



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

September 11, 2024

Nikki Benson
Regulatory Specialist
Nufarm Inc.
11901 S. Austin Ave.
Alsip, IL 60803

Subject: Label Amendment - Registration Review Mitigation for Chlorsulfuron & Metsulfuron-methyl
Product Name: NUP 08135
EPA Registration Number: 71368-91
Application Dates: January 23, 2024
Decision Numbers: 594955 & 596239

Dear Nikki Benson:

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

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must

submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at (202) 566-0636, or via email at carr.caleb@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

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

ENCLOSURE: Stamped label

CHLORSULFURON &
METSULFURON METHYL

GROUP

2

HERBICIDES

NUP-08135 Herbicide

Dry Flowable

For Use on Wheat, Barley, and Fallow

ACTIVE INGREDIENTS:

By Weight

Chlorsulfuron: 2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)aminocarbonyl]
benzenesulfonamide 62.5%

Metsulfuron Methyl: Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]
amino]sulfonyl]benzoate 12.5%

OTHER INGREDIENTS: 25.0%

TOTAL: 100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

EPA Reg. No. 71368-91

EPA Est. No.

Manufactured by:

Nufarm Americas, Inc.

150 Harvester Drive, Suite 200

Burr Ridge, IL 60527

Net Weight:

071368-00091.20240823

NUP-08135

ACCEPTED

Sep 11, 2024

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under

EPA Reg. No. 71368-91

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

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

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

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

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and other handlers" and have such PPE immediately available for use in an emergency such as a spill or equipment break-down.

USER SAFETY RECOMMENDATIONS

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

FIRST AID

If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 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. You may also contact 1-800-424-9300 for emergency medical treatment information.	

ENVIRONMENTAL HAZARDS

Groundwater Advisory: Chlorsulfuron and Metsulfuron-methyl are known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of chlorsulfuron and metsulfuron-methyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Non-target Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

DIRECTIONS FOR USE

It is a 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.

Pesticide Handling

- Calibrate sprayers using only clean water and away from well sites.
- Schedule routine inspections of spray equipment.
- Assure all operation employees are instructed in how to accurately measure pesticides.
- Prepare only enough spray solution for the job at hand.
- Avoid overfilling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- After triple rinsing the pesticide container, add the rinsate to the spray mix.

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 intervals. 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 4 hours.

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

NUP-08135 Herbicide may only be used in accordance with this label or in separately published supplemental labeling. To the extent consistent with applicable law, Etigra will not be responsible for losses or damages resulting from the use of this product in any manner contrary to label directions.

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

WINDBLOWN SOIL PARTICLES

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S641).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S641).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASAE S572.3).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASAE S572.3).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a Medium or coarser droplet size (ASAE S572.3) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

WEED RESISTANCE MANAGEMENT

For resistance management, NUP-08135 contains two Group 2 herbicides – chlorsulfuron and metsulfuron-methyl. Any weed population may contain or develop plants naturally resistant to NUP-08135 and other Group 2 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.

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

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

- Rotate the use of NUP-08135 or other Group 2 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 with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- 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.
- 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.
- [For further information or to report suspected resistance, contact [Nufarm contact] at [one of][any of] the following] [[[X]-XXX-XXX-XXXX] [[,][or]] 1-800-345-3330 [[,][or]] [Nufarm e-mail address] [[,][or]] [Nufarm website] [[,][or]][XXXX]].]

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. Do not assume that each listed weed is being controlled by this mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.

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.

Naturally occurring weed biotypes which have been shown to be resistant to AMBER® herbicide, ALLY® herbicide, GLEAN® FC herbicide, EXPRESS® herbicide or HARMONY® Extra herbicide will also be resistant to NUP-08135 Herbicide.

GENERAL INFORMATION

NUP-08135 Herbicide contains the active ingredients chlorsulfuron and metsulfuron-methyl which are herbicides recommended for control of many weeds found in wheat (including durum), barley and fallow. NUP-08135 Herbicide is approved for use in all states (unless directed otherwise by supplemental labeling) except in the following counties in Colorado: Alamosa, Conejos, Costilla, Rio Grande, and Saguache.

NUP-08135 Herbicide is a dry flowable formulation which is not corrosive, not flammable, and not volatile. It must be mixed with water, or slurried with water before addition to liquid nitrogen fertilizer solutions. A surfactant is to be added to the spray mix unless otherwise noted in other sections of this label.

The directions for use in this label describe how to apply NUP-08135 Herbicide to provide weed control either preemergence (before weeds germinate) or postemergence (when weeds have emerged and are actively growing). Preemergence applications are optimized by sprinkler irrigation or rainfall just after application so that NUP-08135 Herbicide will penetrate the soil to a depth of 2" to 3" and reach the weed seed area or weed root zone.

Several factors determine the length of time weeds are controlled and how well weeds are controlled, including the type of weeds present, density and size of weeds, and the weather conditions at application and after application. The type of weeds present as well as their size will determine which use rate to select. Refer to the tables below on use rates and list of weeds controlled.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY OF NUP-08135 Herbicide

NUP-08135 Herbicide moves into plants by absorption through the roots and foliage and rapidly inhibits the growth of susceptible weeds.

For optimum **preplant** and **preemergence** control of target weeds, NUP-08135 Herbicide needs to reach the weed roots. Rainfall after an application moves the NUP-08135 Herbicide into the soil and the weed root zone, and weeds will not emerge. There may be some instances when susceptible weeds will germinate and emerge shortly after application. Within 3 to 5 days of emergence, these weeds will stop growing, although some species may stay green and be stunted. Within one to three weeks after application, weed growth slows, leaves of susceptible plants become yellow to white in color, and growing points die. Weather conditions that are dry and cold tend to delay the movement of NUP-08135 Herbicide into the root zone, while wet and warm condition increases the speed in which effects of NUP-08135 Herbicide are seen. In **postemergence** applications, poor weed control may be observed if rainfall occurs shortly (within 6 hours) after application.

Optimum control of weeds shaded by a rapidly growing crop is achieved from use of NUP-08135 Herbicide. Ineffective control of weeds may be seen where crop stands are thin or in sections with gaps in seeding. If the canopy of the crop completely intercepts the spray solution, weed control will be reduced. NUP-08135 Herbicide is less effective to weeds hardened off by cold weather or under stress from lack of water. Under these conditions, control is achieved using a tank mix of NUP-08135 Herbicide with other registered herbicides (such as 2, 4-D, or MCPA).

INTEGRATED PEST MANAGEMENT

NUP-08135 Herbicide may be used as part of an Integrated Pest Management (IPM) program. This program relies on tillage (or other mechanical), biological, cultural, and chemical control practices to prevent economic pest damage. IPM principles and practices include field monitoring, historical information related to herbicide use and crop rotation, correct identification of target pests, population monitoring, and treatment when target pest populations reach a locally-determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine the action treatment threshold levels for treating specific pest/crop systems in your area.

