

62719-275

9/10/2002

Page 18 20



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

SEP 10 2002

Mr. Rafael Herrera
Dow Agrosciences
9330 Zionsville Road
Indianapolis, IN 46268

Subject: FirstRate Herbicide
EPA Registration No. 62719-275
Amended labeling submitted on July 1, 2002

Dear Mr. Herrera:

The amended labeling referred to above is acceptable.

This labeling supercedes all previously accepted labeling for this product (except supplemental labeling). A stamped copy of the label is enclosed for your records.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Tompkins".

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

2820

(Base Label):

00XXXXXX

(Logo) Dow AgroSciences

FirstRate*

For broadleaf weed control in soybeans.

**ACCEPTED
with COMMENTS
in EPA Letter Dated**

Active Ingredients:

cloransulam-methyl: N-(2-carbomethoxy-6-chlorophenyl)-5-ethoxy-7-fluoro(1,2,4)triazolo-[1,5-c]pyrimidine-2-sulfonamide	84%
Inert Ingredients	16%
Total Ingredients	100%

SEP 10 2002
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 62719-275

Contains 0.84 pounds of active ingredient per pound of product.

US Patent Number: 5,163,995

Keep Out of Reach of Children

CAUTION PRECAUCION

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

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes Eye Irritation • Harmful If Absorbed Through Skin

Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils or nitrile rubber ≥ 14 mils
- 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.

User Safety Recommendations

Users should:

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

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical and its transformation products demonstrate the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical can contaminate surface water through spray drift.

Under some conditions, this chemical, and/or its transformation products, may have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks post-application. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

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

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

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

EPA Reg. No. 62719-275

XX XX
EPA Est. _____

Superscripts correspond to places 7 & 8 of lot number

*Trademark of Dow AgroSciences LLC

Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

900-000000 / 00000000

Herbicide

Net Weight ___ Water Soluble Packets

[Insert Bar Code FPO]

[Insert DOT shipping classification and diamond(s)]

4820

Lot

5820

(Label Booklet Cover):

(Logo) **Dow AgroSciences**

FirstRate*

For broadleaf weed control in soybeans.

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Refer to inside of label booklet for additional precautionary information including Personal Protective Equipment (PPE) and Directions for Use including Storage and Disposal.

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

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Superscripts correspond to places 7 & 8 of lot number

*Trademark of Dow AgroSciences LLC

Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

900-000000 / 00000000

Herbicide

Net Weight __ Water Soluble Packets

6 7 20

(Page 1 through end):

Precautionary Statements

Hazards to Humans and Domestic Animals**CAUTION****Causes Eye Irritation • Harmful If Absorbed Through Skin****Avoid contact with skin, eyes or clothing.****Personal Protective Equipment (PPE)****Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber \geq 14 mils, or natural rubber \geq 14 mils, or neoprene rubber \geq 14 mils or nitrile rubber \geq 14 mils
- 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.

User Safety Recommendations**Users should:**

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

First Aid

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Environmental Hazards

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical and its transformation products demonstrate the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical can contaminate surface water through spray drift.

Under some conditions, this chemical, and/or its transformation products, may have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks post-application. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

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Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exemptions 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. **Exception:** If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

Storage and Disposal

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

Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

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

Container Disposal: When all packets are used, dispose of empty package in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

General Information

FirstRate* herbicide controls many economically important broadleaf weeds in soybeans. FirstRate may be applied preplant incorporated, preplant surface, preemergence or postemergence.

Use Precautions and Restrictions

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Do not apply this product through any type of irrigation system.

Do not use flood irrigation to apply or incorporate this product.

Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

Handling Precautions for Water Soluble Packets: Do not remove water soluble packet from overpack except for immediate use. Do not allow water soluble packet to come into contact with water prior to use. Do not handle water soluble packet with wet hands or wet gloves. Carefully reseal overpack containing unopened water soluble packets and protect package from moisture.

