spruce, Douglas fir, Fraser fir, grand fir, lodgepole pine, noble fir, ponderosa pine, and white pine.

Use Precautions

- Apply as often as needed, but do not exceed 2/3 pint per acre of CLOPYR AG per annual growing season.
- Do not exceed 1/2 pint per acre per annual growing season for blue spruce.
- In the Pacific Northwest, do not apply in the first year of transplanting (some needle curling has been observed on firstyear transplants).
- Tree injury may occur if CLOPYR AG is used with a surfactant or crop oil; do not use unless previous experience indicates injury is tolerable.
- Do not apply with an air blast sprayer.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Annual weeds	¼ - ½ in a minimum of 10 gallons of water by ground application.	Apply from weed emergence up to the 5-leaf stage of growth. For wild buckwheat, application at the 3-5 leaf stage of growth but before vining is recommended.	May be applied as a band application, use the formulas in the Band Application section of this label for the appropriate rates and volumes per treated acre. May be applied as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of 1/2 to 2/3 pint per acre. Refer to the instructions for "Spot Treatment and Hand-held Sprayers" under "Application Directions" in this label.
Perennial weeds	½ - 2/3 in a minimum of 10 gallons of water by ground application.	For Canada thistle and knapweeds, apply after the majority of basal leaves have emerged but prior to bud stage.	

Corn (Field, Pop and Sweet)

CLOPYR AG is recommended for postemergence control of Canada thistle, Jerusalem artichoke, annual sowthistle, common sunflower, common cocklebur, giant and common ragweed, jimsonweed and other broadleaf weeds infesting field corn. Apply CLOPYR AG at the timing and rates for field, pop and sweet corn as indicated below.

GENERAL INFORMATION FOR ALL CORN

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Cocklebur, common Ragweed, giant Ragweed, common Sunflower Other annual weeds Jerusalem artichoke	¼ - ½ in 10 or more gallons of water per acre as a broadcast treatment to the entire infested area.	Apply from weed emergence up to the 5-leaf stage of growth.	Use the higher rate for heavy infestations or greater residual control.
Canada Thistle	1/3 - 2/3 in 10 or more gallons of water per acre as a broadcast treatment to the entire infested area. Light infestations will generally be controlled with a rate of 1/3 pint per acre. Application rates of ½ - 2/3 pint per acre are generally more effective for medium to heavy infestations (more than 10 plants per square yard).	Apply when the majority of thistle plants have emerged and thistles are at least 6 to 8 inches in diameter or height, up to bud stage.	For best long term control, do not cultivate before or after application. If cultivation is necessary, wait 14 – 20 days after application before cultivating to allow for thorough translocation.

Specific Instructions for Field Corn

Use Precautions for Field Corn:

- Re-treat as necessary, but do not apply more than 2/3 pint per acre of CLOPYR AG per year.
- Do not apply to field corn greater than 24 inches tall.
- Do not allow livestock to graze treated areas or harvest treated corn silage as feed within 40 days after last treatment.

Corn Inbred Lines or Breeding Stock: Varietal susceptibility has a large impact on potential damage from CLOPYR AG, and inbred lines or any breeding stock may be injured by CLOPYR AG. Contact your seed production agronomist for advice before applying CLOPYR AG to inbred lines or breeding stock.

Hand-Held Sprayers: CLOPYR AG may be applied as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of 2/3 pint per acre. Applications should be made on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff. Refer to instructions for "Spot Treatment and Hand-held Sprayers" in the "Application Directions" section.

Tank Mixes or Sequential Applications for Field Corn: See "Tank Mixing Precautions" under "Mixing Instructions". If CLOPYR AG is applied sequentially or in combination with Hornet™ or Scorpion™ III herbicides to the current corn crop, the maximum application rate at which CLOPYR AG may be applied to field corn is indicated in the following tables:

Rate of Hornet™ Applied to Current Corn Crop (oz/acre)	Maximum Application Rate for CLOPYR AG (fl oz/acre)
1.6	8.1
2.4	6.8
3.2	5.4
4.0	4.0

Rate of Scorpion™ III Applied to Current Corn Crop (lb/acre)	Maximum Application Rate for CLOPYR AG (fl oz/acre)
0.25	8.1

Note: Maximum Use Rate for clopyralid is 0.25 lb active ingredient per acre. One ounce of Hornet™ contains 0.039 lb of clopyralid. One-fourth pound of Scorpion™ III contains 0.0625 lb of clopyralid. One ounce of CLOPYR AG contains 0.023 lb of clopyralid.

Specific Instructions for Popcorn and Sweet Corn

(Not registered for use in California)

Use Precautions for Popcorn and Sweet Corn:

- Do not apply within 30 days of harvest for ears and forage and 60 days of harvest for stover.
- Make 1 to 2 broadcast applications per crop per year, not to exceed a total of 2/3 pint per acre.
- Allow at least 21 days between treatments.
- Do not apply to popcorn greater than 24 inches tall or sweet corn greater than 18 inches tall.

Application Timing

Popcorn: After emergence through 24-inch tall popcorn.
Sweet corn: After emergence through 18-inch tall sweet corn.

Application Rate: Apply CLOPYR AG uniformly with ground equipment as a broadcast or directed spray at 1/3 to 2/3 pint per acre in 10 to 20 gallons total spray volume per acre.

Tank Mixtures for Popcorn and Sweet Corn: CLOPYR AG may be tank mixed with other herbicides labeled for use on popcorn and sweet corn.

Cottonwood/Poplar and Eucalyptus Tree Plantations

Use Precautions

- Do not exceed 1-1/3 pints per acre per year.
- Do not tank mix CLOPYR AG with other herbicides labeled for this use unless spray avoids all contact with tree foliage.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
All weeds listed in the "Weeds Controlled" section of this label	1/3 – 2/3 in a minimum of 10 or more gallons of water per acre using ground equipment only. Can also be applied as a banded or directed spray, follow the instructions in the section describing banded applications.	Apply to new plantings after they are well established. Multiple applications can be made as necessary.	CLOPYR AG will not control certain broadleaf weeds, including mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and bindweed.