SPRAY EQUIPMENT

Refer to the manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Use calibrated air or ground equipment, and apply in a spray volume and delivery system to ensure thorough, uniform spray coverage of weed pests. Use precautions to minimize drift. Higher spray volumes will produce better coverage to dense canopies of weeds. Do not overlap sprays. To avoid injury to desirable species, turn off spray booms while starting, turning, slowing, or stopping.

Do not make applications using equipment and/or spray volumes or under weather conditions that might cause spray drift onto nontarget sites. Additional information is provided in the section **Spray Drift Management**.

Use application equipment that will ensure constant agitation of NUP-08135 Herbicide spray solutions.

Ground Application

The use of flat-fan or low-volume flood nozzles will provide optimum spray distribution and thorough coverage of spray solution. Use the following spray volumes for the type of nozzle selected: flat-fan nozzles – minimum 3 gal. per Acre (GPA); flood jet on 30 inch spacings - minimum 10 GPA; flood nozzles (TK10, or equivalent, or smaller) at 30 psi – minimum 30 GPA; jet TK 5 to TK 7.5 or equivalent – minimum 13 GPA (40-inch spacing) to 20 GPA (60-inch spacing); "Raindrop" RA nozzles – minimum 20 GPA. It is essential to overlap the nozzles 100% for all spacings. Screens must be 50-mesh or larger.

Aerial Application

Apply NUP-08135 Herbicide at 1 to 5 gallons per Acre using spray nozzle types and arrangements that optimizes spray distribution and coverage. In Idaho, Oregon, or Utah, apply at a minimum of 3 gallons per Acre.

To prevent drift into adjacent areas or onto sensitive crops, apply NUP-08135 Herbicide by air using solid stream nozzles oriented straight back. To minimize spray drift, supplement aerial applications of NUP-08135 Herbicide with ground applications to borders and edges of fields. See additional precautions in the section **Spray Drift Management**.

INSTRUCTIONS FOR PREPARING TANK MIXES OF NUP-08135 Herbicide

HOW TO MEASURE REQUIRED AMOUNTS OF NUP-08135 Herbicide

The required amount of NUP-08135 Herbicide can be measured using the volumetric cylinder supplied specifically for use with NUP-08135 Herbicide. If you do not have a measuring cylinder, weigh the product using a balance that has scales calibrated in ounces.

PREPARING A TANK MIX OF NUP-08135 Herbicide

1. Using clean, fresh water, fill the spray tank $\frac{1}{4}$ to $\frac{1}{3}$ full. If a liquid nitrogen fertilizer solution is used in place of water, refer to the table **Tank Mixes with Other Products** below for additional details.
2. Begin agitation and then add the required amount of NUP-08135 Herbicide.
3. Allow the solution to agitate for 5 minutes to completely disperse the dry flowable NUP-08135 Herbicide formulation.
4. Continue agitation and fill the spray tank with the remaining water. Do not add any other material until the NUP-08135 Herbicide is thoroughly mixed with the water.
5. As the tank is filling with the remaining amount of water, add any tank mix partners followed by the necessary volume of nonionic surfactant. Always add the surfactant last. Do not mix NUP-08135 Herbicide with spray additives that reduce the pH of the spray solution below 3.0. Additional information is found in the section on **Surfactants** below.
6. NOTE: Continuous agitation is required or settling will occur. Before spraying, reagitate the solution to ensure a uniform solution is sprayed.

7. Make only a sufficient amount of NUP-08135 Herbicide spray mixture that can be used within 24 hours of mixing. The product may degrade if allowed to sit unused.
8. For application of multiple loads of NUP-08135 Herbicide and a tank mix partner, make a pre-slurry of NUP-08135 Herbicide in clean water and then add to the spray tank. This pre-mix helps to prevent the tank mix partner from interfering with the dissolution of the NUP-08135 Herbicide. Be sure all NUP-08135 Herbicide is suspended in the spray tank solution before adding any tank mix partner.

TANK MIXES

Tank mixes of NUP-08135 Herbicide with registered herbicides may be applied to wheat, barley and fallow and will control or suppress weeds listed in the **Weeds** tables below, and other weeds either not listed on this label or that are resistant to NUP-08135 Herbicide. Tank mixes of NUP-08135 Herbicide with insecticides and fungicides registered for use on wheat or barley, or with liquid fertilizers are permitted as directed in the section below on **Tank Mixes with Other Products**. Read and follow all manufacturers' label instructions for the tank mix partner. Before tank mixing the tank mix product with NUP-08135 Herbicide, be sure all instructions on the herbicide labels do not conflict with those on this label. Read the section on **Preparing a Tank Mix of NUP-08135 Herbicide**, above, regarding preparation of pre-slurries of NUP-08135 Herbicide before adding tank mix partners.

SURFACTANTS

Always add an Etigra-authorized, nonionic surfactant to spray tanks unless directions elsewhere on this label recommend against this addition. The surfactant must have at least 80% active ingredient and is to be applied at 0.125 to 0.5% v/v (0.5 to 2 qt. per 100 gal. of spray solution).

Use the higher specified surfactant rate with spray volumes of 5 GPA or less and when low rates of NUP-08135 Herbicide are to be applied. A list of approved surfactants can be obtained from your agricultural dealer applicator or Etigra representative. Use an antifoaming agent if needed.

Do not substitute low rates of liquid fertilizer for a surfactant.

HOW TO CLEAN SPRAYER EQUIPMENT

Clean all spray equipment before making an application of NUP-08135 Herbicide.

Immediately after an application or multiple applications of NUP-08135 Herbicide, clean all spray equipment using the cleanup procedures described on the labels of previously applied products. If there are no cleanup directions, use the 6 step procedure described below before using this equipment to spray crops other than wheat or barley. After spraying is completed at the end of the day, rinse the interior of the tank with fresh water. Partially refill the tank with fresh water and flush the boom and hoses. These rinses will prevent deposits of dried pesticide residues that can remain in the application equipment.

Residues of NUP-08135 Herbicide that remain in the spray equipment may injure desirable crops if the equipment is used to make applications to crops other than barley or wheat. Use the following steps to clean all mixing and spray equipment immediately following applications of NUP-08135 Herbicide:

1. Drain the spray tank and then use fresh water to rinse the interior surfaces of the tank. Then flush the tank, boom, and hoses with water for at least 5 minutes. Physically remove any solid deposits that are found around the equipment.
2. Use fresh clean water to fill the tank and add one gallon of household ammonia (3%)[†] per 100 gallons of water. Flush the boom, hoses, and nozzles with this cleaning solution. Completely fill the tank with fresh water and circulate the solution through the tank and hoses for 15 minutes. Flush the boom, hoses, and nozzles, and then drain the tank.
3. Remove and clean the nozzles and screens separately. Use a bucket filled with the cleaning solution.
4. Repeat step 2.

