

70506-80

4/6/2006

10/29



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (67505C)
401 M St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
70506-80

Date of Issuance:
APR 6 2006

NOTICE OF PESTICIDE:
 x Registration
 Reregistration

Term of Issuance:
Conditional

Name of Pesticide Product:
Picloram 22 Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code)

United Phosphorus Inc.
c/o Mandava Associates
7130 M Street, N.W., Suite 906
Washington, DC 20036

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

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

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

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

1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following changes to your labeling:
 - a. Change the registration number to "70506-80".
 - b. Make all of the changes detailed in the document "Summary of Comments on Picloram 2".
3. A picloram stewardship program must be developed and submitted to EPA for review. The picloram stewardship program must be approved by the Agency prior to releasing this product for shipment. The stewardship program must include all of the elements listed in the attached document "Terms and Conditions for End-Use Picloram Registrations". After the product is released for shipment, the picloram stewardship program must be practiced.

4. Submit final labeling for this product within 30 days of the date of this letter.

Signature of Approving Official:

Date:

4-6-06

20129

page 2
EPA Reg. No. 70506-81

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

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

If you have any questions about this letter, please contact Tobi Colvin-Snyder at 703-305-7801.

Jim Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

30/29

Picloram 22

Summary of Comments on Sencor DFP

Page: 2

Sequence number: 1
Author: Steve Kay
Date: 3/29/06 2:13:22 PM -05'00'
Type: Note
RED required language.

Page: 4

Sequence number: 1
Author: Steve Kay
Date: 3/29/06 2:13:41 PM -05'00'
Type: Note
RED required language.

Page: 5

Sequence number: 1
Author: tsnyder
Date: 4/4/06 11:17:57 AM
Type: Note
Change "should" to "must"

Page: 7

Sequence number: 1
Author: tsnyder
Date: 4/4/06 11:23:22 AM
Type: Note
Move this to the "Maximum Use Rate" section, and change this to the following:
For rights-of-way and other non-crop areas, do not apply more than 1 lb ai/A (2 quarts/A of Picloram 22) in an annual growing season. Do not apply more than 0.5 lb ai/A (1 quart of Picloram 22) on areas where grazing may be allowed.

Page: 24

Sequence number: 1
Author: tsnyder
Date: 4/4/06 11:24:40 AM
Type: Note
Add "To the extent permitted by law," immediately prior to "THE EXCLUSIVE REMEDY".

Terms and Conditions for End-Use Picloram Registrations

These Terms and Conditions for End-Use Picloram Registrations shall apply to end-use picloram herbicide products registered by the U.S. Environmental Protection Agency ("Agency" or "EPA").

All picloram end use products, except those containing 5.4 percent picloram for use on cut stems only, will be restricted use products and subject to these conditions of registration.

1. Qualified Personnel.

The registrant must employ and upon request demonstrate to the satisfaction of the Agency, that it possesses and continues to possess during the term of its picloram end-use registrations, qualified personnel with appropriate scientific and technical expertise to provide the support and training for the Registrant's picloram end-use products.

Specifically, for so long as the registrant has active end-use picloram registrations, the Registrant shall retain qualified personnel with expertise in appropriate science fields such as field biology, environmental fate, soil science, toxicology, etc for each use pattern for which the registrant's end-use picloram products are labeled. Personnel qualification must be demonstrated by the possession of appropriate college or graduate credits in the appropriate science fields from a school accredited by accrediting agencies recognized by the United States Department of Education. If the personnel received a degree outside the United States, it must come from an institution with an accreditation equivalent to that of the United States.

2. Training

The Registrant shall provide picloram-specific application training at least every two years to all applicators that apply one or more of Registrant's picloram end-use products. Such training shall include (1) how to identify appropriate picloram application locations, (2) appropriate application techniques, (3) techniques for reducing application rates in sensitive areas, (4) using Individual Plant Treatments (IPTs), (5) how to avoid product spills, (6) promoting product knowledge and stewardship, and (7) appropriate container management programs. Following successful completion of training, Registrant shall certify each such commercial applicator to apply Registrant's end-use picloram products as identified by the EPA Registration number. Registrant shall only have to provide four hours of training to a particular applicator once every two years even if such Approved Picloram Applicator applies more than one of Registrant's end-use picloram products.

The Registrant's certification will consist at a minimum of the applicator's name, the name of the Company providing the training, and the registration number(s) of the registrant's picloram products for which the applicator has received training.

3. Technical Support and Education for Land Managers and Extension Educators.

The Registrant shall maintain and provide adequate resources and technical support in connection with the picloram end-use products to land managers, government officials and extension educators. Upon request, the Registrant must make available and readily accessible to land managers, government officials and extension educators, analysis and data interpretation of picloram in soil, water and other matrices of interest such as compost and plant and animal tissues for a minimum of 100 samples per calendar year.

4. Books and Records, Annual Reporting

Upon the effective date of registration or amended registration, the registrant shall maintain accurate, up-to-date books and records of its required activities under these Conditions of Registration which shall include:

Names of personnel stewarding picloram and their qualifications along with the training material offered.

Picloram Retail Locations, training dates and number of people attending the training and the names of those individuals who were trained and the EPA Registration Number of the products they were trained to use.

Registrant agrees to provide EPA, States and Tribes with said records within 30 days upon request. Records must be kept for three years.

On or before January 31 of each year after the Effective Date, starting in 2007 and continuing for five (5) years, registrant shall submit to EPA an annual report for the preceding calendar year describing Registrant's end-use picloram product stewardship activities including:

- a list of all Registrant's Approved Picloram Retail Location and any locations where an employee has trained and certified during the preceding calendar year;
- a list of all Registrant's Approved Picloram Applicators including those who were applicator trained and certified during the preceding calendar year;

After the above reporting period, reports will be submitted when requested.

All books, records, and reports maintained and/or furnished in connection with these Conditions of Registration to EPA will be available to the public and cannot be claimed as confidential business information or trade secrets.

5. Labeling

Labeling for all picloram products will state:

- Every 2 years starting January 1, 2007, the registrant will offer training to applicators which will cover application techniques and product stewardship particular to their use(s) of this product (Name of Product, Registration No. _____ - ____). Applicators of this product must be able to show certification of such training on demand by the State, Tribal or Federal enforcement agent."

70929

RESTRICTED USE PESTICIDE

May injure (Phytotoxic) Susceptible, Non-Target Plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

PICLORAM 22 SPECIALTY HERBICIDE

A herbicide for control of susceptible broadleaf weeds and woody plants on spring seeded wheat, barley and oats not underseeded with a legume, fallow cropland, non-cropland, rangeland and permanent grass pastures, and Conservation Reserve Program (CRP) acreage.

