

7969-133

2/26/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Dave G. Bolin  
Product Registration  
BASF Corporation, Agricultural Products  
PO Box 13528  
Research Triangle Park, NC 27709-3528

FEB 26 2009

SUBJECT: Application for Pesticide Notification (PRN 98-10)  
Request Primary Brand Name "BAS 452 18H Herbicide"  
EPA Reg. No. 7969-133  
Application Dated January 28, 2009

Dear Registrant:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 01/28/09 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

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

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

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Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 2-28-95



United States  
Environmental Protection Agency  
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

### Application for Pesticide - Section I

1. Company/Product Number BASF Corporation / 7969-133	2. EPA Product Manager Joanne Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) BASF Corporation / Weedmaster Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation 26 Davis Drive / P.O. Box 13528 Research Triangle Park, NC 27709 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: <b>NOTIFICATION</b> EPA Reg. No. _____ FEB 26 2009 Product Name _____	

### Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of primary brand name "BAS 452 18H" for the 7969-133 formulation formerly known as Weedmaster. BASF will use BAS 452 18H as the primary brand name for 7969-133. This submission is made in accordance with PR Notice 98-10.

Attn: Label Notification Team. No PRIA fee is associated with this action.

### Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container Including, but not limited to, 2.5 gal		5. Location of Label Directions <input checked="" type="checkbox"/> On Label	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued Stenciled				<input type="checkbox"/> Other _____	

### Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dave G. Bolin, Ph.D.	Title Product Registration Manager	Telephone No. (Include Area Code) 919-547-2103
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		Date Application Received (Stamp)
2. Signature 	3. Title Product Registration Manager	
4. Typed Name Dave G. Bolin	5. Date January 28, 2009	

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The Chemical Company

January 28, 2009

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504C)  
U S Environmental Protection Agency  
One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

**RE: Weedmaster® Herbicide (EPA Reg. No. 7969-133);  
Notification – Change in Primary Brand Name to BAS 452 18H Herbicide**

Dear Notification Team,

BASF Corporation is submitting a form 8570-1 and this letter in accordance PR Notice 98-10 Section II (A) to inform EPA of our new primary brand name "**BAS 452 18H Herbicide**" for the 7969-133 formulation. Also included is an approved Weedmaster label, and a new label with the name replaced by the **BAS 452 18H** name.

BASF will use **BAS 452 18H** as the primary brand name for 7969-133.

BASF believes that no PRIA fee is associated with this action. Thank you for your assistance with this request. If you have any questions or need additional information please contact me at 919-547-2108 (david.bolin@basf.com).

"This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

Respectfully submitted,

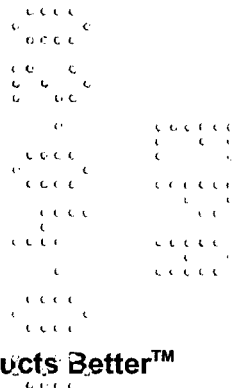
Dave G. Bolin, Ph.D  
Product Registration Manager

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Cc: Julia Stokes, Chemical Review Manager, Product Reregistration Branch

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709-3528  
Tel: (919) 547-2000  
www.basf.com/usa

Helping Make Products Better™



4 of 23



The Chemical Company

**NOTIFICATION**

FEB 26 2009

# BAS 452 18 H

Herbicide

**For use on Conservation Reserve Program Land, Fallow Systems (Between Crop Applications), General Farmstead, Grass (Hay or Silage), Pastures, Rangeland, Sorghum, Sugarcane, and Wheat**

**Active Ingredients:**

Dimethylamine salt of dicamba (3,6-dichloro-o-anisic acid)\*..... 12.4%  
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid\*\*..... 35.7%

**Other Ingredients:**..... 51.9%

**Total:**..... 100.0%

\*This product contains 10.3% dicamba or 1 pound per gallon (120 grams per liter) and 29.6% 2,4-D or 2.87 pounds per gallon (344 grams per liter).

\*\*Isomer specific by AOAC method 978.05, 15th Edition.

