

**QUALI-PRO**

# 2-D

## Herbicide

FOR THE CONTROL OF ANNUAL AND PERENNIAL BROADLEAF WEEDS IN ESTABLISHED TURF-GRASS INCLUDING SOD FARMS, RANGELAND AND PERMANENT GRASS PASTURES, FENCE ROWS, NON-IRRIGATION DITCH BANKS, ROADSIDES, AROUND FARM BUILDINGS, CRP ACRES

Contains triclopyr and clopyralid, the active ingredients used in Confront® Specialty Herbicide.  
Quali-Pro 2-D is not manufactured or distributed by Dow AgroSciences LLC.

<b>ACTIVE INGREDIENT:</b>	<b>% BY WT.</b>
*Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, triethylamine salt .....	33.0%
**Clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, triethylamine salt .....	12.1%
<b>INERT INGREDIENTS:</b> .....	<b>54.9%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

Contains \*2.25 pounds triclopyr per gallon or 23.7%  
\*\*.75 pounds clopyralid per gallon or 7.9%

EPA Reg. No. 66222-222

EPA Est. No. 42750-MO-001

## KEEP OUT OF REACH OF CHILDREN

# DANGER — PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

For additional First Aid, precautionary, handling, and use statements, see inside of this booklet.

Manufactured for:  
**Makhteshim Agan of North America, Inc.**  
4515 Falls of Neuse Road, Suite 300  
Raleigh, NC 27609

## Net Contents: 1 Gallon

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## FIRST AID

<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER-PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Avoid breathing spray mist.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## ENGINEERING CONTROLS STATEMENTS

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

### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

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

### **ENVIRONMENTAL HAZARDS**

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 or rinsate.

Triclopyr has properties and characteristics associated with chemicals detected in groundwater. The use of triclopyr in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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

### **DIRECTIONS FOR USE**

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

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

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

- Coveralls
- Chemical-resistant gloves
- 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 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:** Do not enter or allow others to enter the treated area until sprays have dried.

### APPLICATION INFORMATION-TURFGRASS

Quali-Pro 2-D herbicide is a broad-spectrum weed killer for control of broadleaf weeds in established cool-season and warm-season turfgrass including turfgrass in sod farms with noted exceptions.

Quali-Pro 2-D is recommended for use on the following turfgrass species:

#### Established Cool-Season Turfgrass

##### Common Name

bentgrass<sup>1</sup>  
bluegrass, Kentucky  
fescue, chewing  
fescue, creeping red  
fescue, sheeps  
ryegrass, perennial

##### Scientific Name

*Agrostis species*  
*Poa pratensis*  
*Festuca rubra* var. *commutata*  
*Festuca rubra*  
*Festuca ovina*  
*Lolium perenne*

<sup>1</sup> On bentgrass, do not apply more than 1 pint of Quali-Pro 2-D per acre (0.37 fl oz or 2.5 tsp per 1000 sq ft), unless turfgrass injury can be tolerated. To minimize turfgrass injury, additional applications should be made at least four weeks apart. Avoid swath overlaps.

#### Established Warm-Season Turfgrass<sup>1</sup>

##### Common Name

bahiagrass

##### Scientific Name

*Paspalum notatum* var. *Saurae parodi*

Bermudagrass<sup>2</sup>  
buffalograss  
centipedegrass  
fescue, tall (growing in warm-season areas)  
zoysiagrass  
zoysiagrass

*Cynodon dactylon*  
*Buchloe dactyloides*  
*Eremochloa ophiuroides*  
*Festuca arundinaceae*  
*Zoysia japonica*  
*Zoysia tenuifolia*

<sup>1</sup> Do not treat warm-season turfgrass with Quali-Pro 2-D when the mowing height is less than 1/2 inch. Do not apply more than 1 pint of Quali-Pro 2-D per acre (0.37 fl oz or 2.5 tsp per 1000 sq ft) unless turfgrass injury can be tolerated. To minimize warm-season turfgrass injury, additional applications should be made at least four weeks apart. Avoid swath overlaps. The use of this herbicide in the spring when warm-season turfgrass is breaking dormancy may significantly delay green up of the turfgrass.

