



HELM

QUIZ

Quizalofop-P-ethyl Group 1 Herbicide

ACTIVE INGREDIENT:	(% by weight)
Quizalofop-P-ethyl	
Ethyl(R)-2-[4-(6-chloroquinoxalin-2-yl oxy)-phenoxy]propionate.....	10.3%
OTHER INGREDIENTS:	89.7%
TOTAL:	100.0%

* Equivalent to 0.88 pounds ai per gallon
Contains petroleum-based distillates

EPA Reg. No. 74530-79
EPA Est. No. 70851-GA-002

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

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.)

See label booklet for First Aid, Precautionary Statements and Directions for Use including Storage and Disposal.

NET CONTENT

2.5 Gallon

Manufactured For

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FIRST AID

If swallowed:	<ul style="list-style-type: none">• Immediately call a poison control center or doctor.• Do not give any liquid to the person.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
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.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing and shoes.• Rinse skin immediately with plenty of water for 15 - 20 minutes.• Call a poison control center or doctor for treatment advice.
HOT LINE: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) call CHEMTREC at 1-800-424-9300.	
NOTE TO PHYSICIAN: May pose an aspiration pneumonia hazard. Contains petroleum distillate.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS KEEP OUT OF REACH OF CHILDREN CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves, made of barrier laminate or Viton \geq 14 mils, and
- 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 CONTROL 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 Part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS:

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove personal protective equipment 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

Quiz is toxic to fish and invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

QUIZ may contaminate water through spray drift in wind. This product has a potential for runoff for several months or more after application. Sites containing poorly drained soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which the product is applied and surface water features such as ponds, springs and streams will reduce the potential for contamination of water from rainfall runoff. Additionally, runoff of this product will be reduced by delaying applications when rainfall is forecasted to occur within 48 hours. Good erosion practices will reduce this product's contribution to surface water contamination.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Use only in accordance with directions on this label. 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 at the time of application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Chemical-resistant gloves, made of barrier laminate or Viton \geq 14 mils, and
- 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. Weed control in "Non-Agricultural Uses" is not within the scope of WPS. Keep people and pets off treated areas until spray solution has dried.

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store only in original container. Keep containers closed when not in use. Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, and feed. Store in a cool, dry place.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

CONTAINER HANDLING

Nonrefillable Containers: Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 5 Gallons): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mixing tank draining container for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mixing 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. If burned, stay out of smoke.

For metal containers, offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 5 Gallons): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mixing tank draining container for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water then replace and tighten closures. Place 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. Empty the rinsate into application equipment or a mixing tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Rigid Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):

Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. Pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume if manufacturer's instructions are not available. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

All Refillable Containers: Refilling Container: Refill this container with QUIZ containing quizalofop P-ethyl only. Do not reuse this container for any other purpose. Cleaning container before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use container, contact Helm Agro at 813-621-8846 for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact Helm Agro at 813-621-8846 for instructions.

Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. Pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume if manufacturer's instructions are not available. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact CHEMTREC 1-800-424-9300.

WEED RESISTANCE MANAGEMENT

QUIZ contains the active ingredient quizalofop-P-ethyl, a Group 1 herbicide based on the mode of action classifications system of the Weed Science Society of America. Quizalofop-P-ethyl is in the class of herbicides known as aryloxyphenoxypropionates (FOPs) within the Group 1 herbicides that inhibit the enzyme acetyl-CoA carboxylase (ACCase) in weeds. Any weed population can contain plants naturally resistant to Group 1 herbicides. Weed species resistant to Group 1 herbicides may be effectively managed utilizing another herbicide from a different Group, (either alone or in a mixture according to label directions), by using other cultural or mechanical methods of weed control, or by a combination of the two.

Consult your local company representative, state cooperative extension agent, professional consultant or other qualified authority to determine appropriate actions for controlling specific resistant weeds.

Weed Management Practices

Resistant populations arise when rare individual plants are uncontrolled by a normal dose of a given herbicide under normal environmental conditions. In the absence of other control measures these individuals survive, produce seed, and eventually become the dominant biotype in the field through continuous selection. The best means of reducing this selection is to use diverse weed control practices such as multiple herbicides with different mechanisms of action for the target weed, and often in combination with various mechanical and cultural practices.

To minimize the occurrence of herbicide-resistant biotypes, including those resistant to Group 1 herbicides, implement the following weed management practice options that are practical to your situation. These management practices are applicable to reduce the spread of confirmed resistant biotypes (managing existing resistant biotypes) and to reduce the potential for selecting for resistance in new species (proactive resistance management).

- Use a diversified approach toward weed management focused on preventing weed seed production and reducing the number of weed seeds in the soil.
- Plant crops into fields that are as weed-free as possible and then keep them as weed-free as possible.
- Plant crop seed that is as weed-free as possible.
- Scout fields routinely, before and after herbicide application.
- Use multiple herbicide mechanisms of action that are effective against the most troublesome weeds in your field and against those with known resistance.
- Apply herbicides at application rates listed on the label when weeds are within the size range indicated on the label.
- Emphasize cultural practices that suppress weeds by using crop competitiveness.
- Use mechanical and biological weed management practices where appropriate.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Manage weed seed at harvest and after harvest to prevent a buildup of the weed seedbank.

Report any incidence of repeated non-performance of this product on a particular weed to your Helm Agro representative, local retailer, or county extension agent.

INTEGRATED PEST MANAGEMENT

QUIZ may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

PRODUCT INFORMATION

Product Description: QUIZ is a systemic herbicide that is rapidly absorbed by treated foliage and translocates to the roots and other growing points of susceptible grass plants.

Environmental Conditions and Biological Activity: In susceptible grass plants, when affected, younger plant tissues become chlorotic/necrotic and eventually die. Treated plants become stunted and noncompetitive. Usually, these symptoms are first observed within 7 to 14 days after application depending on the environmental conditions, grass species treated and the rate used.

