



RANCOR™

4 F



RANCOR 4 F is a Flowable Herbicide for Control of Certain Grasses and Broadleaf Weeds on Alfalfa, Asparagus, Barley (Spring and Winter), Carrots, Field Corn, Garbanzo Beans (Chick Peas), Lentils, Peas, Potatoes, Sainfoin, Soybeans, Sugarcane, Tomatoes, Winter Wheat.

ACTIVE INGREDIENT:

Metribuzin: 4-Amino-6-(1,1-dimethylethyl)-3-(methylthio)-1, 2, 4-triazin-5(4H)-one. 41.0%

OTHER INGREDIENTS: 59.0%

TOTAL: 100.0%

Contains 4 lbs of metribuzin per gallon.

EPA Reg. No.: 91234-73

KEEP OUT OF REACH OF CHILDREN CAUTION

See below for additional Precautionary Statements.

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> ▪ Call a poison control center or doctor immediately for treatment advice. ▪ Have person sip a glass of water if able to swallow. ▪ 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 on skin or clothing:	<ul style="list-style-type: none"> ▪ Take off contaminated clothing. ▪ Rinse skin immediately with plenty of water for 15 to 20 minutes. ▪ Call a poison control center or doctor for 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 assistance, call SafetyCall: 1-844-685-9173. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: 1-800-424-9300.	

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident.
Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

- Long sleeved shirt and long pants,
- Waterproof gloves,
- Socks plus footwear.

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.

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

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming into contact with oxidizing agents, hazardous chemical reaction may occur.

USER SAFETY RECOMMENDATIONS

Users should:

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

Do not contaminate feed or food. Keep out of reach of children. Obtain prompt medical aid if poisoning should occur.

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.

GROUNDWATER ADVISORY: Metribuzin is a chemical which can travel (seep or leach) through soil and can contaminate groundwater which may be used as drinking water. Metribuzin had been found in groundwater as a result of agricultural use. Users are advised not to apply Metribuzin where the water table (groundwater) is close to the surface, and where the soils are very permeable, i.e. well drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

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

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

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,
- Waterproof gloves, and
- Shoes plus socks.

PRODUCT INFORMATION

Mixing: It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture.

When using this product, make sure the sprayer is completely clean, free of rust or corrosion which occurs from Winter storage. Examine strainers and screens to be sure the sprayer is clean from previously used pesticides.

Keep any tank mix containing this product agitated and sprayed out immediately. Do not allow tank mixes to stand for prolonged periods of time.

The proper mixing procedure for **RANCOR 4 F** alone or in tank mix combinations with other herbicides is:

1. Fill the spray tank 1/4 to 1/3 full with clean water.
2. Add specified rate of **RANCOR 4 F** while recirculating and agitator running.
3. Follow the triple rinse procedure described under **STORAGE AND DISPOSAL** to ensure that all product is removed from the container.
4. Mix thoroughly and add clean water to fill spray tank to desired level.
5. Add the other herbicide to tank last and agitate thoroughly.
6. Continue agitation during application and until sprayer tank is empty.

Soil Texture: As used on this label "Coarse soils" are loamy sand or sandy loam soils. "Medium soils" are loam, silt loam, silt, sandy clay, or sandy clay loam. "Fine soils" are silty clay, silty clay loam, clay, or clay loam. Silty clay soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

PRODUCT RESTRICTIONS

- Do not use on other crops grown for food or forage.
- Apply this product only as specified on this label
- Do not rotate any crop not listed on this label for 18 months following application.
- Do not allow sprays to drift on to adjacent desirable plants.
- Observe all cautions and limitations on labeling of all products used in mixtures.
- For all uses: Low pressure, high volume hand wand equipment is prohibited.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance-management, **RANCOR 4 F** is a Group 5 herbicide. Any weed population may contain or develop plants naturally resistant to **RANCOR 4 F** and other Group 5 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **RANCOR 4 F** or other Group 5 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures from a different group if such use is permitted; where information on resistance in target weeds 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 certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- 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, if available.
- Suspected herbicide-resistant weeds may be identified by these indicators:
 - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
 - A spreading patch of non-controlled plants of a particular weed species; and
 - Surviving plants mixed with controlled individuals of the same species
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

Report any incidence of non-performance of this product against a particular weed species to your Atticus, LLC representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

CHEMIGATION

This product may be applied through sprinkler irrigation equipment to potatoes, soybeans, tomatoes, and asparagus as directed on this label. Refer to the crop sections of this label for rates, weeds controlled or suppressed, restrictions, and special precautions.

Apply this product only through sprinkler (including center pivot, lateral move, or solid set) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

Calibration: (Center Pivot and Self-Propelled Lateral Move Systems): Sprinkler irrigation systems must be accurately calibrated for application of this product. Greater accuracy in calibration (and distribution) will be achieved by injecting a larger volume of a more dilute mixture of product and water per hour. Follow the steps below to calibrate center pivot and lateral move systems:

1. Determine number of minutes required to make one complete revolution while applying to 1/4 to 3/4 inch of water per acre.
2. With the system at operating pressure determine the exact number of minutes required to inject 1.0 gallon of water.
3. Divide the time required for 1 revolution (step 1) by the time required to inject 1.0 gallon (step 2). This gives total gallons of product-water mixture to be added to nurse tank.
4. Add required amount of water to nurse tank and start the agitation system. Then add this product at the appropriate rate (See **Broadcast Applications**) to the nurse tank.

Example: If 20 hours (1200 minutes) were required for 1 revolution and if 2 minutes were required to inject 1.0 gallon, then a total of 600 gallons of product-water mixture

are required (1200/2=600); to treat 135 acres at 1 pint/acre, 135 pints (16 gallons and 7 pints) of this product are required.

If you have questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. Maintain continuous agitation in the injection nurse tanks during the herbicide application, sufficient to keep herbicide in suspension.

Apply specified dosage in 1/4 to 3/4 inch of water (1/4 to 1/2 inch of water on sandy soils) per acre as continuous injection in center pivot and lateral move systems or in the last 15 to 30 minutes of set in permanent solid set sprinkler systems. Application of more than the quantity of irrigation water directed on this label may result in decreased product performance by removing the chemical from the zone of effectiveness. Where sprinkler distribution patterns do not overlap sufficiently unacceptable weed control may result. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. To insure that lines are flushed and free of remaining pesticide, an indicator dye may be injected into the lines to mark the end of the application period.

Use a minimum of 1 part water to 1 part herbicide for injection. The use of larger volume of water will ensure greater accuracy and more uniform distribution.

Aerial Drift Reduction Advisory Information

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

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

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
3. Where states have more stringent regulations, they must be observed.
4. The applicator should be familiar with and take into account the information covered in **Aerial Drift Reduction Advisory Information**.

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

Controlling Droplet Size:

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

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

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

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

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

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

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

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

Application of this Product with Herbicide Spray Equipment

Use a standard low-pressure (20 to 40 psi.) herbicide boom sprayer equipped with suitable nozzles and screens no finer than 50-mesh in-nozzle and in-line strainers. Agitate thoroughly before and during application with bypass agitation. Low pressure, high volume hand wand equipment is prohibited.

Ground Application: Apply the proper rate of this product in a minimum of 10.0 to 40.0 gallons of spray mixture per acre broadcast.

Banded Application: Use proportionally less of this product per acre in a band versus a broadcast application. For band application use 1/4 to 1.0 gallon of spray mix per inch of band width regardless of row spacing.

Examples: (1) To treat a 15-inch band on rows 30 inches apart, use 1/2 of the broadcast rate of **RANCOR 4 F**. (2) To treat a 14-inch band on rows 42 inches apart, use 1/3 of the broadcast rate of this product.

Aerial Application: Where permitted, apply specified rate in a minimum of 2.0 to 10.0 gallons of spray mixture per acre. Do not apply aerially when wind speed is greater than 10 mph.

For All Applications of RANCOR 4 F: Sprayer must be accurately calibrated before applying this product. Check sprayer during application to be sure it is working properly and delivering a uniform spray pattern. As the volume of spray mixture decreases per acre, the importance of accurate calibration and uniform application increases. Avoid over application, misapplication, and boom and spray swath overlapping that will increase spray dosage. (Crop injury may occur as result). Avoid spray skips and gaps which allow weeds to grow in untreated soil. Do not apply when weather conditions favor spray drift and/or when sensitive or cool season crops, such as cole crops, onions, peas, or strawberries are present in adjacent fields or in areas where wheat is growing in coarse textured soils.

Sprayer Cleanup: Spray equipment must be thoroughly cleaned to remove remaining traces of herbicide that might injure other crops to be sprayed. Drain any remaining spray solution of this product from the spray tank and dispose of according to label disposal instructions. Rinse the spray tank and refill with water, adding a heavy-duty detergent at the rate of 1 cup per 20.0 gallons of water. Recycle this mixture through the equipment for 5 minutes and spray out. Repeat this procedure twice. Fill the spray tank with clean water, recycle for 5 minutes, and spray out. Clean pump and nozzle screens thoroughly. Wash away any spray mixture from the outside of spray tank, nozzles or spray rig. All rinse water must be disposed of in compliance with local, state, and Federal guidelines.

Application of RANCOR 4 F in Fluid Fertilizers

This product may be applied in fluid fertilizer solutions to alfalfa and soybeans by following the appropriate mixing procedures and compatibility check. When using tank mix combinations, be sure all components are compatible.

Make compatibility checks of this product and tank mix combinations which include this product for each batch of fluid fertilizer because of the variability of these fertilizers.

Compatibility Check:

1. Pre-mix 2.0 teaspoonfuls of this product with 8.0 teaspoonfuls of water (1:4 ratio) in a quart jar by adding the water first and followed with this product. Mix thoroughly. If second herbicide is to be used, double the amount of water (1:8 ratio) and add the second herbicide after mixing this product first.
2. Then pour 1.0 pint of fluid fertilizer into the quart jar and shake well.
3. Allow to stand for 5 minutes.

ONLY USE THIS COMPATIBILITY CHECK WHEN MIXING WITH FLUID FERTILIZERS.

Interpretation of Results: If the solution in the jar appears to be uniform without signs of agglomeration, or without separation of an oily film on top of the fertilizer, the mixture may be used. If not, repeat the compatibility check using twice the amount of water or add a compatibility agent to the water. If separation occurs, but the mixture can be resuspended by shaking, then application is possible with good agitation in the spray tank.

Tank Mixing Guidelines:

1. Add the required amount of water and compatibility agent (if required) to the tank. Start agitation system while adding this product and follow by adding the fluid fertilizer and agitate.
2. If a second herbicide is to be used, follow as above in 1, but use twice the amount of water. Start agitation and add this product and follow by adding the second herbicide, and then continue filling the tank with fluid fertilizer.
3. Maintain continuous agitation to assure uniform spray mixture until the tank is emptied.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture.

Commercial Impregnation and Application of RANCOR 4 F on Dry Bulk Fertilizer

Dry bulk fertilizer may be impregnated or coated with this product for application to established alfalfa and to soybeans. All instructions, cautions, and special precautions and restrictions on this label must be followed along with state regulations relating to dry bulk fertilizer blending, impregnating and labeling.

Impregnation: To impregnate, use a system consisting of a belt, conveyor, or closed drum which is used for dry bulk fertilizer blending. Any commonly used fertilizer can be impregnated with this product except ammonium nitrate, or fertilizer containing ammonium nitrate, potassium nitrate, or sodium nitrate. Do not use on powder limestone.

Apply using a minimum of 200 lbs dry bulk fertilizer per acre and up to a maximum of 450 lbs per acre. To impregnate or coat dry bulk fertilizer, mix this product with sufficient water to form a sprayable slurry. The delivery nozzles must be directed to deliver a fine spray toward the fertilizer for through coverage while avoiding spray contact with mixing equipment. Uniform impregnation of this product to dry bulk fertilizer will vary and if the absorptivity is not adequate, an absorbent powder may be added to produce a dry, free-flowing mixture. Micro-Cel® is the recommended absorbent powder. When another herbicide is used with this product, mix and impregnate immediately.

Apply immediately after impregnation unless experience has shown that impregnated fertilizer can be stored without becoming lumpy and difficult to spread.

Rates: Select the specified rate of RANCOR 4 F per acre from the appropriate section of this label and refer to the formula below to determine the amount of RANCOR 4 F which is to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be distributed on one acre.

$$\frac{\text{Pt RANCOR 4 F}}{\text{Acre}} \times \frac{2000 \text{ lbs Fertilizer}}{\text{Acre}} = \frac{\text{Pt RANCOR 4 F}}{\text{Ton of Fertilizer}}$$

Application: Uniform application is essential for satisfactory weed control. Accurate calibration of fertilizer application equipment is essential for uniform distribution to the soil surface. The recommended method of application is to apply 1/2 the specified rate and over 50% or to double apply by splitting the middles to obtain the best distribution pattern. If fertilizer materials are excessively dusty, use diesel oil or other suitable additive to reduce dust prior to impregnation as dusty fertilizer will result in poor distribution during application. Crop injury and/or poor weed control may occur where the impregnated fertilizer is not uniformly applied.

Incorporation and Combination Uses: When this product is to be used in combination with another herbicide, follow directions on this label for combinations, rates, crops, incorporation, and special precautions and use restrictions.

ALFALFA AND SAINFOIN

RANCOR 4 F herbicide may be used for use in alfalfa and sainfoin in the following areas:

1. Alfalfa, and sainfoin (Including mixed stands with grasses) (all areas except California).
2. Alfalfa and sainfoin (Including mixed stands with grasses) (California only).
3. Alfalfa - Tank Mix Combination with Paraquat (Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, and the following California counties: Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, and Siskiyou).

4. Alfalfa - Post Dormant Application of this product Impregnated on Dry Fertilizer Only (Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas and Wisconsin).

RANCOR 4 F may be used for use in aerial or ground spray equipment as a broadcast surface application to established crops of alfalfa and sainfoin for the control of certain grass and broadleaf weeds.

Application: Refer to **PRODUCT INFORMATION** in the front of this label for detailed information on the application of RANCOR 4 F. For information on applying RANCOR 4 F in fluid or on dry fertilizer refer to the **Application of RANCOR 4 F In Fluid Fertilizers** or **Commercial Impregnation and Application of RANCOR 4 F On Dry Bulk Fertilizer** under the **PRODUCT INFORMATION** section of this label.

Use Restrictions:

- Use RANCOR 4 F only on established alfalfa and sainfoin.
- Do not apply RANCOR 4 F after growth begins in the spring or before growth ceases in the fall, except as specified on this label.
- Grazing and Pre-harvest Interval (PHI): Do not graze or harvest within 28 days after application.

Use Precautions:

- For best weed control, apply RANCOR 4 F when weeds are less than 2 inches tall or before weed foliage is 2 inches in diameter.
- Reduced weed control may occur when extended dry conditions follow application of RANCOR 4 F.
- Crop injury may occur when:
 1. Crop is under stress conditions such as diseases, insect infestations, poorly drained soils, drought or winter injury at time of application;
 2. Crop is treated within 12 months after seeding;
 3. There is excessive irrigation or rainfall immediately after application. Do not apply more than 1/2 inch of water in the first irrigation after RANCOR 4 F is applied.

ALFALFA and SAINFOIN (All Areas Except California)

BROADCAST APPLICATION INSTRUCTIONS	
CROP	RANCOR 4 F PT/ACRE
Alfalfa and Sainfoin (Except California)	1/2 to 2
Select the proper dosage according to weeds known to be and present in field to be treated. On loamy sand soils in Oregon and Washington, do not apply more than 1 pt of RANCOR 4 F per acre.	

FOR USE ON MIXED STANDS OF ALFALFA AND GRASSES:

Rates of 1 to 1-1/2 pts of RANCOR 4 F per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa. Higher rates will severely reduce forage grass stands. RANCOR 4 F should not be used on sand soils. In areas, west of the Rocky Mountains, avoid using RANCOR 4 F on soils with calcareous surface area, high levels of lime or sodium, or a pH greater than 8.2.

**ALFALFA and SAINFOIN
Weeds Controlled (Except California)**

1/2 TO 3/4 PT RANCOR 4 F/ACRE	
Chickweed, common (<i>stellaria media</i>)	
3/4 TO 1 PT RANCOR 4 F/ACRE	
Cheat (<i>Bromus secalinus</i>)	Pennycress (<i>Thlaspi arvense</i>)
Deadnettle, Purple (<i>Lamium purpureum</i>)	Rescuegrass (<i>Bromus catharticus</i>)
Downy brome (<i>Bromus tectorum</i>)	Shepherdspurse (<i>Capsella bursa pastoris</i>)
Japanese brome (<i>Bromus japonicus</i>)	
1 TO 2 PTS RANCOR 4 F/ACRE	
Broadleaves Fleabane, Rough (<i>Erigeron strigosus</i>) Flixweed (<i>Descurainia sophia</i>) Henbit (<i>Lamium amplexicaule</i>) Kochia (<i>Kochia scoparia</i>) Lambsquarters, common (<i>Chenopodium album</i>) Marestail (Horseweed) (<i>Hippuris vulgaris</i>) Meadow Salsify (<i>Tragopogon pratensis</i>) Mustard, Blue (<i>Chorispora tenella</i>) Mustard, Jim Hill (tumble) (<i>Sisymbrium altissimum</i>) Mustard, Tansy (<i>Descurainia pinnata</i>) Pepperweed (<i>Lepidium virginicum</i>) Pigweed, Redroot (<i>Amaranthus retroflexus</i>) Prickly Lettuce (<i>Lactuca serriola</i>) White Cockle (<i>Melandrium album</i>) Wild Buckwheat (<i>Polygonum convolvulus</i>) Yellow Rocket (<i>Barbarea vulgaris</i>)	Grasses Foxtail, Green (<i>Setaria viridis</i>) Little Barley (<i>Hordeum pusillum</i>) Smooth Brome (<i>Bromus inermis</i>) Wild Oats (<i>Avena fatua</i>)
2 PTS RANCOR 4 F/ACRE	
Broadleaves Chickweed, Mousear (<i>Cerastium vulgatum</i>) Dandelion (<i>Taraxacum officinale</i>) Ragweed, common (<i>Ambrosia artemisiifolia</i>)	Grasses Barnyardgrass (<i>Echinochloa crus-galli</i>) Bluegrass (<i>Poa annua</i>) Foxtail Barley (<i>Horeum jubatum</i>)

Weeds Partially Controlled: At the rate of 2 pts/acre **RANCOR 4 F** may be used to reduce the competition from curly dock (*Rumex crispus*). At 1 to 2 pts/acre, **RANCOR 4 F** may be used to reduce the competition of German Moss or knawel (*Scelanthus annus*).

**ALFALFA AND SAINFOIN
(California Only) (Including Mixed Stands with Grasses)**

RANCOR 4 F may be used in aerial or ground spray equipment as a broadcast surface application to dormant established crops of alfalfa and sainfoin.

Application: **RANCOR 4 F** may be used in aerial or ground spray equipment as a broadcast surface application to dormant established crops of alfalfa and sainfoin for control of certain grass and broadleaf weeds. Do not apply **RANCOR 4 F** after growth begins in the spring or before growth ceases in the fall. Do not apply to either alfalfa or sainfoin during the first growing season after seeding.

For information on applying **RANCOR 4 F** in fluid fertilizer solutions to alfalfa, refer to the appropriate section of this label.

For information on commercial impregnation and application of **RANCOR 4 F** on dry bulk fertilizer, refer to the appropriate section of this label.

WEEDS CONTROLLED	
3/4 TO 1 PT RANCOR 4 F/ACRE	
Cheatgrass (downy brome) (<i>Bromus secalinus</i>)	
1 TO 2 PTS RANCOR 4 F/ACRE	
Broadleaves Chickweed, common (<i>Stellaria media</i>) Flixweed (<i>Descurainia Sophia</i>) Henbit (<i>Lamium amplexicaule</i>) Kochia (<i>Kochia scoparia</i>) Meadow Salsify (<i>Tragopogon pratensis</i>) Mustard, Blue (<i>Chlorispora tenella</i>) Mustard, Tansy (<i>Descurainia pinnata</i>) Pepperwood, Virginia (<i>Lepidium virginicum</i>) Shepherdspurse (<i>Capsella bursa pastoris</i>) White Cockle (<i>Melandrium album</i>) Wild Buckwheat (<i>Polygonum convolvulus</i>) Yellow Rocket (<i>Barbarea vulgaris</i>)	Grasses Smooth Brome (<i>Stellaria media</i>) Wild Oats (<i>Avena fatua</i>)
2 PTS RANCOR 4 F/ACRE	
Broadleaves Dandelion (<i>Taraxacum officinale</i>)	Grasses Barnyard (<i>Echinochloa crus-galli</i>) Bluegrass (<i>Poa annua</i>) Foxtail Barley (<i>Horeum jubatum</i>)

BROADCAST APPLICATIONS INSTRUCTIONS	
CROP	RANCOR 4 F PT/ACRE
Alfalfa and Sainfoin (California Only)	3/4 to 2
<p>Select the proper dosage according to weeds known to be present in the field to be treated. Apply specified dosage in 20 to 40 gallons of water per acre with ground spray equipment or 3 to 10 gallons of water per acre with aerial spray equipment fitted with nozzles suitable for broadcast applications of herbicides. Treat only dormant established crops of alfalfa and sainfoin. Injury may occur to alfalfa if RANCOR 4 F is applied earlier than 1.2 months after seeding. Do not apply after Spring growth begins or before growth ceases in the Fall. Grazing and Pre-harvest Interval (PHI): Do not graze or harvest within 28 days after application.</p> <p>At the 2 pts/acre rate, RANCOR 4 F may be used for suppression of curly dock.</p>	

For Use on Mixed Stands of Alfalfa And Grasses: Rates of 1 to 1-1/2 pts of **RANCOR 4 F** per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa. Higher rates will severely reduce forage grass stands. Do not apply with aerial spray equipment when wind speed is greater than 10 mph. Do not apply when weather conditions favor spray drift and/or when sensitive cool season crops, such as cole crops, onions, peas, or strawberries, are present in adjacent fields. Applications should not be made when weather conditions favor spray drift, especially in areas where wheat is growing on coarse textured soils in adjacent fields, or injury may occur.