<sup>2</sup> Do not apply Quali-Pro 2-D to Bermudagrass on sod farms.

Quali-Pro 2-D may discolor and/or stunt turfgrass that is not well established or is stressed or weakened due to unfavorable climatic conditions, temperature extremes, drought, nematodes, or other factors which damage or weaken turf. Apply Quali-Pro 2-D only to healthy, well-established turfgrass that has a well-anchored root system.

#### USE PRECAUTIONS AND APPLICATION RESTRICTIONS

- Sale and use of this product in Suffolk and Nassau counties in New York State is prohibited.
- In **California, New York, Oregon** and **Washington**, turfgrass and lawn uses are restricted to golf courses only.
- The state of Arizona has not approved this product for use on agricultural sites. Do not use this product on uses considered by the Arizona statutes to be agricultural uses.
- Do not use more than 0.38 lb ae clopyralid/1.125 lb ae triclopyr per acre (4 pints of Quali-Pro 2-D per acre) per year of treatment.
- In Florida and New York, the maximum use rate is 0.25 lb ae clopyralid/0.74 lb ae triclopyr per acre (2 2/3 pints of Quali-Pro 2-D per acre) per growing season.
- Do not use on residential turf. Turfgrass and lawn uses are restricted to non-residential sites.
- Do not apply to Bermudagrass on sod farms.
- The use of this herbicide in the spring when warm-season turfgrass is breaking dormancy may significantly delay green up of the turfgrass.
- For ground application only.
- 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.
- Do not apply to exposed roots of shallow-rooted trees and shrubs.
- Do not allow sprays of Quali-Pro 2-D to contact exposed suckers and/or roots of trees and shrubs, or injury may occur.
- This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Do not apply Quali-Pro 2-D directly to or allow spray drift to come into contact with flowers, grapes, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other desirable broadleaf crops and ornamental plants or soil where these sensitive crops will be planted the same season.
- Do not reseed for three weeks after application.
- Do not use Quali-Pro 2-D on golf course putting greens or tees.
- Do not send grass clippings to a compost facility.
- Do not collect grass clippings for mulch or compost.

- Applicator must give notice to landowners/property managers to not use grass clippings for composting.
- Do not apply on ditches used to transport irrigation water.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not apply where runoff or irrigation water may flow onto susceptible crops, as injury may result.

#### **TREATMENT OF TURFGRASS SPECIES NOT LISTED ON THE LABEL FOR QUALI-PRO 2-D**

Users who wish to use Quali-Pro 2-D on a turfgrass species not recommended on this label may determine the suitability for such uses by treating a small area at a recommended rate. Prior to treatment of larger areas, the treated area should be observed for any sign of herbicidal injury during 30 days of normal growing conditions to determine if the treatment is safe to the target species. **The user assumes the responsibility for any plant damage or other liability resulting from use of Quali-Pro 2-D on species not recommended on this label.**

#### **PREPARING THE SPRAY**

Add one-half the desired amount of clean water to spray tank. Add Quali-Pro 2-D and complete addition of water with agitation running. Mix thoroughly and continue agitation while spraying.

#### **APPLICATION DIRECTIONS**

Make application using equipment that will insure uniform coverage (see specific application directions below). Sprays should be applied when weeds are actively growing. Application under drought conditions may provide less than desirable results. Broadleaf weed species germinate at different times. Only emerged weeds present at time of application are controlled.

Apply 1 to 2 pints of Quali-Pro 2-D per acre to control broadleaf weeds. A maximum of 0.19 lb ae clopyralid/0.56 lb ae triclopyr per acre (2 pints of Quali-Pro 2-D per acre) per application is recommended. To minimize turfgrass injury, repeat applications should be made not less than 4 weeks apart. Newly seeded turf should be mowed 2 or 3 times before treating. Do not water for 6 hours after application.

**Avoid overlapping of the spray pattern which could result in higher than recommended application rates. Rates above those recommended on this label could result in turf injury.**

**Avoiding Injurious Spray Drift:** Apply Quali-Pro 2-D in a manner to avoid contacting nearby susceptible crops or other desirable plants. Applications should be made only when hazards from spray drift are at a minimum. Very small quantities of spray which may not be visible may seriously injure susceptible plants including ornamental trees and shrubs. Do not spray when the wind will carry spray mist toward susceptible crops or ornamental plants.