The rate of QUIZ applied, weed spectrum, weed size, variability in weed size, growing conditions before, at and following treatment, soil moisture, precipitation, tank mixtures, and spray adjuvant used effects the degree of control and duration of the effect of QUIZ.

When conditions favor healthy, actively growing plants the performance of QUIZ will be optimized. Unacceptable control may occur if QUIZ is applied to grasses stressed from any of the following:

- Abnormal weather (excessive heat or cold, or widely fluctuating temperatures),
- Drought,
- Hail damage,
- Herbicide injury from prior applications,
- Mechanical injury, or
- Water saturated soils.

Grasses growing under stress due to the conditions listed above are often less sensitive to herbicide activity. If grasses are stressed, delay application until the stress passes and weeds and crop resume growth. Before making applications of QUIZ to crops previously under stress, or injured from other pesticide applications, the crop needs to be fully recovered and vigorously growing.

Rainfastness: QUIZ is rainfast 1 hour after application.

Use Restrictions:

- DO NOT feed forage, hay, or straw from treated areas to livestock.
- DO NOT use on driveways, lawns, tennis courts, walks, or similar areas.
- DO NOT apply QUIZ through any type of irrigation equipment.
- DO NOT contaminate any body of water.

Use Precautions:

- Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:
 - o Most grass crops, including barley, corn, oats, rice, rye, sorghum, and wheat are highly sensitive to QUIZ.
 - o Take all necessary precautions to avoid direct and indirect contact (such as spray drift) with non-target plants or areas.
 - o Prevent drift of spray to desirable grass plants (refer to SPRAY DRIFT MANAGEMENT section of this label).
 - o Observe all sprayer cleanup instructions - prior to and after using QUIZ. Spray tank residue may damage crops other than those included in the crop rotation section.

CROP ROTATION

DO NOT rotate crops other than Barley, Canola, Cotton, Crambe, Dry Beans (including Chickpea), Flax, Lentils, Mint (Spearmint and Peppermint), Peas (Dry and Succulent Peas), Snap Beans, Soybeans, Sunflowers, Sugarbeets or Wheat within 120 days after application.

Agricultural Uses Crops

QUIZ is a selective herbicide that controls grasses - annual and perennial - in various crops including - canola, crambe, cotton, eucalyptus, dry beans, including chickpea, dry and succulent peas, flax, hybrid poplar plantings, lentils, mint (spearmint and peppermint), pineapple, ryegrass grown for seed, snap beans, soybeans, sugarbeets, sunflowers and non-crop areas. QUIZ will not control broadleaf or sedge weeds. Applied at rates and timings listed in this label, QUIZ will control the grasses listed in the chart labeled, "**Weeds Controlled and Rate Selection**" table below. Flushes of grasses that emerge after application will require an additional application for control. See the **Specific Crop Uses** section below for Seasonal Use Limits and Harvest Intervals as well as use restrictions.

Crops Grown for Seed

QUIZ is a selective post-emergence herbicide registered for control of annual and perennial grasses in alfalfa, onion, carrot, garlic, Swiss chard, spinach, radish, Chinese cabbage, and red beets grown specifically under contract as non-food/non-feed crops for seed production only. Review Restrictions in the Specific Crop Uses section of label before using. Applied at specified rates and timings, QUIZ will control emerged grasses. However, subsequent flushes of grasses require additional treatment as QUIZ does not offer residual activity.

Pre-plant Burndown

QUIZ may be applied as an early pre-plant burndown treatment for the control of small barnyardgrass, fall panicum, foxtails, shattercane, volunteer barely, volunteer corn, volunteer wheat, and wild proso millet prior to planting crops included in this label, or supplemental labels.

Apply QUIZ as directed below using 2.5 to 5.0 fluid ounces per acre. Make applications before grasses begin to tiller. Do not exceed the maximum labeled rate/acre/season for the crop that is going to be planted when additional applications are made as preplant burn down.

Grass Height - Inches	QUIZ (fl.oz./A)
Up to 3"	2.5
4" - 5"	5

Pre-plant burndown applications of QUIZ (including applications made with tank mixes) must include a petroleum based crop oil concentrate at a rate of 1 gallon per 100 gallons of spray solution (1.0% v/v), unless otherwise directed within the specific use directions on this label.

Most grass crops, including wheat, barley, rye, oats, sorghum, rice, and corn are highly sensitive to QUIZ and all direct or indirect contact (such as spray drift) should be avoided.

Non-Agricultural Uses

Non-Crop Areas

QUIZ is registered for postemergence control of selected grasses on non-crop sites such as equipment storage areas, fence rows, roadsides and similar areas. Make a single application of QUIZ to actively growing grasses at a rate of 12 to 16 fluid ounces per acre per year. Apply by ground equipment only. DO NOT apply by air. For paved areas, apply spot/small area treatments only (see Small Areas/Spot Treatment Spray Instructions section).

Spray Adjuvants

Always include either a crop oil concentrate (COC) or a nonionic surfactant (NIS) with applications of QUIZ. Consult your local Helm Agro US, Inc. representative, fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with QUIZ to increase the weed spectrum, select adjuvants approved for use with both products. Products must contain only EPA-exempt ingredients.

Petroleum Crop Oil Concentrate (COC)

- Apply petroleum-based crop oil concentrate at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions. NOTE: In soybeans and sunflowers, up to 2% v/v may be used based on local recommendations.
- Petroleum-based crop oil concentrates are the preferred adjuvant system in arid areas.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- For aerial applications apply 0.5% v/v (2 quarts product per 100 gallons spray solution).