ACTIVE INGREDIENT:

Picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt 24.4%

INERT INGREDIENTS:..... 75.6%

100.0%

Acid Equivalent:

Picloram: 4-amino-3,5,6-trichloropicolinic acid - 2.1% - 2 lb/gal

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCION

Su 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.)

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact The National Pesticide Information Center at 1-800-858-7378 for emergency medical treatment information.	
For Chemical Emergency: Spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.	



United Phosphorus, Inc.
 423 Riverview Plaza
 Trenton, NJ 08611
 609-392-8200
www.upi-usa.com

**ACCEPTED
 with COMMENTS
 In EPA Letter Dated**

APR 6 2006

Under the Federal Insecticide,
 Fungicide, and Rodenticide Act
 as amended, for the pesticide
 registered under EPA Reg. No.
70506-80

EPA Reg. No. 70506-
 EPA Establishment No.
 Net Contents: 2.5 Gallons

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

Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Prolonged or frequent repeated skin contact may cause allergic skin reactions in some individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not allow runoff or spray to contaminate wells, irrigation ditches or any body of water used for irrigation or domestic purposes. Do not make application when circumstances favor movement from treatment site.

Picloram is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, picloram may also have a high potential for runoff into surface water (primarily via dissolution in runoff water). These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Note: Use in Hawaii limited exclusively to Supplemental Labeling. See "Precautions and Restrictions" for details.

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

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 into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: For applications on rangeland, permanent grass pastures, and non-cropland, do not enter or allow worker entry into treated areas until sprays have dried, unless applicator and other handler PPE is worn.

STORAGE AND DISPOSAL

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

Pesticide Storage: If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized material prior to use.

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

Container Disposal (Metal): Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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

SPRAY DRIFT

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

Because minute quantities of spray (that may not even be visible) may seriously damage susceptible plants, spray only when wind conditions will not carry spray drift towards susceptible crops or ornamental plants.

Using a continuous smoke source at the spray site or a smoke generator on the spray equipment will permit the applicator to detect undesirable conditions for spraying such as air movement towards sensitive plants, temperature inversions or lapse conditions. This product should not be applied by aerial spray if the smoke indicates a potential for hazardous spray drift.

When applying to rights-of-way or other areas near susceptible plants, a drift control additive such as Nalco-Trol may be used. A drift-reducing system such as a Micro-Flo or Thru-Valve boom may also be used to reduce spray drift in these situations. High viscosity invert systems or similar drift control additives may be used as long as the product used provides drift control that is comparable to that provided by Nalco-Trol or a Thru-Valve boom. Do not use a thickening agent with a drift reducing boom such as the Micro-Foil boom or other systems that cannot operate correctly using thick sprays.

Ground Equipment

To reduce spray drift when applying using ground equipment:

- Keep the spray boom as low as possible
- Apply a minimum of 20 gallons of spray solution per acre
- Use the minimum spray pressure necessary to obtain adequate plant coverage
- Use nozzle tips that produce large droplets. Do not apply using hollow cone-type nozzles or other nozzles that produce a fine-droplet spray.
- Spray only when wind velocity is low.

High-Volume Leaf-Stem Treatments

When making high volume leaf-stem treatments, spray drift can be reduced by the following measures:

- Do not spray above brush tops
- Avoid the formation of fine spray mists caused by excessive pressures by using the minimum spray pressure necessary to obtain adequate plant coverage
- Use a thickening agent such as Nalco-Trol to reduce spray drift

Aerial Applications

When making aerial applications, the following drift management requirements *must be followed* to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations:

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

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

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information below.

[The section is advisory in nature and does not supersede the mandatory label requirements.]

Information on Droplet Size

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

Controlling Droplet Size

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

Boom Length

For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

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

Swath Adjustment

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

Wind

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

Temperature and Humidity

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

Temperature Inversions

Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

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

GENERAL INFORMATION

Picloram 22 is a herbicide for control noxious, invasive or undesirable broadleaf weeds and listed woody plants in the following sites:

- rangeland
- permanent grass pastures
- fallow cropland
- spring seeded wheat, barley and oats not underseeded with a legume
- non-cropland
- Conservation Reserve Program (CRP) acreage

This product is NOT for sale or use in the San Luis Valley of Colorado.

PESTS CONTROLLED BY PICLORAM 22

Woody Plants:

acacia, blackbrush	gorse	pine, pinyon
acacia, catclaw	granjeno	rabbitbrush, Douglas

acacia, twisted	guajillo	rose, Macartney
aspen	huisaché (suppression only)	rose, multiflora
broom, Scotch	junipers/cedars	sagebrush, fringed
camelthorn	locust	tallowtree, Chinese
chaparral sp.	mesquite	wormwood, absinth

Annual, Biennial, and Perennial Broadleaf Weeds:

bindweed, field	bitterweed	broomweed, annual
buckwheat, wild	buffalobur	bullnettle
buroweed	bursage	cactus sp.
cactus, cholla	camphorweed	carrot, wild
cinqfoil, sulfur	cocklebur	coneflower, upright praire
croton	crupina, common	daisy, ox-eye
dock, curly	garbanillo (Wooten loco)	Goldaster, gray
Goldaster, narrowleaf	Goldenrod, common	goldenweed, Drummond
goundsel	henbane, black (a,b)	horsenettle, Carolina
horsenettle, western	horsenettle, white	horseweeds
ironweed	knapweed, diffuse	knapweed, meadow
knapweed, Russian	knapweed, spotted	knapweed, squarrose
lambsquarters	larkspur, geyer	larkspur, plains
larkspur, tall	lettuce, prickly	licorice, wild
loco, woolly	loco, Wooten (garbanillo)	locoweeds
lupines	marshelder (sumpweed)	mayweed
milkweed	mullein	mustard, wild
nightshade, silverleaf	pennycress	pigweed
pricklypear, lindheimer	pricklypear, plains	ragweed, bur
ragweed, common	ragweed, lanceleaf	Ragweed, western
ragwort, tansy	Russian thistle	sage, Mediterranean
skeletonweed, rich	smartweed	snakeweed, broom
sneezeweed, bitter	sowthistle, perennial	spurge, leafy
St. Johnswort	starthistle, Iberian	starthistle, purple
starthistle, yellow	sunflower	tasajillo
thistle, bull	thistle, Canada	thistle, distaff
thistle, Italian	thistle, musk	thistle, plumeless
thistle, Scotch	thistle, wavy leaf	toadflax, dalmation
toadflax, yellow	yankweed	

USE PRECAUTIONS AND RESTRICTIONS

- HAWAII NOTICE: Approved uses of Picloram 22 are limited to those described in supplemental labeling which may be obtained from your United Phosphorus, Inc. representative or chemical dealer. Refer to this Supplemental Labeling for specific use directions and precautions.
- Be sure that use of this product conforms to all applicable regulations, including any special use and application restrictions and limitations, including method of application and permissible areas of use as required by state or tribal authorities.
- For rights-of-way and other non-crop areas, do not apply more than 2 quarts / acre of Picloram 2 in an annual growing season.