ALFALFA

RANCOR 4 F Plus Paraquat Tank Mix Applications

Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming and the following California counties: Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, and Siskiyou.

Application: **RANCOR 4 F** plus paraquat herbicide tank mix application may be used, during the dormant season, in aerial or ground spray equipment as a broadcast surface application to established alfalfa for the control of certain grass and broadleaf weeds. Do not apply **RANCOR 4 F**/paraquat tank mix to growth that is more than 2 inches tall. Apply once per season. Do not apply following cuttings during growing season. Use a minimum of 10 gallons of water per acre with aerial spray equipment and a minimum of 20 gallons of water per acre with ground spray equipment. Add a non-ionic spreader at label rates to the spray solution.

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.

Weeds Controlled: **RANCOR 4 F** plus paraquat tank mix application will control established weeds. Paraquat controls weeds by contact activity. Refer to paraquat label for specific use rates.

1/2 TO 3/4 PT OF RANCOR 4 F/ACRE	
Common Chickweed	
3/4 TO 1-1/2 PT OF RANCOR 4 F/ACRE	
Bluegrass Cheat Downy brome Field pennycress	Henbit Japanese brome Rescuegrass Shepherdspurse

USE RANCOR 4 F AT 1 TO 1-1/2 PTS/ACRE FOR CONTROL OF THE FOLLOWING WEEDS:

Blue mustard Common lambsquarters Flixweed Green foxtail Groundsel Jim Hill mustard Kochia Little barley Marestail (Horseweed) Meadow salsify Pepperweed	Prickly lettuce Redroot pigweed Rough fleabane Ryegrass Smooth brome Sow thistle Tansy mustard White cockle Wild oats Wild buckwheat Yellow rocket
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APPLICATION INSTRUCTIONS

DOSAGE/ACRE

<p>RANCOR 4 F 1/2 to 1-1/2 Plus paraquat (refer to label for use rates)</p>	<p>Apply specified dosage of RANCOR 4 F and paraquat in at least 20 gallons of water per acre with aerial equipment or at least 20 gallons of water per acre with ground equipment. Do not apply this tank mix to alfalfa growth if more than 2 inches tall. For best weed control, apply when broadleaf weeds and grasses are 1-6 inches tall and are actively growing. Care should be taken to avoid overlaps. Do not apply more than 1 pt of RANCOR 4 F per acre on loamy sand soils. Reduced weed control may occur when extended dry conditions follow application of RANCOR 4 F Crop injury may occur if alfalfa is under stress conditions such as diseases, insect infestations, drought or winter injury or if RANCOR 4 F is applied to alfalfa earlier than 12 months after seeding.</p>
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For Use on Mixed Stands of Alfalfa And Grasses: Rates of 1 to 1-1/2 pts of **RANCOR 4 F** per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa.

Grazing and Pre-harvest Interval (PHI): Do not graze or harvest within 42 days after application.

In areas west of the Rockies, avoid the use of **RANCOR 4 F** on soils with calcareous surface, soils with high levels of lime or sodium, and with a pH greater than 8.2.

Do not apply when weather conditions favor spray drift. Do not make aerial applications when wind speed is greater than 10 mph. Do not use on sand soil.

Refer to the paraquat label for additional directions, weed species controlled and precautions.

Post Dormant Application of this Product Impregnated on Dry Fertilizer Only

RANCOR 4 F may be applied after dormancy has broken, but prior to three inches of new alfalfa shoot growth, only when impregnated on dry fertilizer in Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas and Wisconsin.

Apply at rates of 1-1/2 to 2 pts per acre as directed on this label for application during dormancy. Apply only when alfalfa foliage is dry or crop injury may occur. When using this application method, do not harvest or graze treated alfalfa for 60 days after application.

ASPARAGUS

(Established)

RANCOR 4 F may be used in ground spray equipment or sprinkler irrigation (center pivot, lateral move, or solid set) systems as a single preemergence broadcast application or as a split application consisting of a preemergence broadcast application followed by a post harvest broadcast application.

Refer to the **PRODUCT INFORMATION** section of this label for directions.

Weeds Controlled: **RANCOR 4 F**, applied to established asparagus according to directions, will effectively control:

BROADLEAVES	
Chickweed, common (<i>Stellaria media</i>)	Ragweed, common (<i>Ambrosia artemisiifolia</i>)
Jimsonweed (<i>Datura stramonium</i>)	Smartweed, Pennsylvania (<i>Polygonum pensylvanicum</i>)
Lambsquarters (<i>Chenopodium album</i>)	Sorrel, red (<i>Rumex acetosella</i>)
Pigweed, redroot (<i>Amaranthus retroflexus</i>)	Velvetleaf (<i>Abutilon theophrasti</i>)
GRASSES	
Crabgrass (<i>Digitaria</i> spp.)	Sandbur, field (<i>Cenchrus pauciflorus</i>)
Foxtails (<i>Setaria</i> spp.)	

BROADCAST APPLICATION INSTRUCTIONS	
CROP	RANCOR 4 F PT/ACRE
	2 TO 4
Asparagus	<p>PREEMERGENCE APPLICATION ONLY Make a single surface application in early Spring before asparagus spears or ferns emerge. If the field is to be disked, apply this product after disking but before the crop emerges. Use the lower rate for control of the broadleaf weeds listed above. Use the higher rate in fields with a history of severe infestations of grasses and for maximum residual control. Do not apply within 14 days of harvest.</p> <p>1 TO 2 PREEMERGENCE PLUS 2 TO 3 POST HARVEST</p> <p>SPLIT APPLICATION PREEMERGENCE AND POST HARVEST Preemergence Application: Apply before asparagus spears or ferns emerge. If the field is to be disked, apply after disking but prior to crop emergence. Do not apply within 14 days of harvest. Post Harvest Application: Apply after last harvest of the season but prior to emergence.</p> <p>The lower combination rates may be used for control of common ragweed, lambsquarters, redroot pigweed, and red sorrel. Use the higher combination rates for other weeds listed or in fields with severe grass infestations or for maximum post harvest control of emerged weeds.</p>
IMPORTANT: The total amount of RANCOR 4 F applied in one crop season may not exceed 4 pts per acre.	

Use Restrictions (Asparagus):

- Do not use on newly seeded asparagus nor on young plants during the first growing season after setting crowns.
- Pre-harvest Interval (PHI): Do not apply within 14 days of harvest.
- DO NOT APPLY POST HARVEST APPLICATIONS UNTIL AFTER THE LAST HARVEST OF SPEARS.**
- Aerial application is prohibited.**

CARROTS

Use on Carrot: The following directions for use were developed under the direction of IR-4 (government minor crops use program).

Apply **RANCOR 4 F** herbicide with ground equipment as specified in the table below under **Application Instructions**. For effective control of broadleaf weeds with post-emergence applications, apply **RANCOR 4 F** before weeds are 1 inch in height or diameter. Thorough spray coverage is essential for adequate weed control.

Do not use air blast or other high pressure spray equipment to make postemergence applications of **RANCOR 4 F**. Refer to the appropriate section of this label for additional information regarding spray equipment, dilution rates, mixing, sprayer cleanup, restrictions, container disposal and cautions.

Refer to **Mixing** under the **PRODUCT INFORMATION** section on the front of this label. For specific application information see **PRODUCT INFORMATION** and **Application** sections at the front of this label.

Weeds Controlled: **RANCOR 4 F** applied to carrots according to directions will effectively control:

BROADCAST APPLICATION INSTRUCTIONS	
CROP	RANCOR 4 F PT/ACRE
	1/2
Carrots	Apply specified dosage per acre as a broadcast spray over the tops of carrot plants. Application should be made after carrots have formed 5-6 true leaves but before weeds are 1 inch in height or diameter. If needed, a second application may be made after an interval of at least 3 weeks. Applications may be made up to 60 days of harvest.
IMPORTANT: The total amount of RANCOR 4 F applied in one crop season may not exceed 4 pts per acre.	

Use Restrictions:

- Do not apply to carrots grown for seed.
- Do not apply within 3 days after periods of cool, wet or cloudy weather or crop injury will occur.
- Do not apply **RANCOR 4 F** within 3 days of any other chemical unless specified on this label.
- Do not apply on very hot days or excessive crop injury will result.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest. Do not apply until carrots have at least 5-6 true leaves. Earlier applications will result in excessive crop damage.

Use Precautions:

- Crop injury or delayed maturity may result from applications of **RANCOR 4 F** if carrots are growing under stress conditions such as periods of drought or cool, wet and cloudy weather preceding application.
- Following an application of **RANCOR 4 F**, chlorosis (yellowing) and burning of the least tissue may occur.
- For newly introduced varieties of carrots with unknown tolerance to **RANCOR 4 F**, treat only a small area to determine if **RANCOR 4 F** can be used without injury to the crop.

FIELD CORN

POSTEMERGENCE APPLICATION

RANCOR 4 F may be used for control of selected broadleaf weeds when applied as a tank mix combination with certain broadleaf herbicides presently registered for post-emergence use in field corn. Herbicides which may be tank mixed with **RANCOR 4 F** include:

2,4-D Atrazine Dicamba Bentazon Bromoxynil	Dicamba + atrazine Bromoxynil + atrazine (Premix) Clarity Imazethapyr* Flumiclorac
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*Use only on Imazethapyr resistant/tolerant corn hybrids (IM-Corn).

Application: **RANCOR 4 F** may be applied to field corn after crop emergence until just prior to tasseling. Broadcast applications may be made with ground or aerial equipment. For optimum weed control, apply treatments when weeds are small and actively growing, but before reaching the maximum heights listed in the **Weeds Controlled** table.

POSTEMERGENCE BROADCAST APPLICATION

Ground Application: Adjust nozzle height above crop and weed canopy to ensure uniform spray coverage. Gallonage should be increased with increasing weed size and population density.

For tank mixes of **RANCOR 4 F** plus atrazine, bentazon, bromoxynil, bromoxynil + atrazine, imazethapyr, flumiclorac, or 2,4-D amine formulations, use flat fan nozzles spaced a maximum of 20 inches apart. Best results are achieved using a minimum spray volume of 10 gallons per acre and spray pressure from 20 to 40 psi.

For **RANCOR 4 F** tank mixes with dicamba, dicamba + atrazine, or 2,4-D low volatile ester formulations, use drift-reducing nozzles which are specifically designed to produce coarse sprays and reduce the amount of driftable fines. Additional measures which will help avoid potential drift to sensitive crops and plants include using a minimum spray volume of 20 gallons per acre and keeping spray pressures at or below 20 psi unless otherwise specified by the nozzle manufacturer.

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.

For further precautions and additional instructions, consult the tank mix partner's label.

Aerial Application: Apply in a minimum spray volume of 3 gallons per acre. For optimum spray coverage and distribution, use a minimum of 5 gallons per acre and a maximum pressure of 40 psi. Use a boom and nozzle configuration which will provide a uniform deposition pattern and coverage with low drift potential. Avoid overlaps to prevent potential crop injury. Do not apply near sensitive crops or sensitive plants growing near the treated area. Do not apply when wind speed is greater than 10 mph or when winds are moving toward sensitive crops or plants. To avoid drift hazards, applicator must follow the most restrictive labeling of the products used in a tank mix. Refer to the appropriate tank mix partner's label for further precautions and instructions.

POST DIRECTED APPLICATION

RANCOR 4 F in tank mix combinations with dicamba, 2,4-D or bromoxynil may be applied post directed to field corn. Use drop nozzles and appropriate spacing to direct spray below the corn whorl and upper leaves.

The top of the target weed canopy must be sufficiently below the whorl and upper leaves of the crop to permit this application and provide adequate spray coverage. The height differential required between the crop and weed canopy will depend on the specific equipment used. Apply before tassel emergence. For further precautions and additional instructions, refer to the appropriate tank mix partner's label.

ADJUVANTS

The adjuvant types listed below may be utilized with certain **RANCOR 4 F** tank mix combinations. Consult the tank mix instructions section for the appropriate adjuvant and rate. Use of non-recommended adjuvants or rates may result in severe leaf burn, crop stunting, and/or stand reduction. Use only adjuvants which are exempt from tolerance requirements under 40 CFR 180.1001.

UAN (urea ammonium nitrate) is commonly referred to as 28, 30, or 32% N.

Ammonium sulfate (spray grade) may be used as an alternative to UAN with certain tank mix combinations.

Non-ionic surfactants should contain at least 80% active ingredient.

DO NOT USE crop oil concentrate (COC) or any adjuvant containing vegetable or petroleum oils with any **RANCOR 4 F** tank mixtures as severe leaf burn, crop stunting, and/or stand reduction may occur.

RAINFASTNESS

RANCOR 4 F will not reduce rainfastness of the above tank mix partners. Refer to the individual product labels for rainfastness recommendations.

SPRAYER CLEANUP

Refer to each tank mix partner's label and the Sprayer Cleanup section of the **RANCOR 4 F** label for specific instructions on cleaning spray equipment. Special attention should be given to the required cleanup procedures for 2,4-D, dicamba, and dicamba + atrazine.

Use Restrictions:

- Do not use on corn grown for seed, sweet corn, popcorn, or white corn.
- Do not apply more than 0.25 pounds ai metribuzin (8 fl oz **RANCOR 4 F**) per acre per use season.
- Do not apply when field corn is under stress (see Stress statement below).
- Do not use aerial applications if sensitive crops or plants are growing in the vicinity of the area to be treated.
- Do not allow spray drift onto sensitive crops or plants.
- Do not use on sand, loamy sand or sandy loam soils that have less than 0.5% organic matter.
- Do not use on sand or loamy sand soils in Washington, Oregon or Idaho or crop injury may occur.
- Observe all precautions and limitations on labeling of all products used in the tank mixtures.

Stress is any condition or combination of conditions which impairs normal crop growth. Weather, disease, insect damage, fertility or other factors may cause stress. Applications made before or after the corn is under stress from these factors or from periods of prolonged cool, wet and cloudy weather or widely fluctuating day and nighttime temperatures, may result in temporary leaf burn, yellowing and/or stunting of the crop. Recovery from damage is generally rapid with no lasting effects on new growth. Under extreme stress, stand reductions may occur.

Feeding Restrictions: Field corn treated with **RANCOR 4 F** may be grazed or harvested for silage or grain 60 days after treatment. Follow the most restrictive preharvest interval on the labels of the products used in the tank mixtures.

TANK MIX COMBINATIONS

The **RANCOR 4 F** tank mixtures listed below can be utilized for control of certain annual broadleaf weeds.

RANCOR 4 F POST DIRECTED INSTRUCTIONS

PRODUCT	RATE	DIRECTIONS AND APPLICATION INSTRUCTIONS*
RANCOR 4 F + 2,4-D amine or 2,4-D LVE	3 to 4.5 fl oz/A + See reference ¹ or See reference ¹	For corn greater than 8-inches tall, apply as a directed spray with drop nozzles before tassel emergence. Apply only to varieties known to be tolerant to 2,4-D. DO NOT USE ADJUVANTS. 2,4-D may cause injury to nearby sensitive crops. 2,4-D applications may result in brittle corn stalks, and winds or cultivation may cause stalk breakage. To reduce damage, delay cultivation 8 to 10 days after application.
RANCOR 4 F + dicamba	3 to 4.5 fl oz/A + See reference ¹	For corn 8 to 36 inches tall, apply as a directed spray with drop nozzles. Application may be made up to 15 days prior to corn tasseling. If growing conditions are dry and plants are stressed, addition of a non-ionic surfactant (1 qt/100 gal of spray solution) may improve weed control. For corn grown on coarse textured soils, apply dicamba as per specific label rates, regardless of application method. Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage.
RANCOR 4 F + bromoxynil	3 to 4.5 fl oz/A + See reference ¹	Apply as a directed spray with drop nozzles before tassel emergence. DO NOT USE ADJUVANTS. Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage application should be made to dry corn foliage when weather conditions are not extreme.
* Consult the appropriate tank mix partner's label for additional instructions or restrictions. It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture. ¹ Refer to specific 2,4-D, dicamba, or bromoxynil labels for use rates.		

RANCOR 4 F POSTEMERGENCE BROADCAST INSTRUCTIONS

PRODUCT	RATE	DIRECTIONS AND APPLICATION INSTRUCTIONS*
RANCOR 4 F + 2,4-D Amine or 2,4-D LVE	3 fl oz/A + See reference ¹ or See reference ¹	Apply as a broadcast spray during the interval from corn emergence until corn is 8 inches tall. Apply only to varieties known to be tolerant to 2,4-D. DO NOT USE ADJUVANTS. 2,4-D may cause injury to nearby sensitive crops. 2,4-D applications may result in brittle corn stalks, and winds or cultivation may cause stalk breakage. To reduce damage, delay cultivation 8 to 10 days after application.
RANCOR 4 F + atrazine	3 fl oz/A + See reference ¹	Apply as a broadcast spray during the interval from corn emergence until corn is 12 inches tall. A non-ionic surfactant (1 qt/100 gal of spray solution) may be added to improve weed control. Atrazine is a restricted use herbicide. Follow all state and federal label instructions and restrictions pertaining to atrazine applications.
RANCOR 4 F + dicamba	3 fl oz/A + See reference ¹	Apply as a broadcast spray during the interval from corn emergence through the five leaf stage or when corn is 8 inches tall, whichever occurs first. Consult the dicamba label for use rates and restrictions. If growing conditions are dry and plants are stressed, addition of a non-ionic surfactant (1 pt/100 gal of spray solution) may improve weed control. For corn grown on coarse textured soils, consult the dicamba label for use rates, regardless of application method. Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage.
RANCOR 4 F + bentazon	3 fl oz/A + See reference ¹	Apply as a broadcast spray after corn emergence but before corn exceeds 30 inches in height and the crop canopy closes the row. Adjuvants such as UAN (0.5 to 1 gal/A), ammonium sulfate (17 lbs/100 gal of spray solution), or non-ionic surfactant (1 qt/100 gal of spray solution) may improve weed control.
RANCOR 4 F + bromoxynil	2.4 to 3 fl oz/A + See reference ¹	Apply as a broadcast spray when corn is in the fourth true leaf stage or later but before the crop canopy closes the row. DO NOT USE ADJUVANTS. Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage, application should be made to dry corn foliage when weather conditions are not extreme.
RANCOR 4 F + bromoxynil + atrazine (Premix)	2.4 to 3 fl oz/A + See reference ¹	Apply as a broadcast spray during the interval from corn emergence until corn is 12 inches tall. DO NOT USE ADJUVANTS. Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage, application should be made to dry corn foliage when weather conditions are not extreme.

(continued)

RANCOR 4 F POSTEMERGENCE BROADCAST INSTRUCTIONS (continued)

PRODUCT	RATE	DIRECTIONS AND APPLICATION INSTRUCTIONS*
RANCOR 4 F + dicamba + atrazine	3 fl oz/A + See reference ¹	Apply as a broadcast spray during the interval from corn emergence through five-leaf stage or when corn is 8 inches tall, whichever occurs first. DO NOT USE ADJUVANTS. Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage. Atrazine is a restricted use product. Follow all state and federal label instructions and restrictions pertaining to atrazine.
RANCOR 4 F + imazethapyr	3 fl oz/A + See reference ¹	Use only on designated IMI-Corn hybrids (hybrids which are resistant/ tolerant to Imazethapyr. Consult the imazethapyr label for use rates if grasses are present or broadleaf weeds are near the maximum heights shown. Apply in combination with a non-ionic surfactant (1 qt/100 gal of spray solution) and UAN (1 to 2 qts/A).
RANCOR 4 F + flumiclorac	3 fl oz/A + See reference ¹	Apply as a broadcast spray to field corn from 2-leaf through 10-leaf (visible leaf collars) stage. Adjuvants such as nonionic surfactant (0.25% v/v), UAN (2% v/v) or ammonium sulfate (2.5 lbs/A) may improve weed control.

* Consult the appropriate tank mix partner's label for additional instructions or restrictions. It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture.