#### **Ground Application**

With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying no less than 20 gallons of spray per acre (except under **Low Volume Application**); by keeping the operating spray pressures at the manufacturer's minimum recommended pressures for the specific nozzle type used; and by spraying when the wind velocity is low (follow state regulations). Avoid application under completely calm conditions which may be conducive to air inversion. In hand-gun applications, select the minimum pressure required to obtain adequate plant coverage without forming a mist. Do not apply with a mist blower.

### Standard Broadcast Application

Apply 1 to 2 pints of Quali-Pro 2-D in enough water to deliver 20 to 200 gallons of total spray mix per acre (0.5 to 5 gallons spray per 1000 sq ft). Higher application volumes may be used when Quali-Pro 2-D is tank mixed with fertilizers.

### Low Volume Application

Apply 1 to 2 pints of Quali-Pro 2-D in enough water to deliver from 5 to 20 gallons of total spray mixture per acre (1/8 to 1/2 gallon spray per 1000 sq ft). Use low pressures and application equipment capable of delivering a uniform droplet size that can wet the weed leaf surface. To improve spray coverage, the addition of a non-ionic surfactant at a rate of 1/4 to 1/2 pint per acre may be used. Use the higher rates of surfactant for lower rates of product and lower spray volumes.

The use of ULV applications is not suggested.

### Spot Treatment of Ornamental Turfgrass Using Portable Sprayers

Mix 0.5 fl oz of Quali-Pro 2-D in enough water to make 1 gallon of spray and apply at any time broadleaf weeds are susceptible by wetting foliage of undesirable plants to point of runoff. This is enough spray to treat approximately 1000 sq ft of turf.

### WEEDS CONTROLLED AND USE RATES

Use the higher rates when hard-to-control species are prevalent, when applications are made in late summer on mature weeds, and during periods of drought stress.

WEEDS	USE RATE		
	pt/acre	fl oz/1000 sq ft	tsp/1000 sq ft
black medic hop clover red clover white clover	1 <sup>1</sup>	0.37 (11 mL)	2.5
American burnweed common chickweed common cocklebur common vetch creeping beggarweed dwarf beggarweed false dandelion hawkweed henbit matchweed mouse ear chickweed round leaf mallow sheep sorrel spotted catsear spurweed	1.5	0.55 (16 mL)	3.5



WEEDS	USE RATE		
	pt/acre	fl oz/1000 sq ft	tsp/1000 sq ft
broadleaf plantain burdock coffeeweed common dandelion common ragweed lambsquarters narrowleaf plantain (buckhorn) shepherdspurse Virginia pepperweed	1.5 - 2	0.55 - 0.74 (16-22 mL)	3.5 - 4.5
Canada thistle common yellow woodsorrel <sup>3</sup> creeping woodsorrel <sup>3</sup> curly dock English lawn daisy <sup>2</sup> goldenrod lespedeza musk thistle poison ivy smartweed wild buckwheat wild violet <sup>3</sup>	2	0.74 (22 mL)	4.5

<sup>1</sup>For faster activity under good growing conditions, use 1.5 pt/acre. For extended weed control, make repeat applications.

<sup>2</sup>Six to eight weeks is required for control.

<sup>3</sup>Repeat treatment may be necessary.

### CROP ROTATION INTERVALS

Residues of Quali-Pro 2-D in treated plant tissues including the treated crop or weeds which have not completely decayed may affect succeeding susceptible crops.

### Field Bioassay Instructions

In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop. Observe the test crop for herbicidal activity such as poor stand (effect on seed germination), chlorosis (yellowing), necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop or crop listed in the table below for which the rotational interval has clearly been met.