See Guidelines for Control of Specific Weeds for recommended rates and timing for specific susceptible annual, biennial, and perennial weeds.

Hand-Held Sprayers:

Spot applications of CLOPYR AG using hand held equipment can be made using the following guidelines:

- Prepare a spray solution by adding 1/4 fl oz CLOPYR AG per gallon of water. When applied at 1 gallon of spray per 1000 sq ft, this spray concentration is equivalent to a broadcast rate of 2/3 pint per acre.
- Apply to weeds on a spray-to-wet basis with spray coverage uniform and complete.
- Do not spray to the point of run-off.
- Contact with tree foliage should be avoided or limited to lower branches.

Fallow Cropland

Use Precautions

- Do not exceed 1-1/3 pints per acre per year.
- Do not tank mix CLOPYR AG with other herbicides labeled for this use unless spray avoids all contact with tree foliage.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
All weeds listed in the "Weeds Controlled" section of this label	1/4 – 2/3 in a minimum of 10 or more gallons of water per acre. Use the higher rate on perennial weeds or when the condition of the weeds at the time of treatment may prevent optimum control.	Apply either postharvest in the spring/summer (during fallow period), or to set-aside. Apply to young, emerged weeds under conditions that promote active growth. For best results on perennial weeds such as Canada thistle, apply after the majority of the basal leaves have emerged up to bud stage.	For best results, wait 14 to 20 days after application before cultivating or fertilizing with shank-type applicators to allow for thorough translocation. CLOPYR AG will not control certain broadleaf weeds, including mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and bindweed.
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on fallow cropland. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Garden Beet

(Not registered for use in California)

Use Precautions

- Do not apply within 30 days of harvest.
- Make 1 or 2 broadcast applications per crop per year, not to exceed a total of ½ pint per acre.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Prickly lettuce Galinsoga	1/4 – 1/2 in a minimum of 10 or more gallons of water per acre with ground equipment. Use the higher rate when greater residual control is required or on heavy infestations.	Apply when weeds are young and actively growing.	For best results, wait 14 to 20 days after application before cultivating or fertilizing with shank-type applicators to allow for thorough translocation.
Common ragwheed and sweet clover		Apply from weed emergence up to the 5 leaf stage of growth.	
Nightshade (all species)		Apply at the 2 to 4 leaf stage of growth.	
Sowthistle		Apply from rosette up to bud stage.	
Wild buckwheat		Apply at the 1 – 3 leaf stage of growth and before vining begins.	
Infesting garden beets		Apply in the 2 – 8 leaf stage of crop growth when weeds are young and actively growing.	
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on garden beet. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Grasses Grown For Seed

Use Precautions

- Do not apply to bentgrass unless injury can be tolerated.
- Do not exceed a total of 2/3 pint per acre per year.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Annual Weeds and Canada thistle	1/4 – 2/3 in a minimum of 10 or more gallons of water per acre with ground equipment. Retreat as necessary for control.	Apply only to established grasses before the boot stage. Applications in the boot stage and beyond can result in increased potential for injury.	For control of late emerging Canada thistle, a preharvest treatment may be made after grass seed is fully developed but before the thistle has reached the bud stage. Post-harvest fall treatments may be made to actively growing Canada thistle after the majority of basal leaves have emerged.

Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with 2,4-D, MCPA, dicamba, or bromoxynil. Dicamba or bromoxynil tank mixes may be useful in broadening the annual weed control spectrum, but may reduce long term control of perennials such as Canada thistle. ***Do not tank mix CLOPYR AG with 2,4-D, MCPA, or dicamba unless the risk of crop injury is acceptable.***

See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.

Mint (Spearmint and Peppermint)

Use Precautions

- Do not apply within 45 days of harvest.
- Do not apply more than one pint per acre per growing season.
- Treated mint may only be used for distillation (oil extraction).
- Do not feed spent mint hay slugs to livestock.
- Mint straw, hay or spent hay (slugs) from treated areas cannot be used for composting or mulching. If hay slugs are disposed of on cropland, distribute in a thin layer and incorporate. Do not dispose of hay slugs on land to be rotated to a susceptible crop. (See "Residues in Plants or Manure" section.)
- Discoloration or malformation of mint leaves may occur following treatment. This effect is generally temporary and does not reduce oil yields.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Fall Treatment Only (Sept. 15 to first frost) Annuals Perennials Hard-to-kill perennials (Canada thistle, etc.)	 1/2 2/3 1	Treat annual weeds when they are small and actively growing before they send up a flower stalk. For Canada thistle, apply CLOPYR AG after the majority of basal leaves have emerged but prior to bud stage.	A nonionic surfactant of at least 80% active ingredient may be added at a rate of 1 pint per 100 gallons of spray solution. CLOPYR AG will not control many broadleaf weeds such as mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and field bindweed.
Spring Treatment Only Annuals Perennials	 1/3 1/2		
Fall Plus Spring Treatment	Maximum of 2/3 pint in fall plus 1/3 pint in spring		
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on mint. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Spinach

(Not registered for use in California)

Use Precautions

- Do not apply within 21 days of harvest.
- Do not exceed a total of ½ pint per acre.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Prickly lettuce Galinsoga Common groundsel Pineapple Clover Common cocklebur Jimsonweed Ragweed Infesting spinach	Make 1 or 2 broadcast applications per year of 1/6 to 1/3 pints using ground or aerial equipment in 10 to 20 gallons total spray volume (minimum of 5 gallons per acre by air) Use higher rates for heavy infestations or when greater residual control is desired.	Apply in the 2 to 5 leaf stage of crop growth and from weed emergence until the five leaf stage of growth	
Annual sowthistle Canada thistle (suppression only)		Apply from rosette up to bud stage.	
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on spinach. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Stone Fruit