- For forest sites, do not apply more than 2 quarts / acre of Picloram 2 within a period of two (2) annual growing seasons.
- Picloram 22 Herbicide may increase the palatability of certain poisonous plants to grazing animals. Do not graze treated areas until poisonous plants are dry and no longer attractive to livestock.
- Do not allow Picloram 2 to contact susceptible crops or other desirable broadleaf plants including but not limited to the following:

alfalfa	beans	cotton
grapes	melons	peas
potatoes	safflower	soybeans
sugar beets	sunflower	tobacco
tomatoes and other vegetable crops	flowers	fruit plants
ornamentals or shade trees.		

- Certain established grasses such as brome grass, blue gramma, and buffalograss may be suppressed by Picloram 22 Herbicide when applied at rates over 1 quart per acre. However, subsequent grass growth should be improved by release from weed competition.
- On treated land, do not rotate to food or feed crops not registered for use with picloram until a bioassay or chemical test indicates that no detectable picloram is present in the soil.
- Do not move treated soil to other areas or use it to grow plants that are not registered for use with picloram until a bioassay or chemical test indicates that no detectable picloram is present in the soil.
- Legumes may be injured or killed when exposed to Picloram 2. If the loss of forage legumes cannot be tolerated or new legume seedlings are desired within two years of application, do not apply Picloram 2.
- Do not mix this product with dry fertilizer.
- Do not apply this product using any sort of irrigation system (chemigation).
- Do not apply to flood or sub-irrigated land.
- Do not apply this product with a mist blower.
- Do not contaminate water intended for irrigation or domestic purposes by allowing spray drift or runoff to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes. Do not apply to snow or frozen ground.
- Do not apply on residential or commercial lawns or near ornamental trees and shrubs.
- Because untreated trees may be affected by root uptake of this product through movement onto the topsoil or by excretion of the product from the roots of nearby treated trees, do not apply Picloram 2 within the root zone of desirable trees unless injury can be tolerated.

Minimum Conifer Planting Intervals:

- South or West of the Cascade Mountains: Pines planted sooner than six months after treatment with Picloram 2 may be injured. Other conifers should be planted at least 8 – 9 months after treatment.
- Between the Cascade and Rocky Mountains: All conifers should be planted 11 – 12 months after treatment.
- Lake States and Northeastern US: All conifers should be planted at least 8 – 9 months after treatment.

Grazing Restrictions:

- When applying more than 1 quart of Picloram 22 per acre, do not cut grass for feed within two weeks after treatment. Meat animals grazing for up to two weeks after treatment should be removed from treated areas three days prior to slaughter.
- Do not graze lactating dairy animals on treated areas within two weeks after treatment.
- The urine and manure from animals grazing in areas treated with Picloram 22 may contain sufficient picloram to damage sensitive broadleaf plants. Allow a minimum of 7 days of grazing on untreated grass pasture before transferring livestock to areas with sensitive broadleaf plants or using the manure on land used to grow broadleaf crops, ornamentals, orchards or any other desirable plants that may be susceptible..
- Do not compost or mulch susceptible broadleaf plants with grass or hay from areas treated with Picloram 2.

Maximum Use Rates:

- **Non-Cropland Areas:** Do not exceed 2 quarts of Picloram 22 Herbicide per acre per annual growing season. This includes retreatments and/or spot treatments.
Rangeland and Permanent Grass Pastures: Do not exceed 2 quarts of Picloram 22 Herbicide per acre per growing season for broadcast and spot treatments of Picloram 22 Herbicide when controlling noxious or invasive weeds as defined by Federal, state, or local authorities
 Picloram 22 Herbicide may be applied broadcast at up to 1 quart per acre per annual growing season, for control of other broadleaf weeds and woody plants. Spot treatments (with not more than 50% of an acre treated) may be applied at an equivalent broadcast rate of up to 2 quarts per acre per annual growing season. These amounts include repeat treatments.
- **Cropland (Spring-seeded Wheat, Barley and Oats):** Do not apply more than 1 pint per acre per annual growing season as a broadcast treatment.
- **Fallow Cropland (Not Rotated to Broadleaf Crops):** Do not apply more than 1 pint per acre per annual growing season as a broadcast treatment.
- **Conservation Reserve Program (CRP) for Seeding to Permanent Grasses Only:** Do not apply more than 1 quart per acre of Picloram 22 per annual growing season as a broadcast treatment or apply more than 2 quarts per acre per annual growing season as a spot application. **To reduce potential damage to subsequent small grain crops, use the lower recommended rates or discontinue the use of Picloram 22 at least 2 years prior to the seeding of small grain crops.**

APPLICATION INSTRUCTIONS

MIX PREPARATION

- 1) Add approximately half of the desired volume of water to the spray tank.
- 2) Start and maintain agitation for the duration of the mix preparation.
- 3) Add the recommended amount of Picloram 22 Herbicide.
- 4) Add any additional tank mix herbicides being sure to follow the instructions on their respective labels.
- 5) Add any additives such as surfactants or drift control and deposition aids.
- 6) Add the rest of the water until the desired volume is reached.

Additives

Using a surfactant when applying under conditions that may impede plant uptake of the herbicide (such as drought or dusty plant surfaces) may improve efficacy. However, if foliar burn occurs too rapidly, translocation of Picloram 22 will be impaired and control of perennial weeds, such as field bindweed, may be reduced.

Oil-Water Emulsions (Ground and Aerial Applications)

For aerial applications, use a 1:5 ratio (one part oil to five parts water).

For ground applications, add oil to the spray mix at a rate of 5 to 10% of the total mix volume.

NOTE: Do not use more than 1 gallon of oil per acre for either aerial or ground applications. Use agricultural spray emulsifiers such as Sponto 712 or Triton X-100 according to the Batch Mixing Instructions below.

Emulsion Mixing Instructions

- 1) Add half the amount of water to be used to the spray tank.
- 2) Start and maintain agitation for the duration of the mix preparation.
- 3) Add the recommended amount of water-soluble herbicides such as Picloram 22, Reclaim herbicide or 2,4-D amine.
- 4) Slowly add a premix of oil, emulsifier, and oil soluble herbicides such as Remedy herbicide or a 2,4-D ester as required.