5. Use clean water to rinse the tank, boom and hoses.
6. If the cleaner used is only ammonia, the rinsate solution may be discarded by being applied to the wheat or barley. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on-site or at an approved waste disposal facility.

† Other Etigra-approved cleaning solutions or different strengths of ammonia solution can also be used as cleaning agents. Use the same amounts as noted in step 2, above. Carefully follow the directions for use on the labels of the individual cleaner. Consult your agricultural dealer, applicator, or Etigra representative for a listing of approved cleaners.

Notes for Sprayer Equipment Cleaning:

- Do not use chlorine bleach with ammonia as dangerous gases will form. Clean equipment in well-ventilated areas.
- Before following the above cleanout procedure for aerial spray tanks, a steam-cleaning of the tanks is recommended to aid in removing caked deposits.
- Follow the most rigorous cleanout procedure for all pesticides which are tank-mixed with NUP-08135 Herbicide.
- After completing the above cleanout procedure and before using the sprayer equipment to make the next pesticide application, clean out the sprayer following the procedures on the pesticide product label that will be applied.
- It is recommended that a dedicated sprayer be kept for NUP-08135 Herbicide applications during the growing season. Dedicated equipment for NUP-08135 Herbicide applications will help to minimize the potential for injury to NUP-08135 Herbicide-sensitive crops if routine spraying practices include equipment shared between applications of NUP-08135 Herbicide and applications of other pesticides during the same spray season.

CROP ROTATION

Do not treat all acres (wheat, barley, fallow) at the same time with NUP-08135 Herbicide if rotational crop plantback flexibility is desired.

FIELD BIOASSAY

The following situations require a field bioassay before planting crops to areas previously treated with NUP-08135 Herbicide (refer to the tables in the section **Crop Rotation** for additional information): 1. The crop is not listed. 2. The soil pH is outside the specified range. 3. The use rate applied is not listed in the Rotation Crop Interval table. 4. The fields treated with NUP-08135 Herbicide have not received the specified minimum cumulative precipitation since application.

Test the crop intended to be planted the year following a treatment with NUP-08135 Herbicide by growing the crop in small plots which received the NUP-08135 Herbicide treatment. The crop response will determine the feasibility of rotating this crop to large areas which had been treated with NUP-08135 Herbicide. Additional information on the procedures for carrying out field bioassays can be obtained from your local dealer or Etigra representative.

GRAZING RESTRICTIONS

There are no grazing restrictions from applications of NUP-08135 Herbicide.

AGRICULTURAL USES

WHEAT AND BARLEY

IMPORTANT PRECAUTIONS AND RESTRICTIONS

Read the following restrictions and precautions to avoid injury to or loss of desirable trees or other desirable plants or vegetation.

- Before using NUP-08135 Herbicide, consult your state experiment station, university, or extension agent as to sensitivity of barley and wheat varieties to various herbicides. If the sensitivity of the crop variety is unknown, test NUP-08135 Herbicide on a small area of the crop variety.
- To avoid injury and/or temporary discoloration, do not apply NUP-08135 Herbicide alone, in combination with surfactants, or with high rates of liquid nitrogen fertilizers to barley or wheat growing under conditions of stress (drought, extreme temperature changes, water-saturated soils, disease, or insect damage, low fertility). Injury to these crops is possible if application is followed by severe winter stress including drought, disease, or insect damage.
- To avoid injury to forages, do not apply NUP-08135 Herbicide to barley or wheat which are undersown with legumes.
- Do not apply NUP-08135 Herbicide preplant, preemergence, or postemergence at rates lower than 2/10 oz. per acre.
- To avoid possible crop injury to desirable trees or vegetation, 1) do not use this product on lawns, walks, driveways, tennis courts, or similar areas; 2) use caution to avoid spray drift or direct or indirect contact of sprays onto desirable plants or areas adjacent to treated fields; 3) do not apply, drain or flush equipment rinses on or near desirable trees or other plants, on areas where their roots may extend, or in areas where the product may be washed or moved into contact with desirable plant roots.
- To minimize off-site movement of product on treated soils which can lead to damage of susceptible crops, do not apply if soils are powdery, dry or light, or sandy unless rainfall, mulch or other cultural practices stabilize these soils. Treated soil particles may move off-site to non-target crop sites through wind or water. Low levels of NUP-08135 Herbicide may injure or kill crops other than barley and wheat.
- Improved weed control in wheel track areas is achieved when NUP-08135 Herbicide is tank mixed with 2,4-D or MCPA and applied by ground postemergence to weeds under dry, dusty field conditions.
- If wheat has germinated and has emerged above the soil surface, do not make preemergence applications of NUP-08135 Herbicide to wheat fields.
- Do not make preemergence applications of NUP-08135 Herbicide to wheat planted into dry soil ("dusted in") or on very coarse, uneven seedbeds.
- To avoid the possibility of surface runoff, do not apply NUP-08135 Herbicide to frozen ground or to snow-covered ground.
- Do not apply NUP-08135 Herbicide to irrigated land if the tailwater will be used to irrigate other crops.
- Clean all spray equipment according to the directions in this label. Residues remaining in spray equipment may damage crops (other than wheat and barley).
- Read and follow the rotation crop restrictions on labels of products such as GLEAN FC, ALLY, Amber, Assert®, or other longer residual herbicides with the same mode of action that have been used on land that may be treated with NUP-08135 Herbicide. Follow the label that has the longest rotation crop plantback interval before choosing to rotate to crops other than wheat or barley.

WEEDS: Refer to the list of weeds controlled at different use rates in the table below.