Nonionic Surfactant (NIS)

- Apply at 0.25% v/v (1 quart of product per 100 gallons spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

Ammonium Nitrogen Fertilizer

- In addition to crop oil concentrate or nonionic surfactant, an ammonium nitrogen fertilizer may be added to the spray mixture. However, ammonium nitrate fertilizer is not required to optimize performance of QUIZ.
- Use 2 quart/acre of a high-quality UAN (urea ammonium nitrate) such as 28%N or 32%N, or 2 lb./acre of a spray-grade AMS (ammonium sulfate). Use 4 quart/acre UAN or 4 lb./acre AMS under arid conditions.
- DO NOT use liquid nitrogen fertilizer as the total carrier solution.

Special Adjuvant Types

- Combination adjuvant products may be used at rates that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality.

TANK MIXES

Tank mixtures of QUIZ with any pesticide or spray adjuvant is not recommended except as directed on this label or on supplemental labels.

Refer to the labels of all tank mix products regarding use information including rates, timing, application information, sprayer cleanup, product precautions, restrictions (including adjuvant guideline). Follow the most restrictive provisions on tank mixtures. If those instructions conflict with this label, do not tank mix the herbicide with QUIZ. Helm Agro US, Inc. recommends that you consult your state experiment station, university, or extension agent, or agricultural dealer as to the potential for any adverse interactions (resulting in unacceptable grass control and/or crop injury) before using new herbicide, insecticide and fungicide mixtures. If no information is available, limit initial use of QUIZ and the new herbicide, insecticide or fungicide product to a small area.

An adjuvant is required with all QUIZ applications. Follow all adjuvants instructions on this label as well as instructions on the adjuvant label.

Always conduct a jar test to evaluate physical compatibility before applying a particular mixture to crops for the first time. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately ½ hour. If the mixture balls-up, forms flakes, gels, layers, oily films, other precipitates, or sludges, it is not compatible.

Application with Insecticides and Fungicides

QUIZ may be tank mixed with postemergence insecticides, fungicides or bactericides registered for use in the specific crop.

Application with Broadleaf Herbicides

For optimum results, apply QUIZ alone or in sequence with broadleaf herbicide(s). Tank mixtures of QUIZ with chlorimuron-ethyl or with clorasulam-methyl containing herbicides may fail to control certain grass species normally controlled by QUIZ when applied alone. Under arid or stressful environmental conditions, tank mixtures with other broadleaf herbicides may show a reduction in control of some grass species. Activity of the postemergence broadleaf herbicide in the tank mixture is not affected.

Split Applications with Postemergence Broadleaf Herbicides

If QUIZ is applied immediately prior to or following an application of a postemergence broadleaf herbicide reduced control of some grasses may result. For best results, follow the following recommendations when making split applications:

- Apply postemergence broadleaf herbicides at least 24 hours after applying QUIZ.
- In fields treated with a postemergence broadleaf herbicide, apply QUIZ when grasses begin to develop new leaves (generally 7 days after the postemergence broadleaf herbicide application).

Fallow Systems – Chemical fallow

QUIZ may be applied during the fallow period prior to planting or emergence of any crop listed on this label. For crops not listed on this label, applications must be made at least 120 days prior to planting. For broad-spectrum weed control, including volunteer glyphosate resistant wheat in fallow fields, QUIZ may be used in combination with glyphosate as a substitute for tillage.

Dry Beans, Dry and Succulent Peas in Idaho, Montana, Oregon and Washington

Tank mix QUIZ with "Basagran" herbicide for selective post emergence weed control of annual and perennial grasses and broadleaf weeds in dry beans, dry peas and succulent peas. When tank mixing QUIZ with "Basagran," minimize annual grass antagonism by increasing the specified use rate of QUIZ by 2 ounces per acre. Refer to the "Specific Crop Uses" section of this label for seasonal maximum use rates.

QUIZ requires the use of a spray adjuvant (surfactant, crop oils, etc.). Refer to the "Basagran" label for application information and restrictions regarding rates, weeds controlled, crop size, use of adjuvants (adjuvant type, temperature and geography), rotational crop intervals, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. DO NOT use the tank mix if any restrictions on the "Basagran" label conflict with instructions on the QUIZ label. DO NOT tank mix QUIZ and adjuvants with "Basagran" when temperatures exceed 80° F, as excessive leaf burn may occur.

Soybeans: Tank Mixes with Postemergence Broadleaf Herbicides

QUIZ may be tank mixed with postemergence soybean broadleaf herbicides, such as CLASSIC®, HARMONY® GT XP and SYNCHRONY® XP herbicide, "Flexstar," or "Basagran" to control broadleaf weeds and selected grasses in soybeans. Include ammonium nitrogen fertilizer if specified on the tankmix partner label. Always include either a crop oil concentrate or a nonionic surfactant as specified in the following table:

	Pints/100 Gallons of Spray Solution			
	Ground		Aerial	
QUIZ Tankmix Partner	COC	NIS	COC	NIS
Classic®	8	2	4	2
Harmony® GT	*	1-2**	*	1-2**
SYNCHRONY® XP	*	1-2**	*	1-2**
Basagran	8	-	4	-
Flexstar	8	-	4	-

*Do not use "Dash" or crop oil concentrate when tank mixing QUIZ with HARMONY® GT, CLASSIC® + HARMONY® GT or SYNCHRONY® XP.

**Using the higher rate of nonionic surfactant, particularly under hot, humid conditions may increase temporary crop injury.

SMALL AREAS/SPOT TREATMENT - SPRAY INSTRUCTIONS

For small area/spot treatment of annuals (i.e., volunteer corn) or perennials (i.e., rhizome johnsongrass), use a 0.375% v/v solution of QUIZ and water. Include a non-phytotoxic crop oil concentrate at 1 gallon per 100 gal of spray solution (1% v/v) or a non-ionic surfactant at 1 qt. per 100 gal of spray solution (0.25% v/v). Treat plants on a spray-to-wet basis to ensure good coverage.