(Not registered for use in California)

Including: Apricot, Chicksaw Plum, Damson Plum, Fresh Prune, Japanese Plum, Nectarine, Peach, Plum, Plumcot, Sweet Cherry, Tart Cherry

Use Precautions

- Do not apply within 30 days of harvest.
- Do not exceed a total of 2/3 pint per acre.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Clover Dandelion Horseweed Musk thistle Vetch	Make 1 or 2 broadcast applications per year of 1/3 to 2/3 pints in 10 or more gallons total spray volume using ground equipment Use higher rates for heavy infestations or when greater residual control is desired.	Apply from weed emergence until the five leaf stage of growth	
Nightshade (black and hairy)		Apply in the 2 to 4 leaf stage of crop growth	
Annual sowthistle Canada thistle		Apply from rosette up to bud stage.	
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on stone fruit. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Sugar Beets

Use Precautions

- Do not apply within 45 days of harvest.
- Do not exceed a total of 2/3 pint per acre per season.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Annual weeds	1/4 to 1/2 using ground equipment in 10 or more gallons total spray volume by broadcast foliar or banded treatment	Apply from weed emergence until the five leaf stage of growth when beets are in the cotyledon to 8-leaf stage. Applications to wild buckwheat should be made at the 1 to 3 leaf stage of growth and before vining begins.	For maximum efficacy, do not flood or furrow irrigate for a minimum of seven days after application. Retreat as necessary.
Perennial weeds	1/4 to 2/3 using ground equipment in 10 or more gallons total spray volume by broadcast foliar or banded treatment	Apply when the beets are in the cotyledon to 8-leaf stage and the weeds are young and actively growing	
Annual sowthistle Canada thistle	1/2 to 2/3 using ground equipment in 10 or more gallons total spray volume	Apply CLOPYR AG after the majority of basal leaves have emerged but prior to bud stage.	For best results do not cultivate thistle patches. Retreat as necessary.

Tank Mixing: To provide consistent control of difficult-to-control weeds such as wild buckwheat and broaden the spectrum of weeds controlled, CLOPYR AG may be applied in combination with Betamix®, Betanex®, UpBeet®, or other products registered for postemergence application in sugar beets.

For best results, tank mix 1/4 pint per acre of CLOPYR AG with Betamix® or Betanex® followed 1 to 2 weeks later by a second application of 1/4 to 1/3 pint per acre of CLOPYR AG tank mixed with Betamix® or Betanex®.

CLOPYR AG may also be tank mixed with grass herbicides such as Poast® and crop oil or Dash surfactant may be added to the tank mixture to optimize grass weed control.

See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.

Turnips

(Not registered for use in California)

Use Precautions

- Do not apply within 15 days of harvest of turnip tops or 30 days of harvest of turnip roots.
- Make only one broadcast application per crop per year.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Wild buckwheat Sweet clover Prickly lettuce Common ragweed Galinsoga	1/3 to 1/2 using ground equipment in 10 or more gallons total spray volume Use the higher rates listed when greater control is necessary or for heavy infestations	Apply from weed emergence to the five leaf stage of growth Applications to control wild buckwheat should be made at the 1 to 3 leaf stage of growth and before vining begins	
Postemergence suppression of sowthistle		Apply from rosette to bud stage	
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with other herbicides labeled for use on turnip. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

RANGELAND, PASTURE, CRP AND OTHER NON-CROP USES

Rotation to Broadleaf Crops: Do not rotate broadleaf crops into rangeland, pasture, CRP, or other non-crop areas until a bioassay indicates that it is safe to do so. See the Crop Rotation Restrictions section above for more information on how to conduct a bioassay.

Non-Crop Use (All States Except California)

For use on non-crop areas such as industrial manufacturing and storage sites, rights-of-way (along roadsides, electrical power lines, communication lines, pipelines and railroads, including grazed areas on these sites and forest spot application adjacent to these sites), fencerows, around farm buildings and equipment pathways.

NOTE: Use on non-crop areas such as storage or industrial / manufacturing sites is prohibited in Oregon.

Broadleaf Weeds Controlled

acacias	hawkweed, orange	ragweed, common
artichoke, Jerusalem	hawkweed, yellow	ragweed, giant
buckwheat, wild	horseweed	salsify, meadow (goatsbeard)
buffalobur*	jimsonweed	sicklepod
burdock, common	knapweed, diffuse	smartweed, green*
chamomile, false (scentless)	knapweed, Russian*	sorrel, red
chamomile, mayweed (dogfennel)	knapweed, spotted	sowthistle, annual
clover, black medic	ladysthumb*	sowthistle, perennial*
clover, hop	lettuce, prickly	starthistle, yellow
clover, red	locoweed, Lambert	sunflower (common or wild)
clover, white	locoweed, white	teasel, common
cocklebur, common	marshelder	thistle, artichoke
coffeeweed	mesquite	thistle, bull
cornflower (bachelor button)	nightshade, Eastern black	thistle, Canada (rosette to bud)
dandelion	nightshade, cutleaf	thistle, musk (rosette to bud)
dock, curly	nightshade, hairy	thistle, Italian
groundsel, common	oxeye daisy	vetch
hawksbeard, narrowleaf	pineappleweed	

* These weeds may only be suppressed. Suppression means reduced population or vigor when compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during and after the time of treatment.

- For perennial weeds such as Russian knapweed and perennial sowthistle, CLOPYR AG will control the top growth and inhibit regrowth during the season of application (season-long control).
- At higher rates shown on this label, CLOPYR AG may cause a reduction in shoot regrowth in the season following application; however, plant response may be inconsistent due to inherent variability in shoot regrowth from perennial root systems.