Note: Do not add water or mixtures containing water to the premix or oil soluble herbicide since a thick "invert" (water in oil) emulsion may be formed that will be difficult to break. An invert emulsion will also form if the premix is added to the mixing tank before the addition of water.

- 5) Finish filling the spray tank with water until the desired volume is reached and maintain sufficient agitation to ensure uniformity of the spray mixture during application.

Sprayable Liquid Fertilizer Solutions

Picloram 22 Herbicide is compatible with most non-pressurized liquid fertilizer solutions; however, a compatibility test (jar test) should be made to verify compatibility prior to mixing. Jar tests are particularly important when a new batch of fertilizer or pesticide is used, when water sources change, or when tank mixture ingredients or concentrations are changed. Using a compatibility aid such as Unite or Compex may assist in obtaining and maintaining a uniform solution during mixing and application.

Picloram 22 Herbicide is most compatible with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K fertilizer solutions or suspensions is more difficult and should not be attempted without first conducting a successful jar test (see "Tank Mix Compatibility Testing" in the Tank Mix Section below). For best results, liquid fertilizer rates should not exceed 50% of the total spray volume.

Note: The lower the temperature of the liquid fertilizer, the greater the likelihood of mixing problems.

To incorporate fertilizer into the spray, premix Picloram 22 Herbicide with water and add to the liquid fertilizer/water mixture while agitating contents of the spray tank. Agitation in the spray tank must be vigorous to be comparable with jar test agitation.

Apply the spray the same day it is prepared while maintaining continuous agitation.

Rinse spray tank thoroughly after use.

Note: Foliar applied liquid fertilizers used as carrier for Picloram 22 can cause yellowing or leaf burn of crop foliage.

Use Precautions for Mixes with Liquid Fertilizers:

Thoroughly clean equipment used to apply Picloram 22 Herbicide prior to using the equipment for other applications to land planted to, or to be planted to, susceptible crops or desirable sensitive plants. Failure to do so may result in the damage or death of desirable crops and vegetation.

Local conditions may affect the use of herbicides. State agricultural experiment stations or extension service weed specialists in many states issue recommendation to fit local conditions. Be sure that use of this product conforms to all applicable regulations.

Tank Mixes

Picloram 22 Herbicide may be applied with other tank mix partners such as 2,4-D provided:

- The tank mix product is labeled for the timing and method of application for the use site to be treated; and
- Tank mixing is not prohibited by the label of the other products to be tank mixed.

Use Precautions for Tank Mixes:

- Read carefully and follow the most restrictive use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended application rates. If products containing the same active ingredient are tank mixed, do not exceed the maximum allowable active ingredient use rates.
- For products packaged in water soluble packaging, do not tank mix 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 "Sprayer Clean-Out" below).
- Special care should be taken to ensure tank mix compatibility when using direct injection or other spray equipment where the product formulations will be mixed in undiluted form.
- Always perform a jar test to ensure the compatibility of products to be used in tank mixture.

Tank Mix Compatibility Testing:

Note: Undiluted Picloram 22 Herbicide can be incompatible with certain amine formulations of 2,4-D. This incompatibility can usually be overcome by diluting one or both products with 50% water prior to mixing.

A jar test is recommended prior to tank mixing to ensure compatibility of Picloram 22 Herbicide and other pesticides or carriers:

- 1) Using a clear glass jar with lid, mix the tank mix ingredients in their relative proportions.
- 2) After inverting the jar several times, the tank mixture is considered compatible if the materials mix readily. The mixture should remain stable after standing for 1/2 hour or, if separation occurs, should readily remix if agitated.
- 3) A mixture is considered to be incompatible when it separates into distinct layers which do not readily remix when agitated and/or the presence of flakes, precipitates, gels, or heavy, oily film on the jar.

Sprayer Clean-Out

To avoid injury to desirable plants, equipment used to apply Picloram 22 herbicide should be thoroughly cleaned using the following procedure before being used to apply any other chemicals:

- 1) Rinse and flush application equipment thoroughly after use. Dispose of rinse water in non-cropland area away from water supplies.

- 2) Rinse a second time, adding 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
- 3) Flush the solution out of the spray tank through the boom.
- 4) Rinse the system twice with clean water, recirculating and draining each time.
- 5) Nozzles and screens should be removed and cleaned separately.

GENERAL APPLICATION INSTRUCTIONS

Ground or Aerial Broadcast

Apply Picloram 22 as a coarse low-pressure spray at the recommended rates in a spray volume of 2 or more gallons per acre by air or 10 or more gallons per acre by ground.

High-Volume Foliar Applications

- Spray until all foliage and stems are thoroughly wet.
- An approved agricultural surfactant should be used at the manufacturer's recommended rate.
- DO NOT apply more than the maximum application rate of Picloram 22 specified for a given treatment site.

Spot Treatments

- Use application rates as suggested in the specific use instructions sections of this label or as recommended by your area weed control specialist.
- Apply in a total spray volume of 20 to 100 gallons per acre.
- To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers according to directions provided below.
- For a given treatment site, do not exceed maximum application rates for Picloram 22 Herbicide.
- On rangeland and permanent grass pastures, spot treatments may be applied at an equivalent broadcast rate of up to 2 quarts per acre per annual growing season, but not more than 50% of an acre may be treated. Repeat treatments may be applied as necessary, but total use must not exceed the maximum amount specified.

Hand-Held Sprayer Applications

Mix the amount of Picloram 22 Herbicide (fl oz or ml) corresponding to the desired broadcast rate in 0.5 to 2.5 gallons of water, depending on the spray volume required to treat 1,000 sq. ft. To calculate the amount of Picloram 22 Herbicide required for larger areas, multiply the fl oz. or ml table value listed by the area to be treated in "thousands" of square feet. For example: if the area to be treated is 3,500 sq. ft., multiply the table value by 3.5. An area of 1,000 sq. ft. is approximately 10.5 x 10.5 yards (strides) in size.

Amount of Picloram 22 Herbicide per 1,000 Sq. Ft. to Equal a Specified Per Acre Broadcast Rate					
1/4 pt/acre	1/3 pt/acre	1/2 pt/acre	2/3 pt/acre	1 pt/acre	1 qt/acre
1/10 fl. oz. (2.7 ml)	1/8 fl. oz. (3.6 ml)	1/5 fl. oz. (5.4 ml)	1/4 fl. oz. (7.3 ml)	3/8 fl. oz. (11 ml)	3/4 fl. oz. (22 ml)

NOTE: 1 fl. oz. = 29.6 (30) ml

Special Application Methods

Soil Spot Concentrate: Picloram 22 Herbicide may be applied as a spot concentrate (undiluted) application to control ashe juniper, eastern redcedar and eastern persimmon (see specific use directions for these plant species below).