Spray Volumes for Small Areas								
Spray Volume (Gallons)	QUIZ		PLUS	COC		OR	NIS	
1	0.5 Fl. Oz.	1 tbsp.		1.25 Fl. Oz.	2.5 tbsp.		0.3 Fl. Oz.	2 tsp
25	12 Fl. Oz.	3/4 pt.		32 Fl. Oz.	1 qts		8 Fl. Oz.	1 cup
50	24 Fl. Oz.	1.5 pt.		64 Fl. Oz.	2 qts		16 Fl. Oz.	1 pt.
100	48 Fl. Oz.	3 pt.		128 Fl. Oz.	1 gal		32 Fl. Oz.	1 qts
DO NOT spot treat grasses using a tank mix of QUIZ and broadleaf herbicides.								
DO NOT treat more than 10% of the total treated area as spot - small area treatment.								
DO NOT exceed the maximum specified rate/acre/season for the crop that is going to be planted when additional applications are made as spot or small area treatment.								

CULTIVATION

A timely cultivation may be necessary to control:

- suppressed weeds
- weeds that were beyond the maximum size at application
- or weeds that emerge after an application of QUIZ.

Decreased weed control may occur if cultivation occurs up to 7 days before the postemergence application of QUIZ due to weed root pruning, placing the weeds under stress, or covering the weeds with soil preventing coverage by QUIZ. To allow QUIZ to fully control weeds, cultivation is not recommended within 7 days **before or after** application. Optimum timing for cultivation is 7-14 days after a postemergence application of QUIZ.

APPLICATION EQUIPMENT

- See **SPRAY DRIFT CONTROL RESTRICTIONS** section for additional restrictions.
- See **SPRAY DRIFT MANAGEMENT** section for additional information and precautions.

Ground Application

Broadcast Application

- For ground applications, use spray nozzle that will deliver medium or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009) (see Spray Drift Management section for additional information).
- Use flat fan or hollow cone nozzles at 25-60 psi.
- DO NOT use flood, rain drop, whirl chamber, or any other nozzle types that produce coarse, large spray droplets.
- DO NOT use controlled droplet applicator (CDA) type nozzles as poor weed control or excessive spray drift may result.
- Use a minimum of 10 gal of water per acre in non- arid areas.
- Use a minimum of 15 gal of water per acre in arid areas.
- Do not exceed 40 gal of water per acre.
- Increase spray volume and pressure as weed or crop density and size increase.

Band Application

- Band application equipment sprays a narrower area than broadcast application equipment. Calibrate equipment to use proportionately less spray solution.
- To avoid crop injury, carefully calibrate the band applicator not to exceed the labeled rate.
- Carefully follow the manufacturer's instructions for nozzle type, nozzle orientation, distance of the nozzles from the crop and weeds, spray volumes, calibration, and spray pressure.

Aerial Application

- For aerial applications, use spray nozzles that will deliver coarse or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009) (see Spray Drift Management section for additional information).
- Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.
- Use a minimum of 3 gal of water per acre in non-arid areas.
- Use a minimum of 5 gal of water per acre in arid areas.

MIXING INSTRUCTIONS

1. Fill spray tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of QUIZ.
3. If QUIZ and a tank mix partner are to be applied together, consult the tank mix partner label for information on which should be added first (normally granules and powders are added first).
4. Continue agitation until the QUIZ is fully dispersed, at least 5 minutes.
5. Once QUIZ is fully dispersed, maintain agitation and continue filling tank with water.
6. Continue filling the tank and while adding the required volume of spray additives. Always add these to the spray tank last.
7. Apply QUIZ spray mixture within a reasonable period of time of mixing to avoid product degradation (24 to 48 hrs.). If the spray mixture stands for any period of time, thoroughly re-agitate before using.

SPRAYER CLEANUP

Clean spray equipment before QUIZ is sprayed. Follow cleanup procedures specified on the labels of the products previously applied. If no directions are provided, follow the six steps outlined in After Spraying QUIZ. Remove the buildup of any dried pesticide deposits which have accumulated in the application equipment prior to spraying QUIZ. Steam-cleaning spray tanks to facilitate the removal of any caked deposits of previously applied products will help prevent accidental crop injury.

At the End of the Day

When multiple loads of QUIZ are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will help prevent the build-up of dried pesticide deposits which can accumulate in the application equipment.

After Spraying QUIZ and Before Spraying Crops Other Than Those Listed in the Crop Rotation Section

Thoroughly clean all mixing and spray equipment immediately following applications of QUIZ to avoid subsequent injury to desirable crops using the following procedure:

1. Drain spray tank.
2. Thoroughly rinse spray tanks, boom, and hoses with clean water.
3. Loosen and physically remove any visible deposits.
4. Fill the tank with clean water and 1 gal of household ammonia* (containing 3% active) for every 100 gal of water.
5. Flush the hoses, boom, and nozzles with the cleaning solution.
6. Add more water to completely fill the tank.
7. Circulate the cleaning solution through the tank and hoses for at least 15 min.
8. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
9. Remove nozzles and screens and clean separately in a bucket containing cleaning agent and water.
10. Repeat step 2.
11. Rinse the tank, boom, and hoses with clean water.
12. If only ammonia is used as a cleaner, the rinse solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinse disposal instructions. If no instructions are given, dispose of the rinse on site or at an approved waste disposal facility.

*Equivalent amounts of an alternate-strength ammonia solution or Helm Agro approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, or applicator or Helm Agro representative for a listing of approved cleaners.

Notes:

1. CAUTION: DO NOT use chlorine bleach with ammonia as dangerous gases will form. DO NOT clean equipment in an enclosed area.
2. Steam-clean spray tanks prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When QUIZ is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of QUIZ and applications of other pesticides to QUIZ -sensitive crops during the same spray season, dedicate a sprayer to QUIZ to further reduce the chance of crop injury.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather -related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR AND GROWER.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply coarse or coarser droplets (ASABE S-572.1). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. 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 - General Techniques

- **Flow Rate/Orifice Size** – Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.
- **Pressure** – The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **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.