WEEDS CONTROLLED AT THE RATES LISTED BELOW

2/10 to 3/10 ounce per acre of NUP-08135 Herbicide		
Blue Mustard	Fixweed § #	Redstem filaree
Broadleaf dock	Groundsel	Redroot pigweed
Bur beakchervil	Hempnettle	Shepherd's purse
Bur buttercup (testiculate)	Henbit	Smallseed falseflax
Carolina geranium	Lady's thumb	Smooth pigweed
Chickweed (common, jagged, mouseear)	Lambsquarters	Tansymustard § #
Conical catchfly	Mayweed chamomile	Treacle mustard (Bushy wallflower)
Corn spurry	Miners lettuce	Tumble mustard (Jim Hill)
Cow cockle	Pineappleweed	Virginia pepperweed
Curly dock	Prickly lettuce € #	White cockle
Cutleaf evening primrose	Prostrate pigweed	Wild mustard
False chamomile	Plains coreopsis	Wild carrot
Field pennycress	Purslane	
3/10 to 4/10 ounce per acre of NUP-08135 Herbicide		
Annual bluegrass § #	Corn gromwell § #	Russian thistle § # €
Annual ryegrass § #	Dove foot geranium	Speedwell (common, ivyleaf) §
Annual sowthistle	Green foxtail (pigeongrass) §	Sunflower #
Bedstraw § #	Knotweed (prostrate) § #	Vetch #
Bromus species (cheat, downy brome, Japanese brome) § #	Kochia § # €	Wild buckwheat #
Canada thistle § #	Pennsylvania smartweed §	Wild radish #
Coast fiddleneck (tarweed)	Prickly poppy (pinnate)	
5/10 ounce per acre of NUP-08135 Herbicide		
Bromus species (cheat, downy brome, Japanese brome) § #	Annual ryegrass § #	
<p>§ These weeds are suppressed and/or controlled by NUP-08135 Herbicide. Evidence of suppression includes a visual reduction in numbers of weeds as well as a significant loss of vigor. The extent that weeds are suppressed by NUP-08135 Herbicide will depend on the use rate, weed size at application and post-application environmental conditions.</p> <p># Refer to the section Additional Directions for Specific Weeds for additional information on these weeds.</p> <p>€ Naturally-occurring resistant biotypes of these weeds are known to occur. Refer to the sections Tank Mixes and Additional Directions for Specific Weeds for additional information.</p>		

USE RATES: Refer to the table below.

Timing of Application	Crop	Use Rate, oz. NUP-08135 Herbicide per Acre	Other Application Directions	Restrictions
Preplant or Preemergence	Spring wheat	2/10 to 4/10 oz.	See Footnote 1. See Footnote 2.	Do not apply to Durum and Wampum varieties of spring wheat (refer to Postemergence use directions). MN, MT, ND, SD, WY: Do not apply more than 3/10 oz. per acre. See Footnote 3.
Preplant	Winter wheat	2/10 to 4/10 oz.	Apply before wheat is planted. See Footnote 1.	

Timing of Application	Crop	Use Rate, oz. NUP-08135 Herbicide per Acre	Other Application Directions	Restrictions
			See Footnote 2.	
Preemergence	Winter wheat	2/10 to 5/10 oz.	<p>Apply after planting but prior to emergence of wheat. The 5/10 oz. rate should be reserved for suppression of bromus species and annual ryegrass.</p> <p>See Footnote 1.</p> <p>See Footnote 2.</p>	<p>MN, MT, ND, SD, WY: Do not apply more than 3/10 oz. per acre.</p> <p>See Footnote 3.</p>
Postemergence	Wheat and Barley	2/10 to 4/10 oz.	<p>Apply any time after the crop is in the 1-leaf stage, but before the boot stage.</p> <p>See Footnote 1.</p>	<p>To avoid crop injury, do not apply NUP-08135 Herbicide during the boot stage or early heading stage.</p> <p>To prevent injury to crops, do not use NUP-08135 Herbicide within 60 days of crop emergence if organophosphate insecticides (such as disulfoton (Di-Syston®) etc.) have been used as an in-furrow treatment.</p> <p>Greater crop injury may result from a combination of stress from herbicide application and cold weather than from pesticide application or cold weather alone. Delay applications of NUP-08135 Herbicide in areas such as the Pacific Northwest and Northern Plains if cold conditions exist or are unpredictable. Make applications after the weather improves and after the crop begins to grow vigorously (after the 1 to 4-leaf stage).</p>
Postemergence MN, MT, ND, SD, WY ONLY:	Spring and Winter Wheat	4/10 oz.	<p>For suppression of Green Foxtail (pigeongrass), Yellow Foxtail and Persian Darnel.</p> <p>Foxtail/Pigeongrass (Green and Yellow): Make application in the fall or spring, or in the spring to land which was fallow the previous year. Include a surfactant in the spray solution. Spray weeds that are less than 1" tall or before the 1-2 leaf stage.</p> <p>For suppression, ½ to 1" rainfall is required after application to move NUP-08135 Herbicide into the weed root zone before weed seed germination and to suppress foxtail before the 2-3 leaf stage. Inadequate</p>	<p>Make only one application per crop cycle. To avoid crop injury, do not apply NUP-08135 Herbicide during the boot stage or early heading stage.</p> <p>When applied in the fall, NUP-08135 Herbicide will provide more consistent weed suppression in most areas because adequate rainfall occurs to activate NUP-08135 Herbicide. When applied in the late spring, NUP-08135 Herbicide may not give consistent weed suppression due to lack of adequate rainfall. Insufficient rainfall will not move NUP-08135 Herbicide into the</p>

Timing of Application	Crop	Use Rate, oz. NUP-08135 Herbicide per Acre	Other Application Directions	Restrictions
			suppression may occur without adequate rainfall if foxtail reaches the 2-3-leaf stage.	weed root zone, and weeds that germinate after treatment will not be controlled. However, too much rainfall may also result in poor suppression of weeds.
<p>Persian Darnel: Make application in the fall or spring. Include a surfactant in the spray solution and apply before weeds are past the 2 leaf stage. For suppression, ½ to 1" rainfall is required after application to move NUP-08135 Herbicide into the weed root zone before weed seed germination and to suppress Persian Darnel before the weed passes the 2-3 leaf stage. Inadequate suppression may occur without adequate rainfall if Persian Darnel reaches the 3-leaf stage.</p> <p>Footnote 1: Apply tank mixes of NUP-08135 Herbicide and other products registered for preplant/preemergence (or postemergence) use on these crops (such as Roundup®).</p> <p>Footnote 2: To prevent injury to crops, do not use NUP-08135 Herbicide if organophosphate insecticides (such as disulfoton (Di-Syston) etc.) have been or are intended to be used as an in-furrow treatment.</p> <p>Footnote 3: Delayed seedling emergence and/or crop stress may result from a preemergence application to late fall plantings under cold weather and/or dry conditions. Preemergence applications may also injure wheat seeded less than 1" deep. It is recommended that a postemergence application be made when the crop has emerged and shows good vigor.</p>				

FALLOW

Use NUP-08135 Herbicide as a fallow treatment at 2/10 to 4/10 oz. per acre. Apply in the spring or fall to actively growing weeds that have emerged. If applied with other herbicides, ensure that the tank mix partners are registered for use in fallow. Read the section above on **Tank Mixes** before using with NUP-08135 Herbicide.

TANK MIXES WITH OTHER PRODUCTS

Before making **postemergence** tank mix applications of NUP-08135 Herbicide and other registered herbicides, or sequential applications of NUP-08135 Herbicide and other registered herbicides, read the additional information on **Tank Mixes** above. Refer to the table below for specific directions for tank mixes with other products.