EPA Reg. No. 7969-133

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN**

**DANGER/PELIGRO**

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

See inside for complete **First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.**

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Net Contents:**

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).</p>	
<p><b>Note to Physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

### **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

**DANGER.** Corrosive. Causes irreversible eye damage. **DO NOT** get in eyes or on clothing. Wear goggles. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### **Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are butyl rubber, nitrile rubber, and neoprene rubber. If you want more options, follow the instructions for **Category A** on an EPA chemical-resistance category selection chart.

#### **All mixers, loaders, applicators, flaggers, and other handlers must wear:**

- long-sleeved shirt and long pants
- shoes plus socks
- protective eyewear
- chemical-resistant gloves when applying postharvest dips or sprays to citrus, applying with any handheld nozzle equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate
- chemical-resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See **Engineering Controls Statement** for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow the 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. After each day of use, clothing or PPE must not be reused until it has been cleaned.

#### **Engineering Controls Statement**

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

#### **User Safety Recommendations**

##### **Users should:**

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

#### **Environmental Hazards**

This pesticide may be toxic to fish and aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** contaminate water when disposing of equipment wash waters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

#### Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

### 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.

**DO NOT** allow people or pets to enter the treated area until sprays have dried.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions and **Conditions of Sale and Warranty** are to be followed. This labeling must be in the user's possession during application.

### 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 plants, soil, or water, is:

- Coveralls, worn over short-sleeve shirt and short pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

### Non-agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter or allow people (or pets) to enter the treated area until sprays have dried.

### Storage and Disposal

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

**Pesticide Storage: DO NOT** store below 32° F or above 100° F. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross contamination with other pesticides.

**Pesticide Disposal:** Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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## CONTAINER DISPOSAL

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Triple rinse containers too large to shake (capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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 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.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. **DO NOT** reuse the container for any other purpose. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned

to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

### In Case of Spill

In case of large-scale spillage regarding this product, call:  
CHEMTREC 1-800-424-9300  
BASF Corporation 1-800-832-HELP (4357)

### Steps to be taken in case material is released or spilled:

Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before reuse. Keep the spill out of all sewers and open bodies of water.

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## General Information

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**BAS 452 18 H Herbicide** is a selective postemergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in grass forages and selected row crops.

### Mode of Action

**BAS 452 18 H** contains two active ingredients: dicamba and 2,4-D. **BAS 452 18 H** is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth.

**BAS 452 18 H** interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

### Cleaning Spray Equipment

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

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## Application Instructions

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Apply **BAS 452 18 H** at the rates and growth stages listed in **Table 1** and **Table 2** as follows unless instructed differently by **Food/Feed Crop-specific Information** or **Nonfood/Feed Use-specific Information**. Applications can be made to actively growing weeds as aerial, broadcast, band, or spot spray applications. **BAS 452 18 H** may be applied using water or sprayable fluid fertilizer as a carrier. Sprayable fluid fertilizer may be used as the carrier in pre-plant or preemergence uses for all crops listed on this label. Postemergence uses with sprayable fluid fertilizer may be made on pasture, hayland, or wheat crops only.

The most effective application rate and timing varies based on the target weed species (refer to **Table 1** and **Table 2**). In mixed populations of weeds, the correct rate is determined by the weed species requiring the highest rate.

Delaying application permits weeds to exceed the maximum size stated and will prevent adequate control.

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

### Irrigation

In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth.

### Spray Coverage

Weeds must be thoroughly covered with spray. Dense leaf canopies shelter smaller weeds and can prevent adequate spray coverage.

### Sensitive Crop Precautions

**BAS 452 18 H Herbicide** may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. These plants are most sensitive to **BAS 452 18 H** during their development or growing stage. **DO NOT** treat areas where either possible downward movement into the soil or surface washing may cause contact of **BAS 452 18 H** with the roots of desirable plants such as trees and shrubs.

Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. **DO NOT** spray near sensitive plants if wind is gusty or in excess of 5 mph and moving in the direction of nearby sensitive crops, or if a temperature inversion exists. However, always make applications when there is some air movement to determine the direction and distance of possible spray drift. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays. Agriculturally-approved drift-reducing additives may be used.

**DO NOT** use aerial equipment or apply **BAS 452 18 H** when sensitive crops and plants are growing in the vicinity of area to be treated.