Woody Plants and Vines Controlled

eastern redbud	locust (spp)	wisteria
kudzu	mimosa (silktree)	

Use Precautions

- Do not exceed 1-1/3 pints per acre per year.
- Conditions that stress grasses, such as drought, will increase potential for injury to the grass at all stages of growth.
- To minimize drift, use low spray pressure and keep sprays no higher than the tree crowns. Trees taller than 8 feet in height may be difficult to treat efficiently and obtain thorough coverage.
- Environmental conditions can significantly influence results and unsatisfactory control may result if application is made when brush and weeds are under severe drought stress or other adverse conditions that inhibit plant growth.

Application Method	Application Rate (pints / acre)	Application Timing	Comments
Broadcast (Ground or Aerial)	¼ - 1-1/3 in 10 or more gallons of water (5 gallons of water or more per acre for aerial)	Use lower rates under ideal growing conditions and when plants are 3 – 6 inches tall. For Canada thistle or knapweed, use higher rates (2/3 to 1-1/3) and apply after basal leaves are produced.	A non-ionic surfactant should be used at 1-2 quarts per 100 gallons of spray mixture. CLOPYR AG can be applied in an invert emulsion using oil and an appropriate inverting agent. Follow label directions of the inverting agent.
High-Volume Leaf Stem Treatment (Ground Application)	1 – 3 quarts per 100 gallons of spray per acre. Thorough coverage is required for good results.		Apply as a complete spray-to-wet foliar application, including all leaves, stems, and root collars.
Tank Mixing: To broaden the spectrum of weeds controlled or to increase control of weeds that are more mature, CLOPYR AG may be tank mixed with ½ - 2 lb per acre of 2,4-D amine or low volatile ester herbicide, or other herbicides registered for the non-ag uses described above. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

NOTE: Refer to "Control of Mesquite and Certain Associated Woody Species" in the "Rangeland and Permanent Grass Pastures" section for more information on controlling mesquite in non-crop use sites.

Non-Crop Use (California Only)

For use on non-crop areas such as industrial manufacturing and storage sites, rights-of-way (along roadsides, electrical power lines, communication lines, pipelines and railroads, including grazed areas on these sites and forest spot application adjacent to these sites), fencerows, around farm buildings and equipment pathways.

Use Precautions

- Do not exceed 2/3 pints per acre per year.
- Conditions that stress grasses, such as drought, will increase potential for injury to the grass at all stages of growth.
- Environmental conditions can significantly influence results and unsatisfactory control may result if application is made when brush and weeds are under severe drought stress or other adverse conditions that inhibit plant growth.

Broadleaf Weeds Controlled (California Only)

knapweed, diffuse
knapweed, Russian*
knapweed, spotted
starthistle, yellow
thistle, artichoke
thistle, Canada (rosette to bud)
thistle, Italian
thistle, musk (rosette to bud)

* Suppression only. Suppression means reduced population or vigor when compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during and after the time of treatment.

Application Method	Application Rate (pints / acre)	Application Timing	Comments
Broadcast (Ground or Aerial)	¼ - 2/3 in 20 or more gallons of water per acre (5 gallons or more or water per acre for aerial)	Use lower rates under ideal growing conditions and when plants are 3 – 6 inches tall. For Canada thistle or knapweed, use higher rates and apply after basal leaves are produced through bud stage.	A non-ionic surfactant should be used at 1-2 quarts per 100 gallons of spray mixture. CLOPYR AG can be applied in an invert emulsion using oil and an appropriate inverting agent. Follow label directions of the inverting agent.

Conservation Reserve Program (CRP) For Seeding To Permanent Grasses Only

Use Precautions

- Do not use CLOPYR AG if legumes or bentgrass are to be used as cover during CRP.
- Conditions that stress grasses, such as drought, will increase potential for injury to the grass at all stages of growth.
- Do not use in newly seeded areas until grass is established.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Wild buckwheat Sunflower (volunteer) Musk thistle rosettes	2/3 in 10 or more gallons of water per acre.	Apply when perennial grasses are well established (as indicated by tillering, vigorous growth, and development of a secondary root system). Application prior to the flowering stage is recommended.	
For actively growing weeds such as: Canada thistle Musk thistle Knapweed (spotted, diffuse and Russian)	2/3 to 1-1/3 in 10 or more gallons of water per acre.		Apply after the majority of basal leaves have emerged up to bud stage.
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be tank mixed with ½ - 1 lb per acre of 2,4-D where species are sensitive to 2,4-D. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

Forest Sites, Including Tree Plantings

NOTE: CLOPYR AG will not control mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle or bindweed.

Use Precautions

- *Application to plants in the legume family (such as locust, redbud, mimosa, and lupine) or to box elder, persimmon or sassafras will severely damage or destroy the plants.*
- Do not use in forest nursery beds.
- Apply either at site preparation or after trees are planted (tree release).
- Applications over the top of tolerant tree species may be made anytime during the season; however, some needle/leaf curling may occur if applied during active tree growth. The curling is transient and the trees should recover by the end of the same growing season or early in the following growing season.
- Applications of CLOPYR AG over actively growing conifers may cause some needle curling. Use of a surfactant or crop oil may increase the likelihood of needle curling when making broadcast applications of CLOPYR AG. Do not use a surfactant or crop oil unless curling can be tolerated.
- Application of CLOPYR AG to broadleaf (hardwood) tree species may cause some leaf burning and malformation. This effect is transient except for plants in the legume family (see below). Addition of surfactant or crop oil may increase the severity of burning and malformation in broadleaf species.
- True firs (grand, noble, and pacific silver firs) show more needle curling than other conifers when higher rates are used. If needle curling is undesirable, use lower rates in rate range for broadcast applications or use directed sprays.

