

SPECIMEN LABEL

Agri Star®

GROUP 2 & 9 HERBICIDE

THUNDER MASTER®

FOR USE ON ROUNDUP READY® SOYBEANS, ROUNDUP READY® ALFALFA AND FALL OR SPRING WEED BURNDOWN APPLICATION ON CLEARFIELD® CORN

ACTIVE INGREDIENTS:

Imazethapyr (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid	1.8%
Glyphosate: N-(phosphonomethyl) glycine, in the form of its isopropylamine salt	22.0%
OTHER INGREDIENTS:	76.2%
TOTAL:	100.0%

THUNDER MASTER® herbicide contains 2.17 pounds of active ingredient per gallon (0.17 pounds acid equivalent of imazethapyr and 2 pounds of glyphosate as the isopropylamine salt).

EPA Reg. No. 42750-147

EPA Est. No. 42750-MO-001

KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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

FIRST AID

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

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: 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 by a poison control center or doctor.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC toll free at 1-800-424-9300.

See inside booklet for additional PRECAUTIONARY STATEMENTS.

Manufactured By:

ALBAUGH, LLC

1525 NE 36th Street
Ankeny, Iowa 50021

**FOR CHEMICAL SPILL, LEAK,
FIRE, OR EXPOSURE, CALL
CHEMTREC 1-800-424-9300**



Albaugh®
Your Alternative™

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. **DO NOT** get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants.
2. Waterproof gloves.
3. Shoes plus socks.
4. Protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users Should:

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

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 and Proper Handling Instructions

Imazethapyr has properties and characteristics associated with chemicals detected in groundwater. The use of imazethapyr in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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.

This labeling must be in the possession of the user at the time of herbicide application.

Not for sale or use on Long Island, New York.

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 48 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 plant, soil, or water, is:

1. Coveralls.
2. Protective eyewear.
3. Chemical-resistant gloves, such as butyl rubber >14 mils, or natural rubber >14 mils, or neoprene rubber >14 mils, or nitrile rubber >14 mils.
4. Shoes plus socks.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: THUNDER MASTER® herbicide is stable under conditions of freezing and thawing. Shake well before using. Keep containers closed to avoid spills and contamination.

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

CONTAINER HANDLING: (See the Net Contents section on the container to determine if it non-refillable or refillable.) APPROPRIATE BOX MUST BE CHECKED.

Non-refillable containers (1 and 2.5 gallon): Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Non-refillable containers (>5 gallon): Do not reuse or refill this container. Triple rinse or pressure 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 ¼ 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. Turn the container over onto its other 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable containers: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

When this container is empty, replace the cap and seal all openings that have been made during usage and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, clean container the empty container and offer for recycling, if available.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

If the container cannot be refilled, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

ATTENTION

AVOID CONTACT OF THUNDER MASTER® WITH FOLIAGE OF DESIRABLE PLANTS, BECAUSE SEVERE INJURY OR PLANT DEATH MAY RESULT. AVOID DRIFT. THUNDER MASTER® CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

DO NOT allow the herbicide solution to drift onto desirable vegetation. Very small amounts of drift may cause injury or death to desirable crops or plants. The likelihood of injury occurring from the use of this product increases when winds are gusty. The risk of injury from this product increases when wind direction is constantly changing or during inversion conditions or other weather conditions that favor drift. Avoid applications using high spray pressure and high speed. These contribute to conditions that favor small spray droplets and drift.

PRODUCT INFORMATION

THUNDER MASTER® herbicide provides burndown and residual control of many broadleaf and grass weeds in soybeans and Roundup Ready alfalfa. THUNDER MASTER® may be applied postemergence to Roundup Ready soybeans and Roundup Ready alfalfa for season-long weed control. THUNDER MASTER® is effective for difficult-to-control weeds common to no-till production, including marestail.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following an THUNDER MASTER® application. These effects occur infrequently and are usually temporary.

THUNDER MASTER® is a mixture of two active ingredients: imazethapyr and glyphosate, which inhibit acetolactate synthase/acetohydroxyacid synthase (ALS/AHAS) and 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS), respectively.