### Spray Drift Management

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

### Droplet Size

Use coarse sprays (volume median diameter of 400 microns or more) to avoid potential herbicide drift. Select nozzles that are designed to produce minimal amounts of fine spray particles (less than 200 microns). Examples of nozzles designed to produce coarse sprays via ground applications are **Delavan® Raindrops, Spraying Systems XR** (excluding 110 tips) flat fans, **Turbo TeeJet®, Turbo FloodJet®**, or large capacity flood nozzles such as D10, TK10, or greater capacity tips.

### Wind Speed

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a coarse or coarser spray,

apply only as a coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

**DO NOT** apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a medium spray, leave one swath unsprayed at the downwind edge of the treated field.

### Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if: **a)** conditions of temperature inversion exist, or **b)** stable atmospheric conditions exist at or below nozzle height. **DO NOT** make applications into areas of temperature inversions or stable atmospheric conditions.

### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding the application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

### Susceptible Plants

**DO NOT** apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

### Aerial Application Methods and Equipment

**Water Volume:** Use 3 to 10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Make applications at the lowest safe height to reduce the exposure of spray droplets to evaporation and wind. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

**For ground boom application: DO NOT** apply with a nozzle height greater than 4 feet above the crop canopy.



The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

**DO NOT** use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exist.

Table 1. Application Rate and Timing

## Annual Weeds

Weeds Controlled (including ALS- and triazine-resistant)	BAS 452 18 H Herbicide Rate Per Acre (according to weed growth stage)					
	0.5 pint	1 pint	1.5 pints	2 pints	3 pints	4 pints
Beebalm, spotted	--	--	--	pre-bloom	post-bloom	--
Broomweed	1" to 3"	3" branching	--	branching	--	after branching
Buckwheat, wild	--	1" to 6"	--	--	--	--
Buffalobur	--	--	--	1" to 6"	--	flowering
Burdock	--	pre-flower	--	--	--	--
Buttercup, corn	--	pre-flower	--	early bloom	late bloom	--
Chickweed, common	--	seedling	1" to 3"	--	--	--
Cockle, cow	--	< 3"	--	--	--	--
Cocklebur, common	--	1" to 6"	6" to 12"	12" to 18"	--	--
Coreopsis, plains	--	1" to 6"	--	--	--	--
Croton, woolly	1" to 4"	4" to 12"	12" to 30"	--	--	--
Devil's claw	--	--	--	< 8"	--	--
Dogfennel	--	--	--	10" to 15"	--	--
Eveningprimrose, cutleaf	--	< 2"	--	2" to 6"	--	--
Falseflax, smallseed	--	< 2"	--	--	--	--
Fleabane, annual	--	1" to 4"	4" to 8"	8"	--	--
Flixweed	--	< 3"	--	--	--	--
Henbit	--	--	pre-flower	--	flower	--
Knotweed spp.	--	< 3" runners	--	> 3" runners	--	--
Kochia	--	1" to 6"	6" to 10"	10" to 20"	--	--
Lambsquarters, common	--	1" to 6"	6" to 10"	10" to 20"	--	--
Mallow, common	--	< 3"	--	--	--	--
Morningglory, ivyleaf	--	pre-flower	--	--	--	--
Morningglory, tall	--	pre-flower	--	post flower	--	--
Mustard, annual	--	rosette	--	early bolt	--	--
Mustard, tansy	--	< 3"	--	early bolt	--	--
Nightshade, black	--	--	--	full flower	--	actively growing
Pennycress, field	--	--	--	rosette	--	--
Pepperweed, Virginia	--	--	1" to 3"	3" to 6"	after branching	--
Pigweed, prostrate	--	< 3"	--	--	--	--
Pigweed, redroot	--	< 3"	3" to 10"	--	--	--
Pigweed, smooth	--	< 3"	--	--	--	--
Pigweed, tumble	--	< 3"	--	mature	--	--
Poorjoe	--	prior to flower	--	--	--	actively growing
Purslane, common	--	< 3"	3" to 8"	--	--	--