### Crop Rotation Intervals for All States Except Idaho, Nevada, Oregon, Utah, and Washington.

Rotation Crops <sup>1</sup>	Rotation Interval <sup>1</sup> (Soils greater than 2% organic matter <b>AND</b> rainfall more than 15 inches during 12 months following application)	Rotation Interval <sup>1</sup> (Soils less than 2% organic matter <b>AND</b> rainfall less than 15 inches during 12 months following application)
barley, field corn, grasses, oats, wheat	30 days	30 days
canola (rapeseed), flax, sugar beets	5 months	5 months
alfalfa, asparagus, cole crops, dry beans, grain sorghum, mint, onions, popcorn, safflower, soybeans, strawberries, sunflowers, sweet corn	10.5 months	18 months <sup>2</sup>
lentils, peas, potatoes (including potatoes grown for seed), broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months <sup>2,3</sup>	18 months <sup>2,3</sup>

<sup>1</sup> 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.

<sup>2</sup> An 18-month crop rotation is suggested due to the potential for crop injury. Note: For these crops, a minimum 10.5-month rotation interval must be observed to avoid illegal residues in the harvested crop.

<sup>3</sup> The potential for injury may be reduced by burning, removal, or incorporation of treated crop residues followed by a minimum of two supplemental fall irrigations.

### Crop Rotation Intervals for Idaho, Nevada, Oregon, Utah, and Washington Only

Rotation Crops <sup>1</sup>	Rotation Interval <sup>1</sup> (Soils greater than 2% organic matter <b>AND</b> rainfall more than 15 inches during 12 months following application)	Rotation Interval <sup>1</sup> (Soils less than 2% organic matter <b>AND</b> rainfall less than 15 inches during 12 months following application)
barley, field corn, grasses, oats, wheat	30 days	30 days
canola (rapeseed), flax, sugar beets	5 months	5 months
asparagus, <i>Brassica</i> species grown for seed, cole crops, grain sorghum, mint, onions, popcorn, strawberries, sweet corn	12 months	12 months
alfalfa, dry beans, soybeans, sunflowers	12 months <sup>2</sup>	18 months <sup>2</sup>
lentils, peas, potatoes (including potatoes grown for seed), safflower, broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months <sup>2</sup>	18 months <sup>2,3</sup>

<sup>1</sup> 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.

<sup>2</sup> An 18-month crop rotation is suggested due to the potential for crop injury. Note: For these crops, a minimum 12-month rotation interval must be observed to avoid illegal residues in the harvested crop.

<sup>3</sup> Crop injury and/or yield loss may occur up to 4 years after application. A field bioassay is also suggested prior to planting these sensitive crops.

<sup>4</sup> **Note:** The above intervals are based upon average annual precipitation regardless of irrigation practices. Observance of recommended crop rotation intervals should result in adequate safety to rotational crops; however, Quali-Pro 2-D is dissipated in the soil by microbial activity. The rate of microbial activity is dependent upon 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%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removing plant residues, supplemental fall irrigation, and deep moldboard plowing prior to planting the sensitive crop.

#### **APPLICATION INFORMATION-RANGELAND AND PERMANENT GRASS PASTURES, FENCE ROWS, NON-IRRIGATION DITCH BANKS, ROADSIDES, AROUND FARM BUILDINGS, AND CRP ACRES**

Quali-Pro 2-D is a broad-spectrum postemergence herbicide for control of broadleaf weeds in rangeland and permanent grass pastures, fence rows, non-irrigation ditch banks, roadsides, around farm buildings, and CRP acres. A non-ionic surfactant cleared for use on growing crops at the manufacturer's labeled rate is essential for all applications of this product. Use a higher rate of surfactant in the spray mixture when applying lower spray volumes per acre.

#### **USE PRECAUTIONS AND APPLICATION RESTRICTIONS**

- The state of Arizona has not approved this product for use on agricultural sites. Do not use this product on uses considered by the Arizona statutes to be agricultural uses.
- Maximum Application Rate: Do not apply more than 4 pints per acre of Quali-Pro 2-D per annual growing season (1.125 lb ae of triclopyr plus 0.375 lb ae of clopyralid).
- In California and Florida, the maximum use rate is 2 2/3 pints (0.75 lb ae triclopyr, 0.25 lb ae clopyralid) per acre per annual use season.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not contaminate water intended for irrigation or domestic purposes.
- To avoid injury to crops or other desirable plants, do not treat or allow spray drift to fall onto banks or bottoms of irrigation ditches or other channels that carry water that may be used for irrigation purposes.
- Tank Mixtures: Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.
- Do not spray pastures if injury to existing forage legumes or other desirable broadleaf plants cannot be tolerated. This product will injure or kill legumes and most other broadleaf plants. However, the stand and growth of established perennial grasses is usually improved after treatment, especially when rainfall is adequate and grazing is deferred.
- Do not apply to desirable legume species with exposed roots or suckers such as pod-bearing plants like acacia, locust, mimosa, redbud, or mesquite.
- Established grasses are tolerant to this product, but newly seeded grasses may be injured until well established as indicated by tillering, development of a secondary root system, and vigorous growth.
- Do not use on smooth brome grass grown for seed.
- Do not apply this product with a mistblower.