Weed populations may contain plants naturally resistant to various herbicide modes of action. Weed populations have been identified that are resistant to ALS/AHAS and/or EPSPS herbicides. Naturally occurring biotypes of some of the weeds listed on the label may not be effectively controlled by this and/or other products with either the ALS/AHAS and/or EPSPS modes of action. If resistant biotypes occur in the field, incorporate additional control methods for effective weed control such as additional approved herbicides with alternate modes of action or mechanical means.

RESTRICTIONS FOR MIXING, LOADING AND CLEANING OF APPLICATION EQUIPMENT

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

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

The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

DO NOT apply this product through any type of irrigation system.

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

DRIFT CONTROL ADDITIVES

Drift control additives may be included to either ground or aerial applications. When a drift control agent is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

To avoid injury to sensitive crops, spray equipment used for THUNDER MASTER® applications must be drained and thoroughly cleaned with water before being used to apply other products.

When THUNDER MASTER® herbicide is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. No label dosages may be exceeded. Do not mix THUNDER MASTER® with any product containing a label prohibiting such mixtures.

SPRAYING INSTRUCTIONS

DO NOT apply when winds are gusty, under low-level inversion conditions or under other conditions that favor drift. Maintain untreated buffer strips between treated fields and adjacent desirable vegetation. Exposed leaves or other green tissue may be damaged or killed by drift from THUNDER MASTER®.

GROUND APPLICATIONS:

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. A spray pressure of 20 to 40 psi is necessary for optimal spray coverage with standard ground sprayers.

For minimum or no-till crops, use a minimum of 20 gallons of water per acre when applying THUNDER MASTER® to ensure thorough coverage. Use higher gallonage for fields with dense vegetation or heavy crop residues. Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's instructions). Use only flat-fan nozzle tips for postemergence applications.

Avoid overlaps when spraying.

THUNDER MASTER® APPLICATIONS WITH A LOW VOLUME SPRAYER:

THUNDER MASTER® may be applied to soybeans with a low volume (Spra-Coupe type) sprayer. When applying THUNDER MASTER® with a low volume sprayer, spray the weeds before they reach the maximum size listed in this label. Adequate control of weeds is dependent upon good spray coverage of the weeds. The sprayer must be calibrated to deliver the recommended spray volume and pressure to ensure adequate spray coverage of the weeds.

When applying THUNDER MASTER® with a low volume sprayer, apply a minimum of 10 gallons per acre of spray solution with a nozzle pressure between 40–60 psi for optimum coverage. Lower nozzle pressure will minimize the potential for drift to desirable vegetation.

AERIAL APPLICATION

Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre. When applied POSTEMERGENCE, the addition of a non-ionic surfactant AND fertilizer solution are required for optimum weed control. Apply a non-ionic surfactant at the rate of 0.125% v/v of spray solution AND ammonium sulfate at the rate of 2.5 lb/acre. (See instructions under **APPLICATION INFORMATION – POSTEMERGENCE**.)

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 is responsible for considering all these factors when making decisions.

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

1. The distance of the outer most nozzles on the boom must not exceed $\frac{3}{4}$ 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.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory presented below.

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 recommended 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** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended 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 $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Do not make applications at a height greater than 10 feet above the top of the target 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

Do not make applications when wind speeds are less than 3 mph or wind speeds are greater than 10 mph. Wind speeds below 3 mph will create 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 make applications during a 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 pesticide must 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).

Applicator is responsible for any loss or damage which results from spraying THUNDER MASTER® in a manner other than specified or required in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regard to spraying.

USE INSTRUCTIONS FOR NON-ROUNDUP READY AND ROUNDUP READY SOYBEANS

BURNDOWN WEED CONTROL (No-till soybeans and stale seedbed)

Apply THUNDER MASTER® for burndown of weeds in no-till soybeans. It may be applied prior to planting, or preemergence of any soybean variety (including Roundup Ready or non-Roundup Ready soybeans). Add 2,4-D to the spray tank for enhanced control of perennial weeds including marehail and hemp dogbane.

ROUNDUP READY SOYBEANS (glyphosate resistant)

THUNDER MASTER® may also be applied for postemergence weed control in Roundup Ready soybeans. Apply THUNDER MASTER® for general weed burndown and season-long control of broadleaf and grassy weeds.

For season-long control of grasses, apply Prowl® 3.3 EC herbicide prior to planting soybeans. Prowl® 3.3 EC will also enhance control of waterhemp. A postemergence application of THUNDER MASTER® will control any escape weeds and provide season-long control of most broadleaf and grass weeds.