Tolerant Tree Species (may not be comprehensive):

Black walnut	Green ash	Norway spruce	Sugar maple
Bur oak	Hackberry	Pacific silver fir	Sumac
Cherry	Hickory	Ponderosa pine	Sycamore
Cherry bark oak	Hybrid aspen	Red oak	Virginia pine
Choke cherry	Hybrid poplar	Red pine	Western red cedar
Cottonwood	Incense cedar	Russian olive	Western hemlock
Crabapple	Loblolly pine	Sawtooth oak	White ash
Douglas fir	Lodgepole pine	Scotch pine	White pine
Eastern red cedar	Longleaf pine	Slash pine	White spruce
European larch	Noble fir	Shortleaf pine	White oak
Grand fir			

Broadcast Application:

Apply using ground equipment or helicopter to achieve a thorough and uniform spray coverage of target weeds.

Weeds Controlled	Application Rate (pints / acre)	Application Timing
General weed control	¼ - 1 1/3 in 5 or more gallons of water per acre.	Apply when weeds are small and actively growing. Use the lower rate only under highly favorable plant growing conditions and when weeds are no more than 3-6 inches tall.
Knapweed, diffuse Knapweed, spotted Thistle, Canada	1/3 - 1 1/3 in 5 or more gallons of water per acre	For best results, apply after the majority of basal leaves have emerged, up to early bud stage. Treatments applied prior to the emergence of the majority of basal leaves or at later growth stages may result in only partial control.

Weeds Controlled	Application Rate (pints / acre)	Application Timing
Hawkweeds Starthisle, yellow Thistle, bull Thistle, musk	2/3 - 1 1/3 in 5 or more gallons of water per acre	For best results, apply from rosette to bolting stage of growth.
Kudzu*	2/3 - 1 1/3 in 5 or more gallons of water per acre.	Applications are most effective between late June and early October as long as the kudzu are actively growing and not under drought stress. The ideal time to apply is during vigorous growth and just prior to or during flowering.
Tank Mixing: To broaden the spectrum of weeds controlled, CLOPYR AG may be applied with Accord® Concentrate, Accord® SP, Arsenal® A.C., Garlon™ 4, Garlon™ 3A, Glypro™, Glypro™ Plus, 2,4-D, atrazine, Oust® or Velpar® DF herbicides as per label directions for forest site uses. See the "Tank Mixes" section under "Mixing Instructions" in this label.		

* In Florida, CLOPYR AG can be used to control kudzu only in the following counties: Bay, Bradford, Calhoun, Escambia, Franklin, Gadsden, Gulf, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Leon, Liberty, Madison, Okaloosa, Santa Rose, Suwannee, Taylor, Wakulla, Walton, and Washington.

Specific Instructions for Spot Application and Hand Held Sprayers:

- Spot applications should be applied at an equivalent broadcast rate. For specific instructions, refer to "Spot Treatments" in the "Application Instructions" section near the beginning of this label.
- Direct spray onto weeds and avoid spraying trees where possible.
- Hand-held sprayers may be used for spot applications of CLOPYR AG if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application.

Rangeland and Permanent Grass Pastures

Use Precautions

- Best results on most weeds are obtained when weeds are small and actively growing (see specific information below) and application is made in 10 gallons or more per acre of water using ground equipment.
- Do not use in newly seeded areas until grass is established.
- Conditions that stress grasses, such as drought, will increase potential for injury to the grass at all stages of growth.
- Do not spray pastures containing desirable broadleaf plants, especially legumes, unless injury can be tolerated. However, the stand and growth of established perennial grasses is usually improved after controlling broadleaf weeds, especially when rainfall is adequate and grazing is deferred.
- Do not use hay or straw from treated areas for composting or mulching on susceptible broadleaf crops. (See "Residues in Plants or Manure" section.)

Application Rates

Use the lower labeled application rate for young, actively growing weeds. The higher rate should be used under less favorable growing conditions or on dense weed stands and/or larger weeds.

Weeds Controlled	Application Rate (pints / acre)	Application Timing	Comments
Thistle, musk	1/3 - 1	From rosette to early bolt growth stage.	Apply in the rosette stage at 1/3 pint per acre only when applied as a tank mixture with 2,4-D at ½ to 1 lb AI per acre. Otherwise apply to musk thistle at 2/3 to 1 pint per acre (see below).
Thistle, artichoke Thistle, Italian	1/3 – 2/3	At the rosette growth stage.	
Starthistle, yellow	½ - 1	From rosette to mid-bolt growth stage.	
Knapweed, diffuse Knapweed, spotted	2/3 – 1	Any time plants are actively growing, including fall regrowth.	Optimum time is from mid bolt to late bud stage of growth.
Thistle, artichoke Thistle, Italian	2/3 – 1	During the bolting growth stage.	
Thistle, Canada	2/3 – 1 1/3	After the majority of basal leaves have emerged through the beginning of the bud stage.	Treatment may also be applied to fall regrowth.
Knapweed, Russian (suppression)	1 – 1 1/3	From bud to mid-flower growth stage.	Treatment may also be applied to fall regrowth.
Tank Mixing (in California, Colorado, Idaho, Montana, Nebraska, Nevada, Oregon, South Dakota, Utah, Washington, and Wyoming only): To broaden the spectrum of weeds controlled, CLOPYR AG may be applied with 2,4-D at ½ to 1 lb. AI per acre when weed species present are susceptible to 2,4-D. See the "Tank Mixing Precautions" section under "Mixing Instructions" in this label.			

