



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 23, 2021

Jane Miller
Regulatory Agent
Biologic Regulatory Consulting, Inc.
10529 Heritage Bay Blvd.
Naples, FL 34120

Subject: Registration Review Label Mitigation for Quinclorac
Product Name: Rook 4L
EPA Registration Number: 94396-22 (formerly 70506-282)
Application Dates: 12/18/2018
Decision Numbers: 567353

Dear Ms. Miller:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Quinclorac Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Quinn Gavin by phone at 703-347-0325, or via email at gavin.quinn@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

| | | | |
|------------|-------|---|-----------|
| Quinclorac | GROUP | 4 | HERBICIDE |
|------------|-------|---|-----------|

ROOK 4L Herbicide

ACTIVE INGREDIENT:

Quinclorac: 3, 7-dichloro-8-quinolinecarboxylic acid.....40.0%

OTHER INGREDIENTS60.0%

TOTAL100.0%

Contains 3.8 pounds of quinclorac per gallon.

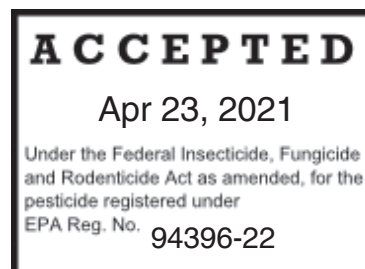
KEEP OUT OF REACH OF CHILDREN CAUTION

| FIRST AID | |
|--|---|
| IF SWALLOWED | Call a poison control center or doctor immediately for treatment advice. <ul style="list-style-type: none"> • Have affected person sip a glass of water if able to swallow. • Do not induce vomiting unless told by a poison control center or doctor. • Do not give anything by mouth to an unconscious person. |
| IF ON SKIN OR CLOTHING | <ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. |
| IF IN EYES | <ul style="list-style-type: none"> • Hold eyes 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 INHALED | <ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. • Call a poison control center or doctor for further treatment advice. |
| HOT LINE NUMBER | |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment, contact the Rocky Mountain Poison and Drug Center at 1-866-673-6671. | |
| NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Have the product container or label with you when calling a poison control center or doctor or going for treatment. | |
| For Chemical Emergency: Spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300. | |

Net Contents: ____ Gallons

Aquatrols Corporation of America
1273 Imperial Way
Paulsboro, NJ 08066

EPA Reg. No. 94396-22
EPA Est. No. XXXXX-XX-XXX



PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, clothing, or eyes. Avoid breathing dust or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below. Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants,
2. Chemical-resistant gloves, made of butyl rubber \geq 14 mils, or natural rubber \geq 14 mils, or neoprene rubber \geq 14 mils, or nitrile rubber \geq 14 mils,
3. Shoes plus socks.

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 STATEMENT

When handlers use closed systems or enclosed cabs 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:

1. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Keep out of lakes, ponds, and streams. Do not apply directly to water, areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of rinsate.

DIRECTIONS FOR USE

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

For use only by certified commercial applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification. All applicable directions, restrictions and precautions are to be followed. This labeling must be in the possession of the user at time of application.

DO NOT apply this product by air or through any type of irrigation equipment.

Aquatrols Corporation of America does not authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application to turf.

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 specified area during application. For any requirements specific to your State or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

- Coveralls,
- Chemical-resistant gloves made of butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- 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, nurseries, or greenhouses.

Professional applications to residential and nonresidential turf are not within the scope of the Worker Protection Standard.

Do not enter or allow others to enter the treated area until sprays have dried.

GENERAL INFORMATION

Rook 4L may be applied postemergence to residential and nonresidential turf grasses (Refer to Table 1) for the control of many broadleaf and grass weeds. Examples of such sites include grounds or lawns around residential and commercial establishments, multi-family dwellings, military and other institutions, parks, airports, road-sides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses and sod farms.

Rook 4L is absorbed by foliage and roots and translocated throughout the plant. The control symptoms exhibited by broadleaf weeds include leaf and stem curl or twisting, and chlorosis. Susceptible grasses demonstrate stunting, chlorosis, and gradual reddening followed by necrosis and death. Refer to Tables 1, 2 and 3 for turf grass tolerance and susceptible weed species.

APPLICATION INFORMATION

Apply Rook 4L to actively growing weeds as postemergence broadcast or spot sprays using the rate, turf species and growth stage indicated in Tables 1, 2 and 3. Do not exceed the specified application rate or fail to comply with use restrictions listed in General Restrictions and Limitations.