When mixing THUNDER MASTER® herbicide with 2,4-D or Prowl® 3.3 EC, always use in accordance with the more restrictive label limitations and precautions. Do not exceed any label dosage rates. Do not mix this product with any product containing a label prohibition against such mixing.

When organophosphate such as (chlorpyrifos) or carbamate insecticides are tank-mixed with THUNDER MASTER® temporary injury may result to the treated crops.

NOTE: DO NOT apply THUNDER MASTER® postemergence to non-glyphosate-resistant soybeans.

FALL APPLICATIONS IN A PLANNED SEQUENTIAL PROGRAM ON ROUNDUP READY SOYBEANS

Apply THUNDER MASTER® herbicide after fall harvest and prior to ground freeze-up in the winter. Fall applications of THUNDER MASTER® will control existing weeds and provide residual control of winter annual weeds and early spring germinating weeds in soybeans. Soybeans must be planted in the spring following the fall application of THUNDER MASTER®. If weeds emerge in-season, other registered soybean products may be applied postemergence for weed control.

NOTE: For fall applications of THUNDER MASTER® adjust the rotational crop intervals by basing the interval on the date of soybean planting rather than the date of herbicide application.

FALL OR SPRING BURNDOWN APPLICATION IN A PLANNED SEQUENTIAL PROGRAM WITH LIGHTNING® HERBICIDE APPLIED TO CLEARFIELD CORN (only in states of Kentucky, Tennessee, and south of Interstate 70 in Indiana)

THUNDER MASTER® may be applied as a fall or spring burndown application prior to planting CLEARFIELD® corn and the use of Lightning® Herbicide in-crop to CLEARFIELD® corn. **DO NOT** apply THUNDER MASTER® to emerged CLEARFIELD® corn, or crop injury will occur.

NOTE: DO NOT apply COUNTER®CR insecticide or COUNTER® 15G insecticide to acres treated with THUNDER MASTER® preplant CLEARFIELD corn or crop injury may occur.

DO NOT plant wheat in the same year as application of THUNDER MASTER® followed by Lightning®, unless at least 10 inches of rainfall or overhead irrigation has occurred between application of THUNDER MASTER® and planting of wheat.

APPLICATION RATES

BURNDOWN WEED CONTROL (No-till soybeans and stale seedbed).

Apply THUNDER MASTER® at the rate of 3 pints per acre. (One gallon will treat 2.7 acres of soybeans at this rate.)

ROUNDUP READY SOYBEANS (glyphosate resistant – in crop postemergence weed control).

THUNDER MASTER® provides burndown and residual control of many broadleaf and grassy weeds in soybeans. It can be applied to no-till soybeans as a burndown prior to planting. It may also be applied postemergence to Roundup Ready® soybeans for season-long weed control. THUNDER MASTER® is effective for control of difficult weeds common to no-till production, including marestalk.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following an THUNDER MASTER® application. These effects occur infrequently and are usually temporary.

To minimize weed competition to the soybeans, apply to weeds 1–8 inches in size. Apply THUNDER MASTER® at the rate of 3 pints per acre. (One gallon will treat 2.7 acres of soybeans at this rate.)

FALL APPLICATIONS IN A PLANNED SEQUENTIAL PROGRAM ON ROUNDUP READY SOYBEANS

Apply THUNDER MASTER® at a rate of 3 pints per acre. (One gallon will treat 2.7 acres at this rate.)

FALL OR SPRING BURNDOWN APPLICATION IN A PLANNED SEQUENTIAL PROGRAM WITH LIGHTNING® HERBICIDE APPLIED TO CLEARFIELD® CORN (only in states of Kentucky, Tennessee, and south of Interstate 70 in Indiana).

Apply THUNDER MASTER® at a rate of 3 pints per acre. (One gallon will treat 2.7 acres at this rate.)

Only one application of THUNDER MASTER® may be made during the season, not to exceed 3.0 pints per acre.

ROUNDUP READY SOYBEANS (only in North Dakota and north of Highway #210 in Minnesota)

Apply THUNDER MASTER® at 2.25 pts/A. **DO NOT** exceed 2.25 pts/A. One gallon of THUNDER MASTER® will treat 2.0 acres at this rate.