Tank-Mix Partner and Use Rate	Application Directions	Timing and Restrictions
Insecticides	Only insecticides registered for use on wheat, barley and fallow may be used in these tank mixes.	<p>There are certain conditions (such as drought or cold stress while crop is in the 2-4 leaf stage and wide fluctuations in day/night temperatures just prior to or soon after treatment) when tank-mixes or sequential treatments of NUP-08135 Herbicide and organophosphate insecticides (such as methyl or ethyl parathion, disulfoton, etc.) should be avoided. Temporary crop yellowing or crop injury may occur unless these tank mixes have been tested on a small plot. If signs of crop injury do not occur, larger areas may be treated.</p> <p>Do not apply NUP-08135 Herbicide plus malathion. Crop injury may occur from this tank mix.</p> <p>When an organophosphate insecticide such as disulfoton (Di-Syston) has been applied in-furrow, crop injury may occur if NUP-08135 Herbicide is applied within 60 days of crop emergence.</p> <p>Pacific Northwest: Do not apply NUP-08135 Herbicide plus Lorsban®. Crop injury may occur from this tank mix.</p>

Fungicides	Only fungicides registered for use on wheat, barley, and fallow (mancozeb such as Manzate® 200DF fungicide) may be used in these tank mixes.	Apply at the normal time when herbicides and fungicide treatments overlap.
Liquid Fertilizers	Liquid fertilizers may replace water as the carrier in spray solutions. Check for physical compatibility before mixing NUP-08135 Herbicide in liquid fertilizers. When tank mixing NUP-08135 Herbicide, use the more compatible ester formulations of 2,4-D or MCPA. Add a surfactant when using low rates of liquid nitrogen fertilizers (less than 50% of spray solution by volume). Crop injury may occur if a surfactant is used at higher rates of liquid nitrogen fertilizers. Local recommendations may provide additional information on when to add surfactants.	Do not use NUP-08135 Herbicide plus liquid fertilizers that have a pH of 3.0 or less. The low pH can lead to degradation of NUP-08135 Herbicide. Do not add surfactant to tank-mixes of NUP-08135 Herbicide plus 2,4-D ester or MCPA ester if liquid fertilizer is added to the spray tank. Test this tank mix on a small area of the crop and if no signs of injury are observed, larger areas may be treated. Do not use low rates of liquid fertilizer solution as a substitute for a surfactant.
Herbicides such as: Bromoxynil (such as BUCTRIL® 4EC - ¼ to 1 pt. per acre, or BRONATE® - ½ to 2 pt. per acre, or CURTAIL® - 1 to 2 pt. per acre) Dicamba (such as BANVEL® or Clarity® - 1/8 to ¼ pt. per acre, or BANVEL SGF - ¼ to ½ pt. per acre) Metribuzin (such as Sencor® DF - 1.5 to 8 oz. AI per acre)	These tank mixes can be used to improve control of weeds not listed on this label.	If Assert is used in the tank mix with NUP-08135 Herbicide, always add a third broadleaf herbicide that has a different mode of action (such as MCPA ester or 2,4-D ester). Use a surfactant if recommended on the tank mix partner label. If crops receive heavy rainfall shortly after application, some temporary crop discoloration, stunting or injury may occur. Some broadleaf weeds may not be completely controlled from tank mixes with dicamba (such as Banvel, Banvel SGF and Clarity). Optimum wild oat control may not be achieved with tank mixes of NUP-08135 Herbicide with Hoelon® 3EC.
2,4-D (Amine or Ester) OR MCPA (Amine or Ester) ¼ to ½ lb. AI per acre	Apply after weeds have emerged. The ester formulations of 2,4-D or MCPA provide best control. Use 2/10 to 4/10 oz. per acre of NUP-08135 Herbicide. Add a surfactant if desired (½ to 1 qt. per 100 gal. of spray solution) but the potential for crop injury increases. If a liquid fertilizer is added to the spray tank mix, do not add a surfactant.	For tank mixes with MCPA, apply after the 3- to 5-leaf stage but before boot. For tank mixes with 2,4-D, apply after tillering (consult the recommendations on the 2,4-D label) but before boot. To avoid severe crop injury and/or foliar burn, the use of liquid fertilizers in either of these tank mixes is not recommended when temperatures are below 32°F or if the crop is under stress from cold weather just before winter dormancy.
Diuron (such as Karmex® DF or Direx® 80 DF) 1 to 1.5 lb per Acre (or Direx 4L, 0.8 to 1.2 qt. per Acre)	This tank mix is useful to control problem weeds such as wild buckwheat, corn gromwell, green foxtail (pigeongrass), annual ryegrass and annual bluegrass. Use 3/10 to 4/10 NUP-08135 Herbicide.	Best results are obtained if rainfall (1/2 to 1 inch) occurs within 7 to 14 days after application. Carefully read and follow the label guidelines and restrictions for the use of diuron to ensure there are no conflicts with the NUP-08135 Herbicide label. Follow the label with the most restrictive directions.
Everest®	This tank mix improves control of weeds in wheat.	Carefully read and follow the label guidelines and restrictions on the Everest label. Do not use this tank mix if any directions on the Everest label conflict with directions on this label. Follow the label with the most restrictive directions.

Maverick®	This tank mix improves control of weeds in wheat.	Carefully read and follow the label guidelines and restrictions on the Maverick label. Do not use this tank mix if any directions on the Maverick label conflict with directions on this label. Follow the label with the most restrictive directions.
Starane® 1/3 to 1 1/3 pints per acre	This tank mix improves control of kochia (2-4"), Russian thistle, mustard species, and wild buckwheat in wheat, barley, and fallow.	Carefully read and follow the label guidelines and restrictions on the Starane label. Do not use this tank mix if any directions on the Starane label conflict with directions on this label. Follow the label with the most restrictive directions.
Starane + Salvo® 2/3 to 2 2/3 pints per acre	This tank mix improves control of kochia (2-4"), Russian thistle, mustard species, and wild buckwheat in wheat, barley, and fallow.	Carefully read and follow the label guidelines and restrictions on the Starane + Salvo label. Do not use this tank mix if any directions on the Starane + Salvo label conflict with directions on this label. Follow the label with the most restrictive directions.
Starane + Sword® ¾ to 2 ¾ pints per acre	This tank mix improves control of kochia (2-4"), Russian thistle, mustard species, and wild buckwheat in wheat, barley, and fallow.	Carefully read and follow the label guidelines and restrictions on the Starane + Sword label. Do not use this tank mix if any directions on the Starane + Sword label conflict with directions on this label. Follow the label with the most restrictive directions.