Use Limitations

- Do not make more than one soil application during a single growing season.
- Do not exceed 0.039 lb active ingredient cloransulam-methyl (0.75 oz FirstRate) per acre as a soil application (preplant or preemergence).
- Do not apply more than 0.03 lb a.i. cloransulam-methyl (0.6 oz per acre of FirstRate) per acre as a postemergence application during a single growing season (either as a single application or as a total of sequential postemergence applications).
- The maximum cumulative application rate from preplant, preemergence, and/or postemergence use of cloransulam-methyl may not exceed 0.055 lb active ingredient (1.05 oz FirstRate) per acre per single growing season.

Read and carefully follow all applicable directions, precautions and restrictions on labeling for other products used in combination with FirstRate.

Preharvest Interval:

- Do not harvest soybeans for forage or hay for 14 days after application of FirstRate.
- Do not harvest soybeans for 65 days after application of FirstRate.

Aerial application: Refer to Dow AgroSciences supplemental labeling for instructions for aerial application. Supplemental labeling may be obtained at the Dow AgroSciences web site at www.dowagro.com. Supplemental labeling allowing aerial application of this product must be in the possession of the user at the time of aerial application. **Aerial application of this product is prohibited in New York State.**

Avoid all direct or indirect contact with non-target plants. Do not apply near desirable vegetation and allow adequate distance between target area and desirable plants to minimize exposure.

Do not apply under conditions that favor runoff or wind erosion of soil containing FirstRate to non-target areas. To prevent off-site movement due to runoff or wind erosion:

- Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
- Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered ground.
- Do not apply to soils when saturated with water.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Do not apply when weather conditions favor drift to non target sites. To minimize spray drift to non target areas:

- Use low pressure application equipment capable of producing a large droplet spray.
- Do not use nozzles that produce a fine-droplet spray.
- Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
- Keep ground-driven spray boom as low as possible above the target surface.
- Spray when conditions are calm or wind speed is low. Do not spray when wind is gusting or steady wind speed is greater than 10 mph.

Iron Chlorosis: There are isolated geographic areas where soil-induced iron chlorosis routinely occurs. In these areas, the severity of iron chlorosis symptoms or other nutrient induced crop injury may increase when FirstRate is applied.

Crop Rotation Intervals

When tank mixing with other herbicides, follow crop rotation guidelines on the label of each product used. The following rotational crops may be planted at the indicated interval following application of FirstRate. Unusual climatic or environmental conditions that may increase the likelihood of rotational crop (i.e., corn, sugar beets, sunflowers) sensitivity include lower than normal rainfall and/or soil temperatures in the fall and spring; and/or soil pH extremes.

Numbers in parentheses (-) refer to "Specific Crop Rotation Information".

Crop	Rotation-Interval(1) (Months)
soybeans	0
wheat	3
alfalfa, field corn, popcorn, seed corn (2), cotton, peanuts, rice, sorghum, dry beans, lima beans, oats, peas, snap beans	9
potatoes, sweet corn	18
tobacco (3)	30 (3)
sugar beets, sunflowers, and other crops not listed (4)	30 (4)

Specific Crop Rotation Information:

1. Minimum number of months that must pass before planting other crops after application of FirstRate at up to 0.75 oz/acre soil-applied and/or 0.3 oz/acre postemergence.
2. **Hybrid Seed Production:** Corn inbred lines grown for hybrid seed production may be injured the growing season following an application of FirstRate. Inbred lines should be thoroughly tested for crop tolerance before rotating to large acreage. While growers are not prohibited from rotating to seed corn in the growing season following an application of FirstRate, **Dow AgroSciences will not accept responsibility for any crop injury on field corn grown for seed following an application of FirstRate.**

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3. **Transplanted tobacco may be planted 10 months after application of 0.3 oz/acre of FirstRate.** Tobacco in seedbed nurseries may be planted 18 months after application of 0.3 oz/acre of FirstRate and following a successful field bioassay. A rotation interval of 30 months and a successful field bioassay is required for all applications of FirstRate greater than 0.3 oz/acre.
4. Rotation to sugar beets, sunflowers, and all other crops not listed require a 30-month rotation interval and a successful field bioassay.