To achieve consistent weed control, methylated seed oil is recommended. Refer to Tables 2 and 3 for rates. Adding adjuvants may cause slight leaf burn, but new growth is normal and turf vigor is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. Additional stress from low mowing heights may also increase the possibility of turf injury. Chelated iron or sprayable soluble nitrogen fertilizer will reduce a slight yellowing that may occur on some turf grass species.

Spot Applications:

Make postemergence spot applications to susceptible weeds in turf grass that is tolerant to Rook 4L (see Tables 1 and 2). Apply 0.55 fluid ounces of Rook 4L per 1,000 square feet of treated area. Ensure that spray coverage is uniform and complete.

Mowing Information:

Do not mow 2 days before or after applying Rook 4L to maximize weed control and minimize potential turf injury. Leave the clippings from the first three mowings on the treated area.

Irrigation and Rainfall:

If soil moisture is not sufficient prior to Rook 4L application, irrigation may improve weed control. For best results, do not water or irrigate for 24 hours after application. If rainfall does not occur in 2 to 7 days after application, apply irrigation of at least one-half inch.

Extended Grass Control:

To extend grass control Rook 4L can be tank-mixed with Satellite 3.3 EC, PRE-M 3.3 turf herbicide or Pendulum 60 DG to provide residual control of annual grasses. Consult the respective tank-mix labels for additional weeds controlled.

Seeding/Overseeding/Sprigging:

The use of Rook 4L before or after seeding or overseeding a turf area will not significantly interfere with the turf grass seed germination and growth of those grass types identified as tolerant in Table 1. Consult Tablet 4 for timing of applications concerning any seeding, overseeding or sprigging situation.

ADDITION OF ADJUVANTS

Additives in Spray Mix to Achieve Control:

Methylated seed oil is the recommended adjuvant for postemergence applications. Do not include additives when tank mixing with EC (Emulsifiable Concentrate) products as this may cause phytotoxicity. Consult your local UPI representative or distributor for information for your area. Other additives or adjuvants may be used such as DyneAmic Lesco Spreader Sticker LI-700, Surf King Spreader, Target Pro Spreader or Thoroughbred. However, under some environmental conditions some of these products may cause phototoxicity or less than optimal efficacy.

Methylated Seed Oil Recommended:

The methylated seed oil used as the adjuvant with Rook 4L must meet all the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the jar test, and
- be successful in local experience.

The exact composition of suitable products will vary; however, any Methylated Seed Oil used should contain emulsifiers to provide good mixing.

Weed Resistance Management

For resistance management, Rook 4L is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Rook 4L and other Group 4 herbicides. Weed species with acquired resistance to Group 4 may eventually dominate the weed population if Group 4 herbicides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Rook 4L or other Group 4 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds. Whenever possible incorporate multiple weed control practices such as mechanical cultivation, biological management practices, and crop rotation.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or pest control advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use, and that considers mechanical control methods, cultural (e.g. timing to favor the desirable plants and not the weeds), biological (weed-competitive varieties) and other management practices.
- Fields should be scouted before application to identify the weed species present and their growth stage to determine if the intended application will be effective. Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method. Prevent movement of resistant weed seeds to other areas by cleaning equipment.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action (MOA), if available. Treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes. To the extent possible do not allow weed escapes to produce seeds, roots, or tubers.
- Contact your sales representative, pest control advisors, or local extension specialist for additional pesticide resistance management and/or integrated weed management recommendations for specific types of plants and weed biotypes. Report any incidence of non-performance of this product against a particular weed species to your retailer or UPI representative.

MIXING INSTRUCTIONS FOR ROOK 4L

See elsewhere on this label for additional information on Rook 4L tank-mix treatments. If tank-mixing with products in PVA bags always allow water soluble packets to dissolve before agitating.

Ground Driven Sprayer:

1. Begin with a clean spray tank. Fill tank one-half to three-quarters full with clean water.
2. Rook 4L Alone: When using Rook 4L alone, either premix (1 part product + 2 parts water) or slowly add Rook 4L to the partially filled tank while agitating until completely dispersed. Fill the remainder of the tank with water.
3. Rook 4L tank mixes:

a. Wettable Powder Formulations

1. When using ROOK 4L with a wettable powder formulation, add Rook 4L to the partially filled tank while agitating.
2. When Rook 4L is properly mixed add a slurry of the wettable powder (1 part WP + 2 parts water) slowly into the tank. Fill the remainder of the tank while agitating.