#### **CROP ROTATION INTERVALS**

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

#### **Field Bioassay Instructions**

In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage,

and any other variable that could affect the seed bed of the new crop. Field bioassay at any time prior to planting of the intended rotational crop. Observe the test crop for herbicidal activity such as poor stand (effect on seed germination), chlorosis (yellowing), necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, wait one year before repeating bioassay or plant a crop tolerant to clopyralid such as barley, canola (rapeseed), grasses, field corn, oats, sugar beets, or wheat.

## **GRAZING AND HAYING RESTRICTIONS**

### **Grazing or harvesting green forage:**

1. Lactating dairy animals: Do not graze or harvest green forage from treated area until the next growing season.
2. Other Livestock: There are no grazing restrictions for other livestock including horses, sheep, goats, pigs, etc.

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

1. Lactating dairy animals: Do not harvest hay until the next growing season.
2. Other Livestock: Do not harvest hay for 14 days after treatment.

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

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 untreated 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.

**Grazing poisonous plants:** Herbicide application may increase palatability of certain poisonous plants. Do not graze treated areas until poisonous plants are dry and no longer palatable to livestock.

## **AVOIDING INJURY TO NONTARGET PLANTS**

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

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

Plant materials or manure may contain enough clopyralid to cause injury to susceptible plant species.

**Residues in Plants or Manure:** Do not use plant residues including hay or straw from treated areas or manure from animals that have grazed or consumed forage from treated areas for composting or mulching where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf crops. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of

clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

### **SPRAY DRIFT MANAGEMENT**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downwards more than 45 degrees.

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

The applicator must be familiar with and take into account the information covered in the following **AERIAL SPRAY DRIFT MANAGEMENT** section.

### **AERIAL SPRAY DRIFT MANAGEMENT**

#### **Importance of 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** sections of this label).

#### **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-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. 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 backwards parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the 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 larger droplets than other nozzle types.

#### **Boom Length**

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

## **Application Height**

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

## **Swath Adjustment**

When applications are made with a cross-wind, 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**

Do not make applications during temperature inversions. 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 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 upwards and rapidly dissipates indicates good vertical air mixing.

## **Sensitive Areas**

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

## **MIXING DIRECTIONS**

**Water Dilution:** To prepare a water dilution of Quali-Pro 2-D:

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

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

**Mixing with Liquid Fertilizer for Broadleaf Weed Control in Rangeland and Permanent Grass Pastures:** Quali-Pro 2-D may be tank mixed with liquid fertilizers and foliarly applied for weed control and fertilization of rangelands and permanent grass pastures. Efficacy may be reduced when using liquid fertilizers in applications to woody plants. Apply liquid fertilizers at rates suggested by supplier or local Extension Service Specialist.

**Compatibility with Liquid Fertilizer:** Prior to large scale batch mixing, conduct a "jar test" for spray mixture compatibility by mixing each component in the required order and proportion in a clear glass jar. Close the jar and agitate the mixture until evenly dispersed. Use of a compatibility agent is indicated if components of the mixture do not disperse readily or do not remain dispersed after mixing. Use of a compatibility aid such as Unite® or Compex® is recommended to help obtain and maintain a uniform spray solution during mixing and application. Compatibility is best with liquid fertilizer solutions containing only nitrogen. Mixing with N-P-K solutions may be difficult even with the addition of a compatibility aid. Premixing 1 part Quali-Pro 2-D with 25-30 parts water is recommended before adding to the spray tank. Agitation in the spray tank must be vigorous to compare with jar test agitation.