Controlling Droplet Size – Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of wing or rotor length – longer booms increase drift potential.
- **Application Height** - Application more than 10 ft. above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Apply when wind speeds are less than 15 mph. The wind speed range for optimum performance is between 3 and 10 mph. At wind speed less than 3 mph temperature inversions may exist, and at wind speeds above 10 mph spray patterns may be compromised. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID GUSTY OR WINDY CONDITIONS.**

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

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Do not apply during temperature inversions. Drift potential is high during a temperature inversion. Surface temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface temperature inversions are characterized by increasing temperature 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. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is suitable.

SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

UPWIND SWATH DISPLACEMENT

When applications are made with a crosswind the swath will be displaced downwind. An adjustment for swath displacement is made on the downwind edge of the application site by shifting the path of the application equipment upwind.

SPRAY DRIFT CONTROL RESTRICTIONS

Where states have more stringent regulations they must be observed.

AERIAL APPLICATIONS

- When applying by air, use spray nozzles that will deliver coarse or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009).
- The boom length must not exceed 75% of the wing span or 80% of the rotor blade diameter.
- Applications with wind speeds greater than 15 miles per hour are prohibited.
- Applications into temperature inversions are prohibited.
- Spray must be released at the lowest height consistent with pest control objectives and flight safety.
- Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size spectrum

GROUND APPLICATIONS

- When applying by ground, use spray nozzles that will deliver medium or larger spray droplets as defined in the American Society of Agricultural and Biological Engineers (ASABE) standard ANSI/ASAE S572.1 (March 2009).
- Applications with wind speeds greater than 15 miles per hour are prohibited.
- Applications into temperature inversions are prohibited.
- Apply spray at the lowest height that is consistent with pest control objectives.

Application Timing

Crop and Non-Crop Uses

Applications of QUIZ should be made to young, actively growing grasses according to the rate chart below. When fields are to be irrigated, delay application of QUIZ until after irrigation is completed.

If applications are made to grasses larger than the sizes listed in the rate charts or to grasses under stress, unsatisfactory control may be obtained.

Pre-Plant Burndown

Soybeans

QUIZ Alone: Apply QUIZ any time after emergence of grasses up to planting.

QUIZ + VIDA®: A tank mix of QUIZ plus VIDA may be applied after emergence of grasses, up to the planting of soybeans (refer to VIDA® labeling for application timing).

QUIZ + CANOPY® XL + 2,4-D (LVE): This tank mix must be applied a minimum of 7 to 30 days prior to soybean planting. The 2,4-D (LVE) rate will determine the minimum interval prior to planting. Refer to the 2,4-D (LVE) and CANOPY XL labeling for application information.

QUIZ + 2,4-D (LVE): This tank mix may be made any time after emergence of grasses, but must be applied a minimum of 7 to 30 days prior to planting of soybeans. The 2,4-D (LVE) rate will determine the minimum interval prior to planting. Refer to the 2,4-D (LVE) label for information on the preplant interval.

QUIZ + glyphosate may be used for broad spectrum weed control, including volunteer glyphosate resistant corn control, prior to or after planting soybean. Applications made after soybean emergence should only be made to soybean varieties designated as glyphosate resistant.

Pre-Plant Burndown

Wheat and Barley (not for use on wheat and barley in the state of New York)

Prior to planting wheat or barley, a tankmix of QUIZ + glyphosate may be used for the purpose of broad spectrum weed control - including volunteer glyphosate resistant wheat control. Applications must be made prior to emergence of the crop. Applications made within 7 days of planting may result in crop injury.

Sequential Applications

DO NOT exceed the maximum use rate per acre per year, as specified for the specific crop (see **Specific Crop Uses** Section below).

Annual Grasses

If after QUIZ has been applied, a subsequent flush of grass emerges or if regrowth of previously treated grass occurs, a second application of QUIZ may be applied. Use the appropriate rate for the grassy weed from the "**Weeds Controlled and Rate Selection**" chart below. DO NOT exceed the maximum use rate per acre per year, as specified for the specific crop (see **Specific Crop Uses** Section below).

Perennial Grasses

If perennial grasses regrow, re-apply QUIZ at 6-7 fluid ounces of product per acre. Application timing should be as follows:

Bermudagrass - 3" tall or up to 6" runners,

Quackgrass - 4"-8"

Rhizome johnsongrass - 6"-10",

Wirestem muhly - 4"-8".

DO NOT exceed the maximum use rate per acre per year, as specified for the specific crop (see **Specific Crop Uses** Section below).

Sequential Applications with Post Broadleaf Herbicides

NOTE: When QUIZ is applied immediately prior to or sequentially after an application of a post broadleaf herbicide, a reduction in grass control may occur.

Observe the following instructions:

Wait a minimum of 24 hours before applying a post broadleaf herbicide after applying QUIZ.

In fields treated with a postemergence broadleaf herbicide, wait for grass plants to begin developing new leaves, (generally 5-7 days after the post broadleaf herbicide application), before applications of QUIZ are made.

Specific Crop Uses

Food Crops	Pre-Harvest Interval (PHI)	Use Rate Fl oz (lb ai/A) / Application	Maximum Use Rate - Fl. Oz. (lb ai/A)/ Crop Season	Maximum Appl./Acre/ Crop Season	Minimum Application Interval (Days)	Application Instructions and Restrictions
Barley (not for use in the State of New York)		5 - 10 (0.034 – 0.069)	10 (0.069)	2	7	- Must be applied prior to barley emergence. - DO NOT apply within 7 days of planting as crop injury may occur. - Not for use on barley in the state of New York.
Canola	60	5 – 12 (0.034 – 0.0825)	18 (0.124)	3	7	
Cotton	80	5 – 12 (0.034 – 0.0825)	18 (0.124)	3	7	
Crambe	60	5 – 12 (0.034 – 0.0825)	18 (0.124)	3	7	
Dry Beans (including Chickpeas)	30	5 – 12 (0.034 – 0.0825)	28 (0.193)	5	7	
Dry Peas	60	5 – 12 (0.034 – 0.0825)	14 (0.096)	2	7	
Flax	70	5 – 12 (0.034 – 0.0825)	24 (0.165)	4	7	
Lentils	60	5 – 12 (0.034 – 0.0825)	14 (0.096)	2	7	
Mint (Spearmint and Peppermint)	30	5 – 12 (0.034 – 0.0825)	24 (0.165)	2	7	