**Table 1. Application Rate and Timing****Annual Weeds** (continued)

<b>Weeds Controlled (including ALS- and triazine-resistant)</b>	<b>BAS 452 18 H Herbicide Rate Per Acre (according to weed growth stage)</b>					
	<b>0.5 pint</b>	<b>1 pint</b>	<b>1.5 pints</b>	<b>2 pints</b>	<b>3 pints</b>	<b>4 pints</b>
Ragweed, common	1" to 3"	3" to 6"	6" to 10"	> 10"	—	—
Ragweed, giant	1" to 3"	3" to 6"	6" to 10"	actively growing	—	—
Ragweed, lanceleaf	1" to 3"	3" to 6"	6" to 10"	> 10"	—	—
Ragweed, Western	1" to 3"	3" to 6"	6" to 10"	> 10"	—	—
Sedge <sup>1</sup>	—	—	—	< 4 leaves	—	—
Shepherdspurse	—	rosette	—	—	—	—
Smartweed, Pennsylvania	—	< 4"	—	—	4" to 12"	—
Sneezeweed, bitter	—	1" to 4"	prior to flower	flower	—	—
Sowthistle, annual	—	rosette	—	bolting	—	—
Sunflower	—	1" to 3"	3" to 6"	6" to 24"	—	—
Thistle, Russian	—	—	—	< 3"	—	—
Velvetleaf	—	< 6"	6" to 20"	> 20"	—	—

<sup>1</sup>For use in nonfood/feed crop only. Adding crop oil concentrate has been shown to improve performance on actively growing annual sedge.

**Table 2. Application Rate and Timing**

**Biennial and Perennial Weeds**

Weeds Controlled	BAS 452 18 H Herbicide Rate Per Acre (according to weed growth stage)					
	0.5 pint	1 pint	1.5 pints	2 pints	3 pints	4 pints
Bindweed, field	—	—	—	—	—	actively growing
Bittercress <sup>5</sup>	—	2" to 3"	—	—	—	—
Buckeye <sup>1</sup>	—	—	—	—	full leaf	—
Bullnettle <sup>2,5</sup>	—	—	—	flowering	—	—
Chicory	—	—	—	rosette	early bolting	—
Clover, spp.	—	—	pre-flower	—	—	—
Dandelion, common	—	rosette	—	bolting	—	—
Dewberry, Southern <sup>1</sup>	—	—	—	—	—	spring or fall
Dock, curly	—	—	prior to bolting	—	after bolting	—
Elderberry <sup>2</sup>	—	—	—	—	—	actively growing
Goldenrod, Missouri	—	—	—	3" to 15"	flower	—
Goldenweed, common	—	—	—	—	—	actively growing
Groundsel	—	rosette	post-bolting	—	—	—
Honeysuckle	—	—	—	—	spring or fall	—
Horsenettle <sup>1</sup>	—	—	—	—	—	flower or berry
Ivy, poison	—	—	—	after bloom	—	—
Knapweed, black <sup>2</sup>	—	—	—	—	—	actively growing
Knapweed, Russian <sup>2</sup>	—	—	—	—	—	actively growing
Knapweed, spotted	—	—	—	—	—	actively growing
Lettuce, prickly	—	—	—	rosette	—	actively growing
Marshelder <sup>5</sup>	—	—	—	< 12"	12"/pre-bloom	—
Mesquite <sup>3</sup>	—	—	—	—	—	45 to 90 days after bud-break
Milkweed <sup>1,5</sup>	—	—	—	pre-flower	—	flower
Nightshade, silverleaf <sup>1</sup>	—	—	—	—	—	full flower
Persimmon, Eastern <sup>3</sup>	—	—	—	—	—	actively growing
Rabbitbrush <sup>2</sup>	—	—	—	—	—	actively growing
Ragwort, tansy	—	—	—	rosette	—	actively growing
Redvine <sup>2</sup>	—	—	—	—	—	actively growing
Sagebrush, fringed <sup>2</sup>	—	—	—	—	—	actively growing
Smartweed, swamp	—	—	—	—	—	actively growing
Sorrel, red	—	—	rosette	bolting	flower	—
Sowthistle, perennial <sup>2</sup>	—	—	—	—	—	actively growing
Spurge, leafy <sup>2</sup>	—	—	—	—	—	full leaf
Starthistle, yellow <sup>1</sup>	—	—	—	—	—	rosette