ADDITIONAL DIRECTIONS FOR SPECIFIC WEEDS

Annual Bluegrass/Annual Ryegrass	<p>Preemergence: 5/10 oz. per acre NUP-08135 Herbicide. Apply after planting but before winter wheat emerges OR apply after planting, before wheat emerges followed by an application of metribuzin at 2.25 to 4.5 oz. AI per acre; apply metribuzin in the fall when the wheat is at the 4-5 leaf stage and annual grassy weeds are in the 1-3 leaf stage.</p> <p>Preemergence control in the Pacific Northwest: A tank mix of NUP-08135 Herbicide (3/10 to 4/10 oz. per acre) plus Diuron DF (1.5 lb per acre) improves control of these weeds. Ensure adequate rainfall (½ to 1") will occur after application to move NUP-08135 Herbicide into the root zone of weeds before bluegrass or ryegrass emerges</p> <p>Postemergence: Use 2/10 to 4/10 oz. per acre NUP-08135 Herbicide as a tank mix with metribuzin at 2.25 to 3 oz. AI per acre. Apply after the wheat (4-5 leaf stage) and grass weeds (1-3 leaf stage) have emerged.</p>
Bedstraw	4/10 oz. per acre NUP-08135 Herbicide. If applied postemergence, use NUP-08135 Herbicide plus a surfactant (2 qt. per 100 gal. of spray solution) and apply before bedstraw is over 2 inches long.
Bromus species (cheat, downy brome, Japanese brome)	<p>These grasses are best suppressed from an application of NUP-08135 Herbicide in a tank mix with metribuzin, or as an alternate, from sequential applications of these herbicides. Refer to the use directions for wheat, barley and fallow on the metribuzin label.</p> <p>For NUP-08135 Herbicide and metribuzin to be most effective, sufficient rainfall (1/2 to 1") is required so that NUP-08135 Herbicide and metribuzin move into the weed root zone before these weeds germinate and develop an established root system. These weed will not be suppressed if there is an insufficient amount of rainfall. Too much rainfall may result in crop injury.</p> <p>When the weather turns cold, there is a risk for crop injury and ineffective weed suppression. Apply metribuzin (such as Sencor DF) prior to winter dormancy of the crop and grassy weeds. Do not add any other pesticide to tank mixes of NUP-08135 Herbicide and metribuzin and use the surfactants recommended on either the NUP-08135 Herbicide or metribuzin labels. Some wheat and barley varieties are sensitive to metribuzin so refer to the metribuzin label for a list of these varieties.</p> <p>Preemergence and Sequential: 5/10 oz. per acre of NUP-08135 Herbicide. Apply after planting winter wheat and prior to its emergence. Follow this application with a sequential application of 2.25 to 3 oz. AI per acre of metribuzin applied in the fall after the wheat has reached the 4 to 5-leaf stage of growth and the annual grassy weeds are in the 1 to 3-leaf stage of growth.</p> <p>Idaho, Oregon, and Washington: 4/10 to 5/10 oz. per acre of NUP-08135 Herbicide. Apply after planting winter wheat and prior to its emergence. A sequential application of</p>

	<p>metribuzin may be made to aid in suppression of these weeds. Apply 1.5 to 3 oz. AI per acre metribuzin in the fall to wheat (2-leaf to 3 tiller stage) or 3.75 to 6 oz. AI per acre after winter wheat is actively growing with at least 4 tillers and 2 inches of secondary root systems.</p> <p>Postemergence: 2/10 to 4/10 oz. per acre NUP-08135 Herbicide plus 2.25 to 3 oz. AI per acre metribuzin. Treat wheat (at the 4 to 5-leaf stage) and weeds (at the 1 to 3-leaf stage) that have emerged.</p> <p>Idaho, Oregon, and Washington: 3/10 to 4/10 oz. per acre NUP-08135 Herbicide plus 1.5 to 3 oz. AI per acre metribuzin. Apply in the fall when wheat or barley are at the 2-leaf to 3-tiller stage. When these crops are actively growing with at least 4 tillers and at least 2 inches of secondary root system, apply NUP-08135 Herbicide at 3/10 to 4/10 oz. and metribuzin at 3.75 to 6 oz. active per acre. Best results will be obtained if application is made before the weeds reach the 2 to 3-leaf stage. Refer to the metribuzin label for additional information on treating these weeds.</p>
Canada thistle	Time the application of NUP-08135 Herbicide to occur after the majority of thistles emerge, are small (rosette stage to 4" – 6" tall) and are actively growing. Annual treatments may provide maximum long-term results. Include a surfactant with NUP-08135 Herbicide spray solutions.
Corn groomwell	Postemergence: Applications work best from 4/10 oz. per acre NUP-08135 Herbicide plus bromoxynil (such as Buctril or Bronate). Spray small, actively growing weeds.
Flixweed, Tansymustard	Postemergence: Applications work best from NUP-08135 Herbicide in tank mixes with 2,4-D or MCPA (amine or ester). Spray actively growing weeds.
Kochia, Russian thistle, Prickly lettuce	These weeds are known to have naturally occurring resistant biotypes which can be best controlled from application of NUP-08135 Herbicide in the spring when weeds are less than 2" tall or 2" across and are actively growing. A tank mix of NUP-08135 Herbicide plus dicamba (such as Banvel/Banvel SGF/Clarity) and/or 2, 4-D should be applied with a surfactant (2 qt. surfactant per 100 gal. of spray solution).
Prostrate knotweed	<p>Preemergence: 3/10 to 4/10 oz. per acre NUP-08135 Herbicide. Apply in the fall.</p> <p>Postemergence: Applications work best with 3/10 to 4/10 oz. per acre NUP-08135 Herbicide plus either 2, 4-D, MCPA, dicamba (such as Banvel/Banvel SGF/Clarity) and/or bromoxynil (such as Buctril or Bronate). Include a surfactant in the tank mix. Spray emerged seedlings (no more than 4 true leaves) that are actively growing.</p>
Sunflower	<p>Postemergence: Wait until the majority of sunflowers have emerged but before they are more than 2 inches in height before making an NUP-08135 Herbicide application. The surfactant rate should be 2 qt. per 100 gal. of water.</p> <p>Preemergence: Make an application of NUP-08135 Herbicide in the early spring. Spring rainfall should move the NUP-08135 Herbicide into the weed root zone which should prevent weed germination or weed root system development.</p> <p>NOTE: If applied in the fall in areas where rainfall is significant, the residual activity of NUP-08135 Herbicide may not provide adequate control of this weed. NUP-08135 Herbicide applied in the spring may not control deep-germinating sunflowers that emerge.</p>
Vetch	Postemergence: Applications work best from 4/10 oz. per acre NUP-08135 Herbicide plus 1/4 lb AI per acre of 2,4-D or MCPA (amine or ester). Include a surfactant in the tank mix.
Wild buckwheat	<p>Preemergence: 4/10 oz. per acre of NUP-08135 Herbicide applied in the fall or early spring provides optimum results.</p> <p>Postemergence: 4/10 oz. per acre NUP-08135 Herbicide plus 2,4-D, MCPA, dicamba (such as BANVEL/BANVEL SGF or Clarity), and/or bromoxynil (such as BUCTRIL or BRONATE) provide optimum results. Spray emerged seedlings that are actively growing. Although 3/10 oz. per acre NUP-08135 Herbicide may control this weed, consult local Etigra recommendations on directions for treating this weed.</p>
Wild radish	3/10 to 4/10 oz. per acre NUP-08135 Herbicide. Optimum results are achieved if NUP-08135 Herbicide is applied postemergence.