### **Suggested Mixing and Application Procedure**

With continuous vigorous agitation:

1. Add 1/2 the amount of liquid fertilizer to the spray tank.
2. Add compatibility aid such as Unite or Compex at 1 quart per 100 gallons of total spray mix.
3. First add the amount of Quali-Pro 2-D needed for the total spray mixture.
4. Mixing with N-P-K fertilizer solutions may be improved by premixing Quali-Pro 2-D with water (1 part Quali-Pro 2-D to 25-30 parts water) before adding to the spray tank.
5. Add the remaining liquid fertilizer to produce the needed total spray volume.
6. Apply as soon as mixing is complete, maintaining continuous vigorous agitation throughout mixing and application without interruption.

Application during very cold (near freezing) weather is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions. Do not store the spray mixture.

## **APPLICATION DIRECTIONS**

### **Application Timing**

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

### **Application Rates**

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

### **Use of Surfactants**

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

## Coverage

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

## Spot Application

To prevent misapplication, apply spot applications with calibrated equipment or with hand sprayers according to directions provided below.

**Hand-Held Sprayers:** Hand-held or backpack sprayers may be used for spot applications. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1000 sq ft. Mix the amount of this product (fl oz or mL) corresponding to the desired broadcast rate in one or more gallons of spray. To calculate the amount of product required for larger areas, multiply the table value (fl oz or mL) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (calc.  $3500 \div 1000 = 3.5$ ). An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

<b>Amount of Quali-Pro 2-D to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1000 sq ft)</b>			
<b>1 pt/acre</b>	<b>2 pt/acre</b>	<b>3 pt/acre</b>	<b>4 pt/acre</b>
0.37 fl oz (11 mL)	0.75 fl oz (22 mL)	1.1 fl oz (33 mL)	1.5 fl oz (44 mL)

1 fl oz = 29.6 (30) mL

## RANGELAND AND PERMANENT GRASS PASTURES AND NON-CROP AREAS

**Broadcast (Ground or Air) and Spot Application:** For control of listed broadleaf weeds, apply Quali-Pro 2-D as a broadcast spray or spot application at 1 ½ to 2 pt/acre for control of annuals and up to 4 pt/acre for control of deep-rooted perennial broadleaf weeds as specified in the table below. Do not apply more than 4 pt/acre of Quali-Pro 2-D per year. Use a total spray volume of 10 or more gallons per acre for ground broadcast or 3 or more gallons per acre by air. Refer to application directions found elsewhere on this label for spot application instructions.

## WEED CONTROL PRIOR TO SEEDING GRASSES

Weed control with Quali-Pro 2-D fits into most revegetation programs. Apply Quali-Pro 2-D at the rate listed below for the target weed species. To optimize weed control, the site should be left undisturbed for 14 days prior to seedbed preparation or seeding.

## WEEDS CONTROLLED OR SUPPRESSED AND USE RATES

- Use the higher rates when hard-to-control species are prevalent, when applications are made to mature weeds in advanced stages of growth, or during periods of drought stress or low temperatures.
- Use rates in the lower end of the rate range only where grass response (competition) will help to suppress weed growth following treatment.
- Suppression or short-term control of certain woody plants such as multiflora rose and blackberry within treated areas may be observed at application rates in the table below. See the section entitled **HIGH-VOL-**



**UME FOLIAR APPLICATIONS** for additional information regarding these and other woody plants.

- Unless otherwise noted, apply when weeds are actively growing; use lower rate when weeds are 6 inches or less in height, increase rate for larger weeds up to flowering.