¹ Refer to specific 2,4-D, atrazine, dicamba, bentazon, bromoxynil, bromoxynil + atrazine, dicamba + atrazine, imazethapyr, and flumiclorac labels for use rates.

WEEDS CONTROLLED - POSTEMERGENCE BROADCAST APPLICATION

These tank mixtures with RANCOR 4 F will control the following annual weeds up to the maximum weed heights listed:

COMMON WEED NAME	RANCOR 4 F +							
	Atrazine	Dicamba	Bentazon	Bromoxynil/ Bromoxynil + atrazine	2,4-D	Dicamba + atrazine	Imazethapyr	Flumiclorac
	MAXIMUM WEED HEIGHT INCHES*							
Amaranth, palmer	4 ^a	4	2 ^a	4 ^a	4	4	8 ^b	4
Buckwheat, wild	3	3	3	3	2	3	2	4
Buffalobur	4	4	-	4	-	4	1	-
Burcucumber	-	4	-	4	2	4	-	-
Carpetweed	2	2	2	2	2	2	-	3
Cocklebur, common	8	8	8	8	8	8	8 ^b	3
Eclipta	3	3	3	3	3	3	-	-
Henbit	3	3	2	2	2	4	3	-
Horseweed/marestail	3	4	1	1	3	6	-	-
Jimsonweed	5	5	6	5	5	5	5	3
Knotweed	6	6	6	4	2	6	4	6
Kochia	2 ^a	2	1 ^a	2 ^a	2 ^a	2	2	2 ^a
Ladysthumb	6	6	6	6	4	6	4	4
Lambsquarters, common	6 ^a	6	1	6	6	6	4	4
Lettuce, prickly	4	4	-	3	4	5	-	-
Mallow, Venice	2	2	2	2	2	2	2	-

(continued)

COMMON WEED NAME	RANCOR 4 F +							
	Atrazine	Dicamba	Bentazon	Bromoxynil/ Bromoxynil + atrazine	2,4-D	Dicamba + atrazine	Imazethapyr	Flumiclorac
	MAXIMUM WEED HEIGHT INCHES*							
Morningglory entire leaf	3	3	1	3	3	3	2	-
Morningglory, ivyleaf	3	3	1	3	3	3	2	-
Morningglory, pitted	3	3	1	3	3	3	2	-
Morningglory, tall	3	3	1	3	3	3	2	-
Mustard, tansy	4	4	4	4	4	4	4	-
Mustard, wild	4	4	4	4	4	4	4	-
Nightshade, black	6	6	-	6	1	6	3	-
Nightshade, eastern black	6	6	-	6	1	6	3	-
Pigweed, redroot	6 ^a	6	2 ^a	6 ^a	6	6	8 ^b	4
Pigweed, smooth	6 ^a	6	2 ^a	6 ^a	6	6	8 ^b	4
Poorjoe	3	3	3	3	3	3	3	-
Purslane, common	1	3	-	-	-	4	1	-
Pusley, Florida	3	3	3	3	3	3	-	3
Ragweed, common	5	5	3	5	5	6	3	3
Ragweed, giant	4	5	2	4	3	6	4	-
Sicklepod	3	3	3	3	3	3	3	-
Sida, prickly	1	1	3	1	1	2	1	2
Smartweed, Pennsylvania	6	6	6	6	4	6	4	4
Sunflower, common	6	6	6	6	6	6	5	-
Thistle, Russian	1	3	-	3	1	3	1	-
Velvetleaf	6 ^a	6	6	6	4	6	5	6
Waterhemp spp.	5 ^a	5	2 ^a	5 ^a	5	5	4 ^b	4

When weeds are approaching the maximum height listed or found in high densities, use the higher rate of **RANCOR 4 F** and the selected tank mix partners.

^aThese treatments will not control triazine resistant biotypes.

^bThese treatments will not control ALS resistant biotypes.

WEEDS CONTROLLED - POSTEMERGENCE BROADCAST APPLICATION

These tank mixtures with **RANCOR 4 F** will control the following annual weeds up to the maximum weed heights listed:

COMMON WEED NAME	RANCOR 4 F +		
	2,4-D	Dicamba	Bromoxynil
	MAXIMUM WEED HEIGHT INCHES*		
Amaranth, palmer	12	12	6
Cocklebur, common	12	12	12
Jimsonweed	12	10	10
Ladysthumb	6	8	6
Lambsquarters, common	12	12	10
Morningglory entire leaf	18	18	6
Morningglory, ivyleaf	18	18	6
Morningglory, pitted	18	18	6
Morningglory, tall	18	18	6
Nightshade, black	10	8	8
Nightshade, eastern black	10	8	8
Pigweed, redroot	12	12	6
Pigweed, smooth	12	12	6
Ragweed, common	8	8	8
Ragweed, giant	12	12	8
Smartweed, Pennsylvania	6	8	6
Sunflower, common	12	12	12
Velvetleaf	10	8	8
Waterhemp, tall	12	12	6

*When weeds are approaching the maximum height listed or found in high densities, use the higher rate of **RANCOR 4 F** and the selected tank mix partners.

PERENNIAL WEED SUPPRESSION

The following **RANCOR 4 F** tank mixtures will provide top growth burndown and in-season suppression of the following perennial weeds; however, regrowth may occur. For the best performance on these weeds, use the maximum rates of this product, dicamba, bromoxynil, bromoxynil + atrazine, dicamba + atrazine, 2,4-D LVE or imazethapyr specified for these tank mixtures.

RANCOR 4 F + dicamba

Bindweed, field; Dandelion, common; Dock, curly; Smartweed, swamp; Thistle, Canada.

RANCOR 4 F + bromoxynil or bromoxynil + atrazine

Thistle, Canada.

RANCOR 4 F + 2,4-D LVE

Bindweed, field; Dandelion, common; Dock, curly; Smartweed, swamp; Thistle, Canada.

RANCOR 4 F + dicamba + atrazine

Bindweed, field; Dandelion, common; Dock, curly; Smartweed, swamp; Thistle, Canada.

RANCOR 4 F + imazethapyr

Thistle, Canada.

PREPLANT AND PREEMERGENCE APPLICATIONS:

(Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota and Wisconsin) **RANCOR 4 F** applied as a tank mix combination with both grass and broadleaf herbicides registered for use in field corn. **RANCOR 4 F** can be tank mixed with specified rates of the following herbicides:

Acetochlor	Flumetsulam + metolachlor
Acetochlor + atrazine	Hydrogen peroxide + ethaneperoxoic acid
Atrazine	Imazethapyr*
Atrazine + S-metolachlor	Imazethapyr* + pendimethalin
Dicamba	Linuron
Dicamba + atrazine	Metolachlor
Dimethenamid	Pendimethalin
Dimethenamid + atrazine	Simazine
Flumetsulam + clopyralid	S-metolachlor

* Use only on Imazethapyr resistant/tolerant corn hybrids (IMI corn).

Application: **RANCOR 4 F** may be applied to field corn preplant without incorporation up to 30 days prior to planting or preemergence. Applications may be made by either ground or aerial equipment. For tank mixes, follow the most restrictive application methods of all products used.

Use Restrictions:

- Do not apply more than 8 fluid ounces of this product (0.25 pound active ingredient) per acre per growing season.
- Do not apply on soils having pH 7.0 or greater.
- Plant corn seed a minimum of 1-1/2 inches deep.
- RANCOR 4 F** may only be used in hybrid seed corn production fields if both inbred parents are known to be tolerant to **RANCOR 4 F**.
- Do not use on muck soils as reduced weed control may result.
- Observe all precautions and limitations on labeling of all products used in tank mixes.

Feeding Restrictions: Corn treated with **RANCOR 4 F** may be harvested for silage or grain 60 days after treatment. For tank mixes, follow the most restrictive preharvest interval of all products used.

Weeds Controlled*: **RANCOR 4 F** will aid in the residual preemergence control of the following weed species when tank mixed with other registered grass and/or broad-leaf corn herbicides:

Horseweed/marestail	Smartweed, Pennsylvania
Ladysthumb	Sunflower
Lambsquarters, common	Velvetleaf
Pigweed spp.	Waterhemp, tall
Ragweed, common	

* For control of emerged weeds refer to the **Burndown Weed Control** section of this product label.

RANCOR 4 F FIELD CORN RATE INSTRUCTIONS		
STATES	APPLICATION TIMING	RANCOR 4 F FL OZS/A
Iowa Kansas Missouri Nebraska South Dakota	Preplant (0 to 30 days) Preemergence	3 to 8
Illinois Indiana Kentucky Michigan Minnesota Ohio Wisconsin	Preplant (10 to 30 days) Preplant (0 to 9 days) Preemergence	3 to 8 3 to 6

Remarks: Apply as a broadcast spray prior to corn emergence from the soil. Do not apply **RANCOR 4 F** on coarse textured soils with less than 1.5% organic matter.

Do not apply more than 6 fl oz **RANCOR 4 F** per acre on soils with less than 2.0% organic matter. For heavy weed infestations and/or early preplant applications, use the higher rates of **RANCOR 4 F**. Consult the label of herbicide tank mix partners to determine proper use rates for the other product(s).

BURNDOWN WEED CONTROL – FIELD CORN See **BURNDOWN WEED CONTROL - FIELD CORN AND SOYBEANS** section below.

GARBANZO BEANS (Chickpeas)

(California, Idaho, and Washington)

Use on Garbanzo Beans (Chickpeas): The following directions for use were developed under the direction of IR-4 (government minor crops use program).

RANCOR 4 F herbicide may be used as a preemergence application for the suppression of certain broadleaf weeds in garbanzo beans.

Weeds Suppressed*:

Common Chickweed Dog Fennel (Mayweed) Field Pennycress Henbit	Common Lambsquarters Shepherdspurse Wild Mustard Pigweed
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* Suppression is a reduction in weed size and growth compared to a non-treated area in the same field. **RANCOR 4 F** used alone will not control triazine-resistant weed species.

APPLICATION INSTRUCTIONS	
CROP	RANCOR 4 F
	Garbanzo beans

Apply specified dosage in a single preemergence application using 10 to 40 gallons of water per acre with ground spray equipment. Apply before or after planting but before crop emergence. Thorough incorporation, either by rainfall or by mechanical means, is essential for weed suppression. Under dry conditions, incorporate **RANCOR 4 F** into the top 1 to 2 inches of soil with spike harrows, or similar shallow incorporation equipment, then cross harrow to insure uniform soil incorporation. Where soil surface is moist at the time of application and rain follows before weed emergence, a broadcast application should provide adequate weed suppression. Use on coarse-textured soils, sandy soils or any soil with less than 1.5% organic matter will likely cause crop injury. Use the higher rate on fine textured soils (high in clay or organic matter) and in fields with a history of high weed populations.

Use Restrictions:

- Do not use on clay knobs or poorly covered subsoils.
- Do not apply preemergence on shallow seedlings less than 2 inches deep.
- Do not graze or feed treated vines to livestock within 40 days after application.

Use Precautions:

- Crop injury may result if crop is under stress conditions caused by cold weather, poor soil fertility, disease or insect damage.
- Crop injury may result if application is followed by heavy rain. Avoid application of more than 1/2 inch of irrigation within one month after application of **RANCOR 4 F**, or crop injury may occur.
- Maintain continuous spray tank agitation to keep material in suspension. Avoid overlapping of spray swaths and shut off spray booms while turning, slowing or stopping, or crop injury will occur.

NOTE: This treatment may cause some chlorosis or minor necrosis. Because garbanzo bean varieties may vary in their susceptibility to **RANCOR 4 F**, determine crop tolerance prior to adoption as a field scale practice to prevent possible injury.

LENTILS AND PEAS

(Idaho, Oregon, and Washington)

This product herbicide may be used as a preemergence and postemergence application for the suppression of certain broadleaf weeds in lentils and peas.

Weeds Suppressed*

Common Chickweed** Corn Spurry Dog Fennel Field Pennycress Henbit** Lambsquarters	Pennsylvania Smartweed Pineapple Weed Prostrate Knotweed Redroot Pigweed Shepherdspurse** Wild Mustard
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* Suppression is a reduction in weed size and growth compared to a non-treated area in the same field.

** Preemergence application only.

Preemergence Application: Make a single preemergence application of **RANCOR 4 F** at 3/8 to 3/4 pint per acre per crop year. Apply in 10 or more gallons of water per acre with ground spray equipment or 5 or more gallons of water per acre with aerial spray equipment. Apply **RANCOR 4 F** before or after planting. Thorough incorporation, either by rainfall or by mechanical means, is essential for weed suppression. Under dry conditions, incorporate **RANCOR 4 F** into the top 1 to 2 inches of soil with spike harrows, or similar shallow incorporation equipment, then cross harrow to ensure uniform soil incorporation. Where soil surface is moist at the time of application and rain follows before weed emergence, a broadcast application should provide adequate weed suppression. Use the higher rate on fine-textured soils (high in clay or organic matter) and in fields with a history of high weed populations. **RANCOR 4 F** may be applied pre- or post plant incorporated as a tank mix combination with FARGO 4EC. Follow the Directions for Use statements on both product labels.

Postemergence Application: One postemergence application may be made per season. Use 1/4 to 1/2 pint of **RANCOR 4 F** per acre on lentils and spring peas. On winter peas, use 3/8 to 1/2 pint of **RANCOR 4 F** per acre. For suppression of dog fennel, use 1/2 pint **RANCOR 4 F** per acre. Apply specified dosage in 20 or more gallons of water per acre with ground spray equipment or 5 or more gallons of water per acre with aerial spray equipment. Do not exceed 40 psi with ground spray equipment. Apply as a broadcast spray when weeds are small (less than 2 inches in height or diameter) and before crop is 6 inches tall.

Temporary chlorosis of the crop may occur. There is an added risk of crop injury if a postemergence application is made following a previous preemergence or post plant incorporated **RANCOR 4 F** application.

Do not apply over very moist soils or wet crop foliage. Do not apply postemergence within 3 days after periods of cool, wet, or cloudy weather or crop injury may occur. Do not apply within 24 hours of treatment with other pesticides.

Use Restrictions (all applications):

- Do not apply more than 1 pint of **RANCOR 4 F** per acre per year.
- Do not use on coarse-textured soils, sandy soils or soils with less than 1.5% organic matter.
- Do not apply to "Estin" lentils.
- Do not use on clay knobs or poorly covered subsoils.
- Do not apply on shallow seedlings less than 2 inches deep (preemergence only).
- Pre-harvest Interval (PHI): Do not apply within 50 days of harvest of peas, or within 75 days of harvest of lentils.
- Do not graze or feed treated vines to livestock within 40 days after application.

Use Precautions:

- Crop injury may result if crop is under stress conditions caused by cold weather, low fertility, disease or insect damage.
- Crop injury may also result if application is followed by heavy rain. Maintain continuous spray tank agitation to keep material in suspension. Avoid overlapping and shut off spray booms while turning, slowing or stopping, or crop injury will occur.

NOTE: This treatment may cause some chlorosis or minor necrosis. Because lentil and pea varieties may vary in their susceptibility to **RANCOR 4 F**, determining crop tolerance prior to adoption as a field scale practice is suggested to prevent possible injury. For additional precautions, restrictions, limitations, and sprayer clean-up information refer to the appropriate sections of this label.

POTATOES

RANCOR 4 F herbicide may be used for use in ground, aircraft or specified chemigation equipment as a preemergence and/or postemergence application to potatoes. Early maturing smooth skinned white and all red skinned varieties may be injured with postemergence applications. The varieties Atlantic, Bellchip, Centennial, Chipbelle and Shepody are sensitive to **RANCOR 4 F**. Avoid postemergence applications on these varieties. Preemergence applications on these varieties may cause crop injury under adverse weather conditions, on coarse soils, under high soil pH, with higher rates per acre and with mechanical incorporation.

Ground Application: **RANCOR 4 F** may be used for use with ground spray equipment applied as a preemergence and/or postemergence application for control of the listed grass and broadleaf weeds in potatoes. Apply as a uniform broadcast spray at 20 or more gallons per acre.

Aerial Application: **RANCOR 4 F** may be applied in aerial spray equipment as a preemergence and/or postemergence application at 5 or more gallons per acre.

Chemigation: **RANCOR 4 F** may be applied preemergence and/or early postemergence to potatoes using center pivot, solid set and lateral roll systems. Apply specified dosage in 1/4 to 3/4 inch of water per acre (1/4 to 1/2 inch on sandy soil) as a continuous injection in self-propelled systems or apply in the last 15 to 30 minutes of the set in other systems. Be sure all the **RANCOR 4 F** has been flushed from the lines before shutting down the system.

WEEDS CONTROLLED

RANCOR 4 F applied to potatoes according to directions, will provide economic control of the following weeds. For optimum control, applications should be made before weeds are 1 inch tall. (See **NOTE**)

BROADLEAVES		
Carpetweed, common ¹	Mustard, tansy ¹	Ragweed, common ^{1,2}
Cocklebur, common ^{1,2}	Mustard, tumble ¹	Shepherdspurse ¹
Jimsonweed ¹	Mustard, wild ¹	Sicklepod ¹
Kochia ³	Pennycress, field ^{1,2}	Smartweed, Pennsylvania ^{1,2}
Lambsquarters, common ^{1,2}	Pigweed, redroot ^{1,2}	Sunflower, common ³
Mustard, Indian ¹	Pigweed, smooth ^{1,2}	Thistle, Russian ²
GRASSES		
Baryardgrass ³	Foxtail, giant ¹	Johnsongrass, seedling ¹
Crabgrass, large ¹	Foxtail, green ¹	Panicum, fall ¹
Crabgrass, smooth ¹	Foxtail, yellow ¹	Signalgrass, broadleaf ¹
¹ Weeds controlled with preemergence applications.		
² Weeds controlled with postemergence applications.		
³ Weeds requiring two applications for control.		

HARD TO CONTROL WEEDS

Although **RANCOR 4 F** may not provide commercially acceptable control in every instance, it will suppress growth of the following weeds and reduce their competition with potato plants.

BROADLEAVES	
Kochia	Purslane, common
Nightshade, hairy	Sunflower, common
GRASSES	
Barnyardgrass	Nutsedge, yellow

NOTE: Where triazine-resistant weeds are present, this product alone may not provide adequate control.

BROADCAST APPLICATIONS INSTRUCTIONS	
	RANCOR 4 F PT/ACRE
CROP	1/2 to 2
Potatoes	Preemergence: Apply specified dosage as a broadcast spray. Do not mechanically incorporate into soil. Use the 1/2 to 1 pint/acre rate for control of wild mustard (<i>Brassica</i> sp.) only. On sand soils or sensitive varieties, do not exceed 1 pint/acre.
Potatoes (Except early maturing smooth skinned, red skinned, and other specified varieties.)	1/2 to 1 Postemergence: Apply specified dosage as a broadcast spray over the tops of potato plants.* Use rates of 1/2 to 1 pint/acre for control of redroot pigweed and common lambsquarters only. Apply the 1 pint/acre rate for control of other weeds listed on this label. Split Applications: This product may be applied once preemergence and once postemergence as directed above. * Do not exceed 2 pints total per acre per season. Idaho, Oregon and Washington Only: Two postemergence applications can be made as broadcast sprays over the tops of potato plants if RANCOR 4 F is not applied preemergence. Use 1/2 to 1 pint/acre for control of redroot pigweed and lambsquarters only. On coarse (sandy) soils with low organic matter do not exceed 3/4 pint/acre per application. On medium and heavy soils only, use 1 pint/acre per application for control of other weeds listed on this label and for suppression of hairy nightshade. Make the first application early in the season while weeds are still small. Allow at least 14 days before the second application. Do not apply after June 30 if treated land is to be planted to crops other than potatoes.
* Refer to Use Restrictions (Potatoes) below.	

Tank Mixes: **RANCOR 4 F** may be tank mixed with the following herbicide active ingredients:

Metolachlor/S-metolachlor, S-ethyl dipropylthiocarbamate, pendimethalin and rimsulfuron. In addition, three-way tank mix combinations may be used for **RANCOR 4 F** plus metolachlor/S-metolachlor, S-ethyl dipropylthiocarbamate, or pendimethalin plus rimsulfuron when applied preemergence. Refer to each product's label for precautionary statements, restrictions, application information and weeds controlled.

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.

Metolachlor/S-metolachlor: **RANCOR 4 F** may be applied in a tank mix combination with metolachlor/S-metolachlor as a preemergence broadcast application. Apply **RANCOR 4 F** at 3/4 to 2 pints per acre. Refer to the metolachlor/S-metolachlor label for use rates per acre alone on potatoes.

S-ethyl dipropylthiocarbamate: **RANCOR 4 F** may be tank mixed with S-ethyl dipropylthiocarbamate at rates and uses permitted on each product's label.

Pendimethalin: **RANCOR 4 F** may be applied in tank mix combination with pendimethalin as a preemergence or early postemergence broadcast application. As a preemergence mix, apply **RANCOR 4 F** at 1 to 2 pints per acre and refer to use rates as permitted on the pendimethalin label. As an early postemergence spray, apply **RANCOR 4 F** at 1/2 to 1 pint per acre before the crop is in the 6-inch growth stage. Refer to the pendimethalin label for use rates per acre.