**Table 2. Application Rate and Timing**

**Biennial and Perennial Weeds** *(continued)*

Weeds Controlled	BAS 452 18 H Herbicide Rate Per Acre (according to weed growth stage)					
	0.5 pint	1 pint	1.5 pints	2 pints	3 pints	4 pints
Tallow Tree, Chinese <sup>4,5</sup>	—	—	—	—	—	actively growing
Thistle, bull	—	—	rosette	bolting	—	—
Thistle, Canada <sup>2</sup>	—	—	—	—	—	actively growing
Thistle, musk	—	—	—	rosette/bolting	—	—
Thistle, plumeless	—	—	rosette	bolting	—	—
Vetch, hairy	—	1" to 4"	4" to 8"	8" full flower	—	—
Yankee weed	—	—	—	10" to 18"	—	—

<sup>1</sup> May require repeat applications.  
<sup>2</sup> Recommended rate will provide top growth suppression only.  
<sup>3</sup> For improved root kill of woody species such as mesquite, spray 4 pints **BAS 452 18 H** per acre each year for 3 consecutive years. For increased control of weeds such as blackberry and dewberry, **BAS 452 18 H** may be tank mixed with **Ally® herbicide** (0.1 to 0.2 ounce per acre), if labeled for the use site.  
<sup>4</sup> Under dense populations, a second application may be needed the following growing season.  
<sup>5</sup> **Not for use in California.**

**Ground Application (Banding)**

When applying **BAS 452 18 H Herbicide** by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$$

**Ground Application (Broadcast)**

**Water Volume:** Use 5 to 40 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

**Spot or Small Area Application**

**BAS 452 18 H** may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of **BAS 452 18 H** in water according to **Table 3** (assuming that the spot treatment rate equates to 60 gallons per acre on the broadcast basis). Adding a surfactant (0.5% by volume) can help improve control.

For example, 5 gallons (40 pints or 640 fluid ounces) of herbicide solution would require 0.2 pints (3.2 fluid ounces) of surfactant.

**DO NOT** make spot treatments in addition to broadcast or band treatments.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

Sprayer Capacity (gallons of water)	Amount of BAS 452 18 H Herbicide to add to the spray tank
1 gallon	1 fluid ounce*
3 gallons	3 fluid ounces
5 gallons	5 fluid ounces

\*1 fluid ounce = 2 tablespoons

**Additives**

To improve burndown of emerged weeds, surfactants and/or low use rate of liquid fertilizers (28-0-0, 32-0-0) or crop oil concentrate (COC) may be used with **BAS 452 18 H** or **BAS 452 18 H** tank mixes applied after the weeds have emerged. Crop oil concentrate is for nonfood/feed crop uses only. **DO NOT** apply tank mixes that include ammonium sulfate (AMS) or crop oil concentrate to any food/feed crop use listed on this label. For food/feed crop uses, **DO NOT** use

liquid fertilizers that contain AMS as a source of nitrogen because tolerances in commodities derived from the crop may contain residues that exceed established tolerances. Consult your local BASF representative for recommendations for your area. For additional information, see **Compatibility Test for Mix Components**.

**Oil Concentrate**

A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet **ALL** of the following criteria:

- Nonphytotoxic
- Contain only EPA-exempt ingredients
- Provide good mixing quality in the jar test
- Successful in local experience

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see **Compatibility Test for Mix Components**.

Adjuvants containing crop oil concentrates may be used for preplant, preemergence and between cropping applications. **DO NOT** use crop oil concentrate for postemergence applications in **food/feed crops (i.e., sorghum, grass (hay or silage), pastures, rangeland, sugarcane and wheat)**.

**Nitrogen Source**

**Sprayable liquid fertilizers:** Use one quart of sprayable liquid fertilizers (28-0-0, 32-0-0) per acre. **DO NOT** use brass or aluminum nozzles when spraying fertilizers.

**Nonionic Surfactant**

The standard label recommendation is 2 to 4 pints of an 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, use a higher spray surfactant rate.

Additive	Rate Per Acre
<b>Nonionic surfactant</b>	<b>2 to 4 pints per 100 gallons</b>
Sprayable liquid fertilizers (28-0-0, 32-0-0)	2 to 4 quarts
Crop oil concentrate	1 quart*

\*See manufacturer's label for specific rate recommendations.