Food Crops	Pre-Harvest Interval (PHI)	Use Rate Fl oz (lb ai/A) / Application	Maximum Use Rate - Fl. Oz. (lb ai/A)/ Crop Season	Maximum Appl./Acre/ Crop Season	Minimum Application Interval (Days)	Application Instructions and Restrictions
Pineapple	160	15 – 30 (0.103 – 0.206)	60 (0.413)	4	7	<ul style="list-style-type: none"> - Controls grasses (annual and perennial) in pineapple in the state of Hawaii. - Controls: Sour Grass (<i>Tricachne insularis</i>), Crabgrass (<i>Digitaria</i> spp), Natal Red Top (<i>Agrostis alba</i>). Sour Grass (<i>Tricachne insularis</i>), - Partially controls: Guineagrass (<i>Panicum maximum</i>), Molasses Grass (<i>Melinis minutiflorav</i>) Wiregrass (<i>Eleusine Indica</i>) - Apply by ground equipment only. - DO NOT apply by air. - Mix in water only. - Broadcast application - Apply at 15-30 fl.oz./A per application. - Directed spot treatments for perennial grasses: Spray perennial grasses postemergence to wet (50-100 gals/A depending on size) with 15 to 30 fl.oz. product per 100 gallons of water as a spot treatment. A maximum of 4 applications may be made per harvest. - DO NOT graze treated fields or harvest for forage or hay.
Snap Beans	15	5 – 12 (0.034 – 0.0825)	14 (0.096)	2	7	
Soybeans	80	5 – 12 (0.034 – 0.0825)	18 (0.124)	3	7	DO NOT apply after pod set.
Succulent Peas	30	5 – 12 (0.034 – 0.0825)	14 (0.096)	2	7	
Sugarbeets	45	5 – 12 (0.034 – 0.0825)	25 (0.172)	4	7	DO NOT feed beet tops within 60 days of last application
Sunflowers	60	5 – 12 (0.034 – 0.0825)	18 (0.124)	3	7	The preferred adjuvant in sunflowers is nonionic surfactants. Use at 1 qt. of NIS per 100 gal of spray solution (0.25% v/v).
Wheat (not for use in the State of New York)		5 – 10 (0.034 – 0.0701)	10 (0.069)	2	7	<ul style="list-style-type: none"> - Must be applied prior to wheat emergence. - DO NOT apply within 7 days of planting as crop injury may occur. - Not for use on wheat in the State of New York.
Eucalyptus		15 – 30 (0.103 – 0.206)	60 (0.413)	4	7	<ul style="list-style-type: none"> - Controls grasses (annual and perennial) in Eucalyptus plantations in the state of Hawaii. - Controls - Para grass (<i>Panicum muticum</i>) and Crabgrass (<i>Digitaria</i> spp.) - Partially controls: Torpedo grass (<i>Panicum repens</i>) - Apply by ground equipment only. - DO NOT apply by air. - Apply as a broadcast spray at 15 to 30 fl.oz./A.

(continued)

Food Crops	Pre-Harvest Interval (PHI)	Use Rate Fl oz (lb ai/A) / Application	Maximum Use Rate - Fl. Oz. (lb ai/A)/ Crop Season	Maximum Appl./Acre/ Crop Season	Minimum Application Interval (Days)	Application Instructions and Restrictions
Hybrid Poplar		5 – 10 (0.034 – 0.0701)	10 (0.069)	2	7	<ul style="list-style-type: none"> - Controls grasses (annual and perennial) in Hybrid Poplar plantings in the states of Maine and Minnesota. - May be applied over hybrid poplar following planting. - Apply as a broadcast spray at 5 to 10 fl.oz./A. - Apply by ground equipment only. - DO NOT apply by air. - Follow label recommendations regarding weed size or growth stage of grasses to be controlled. Follow label recommendations regarding the use of surfactants, spray additives and tank mixes.
Non-Food/Non-Feed Crops Grown for Seed Production		5 – 12 (0.034 – 0.0701)	25 (0.172)	2	7	<ul style="list-style-type: none"> - Controls grasses (annual and perennial) in alfalfa, onion, carrot, garlic, Swiss chard, spinach, radish, Chinese cabbage, and red beets grown specifically under contract as non-food/non-feed crops for seed production only in the states of: Idaho, Montana, Oregon, Washington, and Wyoming. - QUIZ will control emerged grasses when applied at specified rates and timings. However subsequent grass flushes will require additional treatment. - Apply by ground equipment only. - DO NOT apply by air. - All treated seed must be tagged at the processing facility, "Not For Human Or Animal Consumption." - It shall be the growers' responsibility to notify the processing facility of any seed crop that has been treated. - DO NOT divert any portion of crop (seed, sprouts, screenings, forage, hay, etc.) to use for human or animal consumption after application. - DO NOT graze treated crop areas. - Always include a non-phytotoxic petroleum based crop oil concentrate at 1% v/v (1 gallon/100 gallons) or a nonionic surfactant at 0.25% v/v (1 quart/100 gallons). - Crop oil concentrate is the preferred adjuvant in arid areas. - Tank mixtures with any pesticide or spray adjuvant is NOT recommended except as directed on this label or on supplemental labels. - Most grass crops, including barley, corn, oats, rice, rye, sorghum, and wheat are highly sensitive to QUIZ. - DO NOT apply within 14 days of anticipated bloom.