Field Bioassay Instructions: Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with FirstRate. Plant the strips perpendicular to the direction FirstRate was applied. The strips should also be located so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury, stand reduction, or yield reduction, the field can be seeded with the test crop. If visible injury or stand reduction occurs, the test crop should not be seeded, and the bioassay must be repeated the next growing season.

Mixing Instructions

To calculate the total number of water soluble packets required for your spray mix:

1. Determine the number of acres to be treated.
2. Divide the number of acres to be treated by the acres/packet value that corresponds to the desired rate. See rate tables for broadcast application rates and corresponding acres per packet.

Note: If the calculated number of packets does not equal a whole number, round to the nearest whole number that does not exceed the maximum allowable use rates per application and per season. You may round up only if the maximum allowable use rates are not exceeded.

FirstRate Applied Alone

FirstRate herbicide water dispersible granules are packaged in water soluble packets. Thorough mixing prior to and during application is required.

Note: The film used in water soluble packets is not soluble in liquid fertilizer. If applied in liquid fertilizer, FirstRate **must be** pre-mixed with water to form a slurry and then added to the liquid fertilizer solution. Pre-mixing may also be used if making an application in water. See pre-mixing instructions below.

Mixing Instructions:

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load
2. Start agitation.
3. Add water soluble packets by opening the overpack and adding water soluble packet (product in transparent film) directly to the spray tank while agitating and allow time to disperse. Do not open water soluble packets. Water soluble packets will float on the surface until the water soluble film is dissolved and product is released. Handling packets with hands should be minimized. Do not handle if hands or gloves are wet. If liquid fertilizer is being used as the spray carrier rather than water, pre-mix the water-soluble packets as described below before adding to the spray tank.
4. After water soluble packets of FirstRate have completely dissolved (approximately 5 minutes), add non-ionic surfactants or other adjuvant materials.
5. Before spraying, make sure that water soluble packets have completely disintegrated and product is thoroughly mixed with the spray carrier. Depending on the water temperature and the degree of agitation, the packet and its contents should be completely dispersed within 5 minutes after being added to the spray tank.
6. Continue agitation while filling the spray tank to the required volume.
7. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying. Apply within 24 hours of mixing. Weed control with FirstRate, which has been mixed and allowed to stand for more than 24 hours may be reduced.

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Pre-mixing (Slurry) of Water Soluble Packets: The film used in water soluble packaging for FirstRate is not soluble in liquid fertilizer solutions. **In order to add FirstRate to liquid fertilizer carrier, the product must be premixed with water to form a slurry.** Pre-mixing can also be used as an alternative mixing method for application in water. Use a minimum of 1 quart of water for up to five water soluble packets of FirstRate. The packets can be stirred immediately on addition to water or allowed to dissolve. Stir (or shake if pre-mixed in a closed container) until the packets are completely dissolved and granules are dispersed and then add to the spray tank through a 20-35 mesh screen. Rinse container used for pre-mixing and add rinsate to spray tank.

Pre-mixing (other products): If pre-mixing is required for other dry or flowable products applied in tank mix combination with FirstRate, follow recommendations for pre-mixing of such products provided in their respective product labels.

FirstRate Applied in Tank Mix Combination

If a broader spectrum of weed control is needed, FirstRate may be tank-mixed with labeled rates of other herbicides provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned. (See Equipment Clean-Out Procedures.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of FirstRate and other pesticides. 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 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Mixing Order for Tank Mixes:

1. Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water or liquid fertilizer.
2. Start agitation.
3. Add water soluble packets by opening the overpack and adding water soluble packet (product in transparent film) directly to the spray tank while agitating and allow time to disperse. Do not open water soluble packets. Water soluble packets will float on the surface until the water soluble film is dissolved and product is released. Handling packets with hands should be minimized. Do not handle if hands or gloves are wet. If liquid fertilizer is being used as the spray carrier rather than water, pre-mix the water-soluble packets as described above before adding to the spray tank.
4. After adding FirstRate, add different formulation types in the following order: (1) other formulation(s) packaged in water soluble packets; (2) any compatibility agent, if required; (3) dry flowables; (4) wettable powders; (5) aqueous suspensions, flowables and liquids. Maintain agitation and fill spray tank to 3/4 of total spray volume and add: (6) emulsifiable concentrates; (7) solutions; and (8) adjuvants. Allow time for complete mixing and dispersion after each addition.
5. Finish filling the spray tank. Maintain continuous agitation during mixing and throughout application.