Rimsulfuron: (except the following counties in Colorado: Almosa, Conejos, Costilla, Rio Grande and Saguache): **RANCOR 4 F** may be applied in tank mix combination with rimsulfuron as a preemergence and/or early postemergence application for improved

control on weeds such as Russian thistle, kochia and common lambsquarters. As a pre-emergence mix, apply **RANCOR 4 F** at 1/2 to 1.125 pints per acre and refer to the rimsulfuron label for use rates. As an early postemergence spray, apply this product at 1/2 to 1 pint per acre and refer to the rimsulfuron label for use rates.

Use a nonionic surfactant at a rate of 0.125% v/v (1 pt/100 gallons of water). Apply before the crop exceeds 14 inches in height. Postemergence applications of rimsulfuron treatments should be made prior to June 30.

Use Restrictions (Potatoes):

- Do not use **RANCOR 4 F** on potatoes in Kern County, California.
- Do not apply more than a total of 2 pints **RANCOR 4 F** per acre in a single crop season regardless of the method of application.
- Do not make postemergence applications prior to rainfall or irrigation on recently cultivated potatoes, nor within 3 days after periods of cool, wet cloudy weather or injury may occur.
- Pre-harvest Interval (PHI): Do not apply **RANCOR 4 F** within 60 days of harvest.
- Do not use air blast sprayers.
- Do not apply to sweet potatoes or yams.
- Do not rotate any crop not listed on this label for 18 months following application of **RANCOR 4 F**.

Use Precautions:

- Postemergence applications may cause some chlorosis or minor necrosis. These symptoms may be more severe if seed-piece decay is occurring or if growing conditions favor crop stress.
- Postemergence applications may be made only on russet or white skinned varieties that are not early maturing.
- Potato varieties may vary in their response to herbicide application. When using **RANCOR 4 F** for the first time on a variety, always determine crop tolerance before using on a field scale.

Certain varieties of wheat and barley are sensitive to **RANCOR 4 F** (see the wheat and barley section of this label for sensitive varieties) and should not be planted during the next growing season unless the following cultural practices occur:

- Potato vines left in rows as a result of harvest must be uniformly distributed over the soil surface prior to plowing and,
- Plow with a moldboard plow to a depth sufficient to mix the upper 8 inches of soil.

SOYBEANS

(Except California)

RANCOR 4 F tank mix combinations may be used for preplant incorporated applications, preemergence surface applications, split-shot application and extended split-shot application. This product may also be used as an overlay application following a preplant incorporated application of a grass herbicide and alone as a preemergence surface application of a surface application. All these applications can be applied with ground equipment, and some can be applied with aerial spray equipment. In addition, this product can be applied as a post emergence directed spray to soybeans in certain states.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture.

Restrictions (Soybeans):

- Grazing and Feeding Treated Vines: Treated vines may be grazed or fed to livestock 40 days after application when this product is applied alone or with trifluralin, metolachlor, or pendimethalin.
- Do not use treated vines for feed or forage when this product is applied with ethfluralin, or linuron plus metolachlor.

Precautions (Soybeans):

Injury to soybeans may occur when this product is used under the following conditions:

- When the soils have a calcareous surface area or a pH of 7.5 or higher.
- Due to the sensitivity of certain soybean varieties, do not use this product on Altona, AP 55, AP71, Asgrow 6520, Burlison, Coker 102, Coker 156, Dassel, GL 3202, Govan, Maple Amber, NB 3665, NKS 1884, Paloma 350, Portage, Regal, Semmes, Terra-Vig 505, Terra Vig 606, Tracy, Vansoy, and Vinton 81. Consult your seed supplier for information on the tolerance of newly released soybean varieties, prior to use of this product.
- When applied in conjunction with soil-applied organic phosphate pesticides.
- Over application or boom overlapping may result in stand loss and soil residues.
- Uneven application or improper incorporation can decrease the level of weed control and/or increase the level of injury.
- When applied to any soil with less than 1/2 organic matter.
- Soil incorporation deeper than directed.

- When sprayers are not calibrated accurately.
- When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days.
- When soybeans are planted less than 1-1/2 inches deep, particularly in preemergence application.

Activation: A minimum amount of soil moisture is required to activate this product. In areas of low rainfall, preemergence applications to dry soil should be followed with light irrigation of 1/4 acre-inch of water. Do not apply heavy irrigation immediately after application. As with many surface applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

Rate Ranges: Where the rate range is shown, use a lower rate on soils that are coarse textured or low in organic matter. Use a higher rate on soils that are relatively fine textured or high in organic matter.

Replanting: If replanting is necessary in fields treated with this product as directed on this label, the field may be replanted to soybeans. When replanting use a minimum of tillage. Do not apply a second treatment as injury to soybeans may occur.

WEEDS CONTROLLED BY RANCOR 4 F AND RANCOR 4 F HERBICIDE TANK-MIX COMBINATIONS

	C = Control		S = Suppression or Erratic Control (Control may range from poor to excellent)		P = Poor or No Control		O = No Information	
	1 = RANCOR 4 F Alone	2 = RANCOR 4 F Split-Shot	3 = RANCOR 4 F plus trifluralin	4 = RANCOR 4 F plus metolachlor	5 = RANCOR 4 F plus pendimethalin	6 = Extended Split-Shot	7 = RANCOR 4 F plus ethalfuralin	8 = RANCOR 4 F plus linuron plus metolachlor
ANNUAL BROADLEAF WEEDS	1	2	3	4	5	6	7	8
Black Nightshade (<i>Solanum nigrum</i>)	P	P	P	C	P	C	P	S
Bristly Starbur (<i>Acanthospermum hispidum</i>)	C	C	C	C	C	C	C	C
Buffalobur (<i>Solanum rostratum</i>)	C	C	P	P	P	C	P	O
Carpetweed (<i>Mollugo verticillata</i>)	C	C	C	C	C	C	C	C
Cocklebur (<i>Xanthium pensylvanicum</i>)	S	C	S	S	S	C	S	S
Copperleaf (<i>Acalypha ostrva elolia</i>)	C	C	C	C	C	C	C	C
Florida Beggarweed (<i>Desmodium tortuosum</i>)	C	C	C	C	C	C	C	C
Florida Pusley (<i>Richardia scabra</i>)	C	C	C	C	C	C	C	C
Galinsoga (<i>Galinsoga</i> spp.)	C	C	C	C	C	C	C	C
Horseweed, Maretail (<i>Conyza canadensis</i>)	O	O	O	O	O	C	O	O
Jimsonweed (<i>Datura stramonium</i>)	C	C	C	C	C	C	C	S
Knotweed (<i>Polygonum</i> spp.)	C	C	C	C	C	C	C	C
Kochia (<i>Polygonum</i> spp.)	C	C	C	C	C	C	C	C
Lambsquarters (<i>Chenopodium</i> spp.)	C	C	C	C	C	C	C	C
Morningglory, ivyleaf (<i>Ipomoea hederacea</i>)	P	P	S	P	P	P	P	P
Morningglory, pitted (<i>Ipomoea lacunosa</i>)	P	P	S	P	P	P	P	P
Morningglory, smallflower (<i>Jacquemontia tamnifolia</i>)	P	P	C	P	P	P	P	P
Morningglory, tall (<i>Ipomoea purpurea</i>)	P	P	S	P	P	P	P	P
Pigweeds (<i>Amaranthus</i> spp.)	C	C	C	C	C	C	C	C

(continued)

WEEDS CONTROLLED BY RANCOR 4 F AND RANCOR 4 F HERBICIDE TANK-MIX COMBINATIONS (continued)

C = Control **S** = Suppression or Erratic Control **P** = Poor or No Control **O** = No Information
(Control may range from poor to excellent)

1 = **RANCOR 4 F** Alone 4 = **RANCOR 4 F** plus metolachlor 7 = **RANCOR 4 F** plus ethalfuralin
2 = **RANCOR 4 F** Split-Shot 5 = **RANCOR 4 F** plus pendimethalin 8 = **RANCOR 4 F** plus linuron plus metolachlor
3 = **RANCOR 4 F** plus trifluralin 6 = Extended Split-Shot

ANNUAL BROADLEAF WEEDS (continued)	1	2	3	4	5	6	7	8
Prickly Sida/Teaweed (<i>Sida spinosa</i>)	C	C	C	C	C	C	C	C
Purslane (<i>Portulaca oleracea</i>)	C	C	C	C	C	C	C	C
Ragweed, common (<i>Ambrosia artemisiifolia</i>)	C	C	C	C	C	C	C	C
Redweed (<i>Melochia corchorifolia</i>)	C	C	C	C	C	C	C	C
Russian Thistle (<i>Salsola kali</i>)	C	C	C	C	C	C	C	C
Sesbania (<i>Sesbania</i> spp.)	C	C	C	C	C	C	C	C
Shepherdspurse (<i>Capsella bursa-pastoris</i>)	C	C	C	C	C	C	C	C
Sicklepod (<i>Cassia obtusifolia</i>)	C	C	S	C	S	C	S	S
Smartweeds (<i>Polygonum</i> spp.)	C	C	C	C	C	C	C	S
Spotted Spurge (<i>Euphorbia maculata</i>)	C	C	P	C	P	C	P	O
Spurred Anoda (<i>Anoda cristata</i>)	C	C	C	C	C	C	C	O
Sunflower (<i>Helianthus</i> spp.)	C	C	S	S	S	C	S	P
Velvetleaf (<i>Abutilon theophrasti</i>)	C	C	C	C	C	C	C	C
Venice Mallow (<i>Hibiscus trionum</i>)	C	C	C	C	C	C	C	C
Wild Mustards (<i>Brassica</i> spp.)	C	C	C	C	C	C	C	C
ANNUAL GRASSES								
Barnyardgrass (<i>Echinochloa crus-galli</i>)	S	C	C	C	C	C	C	C
Bluegrass (<i>Poa annua</i>)	C	C	C	C	C	C	C	C
Broadleaf Signalgrass (<i>Brachiaria platyphylla</i>)	C	C	C	C	C	C	C	O
Browntop Millet (<i>Panicum ramosum</i>)	C	C	C	P	C	C	O	O
Crabgrass (<i>Digitaria</i> spp.)	C	C	C	C	C	C	C	C
Crowfootgrass (<i>Dactyloctenium aegyptium</i>)	C	C	C	C	C	C	O	O
Cupgrass (<i>Eriochloa gracilis</i>)	P	C	P	P	P	C	O	O
Foxtails (<i>Setaria</i> spp.)	S	C	C	C	C	C	C	C
Goosegrass (<i>Eleusine indica</i>)	C	C	C	C	C	C	C	C
Johnsongrass, seedling (<i>Sorghum halepense</i>)	C	C	C	C	C	C	C	O
Junglerice (<i>Echinochloa colonum</i>)	C	C	C	C	C	C	C	O
Nutsedge, yellow (<i>Cyperus esculentus</i>)	P	P	P	C	P	C	P	O

(continued)

WEEDS CONTROLLED BY RANCOR 4 F AND RANCOR 4 F HERBICIDE TANK-MIX COMBINATIONS (continued)

C = Control	S = Suppression or Erratic Control (Control may range from poor to excellent)			P = Poor or No Control			O = No Information	
1 = RANCOR 4 F Alone 2 = RANCOR 4 F Split-Shot 3 = RANCOR 4 F plus trifluralin	4 = RANCOR 4 F plus metolachlor 5 = RANCOR 4 F plus pendimethalin 6 = Extended Split-Shot	7 = RANCOR 4 F plus ethalfluralin 8 = RANCOR 4 F plus linuron plus metolachlor						
ANNUAL GRASSES (continued)	1	2	3	4	5	6	7	8
Panicum, fall (<i>Panicum dichotomiflorum</i>)	P	C	C	C	C	C	C	C
Panicum, Texas (<i>Panicum texanum</i>)	P	C	C	P	C	S	C	O
Red Rice (<i>Oryza sativa</i>)	P	C	C	C	P	C	O	O
Sandbur (<i>Cenchrus</i> spp.)	P	C	C	P	C	S	O	O
Shattercane (<i>Sorghum bicolor</i>)	P	C	C	P	P	P	C	O
Sorghum, volunteer (<i>Sorghum</i> spp.)	P	C	C	P	P	P	O	P
Sprangletop (<i>Leptochloa</i> spp.)	P	C	C	P	P	P	O	P
Stinkgrass (<i>Eragrostis</i> spp.)	P	C	C	P	P	P	O	P
Wheat, volunteer (<i>Triticum</i> spp.)	P	P	P	P	P	P	O	P
Witchgrass (<i>Panicum capillare</i>)	P	C	C	C	C	C	C	O

RANCOR 4 F Alone

RANCOR 4 F (Alone) Preemergence Application: The following rates of this product may be applied preemergence to soybeans through center pivot or lateral move sprinkler irrigation systems that apply water in a uniform manner. Refer to the **CHEMIGATION** section of this label for directions.

This product can be applied broadcast or banded. This application may be made during planting or as a separate operation after planting but before crop emergence. See the **PRODUCT INFORMATION** section in the front of this label.

Do not apply to sand soils, or to sandy loam or loamy sand soils containing less than 2% organic matter. Do not incorporate into soil or apply more than once per season.

PINTS OF RANCOR 4 F PER ACRE

SOIL TEXTURE	ORGANIC MATTER		
	Less than 2%	2 to 4%	Over 4%
Coarse Soils (Sandy loam, loamy sand)	DO NOT USE ³	3/4	1
Medium Soils¹ (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4 to 1	1 to 1-1/4	1-1/4 to 1-1/2
Fine Soils¹ (Silty clay, silty clay loam ² , clay loam)	1 to 1-1/4	1-1/4 to 1-1/2	1-1/2 to 1-3/4
Mississippi Delta Only	1-1/2	1-3/4	2

¹ For control of lambsquarters, redroot pigweed and wild mustard, and for suppression of green, yellow and giant foxtails on alkaline (calcareous) soils in Nebraska, Minnesota, South Dakota and North Dakota only, apply this product at rates of 1/2 pt/acre on medium soils and 1/2 to 3/4 pt/acre on fine soils regardless of soil organic matter percentage (use 3/4 pt only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pt/acre rate of this product alone can be applied regardless of soil pH. For control of other weeds listed on this label use this product at full rates specified in the table above, **but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.**

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

³ Refer to the appropriate section of this label for use of this product on soybeans in coarse soils with 0.5% or more organic matter in certain states.

Uses of RANCOR 4 F Herbicide in Combination with Other Herbicides

It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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 on each product in the tank mixture.

Sequential Application of Imazaquin Following RANCOR 4 F

If needed, application of this product alone or in a registered tank mix according to directions on this label, may be followed by an early postemergence application of imazaquin herbicide.

Refer to the imazaquin label for precautions, restrictions, directions, limitations, and information on environmental hazards and planting of rotational crops.

Split-Shot Application

A preplant incorporated application of this product tank mixed with either trifluralin, metolachlor, pendimethalin or ethalfluralin and followed by a preemergence surface application of this product alone after planting but prior to soybean emergence, will control more broadleaf and grass weeds in soybeans than when either herbicide is used alone.

Refer to the trifluralin, metolachlor, pendimethalin or ethalfluralin labels, and to appropriate sections of this label for directions on soil preparation, herbicide application, incorporation techniques, herbicide rates, weed species controlled, and restrictions for using tank mix combinations of this product. Carefully observe the **Precautions** section concerning the use of this product in tank mix combinations on soybeans.

When a Split-Shot application of this product with pendimethalin, trifluralin, or ethalfluralin is used, the preplant incorporated tank mix may be applied up to 21 days prior to planting soybeans; with metolachlor, the preplant incorporated tank mix may be applied up to 14 days prior to planting.

On medium and fine textured soils with greater than 2% organic matter, a rate range is specified for the preemergence overlay application. Use the higher rate (a) in fields with a history of severe broadleaf weed pressure, (b) when the time between preplant incorporated tank mix and preemergence overlay applications approaches the maximum stated above, and/or (c) when the organic matter content of the soil is at the upper end of the indicated range.

For black nightshade control, refer to the appropriate sections of the metolachlor or ethalfluralin labels for specific instructions.

SPLIT-SHOT APPLICATION

PREPLANT INCORPORATED TANK-MIX APPLICATION – FOLLOWED BY – PREEMERGENCE OVERLAY APPLICATION						
SOIL TEXTURE ¹	COMBINATION PRODUCT RATE	PLUS	RATE OF RANCOR 4 F PT/A	RATE OF RANCOR 4 F PT/A ORGANIC MATTER		
				LESS THAN 2.0%	2.0% TO 4.0%	OVER 4.0%
Coarse (Light) Soils sand, loamy sand, sandy loam	See reference ⁴	plus	1/2 – Followed By	1/4	1/4	1/4 to 1/2
Medium Soils loam, silt loam, sandy clay loam, silt, sandy clay	See reference ⁴	plus	3/4 – Followed By or 1/22 – Followed By	1/4 1/2	1/4 to 1/2 1/2 to 3/4	1/2 to 3/4 (3/4 to 1) ³
Fine (Heavy) Soils silty clay loam*, clay loam, silty clay, clay	See reference ⁴	plus	1.0 – Followed By or 3/4 ² – Followed By	1/4 1/2	1/4 to 1/2 1/2 to 3/4	1/2 to 3/4 (3/4 to 1) ³

* Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

¹ On coarse textured soils, do not use on sand soils with less than 1% organic matter, or on loamy sand or sandy loam soils with less than 0.5% organic matter. However, on coarse textured soils with a **calcareous surface area or a pH of 7.5 or higher**, do not use on sand soils with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.

² Use this lower rate of this product in the preplant incorporated tank mix **on soils having a calcareous surface area or a pH of 7.5 or higher**, and in those situations where soils within a field vary extremely in texture or organic matter content.

³ Reduce this preemergence overlay rate of this product by 1/4 pt/acre when using Split-Shot application **on soils with over 4% organic matter and which have a calcareous surface area or a pH of 7.5 or higher**.

⁴ Refer to specific trifluralin, metolachlor, pendimethalin, or ethalfluralin product label instructions.

**Extended Split-Shot Application
(Includes No-Till, Reduced-Till, Ridge-Till, Strip-Till, Mulch-Till)**

An early preplant (surface-applied or shallow incorporated) application of this product tank mixed with metolachlor, followed by a preemergence surface application of this product tank mixed with metolachlor after planting but prior to soybean emergence, will control more broadleaf and grass weeds in soybeans than either herbicide used alone. An Extended Split-Shot application will decrease the need for tillage and/or contact herbicides for control of existing vegetation prior to planting, while providing residual control of weeds after planting.

When an Extended Split-Shot application of this product with metolachlor is used, the preplant tank mix combination may be applied 15 to 30 days prior to planting soybeans. Follow directions on the label accompanying the product for Split-Shot applications from 0 to 14 days before planting.

Where a rate range is specified, use the higher rate (a) in fields with a history of severe weed pressure, (b) when the time between early preplant tank mix and preemergence overlay applications approaches the maximum 30 days, (c) when the organic matter content of the soil is at the upper end of the indicated range, (d) when heavy crop residues are present on the soil surface, and/or (e) when the early preplant tank mix application is shallow incorporated (e.g. use 2 to 2-1/2 qts Lasso in the early preplant tank mix when surface applied and use 2-1/2 to 3 qts Lasso when the tank mix is to be lightly incorporated).

When weeds exceed 1 to 1-1/2 inches in height or diameter at application, use a contact herbicide, such as glyphosate or paraquat.

Refer to the metolachlor label, and to appropriate sections of this label for additional information on soil preparation, herbicide application, weeds controlled, precautions, restrictions, limitations and sprayer clean up.

EXTENDED SPLIT-SHOT APPLICATION

EARLY PREPLANT TANK MIX APPLICATION (SURFACE-APPLIED OR SHALLOW INCORPORATED)				FOLLOWED BY	PREEMERGENCE OVERLAY APPLICATION				
SOIL TEXTURE ¹	COMBINATION PRODUCT RATE	PLUS	RATE OF RANCOR 4 F PT/A		COMBINATION PRODUCT RATE	PLUS	RATE OF RANCOR 4 F PT/A ORGANIC MATTER		
							LESS THAN 2.0%	2.0% TO 4.0%	OVER 4%
Coarse (Light) Soils sand, loamy sand, sandy loam	See reference ³	plus	1/2 to 3/4	metolachlor	See reference ³	plus	1/4	1/4 to 1/2	1/2
Medium Soils loam, silt loam, sandy clay loam, silt, sandy clay	See reference ³	plus	² 3/4 to 1	metolachlor	See reference ³	plus	1/2	1/2 to 3/4	3/4 to 1
Fine (Heavy) Soils silty clay loam*, clay loam, silty clay, clay	See reference ³	plus	² 1 to 1-1/4	metolachlor	See reference ³	plus	1/2	1/2 to 3/4	3/4 to 1

* Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

¹ On coarse textured soils, do not use on sand soil with less than 1% organic matter. However, on coarse textured soils with a **calcareous surface area or a pH of 7.5 or higher**, do not use on sand soils with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.