Food Crops	Pre-Harvest Interval (PHI)	Use Rate Fl oz (lb ai/A) / Application	Maximum Use Rate - Fl. Oz. (lb ai/A)/ Crop Season	Maximum Appl./Acre/ Crop Season	Minimum Application Interval (Days)	Application Instructions and Restrictions
Perennial Ryegrass - Quizalofop Tolerant - Grown for Seed Only (Non-Food/Non-Feed)		5 – 12 (0.034 – 0.0701)	20 (0.138)	2	7	<ul style="list-style-type: none"> - Controls grasses (annual and perennial) in non-food/non-feed quizalofop-tolerant perennial ryegrass crops grown specifically for seed production in the state of Minnesota. - When applied at specified rates and timings, QUIZ will control emerged grasses. However subsequent grass flushes will require additional treatment. - Apply QUIZ prior to the boot stage in the spring of the second year of Quizalofop-tolerant perennial ryegrass growth at 10 fl. oz./A. Application at this stage is for vegetative suppression of quackgrass growth and preventing quackgrass seed contamination during ryegrass harvest. - DO NOT apply QUIZ after boot stage of growth of QUIZ tolerant perennial ryegrass. - Application of QUIZ at 10 fl. oz./A may be made in the first season of Quizalofop-tolerant perennial ryegrass growth for control of heavier quackgrass infestations. Such applications can be made anytime from planting until the end of August. - Fall application of QUIZ should be avoided on Quizalofop-tolerant perennial ryegrass because seed production may be reduced. - DO NOT divert any portion of crop (seed, sprouts, screenings, forage, hay, stover, etc.) treated with QUIZ to use for human or animal consumption. - DO NOT graze treated crop. - Apply by ground equipment only. - DO NOT apply by air.
Wildflower Establishment		5 – 12 (0.034 – 0.0701)	12 (0.083)	2		<ul style="list-style-type: none"> - Use in Non-Crop Areas - to aid in establishment of Wildflowers. - Controls grasses (annual and perennial) in non-crop areas to enhance establishment and growth of certain broadleaf plants on non-crop sites that is, plants identified as "wildflowers". - This includes bachelor button, black-eyed susan, bluebonnet, blue flax, catchfly, chrysanthemum, cone flowers, coreopsis, dames-rocket, dwarf cornflower, evening primrose, gaillardia, oxeye daisy, impatiens, Indian blanket, Indian paintbrush, marigolds, scarlet pimpernel, verbena and white yarrow. - Refer to the Weeds Controlled and Rate Selection table for specific application rates. - Make a single application of QUIZ at a rate of 5 to 12 fl.oz./A.

WEEDS CONTROLLED AND RATE SELECTION

Annual Grasses**		Size at Application - Inches	Fl. Oz./A when Applied Alone	Fl. Oz./A when tankmixed with Broadleaf Herbicide*
Common Name	Scientific Name			
Barnyardgrass	<i>Echinochloa crus-galli</i>	2-6	8-10	Split†
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2-6	10	Split†
Crabgrass, Large	<i>Digitaria sanguinalis</i>	2-6†	8-10	Split†
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	2-6†	8-10	Split†
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2-6	7-8	8
Downy Brome	<i>Bromus tectorum</i>	2-6	10-12	12
Fall Panicum	<i>Panicum dichotomiflorum</i>	2-6	7-8	8
Field Sandbur	<i>Cenchrus incertus</i>	2-6	7-8	8
Foxtail, Bristly	<i>Setaria verticillata</i>	2-6	7-8	8
Foxtail, Giant	<i>Setaria faberi</i>	2-4 (pretiller)	5-8	5
Foxtail, Giant	<i>Setaria faberi</i>	2-8	7-8	7
Foxtail, Green	<i>Setaria viridis</i>	2-4	7-8	8
Foxtail, Yellow	<i>Setaria lutescens</i>	2-4	7-8	Split†
Goosegrass	<i>Eleusine indica</i>	2-6†	7-8	8
Italian Ryegrass	<i>Lolium multiflorum</i>	2-6	10-12	12
Itchgrass	<i>Rottboellia exaltata</i>	2-8	7-8	8
Johnsongrass, Seedling	<i>Sorghum halepense</i>	2-8	5-8	5
Jointed Goatgrass	<i>Aegilops cylindrical</i>	2-6	10-12	12
Junglerice	<i>Echinochloa colonum</i>	2-6	8-10	10
Red Rice	<i>Oryza sativa</i>	1-4	9-10	Split†
Shattercane	<i>Sorghum bicolor</i>	6-12	5-8	5
Sprangletop	<i>Leptochloa filiformis</i>	2-6	7-8	8
Texas Panicum	<i>Panicum texanum</i> ††	2-4	8-10	Split†
Volunteer Barley	<i>Hordeum vulgare</i>	2-6	7-8	8
Volunteer Corn	<i>Zea mays</i> ***	6-30	5-8	4-8
Volunteer Oats	<i>Avena sativa</i>	2-6	7-8	8
Volunteer Rye	<i>Secale cereale</i>	2-6	7-8	8
Volunteer Wheat	<i>Triticum aestivum</i>	2-6	7-8	8
Wild Oat	<i>Avena fatua</i>	2-6	7-8	8
Wild Proso Millet	<i>Panicum miliaceum</i>	2-6	5-8	7
Windgrass	<i>Bromus mollis</i>	2-6	10-12	12
Witchgrass	<i>Panicum capillare</i>	2-6	7-8	8
Woolly Cupgrass	<i>Eriochloa villosa</i>	2-4§	9-10	Split†
Perennial Grasses**				
Bermudagrass	<i>Cynodon dactylon</i>	3" tall, or up to 6" runners	10-12	Split†
Johnsongrass, Rhizome	<i>Sorghum halepense</i>	10-24	10-12	10
Quackgrass	<i>Agropyron repens</i>	6-10	10-12	Split†
Wirestem Muhly	<i>Wirestem Muhly</i>	4-8	8-10	Split†

*See "Applications with Broadleaf Herbicides" Section Below

**Apply up to 12 fl.oz./A for annual and perennial grass control based on local recommendations. Under arid conditions the higher rate should be used.