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If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

Clean-out Procedures for Spray Equipment

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank 1/2 full of water.
3. Add household ammonia at a rate of 1 gallon per 100 gallons of water. Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom. Drain tank.
4. Remove all spray nozzles and screens and clean separately.
5. If spray equipment will be used for pesticide application to crops sensitive to FirstRate, steps 1-3 should be repeated. Exterior surfaces of spray equipment should also be thoroughly cleaned.

Note: Rinsate may be disposed of on site according to label use directions or at an approved waste disposal facility.

Application in Liquid Fertilizer

Always premix or slurry FirstRate with water prior to adding to liquid fertilizer in spray tanks. Do not attempt to dissolve water soluble packets in liquid fertilizer. The film used in water soluble packaging is not soluble in liquid fertilizer solutions. To slurry or pre-mix FirstRate, use a minimum of 1/2 pint of water for each packet of product. Make sure FirstRate is completely and uniformly dispersed in water and then add to the spray tank or induction system through a 20-35 mesh screen. Add any rinsate to the spray mixture.

When necessary, a compatibility agent should be used to ensure that FirstRate mixes properly. The use of an appropriate compatibility agent is especially important when tank mixing FirstRate and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizer. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are difficult to disperse. A jar test, utilizing relative proportions of the tank mix ingredients is recommended prior to mixing with a large quantity of liquid fertilizer.

Note: Refer to Clean-out Procedures for Spray Equipment for directions on cleaning equipment prior to use in crops other than soybeans.

Application with Dry Bulk Fertilizer

Dry bulk fertilizer may be impregnated or coated with FirstRate. Application of dry bulk fertilizer impregnated with FirstRate provides weed control equal to the same rates of FirstRate applied in liquid carriers. Follow label recommendations for FirstRate regarding rates per acre, crops, special instructions, cautions and special precautions. Apply 200 to 700 pounds of the fertilizer/herbicide mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control.

Most dry fertilizers can be used for impregnation with FirstRate. When coated ammonium nitrate and/or limestone are used alone, do not impregnate with FirstRate. These materials will not absorb the herbicide. Blends containing a mixture of ammonium nitrate and/or limestone as part of the fertilizer mixture can be impregnated.

Compliance with all Federal and State regulations relating to blending pesticide mixtures with dry bulk fertilizer, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

Impregnation: FirstRate must be premixed with water to form a slurry prior to impregnation of dry bulk fertilizer. For best results, use a minimum of 1/2 pint of water for each packet of product. Make sure FirstRate is completely and uniformly dispersed in water. Then add sufficient water to adjust the total volume of the mixture to deliver a spray volume of at least 6 pints per ton of fertilizer. Nozzles used to spray FirstRate onto the fertilizer should be placed to provide uniform spray coverage. Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender.

Calculate amounts of FirstRate by the following formula:

$$\frac{2,000}{\text{lb/acre of fertilizer}} \times \text{lb/acre of FirstRate} = \text{Pounds of product per ton of fertilizer}$$

Note: Thoroughly clean dry fertilizer blending and application equipment prior to use with other herbicides. It is important to clean the blender, herbicide spray tank, and spraying apparatus thoroughly. Rinse the sides of the blender and the herbicide tank with water. Clean spraying apparatus prior to preparing fertilizer/herbicide mixtures for crops other than soybeans (see Clean-out Procedures for Spray Equipment). Then, impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gallon of rinsate per ton of fertilizer. Follow with 1 to 2 loads of unimpregnated fertilizer in the blender before switching herbicides. The fertilizer application equipment must be empty, clean, and dry before applying any material to crops other than soybeans.