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## General Tank Mixing Information

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### Tank Mix Partners/Components

The following products may be tank mixed with **BAS 452 18 H Herbicide** according to the specific tank mixing instructions in this label and respective product labels:

- **Aim**<sup>®</sup> (carfentrazone-ethyl)
- **Ally**<sup>®</sup> (metsulfuron-methyl)
- **Amber**<sup>®</sup> (triasulfuron)
- **Basagran**<sup>®</sup> (bentazon)
- **Bronate**<sup>®</sup> (bromoxynil + MCPA)
- **Buctril**<sup>®</sup> (bromoxynil)
- **Clarity**<sup>®</sup> (dicamba)
- **Curtail**<sup>®</sup> (clopyralid + 2,4-D)
- **Distinct**<sup>®</sup> (diflufenzopyr + dicamba)
- **Evik**<sup>®</sup> (ametryn)
- **Express**<sup>®</sup> (thifensulfuron + tribenuron-methyl)
- **Finesse**<sup>®</sup> (chlorsulfuron + metsulfuron-methyl)
- **Glean**<sup>®</sup> (chlorsulfuron)
- glyphosate (e.g., **Roundup**<sup>®</sup>)
- **Gramoxone**<sup>®</sup> **Extra** (paraquat)
- **Harmony**<sup>®</sup> **Extra** (thifensulfuron + tribenuron-methyl)
- **Karmex**<sup>®</sup> (diuron)
- **Kerb**<sup>®</sup> (pronamide)
- **Laddok**<sup>®</sup> **S-12** (bentazon + atrazine)
- **Landmaster**<sup>®</sup> (glyphosate + 2,4-D)
- MCPA
- **Overdrive**<sup>®</sup> (diflufenzopyr + dicamba)
- **Paramount**<sup>®</sup> (quinclorac)
- **Peak**<sup>®</sup> (prosulfuron)
- **Permit**<sup>®</sup> (halosulfuron-methyl)
- **Rave**<sup>®</sup> (dicamba + triasulfuron)
- **Sencor**<sup>®</sup> (metribuzin)
- **Sinbar**<sup>®</sup> (terbacil)
- **Stinger**<sup>®</sup> (clopyralid)
- **Tordon**<sup>®</sup> (picloram)
- 2,4-D

See **Crop-specific Information** for more details. Read and follow the applicable **Restrictions and Limitations** and **Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **BAS 452 18 H** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. BASF does not recommend using tank mixes other than those listed on BASF labeling. Local agricultural authorities may be a source of information when using other than BASF recommended tank mixes.

### Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test. For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

### Mixing Order

If an inductor is used, rinse it thoroughly after each component has been added. Maintain constant agitation during application.

- 1) **Water**<sup>\*</sup>. Begin by agitating a thoroughly clean sprayer tank 1/2 full of clean water.
- 2) **Agitation**. Maintain constant agitation throughout mixing and application.
- 3) **Products in PVA bags**. Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 4) **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspensions).
- 5) **Water-soluble products** (such as **BAS 452 18 H**).
- 6) **Emulsifiable concentrates** (such as oil concentrate when applicable).
- 7) **Water-soluble additives** (such as liquid fertilizers [28-0-0, 32-0-0] when applicable).
- 8) **Remaining quantity of water**.

\* If sprayable fluid fertilizer is used as the carrier, **BAS 452 18 H** must be diluted with a minimum of 5 parts water to 1 part **BAS 452 18 H**. Then add 0.25% to 0.5% volume/volume of a nonionic surfactant to the dilution before adding it to the sprayable fluid fertilizer to reduce the concern for compatibility problems with this mix. Always perform the **Compatibility Test for Mix Components** before mixing into the spray tank. Also, when using a sprayable fluid fertilizer as the carrier, any product contained in PVA bags must first be completely dissolved in water before the contents can be added to the fertilizer mix.