SPECIFIC INSTRUCTIONS FOR MESQUITE AND ASSOCIATED WOODY SPECIES
(Arizona, New Mexico, Oklahoma, and Texas Only)

USE PRECAUTIONS

- Do not apply more than 1-1/3 pts. CLOPYR AG per annual growing season.
- Do not plant broadleaf crops in treated areas until conducting a bioassay. See the "Field Bioassay Instructions" under "Crop Rotation Intervals" section of this label.
- Reapplication during the same growing season is not recommended because it will not be effective until woody plants have developed sufficient new foliage to provide adequate uptake and translocation to the root system.
- Following mechanical removal, regrowth mesquite should be at least 4 feet tall before application of CLOPYR AG.

USE GUIDELINES

- For best results on mesquite, apply in the spring or early summer (40 to 90 days after the first green growth appears).
- Avoid treatment if mesquite exhibits new terminal (light green) growth, usually after a heavy rainfall during the growing season.
- Apply when soil moisture is adequate for active growth.
- A soil temperature of 75 - 83°F at a depth of 12 to 18 inches is optimal for good plant kills. Soil temperature of less than 75°F at this depth will reduce the amount of root kill. Application should be made within 60 days after the minimum soil temperature of 75°F at a depth of 12 to 18 inches has been reached.
- To maximize woody plant control, do not disturb treated plants or remove by mechanical means or by fire for at least 1 year after application.
- When CLOPYR AG is used at labeled rates, there are no restrictions on grazing of treated areas. However, because of standing woody plants hay harvest is not considered to be feasible for at least 1 year following application.

NOTE: Mesquite treated with CLOPYR AG often reacts differently than when treated with other herbicides. Complete brownout and leaf drop of treated mesquite may be delayed and not occur before the first frost. Discoloration and rupture and/or "bleeding" of bark on branches and trunks may also be observed.

Broadcast Ground or Aerial Application: Use CLOPYR AG alone or in combination with Remedy™ herbicide or Tordon™ 22K herbicide as recommended in the table below.

Brush Species	Application Rates (pint/acre)	Specific Use Recommendations
Mesquite	1 1/3 CLOPYR AG or 2/3 – 1 1/3 CLOPYR AG plus ½ - 1 Remedy™ or 2/3 – 1 1/3 CLOPYR AG plus 2 Tordon™ 22K	Apply as a water spray or oil-water emulsion (see "Mixing Instructions") in a total spray volume of 4 or more gallons per acre by air or 10 or more gallons per acre by ground application using higher spray volumes with increasing brush and height. **Note:** Where control of pricklypear cactus is desired, the tank mixture of Reclaim and Tordon™ 22K should be used.
South Texas mixed brush including: mesquite, pricklypear, blackbrush, twisted acacia, catclaw acacia, granjeno and guajillo	2/3 – 1 1/3 CLOPYR AG plus 2 Tordon™ 22K	See "Use Guidelines" section above for information on mesquite treatment. Apply in a spray volume of 4 or more gallons per acre by air or 10 or more gallons per acre by ground application using higher spray volumes with increasing brush and height. For best results, apply as an oil-water emulsion.
Mesquite in Stands of Live Oak	1-1/3 CLOPYR AG by air as a water dilution with surfactant (0.25% v/v) at a total spray volume of 4 or more gallons per acre	Live oak over-sprayed with CLOPYR AG may show a 10 to 20 percent canopy reduction the year of treatment but will recover. CLOPYR AG applied in a tank mix with other herbicides may increase injury to live oak.

Individual Plant Treatment: Low to moderate density infestations of mesquite can be controlled using backpack or hand-held sprayers or a vehicle mounted sprayer with hand-held spray wand or spray gun. This method of treatment is only recommended for brush less than 8 feet tall.

Application Method	Application Rate (pints / acre)	Specific Use Recommendations
High-Volume Leaf Stem Treatment (Ground Application)	3 quarts per 100 gallons of spray per acre.	Apply in water or as a 5% oil-water emulsion as described in the "Mixing Instructions" section. Apply as a complete spray-to-wet foliar application, including all leaves, stems, and root collars. Thorough coverage is required for good results, but do not spray to the point of runoff. If desired, a spray dye may be added to the spray mixture to mark the treated plants.
	2 quarts CLOPYR AG + 2 quarts Remedy per 100 gal. spray per acre. (1/2% v/v of each product)	

Minimizing Spray Drift During Individual Plant Treatment:

- Select a spray nozzle and pressure that will provide good coverage while forming a coarse spray.
- Use the minimum pressure necessary to obtain plant coverage without forming a mist
- Direct sprays no higher than the tops of target plants.

NON-RESIDENTIAL TURF AND ORNAMENTAL PLANTING USES

GENERAL INFORMATION ON WEEDS CONTROLLED AND USE RATE RECOMMENDATIONS

- ***In California, Florida and New York, the maximum use rate is 2/3 pint/acre per growing season.***
- Apply CLOPYR AG when weeds are small and actively growing.
- For control of weeds such as Canada thistle and knapweeds, apply after the majority of the basal leaves have emerged, but before bud stage. Later application may result in less consistent control.

Note: Under any the following conditions, use the higher rates in the table below:

- Hard to control species are prevalent
- Applications are made in late summer
- The weeds are mature
- During periods of drought stress.