Soybean Application Instructions

General: Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform coverage. A spray volume of 10 or more gallons per acre is recommended for either soil or postemergence applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. *Screens in spray lines and nozzles should be no finer than 50 mesh (100 mesh is finer than 50 mesh).*

Broadleaf Weeds Controlled by Soil Applications

The following weeds are controlled by FirstRate when applied to the soil surface at recommended rates either as a preplant incorporated, preplant surface, or preemergence application (FirstRate does not control known ALS resistant biotypes of these weeds):

- | | |
|-------------------------------|-------------------------|
| cocklebur, common | ragweed, common |
| horseweed, (marestail) | ragweed, giant |
| jimsonweed | smartweed, Pennsylvania |
| lambquarters, common | sunflower, common |
| mallow, venice | velvetleaf |
| morningglory (annual species) | waterhemp species (1) |
| pigweed (annual species) | |

1. FirstRate provides partial control of waterhemp. To improve control of waterhemp, apply FirstRate in tank mix combination with the appropriate labeled rate of a surface-applied acetanilide product such as Dual II Magnum® herbicide or soil applied dinitroaniline product such as Treflan* herbicide or Pendimax 3.3 (pendimethalin).

**Application Rates and Methods for Soil Applications
(Preplant Incorporated, Preplant Surface Applied and Preemergence Applications)**

Note: Numbers in parentheses (-) refer to footnotes following table. See instructions for "special Situations" below.

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Area of Use	Soil Organic matter	FirstRate (oz/acre)	Acres per 0.6 oz Packet (1)
DE, CT, IA, KS, MD, ME, MI, MN, MO (excluding the bootheel), ND, NE, NH, OH, OK, SD, VT, WI, PA, NY, and areas north of Interstate 64 in the states of IL, IN KY, WV, VA.	3.0% or less	0.6	1.0
	Greater than 3.0% (2)	0.75	0.8
All areas to the south of the above mentioned geographic area.	All organic matter levels	0.75	0.8

1. See instructions for calculating the total number of water soluble packets required in the "Mixing Instructions" section.
2. Soil applications of FirstRate at 0.75 oz/acre on soils with greater than 5% organic matter may result in reduced weed control. Under these conditions, postemergence applications of FirstRate or other herbicides may be required to control specific weeds.

Special Situations:

Note: Numbers in parentheses (-) refer to footnotes following table.

Situations	Soil Organic matter	FirstRate (oz/acre)	Acres per 0.6 oz Packet (1)
<ul style="list-style-type: none"> • Moderate to Heavy Giant Ragweed or Morningglory Infestations • Applications made 15 to 30 days prior to planting 	3.0% or less	0.6 - 0.75	1 - 0.8
	Greater than 3.0% (2)	0.75	0.8

1. See instructions for calculating the total number of water soluble packets required in the "Mixing Instructions" section.
2. Soil applications of FirstRate at 0.75 oz/acre on soils with greater than 5% organic matter may result in reduced weed control. Under these conditions, postemergence applications of FirstRate or other herbicides may be required to control specific weeds.

Preplant Incorporated Application

Apply FirstRate alone or in tank mix combination with other herbicides registered for preplant incorporated application to soybeans. For best results, the seedbed should be relatively free of clods. Incorporate the herbicide(s) into the top 1 to 3 inches of the final seedbed using equipment that provides thorough soil mixing. Do not apply FirstRate earlier than 4 weeks before planting. For best results, apply FirstRate within 2 weeks of planting. When FirstRate is applied in tank mix combination with other herbicide(s), follow the incorporation directions for the tank mix partner(s). Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