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## Restrictions and Limitations

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- **Maximum seasonal use rate**: Refer to **Table 5**.
- **Preharvest Interval (PHI)**: Refer to **Food/Feed Crop-specific Information**
- **Restricted-entry Interval (REI)**: **48 hours**
- **Crop Rotational Restrictions**:

The interval between application and planting rotational crop is given below. Always exclude counting days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

**Planting/replanting restrictions for BAS 452 18 H**

**Herbicide applications of 6 pints per acre or less:** No rotational cropping restrictions apply at 120 days or more following application. Additionally, for annual crop uses in this label including sorghum, follow the preplant use directions in **Food/Feed Crop-specific Information**. For barley, oat, wheat, and other grass seedings, the interval between application and planting is 10 days per pint per acre.

**Planting/replanting restrictions for applications of more than 6 pints and up to 8 pints of BAS 452 18 H per acre:**

Corn, sorghum, cotton (east of the Rocky Mountains) and all other crops grown in areas with 30" or more of annual rainfall may be planted 120 days or more after application. Barley, oat, wheat, and other grass seedings may be planted if the interval from application to planting is 10 days per pint per acre east of the Mississippi River and 15 days per pint per acre west of the Mississippi River. For all other crops in areas with less than 30" of annual rainfall, the interval between application and planting is 180 days or more.

**Rainfast period:** Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce the effectiveness of **BAS 452 18 H**.

**Stress: DO NOT** apply to crops under stress, such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, because unsatisfactory control may result.

**DO NOT** apply to crops that show **injury** (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications because this injury may be enhanced or prolonged.

**DO NOT** apply through any type of irrigation equipment.

**DO NOT** contaminate irrigation ditches or water used for domestic purposes.

This product cannot be used to **formulate** or **reformulate** any other pesticide product.



**Table 5. Crop-specific Restrictions and Limitations**

Crop	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season	Livestock Grazing or Feeding <sup>1</sup>	Aircraft Application
Between Crop Applications	5.5 pints	8 pints	Yes	Yes
Pasture, Hay, Silage	4 pints	8 pints	Yes	Yes
Sorghum	1 pint	1 pint	Yes	Yes
Sugarcane	5.5 pints	11 pints	Yes	Yes
Wheat	1.4 pints	3.33 pints	Yes	Yes

<sup>1</sup>Refer to **Food/Feed Crop-specific Information** for grazing and feeding restrictions.

### Food/Feed Crop-specific Information

#### Pastures, Rangeland and Grass (Hay, Silage)

**BAS 452 18 H Herbicide** is recommended for use for pasture (including pasture grown for hay), rangeland and grass grown for hay or silage.

If grass is to be cut for hay, **Agricultural Use Requirements** for the Worker Protection Standard are applicable. **DO NOT** cut forage for hay within 7 days of application.

Refer to **Table 1** and **Table 2** for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of **BAS 452 18 H** per acre are for spot treatments only.

Limited to 2 applications per year, **DO NOT** exceed a total of 8 pints of **BAS 452 18 H** per treated acre during a growing season. Minimum of 30 days is required between applications.

Uses described in this section also pertain to small grains (such as barley, corn, forage sorghum, oats, rye, Sudangrass, or wheat) grown for pasture, hay, and silage only. Newly seeded areas, including small grains grown for pasture or hay, may be injured if rates of **BAS 452 18 H** greater than 2 pints per acre are applied.

In newly established hybrid Bermudagrass, Pangolagrass, and stargrasses (*Cynodon* spp.), use 2 to 4 pints of **BAS 452 18 H** per acre to control or suppress weeds after planting vegetative propagules (stolons) of hybrid Bermudagrasses. In addition to the weeds listed in **Table 1** and **Table 2**, this rate of **BAS 452 18 H** will control or suppress annual sedges, broadleaf signalgrass, crabgrass, and goosegrass. For susceptible annual and biennial broadleaf weeds **DO NOT** exceed 2.75 pints per acre per application.

Best results will be obtained if **BAS 452 18 H** is applied at the germinating stage of weeds. Under favorable conditions, this is usually 7 to 10 days after planting these grasses. Reduced control can be expected if weeds are allowed to reach 1" in height before application or if germination of weeds occurs 10 days after application.

**DO NOT** use on bentgrass, susceptible grass pastures (such as carpetgrass, buffalograss, or St. Augustinegrass), lespedeza, wild winter peas, vetch, clover, and alfalfa pastures as injury will occur.