<b>APPLICATION RATE (Pints/Acre)</b>	<b>WEED SPECIES</b>	<b>COMMENTS</b>
1 - 2	Biennial thistles including: bull, distaff, milk, musk, and plumeless	Apply 1 pt/acre at rosette, 1.5 pt/acre at bolting and 2 pt/acre at prebud
1.5 - 2	broomweed, annual burdock clover, red clover, white cocklebur, common coffeweed cornflower (bachelor button) croton dandelion, common dandelion, false (spotted catsear) goldenrod groundsel, common henbit horseweed jimsonweed knapweed (including black diffuse, meadow, and spotted) lambsquarters lettuce, prickly locoweed marshelder nightshade pepperweed, Virginia pineappleweed plantain, broadleaf plantain, narrowleaf (buckhorn) ragweed, common ragweed, Western salsify, meadow shepherdspurse sneezeweed, bitter smartweed sorrel, red sorrel, sheep sowthistle, annual starthistle, yellow sunflower, common teasel, common vetch wormwood, absinth	Knapweeds and Yellow Starthistle: Apply from rosette to early flower or to fall regrowth. Optimum time is mid-bolt. Marshelder: Apply early season when plants are less than 6 inches. Western ragweed: Use lower rate when plants are less than 4 inches. Herbicide effect is slow.

<b>APPLICATION RATE (Pints/Acre)</b>	<b>WEED SPECIES</b>	<b>COMMENTS</b>
2 - 3	buttercup, hairy dock, curly horsetail, oxeye daisy, poison ivy	Curly dock: Apply before flower elongation. Horsenettle: Best when applied at 4- to 6-inch stage of growth. Only plants that have emerged will be controlled.
2.5 - 4	amaranth, spiny (pigweed)(suppression), chicory, dogfennel (suppression), ironweed, Western ragwort, tansy, skeleton, rush, sowthistle, perennial thistle, wavyleaf, tropical soda apple	Western Ironweed: Apply after plants are 8 inches tall; weed control effect can be slow. Wavyleaf thistle: Apply either after the majority of basal leaves have emerged through the beginning of the bud stage or at the time of fall regrowth.
3 - 4	hawkweed, knapweed, Russian mallow, thistle, Canada	Canada thistle: Apply either after the majority of basal leaves have emerged through the beginning of the bud stage or at the time of fall regrowth. Russian knapweed: Apply from bud to mid-flower stage or fall regrowth.

#### **HIGH-VOLUME FOLIAR APPLICATIONS**

Spray to thoroughly wet foliage and stems. The use of an approved agricultural surfactant is essential. Note: This product should not be used for broadcast control of woody plants except as labeled below.

<b>APPLICATION RATE (Quarts/100 Gallons)</b>	<b>WEED SPECIES</b>	<b>COMMENTS</b>
3-4	blackberry	Apply in late spring to early summer after leaves are fully expanded and mature. For best results on blackberry, treat during or after bloom. Himalayan blackberry can be treated up to the fall, but before leaf coloration.
	kudzu	Apply between late June and October when soil moisture is sufficient for active plant growth. For best results, apply just prior to or during flowering using a 3/4% solution (3 qt per 100 gal or 2 fl oz per 3 gal) plus surfactant. Note: This type of application should be used only in areas that can tolerate foliage damage and some brown-up of neighboring broadleaf vegetation. Eradication may require annual repeat applications, depending on the age of the kudzu stand.
	locusts Macartney rose multiflora rose	Apply in spring or summer after full leaf expansion through fall when conditions are favorable for plant growth. Avoid treatment soon after mowing when plants have a high percentage of new growth. For best results, delay treatment for at least 6 months after shredding or mowing.

## TREATMENT OF CONSERVATION RESERVE PROGRAM (CRP) ACRES

### (Established Permanent Grass Stands)

Use Quali-Pro 2-D on CRP acres only after perennial grasses are well established (see precaution for newly seeded grasses found elsewhere on this label). Application may be made using broadcast ground or aerial application equipment or spot treatment. Follow the application instructions found in the **RANGELAND AND PERMANENT GRASS PASTURES AND NON-CROP AREAS** section of this label for application rates and weeds controlled when treating CRP acres.

**Restrictions for CRP Acres:** When applying to CRP lands, follow all applicable state and federal regulations. Follow the most severe grazing restriction imposed by the pesticide label or by the USDA Acreage Conservation Reserve Program. After that time period, follow local (CRP) guidelines regarding cropping and haying restrictions. Do not use Quali-Pro 2-D if damage or loss of existing legumes or other desirable broadleaf plants cannot be tolerated. On CRP acres, do not apply more than 4 pt per acre of Quali-Pro 2-D per annual use season.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store above 28°F or agitate before use.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

## LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions,

presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

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