² Use the lower rate of this product in the early preplant tank mix on soils having a **calcareous surface area or a pH of 7.5 or higher**, and in those rare situations where **soils within a field vary extremely in texture or organic matter content**.

³ Refer to specific metolachlor product label instructions.



RANCOR 4 F Plus Ethalfluralin

RANCOR 4 F plus Ethalfluralin Overlay Application: This product may be applied as a preemergence overlay application following a preplant incorporated application of ethalfluralin. Consult the ethalfluralin label for specific directions on use, instructions, restrictions and any additional weeds not specified on this label.

RANCOR 4 F plus Ethalfluralin Tank Mix Application: Incorporate the tank mixture into the top 1 to 2 inches of soil within 21 days before planting according to label directions for ethalfluralin.

Apply this product plus ethalfluralin preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: Ethalfluralin should be uniformly applied and thoroughly mixed into the soil within 2 days after application. For specific application information, refer to the **PRODUCT INFORMATION** section in the front of this label.

Precautions (RANCOR 4 F plus Ethalfluralin):

- For additional precautions, restrictions, limitations, incorporation, and sprayer clean-up information, refer to the appropriate sections of this label and the ethalfluralin label.
- For black nightshade control, refer to the ethalfluralin label for specific rates and application instructions.

BROADCAST RATES

SOIL TEXTURE	RANCOR 4 F PT/A	ETHALFLURALIN
Coarse soils¹ (Sandy loam, loamy sand)	1/2	See reference ⁴
Medium soils³ (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	See reference ⁴
Fine soils³ (Silty clay, silty clay loam ² , clay, clay loam)	1	See reference ⁴

¹ Do not use on coarse soils with less than 1% organic matter.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

³ For control of lambsquarters, redroot pigweed, wild mustard, and green and yellow foxtails on alkaline (calcareous) soils in Minnesota, Nebraska, South Dakota, and North Dakota only, apply this product at rates of 1/2 pt/acre on medium soils and 1/2 to 3/4 pt/acre on fine soils regardless of soil organic matter percentage (use 3/4 pt only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pt rate of this product in tank mix combination with ethalfluralin can be applied regardless of soil pH. For control of other weeds not listed on the label, use this product at full rates specified in the table above, **but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.**

⁴ Refer to specific ethalfluralin product label instructions.

RANCOR 4 F Plus Trifluralin

Restrictions

- Do not plant soybeans deeper than 2 inches.
- Do not rotate any crop not listed on this label for 18 months after the tank-mix application.
- Do not use this tank mix combination on soils containing charcoal in Arkansas, Louisiana and Mississippi.

Precautions

- Seedling disease, cold weather, excessive moisture, high salt concentration or drought may weaken soybean seedlings and increase possibility of damage from the tank mix.

For additional precautions, restrictions, limitations and sprayer clean-up information refer to the appropriate section of this label.

RANCOR 4 F and Trifluralin Overlay Application: This product may be applied as a preemergence broadcast or band overlay application following a pre-plant incorporated treatment of trifluralin. Consult the trifluralin label for specific directions for use, instructions, restrictions and any additional weeds not specified on this label.

RANCOR 4 F plus Trifluralin Tank Mix Application: A single application of a tank mix combination of this product and trifluralin will control more broadleaf and grass weeds in soybeans than when either herbicide is used alone.

Prepare the soil surface by deep plowing, offset disking or tandem disking prior to the application of the herbicide combination. The soil surface should be well prepared and free of clods and trash.

This product plus trifluralin tank mix combination may be applied and incorporated into the soil up to 10 days before planting.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: For specific information refer to the **PRODUCT INFORMATION** section in the front of this label.

Apply this product plus trifluralin to the soil surface and incorporate in the same operation, if possible. Variable weed control may result from delayed incorporation if this product plus trifluralin are applied to a wet, warm soil surface or if the wind velocity is 10 mph or higher. Use machinery that mixes this product plus trifluralin thoroughly with the soil. Incorporation may be delayed up to 24 hours after application. Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Do not use spike or spring-tooth harrows alone for incorporation.

BROADCAST RATES

SOIL TEXTURE	RANCOR 4 F PT/A	TRIFLURALIN
Coarse soils¹ (Sandy loam, loamy sand)	1/2	See reference ⁴
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	See reference ⁴
Fine soils (Silty clay, silty clay loam ² , clay, clay loam) ³	1	See reference ⁴

¹ Do not use on coarse soils with less than 1% organic matter.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

³ For control of lambsquarters, redroot pigweed, wild mustard, and green and yellow foxtails on alkaline (calcareous) soils in Minnesota, Nebraska, South Dakota, and North Dakota only, apply this product at rates of 1/2 pt/acre on medium soils and 1/2 to 3/4 pt/acre on fine soils regardless of soil organic matter percentage (use 3/4 pt only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pt rate of this product in tank mix combination with trifluralin can be applied regardless of soil pH. For control of other weeds listed on the label use this product at full rates specified in the table above, **but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.**

⁴ Refer to specific trifluralin product label instructions.

Incorporation Equipment:

Set PTO driven equipment (tillers, cultivators, hoes) to cut 2 to 3 inches deep and space rotors to provide a clean sweep of the soil. PTO equipment should not be operated at a speed greater than 4 miles per hour.

Set disk to cut 4 to 6 inches deep and operate twice in different directions at 4 to 6 miles per hour.

Set mulch treader and other similar disk-type implements to cut 3 to 4 inches deep and operate twice in different directions at 5 to 8 miles per hour.

For Coarse and Medium Textured Soils Only:

Set rolling cultivator to cut 2 to 4 inches deep and operate twice at 6 to 8 miles per hour.
Set bed conditioner (Do-All) to cut 2 to 4 inches deep and operate at 4 to 6 miles per hour.

RANCOR 4 F Plus Metolachlor Tank Mix Applications

Preplant Incorporated Application: Incorporate the tank mixture into the top 2 inches of soil within 14 days before planting using a disk, harrow, rolling cultivator or similar implement. Apply this product plus metolachlor preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation.

Preemergence Application: Dry weather following preemergence application of this product plus metolachlor tank mixture may reduce effectiveness. If weeds develop, cultivate uniformly with shallow tillage equipment such as a rotary hoe that will not damage soybeans.

Mixing Instruction: Refer to the **PRODUCT INFORMATION** section in the front of this label.

For information on applying this product in fluid or dry fertilizer refer to the **Application of RANCOR 4 F in Fluid Fertilizers or Commercial Impregnation and Application of RANCOR 4 F on Dry Bulk Fertilizer** under the **PRODUCT INFORMATION** section in the front of this label.

BROADCAST RATES RANCOR 4 F PLUS METOLACHLOR TANK MIX PREEMERGENCE APPLICATIONS		
0.5% TO 3% ORGANIC MATTER		
SOIL TEXTURE	RANCOR 4 F PT/A	METOLACHLOR
Coarse soils¹ (Loamy sand, sandy loam)	1/2	See reference ³
Medium soils (Loam, silt loam, silt)	3/4	See reference ³
Fine soils (Silty clay loam ² , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1	See reference ³
Mississippi Delta Only (Silty clay, clay)	1-1/2	See reference ³
OVER 3% ORGANIC MATTER		
Coarse soils¹ (Loamy sand, sandy loam)	3/4	See reference ³
Medium soils (Loam, silt loam, silt)	1	See reference ³
Fine soils (Silty clay loam ² , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1 to 1-1/4	See reference ³
Mississippi Delta Only (Silty clay, clay)	1-1/2	See reference ³

¹ Do not use on sand soils. Do not apply this product and metolachlor overlay or tank mix preemergence on loamy sand with less than 2% organic matter.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

³ Refer to specific metolachlor product label instructions.

BROADCAST RATES RANCOR 4 F PLUS METOLACHLOR TANK MIX PREPLANT INCORPORATED APPLICATIONS		
0.5% TO LESS THAN 3% ORGANIC MATTER		
SOIL TEXTURE	RANCOR 4 F PT/A	METOLACHLOR
Coarse soils¹ (Loamy sand, sandy loam)	1/2	See reference ³
Medium soils (Loam, silt loam, silt)	3/4	See reference ³
Fine soils (Silty clay loam ² , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1	See reference ³
Mississippi Delta Only (Silty clay, clay)	1 to 1-1/4	See reference ³
3% OR GREATER ORGANIC MATTER		
Coarse soils¹ (Loamy sand, sandy loam)	1/2	See reference ³
Medium soils (Loam, silt loam, silt)	3/4	See reference ³
Fine soils (Silty clay loam ² , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1	See reference ³
Mississippi Delta Only (Silty clay, clay)	1 to 1-1/4	See reference ³

¹ Do not use on sand soils. Do not apply this product plus metolachlor tank mix pre plant incorporated on sand or loamy sand with less than 2% organic matter or crop injury may occur.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

³ Refer to specific metolachlor product label instructions.

Precautions (RANCOR 4 F and Metolachlor):

- For additional precautions, restrictions, limitations, and sprayer clean up information refer to the appropriate sections of this label and the metolachlor label.

RANCOR 4 F Plus Pendimethalin

RANCOR 4 F plus Pendimethalin Overlay Application:

Apply a preplant incorporated treatment of pendimethalin as directed on that product label for use on soybeans. Follow with a preemergence treatment of this product as directed on this label for use on soybeans.

RANCOR 4 F plus Pendimethalin Tank Mix Application

Preplant Incorporated Application: Prepare the soil by plowing or disking to mix previous crop residues into the soil to a depth of 4 to 6 inches.

For specific application information refer to the **PRODUCT INFORMATION** section in the front of this label.

Incorporate the tank mixture into the top 1 or 2 inches of soil within 7 days after application according to label directions for pendimethalin. Mechanical incorporation is not required if a rain of 1/4-inch or more occurs within 7 days after application. Soybeans must be planted no later than 7 days after application of the tank mixture.

Preemergence Application: Except for the minimum and no-tillage system, the seed bed should be free of trash and clods.

For specific application information refer to the **PRODUCT INFORMATION** section in the front of this label. Do not apply pendimethalin preemergence north of Interstate 80. This application must be made after planting and before crop emergence. Do not incorporate. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain or irrigation, use shallow tilling equipment such as a rotary hoe that does not damage soybeans.

Mixing Instructions: Refer to the **PRODUCT INFORMATION** section in the front of this label.

For information on applying this product in fluid or dry fertilizer refer to the **Application of RANCOR 4 F In Fluid Fertilizers** or **Commercial Impregnation and Application of RANCOR 4 F On Dry Bulk Fertilizer** under the **PRODUCT INFORMATION** section in the front of this label.

Southern States and Eastern Coastal Plains

For use only in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, Southeastern Missouri "Bootheel" Region and Coastal Plains of Delaware*, Maryland*, New Jersey* and Virginia*.

* Do not use **RANCOR 4 F**/pendimethalin on soils with less than 2% organic matter in the coastal plain of New Jersey or the Delmarva Peninsula.

BROADCAST RATES RANCOR 4 F PLUS PENDIMETHALIN TANK MIX APPLICATIONS		
SOIL TEXTURE	RANCOR 4 F PT/A	PENDIMETHALIN
Coarse soils¹ (Sandy loam, loamy sand)	1/2	See reference ³
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	See reference ³
Fine soils (Silty clay, silty clay loam ² , clay, clay loam)	1	See reference ³

¹ Do not use on sand soils. Do not use on loamy sand or sandy loam containing less than 1% organic matter.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in certain regions of the U.S. Do not use on muck or peat soils.

³ Refer to specific pendimethalin product label instructions.

Northeastern and North Central States

For use only in Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Wisconsin and Missouri (except the 'Bootheel' Region).

BROADCAST RATES RANCOR 4 F PLUS PENDIMETHALIN TANK MIX APPLICATIONS		
1/2 TO 3% ORGANIC MATTER		
SOIL TEXTURE	RANCOR 4 F PT/A	PENDIMETHALIN
Coarse soils¹ (Sandy loam, loamy sand)	1/2	See reference ³
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	See reference ³
Fine soils (Silty clay, silty clay loam ² , clay, clay loam)	3/4 to 1	See reference ³
OVER 3% ORGANIC MATTER		
Coarse soils¹ (Sandy loam, loamy sand)	3/4	See reference ³
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4 to 1	See reference ³
Fine soils (Silty clay, silty clay loam ² , clay, clay loam)	1 to 1-1/4	See reference ³

¹ Do not use on sand soils. Do not use on loamy sand or sandy loam containing less than 1% organic matter. Where a range of rates is shown for medium and fine soils, use the higher rate if heavy weed infestations are anticipated.

² Silty clay loam soils are transitional soils and may be classified as medium textured soils in certain areas of the U.S. Do not use on muck or peat soils.

³ Refer to specific pendimethalin product label instructions.

Precautions (RANCOR 4 F plus Pendimethalin):

- Soil incorporation deeper than directed will reduce weed control and can result in crop injury.
- For additional precautions, restrictions, limitations, and sprayer clean-up information, refer to the appropriate sections of this label and the pendimethalin label.

RANCOR 4 F Plus Clomazone

This product may be applied in combination with clomazone as a preplant or shallow incorporated application for the control of certain weeds in soybeans. Consult the clomazone label for specific directions on use, instructions, restrictions and any additional weeds not specified on this label.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Use Restrictions (RANCOR 4 F plus Clomazone):

- Do not rotate to wheat, barley, alfalfa or seed corn in the fall of the year of application or in the spring of the following year as crop injury may occur.
- Do not rotate any crop not listed on this label for 18 months following application.
- Do not apply when weather conditions favor drift.
- Do not use treated vines for feed or forage.
- Do not apply aerially or through irrigation equipment.

Application: This product plus clomazone may only be applied with ground equipment as a preplant or shallow incorporated application. This product plus clomazone should be immediately incorporated into the top 1 to 3 inches after application unless surface is dry. On dry soils, incorporate into the top 1 to 3 inches within 3 hours of tank mix application.

Do not apply this tank mix within 1000 feet of towns and subdivisions, commercial vegetable, fruit, nurseries or greenhouse operations.

A minimum of 15 gallons spray volume per acre is required with appropriate nozzle types and sizes to produce a coarse spray droplet. The use of an approved agricultural drift reducing additive is recommended for application volumes of 15 to 40 gallons per acre. The use of an approved agricultural drift reducing additive is required at spray volumes of 10 to 15 gallons per acre.

NOTE: Off-site movement of clomazone spray drift or vapors can cause foliar whitening or yellowing of some vegetation. Prior to application of clomazone, read and strictly follow all precautions, restrictions and application instructions as set forth in that label. For additional information on application, refer to the **PRODUCT INFORMATION** section in the front of this label and the clomazone label.

Weeds Controlled: Bristly Starbur, Carpetweed, Copperleaf, Florida Beggarweed, Florida Pusley, Galinsoga, Jimsonweed, Knotweed, Lambsquarters, Pigweeds, Prickly Sida/Teaweed, Purslane, Common Ragweed, Redweed, Sesbania, Smartweeds, Spurred Anoda, Velvetleaf, Venice Mallow, Wild Mustards, Barnyardgrass*, Bluegrass, Broadleaf Signalgrass, Crabgrass*, Foxtails (Green, Giant, Yellow*, Robust Purple), Goosegrass, Johnsongrass (seedling)*, Fall Panicum*, Texas Panicum, and witchgrass.

*Refer to clomazone label for use rates on coarse and medium textured soils with high populations of these weeds.

APPLICATION INSTRUCTIONS

RANCOR 4 F Plus Clomazone Tank Mix Preplant Incorporated Application (Broadcast Rates)

0.5% TO 3% ORGANIC MATTER		
SOIL TEXTURE	RANCOR 4 F PT/A	CLOMAZONE
Coarse soils² (Sandy loam, loamy sand)	1/2	See reference ⁴
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	1/2 to 3/4	See reference ⁴
Fine soils (Silty clay, silty clay loam ³ , clay, clay loam)	1/2 to 3/4	See reference ⁴

(continued)

OVER 3% ORGANIC MATTER

SOIL TEXTURE	RANCOR 4 F PT/A	CLOMAZONE
Coarse soils² (Sandy loam, loamy sand)	1/2	See reference ⁴
Medium soils (Loam, silt loam, silt, sandy clay, sandy clay loam)	1/2 to 3/4	See reference ⁴
Fine soils (Silty clay, silty clay loam ³ , clay, clay loam)	3/4 to 1	See reference ⁴

¹ Crop injury may occur on soils having a calcareous surface area or a pH of 7.1 or higher.

² Do not use on coarse soils with less than 1% organic matter.

³ Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

⁴ Refer to specific clomazone product label instructions.

RANCOR 4 F Plus Metribuzin + Chlorimuron Plus a Grass Herbicide

Use Restriction

- Do not use treated vines for feed or forage.

Use Precaution:

- For additional precautions, restrictions, limitations and sprayer clean-up information, refer to the appropriate sections of the labels for this product and the metribuzin + chlorimuron label.

A tank combination of this product plus metribuzin + chlorimuron plus a registered grass herbicide (metolachlor, pendimethalin, ethalfuralin or trifluralin) may be used for control of the following weeds in soybeans:

WEEDS CONTROLLED

ANNUAL GRASSES	
Barnyardgrass Bluegrass Broadleaf Signalgrass Browntop Millet Crabgrass Crowfootgrass Foxtails Goosegrass	Johnsongrass, seedling Junglerice Panicum, fall Panicum, Texas Sandbur Sprangletop Stinkgrass
ANNUAL BROADLEAVES	
Bristly Starbur Carpetweed Cocklebur Copperleaf Hophornbeam Florida Beggarweed Florida Pusley Galinsoga Jimsonweed Knotweed Kochia Lambsquarters Pigweed	Prickly Sida/Teaweed Purslane Ragweed, common Redweed Russian Thistle Sesbania Shepherdspurse Smartweed Spurred Anoda Velvetleaf Venice Mallow Wild Mustard

Tank mix combinations which include metolachlor or pendimethalin can be applied pre-emergence broadcast or preplant incorporated broadcast. When ethalfuralin or trifluralin are used in the tank mix, apply preplant incorporated broadcast. Refer to the table below for rates of each product to be used in tank mix combinations:

APPLICATION INSTRUCTIONS

RANCOR 4 F Plus Metribuzin + Chlorimuron Plus a Grass Herbicide (Broadcast Rates)

SOIL TEXTURE ¹			
PRODUCT	COARSE ²	MEDIUM	FINE
RANCOR 4 F (Pt/Acre)	1/2	1/2 to 3/4 ³	3/4 to 1 ³
Metribuzin + Chlorimuron	See reference ⁴	See reference ⁴	See reference ⁴
Trifluralin	See reference ⁴	See reference ⁴	See reference ⁴
Metolachlor	See reference ⁴	See reference ⁴	See reference ⁴
Pendimethalin	See reference ⁴	See reference ⁴	See reference ⁴
Ethalfuralin	See reference ⁴	See reference ⁴	See reference ⁴

¹ Do not use on soils with a pH greater than 7.0.

² Refer to **Soil Texture** paragraph on this label for specific soil classification.

³ Use the lower rate of this product in preplant incorporated tank-mix as in those situations where soils within a field vary extremely in texture or organic matter content.

⁴ Refer to specific metribuzin + chlorimuron, trifluralin, metolachlor, pendimethalin, or ethalfuralin product label instructions.

Refer to the **PRODUCT INFORMATION** section of this label for mixing and application directions.

IMPORTANT: If weeds escape in fields treated with these tank mix combinations, postemergence application of a registered herbicide will be needed for control.

RANCOR 4 F Plus Clomazone Plus a Grass Herbicide

This product may be applied with clomazone and a grass herbicide (trifluralin, metolachlor, pendimethalin or ethalfuralin) for the control of certain broadleaf weeds and grasses in soybeans. This combination will provide improved control of heavy infestations of velvetleaf, Jimsonweed and common ragweed. This product and clomazone plus a grass herbicide may be applied preplant incorporated broadcast. Consult the clomazone, trifluralin, metolachlor, pendimethalin or ethalfuralin labels for specific directions for use, instructions, restrictions and additional weeds controlled not specified on this label.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: For specific application information, refer to the **PRODUCT INFORMATION** section in the front of this label.

WEEDS CONTROLLED

ANNUAL GRASSES	
Barnyardgrass	Foxtails
Bluegrass	Goosegrass
Broadleaf signalgrass	Johnsongrass, seedling
Browntop millet	Panicum, Fall
Crabgrass	Witchgrass
Crowfootgrass	

(continued)

ANNUAL BROADLEAVES

Bristly Starbur	Purslane
Carpetweed	Ragweed, common
Copperleaf	Redweed
Hophornbeam	Russian Thistle
Florida Beggarweed	Sesbania
Florida Pusley	Shepherdspurse
Galinsoga	Sicklepod
Jimsonweed	Smartweeds
Knotweed	Spotted spurge
Kochia	Spurred Anoda
Lambsquarters	Velvetleaf
Pigweeds	Venice mallow
Prickly Sida/Teaweed	Wild Mustards

This product and clomazone plus trifluralin, metolachlor, pendimethalin or ethalfuralin will provide suppression (reduce the competition) of cocklebur and sunflower.