b. Flowable Formulations

1. When using Rook 4L with a flowable formulation, add Rook 4L to the partially- filled tank while agitating.
2. When Rook 4L is properly mixed, premix one part of the flowable with two parts water and add this diluted mixture slowly into the tank. Fill the remainder of the tank while agitating.

c. Emulsifiable Concentrate Formulations

1. When using Rook 4L with an emulsifiable concentrate formulation, add Rook 4L to the partially-filled tank while agitating.
2. When Rook 4L is properly mixed, premix one part of the emulsifiable concentrate with two parts water and add this diluted mixture slowly into the tank. Fill the remainder of the tank while agitating.

d. Dry Flowable (Water Dispersible Granule) Formulations

1. When using ROOK 4L with a dry flowable formulation, add Rook 4L to the partially-filled tank while agitating.
 2. When Rook 4L is properly mixed, premix one part of the dry flowable with two parts water and add this diluted mixture slowly into the tank. Fill the remainder of the tank while agitating.
4. **MAINTAIN CONTINUOUS AGITATION WHILE ADDING HERBICIDES AND UNTIL SPRAYING IS COMPLETED.** If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Backpack Sprayer:

Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water and add the required amount of Rook 4L to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate once again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed.

Liquid Fertilizers:

Prior to mixing, test small quantities using a simple jar test. Add the required amount of Rook 4L to half-filled tank while agitating then add the fertilizer product. Complete filling spray tank to desired level.

SPRAYING INSTRUCTIONS FOR ROOK 4L

Apply with properly calibrated ground equipment in sufficient water per acre to provide uniform spray distribution (at least 20 gallons of water per acre or at least 0.5 gallon per 1,000 sq. ft.). Use low pressure (e.g., 20-40 psi) sprayers. When applying by ground, do not release spray at a height greater than 30 inches above the ground. For aerial applications, do not release spray at a height greater than 10 feet above the crop canopy, unless a higher application height is required for reasons of pilot safety.

Maintain continuous agitation during spraying with good mechanical or bypass agitation. Nozzle screens must be no finer than 50 mesh (100 mesh is finer than 50 mesh). Check sprayer routinely to determine proper calibration. Flat fan, flood or cone nozzles may be used. Arrange nozzles to obtain uniform coverage or turf and weeds to be controlled. Boom height, nozzle selection, and pressure should be adjusted to provide uniform coverage and minimize spray drift. Apply as a medium or coarser spray (ASABE standard 572). Do not apply when wind speeds are greater than 10 mph at the application site.

Avoid overlaps that will increase rates above those specified. Avoid application when winds may cause drift.

Procedure for Cleaning Spray Equipment:

Clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product.

COMPATIBILITY TEST FOR MIX COMPONENTS

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of specified label rate per acre.

1. Water: For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
2. Products in PVA bags: Cut an opening in the water-soluble PVA bag just large enough to use a teaspoon for measuring purposes. Use the opened water-soluble PVA bag first when preparing spray solution. Boron containing fertilizers can be incompatible with PVA material. Include PVA material if a boron fertilizer is intended to be used. Cap the jar and invert 10 cycles.
3. Water-dispersible products: (such as Rook 4L) (dry flowables, wettable powders, suspension concentrates, or suspoemulsions). Cap the jar and invert 10 cycles.
4. Water-soluble products: (such as Basagran T/O) - Cap the jar and invert 10 cycles.
5. Emulsifiable concentrates: (methylated seed oil) - Cap the jar and invert 10 cycles.
6. Water-soluble additives: Cap the jar and invert 10 cycles.
7. Let the solution stand for 15 minutes.
8. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface nor thick (clabbered) texture. For WG or WP products, a fine precipitate that is easily re-suspended is normal; large non-dispersible particles (> 300 microns) that precipitate on standing are a sign of tank mix incompatibility. Do not use any spray solution that could clog spray nozzles.

LIMITATIONS

- Apply when wind speed is less than 10 mph as drift may cause damage or death of non- target area vegetation.
- Use a lawn type sprayer with coarse spray as wind drift is less likely.
- For best results, ensure that weeds are not under stress from lack of water, excessive water, low fertility, mowing shock, excessive hot or cold temperatures, or injury from other herbicide applications.