***Control includes "Roundup" Ready (glyphosate resistant), Liberty Link, and IMI-Corn. Apply 4 fl.oz./A for up to 12 inch tall corn; 5 fl.oz./A for 12-18 inch volunteer corn and 8 fl.oz./A for 18-30 inch volunteer corn.

†Split = Split Application. May not be controlled effectively using a tank mix with broadleaf herbicides. For optimum results, alternate applications of QUIZ with broadleaf herbicide. Ensure that QUIZ is applied either 24 hours before or 7 days after the broadleaf herbicide.

††In Texas and other areas of the arid west, use 10 fl. oz./A is the rate to be used for control of Texas panicum. Use of lower rates may result in unsatisfactory control.

‡ Length of lateral growth.

§ Size in height or diameter, whichever is more restrictive. Applications to plants with more than three tillers may result in unsatisfactory control.

Specific Weed Problems

Target Weed	Size at Application – (Inches)	QUIZ- Application Rate - Fl. Oz./A (lb. ai/A)	Comments
Seedling Johnsongrass	2 - 6	8 (0.055)	<ul style="list-style-type: none"> • In the states of Colorado, Kansas, Oklahoma, and Texas in Fallow. Applied at specified rates and timings, QUIZ will control emerged grasses only. Subsequent flushes of grasses require additional treatment. • Weed control may be reduced if the soil is disturbed by tillage within 21 days before or 14 days after application of QUIZ.
Rhizome Johnsongrass	10 - 16 - but before boot stage	12 (0.083)	
Rhizome Johnsongrass (regrowth)	6 - 10	8 (0.055)	
Rhizome Johnsongrass - Southern and Eastern States	10 - 24	5 (0.034)	<ul style="list-style-type: none"> • A reduced rate of QUIZ may be used for control of rhizome johnsongrass in the states of Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, Tennessee, Virginia, and West Virginia if applied in a sequential application program. • DO NOT apply QUIZ in a tank mix with postemergence broadleaf herbicides when using this reduced rate, sequential program. • DO NOT exceed the maximum specified rate/acre/season for the crop that is going to be planted when additional applications are made to control Rhizome Johnsongrass.
	Followed Sequentially		
	6 – 10 (regrowth)	5 (0.034)	
Volunteer Glyphosate - Resistant Corn	12	4 (0.028)	<ul style="list-style-type: none"> • Tank mix QUIZ with glyphosate for control of volunteer glyphosate-resistant corn in other glyphosate-resistant crops as follows: <ol style="list-style-type: none"> 1. When tank mixed with a glyphosate formulation that does not include a built-in adjuvant system, a nonionic surfactant or petroleum based crop oil concentrate must be included, per directions on this label. 2. When tank mixed with a glyphosate formulation that contains a built-in adjuvant system (i.e. "Roundup WeatherMax"), additional adjuvant is still required. Add nonionic surfactant at a rate of 0.125% v/v (1 pt. per 100 gal. spray solution). Under arid conditions consider adding a petroleum based crop oil concentrate at 1% v/v (1 gallon per 100 gallons spray solution) instead of a nonionic surfactant.
	12-18	5 (0.034)	
	18-30	8 (0.055)	
Volunteer Corn and Shattercane - Tankmixes with Pursuit® Herbicide	Volunteer Corn 6-18 Shattercane 6-12	5-7 (0.031- 0.048)	<ul style="list-style-type: none"> • QUIZ may be used in a tankmix with Pursuit® Herbicide for control of Volunteer Corn or Shattercane. • Use the 7.0 Fl. Oz. rate when shattercane or corn approaches the upper size limit and/or if pressure is heavy. Refer to the Pursuit label for Pursuit rates, broadleaf weeds and other grass species controlled. • Applications to weeds smaller than, or exceeding the stated sizes for application may result in less than satisfactory control. • DO NOT include any other pesticide in with the tank mix of QUIZ plus Pursuit. • Applications of QUIZ + Pursuit must include either: <ol style="list-style-type: none"> 1. A nonionic surfactant at the rate (concentration) of 0.25% v/v (1 quart per 100 gallons of spray solution). Use only EPA approved surfactants authorized for use on food crops containing at least 80% active ingredients. 2. Crop oil concentrate at a rate (concentration) of 1.0%v/v (4 quarts per 100 gallons of spray solution) • Note: Tankmixes of QUIZ with Pursuit have shown reductions in grass control when compared to either product applied alone. This tank mix is labeled for the control of volunteer corn and shattercane only. Different control measures should be used to control other grasses present. Best results are obtained when QUIZ is applied 24 hours before, or 7 days after the application of "Pursuit". DO NOT apply QUIZ to plants stressed from a previous herbicide application.

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.

Follow Directions for Use of this product carefully. 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 Helm Agro US, Inc. or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Helm and Seller harmless for any claims relating to such factors.

Helm 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 Helm, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, HELM MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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Master label EPA approved on November 30, 2017
REV 06/26/2018
Supersedes REV 02/15/2018



HELM

QUIZ

Quizalofop-P-ethyl Group 1 Herbicide

ACTIVE INGREDIENT:	(% by weight)
Quizalofop-P-ethyl	
Ethyl(R)-2-[4-(6-chloroquinoxalin-2-yl oxy)-phenoxy]propionate.....	10.3%
OTHER INGREDIENTS:	89.7%
TOTAL:	100.0%

* Equivalent to 0.88 pounds ai per gallon
Contains petroleum-based distillates

EPA Reg. No. 74530-79
EPA Est. No. 70851-GA-002

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

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.)

See label booklet for First Aid, Precautionary Statements and Directions for Use including Storage and Disposal.

NET CONTENT

2.5 Gallon

Manufactured For
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