Weeds Controlled		Application Rate (pt/acre)	Application Rate (fl. oz./1000 sq. ft.)*
black medic dock (curly, broadleaf) galinsoga goldenrod	mayweed, stinking nightshade (Eastern black, cutleaf, hairy) pineappleweed	¼ - 1/3	1/10 - 1/8
burnweed, American burweed, lawn	clover (red, hop, white, sweet) dogfennel	1/3 - ½	1/8 - 1/5
artichoke, Jerusalem aster, seaside burdock, common chamomile, false (mayweed) cocklebur, common coffeeweed cornflower daisy, oxeye hawksbeard, narrowleaf hawkweed, orange hawkweed, yellow inula sp. jimsonweed lettuce prickly	locoweed locoweed, lambert marshelder salsify, meadow sicklepod sorrel, red sowthistle, annual speedwell starthistle, yellow sunflower teasel, common thistle, bull thistle, musk vetch, common	½	1/5
carrot, wild cudweed dandelion, common groundsel, common horseweed knapweed, spotted knapweed, diffuse	knotweed, prostrate pimpernel, scarlet plantain, narrowleaf ragwort, tansy spurry, corn thistle, Canada**	2/3	¼
ragweed (common, giant) smartweed	buckwheat, wild	1	3/8
Weeds Suppressed (Repeat Treatment May be Necessary)			
buffalo bur buttercup, hairy buttonweed, Virginia dollarweed knapweed, Russian	kudzu ladysthumb mesquite plantain, broadleaf sowthistle, perennial	1-1/3	½

* For treatment of small areas, see instructions for "Spot Treatments" in the "Application Directions" section of this label.

** Refer to the specific use guidelines for control of Canada thistle under Ornamentals below.

TURFGRASSES (INCLUDING TURF GROWN FOR SEED OR SOD)

Apply CLOPYR AG in sufficient water to deliver 20 gallons or more of total spray mix per acre. Higher application volumes may be used when tank mixed with fertilizers. Spot applications may be applied at equivalent broadcast rates using hand-held application equipment (refer to the Application Information section of this label). Refer to the "Weeds Controlled and Use Rate Recommendations" section of this label.

Specific Use Restrictions:

- In the states of California and Washington, turfgrass and lawn uses are restricted to golf courses only.
- In Oregon, applications to turfgrass and lawn uses are limited to golf courses, nurseries, and grass grown for seed or sod farms.
- Do not send grass clippings to a compost facility.
- Applicator must give notice to landowners/property managers to not use grass clippings for composting.
- Do not collect grass clippings for mulch or compost.
- Do not use this product on residential turf. Turfgrass and lawn uses are restricted to non-residential sites.

Note: CLOPYR AG may discolor and/or stunt turf that is not well established or is stressed or weakened due to unfavorable climatic conditions, temperature extremes, drought, nematodes, or other factors that damage or weaken turf. To avoid unacceptable turf injury, apply CLOPYR AG only to healthy, well-established turf that has a well-anchored root system.

Use CLOPYR AG on the following turf species:

Established Cool Season Turfgrasses

Common Name	Scientific Name
Bentgrass (including bentgrass fairways)	*Agrostis* species
Bluegrass, Kentucky	*Poa pratensis*
Fescue, chewing	*Festuca rubra var. commutate*
Fescue, creeping red	*Festuca rubra*
Fescue, sheeps	*Festuca ovina*
Fescue, tall	*Festuca arundinaceae*
Ryegrass, perennial	*Lolium perenne*

Established Warm Season Turfgrasses

Common Name	Scientific Name
Bahiagrass	*Paspalum notatum var. saurae parodi*
Bermudagrass (including bermudagrass fairways)	*Cynodon spp.*
Buffalograss	*Buchloe dactyloides*
Centipedegrass	*Eremochloa ophiuroides*
Kikuyugrass	*Pennisetum clandestinum*
Seashore paspalum	*Paspalum vaginatum*
Zoysiagrass	*Zoysia japonica*
Zoysiagrass	*Zoysia tenuifolia*
St. Augustinegrass	*Stenotaphrum secundatum*
Fescue, tall (growing in warm season areas)	*Festuca arundinaceae*

ORNAMENTALS (LANDSCAPES AND NURSERIES)

Use CLOPYR AG for selective postemergence control of labeled broadleaf weeds in new and established plantings of selected ornamentals (see list below). Refer to the "Weeds Controlled and Use Rate Recommendations" section of this label.

Specific Use Precautions:

- In Oregon, use is not permitted in landscapes except for golf courses.
- Do not apply CLOPYR AG to legumes (pod bearing plants such as acacia, locust, mimosa, redbud, or mesquite) or littleleaf linden (*Tilia cordata* and other *Tilia* species). CLOPYR AG is highly active on composites such as perennial daisies and sunflowers, and solanaceae (nightshade) species such as potato vine and Jerusalem cherry. Do not allow spray or spray drift to come in contact with desirable plants belonging to these families or severe plant injury or death may occur.
- Due to the wide variety of plants found in commercial and residential landscape settings and to avoid injury to non-target species, use only spot and directed sprays on labeled ornamental species in landscape settings.
- For treatment of nursery ornamentals not found in this section, refer to the "Treatment of Plant Species not Listed on this Label (Nursery and Turfgrass Use only)" section of this label.
- Do not tank mix CLOPYR AG with other herbicides labeled for use in ornamentals.
- Do not apply to container grown ornamentals.

Application Method	Application Rate (pints / acre)	Application Timing	Comments
Broadcast (Over-the-Top foliar or directed spray)	See the "Weeds Controlled" section above for specific weeds and rates. Apply in 20 or more gallons total spray volume per acre.	Multiple applications may be made with the total rate per growing season not to exceed 2/3 pints / acre in California, Florida and New York or 1-1/3 pints per acre elsewhere. Ensure new plantings are well established before application.	Apply using ground equipment only.
Spot Treatment (Hand-held equipment)	See the "Weeds Controlled" section above for specific weeds and rates.		Apply as a complete spray-to-wet foliar application, including all leaves, stems, and root collars. See instructions for Spot Treatments in the Application Instructions section at the beginning of this label.

Specific Guidelines for Control of Canada Thistle in Landscapes and Nurseries

- To avoid injury to non-target plants in landscape settings, apply only as a directed spot application as described in the table above.
- In nurseries, a spot treatment or broadcast application may be made as described above.
- For most effective control, apply this product at the rate of 2/3 pint per acre when the majority of thistle plants have emerged and are from 6 to 8 inches in height or diameter to bud stage.
- Do not cultivate areas before or after application as cultivation can disrupt translocation of the herbicides to the roots of Canada thistle and reduce control. If cultivation is necessary following application, delayed for 14 to 20 days.