APPLICATION INSTRUCTIONS

RANCOR 4 F plus Clomazone plus Grass Herbicide (Broadcast Rates)

SOIL TEXTURE ¹			
PRODUCT	COARSE ²	MEDIUM	FINE
RANCOR 4 F (Pt/Acre)	1/2	1/2 to 3/4 ²	3/4 to 1 ²
Clomazone	See reference ⁴	See reference ⁴	See reference ⁴
Trifluralin	See reference ⁴	See reference ⁴	See reference ⁴
Metolachlor	See reference ⁴	See reference ⁴	See reference ⁴
Pendimethalin	See reference ⁴	See reference ⁴	See reference ⁴
Ethalfuralin	See reference ⁴	See reference ⁴	See reference ⁴

¹ Refer to **Soil Texture** paragraph on this label for specific soil classification. On coarse textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on loamy sand or sandy loam soils with less than 1% organic matter.

² The higher rate of this product should be used for the control of sicklepod and hemp sesbania. Use the lower rate of this product in the preplant incorporated tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those situations where soils within a field vary extremely in texture or organic matter content.

³ Higher rate should be used under moderate to heavy weed infestations.

⁴ Refer to clomazone, trifluralin, metolachlor, pendimethalin, or ethalfuralin product label instructions.

RANCOR 4 F Plus Imazaquin Plus A Grass Herbicide

This product may be applied with imazaquin herbicide and a grass herbicide (trifluralin, metolachlor, pendimethalin or ethalfuralin) for the control of certain broadleaf weeds and grasses in soybeans. This product and imazaquin plus trifluralin or ethalfuralin may be applied preplant incorporated broadcast. This product and imazaquin plus metolachlor or pendimethalin may be applied preplant incorporated, preemergence broadcast or in a band application.

Consult the imazaquin, trifluralin, metolachlor, pendimethalin or ethalfuralin labels for specific directions for use, instructions, restrictions and additional weeds controlled not specified on this label.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: For specific application information, refer to the **PRODUCT INFORMATION** section in the front of this label.



Weeds Controlled: This product plus Imazaquin plus trifluralin, metolachlor, pendimethalin or ethalfluralin will control the following broadleaf weeds and grasses:

WEEDS CONTROLLED

ANNUAL GRASSES	
Barnyardgrass Bluegrass Broadleaf Signalgrass Browntop Millet Crabgrass Crowfootgrass	Foxtails Goosegrass Johnson grass (seedling) Panicum, Fall Witchgrass
ANNUAL BROADLEAVES	
Bristly Starbur Buffalobur Carpetweed Cocklebur Coffee Senna Copperleaf Hophornbeam Florida Beggarweed Florida Pusley Galinsoga Jimsonweed Knotweed Kochia Lambsquarters Morningglory, pitted Morningglory, small-flower	Pigweeds Prickly Sida/Teaweed Purslane Ragweed, common Redweed Russian Thistle Sesbania Shepherdspurse Sicklepod Smartweeds Spotted spurge Spurred Anoda Sunflower Velvetleaf Venice mallow Wild mustards

This product and imazaquin plus trifluralin, metolachlor, pendimethalin or ethalfluralin will suppress (reduce the competition of) ivyleaf and tall morningglory, and red rice.

RANCOR 4 F PLUS IMAZAQUIN PLUS A GRASS HERBICIDE (Broadcast Rates)

PRODUCT	SOIL TEXTURE ¹		
	COARSE ²	MEDIUM	FINE
RANCOR 4 F (Pt/Acre)	1/2	1/2 to 3/4 ²	3/4 to 1 ²
Imazaquin	See reference ⁴	See reference ⁴	See reference ⁴
Trifluralin	See reference ⁴	See reference ⁴	See reference ⁴
Metolachlor	See reference ⁴	See reference ⁴	See reference ⁴
Pendimethalin	See reference ⁴	See reference ⁴	See reference ⁴
Ethalfluralin	See reference ⁴	See reference ⁴	See reference ⁴

¹ Refer to **Soil Texture** paragraph on this label for specific soil classification. On coarse textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on loamy sand or sandy loam soils with less than 1% organic matter.

² The higher rate of this product should be used for preemergence tank mix application and for the control of sicklepod and hemp sesbania. Use the lower rate of **RANCOR 4 F** in the preplant incorporated tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those situations where soils within a field vary extremely in texture or organic matter content.

³ Higher rate should be used under moderate to heavy weed infestations.

⁴ Refer to specific imazaquin, trifluralin, metolachlor, pendimethalin, or ethalfluralin product label instructions.

RANCOR 4 F PLUS IMAZETHAPYR AND A GRASS HERBICIDE

RANCOR 4 F may be tank mixed with an imazethapyr herbicide and a registered grass herbicide (metolachlor, pendimethalin, ethalfluralin or trifluralin) for control of certain broadleaf and grass weeds in soybeans. Refer to the product labels for imazethapyr, metolachlor, pendimethalin, ethalfluralin or trifluralin for additional directions for use, instructions, restrictions and limitations not included on this label.

Tank mix combinations of **RANCOR 4 F**, imazethapyr and metolachlor, or pendimethalin can be applied broadcast preemergence or preplant incorporated. When the grass herbicide used is ethalfluralin or trifluralin, apply the tank mix broadcast preplant incorporated.

Mixing and Application: Refer to the **PRODUCT INFORMATION** section of this label for directions on mixing and application of **RANCOR 4 F**.

APPLICATION INSTRUCTIONS

RANCOR 4 F Plus Imazethapyr and a Grass Herbicide*

SOIL TEXTURE	RANCOR 4 F PT/ACRE	IMAZETHAPYR
Coarse soils	1/2	See reference ¹
Medium soils	3/5 to 3/4	See reference ¹
Fine soils	3/4 to 1	See reference ¹

* For control of grass weeds include metolachlor, pendimethalin, ethalfluralin or trifluralin at label rates in the tank mix with **RANCOR 4 F** and imazethapyr herbicides.

¹ Refer to specific imazethapyr label instructions.

Restrictions and Limitations: Do not apply this tank mix with aerial or irrigation equipment. Do not apply when weather conditions favor drift, or allow sprays to drift on to adjacent desirable plants. Do not use treated vines for feed or forage. Refer to appropriate sections of the Imazethapyr herbicide label for restrictions on use area and rotational crops.

RANCOR 4 F PLUS IMAZETHAPYR PLUS HERBICIDE

Mixing and Application: Refer to the **PRODUCT INFORMATION** section of this label for directions on mixing and application of **RANCOR 4 F**.

APPLICATION INSTRUCTIONS

RANCOR 4 F Plus Imazethapyr (Broadcast Rates)

SOIL TEXTURE	RANCOR 4 F PT/ACRE	IMAZETHAPYR
Coarse soils	1/2	See reference ¹
Medium soils	3/5 to 3/4	See reference ¹
Fine soils	3/4 to 1	See reference ¹

¹ Refer to specific imazethapyr label instructions.

Restrictions and Limitations:

- Do not apply this tank mix with aerial or irrigation equipment. Do not apply when weather conditions favor drift, or allow sprays to drift on to desirable plants.
- Do not use treated vines for feed or forage.
- Refer to appropriate sections of the imazethapyr label for restrictions on use area and rotational crops.

RANCOR 4 F PLUS LINURON PLUS METOLACHLOR

Tank Mix Application: **RANCOR 4 F** may be applied in combination with linuron and metolachlor as a preemergence application for the control of certain weeds in soybeans. Consult the linuron or metolachlor labels for specific directions for use, instructions, restrictions and any additional weeds not specified on this label.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: Applications can be made only with ground spray equipment in accordance with specified soil types and dosage rates. For specific application information, refer to the **PRODUCT INFORMATION** section in the front of this label.

**RANCOR 4 F Plus Linuron Plus Metolachlor
Broadcast Rates (0.5 to 3% Organic Matter Only)**

SOIL TEXTURE			
PRODUCT	COARSE ¹ (Sandy, loamy sand, sandy loam)	MEDIUM (Loam, silt loam, silt, sandy)	FINE (Silty clay, sandy clay loam, clay, silty clay loam ² , clay, clay loam)
RANCOR 4 F (Pt/Acre)	1/4 to 3/8	3/8 to 1/2	1/2 to 3/4
Linuron	See reference ³	See reference ³	See reference ³
Metolachlor	See reference ³	See reference ³	See reference ³

¹ Do not use RANCOR 4 F plus linuron plus (Lasso or Metolachlor) on sand soils with less than 1% organic matter.
² Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.
³ Refer to specific linuron or metolachlor product label instructions.

Precautions (RANCOR 4 F plus Linuron plus Metolachlor): For additional precautions, restrictions, limitations, and sprayer clean-up information, refer to the appropriate sections of this label and the linuron label and the metolachlor labels.

FOR USE IN COARSE (LIGHT) SOILS IN Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

RANCOR 4 F herbicide may be used alone or in combination with trifluralin or metolachlor for use in coarse textured, low organic matter soils in the states listed above for the control of certain weeds in soybeans. Refer to the appropriate sections of this label and the trifluralin or metolachlor labels for specific directions for use, instructions, restrictions and any additional weeds not specified on this label.

Mixing: Refer to the **PRODUCT INFORMATION** section in the front of this label.

Application: For specific application information, refer to the **PRODUCT INFORMATION** section in the front of this label.

**RANCOR 4 F (Alone) Preemergence Application
(Broadcast Rates)**

SOIL TEXTURE	ORGANIC MATTER	RANCOR 4 F PT/ACRE
Coarse (Light) Soils Sand ¹ , Loamy Sand, Sandy Loam	0.5% or Above	1/2 to 3/4 ²

¹ Do not use on sand with less than 1% organic matter.
² Use the higher rate under heavy weed pressures and/or on soils higher in organic matter.

RANCOR 4 F in Combination with Other Herbicides: RANCOR 4 F may be used in a tank mix combination with trifluralin as a preplant incorporated application or as a preemergence overlay application following a preplant incorporated application of trifluralin. RANCOR 4 F may also be used as a preemergence application in combination with metolachlor.

Use Restrictions:

- Do not use on sand soils with less than 1% organic matter, or on sandy loam or loamy sand soils with less than 0.5% organic matter.
- For additional precautions, restrictions, limitations and sprayer clean-up information, refer to the appropriate sections of this label and the Trifluralin, Lasso or Metolachlor labels.

BURNDOWN WEED CONTROL - FIELD CORN AND SOYBEANS

RANCOR 4 F can be used as part of an herbicide program for burndown of existing vegetation prior to crop emergence in conservation tillage systems. RANCOR 4 F may be tank mixed with 2,4-D low volatile ester (LVE), paraquat, or glyphosate for control of emerged weeds prior to field corn or soybean emergence.

RANCOR 4 F tank mixes with 2,4-D, fluazifop-P-butyl + fenoxaprop-P-ethyl, sethoxydim or clethodim may also be used in soybeans for control of emerged weeds prior to crop emergence. RANCOR 4 F burndown tank mixes can be applied before planting or prior to crop emergence in the following areas:

Field Corn:

Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin

Soybeans:

All areas for all products except fluazifop-P-butyl + fenoxaprop-P-ethyl tank mixes - see fluazifop-P-butyl + fenoxaprop-P-ethyl section of this label for specified states.

Application: RANCOR 4 F may be applied up to 30 days prior to planting or pre-emergence. Apply only by ground equipment when RANCOR 4 F is used for burndown of existing vegetation in conservation tillage systems. RANCOR 4 F and tank mix partner burndown rates are listed in the following three tables.

RANCOR 4 F BURNDOWN RATES-FIELD CORN AND SOYBEANS

CROPS	APPLICATION TIMING	RANCOR 4 F RATE (PT/A)
Field corn Iowa Kansas Missouri Nebraska South Dakota	Preplant (0 to 30 days) Preemergence	3 to 8
Field corn Illinois Indiana Kentucky Michigan Minnesota Ohio Wisconsin	Preplant (10 to 30 days) Preplant (0 to 9 days) Preemergence	3 to 8 3 to 6
Soybeans	Preplant (0 to 30 days) Preemergence	3 to 8

RANCOR 4 F PLUS TANK MIX PARTNER BURNDOWN RATES-FIELD CORN OR SOYBEANS

PRODUCT	RATE	DIRECTIONS AND APPLICATION INSTRUCTIONS
RANCOR 4 F + 2,4-D	3 to 8 fl oz/A* + See reference ¹	In soybeans, apply as per specific 2,4-D label instructions. Include crop oil concentrate (COC) at the rate of 1 gal/100 gal of spray solution (1% v/v). In corn, apply at least 7 days preplant or at least 3 days after planting but before corn emergence.
RANCOR 4 F + Paraquat	3 to 8 fl oz/A* + See reference ¹	Must be applied prior to crop emergence. Refer to specific paraquat label for use rates. Apply in 20 to 60 gallons of water per acre. Include either nonionic surfactant at 1 quart per 100 gallons (0.25% v/v) or crop oil concentrate at 1 gallon per 100 gallons (1% v/v) of spray solution.
RANCOR 4 F + Paraquat + 2,4-D	3 to 8 fl oz/A* + See reference ¹ + See reference ¹	For this tank mix follow the Directions and Remarks Sections above for RANCOR 4 F + 2,4-D and RANCOR 4 F + paraquat, paying special attention to crop planting restrictions with 2,4-D. Include either nonionic surfactant or crop oil concentrate in this tank mix.
RANCOR 4 F + Glyphosate	3 to 8 fl oz/A* + See reference ¹	Must be applied prior to crop emergence. Use the higher rates as weeds approach the maximum weed heights listed in the Weeds Controlled section below. Apply in 10 to 20 gallons of water per acre. With glyphosate, include nonionic surfactant at 2 quarts per 100 gallons (0.5% v/v) and ammonium sulfate (spray grade) at 17 pounds per 100 gallons of spray solution. With glyphosate, include ammonium sulfate (spray grade) at 17 pounds per 100 gallons of spray solution. Any glyphosate formulation registered and labeled for use in field corn or soybeans may be tank mixed with RANCOR 4 F .
RANCOR 4 F + Glyphosate + 2,4-D	3 to 8 fl oz/A* + See reference ¹ + See reference ¹	For this tank mix follow the Directions and Remarks Sections above for RANCOR 4 F + 2,4-D and RANCOR 4 F + Glyphosate, paying special attention to planting restrictions with 2,4-D. Use the adjuvant recommendations under the RANCOR 4 F + Glyphosate tank mix. Do not use crop oil concentrate.
* If applied to field corn grown in Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio and Wisconsin, refer to RANCOR 4 F BURNDOWN RATE-FIELD CORN AND SOYBEANS table for correct dosage of this product rate based on application timing.		
¹ Refer to specific 2,4-D, paraquat, or glyphosate product label instructions.		

RANCOR 4 F PLUS TANK MIX PARTNER BURNDOWN RATES - FIELD CORN OR SOYBEANS

PRODUCT	RATE	DIRECTIONS AND APPLICATION INSTRUCTIONS
RANCOR 4 F + 2,4-D	3 to 8 fl oz/A + See reference ¹	Apply preplant or before soybean emergence. Include nonionic surfactant at 2 quarts per 100 gallons (0.5% v/v) of spray solution.
RANCOR 4 F + Fluazifop-P-butyl + fenoxaprop-P-ethyl + 2,4-D	3 to 8 fl oz/A + See reference ¹ + See reference ¹	For use in Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, West Virginia, and Wisconsin. For this tank mix follow the planting restrictions under the Directions and Remarks Section above for RANCOR 4 F + 2,4-D. Refer to fluazifop-P-butyl + fenoxaprop-P-ethyl label for rates and control. Include either crop oil concentrate at 1 gallon per 100 gallons (1.0% v/v) or nonionic surfactant at 1 to 2 quarts per 100 gallons (0.25 - 0.5% v/v) of spray solution. Refer to the fluazifop-P-butyl + fenoxaprop-P-ethyl label for additional information.
RANCOR 4 F + Glyphosate + 2,4-D	3 to 8 fl oz/A + See reference ¹ + See reference ¹	For this tank mix follow the Directions and Remarks Sections above for RANCOR 4 F + 2,4-D and RANCOR 4 F + Glyphosate, paying special attention to planting restrictions with 2,4-D. Use the adjuvant recommendations under the RANCOR 4 F + Glyphosate tank mix. Do not use crop oil concentrate.
RANCOR 4 F + Clethodim + 2,4-D	3 to 8 fl oz/A + See reference ¹ + See reference ¹	For this tank mix follow the planting restrictions under the Directions and Remarks Section above for RANCOR 4 F + 2,4-D. Refer to the clethodim label for specific rates and control. Include crop oil concentrate at the rate of 1 quart per acre and 28% UAN (urea ammonium nitrate) at a rate of 1-2 quarts per acre. Refer to the clethodim label for additional information.
¹ Refer to specific 2,4-D, Fluazifop-P-butyl + fenoxaprop-P-ethyl, glyphosate, or clethodim product label instructions.		

Use Restrictions: Do not apply these treatments after crop emergence. Observe all precautions and limitations on the labeling of all products used in tank mixtures. Refer to the **PRODUCT INFORMATION** section of this label for additional information, restrictions, and limitations.

Field Corn:

- Do not apply on coarse textured soils with less than 1.5% organic matter.
- Do not apply more than 6 fl oz of **RANCOR 4 F** per acre on soils with less than 2% organic matter.
- Do not apply on soils having pH 7.0 or greater.
- Do not apply more than 8 fl oz **RANCOR 4 F** (0.25 pound active ingredient) per acre per growing season.
- Plant corn seed a minimum of 1-1/2 inches deep.
- RANCOR 4 F** may only be used in hybrid seed corn production fields if both inbred parents are known to be tolerant to **RANCOR 4 F**.

Soybeans:

- Apply only 2,4-D low volatile ester formulations which are registered for preplant or burndown use in soybeans.
- Do not apply tank mixtures containing 2,4-D if wind is blowing toward desired susceptible plants (i.e. cotton, tobacco, tomato, etc.) or when wind speeds exceed 6 miles per hour.

Feeding Restrictions. Corn treated with **RANCOR 4 F** may be harvested for silage or grain 60 days after treatment. Soybean vines or hay treated with **RANCOR 4 F** may be grazed or fed to livestock 40 days after application. Do not feed hay, forage, fodder or graze 2,4-D, clethodim, or fluazifop-P-butyl + fenoxaprop-P-ethyl treated vegetation. Follow the most restrictive preharvest interval of all products used in a tank mixture.

Weeds Controlled: **RANCOR 4 F** in tank mixtures with the above herbicides will provide burndown control of the weeds listed below.

WEEDS CONTROLLED BY BURNDOWN RATES OF RANCOR 4 F

WEEDS CONTROLLED	RANCOR 4 F PLUS					
	2,4-D Sethoxydim + 2,4-D Clethodim + 2,4-D fluazifop-P-butyl + fenoxaprop-P-ethyl + 2,4-D	Glyphosate	Glyphosate + 2,4-D	Paraquat	Paraquat + 2,4-D	2,4-D
BROADLEAVES	MAXIMUM BURNDOWN HEIGHT (INCHES)					
Buffalobur	-	6	6	4 to 6	4 to 6	-
Chickweed, common	6	6	8	4 to 6	4 to 6	2
Cocklebur, common	6	6	8	4 to 6	4 to 6	6
Dandelion, common	6 dia ^a	2 dia ^b	6 dia ^a	4 dia ^d	6 dia ^a	2 dia
Henbit	4	4	4	4 to 6	4 to 6	-
Horseweed/marestail	6 ^{ac}	4 ^b	6	3	6 ^a	2 ^c
Jimsonweed	6	6	6	4 to 6	4 to 6	2
Kochia*	4 ^{ac}	-	4	4	4	-
Ladysthumb	6	6	8	4 to 6	4 to 6	3
Lambsquarters, common	6	6	8	4 to 6	4 to 6	2
Lettuce, prickly	6	6	6	4 to 6	4 to 6	2
Mallow, Venice	6	6	6	4 to 6	4 to 6	-
Morningglory spp.	6	2	4	2	4	4
Mustard spp.	6	6	8	4 to 6	4 to 6	2
Pennycress, field	6	6	6	4 to 6	4 to 6	2
Pigweed spp. (annual)	6	6	8	4 to 6	4 to 6	2
Ragweed, common	6	6 ^b	8	4 to 6	4 to 6	2
Ragweed, giant	6 ^{ac}	4 ^b	6	4	6	2
Shepherdspurse	6	6	6	4 to 6	4 to 6	-

(continued)



WEEDS CONTROLLED BY BURNDOWN RATES OF RANCOR 4 F (continued)

WEEDS CONTROLLED	RANCOR 4 F PLUS					
	2,4-D Sethoxydim + 2,4-D Clethodim + 2,4-D fluzifop-P-butyl + fenoxaprop-P-ethyl + 2,4-D	Glyphosate	Glyphosate + 2,4-D	Paraquat	Paraquat + 2,4-D	2,4-D
BROADLEAVES (continued)	MAXIMUM BURNDOWN HEIGHT (INCHES)					
Sida, prickly	6	4	4	4	4	1
Smartweed, Pennsylvania	6	6	8	4 to 6	4 to 6	3
Sunflower, common	6	6	6	4	4 to 6	4
Thistle, Russian	4 ^{ac}	2 to 4 ^{bc}	8	4	4 to 6	3 ^e
Velvetleaf	6	6	8	4 to 6	4 to 6	3
Waterhemp spp.	6	6	8	4 to 6	4 to 6	3
^a Refer to 2,4-D label for application rate per acre. ^b Refer to glyphosate label for application rate per acre. ^c Use RANCOR 4 F at 6 fl oz/A for optimum control. ^d Suppression only. ^e Does not control triazine resistant biotypes.						