Only one application of THUNDER MASTER® may be made during the season. **DO NOT** exceed 3.0 pts/A of THUNDER MASTER®.

MIXING INSTRUCTIONS

BURNDOWN OR POSTEMERGENCE APPLICATIONS OF THUNDER MASTER® REQUIRE THE ADDITION OF A SURFACTANT AND FERTILIZER.

1. SURFACTANTS: Use a non-ionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 1 pint per 100 gallons of spray mixture (0.125% v/v of the spray mixture). Use only surfactants approved for application to growing crops.

AND

2. FERTILIZER: Include a fertilizer in the spray solution. Add spray grade ammonium sulfate at the rate of 8.5–17 lbs. per 100 gallons of spray solution. Use the higher rate when weeds are under moisture or temperature stress.

When mixing THUNDER MASTER®, while agitating, add components in the following order:

1. Fill spray tank 1/2 full with clean water.
2. Maintain continuous agitation throughout
3. Add fertilizer.
4. Add THUNDER MASTER® and thoroughly mix.
5. Add surfactant to the spray tank.
6. While agitating, fill the remainder of the tank with water.

APPLICATION INFORMATION

POSTEMERGENCE

THUNDER MASTER® is effective in controlling weeds in conservation tillage as well as in conventional production systems. Apply THUNDER MASTER® as a postemergence treatment. Application timing should be based on weed size and not crop growth stage. Apply THUNDER MASTER® to Roundup Ready® Soybeans and weeds that are actively growing.

A non-ionic surfactant and a nitrogen-based fertilizer must be added to the spray solution for optimum weed control activity. See the **ADJUVANTS** section under **MIXING INSTRUCTIONS** for specific instructions.

When THUNDER MASTER® is applied postemergence, absorption will occur through both the roots and foliage. Susceptible weeds stop growing and either die or are not competitive with the crop. THUNDER MASTER® not only controls many existing broadleaf and grass weeds when applied postemergence, it also provides control of susceptible weeds that may emerge after application.

For maximum weed control, cultivate 7–10 days following a postemergence THUNDER MASTER® application. This timely cultivation will enhance residual weed control, especially under dry conditions.

THUNDER MASTER® must be applied a minimum of one hour before rainfall or overhead irrigation.

Unusually cool temperatures (50°F or less) reduce photosynthesis and transpiration and thus reduce uptake, translocation, and efficacy of THUNDER MASTER® herbicide in weeds.

If air temperature has been below 50°F for 10 or more hours, delaying an THUNDER MASTER® application for 48 hours after the temperature increases above 50°F, will improve weed control and reduce crop response.

NO-TILL/MINIMUM TILLAGE AND DOUBLE CROP SOYBEANS

THUNDER MASTER® herbicide controls existing weeds and provides residual control of most weeds when applied early postemergence to Roundup Ready soybeans in no-till or minimum tillage and double crop soybean production systems. The application may be applied either before or after emergence of the crop. (Refer to the **WEEDS CONTROLLED** chart for weeds controlled and recommended weed size).

The addition of Prowl® 3.3 EC herbicide in a tank-mixture with THUNDER MASTER® for burndown weed control will provide season-long control of grasses and enhance control of waterhemp.

For improved burndown weed control, THUNDER MASTER® may be tank-mixed with 2,4-D. Refer to the 2,4-D label for application rates and intervals between application and planting.

SOYBEANS USE RESTRICTIONS (Roundup and non-Roundup Ready)

- Do not apply THUNDER MASTER® postemergence to non-Roundup Ready resistant soybeans.
- Do not exceed 3.0 pts/A of THUNDER MASTER® per season.
- North Dakota; north of Highway #210 in Minnesota Only – Apply THUNDER MASTER® at 2.25 pts/A. Do not exceed 2.25 pts/A per season.
- If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4–6 inches deep.
- Pre-Harvest Interval (PHI) – There must be an interval of at least 85 days between an application of THUNDER MASTER® and soybean harvest.
- THUNDER MASTER® applications must be made before soybean bloom.
- Make only one application of THUNDER MASTER® per soybean growing season.
- **DO NOT** graze or feed treated soybean forage, hay or straw to livestock.

ROUNDUP READY ALFALFA

THUNDER MASTER® provides contact and residual control of many broadleaf and grass weeds in Roundup Ready alfalfa.