CROP ROTATION

Do not treat all acres (wheat, barley, fallow) at the same time with NUP-08135 Herbicide if rotational crop plantback flexibility is desired. Before using NUP-08135 Herbicide, plan your application and rotation crop strategy. Follow the rotation crop intervals specified in the tables below. The tables below note

cumulative precipitation in inches, which is defined as the amount of rainfall received from the date of NUP-08135 Herbicide application to the date of planting. Do not rotate to the crops listed in the tables below until the next growing season if the listed cumulative precipitation has not been received. A field bioassay must be conducted in certain states under certain conditions.

Minimum Rotation Intervals

Minimum recropping (or rotation crop) intervals for planting crops to fields previously treated with NUP-08135 Herbicide are defined as the amount of time that must elapse from the last application to the anticipated date of the next planting. These intervals have been established based on how quickly NUP-08135 Herbicide breaks down in the soil. Factors that influence the rate of breakdown include soil pH, soil temperature, soil microbes, and soil moisture. Soils that have a low pH (less than 7.0), high moisture (regions that receive over 20" of annual rainfall), and high soil temperatures (greater than 40°F) facilitate the breakdown of NUP-08135 Herbicide in soil. Conversely, soils with high soil pH, low moisture and low soil temperatures tend to break down NUP-08135 Herbicide more slowly. Due to the variations from year to year in rainfall and soil temperatures and from region to region, it is important to monitor soil temperatures and soil moisture when crops will be planted back to NUP-08135 Herbicide treated areas.

Soil pH Limitations

If soils have a pH above 7.9, NUP-08135 Herbicide should not be applied to these fields or residues of NUP-08135 Herbicide may persist. This residual activity may require crop rotation intervals longer than the timing listed in the table below in order to avoid injury to barley or wheat or other sensitive crops. To avoid crop injury or stress due to low soil pH levels and aluminum toxicity, do not apply NUP-08135 Herbicide to soils that have a pH below 5.0.

Testing Soil pH: Do not apply until you have tested the soil pH in areas where treatment is planned. To determine the pH of the soil, sample soils taken from different, representative areas at depths of between 0 and 4 inches. Send the samples to a laboratory for individual pH determinations. Additional information on soil sampling can be obtained from local extension publications.

Rotation Crop Intervals for Cereal Crops

The minimum recropping intervals are based upon the soil pH, the rate of NUP-08135 Herbicide applied and the location. The minimum-recropping interval is the amount of time that must elapse from the date of the last application to the anticipated date of planting. The crops that can be rotated are listed under the corresponding minimum recropping interval column in the table below.

Location	Soil pH†	Use Rate (oz./Acre)	Minimum Recropping Interval			
			0 Months	4 Months	10 Months	16 Months
CO, NE (Panhandle), Southeastern WY	7.9 or lower	2/10 to 4/10	W/R/T		O and B	
NE, KS, OK, and TX	7.9 or lower	2/10 to 4 /10	W/R/T		O and B	
	7.9 or lower	5/10		W/R/T	O	B
ID, OR, WA, MT, ND, SD, and WY (except Southeastern WY)	6.5 or lower	2/10 to 4/10	W/R/T		O and B	
	6.6 to 7.9	2/10 to 4/10	W/R/T		O	B
W/R/T = wheat, rye, triticale; B = barley; O = oats (use the rotation interval specified for barley when rotating to Durum wheat and Wampum variety of Spring Wheat)						
† See the Soil pH Limitations sections of this label.						

Rotation Crop Intervals for Planting Non-Cereal Crops—Non Irrigated Land

The listed non-cereal crops can be planted after the checked (✓) period of time (or otherwise designated number of months) has elapsed after application of NUP-08135 Herbicide.

Note: Do not plant sorghum grown for hybrid seed production. In Idaho, Oregon and Washington, if peas and lentils are to be planted in soils treated with NUP-08135 Herbicide, a field bioassay is required if the soil pH is above 6.5.

State, County or Area	Plantback Crop(s)	Soil pH	Application Rate (oz./A)	Cumulative Precipitation (Inches)	Rotation Crop Interval - Months				
					11	14	24	36	48
CO East of the Continental Divide	Field corn Millets	7.4 or lower 7.5 to 7.9	2/10 to 4/10 2/10 to 4/10	20 45	√			√	
	Grain sorghum	7.5 or lower 7.6 to 7.9	2/10 to 4/10 2/10 to 4/10	45 60				√	√
ID Northern Counties (Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis and Nez Perce)	Pea (dry)	6.5 or lower	2/10 to 4/10	35			√		
	Lentils	6.5 or lower	2/10 to 4/10	50				√	
KS, All areas	Field corn, Millets	7.4 or lower	2/10 to 4/10	20	√				
		7.5 to 7.9	2/10 to 4/10	45				√	
KS Central (Generally E. of Hwy 183, W. of the Flinthills)	Grain sorghum, Soybeans	7.9 or lower	2/10 to 5/10	25		√			
KS W. Central and Western (generally W. of Hwy 183 to the western edge of Grant, Kearny, Logan, Rawlings, Stevens, Thomas, and Wichita counties)	Grain sorghum	7.5 or lower 7.6 to 7.9	2/10 to 4/10 2/10 to 4/10	21 42		√	26 mos.		
	Soybeans	7.5 or lower 7.6 to 7.9	2/10 to 4/10 2/10 to 4/10	40 60			√	√	