WEEDS CONTROLLED	RANCOR 4 F PLUS						
	2,4-D	Sethoxydim + 2,4-D	Clethodim + 2,4-D	Fluzifop-P- butyl + fenoxaprop- P-ethyl + 2,4-D	Glyphosate Glyphosate + 2,4-D	Paraquat Paraquat + 2,4-D	2,4-D
ANNUAL GRASSES	MAXIMUM BURNDOWN HEIGHT (INCHES)						
Barley	Does not control these species	-	-	-	8	4 to 6	Does not control these species
Barnyardgrass		2 to 3	3 to 4	-	6	4 to 6	
Crabgrass spp.		2 to 3	-	-	6	4 to 6	
Foxtail spp.		2 to 3	3 to 4	2 to 6	8	4 to 6	
Johnsongrass, seeding		2 to 3	-	-	8	4 to 6	
Panicum, fall		2 to 3	3	2 to 6	6	4 to 6	
Sandbur, field		-	-	-	8	4 to 6	
Shattercane		2 to 3	-	-	8	4 to 6	
Wheat, volunteer		-	-	-	6	4 to 6	
Witchgrass		2 to 3	-	-	6	4 to 6	

RESIDUAL WEED CONTROL

RANCOR 4 F burndown programs can be used as part of a full season weed control program in both field corn and soybeans when, 1) applied as a tank mixture with residual herbicides, or 2) followed with a postemergence weed control program, which is registered for use on that crop.

For residual control, this product burndown programs may include tank mixes with the following herbicides or combination of herbicides:

FIELD CORN	
Acetochlor	Flumetsulam + Clopyralid
Acetochlor + Atrazine	Hydrogen peroxide + ethaneperoxoic acid
Atrazine	Imazethapyr ^a
Atrazine + S-metolachlor	Imazethapyr + Pendimethalin ^a
Dicamba	Linuron
Dicamba + Atrazine	Metolachlor
Dimethenamid	Pendimethalin
Dimethenamid + Atrazine	Simazine
Flumetsulam + Metolachlor	S-metolachlor
^a Use only imazethapyr resistant/tolerant corn hybrids.	
SOYBEANS	
Clomazone	Metolachlor
Dimethenamid	Metribuzin + Chlorimuron
Flumetsulam + Metolachlor	Metribuzin + Metolachlor
Imazaquin	Metribuzin ^b
Imazethapyr	Pendimethalin
Imazethapyr + pendimethalin	Pendimethalin + Imazaquin
Linuron	S-metolachlor
^b RANCOR 4 F used (alone and in tank-mixes) on soybeans at higher labeled rates than those listed burndown weed control will also provide residual control of those listed for burndown weed control will also provide residual control of those weeds listed in the Weeds Controlled by RANCOR 4 F and RANCOR 4 F Tank Mix Combinations section of the RANCOR 4 F label.	

Refer to the individual product labels for additional information, restrictions, and limitations.

RANCOR 4 F POSTEMERGENCE DIRECTED SPRAY		
CROP	RANCOR 4 F PT/ACRE	APPLICATION INSTRUCTIONS
Soybeans (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee and Texas)	1/2 to 1 (Broadcast Basis)	Apply proper dosage using 10 to 40 gallons of water per acre as a directed spray in a 6 to 8 inch band on each side of the row after soybeans are 8 inches tall and before broadleaf weeds are 3 inches tall and before grasses and common ragweed are 1 inch tall. For best results, the spray must cover weed foliage with minimum or no contact with soybean foliage. Add a nonionic surfactant such as Ortho X-77 to the spray mixture to obtain better wetting of weed leaf surfaces. To determine the correct dosage of RANCOR 4 F for a band application see Banded Application under the PRODUCT INFORMATION section in the front of this label. If necessary, a second postemergence directed spray application can be made after 7 days. Do not feed or graze green soybean vines. Do not harvest soybeans or use dry soybean vines for feed or forage within 70 days of last application.

Use Restrictions (Directed Postemergence): Do not apply directly to soybeans or serious crop injury will occur. Do not allow spray to contact more than the lower 1/4 to 1/3 of soybean plants. Soybean leaves contacted by the spray will be killed.

Do not apply **RANCOR 4 F** postemergence to sensitive soybean varieties. See **Special Precautions** in the front of this label.

SOUTHERN AND SOUTHEASTERN STATES ONLY POSTEMERGENCE DIRECTED SPRAY APPLICATIONS

RANCOR 4 F can be applied in postemergence directed sprays to soybeans for control of certain weeds which escape preplant or preemergence herbicide applications and for control of additional flushes of weeds that may occur after soybeans have emerged. Postemergence directed sprays of **RANCOR 4 F** can be applied to soybeans in addition to a preemergence or preplant application of **RANCOR 4 F** herbicide according to label directions.

Weeds Controlled: RANCOR 4 F, applied postemergence to soybeans as a directed spray according to directions on this label, will control the following at rates shown (broadcast basis) when grasses and common ragweed are less than 1-inch tall and other broadleaves are less than 3-inches tall:

1/2 PT/ACRE	
Florida Beggarweed (<i>Desmodium tortuosum</i>)	Mexicanweed (<i>Caperonia castaneifolia</i>)
Pigweeds (<i>Amaranthus</i> spp.)	Purslane (<i>Portulaca oleracea</i>)
Carpetweed (<i>Mollugo verticillata</i>)	Sicklepod (<i>Cassia obtusifolia</i>)
Cocklebur (<i>Xanthium pensylvanicum</i>)	Velvetleaf (<i>Abutilon theophrasti</i>)
Dayflower (<i>Commelina</i> spp.)	Crabgrass (<i>Digitaria</i> spp.)
1/2 TO 1 PT/ACRE	
Sesbania (<i>Sesbania</i> spp.)	Prickly sida/Teawood (<i>Sida spinosa</i>)
1 PT/ACRE	
Ragweed, common (<i>Ambrosia artemisiifolia</i>)	

At the rate of 1/2 pt/acre morningglory species, (*Ipomoea* spp.) horsenettle, (*Solanum* spp.) Florida pusley, (*Richardia scabra*) spotted spurge (*Euphorbia maculata*) and wild poinsettia (*Euphorbia heterophylla*) are suppressed when **RANCOR 4 F** is applied before these weeds are 3 inches tall. The 1 pt/acre rate will suppress broadleaf signalgrass (*Brachiaria platyphylla*) up to 1 inch tall.

SUGARCANE

Use Restrictions:

- For aerial and chemigation application methods on sugarcane the maximum application rate is 4 pts **RANCOR 4 F**/acre (2.0 lbs ai/A).
- To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.
- Do not rotate any crop not listed on this label for 18 months following application of **RANCOR 4 F**. Refer to the **CROP ROTATION RESTRICTIONS** section of this label for more information.

SUGARCANE (Hawaii Only)

RANCOR 4 F, a selective herbicide, is effective as a preemergence and an early postemergence broadcast application for control of certain grass and broadleaf weeds. When applied as a spot treatment, it also provides excellent control of perennial grasses and broadleaves.

Ground Application: **RANCOR 4 F** should be mixed by filling the spray tank half full of clean water. Then add the specified amount of this product to suit the total tank capacity and the rate of application per acre (preferably 25 to 35 gallons per acre). Complete filling the tank and maintain sufficient agitation during mixing and spraying to insure a uniform spray mixture.

Aerial Application: **RANCOR 4 F** may be used for use in aerial spray equipment as a preemergence or postemergence application to irrigated sugarcane. Aerial spray equipment should be calibrated to apply the proper amount of **RANCOR 4 F** in 7 to 10 gallons of spray mixture per acre.

RANCOR 4 F applied preemergence or postemergence to the sugarcane as a broadcast spray or spot treatment will effectively control the following when weeds are less than 3 inches in height.

WEEDS CONTROLLED IN IRRIGATED AND NON-IRRIGATED SUGARCANE	
BROADLEAVES	
Amaranth, spleen (<i>Amaranthus dubius</i>)	Hilahila (<i>Mimosa pudica</i>)
Haole Koa (<i>Leucaena leucocephala</i>)	Purslane, common (<i>Portulaca oleracea</i>)
Hialoa (<i>Waltheria americana</i>)	Rattlepod (<i>Crotalaria spectabilis</i>)
GRASSES	
Alexandergrass (<i>Brachiaria plantaginea</i>)	Bristly Foxtail (<i>Setaria verticillata</i>)

WEEDS CONTROLLED IN-IRRIGATED SUGARCANE ONLY	
BROADLEAVES	
Ageratum (<i>ageratum conyzoides</i>)	Tarweed (<i>Cuphea carthagenensis</i>)
Richardia (<i>Richardia brasiliensis</i>)	

SUGARCANE (HAWAII ONLY)

BROADCAST APPLICATION INSTRUCTIONS

RANCOR 4 F PT/ACRE	APPLICATION INSTRUCTIONS
4 to 8 (1/2 to 1 gal) (non-irrigated)	Preemergence (Irrigated and non-irrigated sugarcane): Apply specified dosage per acre as a broadcast spray to the soil surface. Applications should be made within two weeks after planting prior to cane emergence or shortly after emergence (spike stage). OR Early Postemergence (Irrigated and non-irrigated sugarcane): Apply specified dosage per acre as a broadcast spray over the cane. Application may be delayed as long as 4 to 6 weeks after planting provided weeds are less than 3 inches in height.
8 to 12 (1 to 1-1/2 gal) (irrigated)	OR Postemergence: Apply specified dosage per acre as a broadcast spray to control weeds prior to "close in" time when cane shades out the weed growth.
4 to 8 (1/2 to 1 gal)	OR Postemergence: Apply specified dosage per acre as a broadcast spray to control weeds prior to "close in" time when cane shades out the weed growth.
5 to 10 (1-1/8 to 1-1/4 gal)	Spot Treatment: Apply specified dosage in 30 to 50 gallons of finished spray acre. Spot treatments may be used to control weeds in missed areas, corners of fields, or areas of hard to control weeds.
NOTE: Do not apply more than 16 pts (2 gals) of RANCOR 4 F (8 lbs active ingredient)/acre per year regardless of the method of application. The last application may be made up to 17 months of harvest.	

Use Restrictions:

- Do not use treated foliage for feed or forage.
- Pre-harvest Interval (PHI): Do not apply within 17 months of harvest.

SUGARCANE (Louisiana and Texas Only)

Preemergence and postemergence applications of RANCOR 4 F with aerial or ground spray equipment may be used for control of the following weeds in sugarcane in Louisiana and Texas	
BROADLEAVES	
Amaranth, spiny (<i>Amaranthus spinosus</i>)	Marestail (<i>Conyza canadensis</i>)
Bindweed, field (<i>Convolvulus arvensis</i>)	Mustard, wild (<i>Brassica kaber</i>)
Chickweed (<i>Cerastium vulgatum</i>)	Pigweeds (<i>Amaranthus</i> spp.)
Henbit (<i>Lamium amplexicaule</i>)	Purslane (<i>Portulaca oleracea</i>)
Lambsquarters (<i>Chenopodium album</i>)	Sowthistle (<i>Sonchus</i> spp.)
London rocket (<i>Sisymbrium irio</i>)	
GRASSES	
Broadleaf Signalgrass (<i>Brachiaria platyphylla</i>)	Johnsongrass, seedling (<i>Sorghum halepense</i>)
Crabgrass (<i>Digitaria</i> spp.)	Oats, Winter (<i>Avena</i> spp.)
Foxtails (<i>Setaria</i> spp.)	

SUGARCANE (LOUISIANA AND TEXAS ONLY)	
BROADCAST APPLICATION INSTRUCTIONS	
RANCOR 4 F PT/ACRE	APPLICATION INSTRUCTIONS
3 to 6	Broadcast: Apply specified dosage per acre using 20 to 30 gallons of water with ground equipment or 5 gallons of water with aircraft spray equipment. Apply as a broadcast spray during the Fall after planting or to the stubble after harvest. Make a second application early in the Spring.
1-1/2 to 3	Band: Apply specified dosage in 10 to 20 gallons of water per acre in a 30 to 36 inch band over the row during the Fall after planting or to the stubble after harvest. Make a second application early in the Spring.

Use Restrictions (Louisiana and Texas only):

- Do not use treated foliage for feed or forage.
- Use the higher rate on heavy clay soil and soil with a high percentage of organic matter. If necessary, a third application may be made in late Spring at layby.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest.
- For aerial and chemigation application methods on sugarcane the maximum application rate is 4 pts RANCOR 4 F /acre.
- To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

SUGARCANE (Florida Only)

Postemergence over-the-top or directed spray applications of metribuzin may be used for the control of the following weeds in sugarcane in Florida	
BROADLEAVES	
Amaranth, spiny (seedling) (<i>Amaranthus spinosus</i>)	Purslane (<i>Portulaca oleracea</i>)
Butterweed (<i>Cressleaf groundsel</i>) (<i>Senecio glabellus</i>)	
GRASSES	
*Crabgrass, large (<i>Digitaria sanguinalis</i>)	Panicum, broadcast (<i>Panicum adspersum</i>)
Foxtail, bristleglass (<i>Setaria magna</i>)	Signalgrass, broadcast (<i>Brachiaria platyphylla</i>)
Goosegrass (<i>Eleusine indica</i>)	

* Best control is achieved when applications are made when this weed is less than 4" in diameter.

SUGARCANE (FLORIDA ONLY)	
APPLICATION INSTRUCTIONS	
RANCOR 4 F PT/ACRE	APPLICATION INSTRUCTIONS
2 to 4	Ground Application: RANCOR 4 F may be used in one or two applications with a minimum of 14 days between each application. Apply when weeds are less than 6 inches tall in 10 to 40 gallons of spray mixture per acre. Postemergence Broadcast or Band: Apply over the top of stubble or plant cane while sugarcane is less than 14 inches tall. Postemergence Directed Spray: Apply to sugar cane that is a minimum of 14 inches tall and before row closing.
2 to 3	Aerial Application: Apply when weeds are less than 4 inches tall in 5 to 10 gallons of spray mixture per acre. Apply to stubble or plant cane while the sugarcane is less than 14 inches tall.

RANCOR 4 F Plus Atrazine Tank Mix: RANCOR 4 F may be used with atrazine as a preemergence or postemergence (before row closing) application to sugarcane. Rates for RANCOR 4 F are 1-1/2 to 4 pts/acre. Consult specific atrazine label for use rates. For additional information on precautions, instructions, limitations, application, and weeds controlled, refer to this label and the atrazine label.

Use Restrictions (Florida only):

- Do not use more than 4 pts per acre in a single growing season.
- Do not use on sand soils.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest.
- Do not use treated crop for feed or forage.
- Do not allow spray overlaps or variations in application speed that may result in insufficient or excessive rates of application.

- To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

Use Precaution (Florida only):

- Spray contact with sugarcane foliage may result in minor leaf margin chlorosis and/or necrosis.

TOMATOES

Apply **RANCOR 4 F** herbicide with ground equipment to seeded and transplanted tomatoes as specified below under Application Instructions.

For effective control of grasses and broadleaf weeds with postemergence applications, apply **RANCOR 4 F** before weeds are 1-inch tall. Thorough spray coverage on weed foliage is essential for adequate control with postemergence applications. Do not use air blast or other high pressure spray equipment to make postemergence applications of **RANCOR 4 F**. Refer to the appropriate section of this label for additional information regarding spray equipment, dilution rates, mixing, sprayer cleanup, restrictions, container disposal and cautions.

For specific application information see the **PRODUCT INFORMATION** section in the front of this label.

WEEDS CONTROLLED

PREPLANT INCORPORATED APPLICATIONS TRANSPLANT TOMATOES ONLY

BROADCAST SPRAYS - 1/2 TO 1 PT RANCOR 4 F/ACRE	
BROADLEAVES	
Galinsoga (<i>Galinsoga</i> spp.)	*Pigweed, redroot (<i>Amaranthus retroflexus</i>)
Lambsquarters (<i>Chenopodium album</i>)	*Purslane, common (<i>Portulaca oleracea</i>)
GRASSES	
*Goosegrass (<i>Eleusine indica</i>)	
Preplant incorporated applications applied as directed will suppress foxtails, panicums and barnyardgrass. RANCOR 4 F/Trifluralin Tank Mix: This tank mix combination applied preplant incorporated as directed on this label will control the weeds listed above plus those weeds listed on the trifluralin label. *For optimum control of these weeds, use the highest rate specified on the label for the type of application to be made. Repeat postemergence applications may be needed for best control.	

WEEDS CONTROLLED

POSTEMERGENCE APPLICATIONS ESTABLISHED TOMATOES

For effective control of weeds with postemergence applications, apply this product before weeds are 1-inch tall.

BROADCAST SPRAYS -1/2 TO 1 PT RANCOR 4 F/ACRE	
BROADLEAVES	
Carpetweed (<i>Mollugo verticillata</i>)	Pigweeds (<i>Amaranthus</i> spp.)
Fumitory (<i>Fumaria officinalis</i>)	Purslane (<i>Portulaca oleracea</i>)
Galinsoga (<i>Galinsoga</i> spp.)	*Ragweed, common (<i>Ambrosia artemisiifolia</i>)
Jimsonweed (<i>Datura stramonium</i>)	*Smartweed, Pennsylvania (<i>Polygonum pennsylvanicum</i>)
Ladysthumb (<i>Polygonum persicaria</i>)	Toadflax (<i>Linaria</i> spp.)
Lambsquarters (<i>Chenopodium album</i>)	Velvetleaf (<i>Abutilon theophrasti</i>)
Mustard, wild (<i>Brassica kaber</i>)	
DIRECTED SPRAYS -1 TO 2 PTS RANCOR 4 F/ACRE	
GRASSES	
*Foxtail, yellow (<i>Setaria glauca</i>)	Plus Weeds Listed Under Broadcast Sprays
Goosegrass (<i>Eleusine indica</i>)	
*For optimum control of these weeds, use the highest rate specified on the label for the type of application to be made. Repeat postemergence applications may be needed for best control. Postemergence applications as directed on this label will suppress barnyardgrass and crabgrass when these weeds are less than 1-inch tall.	

BROADCAST APPLICATION INSTRUCTIONS FOR TOMATOES

RANCOR 4 F PT/ACRE	APPLICATION INSTRUCTIONS
1/2 to 1	Preplant Incorporated-Transplant Tomatoes Only: Apply specified dosage in 10 or more gallons of water per acre as a broadcast spray to the soil surface immediately before transplanting. Incorporate to a depth of 2 to 4 inches with equipment capable of uniformly mixing the chemical into the soil. This application may be made alone or in a tank mix combination with Trifluralin E.G. When transplanting tomatoes, place the root system of the plants below the herbicide incorporation zone or injury may occur. Refer to the Trifluralin label for specific rate of application and for additional precautions and restrictions for tomatoes.
1/2 to 1	Postemergence Broadcast Spray-Established Tomatoes: Apply specified dosage in 20 or more gallons of water per acre as a broadcast spray, or apply in 1/4 to 3/4 inch of water (use 1/4 to 1/2 inch of water on sandy soils) per acre as a continuous injection in center pivot and lateral move systems or apply in the last 15 to 30 minutes of set in permanent solid set sprinkler systems. One or more applications may be applied per use season. Allow at least 14 days between applications or severe crop injury may occur. For transplanted tomatoes, do not apply until transplants have recovered from transplant shock and new growth is evident. Do not apply to tomatoes within 24 hours of application of other pesticides. Do not tank mix with other pesticides. (See Use Restrictions below.)
1 to 2	Postemergence Directed Spray-Established Tomatoes: Apply specified dosage in 20 or more gallons of water per acre as a directed spray. One or more applications may be applied per use season. Allow at least 14 days between applications or severe crop injury may occur. Avoid contacting tomato foliage with spray. This method of treatment can be used in fields with a history of severe weed pressure or in fields infested with hard-to-control weeds. For transplanted tomatoes, do not apply until transplants have recovered from transplant shock and new growth is evident. Do not apply to tomatoes within 24 hours of application of other pesticides. (See Use Restrictions (Tomatoes) below.) When banding see the appropriate section in the front of this label.
*Use the higher rate in fields with a history of severe weed pressure and for maximum residual weed control.	