THUNDER MASTER® can be applied postemergence to seedling or established Roundup Ready alfalfa or to dormant or semi-dormant established Roundup Ready alfalfa grown for forage, hay, or seed. Roundup Ready alfalfa is tolerant to postemergence applications of THUNDER MASTER®. THUNDER MASTER®, if applied to non-Roundup Ready alfalfa, will cause severe crop injury and crop loss.

Apply THUNDER MASTER® at a broadcast rate of 2.2 to 4.4 pts/A postemergence only to seedling or established Roundup Ready alfalfa grown for forage, hay, or seed. Allow a minimum of 7 days between sequential applications.

Maximum Seasonal Use Rate – A maximum of 0.094 lb ae/A of imazethapyr (4.4 pts/A of THUNDER MASTER®) per year may be applied to Roundup Ready alfalfa.

DO NOT apply more than 3.0 pts/A of THUNDER MASTER® to Roundup Ready alfalfa during the last year of the stand.

Seedling Roundup Ready Alfalfa

THUNDER MASTER® must be applied postemergence to seedling Roundup Ready alfalfa. Apply THUNDER MASTER® when the seedling Roundup Ready alfalfa is in the second trifoliate stage or larger and when the majority of the weeds are 1 to 3 inches. For low growing weeds (such as mustards), apply THUNDER MASTER® before the rosette exceeds 3 inches.

Because of the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain a Roundup Ready gene and will not survive or thrive after the first application of THUNDER MASTER®. To limit undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, apply a single THUNDER MASTER® application of at least 3.0 pts/A at or before the 3 to 4 trifoliate growth stage.

Established Roundup Ready Alfalfa

THUNDER MASTER® can be applied to established Roundup Ready alfalfa in the fall, in the spring to dormant or semi-dormant Roundup Ready alfalfa (less than 3 inches of regrowth), or between cuttings. For weed control between alfalfa cuttings, apply THUNDER MASTER® following Roundup Ready alfalfa cutting and removal of the hay from the field. Make any application before significant Roundup Ready alfalfa growth or regrowth (3 inches) to allow THUNDER MASTER® to reach target weeds.

Replanting

If replanting is necessary in a field previously treated with THUNDER MASTER®, **DO NOT** plant alfalfa for 4 months following an THUNDER MASTER® application.

ROUNDUP READY ALFALFA RESTRICTIONS AND LIMITATIONS

- **DO NOT** apply THUNDER MASTER® at more than 3.0 pts/A in North Dakota or Minnesota north of Highway #210.
- **DO NOT** apply more than 3.0 pts/A of THUNDER MASTER® to Roundup Ready alfalfa during the last year of the stand.
- Maximum Seasonal Use Rate – A maximum of 0.094 lb ae/A of imazethapyr (4.4 pts/A of THUNDER MASTER®) per year may be applied to Roundup Ready alfalfa.
- Preharvest Interval (PHI) – **DO NOT** feed, graze, or harvest Roundup Ready alfalfa for 30 days following application of THUNDER MASTER® to Roundup Ready alfalfa.

BROADLEAF WEEDS CONTROLLED

Broadleaf Weeds Controlled	Maximum Size (inches)
Alligator weed	5
Amaranth, Palmer*	4
Anoda, spurred	3
Artichoke Jerusalem	8
Buffalobur	5
Bristly starbur	3
Buckwheat, wild	4
Burcucumber	8
Carpetweed	8
Chickweed	8
Cocklebur, common*	8
Copperleaf	
Hophornbeam	2
Virginia	2
Corn (volunteer- non Roundup Ready)	20
Eclipta	8
Fleabane	
Annual	8
Hairy	8
Rough	6
Jimsonweed	6
Hemp sesbania	2
Horseweed/marestail*	8
Knotweed	8

Broadleaf Weeds Controlled	Maximum Size (inches)
Kochia*	8
Lambsquarters, common*	8
Mallow, common	3
Mallow, Little	3
Marshelder	5
Morningglory, annual	
<i>Ipomea</i> spp.	4
Mustard spp.	8
Nightshade	
Black	8
Eastern black	8
Hairy	8
Pennycress, field	N/A
Pepperweed, field	N/A
Pepperweed, Virginia	N/A
Pigweed	
Redroot	8
Smooth	8
Spiny	8
Radish, wild	3
Ragweed	
Common*	9
Giant*	9
Rocket, London	4