Special Ground Sprayer Equipment: When using special low-volume, minimum drift equipment such as the hooded Forage Chemical Mower to control annual and perennial weed species, apply 1 to 2 pints of Picloram 22 Herbicide in 1 gallon to 5 gallons of water per acre or as an oil-water emulsion at a 1:5 and 1:4 oil-to-water ratio for 1 gallon and 5 gallon per acre solutions, respectively.

NON-CROPLAND AREAS

Picloram 22 Herbicide may be used to control susceptible broadleaf weeds and woody plants on non-cropland areas such as roadsides or other rights-of-way, fence rows, and around farm buildings. Refer to the Rangeland and Permanent Grass Pastures section of this label for specific target weed or woody plant species treatment recommendations.

RANGELAND AND PERMANENT GRASS PASTURES

Picloram 22 Herbicide will control undesirable broadleaf weeds and woody plants (including, but not limited to, those shown in the following tables) on rangeland and permanent grass pastures.

When weed pressure is high and for dense infestations, and for more dependable long-term control apply the higher rates listed. When conditions are favorable and plants are at the optimum growth stage for maximum efficacy use the lower rates listed. Note that the lower rates listed may require retreatment. Many annual weeds at the seedling stage can be controlled at the rate of 1 pint per acre.

For best results, treat in the spring when weeds are small and actively growing but before full bloom as treatments during full bloom or seed stage of some weeds may not provide acceptable control. Certain weeds may also be treated in late summer to fall as noted below.

Rate Recommendations for Northern States

Annual and Biennial Weeds		
Weed Species	Application (Rate/acre)	Specific Use Instructions
thistles, including: bull distaff Italian musk plumecless Scotch	Fall: ½-¾ pt Picloram 22 Spring: ½-¾ pt Picloram 22 - 1 lb ae 2,4-D	Apply in the spring at the rosette stage (before bolting) or in the fall prior to soil freeze-up. Distaff Thistle: Apply at rosette stage in spring only. Bolted Mask Thistle: Apply before flowering at the rate of ½-1 pt of Picloram 22 Herbicide + 1 lb ae of 2,4-D per acre.
Mullein, common	1 pt Picloram 22 - 1 lb ae 2,4-D	Apply at the rosette stage with surfactant.
bursage (bur ragweed) crupina, common henbane, black horseweed starthistle, Liberian	1-2 pt. Picloram 22	Apply when there is adequate soil moisture and weeds are actively growing.

starthistle, purple		
starthistle, yellow		

Perennial Weeds		
Weed Species	Application (Rate/acre)	Specific Use Instructions
pricklypear, plains	½-1 pt Picloram 22	Apply at peak of flowering. An oil-water emulsion spray mixture may improve control. The lower rate will provide partial control for stand reduction and the high rate more complete control. Note that treatment response is slow and may continue for two or more years.
sagebrush, fringed	½-1 pt Picloram 22 + 1 lb ac 2,4-D ester	Apply after seed stalk elongation and early flowering. If conditions are favorable, may continue to apply throughout the summer.
cinquefoil, sulfur larkspur, geyer larkspur, plains locoweeds snakeweed, broom	1 pt Picloram 22	Apply when weeds are actively growing. Broom snakeweed: Apply between full leaf to early bloom stage. Geyer larkspur: Apply between rosette stage and flower bud formation. Sulfur cinquefoil: May also be applied during fall regrowth. Locoweeds: Apply from early bud to early bloom stage. Refer to the "General Use Precautions" section for note on grazing treated poisonous plants.
burweed daisy, ox-eye goldenrod, common knapweed, diffuse knapweed, meadow knapweed, spotted knapweed, squarrose rabbitbrush, Douglas sage, Mediterranean thistle, Canada thistle, wavy leaf wormwood, absinth	1-2 pt Picloram 22 Control with lower rates may be improved by tank mixing with 1.0 lb ac per acre 2,4-D.	Apply during active growth but prior to bud stage. Spot treatments may be necessary when using the lower rates in the range. Diffuse or spotted knapweed: For best results apply from rosette to mid-bolting stage or during fall regrowth. Thistle (Canada and Wavy Leaf): For best results apply when most basal leaves have emerged, but before bud stage. May also apply during regrowth in the fall. Use rates less than 1 ½ pt/acre only under favorable conditions and in combination with 1 lb ae/acre of 2,4-D. Retreatment may be required. Absinth wormwood: Apply in spring or early summer when plants are actively growing.
licorice, wild milkweed	2 pt Picloram 22	Wild Licorice: Apply at bloom stage. Milkweed: Treat during active growth and tank mix recommended rate of Picloram 22 with 1 lb ae/acre 2,4-D and surfactant.
bindweed, field gorse lupines knapweed, Russian ragwort, tansy skeletonweed, rush	2-4 pt Picloram 22 Control at low end of rate range may be improved by tank	Annual retreatment will be required when using the lower rates listed. Russian knapweed: Apply during active growth from bud to mid-flowering, or to fall regrowth. Leafy Spurge: Apply at true flower stage of growth or

Perennial Weeds		
Weed Species	Application (Rate/acre)	Specific Use Instructions
spurge, leafy St. Johnswort toadflax, dalmation	mixing with 1 lb ae/acre 2,4-D.	apply to fall regrowth. Re-apply when level of control falls below 80 percent. Dalmation Toadflax: Apply when plants are actively growing in the summer or fall through full bloom stage.
larkspur, fall sowthistle, perennial toadflax, yellow	4 pt Picloram 22 For increased control of fall larkspur, tank-mix with Ally or Escort herbicide and a non-ionic surfactant.	A retreatment program may be required to control these species. Tall Larkspur: For best results apply from 6 inches tall to late bloom stage. Refer to the "General Use Precautions" section for note on grazing treated poisonous plants.

Woody Plants		
Weed Species	Application (Rate/acre)	Specific Use Instructions
juniper	4 qt Picloram 22 per 100 gallons of spray	Apply only to individual plants as a high volume foliar spray.
redcedar, eastern	Use 3 ml to 4 ml of Picloram 22 (undiluted) per 3 feet of plant height.	Apply spot concentrate applications of Picloram 22 directly to the soil on the upslope side of the tree within the dripline in either the spring (April-May) or fall (September-October). Applications should be made before periods of expected rainfall. Applications to trees taller than 15 feet are not recommended. Do not use more than 2 pints of Picloram 22 Herbicide per acre in any one year.