Use Restrictions (Tomatoes):

- Do not apply more than a total of 2 pts **RANCOR 4 F** per crop season.
- Do not apply the total amount of 2 pts **RANCOR 4 F** within a time span of less than 35 days, except in the case of directed sprays.
- Allow at least 14 days between applications, regardless of dosage or method of application or severe crop injury may occur.
- Pre-harvest Interval (PHI): Do not apply within 7 days of harvest.
- Do not apply within 3 days after periods of cool, wet or cloudy weather, or crop injury will occur.
- Do not use hot caps on tomatoes within 7 days before or at any time after application of **RANCOR 4 F**.
- Do not treat seeded tomatoes until plants have reached the 5 to 6 leaf stage or severe crop injury may occur.
- Aerial application is prohibited.

Use Precautions:

- Crop injury or delayed maturity may result from broadcast or directed spray applications if tomatoes are growing under stress conditions such as periods of drought or cool, wet and cloudy weather preceding application.
- For newly introduced tomato varieties with unknown tolerance to **RANCOR 4 F**, treat only a small area to determine if **RANCOR 4 F** can be used without injury to the crop.

**DO NOT USE THIS PRODUCT ON TOMATOES
IN KERN COUNTY, CALIFORNIA.**

SPRING AND WINTER BARLEY AND WINTER WHEAT

RANCOR 4 F herbicide may be used for control or suppression of certain grasses and broadleaf weeds when applied postemergence to spring and winter barley or winter wheat. **RANCOR 4 F** alone and several tank mixture treatments may be used in the following states: AR, GA, ID, IL, IN, KS, KY, LA, MS, MO, MT, NV, OH, OK, OR, TN, TX, UT, WA.

Mixing: See the **PRODUCT INFORMATION** section of this label for specific mixing procedures. When tank mixing, carefully follow the instructions on this label. Refer to the other product labels registered for use on barley and winter wheat for additional use directions, rates, weeds controlled and restrictions.

Application: **RANCOR 4 F** may be applied by aerial or ground application equipment. Use a minimum spray volume of 2 gpa by air and 10 gpa by ground. Uniform spray coverage is necessary to obtain optimum weed control and to minimize potential for crop injury. Do not exceed rates specified on this label. Do not apply **RANCOR 4 F** through any type of irrigation equipment. Apply **RANCOR 4 F** when the crop is healthy and actively growing. **RANCOR 4 F** may be applied more than once per crop season. Allow a minimum of 21 days between applications if wheat is actively growing or allow 45 days between applications if wheat is growing in adverse conditions, has entered dormancy or is stressed due to frost damage, disease, drought or excessive moisture. Do not use on soils containing less than 0.75% organic matter. Do not apply more than a total of 16 fluid ounces **RANCOR 4 F** (8 ounces active ingredient) per acre per year. On irrigated wheat and barley, do not apply more than 0.5 inch of water for the first irrigation, the maximum amount for each additional irrigation should not exceed 1 inch. Allow a minimum of 14 days between the first irrigation and subsequent irrigations.

Performance Factors: Weed control may not be observed for 2 to 4 weeks under normal growth conditions and for 4 to 6 weeks under very dry conditions. Moisture (at least 1/2 inch) is required within 2 to 3 weeks after application to move **RANCOR 4 F** into the weed root zone. Lack of adequate moisture after application may result in poor or erratic weed control. Control or suppression of listed weeds is dependent on weed size at time of application. Control or suppression may be reduced if broadleaf weeds are taller than 1 inch or grasses have more than 2 leaves.

Tank Mixtures: **RANCOR 4 F** may be tank mixed with metsulfuron methyl, trisulfuron, chlorsulfuron + metsulfuron, chlorsulfuron, acetoclor + atrazine, 2,4-D, MCPA, terbutryn, dicamba, or bromoxynil herbicides. A nonionic surfactant containing at least 80% active ingredient may be used in **RANCOR 4 F** tank mixes with sulfonyleurea herbicides (metsulfuron methyl, triasulfuron, chlorsulfuron + metsulfuron, chlorsulfuron and acetoclor + atrazine). Do not use a crop oil concentrate or any adjuvant containing vegetable or petroleum oils with any **RANCOR 4 F** mix as crop injury may result. Additional pesticides may also be tank mixed with **RANCOR 4 F** unless specifically prohibited on the mix product's label. In some instances, combinations with organophosphate insecticides may cause temporary leaf yellowing and/or crop injury, especially when widely fluctuating day/night temperatures occur near application. Always refer to the other product labels registered for use on wheat and barley for additional directions, rates and weed species controlled. Observe all precautions and limitations on labeling of all products used in mixtures.

Feeding Restrictions: Do not graze wheat within 14 days of **RANCOR 4 F** application or harvest grain within 21 days after last application. Do not graze or harvest barley before crop maturity. For tank mix combinations, follow the most restrictive label.

Special Precautions: Wheat and Barley Injury - Crop injury may occur if **RANCOR 4 F** is applied:

- When the crop is under stress such as winter kill, frost damage, disease, drought or excessive moisture, severe grazing, or when these conditions follow the application.
- In combination with fluid fertilizer especially with the addition of surfactant,
- Prior to the growth stage specified on this label.
- To soils high in lime or sodium, a pH greater than 7.7, calcareous, gravelly, thinly covered or exposed subsoil areas.
- To fields where wheat and barley seeds have been planted less than 1 inch deep.
- To a non-winter hardy wheat or barley variety.
- To a sensitive wheat or barley variety as listed below.
- To frozen soil or crop still in winter dormancy.

Wheat and Barley Rotations Following Potatoes Treated with RANCOR 4 F: If planting a sensitive wheat and barley variety (listed under the wheat and barley variety tolerance portion of this label), following potatoes treated with **RANCOR 4 F** or metribuzin containing products, refer to the potato section of the **RANCOR 4 F** label for special cultural practices to follow.

APPLICATION INSTRUCTIONS

RANCOR 4 F alone or in a tank mix with labeled broadleaf herbicides may be applied by aerial or around spray equipment as a broadcast postemergence spray.

CROP GROWTH STAGE	SOIL TEXTURE	RANCOR 4 F RATE (FL OZ/A) % ORGANIC MATTER	
		0.75 TO 2.0	OVER 2.0
2 Leaf to 2 Tiller	Coarse	1.5 to 3	1.5 to 4.5
	Medium	1.5 to 4.5	3 to 4.5
	Fine	3 to 4.5	3 to 6
Use these rates on crops with secondary roots smaller than 1 inch. For dryland winter wheat (nonirrigated), apply the highest specified rate to achieve maximum weed suppression/control.			
3 Tiller to 4 Tiller	Coarse	4.5 to 6	6 to 7.5
	Medium	6 to 7.5	7.5 to 9
	Fine	7.5 to 9	7.5 to 9
Do not apply within 2 weeks after grazing or breaking of winter dormancy. Apply after the crop is at or beyond the 3 tiller growth stage but before jointing. Secondary roots should be developed and larger than 1 inch long. Do not apply before 75 days after planting. For dryland winter wheat (nonirrigated), apply the highest specified rate to achieve maximum weed suppression/control. GEORGIA ONLY: Wheat must be planted before November 15 in the Piedmont area and Northern part of the state, and before December 1 in the Coastal Plain area.			

(continued)

CROP GROWTH STAGE	SOIL TEXTURE	RANCOR 4 F RATE (FL OZ/A) % ORGANIC MATTER	
		0.75 TO 2.0	OVER 2.0
Over 4 Tillers	Coarse	5 to 9	7.5 to 12
	Medium	6 to 12	7.5 to 12
	Fine	7.5 to 12	12 to 16

Do not apply within 2 weeks after grazing or breaking of winter dormancy. Apply after the crop is at or beyond the 3 tiller growth stage but before jointing. Secondary roots should be developed and larger than 1 inch long. Do not apply before 75 days after planting. For dryland winter wheat (nonirrigated), apply the highest specified rate to achieve maximum weed suppression/control.
GEORGIA ONLY: Wheat must be planted before November 15 in the Piedmont area and Northern part of the state, and before December 1 in the Coastal Plain area.

WHEAT AND BARLEY VARIETIES TOLERANCE

Wheat and barley varieties vary in their tolerance to **RANCOR 4 F**. Varieties below are tolerant to and may be used with **RANCOR 4 F**:

Winter Wheat: Abe, AgriPro Mason, AgriPro Shiloh, Arthur, AS 7846, AS 7853, Baker Seed 32, Barbie VI, Basin, Batum, Bayles, Becker, Bintee V, Buchshot OS 2368, Caldwell, Cardinal, Cashup, Centurk, Cherokee, Cheyenne, Clark, Coker 747, Coker 762, Coker 797, Coker 68-15, Coker 9134, Coker 9543, Coker 9904, Coker 9907, Daws, DB 533W, DB 562W, DB 580W, Delta King 502, Delta King 9027, Dixie 952, Doublecrop, Dusty, Dyna-gro 426, Dynasty, Excel, Faro, FFR 525W, Florida 302, FS 432, FS 433, FS 435, Gains, Garst 64, Georgia 100, Genie V, Hatton, Hawk, Hill 81, Howell, Hunter, Hyak, Hyslop, Katie VI, KY 16-2, Larned, Lewis 833, Lewjain, Lisa, Longhorn, Luke, Madison, Magnum, Malcom, McDermid, McNaiMOOS, McNair 1813, Molly, Mora, Neely, Nelson, Newton, Norstar, Norwin, Nugaines, Oasis, Omega 78, Paha, Peck, Pike, Pioneer 2157, Pioneer 2180, Pioneer 2510, Pioneer 2545, Pioneer 2548, Pioneer 2550, Pioneer 2552, Pioneer 2555, Pioneer 2566, Pioneer 2571, Pioneer 2580, Pioneer 2684, Quantum 577, Redwin, Rocky, Saluda, Sawyer, SO 104, Siouxland, Sprague, Southern Belle, Stacy, Stallion, Stephens, TAM W101, TAM 105, TE 877, TE 2548, TE SR204, TR 8555, TR 8557, TR 8768, Tiber, Tomahawk, Traveler, Tres, Tyee, Tyler, Verne, Victory, Wakefield, Wanser, Weston, Winalta, Wrangler.

Barley: Advance, Boyer, Clark, Compana, Hannchen, Hector, Hesk, Hudson, Lud, Luther, Kamiak, Klages, Olympic, Pirolina, Steptoe and Triumph. Do not use the following wheat and barley varieties which are sensitive to **RANCOR 4 F**:

Winter Wheat: AgriPro Clemens, AT 90W, AT 91W, Arapaho, Baker Seed 33, Century, Cimarron, Coker 833, Coker 916, Coker 983, Coker 9024, Coker 9105, Coker 9323, Coker 9663, Choker 9474, Choker 9835, Choker 9766, Choker 9877, EK 102, EK 114, FAR 555, Florida 304, Freedom, FS 417, FS 423, FS 425, FS 430, Gore, Hazen, Hickory, Jackson, Julie III, KY-49-25, Linden, Madison, Mesa, Mustang, Pacer, Pioneer 2551, Pioneer 2163, Pioneer 2643, Pioneer 2691, Princeton 733, PER W71, PER 226, PER 278, Rosen, Savannah, Sierra, TAM 107,TR 101,TR 1011,TR8822, Triumph 64, Vona, Wings, Winridge, Yamhill.

Spring/Durum Wheat: Avoid use on Spring wheat and Durum wheat varieties.

Barley: Glenn, Morex, Moravian 3, Larker, Summit, Bracken, Anheuser Busch B2601 and varieties with Morex parentage.

Varieties Not Listed: To avoid possible crop injury on any variety not mentioned in this label, contact an Atticus, LLC representative or herbicide expert for a variety recommendation prior to treatment or treat a small strip of the unlisted variety with the specified **RANCOR 4 F** rate to ascertain crop tolerance before treating an entire field.

* Abbreviated names of vendors: AS (Agseco), AT (Agratech), DB (Diener Bros.), FS (Growmark FS), PI (Pioneer), PER (Hybritech), SC (J.M. Schultz), TE (Terra), and TR (Terral).

Weeds Controlled

Used at specified rates, **RANCOR 4 F** will control many annual broadleaf weeds. Control is best when applied to young, actively growing weeds. Weeds controlled by **RANCOR 4 F** include:

Bittercress	Knotweed, prostrate
Catchfly, conical (sand)	Lambsquarters, common
Catchweed (Madwort)	Lettuce, miners
Chickweed, common	Mustard, blue
Chickweed, mouseear	Mustard, wild
Corncockle	Pennycress, field
Dogfennel (Mayweed)	Pepperweed Virginia
Evening Primrose, cutleaf	Pigweed spp.
Falseflax, smallseed	Pineappleweed
Fiddleneck, tarweed	Polemonium, annual (Jacob's Ladder)
Filaree, redstem	Radish, wild
Geranium, Carolina	Shepherdspurse
Gromwell spp.	Speedwell, ivyleaf
Henbit	Turnip, wild

Weeds Suppressed

RANCOR 4 F control of the following weeds varies from poor to excellent depending on time of application, stage of growth at application, temperatures and soil moisture conditions following treatment. For maximum effect on these weeds, apply the highest specified rate at the earliest growth stage timing for each particular soil type and organic matter. Suppression is a reduction in weed size and growth as compared to a nontreated area in the same field.

BROADLEAVES	
Buckwheat, wild*	Mustard, tumble (Jim Hill)*
Buttercup, spp.	Tanysmustard
Cowcockle	Thistle, Russian
Kochia*	Vetch, Winter
Lettuce, prickly	
GRASSES	
Barley, Hare (Wild)	Brome, rippgut*
Barley, Little	Cheat*
Blackgrass	Foxtail spp.*
Bluegrass, annual	Oat, wild*
Bluegrass, bulbous	Rescuegrass*
Brome, downy*	Whitlowgrass, Spring (Vernal)
Brome, Japanese*	Windgrass

*Use the highest specified **RANCOR 4 F** rate for maximum weed suppression.

FOR WEED CONTROL IN A WHEAT/FALLOW/WHEAT ROTATION

(Idaho, Oregon, Utah and Washington Only)

RANCOR 4 F may be applied to provide weed control during the fallow period after wheat harvest or in the Spring before winter wheat is planted. Winter wheat can be seeded 4 months (120 days) after Spring application. Mechanical tillage or the application of a contact herbicide may be required to control weeds germinating prior to seeding of winter wheat. Best results will be obtained where straw and chaff are evenly distributed across the field.

For specific application information see the **PRODUCT INFORMATION** section in the front of this label.

Where weed growth is present at application time, **RANCOR 4 F** should be applied with Paraquat or other contact herbicide. Refer to the other product label registered for additional directions, rates, and weed species controlled.

Weeds Controlled

BROADLEAVES	
Chickweed, common (<i>Stellaria media</i>)	Mustard, treacle (<i>Erysimum repandum</i>)
Henbit (<i>Lamium amplexicaule</i>)	Mustard, wild (<i>Brassica kaber</i>)
*Kochia (<i>Kochia scoparia</i>)	Pennycress, field (Fanweed) (<i>Thlaspi arvense</i>)
Lambsquarters (<i>Chenopodium album</i>)	Pigweeds (<i>Amaranthus</i> spp.)
Mustard, blue or purple (<i>Chorispora tenella</i>)	*Russian Thistle (<i>Salsola iberica</i>)
Mustard, Jim Hill (<i>Sisymbrium altissimum</i>)	*Wild Sunflower (<i>Helianthus</i> spp.)
Mustard, tansy (<i>Descurainia pinnata</i>)	
GRASSES	
Cheatgrass (<i>Bromus secalinus</i>)	*Wheat, volunteer (<i>Triticum</i> spp.)
Downy Brome (<i>Bromus tectorum</i>)	

* Note: Since control of these weeds may be variable depending on moisture following application, the higher labeled rate should be used.

After Harvest Application (Fall Fallow): **RANCOR 4 F** may be applied to wheat stubble after harvest in the Fall. Apply 1 to 1-1/4 pts per acre broadcast before weeds emerge. Use higher rate for longer weed control or for weeds designated as requiring the higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

Do not plant crops in treated areas for at least 10 months following Fall applications. Do not rotate any crop not listed on this label for 18 months following application of **RANCOR 4 F**.

RANCOR 4 F may be applied at 1 to 1-1/4 pts per acre as directed above for a fall application. If other vegetation is present at the time of application use a contact herbicide.

Spring Application (Summer Fallow): **RANCOR 4 F** may be applied to wheat stubble in the Spring. Apply 3/4 to 1 pt per acre broadcast before weeds emerge in the Spring. Use higher rate for longer weed control or weeds designated as requiring higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

Use Restrictions:

- Do not graze treated fields.
- Do not plant Spring seeded barley following Fall fallow applications of **RANCOR 4 F**.
- Where **RANCOR 4 F** was applied in the Fall, do not apply **RANCOR 4 F** in the Spring.

FOR WEED CONTROL IN A FALLOW ROTATION WITH BARLEY AND WHEAT

(Colorado, Kansas, Montana, Nebraska, and Wyoming Only)

RANCOR 4 F may be applied to provide weed control during the fallow period after wheat or barley harvest or in the Spring before planting of Winter wheat or barley. Mechanical tillage or the application of a contact herbicide may be required to control weeds germinating prior to seeding of Winter wheat or barley.

For specific application information see the **PRODUCT INFORMATION** section in the front of this label.

Where weed growth is present at application time, **RANCOR 4 F** should be applied with Paraquat, Roundup, or other contact herbicide. Refer to the other product label registered for additional directions, rates, and weed species controlled. Do not plant crops in treated areas earlier than 10 months following Fall applications. Do not rotate any crop not listed on this label for 18 months following application of **RANCOR 4 F**.

Weeds Controlled

BROADLEAVES	
Chickweed, common (<i>Stellaria media</i>)	Mustard, Tansy (<i>Descurainia pinnata</i>)
Cowcockle (<i>Vaccaria pyramidata</i>)	Mustard, Treacle (<i>Erysimum repandum</i>)
Henbit (<i>Lamium amplexicaule</i>)	Mustard, Wild (<i>Brassica kaber</i>)
*Kochia (<i>Kochia scoparia</i>)	Pennycress, Field (fanweed) (<i>Thlaspi arvense</i>)
Lambsquarters (<i>Chenopodium album</i>)	Pigweeds (<i>Amaranthus</i> spp.)
Mustard, blue or purple (<i>Chorispora tenella</i>)	Russian thistle (<i>Salsola iberica</i>)
Mustard, Jim Hill (<i>Sisymbrium altissimum</i>)	Sunflower (<i>Helianthus</i> spp.)
GRASSES	
Cheatgrass (<i>Bromus secalinus</i>)	*Wheat, volunteer (<i>Triticum</i> spp.)
Downy Brome (<i>Bromus tectorum</i>)	*Wild Oats (<i>Avena fatua</i>)
*Foxtail, green (<i>Setaria viridis</i>)	
* Note: Since control of these weeds may vary depending on moisture following application, use the higher rate specified below.	

After Harvest Application (Fall Fallow): **RANCOR 4 F** may be applied to the stubble after harvest in the Fall. Apply 1-1/4 to 1-1/2 pts per acre broadcast before weeds emerge. Use the higher rate for longer weed control or for weeds designated as requiring the higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

Spring Application (Summer Fallow): **RANCOR 4 F** may be applied to the stubble in the Spring. Apply 3/4 to 1 pt per acre broadcast before weeds emerge in the Spring. Use the higher rate for longer weed control or weeds designated as requiring the higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation. Wheat or barley can be seeded 120 days after Spring application.

Use Restrictions:

- Do not graze treated fields.
- Do not plant Spring seeded barley following Fall applications for fallow.
- Where **RANCOR 4 F** was applied in the Fall, do not apply **RANCOR 4 F** in the Spring.

CROP ROTATION RESTRICTIONS

WAITING PERIOD AFTER RANCOR 4 F FLOWABLE HERBICIDE APPLICATION ¹			
4 Months	Alfalfa Asparagus Barley ² Corn	Forage Grasses Sainfoil Soybeans	Sugarcane Tomatoes Wheat ²
8 Months	Barley Lentils	Peas Wheat	-
12 Months	Potatoes	Rice ³	-
18 Months	Sugar Beets, Onions and other root crops not listed on this label, and all other crops not listed on this label.		
¹ Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed. Stand reductions may occur in some areas. ² Following peas, lentils or soybeans. ³ Do not rotate rice after any application to a primary crop greater than 1.0 lb ai/A of RANCOR 4 F per season. Do not rotate any crop not listed on this label after application of RANCOR 4 F to sugarcane.			

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to **PRECAUTIONARY STATEMENTS** on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site in accordance with the uses permitted on this label, or at an approved waste disposal facility.

CONTAINER HANDLING:

Nonrefillable containers < 5 gallons: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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; otherwise dispose of in a sanitary landfill.

Nonrefillable containers > 5 gallons: Nonrefillable container. 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 mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Conditions of Sale and Limitation of Warranty and Liability

The Directions for Use of this product must be followed 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, resistant strains or other influencing factors in the use of the product, which are beyond the control of Atticus, LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Atticus, LLC and Seller harmless for any claims relating to such factors.

To the extent allowed by applicable laws, Atticus, LLC 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 the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Atticus, LLC and Buyer and User assume the risk of any such use. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, ATTICUS, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent allowed by applicable laws, in no event shall Atticus, LLC or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ATTICUS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ATTICUS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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