(continued)

BROADLEAF WEEDS CONTROLLED *(cont.)*

Broadleaf Weeds Controlled	Maximum Size (inches)
Rocket, yellow	3
Shepherd's purse	8
Smartweed	
Ladysthumb	6
Pennsylvania	6
Spurge	
Prostrate	8
Spotted	8

Broadleaf Weeds Controlled	Maximum Size (inches)
Sicklepod	3
Sunflower	8
Teaweed/prickly sida	2
Velvetleaf	5
Waterhemp*	8

GRASS WEEDS CONTROLLED

Grass Weeds controlled	Maximum Size (inches)
Barley (volunteer)	8
Barnyardgrass	6
Crabgrass	
Large	8
Smooth	8
Cupgrass, woolly	8
Foxtail	
Giant	8
Green	8
Yellow	8
Goosegrass	5
Johnsongrass	
Seedling	8
Rhizome	8

Grass Weeds Controlled	Maximum Size (inches)
Oats (volunteer)	8
Panicum	
Fall	8
Texas	8
Browntop	8
Red rice	4
Rye	8
Shattercane	8
Sprangletop	8
Signalgrass, broadleaf	8
Sorghum, alnum	4
Wheat (volunteer)	8
Wild oats	8

*Populations of indicated weeds exist that known to be resistant to ALS/AHAS-inhibiting and EPSPS-inhibiting herbicides and may not be effectively controlled with THUNDER MASTER® herbicide. In fields where these populations exist, incorporate additional control methods for effective weed control and include additional approved herbicides with alternate modes of action or mechanical means.

N/A = Not Applicable

SEDGES CONTROLLED

Nutsedge	
Purple	3 ¹
Yellow	3 ¹
¹ Reduced competition	

ROTATIONAL CROP INSTRUCTIONS

The following rotational crops may be planted after applying THUNDER MASTER® herbicide at the specified rate:

Time after THUNDER MASTER® application	CROP
Anytime	CLEARFIELD corn seed hybrids (resistant/tolerant to Pursuit herbicide) Lima beans Peanuts Peas Southern peas Soybeans
Two months	Snap peas
Four Months	Barley (select states; see Exceptions To Rotational Crop Restrictions) Alfalfa Clover CLEARFIELD Wheat Edible beans (other than lima beans) Rye (Except in North Dakota and Minnesota north of highway 210) Wheat
Eight and one-half months	Field corn Field corn grown for seed
Nine and one-half months	Barley (except in North Dakota) Tobacco
Twelve months	CLEARFIELD canola varieties (tolerant to Pursuit herbicide)
Eighteen months	Barley (North Dakota; see exceptions to Rotational Crop Restrictions) Cotton Lettuce Oats Popcorn Rye (North Dakota and Minnesota north of highway 210) Safflower Sorghum Sunflower Sweet corn
Twenty six months	Flax Potatoes
Forty months	All crops not listed elsewhere in these ROTATIONAL CROP INSTRUCTIONS ¹

¹ Following forty months after an THUNDER MASTER® application, and before planting any crop not listed elsewhere in the **ROTATIONAL CROP INSTRUCTIONS** a successful field bioassay must be completed.

The field bioassay consists of a test strip of the intended rotational crop planted across the previously treated field and grown to maturity.

The test strip should include low areas and knolls, and include variations in soil such as type and pH. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Sugarbeet production can be reduced when grown in soil conditions with a pH less than 6.5. If the field is limed to adjust pH prior to planting rotational crops not listed in the **ROTATIONAL CROP INSTRUCTIONS**, apply the lime at least 12 months prior to planting the rotational crop.

Use of THUNDER MASTER® in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

EXCEPTIONS TO ROTATIONAL CROP INSTRUCTIONS

BARLEY:
(North Dakota only).

Barley may be planted 18 months following an THUNDER MASTER® application in North Dakota.

BARLEY:
(States of Indiana, Ohio, Kentucky, Pennsylvania, New Jersey, Delaware, Virginia and Maryland only).

Barley may be planted 4 months following an THUNDER MASTER® application in these states.