Rate Recommendations for Southern States

NOTE: To enhance control of certain species, Picloram 22 Herbicide may be applied in combination with 2,4-D amine or ester. When Picloram 22 is applied alone, herbicide symptoms will appear more slowly than when tank mixed with 2,4-D.

Annual and Biennial Weeds		
Weed Species	Application (Rate/acre)	Specific Use Instructions
bitterweed, western broomweed, annual buffalobur bursage (bur ragweed) camphorweed carrot, wild cocklebur croton horsweed	Early Season (when weeds are no more than 2-3 inches tall) ¾-1 ½ pt Picloram 22 Mid to Late Season (when weeds are 3-	Apply when there is adequate soil moisture and weeds are actively growing. Marshelder: Use a minimum of ¾ pt/acre of Picloram 22 +0.75 lb ae/acre 2,4-D + non-ionic surfactant. Apply when plants are no more than 3-6 inches tall. Control may be improved by adding ammonium sulfate at 17 lb/100 gal. spray solution. Thistles: Apply when thistles are in the rosette stage before bolting.

lettuce, prickly Marshelder (sump-weed, sulfaweed) ragweed, common ragweed, lanceleaf smartweed sneezeweed, bitter sunflower thistle, bull thistle, musk	inches tall to early flowering) 1-2 pt Picloram 22	Lanceleaf Ragweed: Use the higher rate within the recommended rate range.
--	---	--

Perennial Weeds		
Weed Species	Application (Rate/acre)	Specific Use Instructions
snakeweed, broom	1 pt Picloram 22	Apply in the fall and early winter. If rainfall is less than average prior to flowering, apply after flowering is complete. If rainfall is average to above average prior to or during flowering, apply during full flower and/or active pollination, but before resumption of new top growth.
bullnettle coneflower, upright prairie dock, curly horsenettle, Carolina horsenettle, western horsenettle, white ironweed nightshade, silverleaf ragweed, western yankeeweed	1-2 pt Picloram 22	Apply when there is adequate soil moisture and weeds are actively growing. Curly Dock: Apply until plant begins bolting. Ironweed: Apply until plant reaches bud stage. Nettles and Silverleaf Nightshade: Apply when plants begin to flower in the spring. Upright Prairie Coneflower: Apply when plants are 2-6 inches tall but prior to flowering. Yankeeeweed: Apply when plants are 8 to 10 inches tall.
goldaster, gray goldaster, narrowleaf goldenweed, common goldenweed, Drummond (<i>Isocoma spp.</i>)	1-2 pt Picloram 22 Goldenweed: Add an agricultural surfactant at 0.25%-0.5% or apply in oil-water emulsion.	Gray and Narrowleaf Goldaster: Apply in the spring during bud stage (pre-bloom) using an oil-water emulsion. For best results, be sure to thoroughly cover the plants. Goldenweed: Apply in spring (April-June) when there is substantial canopy development as a result of good growing conditions. Increase spray volume, 4-5 gpa by air or 15-20 gpa by ground, to ensure thorough coverage.
Poisonous Plants such as: Groundsel (<i>Senecio spp.</i>) Lambert crazyweed Loco, woolly Loco, Wooton (garbancillo)	1½-2 pt Picloram 22 To improve wetting of locoweeds, use an agricultural surfactant at 0.25%-0.5% or apply in an oil- water emulsion.	Apply in fall or winter when there is adequate soil moisture and weeds are actively growing. Refer to the "General Use Precautions" section for note on grazing treated poisonous plants.

Cactus and Woody Plants

Weed Species	Application Rate ¹	Specific Use Instructions
Cactus spp. Cactus, cholla	High Vol. Foliar: 4 qt Picloram 22	Apply any time of the year with water and surfactant. For best results completely cover the plants.
huisache (suppression)	Broadcast or High Vol. Foliar: 2 pt Picloram 22 + 1 pt Remedy ⁹	Fall application is recommended; however, fall applications will not provide satisfactory control of other woody species in the South Texas mixed brush complex. Performance can be erratic.
pinyon pine eastern redcedar juniper, including: alligator redberry Utah one-seeded	High Vol. Foliar: 4 qt Picloram 22	Apply in May through July. For best results completely cover the plants. High volume foliar applications to ashe juniper may provide variable results.
pricklypear, lindheimer (unburned rangeland)	Broadcast: 2 pt Picloram 22 High Vol. Foliar: 4 qt Picloram 22	Application may be made at anytime but for best results apply in late August to early November. Onset of herbicidal activity is very slow and may continue for two years or longer. For best results completely cover the plants.
pricklypear, lindheimer (burned rangeland)	Broadcast: 1 pt Picloram 22 High Vol. Foliar: 2 qt Picloram 22	Apply Picloram 22 Herbicide in mid-April through May after conducting intense controlled burns from December through March. For best results completely cover the plants.
pricklypear, plains	Broadcast: 1½-2 pt Picloram 22 High Vol. Foliar: 4 qt Picloram 22	Optimum time for treatment is during flowering. Control may be improved by use of an oil-water emulsion spray mixture. Lower rate will provide partial control (stand reduction) and high rate more complete control. Treatment response is slow and may continue for 2 years or longer.
rose, Macartney rose, multiflora	Broadcast: 1 qt. Picloram 22 + 2 lb ae 2,4-D High Vol. Foliar: 1-2 qt. Picloram 22 + 2-4 lb ae 2,4-D Use an agricultural surfactant (0.5% v/v) or apply as an oil-water emulsion.	Apply in the spring or fall when conditions are favorable for plant growth. Ensure thorough and uniform coverage by applying at higher spray volume, 5 or more gpa by air or 20 or more gpa by ground. Avoid treatment less than 9 to 12 months after mowing when plants have a high percentage of new growth. Repeat treatment as necessary.
tallowtree, Chinese	Broadcast: 1 qt. Picloram 22 + 2 lb ae 2,4-D OR 1 pt. Remedy High Vol. Foliar: 2 qt. Picloram 22 OR 1-2 qt. Picloram 22	Apply when conditions are favorable for plant growth in the spring or fall. Apply using higher spray volumes: 5 gpa or more by air and 20 gpa or more by ground.