RESTRICTIONS

- DO NOT apply more than 3 pints (1.425 lbs. a.i.) of Rook 4L per acre (or 1.1 fluid ounces per 1,000 square feet) in one year.
- DO NOT apply to golf course collars or greens.
- DO NOT apply to fine fescue unless it is part of a seed blend.
- DO NOT apply to bahia grass, carpet grass, St. Augustine grass, centipede grass, dichondra, or lawns or turf where desirable clovers are present.
- DO NOT apply within 4 weeks after seedling emergence of Kentucky blue grass, creeping bent grass, fine fescue blends and perennial rye grass.
- DO NOT apply to exposed feeder roots of trees or ornamentals. Be particularly careful within the drip line of trees and other ornamental species.
- DO NOT apply into any ornamental bed.
- DO NOT use clippings as mulch or compost around flowers, ornamentals, trees, or in vegetable gardens.
- DO NOT apply when conditions favor drift from target area.
- Avoid mist and spray onto vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants, especially plants belonging to the Solanaceae family such as tomatoes, eggplants, and bell peppers.
- DO NOT pour spray solutions near these plants.
- DO NOT apply through any type of irrigation system.
- DO NOT use to formulate or reformulate any other pesticide product which is not registered by EPA.

TURF GRASS TANK-MIXES

Read and follow the applicable Restrictions and Limitations and Directions For Use on all products involved in tank mixing. The most restrictive labeling applies to any tank mix. To increase spectrum of control of broadleaf weed species a tank mix with 2,4-D, triclopyr, MCPA, MCPP, Three Way, Trimec, or other broadleaf herbicide can be used. For extended residual control apply Rook 4L with Pendulum or PRE-M herbicides. For sedge control applications of Rook 4L with Basagran SG, Basagran T/O, Lescogran, Image 70 DG or MSMA can be made.

Combinations with MSMA will aid in control of certain grassy weeds such as bahia grass or kikulyu grass. Consult tolerant turf grass species on all labels. Make separate applications if all target weeds are not at the correct growth state for treatment at the same time.

Physical incompatibility, reduced weed control, or turf injury may result from mixing Rook 4L with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

Before tank-mixing, complete a simple jar test to insure compatibility of herbicides or other pesticide and/or additives. Refer to manufacturer's labels for specific use directions, precautions, and limitations before tank mixing with Rook 4L and follow those that are most restrictive.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Table 1. Turf Tolerance (Established)

| Highly Tolerant | Moderately Tolerant | Susceptible |
|--|--|---|
| Bermuda , Common ¹ Blue grass, Kentucky Blue grass, Annual Buffalo grass Fescue, Tall Rye grass, Annual Rye grass, Perennial Zoysia grass | Bent grass, Creeping ¹ Bermuda grass, Hybrid ¹ Fescue, Fine ² Fescue, Red Fescue, Hard Fescue, Chewing's Blue grass, Rough (<i>Poa trivialis</i>) | Bahia grass Centipede grass Dichondra St. Augustine grass Bent grass, Seaside Bent grass, Colonial |
| ¹ Yellowing that occurs on these species can be reduced by the addition of chelated iron or sprayable soluble nitrogen fertilizer (See Application Information, Additives). ² Apply Rook 4L to fine fescue only when it is part of a blend. Consult Table 4. Seeding/Sprigging Chart for this situation. Restriction: Do not use on golf course greens and collars. | | |

Table 2. ROOK 4L Application to Established Creeping Bent grass

| Turfgrass Species | Application Rate/Timing | Additive Rate |
|--|---|---|
| Bent grass, Creeping ¹ | Rook 4L must be applied in 2 - 3 split applications at 0.25 to 0.35 fluid ounces per 1,000 sq. ft. (not to exceed 3 pints of product per acre per season). Time sequential application(s) at 21 days apart. | Use methylated seed oil at 0.55 ounces per 1,000 sq. ft. (1.5 pints per acre) |
| <p>¹Yellowing that occurs on these species can be reduced by the addition of chelated iron or sprayable soluble nitrogen fertilizer (See Application Information, Additives) Consult Table 4. Seeding/Sprigging Chart for this situation.</p> <p>Restriction: Do not use on golf course greens and collars.</p> | | |