Trees (Recommended Application by Overtop Spray or Directed Spray)

Common Name	Scientific Name
Fir, balsam	*Abies balsamea*
Fir, Douglas	*Pseudotsuga menziesii*
Fir, fraser	*Abies fraseri*
Fir, grand	*Abies grandis*
Fir, noble	*Abies procera*
Pine, lodgepole	*Pinus contorta*
Pine, ponderosa	*Pinus ponderosa*

Common Name	Scientific Name
Pine, Scotch	*Pinus, strobes*
Pine, white	*Pinus, sp.*
Spruce, Norway	*Picea abies*
Spruce, white	*Picea glauca*
Spruce, Colorado (blue)	*Picea pungens*

Trees (Recommend Application by Directed Spray Only)

Common Name	Scientific Name
Dogwood, flowering	*Cornus florida*
Maple, red	*Acer rubrum*
Oak, red	*Quercus rubra*
Oak, willow	*Quercus phellos*
Sycamore, American	*Platanus occidentalis*

Shrubs (Recommended Application by Overtop Spray or Directed Spray)

Common Name	Scientific Name
Arborvitae, American	*Thuja occidentalis*
Arborvitae, nigra-dark American	*Thuja occidentalis*
Azalea, hino-crimson	*Rhododendron obtusum*
Boxwood, littleleaf	*Buxus microphylla*
Cinquefoil	*Potentilla fruticosa*
Juniper, shore	*Juniperus conferta*
Juniper, blue rug	*Juniperus horizontalis*
Juniper, blue star	*Juniperus squamata*
Pine, mugo-mugho	*Pinus mugo*
Rhododendron, roseum elegans	*Rhododendron catawbiense 'roseum elegans'*
Spirea, Anthony Waterer	*Spiraea bumaida*
Yew	*Taxus media*

Shrubs (Recommend Application by Directed Spray Only)

Common Name	Scientific Name
Cinquefoil	*Potentilla fruticosa*
Spirea, Anthony Waterer	*Spiraea bumaida*

Ornamental Grasses (Recommended Application by Overtop Spray or Directed Spray)

Common Name	Scientific Name
Adagio miscanthus	*Miscanthus sinensis var. 'Adagio'*
Autumn moor	*Stipa tenuissima var. 'Ponytails'*
Autumn red flame	*Miscanthus sinensis var. 'Purpurascens'*
Blaze little bluestem	*Schizachyrium scopariium var. 'Blaze'*
Blue grama	*Bouteloua gracilis*
Blue lyme	*Leymus arenarius*
Blue moor	*Sesleria caerulea*
Bottle-brush	*Hystrix patula*
Common quaking	*Briza media*
Dwarf's garters ribbon	*Phalaris arundinacea var. 'Woods dwarf'*
Feathertop	*Pennisetum villosum*
Fountain grass	*Pennisetum alopecuroides*
Dardener's garters	*Phalaris arundinaceae var. 'Picta'*
Hamein fountain grass	*Pennisetum alopecuroides var. 'Hameln'*
Japanese blood grass	*Imperta cylindrica var. 'red baron'*
Karl Foerster feather reed	*Calamagrosotis acutiflora var. 'Foerster'*

Common Name	Scientific Name
Korean feather reed	*Calamagrostis brachytricha*
Maiden	*Miscanthus sinensis var. 'Gracillimus'*
Moudry fountain	*Pennisetum alopecuroides var. 'Moudry'*
Northern sea oats	*Chasmanthium latifolium*
Pampas	*Cortaderia selloana*
Pink crystals ruby	*Rhynchelytrium nerviglume var. 'Pink'*
Ponytails feather Mexican	*Stipa tenuissima var. 'Ponytails'*
Purple fountain	*Pennisetum setaceum var. 'Rubrum'*
Ravenna	*Saccharum ravennae*
Rosea pampas	*Cortaderia selloana var. 'Rosea'*
Sarabande miscanthus	*Miscanthus sinensis var. 'Sarabande'*
Strawberries & cream ribbon	*Phalaris arundinaceae var. 'Feesey'*
Striped tuber oat	*Arrhenatherum elatius var. 'Variegatum'*
Trailblazer switch	*Panicum virgatum var. 'Trailblazer'*
Trailway side-oats	*Bouteloua curtipendula var. 'Trailway'*
Tufted hair	*Deschampsia cespitosa*
Variegated miscanthus	*Miscanthus sinensis var. 'Variegatus'*
White flowering fountain	*Pennisetum alopecuroides var. 'Caudatum'*
Zebra	*Miscanthus sinensis var. 'Zebrinus'*

Field Grown Lillies

Application Method	Application Rate (pints / acre)	Application Timing	Comments
Broadcast Foliar Spray	See the "Weeds Controlled" section above for specific weeds and rates	Apply from early spring to fall. Delay application to spring planted bulbs until rainfall or irrigation has settled the soil covering the bulbs.	Only established weeds will be controlled.

Dichondra Turf and Dichondra Grown for Seed

Application Method	Application Rate (pints / acre)	Application Timing	Comments
Broadcast Foliar Spray	See the "Weeds Controlled" section above for specific weeds and rates. Apply in 20 or more gallons total spray volume per acre.	Apply to new plantings only after they are well established. Multiple applications may be made with the total rate per growing season not to exceed 2/3 pints / acre.	Apply using ground equipment only

STORAGE AND DISPOSAL

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

Pesticide Storage: Store above 28° F or warm to 40° F and agitate before use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Plastic Container Disposal: Do not reuse container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TERMS AND CONDITIONS OF USE

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

WARRANTY DISCLAIMER

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(2) Replacement of amount of product used

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