Preplant Surface Application

Apply FirstRate alone or in tank mix combination with other herbicides registered for preplant soil surface application to soybeans. For best results, the seedbed should be relatively free of clods. For best results, apply FirstRate within 2 weeks of planting. Soil surface applications are not effective until rainfall of at least 0.5 inch has moved FirstRate into surface soil where weed germination occurs. If rainfall is not anticipated, shallow incorporation (i.e., 2 inches deep) prior to planting is recommended to place FirstRate in contact with germinating weeds. FirstRate may provide suppression of annual grasses at rates greater than 0.3 oz/acre if there is sufficient rainfall to move the herbicide into the soil prior to weed

15820

germination. Timely subsequent rainfall is required for optimal herbicidal activity. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

Note: Reduced weed control in the planted row may occur if untreated soil is exposed during planting operations.

Burndown Application

When used as a burndown treatment, FirstRate alone will provide foliar activity on those broadleaf weeds listed in the "Postemergence Application" section of this label. In addition, FirstRate will provide residual control of broadleaf weeds listed under the "Soil Application" section. FirstRate may provide suppression of annual grasses at rates greater than 0.3 oz/acre if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Timely subsequent rainfall is required for optimal herbicidal activity.

FirstRate does not control or suppress emerged annual grasses. Foliar burndown applications should include crop oil concentrate (COC) plus a liquid nitrogen fertilizer (see "Adjuvant Systems for Postemergence Application" section). To broaden the spectrum of weeds controlled, FirstRate may be tank mixed with other herbicides such as glyphosate (Glyphomax*, Glyphomax Plus or Roundup UltraMAX herbicide), Touchdown, Gramoxone Extra, 2,4-D, etc. If tank mixing, a jar test for compatibility is always recommended.

Foundation Soil Herbicide in Glyphosate-Tolerant Soybeans: FirstRate can be used as a foundation soil herbicide in a planned sequential program with products such as Glyphomax, Glyphomax Plus, Roundup UltraMAX or Touchdown herbicide (including any glyphosate or sulfosate product labeled for use in glyphosate-tolerant soybeans). Used as a foundation soil herbicide, FirstRate will control or suppress key broadleaf weeds listed in the soil applied section of this label, allowing more optimal timing of a glyphosate (Glyphomax, Glyphomax Plus, Roundup UltraMAX or Touchdown postemergence treatment. In addition, residual control from FirstRate may prevent a need for subsequent postemergence applications.

Preemergence Application

Apply after planting but prior to crop or weed emergence. For optimum results, FirstRate should be applied within 2 days after planting. FirstRate may be applied alone or in tank mix combination with other herbicides registered for preemergence application to soybeans. When applied in tank mix combination, follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

Soybeans (Postemergence Application)

Postemergence Application Timing

FirstRate may be applied any time prior to the 50% flowering stage of soybeans. Application prior to full emergence of the first soybean trifoliolate leaf may cause temporary yellowing or chlorosis of soybeans. Tank-mix partners may cause other effects regardless of the application timing. Application timing restrictions of tank-mix partners should be followed. For FirstRate, optimum application timing for control of labeled weeds is provided in the table below.

Postemergence applications of FirstRate may provide residual soil activity on broadleaf weeds, excluding sicklepod (see soil and postemergence weed lists). Length and effectiveness of residual activity from postemergence applications will vary and is dependent on application rate, rainfall following application (0.5 inches or more of rainfall within a week of application), density of the weed and crop canopy at application, and the reserve of ungerminated weed seeds in surface soil.

Environmental Conditions and Herbicidal Activity of FirstRate: Factors in effective weed control with FirstRate include application rate, weed size, daytime temperature, soil moisture prior to and following application, and use of adjuvants. Best weed control results are obtained when FirstRate is applied to small, actively growing weeds, when daytime temperatures are warm (70°F or more), and soil moisture is adequate to support active weed growth prior to and following application. If weeds are under drought stress, especially common ragweed, giant ragweed, and marehail, consider delaying application until more favorable conditions resume. Application when weeds are moisture stressed or taller than the recommended height for control may result in only partial control.