CORN INBRED LINES:

Corn inbred seed lines may be planted the year following an application of THUNDER MASTER®. Several seed companies have tested a wide range of inbreds for sensitivity to THUNDER MASTER® soil residues and have reported good crop safety. However, due to the proprietary nature of seed production, ALBAUGH, LLC has not been given access to the inbred data. Growers are directed to contact the seed company for information and recommendations regarding the planting of corn grown for seed in fields treated with THUNDER MASTER® herbicide the previous year. Since growing conditions, environmental conditions and grower practices are beyond the control of ALBAUGH, LLC, to the extent permitted by applicable law, all risks and consequences associated with planting seed corn inbreds into fields treated previously with THUNDER MASTER® shall be assumed by the user.

SWEET CORN AND POPCORN VARIETIES:
(States of Iowa, Illinois, Indiana, Ohio, Wisconsin, Minnesota and Tennessee only).

Sweet corn and popcorn varieties may be planted the year following an application of THUNDER MASTER®. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of THUNDER MASTER®. Before planting sweet corn for processing, contact the processor company for information and recommendations regarding the tolerance of sweet corn varieties planned for fields treated with THUNDER MASTER® the previous year. **DO NOT** plant fresh market sweet corn varieties prior to 18 months after THUNDER MASTER® use. Before planting popcorn, contact the popcorn company for information and recommendations regarding the tolerance of popcorn varieties planned for fields treated with THUNDER MASTER® the previous year.

Since growing conditions, environmental conditions and grower practices are beyond the control of Albaugh, LLC TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SWEET CORN OR POPCORN VARIETIES INTO FIELDS TREATED PREVIOUSLY WITH THUNDER MASTER® SHALL BE ASSUMED BY THE USER.

Stunting and maturity delay or other adverse effects may result when sweet corn or popcorn are planted following THUNDER MASTER® use.

CERTAIN VEGETABLE CROPS:
(States of New Jersey, Virginia, North Carolina, South Carolina, Georgia, Alabama, Florida, Delaware, Maryland, Pennsylvania, Kentucky and Indiana only).

The following crops may be planted 18 months following the last application of THUNDER MASTER®: Bahiagrass, cabbage, cantaloupe, cucumber, Irish potato, onion, sweet potato transplants, sweet pepper transplants, tomato transplants, and watermelon.

WHEAT:
Wheat may be planted 3 months following a THUNDER MASTER® application in areas east of interstate highway I-35.

NON-CLEARFIELD® WHEAT

Rotational Interval based on pH, Moisture and Tillage (North Dakota)		Moldboard Plowing	
		NO	YES
pH and Rainfall Requirements	>10 inches R+I AND pH >6.2	4 months	4 months
	<10 inches R+I OR pH <6.2	15 months	4 months

R+I = Rainfall and overhead irrigation from the time of THUNDER MASTER® application up until time of wheat planting. Does not include furrow or flood irrigation.

If the rainfall or pH requirements are not fully met, and non-CLEARFIELD wheat is planted prior to the specified rotation interval, injury may be reduced by tillage, such as deep disking (greater than 6 inches deep) after crop harvest but prior to November 1.

The possibility of injury to non-CLEARFIELD wheat planted the next season increases if less than normal precipitation occurs within the first two months after THUNDER MASTER® application.

CONDITIONS OF SALE AND WARRANTY

The Directions For Use of this product reflects the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of ALBAUGH, LLC or the Seller. To the extent allowable by applicable law, all such risks shall be assumed by the Buyer.

ALBAUGH, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions For Use, subject to the inherent risks, referred to above.

ALBAUGH, LLC MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT PERMITTED BY LAW, ALBAUGH, LLC AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. ALBAUGH, LLC and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing "conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of ALBAUGH, LLC.

Uses With Other Products (Tank-mixes)

If this product is used in combination with any other product except as specifically recommended in writing by ALBAUGH, LLC, then ALBAUGH, LLC shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically recommended. If used in combination recommended by ALBAUGH, LLC, to the extent allowable by applicable law, the liability of ALBAUGH, LLC shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the ALBAUGH, LLC product in such combination use, and to the extent allowable by applicable law, in any event shall be limited to return of the amount of the purchase price of the ALBAUGH, LLC product.

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Roundup Ready Soybeans is a registered trademark of Monsanto Company.