Table 3. Application Rates and Timing for Postemergence Weed Control in Turf

| Weed Species | | Rook 4L TURF Rate | Additive Rate |
|--------------------------------------|--|--|--|
| Grasses Controlled | | Broadcast Applications: 1.5 pints of product per acre or 0.55 fluid ounces per 1,000 square feet. | Apply: 1.5 pints per acre (0.55oz per 1,000 square feet) methylated seed oil. |
| Common Name | Scientific Name | | |
| Barnyard grass | <i>Echinochloa crusgalli</i> | | |
| Crab grass, Large ^{1,4} | <i>Digitaria sanguinalis</i> | | |
| Crab grass, Smooth ^{1,4} | <i>Digitaria ischaemum</i> | | |
| Foxtails, Giant ¹ | <i>Setari faberi</i> | | |
| Foxtail, Green ¹ | <i>Setari viridis</i> | | |
| Foxtail, Yellow ¹ | <i>Setari glauca</i> | | |
| Kikuyu grass ^{2,3} | <i>Pennisetum</i> | | |
| Signal grass, Broadleaf ¹ | <i>clandewtinum</i> | | |
| Torpedo grass ³ | <i>Brachiaria platyphylla</i> <i>Panicum repens</i> | | |
| Broadleaf Weeds Controlled | | Spot Applications: Apply 0.55 fluid ounces of ROOK 4L per 1,000 square feet of treated area. Refer to footnotes in Tables 2 and 3 for specific turf grass or weed instructions. | |
| Common Name | Scientific Name | | |
| Bindweed, Field | <i>Convolvulus arvensis</i> | | |
| Medic, Black | <i>Medicago lupulina</i> | | |
| Clover, Hop | <i>Trifolium aureum</i> | | |
| Clover, Red | <i>Pollich</i> | | |
| Clover, White | <i>Trifolium pratense</i> | | |
| Dandelion, Common ² | <i>Trifolium repens</i> | | |
| Daisy, English ^{2,5} | <i>Taraxacom officinale</i> | | |
| Dollarweed | <i>Bet/is perenne</i> | | |
| Geranium, Carolina | <i>Hydrocotyle umbellata</i> | | |
| Morningglory spp. | <i>Geranium carolinum</i> | | |
| Speedwell, Common | <i>Ipomea spp</i> | | |
| Speedwell, Slender | <i>Veronica officinalis</i> | | |
| Speedwell, Thymeleaf | <i>Veronica filiformis</i> | | |
| Violet, Wild | <i>Veronica serpyllifolia</i> <i>Viola spp.</i> | | |

¹ Under certain conditions applications of Rook 4L made to annual grasses at 2 - 4 tiller may not provide complete control. A sequential application will be required for grass control in these situations. Optimum control is achieved when applications of Rook 4L + methylated seed oil is applied either before second tiller or as weed

grasses mature.

² Tank mix partner or sequential application required

³ Make 3 sequential applications of 0.35 fluid ounces of Rook 4L per 1,000 square feet at 14 – 21 day intervals.

⁴ Biotypes of large and smooth crab grass in California have shown varied response to Rook 4L. If control failure occurs following the application of a full or split application rates do not reapply ROOK 4L herbicide, and change to an herbicide with a different mode of action.

⁵ NOT FOR USE to control this weed in California.

Table 4. Seeding/Overseeding/Sprigging Timing Chart¹

| Variety | Before seeding ² | At Seeding | 7 days after emergence | 14 days after emergence | 28 days after emergence |
|-----------------------------|-----------------------------|------------|------------------------|-------------------------|-------------------------|
| Annual Blue grass | OK | OK | OK | OK | OK |
| Annual Rye grass | OK | OK | OK | OK | OK |
| Buffalo grass | OK | OK | OK | OK | OK |
| Common Bermuda ³ | OK | OK | OK | OK | OK |
| Creeping Bent grass | OK | NO | NO | NO | OK |
| Fine Fescue On blend) | OK | NO | NO | NO | OK |
| Hybrid Bermuda ³ | OK | OK | OK | OK | OK |
| Kentucky Blue grass | OK | NO | NO | NO | OK |
| Perennial Rye grass | OK | OK | NO | NO | OK |
| Tall Fescue | OK | OK | OK | OK | OK |
| Zoysia grass ³ | OK | OK | OK | OK | OK |

¹ Note: No adjuvant or additive should be used when Rook 4L applications are made on newly emerged turf seedlings until 28 days after emergence.

² Rook 4L can be applied 7 days or greater prior to seeding.

³ Rook 4L can be used any time prior to, at or after sprigging. Time the application of Rook around the seeding operations using the above chart as a reference point.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in cool, dry, and well ventilated area. Do not store containers under wet conditions.

PESTICIDE DISPOSAL: Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Triple rinse container (or equivalent) 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 1/4 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. Offer for recycling, if available.

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product reflect the opinion of experts based on field use and tests and must be followed carefully. 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 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 Aquatrols Corporation of America or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of Aquatrols Corporation of America and 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 Aquatrols Corporation of America and Seller harmless for any claims relating to such factors.

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