- FirstRate is rainfast in 2 hours.
- Applications made immediately prior to, during, or immediately following periods of large day/night temperature fluctuations or where daytime temperatures do not exceed 60°F may decrease weed control.
- Poor weed control may result from applications made to plants under stress from:
 - ▶ abnormally hot or cold weather
 - ▶ environmental conditions such as drought, water-saturated soils, hail damage, or frost
 - ▶ prior herbicide applications

Application Rate and Timing for Postemergence Applications

Apply as a broadcast spray at a rate of 0.3 oz/acre prior to the maximum leaf stage and weed height for listed weeds using one of the recommended adjuvant systems. FirstRate may be applied alone or in tank mix combination with other herbicides registered for postemergence application to soybeans.

Use Rates for Postemergence Applications:

Note: Numbers in parentheses (-) refer to footnotes following table.

FirstRate (oz/acre)	Acres per 0.6 oz. Packet (1)
0.3	2.0

1. See instructions for calculating the total number of water soluble packets required in the "Mixing Instructions" section.

Broadleaf Weeds Controlled and Optimum Stage of Growth:

The following weeds are controlled by FirstRate when applied postemergence at the indicated weed stage of growth. FirstRate does not control known ALS resistant biotypes of these weeds. To improve coverage and product performance in heavy weed infestations, use a minimum of 15 gallons per acre spray volume.

Note: Numbers in parentheses (-) refer to "Weed-Specific Use Information" following table.

Weeds Controlled	Leaf Number at Application (Optimum to Maximum)	Maximum Height (inches)
cocklebur, common	4 to 8	10
dayflower, Asiatic	2 to 6	NA
dayflower, marsh	2 to 6	NA
dayflower, spreading	2 to 6	NA
jimsonweed	2 to 4	4
mallow, venice	2 to 4	<3
horseweed (marestail)	---	6
marshelder	4 to 6	10
morningglory (annual species) (1)	2 to 4	4
mustard, wild (2)	2 to 4	2
ragweed, common	4 to 6	8
ragweed, giant	4 to 6	10
sicklepod (3)	cotyledon to 1	<2
smartweed, Pennsylvania	2 to 4	6
sunflower, common	4 to 8	12
velvetleaf (4)	2 to 4	6
Weeds Suppressed		
burcucumber	2 to 4	6
Canada thistle	---	10
Hophornbeam copperleaf	1 to 2	4
nutsedge, yellow	---	8

Weed-Specific Use Information

- Morningglory:** Spray before morningglory plants begin to send out runners.
- Wild mustard:** For optimum control, apply before wild mustard plants exceed four inches in diameter.
- Sicklepod:** Applications made to sicklepod plants later than the 1-leaf stage of growth will likely result in reduced control. Repeat application of FirstRate may be necessary 7 – 10 days after the first (do not apply more than a total of 0.6 oz/acre per season as a postemergence application). Application of other postemergence herbicides may be necessary to control later germinating sicklepod plants.
- Velvetleaf:** When velvetleaf is a primary target weed, always include urea ammonium nitrate (UAN) or ammonium sulfate with nonionic surfactant, crop oil concentrate or methylated seed oil as the adjuvant system.

Adjuvant Systems for Postemergence Application

Use in combination with one of the following adjuvant systems approved for application to growing crops:

- Nonionic surfactant at 1 to 2 pt/100 gallons of spray mixture (0.125 - 0.25% v/v) plus urea ammonium nitrate at 2.5 gal/100 gallons (2.5% v/v)[†]. Nonionic surfactant may be used alone at 2 pt/100 gallons of spray mixture 0.25% v/v when required in certain tank mixes.
- Crop oil concentrate or methylated seed oil at 1.2 gallons/100 gallons of spray mixture (1.2% v/v)
- Crop oil concentrate or methylated seed oil at 1.2 gallons/100 gallons of spray mixture (1.2% v/v) plus urea ammonium nitrate solution at 2.5 gal/100 gallons (2.5% v/v)

18 8 20

Note: Use of crop oil concentrate or methylated seed oil plus urea ammonium nitrate is preferred when weeds are under drought stress, but may increase crop injury.