State, County or Area	Plantback Crop(s)	Soil pH	Application Rate (oz./A)	Cumulative Precipitation (Inches)	Rotation Crop Interval - Months				
					11	14	24	36	48
KS Far Western (In the last tier of counties along the KS/CO border: Cheyenne, Greeley, Hamilton, Morton, Sherman, Stanton, and Wallace)	Grain sorghum, Soybeans	7.5 or lower 7.6 to 7.9	2/10 to 4/10 2/10 to 4/10	36 60			26 mos.		√
NE All areas	Field corn, Millet	7.4 or lower 7.5 to 7.9	2/10 to 4/10 2/10 to 4/10	20 45	√			√	
NE S. Central (Franklin, Nuckolls, Thayer and Western counties)	Grain sorghum, Soybeans	7.9 or lower	2/10 to 5/10	25		√			
NE Western counties (Chase, Dundy, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Perkins, Phelps, and Red Willow)	Grain sorghum, Soybeans	7.5 or lower 7.6 to 7.9	2/10 to 4/10 2/10 to 4/10	40 60			√	√	
NE Panhandle (Deuel, Garden, and Sheridan counties and all counties W. to the WY border)	Grain sorghum	7.5 or lower	2/10 to 4/10	45			√		
OK All areas	Field corn, Millets	7.4 or lower 7.5 to 7.9	2/10 to 4/10 2/10 to 4/10	20 45	√			√	
OK East of Panhandle	Grain sorghum, Cotton, Mung beans, Soybeans	7.9 or lower	2/10 to 5/10	25		√			
OK Panhandle	Grain sorghum	7.9 or lower	2/10 to 4/10	30			25 mos.		

State, County or Area	Plantback Crop(s)	Soil pH	Application Rate (oz./A)	Cumulative Precipitation (Inches)	Rotation Crop Interval - Months				
					11	14	24	36	48
OR Northeastern counties (Baker, Umatilla, Union and Wallowa)	Pea (dry)	6.5 or lower	2/10 to 4/10	35			√		
	Lentils	6.5 or lower	2/10 to 4/10	50				√	
OR West of the Cascades	Ryegrass (annual and perennial) Crimson Clover	6.5 or lower	2/10 to 4/10	20	9 mo.				
	Red clover Snap beans	6.5 or lower	2/10 to 4/10	40		15 mos.			
	Field corn	6.5 or lower	2/10 to 4/10	60			22 mo.		
TX All areas	Field corn, Millets	7.4 or lower	2/10 to 4/10	20	√				
		7.5 to 7.9	2/10 to 4/10	45				√	
TX Eastern counties (Archer, Bell, Bosque, Bowie, Camp, Cass, Clay, Colin, Cooke,	Grain sorghum, Cotton, Mung beans, Soybeans	7.9 or lower	2/10 to 5/10	25		√			
Coryell, Dallas, Delta, Denton, Ellis, Falls, Fannin, Franklin, Grayson, Hill, Hood, Hopkins, Hunt, Jack, Johnson, Kaufman, Lamar, Limestone, McLennan, Milam, Montague, Morris, Navarro, Palo Pinto, Parker, Rains, Red River, Robertson, Rockwall, Somervell, Tarrant, Titus, Upshur, Van Zandt, Wichita, Williamson, Wise, Wood, Young									
TX Central counties (Baylor, Callahan, Eastland, Foard, Hardeman, Haskell, Knox, Shackelford, Stephens, Throckmorton and Wilbarger)	Cotton, Grain sorghum	7.9 or lower	2/10 to 4/10	25		√			
		7.9 or lower	5/10	46			26 mos.		
TX Panhandle	Grain sorghum	7.9 or lower	2/10 to 4/10	30			25 mos.		
WA Eastern counties (Asotin, Columbia, Garfield, Pend	Pea (dry)	6/5 or lower	2/10 to 4/10	35			√		

State, County or Area	Plantback Crop(s)	Soil pH	Application Rate (oz./A)	Cumulative Precipitation (Inches)	Rotation Crop Interval - Months				
					11	14	24	36	48
Oreille, Spokane, Stevens, Walla Walla and Whitman)	Lentils	6/5 or lower	2/10 to 4/10	50				√	
WY Southeastern counties of Goshen, Laramie and Platte Counties	Field corn, Millets	7.4 or lower	2/10 to 4/10	20	√				
		7.5 to 7.9	2/10 to 4/10	45				√	
	Grain sorghum	7.5 or lower	2/10 to 4/10	45				√	
		7.6 to 7.9	2/10 to 4/10	60					√

Rotation Crop Intervals for Non-Cereal Crops—Irrigated/Non Irrigated Land Following Wheat, Barley or Fallow from Application of NUP-08135 Herbicide at the Maximum Use Rate

The listed non-cereal crops can be planted after the checked (√) period of time has elapsed after application of NUP-08135 Herbicide. These intervals are based on normal amounts of precipitation or irrigation. **NOTE:** If drought conditions exist, cold weather persists, or soil pH varies within fields, some temporary crop discoloration and/or crop injury may occur to STS soybeans planted in fields previously treated with NUP-08135 Herbicide.

Location	Crop†	Soil pH	Max. Use Rate (oz./Acre)	Minimum Recropping Interval	
				6 Months	18 Months
All Areas Alabama Arkansas Delaware Georgia Illinois Indiana Kentucky Louisiana	STS Soybeans**	7.9 or lower	0.5	√	
Maryland Mississippi Missouri North Carolina New Jersey Pennsylvania South Carolina Tennessee Virginia	Grain sorghum, Cotton, Non-STS soybeans, Field corn, Rice	7.9 or lower	0.5		√

† These rotation crops do not include crops grown for seed.

Rotation Crop Intervals for Planting Grasses on Conservation Reserve Program (CRP) Acres

The grasses listed below may be planted into wheat, barley, oats or fallow areas previously treated with NUP-08135 Herbicide after the appropriate interval has elapsed (refer to table below for the designated interval noted by the √ symbol). Injury to legumes may occur and Etigra does not recommend planting of grass and legume mixtures.

Bentgrasses	Lovegrasses – Sand, Weeping
Blue grama	Orchardgrass (excluding Piaute)
Bluestems – Big, Little, Plains, Sand, WW Spar	Prairie sandreed
Buffalograss	Sand dropseed
Galleta	Sheep fescue
Green needlegrass	Sideoats grama
Green sprangletop	Switchgrass
Indiangrass	Wheatgrasses – Crested, Intermediate, Pubescent, Slender, Streambank, Tall, Thickspike, Western
Indian ricegrass	Wild-ryegrasses – Beardless, Russian

Location	Soil pH†	Use Rate (oz/acre)	Minimum Recropping Interval - 2 Months	Minimum Recropping Interval - 4 Months
MT, ND, SD, and Northern WY	7.5 or lower	2/10 – 3/10		√
	7.6 to 7.9	2/10 – 3/10		√ (wheatgrasses only)
CO, NM, Southern WY	7.9 or lower	2/10 – 3/10	√	
NE, KS, OK, TX	7.9 or lower	2/10 – 4/10	√	
	7.9 or lower	5/10		√
ID, OR, UT, WA	7.9 or lower	2/10 – 4/10	√	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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