Cactus and Woody Plants		
Weed Species	Application Rate†	Specific Use Instructions
	<p>±</p> <p>2,4 lb ae 2,4-D or 1 qt Remedy</p> <p>Use an agricultural surfactant (0.5% v/v) or apply as an oil-water emulsion.</p>	
<p>South Texas mixed brush, including:</p> <p>acacia acacia, catclaw acacia, twisted blackbrush granjeno guajillo mesquite pricklypear tasajillo</p>	<p>Broadcast: 2 pt. Picloram 22 + 2/3–11/3 pt. Reclaim or 1–2 pt. Remedy</p> <p>High Vol. Foliar: 2 qt. Picloram 22 + 2–3 pt. Remedy or 1–2 qt. Reclaim</p>	<p>Apply in an oil-water emulsion. For best results ensure adequate coverage of vegetation by using 4 or more gpa by air or 20 or more gpa by ground.</p> <p>Mesquite: For application timing see the section on mesquite control below.</p> <p>Tank mixing with Reclaim will provide improved control of pricklypear and legume species such as mesquite and acacias.</p> <p>Tank mixing with Remedy will provide improved control of non-legume species such as granjeno, oaks and hackberry.</p>
<p>mesquite</p>	<p>Broadcast: 1–2 pt. Picloram 22 + 2/3–11/3 pt. Reclaim OR 2 pt. Picloram 22 + 1 pt. Remedy</p> <p>High Vol. Foliar: 1–2 qt. Picloram 22 + 1½–3 pt. Remedy or 1–2 qt. Reclaim</p>	<p>Picloram 22 Alone: Apply as a water spray or oil-water emulsion (see Mixing instructions) in 4 or more gpa by air or 10 or more gpa by ground. Increase spray volumes with increasing brush density and height to ensure adequate coverage. Where control of pricklypear cactus is desired, use the 2 pint/acre rate of Picloram 22.</p> <p>Picloram 22 in Tank Mix: Tank mixing with Reclaim will provide control of pricklypear and improved control of legume species such as mesquite and acacias. Tank mixing with Remedy will provide improved control of non-legume species such as granjeno, oaks and hackberry. Regrowth mesquite should be at least 4 ft tall prior to treatment.</p> <p>See labels for Reclaim and Remedy for additional treatment recommendations and information on mesquite control.</p> <p>Timing and Factors in Control: For best results, apply under the following conditions:</p> <ul style="list-style-type: none"> • when new growth foliage has turned from light to dark green. • when the soil temperature has reached 75°F to 83°F at a depth of 12–18 inches. • when soil moisture is adequate for plant growth. <p>Application should be made within 45 days after the critical soil temperature at the 12–18 inch depth has been reached, or if Picloram 22 is applied in</p>

Cactus and Woody Plants		
Weed Species	Application Rate[†]	Specific Use Instructions
		combination with Reclaim, within 60 days. Herbicidal performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases. Do not apply if mesquite exhibits new (light green) growth in response to significant rainfall during the growing season. Re-application: Do not reapply in the same growing season. Retreatment will not be effective until woody plants develop sufficient new foliage for interception, uptake, and translocation of the herbicide to plant roots.

[†] The application rate is in (RATE/Acre) units for broadcast applications or (RATE/100 gallons) units for high volume foliar applications.

Spot Concentrate Application for Juniper Control		
Weed Species	Application Rate	Specific Use Instructions
ashe juniper eastern redcedar eastern persimmon	Ashe Juniper: 4-6 ml per 3 ft of plant height. Eastern Redcedar: 3-4 ml per 3 ft of plant height. Eastern Persimmon: 2-4 ml per inch of stem diameter.	Apply spot concentrate applications of Picloram 22 directly to the soil on the upslope side of the tree within the dripline. Applications should be made before periods of expected rainfall. Applications to trees taller than 12 feet are not recommended. Ashe Juniper: Apply in the spring (April-May). Eastern Redcedar: Apply in either the spring (April-May) or fall (September-October). Eastern Persimmon: Apply in the spring (March-May).

**SEEDING TO PERMANENT GRASSES
INCLUDING CONSERVATION RESERVE PROGRAM (CRP) ACRES**

Newly Seeded Grasses

Apply Picloram 22 only after perennial grasses are well established. Once well established, most perennial grasses show improved tolerance to post-emergence applications.

For best results, apply to actively growing weeds in a spray volume of 2 or more gallons of water per acre by air or 5 or more gallons of water per acre by ground. Refer to the weeds rate chart for information on recommended application rates for target weed species.

Perennial Broadleaf Weeds

Once grass is well established, apply Picloram 22 to actively growing weeds at up to 2 pints per acre. NOTE: Risk of grass injury is greatest when using the maximum (2 pints per acre) rate.

Annual Broadleaf Weeds

Apply ¼ - ½ pint per acre of Picloram 22 Herbicide to actively growing annual broadleaf weeds (including Russian thistle). When 2,4-D sensitive species are present, Picloram 22 Herbicide can also be tank mixed with ½ - 1 pound ac per acre of 2,4-D.

Weed Control Prior to Seeding Cool Season Perennial Grasses

When perennial range or reclamation grass species are to be established in non-cropland, rangeland, permanent grass pastures or CRP areas, Picloram 22 Herbicide may be applied in the spring or early summer (depending on the target weed species) and grass seed planted in the fall when conditions are favorable for grass establishment. Alternatively, Picloram 22 may be applied in the fall and grass seed planted in the winter or spring when conditions are favorable for grass establishment.

Apply 1 qt/acre or less of Picloram 22 Herbicide by referring to the weeds rate chart for recommended application rates based on target weed species.

Depending on sensitivity, temporary injury to new plantings of certain perennial grass species may occur when Picloram 22 Herbicide is applied at 1 qt/acre. This temporary injury to the grass will be offset by the benefits to grasses due to decreased weed competition.

Germination of annual grass species may be suppressed after treatment.

After application, the site should be left undisturbed for a minimum of 14 days prior to seedbed preparation or seeding. For best results, the seeding operation should disturb the application site as little as possible. Increasing the interval between application and seeding operations will reduce the possibility of injury to the grass that is planted.

Precautions for Permanent Grass Applications:

- If legumes are a desired cover during CRP, do not apply Picloram 22 Herbicide to the site.
- Conditions that stress grasses will increase the potential for Picloram 22 Herbicide to injure grass at all stages of growth.
- This product is not intended for use on land planted to sweet sorghum. Do not plant grain sorghum (milo) within 8 months after application. If more than 1 pint / acre of Picloram 22 Herbicide has been applied, do not rotate to grain sorghum.
- Use the lower rates listed or discontinue the use of Picloram 22 Herbicide at least 2 years prior to the seeding of small grain crops to reduce potential damage to subsequent small grain crops or grain sorghum (milo). After CRP, do not plant broadleaf crops in treated acres until an adequately sensitive bioassay shows that no detectable picloram is present in the soil.
- Applications of Picloram 22 Herbicide at rates over 2 pints per acre may suppress certain established grasses such as bromegrass, bluegramma and buffalograss. However, by removing weed competition subsequent grass growth should be improved.