† Dry ammonium sulfate may be used at a rate of 2 lbs per acre (8.5 to 17 lb/100 gallons of spray mixture) as a substitute for urea ammonium nitrate.

Refer to "Soil and Post Application Instructions" section for mixing instructions and mixing order for tank mix products and adjuvants.

Tank-Mix Options

For weeds not listed for postemergence control with FirstRate, the herbicides listed below may be used per label instructions. When applied in tank mix combination with other herbicides, **follow all use instructions for all products, including application rates, precautions and restrictions for each product used in the tank mixture, including use of adjuvants.**

Note: Numbers in parentheses (-) refer to footnotes following table.

Broadleaf Herbicides	Grass Herbicides
Basagran	Assure II (2)
Blazer	Fusion (2)
Classic	Glyphomax (1), Glyphomax Plus (1)
Cobra	Poast Plus
Glyphomax (1), Glyphomax Plus (1)	Roundup Original (1), Roundup UltraMAX (1)
Flexstar	Select
Pinnacle	Touchdown (1)
Pursuit	
Raptor	
Reflex	
Reliance	
Resource	
Roundup Original (1), Roundup UltraMAX (1)	
Touchdown (1)	
Status	
Stellar	
Synchrony	

1. Tank mixtures of FirstRate plus glyphosate or sulfosate products such as Glyphomax, Glyphomax Plus, Roundup Original, Roundup UltraMAX, or Touchdown may only be used postemergence over glyphosate-tolerant soybeans (refer to paragraph below for specific use instructions for tank mixing FirstRate with these products).
2. Under certain conditions, tank-mixing FirstRate with these postemergence grass herbicides may reduce their activity on some grass species. However, broadleaf weed control with FirstRate will not be affected. This grass antagonism may be overcome by using full labeled rates of these grass herbicides in tank mixtures with FirstRate. Making separate applications of FirstRate and Assure II or Fusion is the most effective method for reducing the potential for antagonism.

Do not tank mix Assure II with FirstRate when the target weed is woolly cupgrass or fall panicum, as reduced control may occur.

Other Postemergence Herbicide Applications: Apply other postemergence herbicides at least 7 days before or 7 days after an application of FirstRate.

Precautions for postemergence Applications of FirstRate with Foliar Insecticides: FirstRate may be tank mixed with the foliar applied Lorsban-4E insecticide or synthetic pyrethroid products. The addition of other herbicides with FirstRate in combination with an insecticide may increase the risk for crop injury in the form of stunting or leaf burn.

19 8 20

FirstRate + Glyphomax, Glyphomax Plus, Roundup UltraMAX or Roundup Original Tank Mix in Glyphosate-Tolerant Soybeans

FirstRate at 0.3 oz per acre may be tank mixed with Glyphomax, Glyphomax Plus, Roundup UltraMAX or Roundup Original, (or any glyphosate formulation labeled for use in glyphosate-tolerant soybeans) to provide flexibility in use rates and to enhance control of key broadleaf weeds such as giant ragweed, marehail, morningglory, velvetleaf, and others listed under the "Postemergence Application" section of this label. Residual control from FirstRate may also reduce the potential need for subsequent postemergence applications.

As a general rule, when tank mixing FirstRate with Glyphomax, Glyphomax Plus, Roundup Original or Roundup UltraMAX, it is recommended to add ammonium sulfate (AMS) at 8.5 to 17 lb per 100 gallons of spray mixture. The recommended order of mixing is: (1) water; (2) FirstRate; (3) AMS; and (4) glyphosate product. **Do not** add a non-ionic surfactant or crop oil concentrate to tank mixes with Glyphomax Plus or Roundup UltraMAX.

Note: If Glyphomax or Roundup Original is tank mixed with FirstRate, a non-ionic surfactant is also recommended at the rate of 2 quarts per 100 gallons of spray mixture. Add the non-ionic surfactant before completing the filling process.

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20320

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