**SPRING SEEDED BARLEY, OATS, AND WHEAT
NOT UNDERSEEDED WITH LEGUMES**

Picloram 22 Herbicide will control susceptible annual broadleaf weeds such as (but not limited to) volunteer sunflower, wild buckwheat, lambsquarters, pigweed, Russian thistle, and sowthistle.

NOTE: This product may cause shorter straw on some varieties of cereals, but grain yields are usually not affected.

Use Restrictions

- Do not use on land that is flood or sub-irrigated.

- Do not use on land that will be rotated to broadleaf crops as crop injury may occur.
- Do not use on land planted to sweet sorghum.
- Do not apply to winter wheat, durum wheat or barley as crop injury may occur.
- Do not plant grain sorghum within 8 months after application.
- Use only on land that will be planted the following year to grass, barley, oats, wheat, grain sorghum (milo) or fallowed.
- Do not apply Picloram 22 Herbicide within 50 days of harvest.
- Do not graze or feed forage from treated areas for 2 weeks after treatment. Do not harvest hay from treated grain fields.
- During the small grain growing season, do not apply more than 1 1/2 fl. oz. of Picloram 22 Herbicide per acre.

Broadcast Treatment (Ground and Aerial Applications)

Picloram 22 Herbicide may be applied by itself or as a tank mix with 2,4-D, MCPA, or sulfonyleurea herbicides such as Ally.

For aerial applications apply Picloram 22 Herbicide in 2 to 5 gallons of water per acre by air or in 5 to 20 gallons of water per acre by ground using the rates suggested in the table below.

In dry conditions surfactants may increase efficacy, but may cause injury to grain if applied over the top.

Recommended Application Rates for Spring Wheat, Barley and Oats[†]

Weed Species	Weed Growth Stage ^{††}	Grain Growth Stage	Amounts Per Acre ^{†††}		
			Picloram 22	4 lb ae/gal 2,4-D or MCPA	6 lb ae/gal 2,4-D or MCPA
More susceptible species such as: lambsquarters pennycress wild mustard mayweed	3 inches	3 to 5 leaf to early tillering	1 fl oz	1/2 pt	1/3 pt
	3-6 inches	Tillering to early jointing	1 1/2 fl oz	3/4 pt	1/2 pt
Less susceptible species such as: volunteer sunflower wild buckwheat Russian thistle pigweed Canada thistle top grown suppression	1-6 inches	Tillering to early jointing	1 1/2 fl oz	3/4 to 1 pt	1/2 to 2/3 pt

[†] For oats, do not tank mix with 2,4-D herbicides.

^{††} For best results, treat when seeds have 2 to 4 leaves and are actively growing.

^{†††} When measuring small amounts of Picloram 22 Herbicide, special care should be taken not to exceed suggested rates.

Application Timing

Apply from the 3 to 5 leaf stage to early jointing stage of growth as indicated in the table above.

NOTE: Applications at the 3 to 5 leaf stage may cause slight head malformations and straw shortening but normally do not affect yield.

FALLOW CROPLAND (NOT ROTATED TO BROADLEAF CROPS)

Picloram 22 Herbicide may be used either alone or in a tank mix with 2,4-D (or other herbicides registered for this use) as a post harvest or fallow treatment in continuous grain or during the fallow period.

Use Restrictions

- As a broadcast treatment, do not apply more than 1 pint per acre per annual growing season.
- Spot treatments of Picloram 22 Herbicide at rates over 1 pint per acre can be made on fallow, non-irrigated cropland if the treated areas comprise less than 10% of the immediate field in any one year. For calibration, spray volume determination and mixing instructions when making spot treatment applications, refer to "Spot Treatments" in the "Mixing and Application Methods" section.
- Picloram 22 Herbicide should not be applied to cropland at rates exceeding 2 quarts per acre.
- When Picloram 22 is applied at rates above 1 pint per acre, injury to small grains may result for periods up to two years after treatment.

Crop Rotation

Use only on land to be planted the following year to grass, barley, oats, wheat, grain sorghum (milo) or fallowed.

Do not plant grain sorghum within 8 months after application. This product is not intended for use on land planted to sweet sorghum.

Many broadleaf crops are extremely sensitive to soil residues of Picloram 22 Herbicide.

Do not plant sensitive broadleaf crops for 36 months after treatment or until a bioassay using the intended broadleaf crop or chemical test indicates that no detectable picloram is present in the soil. A bioassay is recommended following treatment prior to planting any sensitive broadleaf crop.

Planting Intervals

Prior to planting small grains, a planting interval is recommended to reduce or eliminate potential crop injury and/or yield reduction following applications of Picloram 22 Herbicide. The possibility of crop injury or yield reduction depends on application rate, soil organic matter, rainfall, temperature and incidence of cereal diseases.

The presence of adequate soil moisture and sufficient soil temperature during the preplant interval is important in reducing, but may not eliminate, the risk of crop injury.

When considering use of Picloram 22 on fallow land, growers should consider the benefit of weed control against the risk of crop damage and treat only if the risk of injury to small grains can be tolerated.

The following preplant intervals are recommended:

- For applications up to 1/2 pint per acre: Allow a minimum of 45 days of soil temperatures above 40°F between application and planting.
- For applications greater than 1/2 pint and up to 1 pint per acre: Allow a minimum of 60 days of soil temperatures above 40°F between application and planting, except in Idaho, North Dakota, Nebraska, Montana, Oregon, South Dakota, Washington, and Wyoming where the minimum preplant interval is 90 days regardless of soil temperature.

Application Instructions

Apply using the rates listed below in 2 or more gallons of water per acre by air or 5 or more gallons per acre by ground.

Annual Weeds:

When weeds are actively growing apply ¼ - ½ pint per acre of Picloram 22 Herbicide in a tank mix with ½ - 1 lb ae of 2,4-D or other herbicides registered for use on fallow land.

Field Bindweed:

When bindweed is actively growing apply ½ - 1 pint per acre of Picloram 22 Herbicide in a tank mix with ½ to 1 lb ae per acre of 2,4-D. Use ½ pint per acre to control light to moderate infestations under good growing conditions or to reduce the potential for crop injury. Use 1 pint per acre for heavy infestations and to start a treatment program for long-term control.

For best results apply when plant runners are 8 - 12 inches long.

A retreatment program of ½ pint of Picloram 22 Herbicide with ½ lb ae of 2,4-D for one to two years after initial application will provide stand reduction.

Canada Thistle:

When the majority of thistle plants have emerged but prior to bud stage, apply 1 pint per acre of Picloram 22 Herbicide in a tank mix with 1 lb ae per acre of 2,4-D.

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. The Directions for Use of this product reflect the opinion of experts based on field use and tests. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.