When perennial weeds are reaching maturity, mowing and allowing some regrowth will enhance control. Difficult to control weeds and brush may require repeat applications.

For pasture renovations, wait 3 weeks per quart (2 pints) of **BAS 452 18 H** used per acre before interseeding or injury may occur.

If grasses are grown for seed or for seed-down purposes, **DO NOT** apply after grass reaches the joint stage.

For program lands, such as Conservation Reserve Program, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

#### **Grazing and Feeding Nonlactating Animals**

There is no waiting period between treatment and grazing for nonlactating animals. **DO NOT** permit meat animals being finished for slaughter to graze treated fields within 30 days of slaughter.

#### **Grazing and Feeding Lactating Animals**

**DO NOT** graze lactating dairy animals within 7 days of treatment.

**Dry hay and Silage:** Treated grasses may be harvested for dry hay or silage but **DO NOT** harvest within 37 days of treatment.

## Pasture and Rangeland Tank Mixes

**BAS 452 18 H Herbicide** may be applied in tank mixes with one or more of the following herbicides:

- Ally®
- Amber®
- Clarity®
- Rave®

### Sorghum

#### Rates and Timings

Apply 1 pint of **BAS 452 18 H** per acre to sorghum in the 3-leaf to 5-leaf stage (4" to 8" tall). For best performance, apply **BAS 452 18 H** when weeds are small (less than 3" tall).

Applications of **BAS 452 18 H** to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of leaves. These effects are usually outgrown within 10 to 14 days. Sorghum growing under conditions of stress, such as high moisture, low fertility, and abnormal temperature, may be more sensitive to applications of **BAS 452 18 H**.

**DO NOT** use surfactants or oils with postemergence applications of **BAS 452 18 H** on sorghum crops.

**DO NOT** use **BAS 452 18 H** if the potential for sorghum injury is not acceptable.

The preharvest interval (PHI) is **30 days**.

**DO NOT** permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application.

If sorghum is grown for pasture, hay, or silage, refer to **Pasture and Rangeland and Grass (Hay, Silage) in Crop-specific Information** for livestock grazing and feeding restrictions.

**DO NOT** apply **BAS 452 18 H** to sorghum grown for seed production.

Make no more than one postemergence application per growing season.

### Sorghum Tank Mixes

**BAS 452 18 H** may be applied in tank mixes with one the following herbicides:

- atrazine
- Buctril®
- Basagran®
- Laddok® S-12
- Paramount®
- Permit®
- Peak®

### Sugarcane

Applications of **BAS 452 18 H** can be made any time after the weeds have emerged and are actively growing but prior to the close-in stage of sugarcane. When possible, direct the spray beneath the sugarcane canopy in order to minimize the likelihood of crop injury. The use of directed sprays will also aid in maximizing spray coverage of weed foliage. Application rates and timing are given below. Use the higher

level of listed rate ranges when treating dense vegetative growth. **DO NOT** harvest cane prior to crop maturity.

#### Rate

- For control of listed annual broadleaf weeds, apply 2 pints of **BAS 452 18 H** per treated acre.
- For suppression of listed perennial weeds, apply 1 to 5.5 pints of **BAS 452 18 H** per treated acre.
- The preharvest interval (PHI) is 87 days.

Limited to one preemergence and one postemergence application, **DO NOT** exceed 11 pints of **BAS 452 18 H** per treated acre during a growing season.

### Sugarcane Tank Mixes

**BAS 452 18 H** may be applied in tank mixes with one or more of the following herbicides:

- Asulox®
- atrazine
- Evik®
- Sencor®
- Sinbar®

### Wheat (fall and spring-seeded)

If small grains are grown for pasture or hay only, refer to **Pastures, Rangeland and Grass (Hay, Silage)**.

**DO NOT** graze or harvest for livestock feed prior to crop maturity.

**DO NOT** use **BAS 452 18 H** in wheat underseeded with legumes.

Limited to one postemergence and one preharvest application per crop cycle.

#### Early Season Applications

Apply 0.5 to 1 pints of **BAS 452 18 H** per acre to wheat unless using one of the wheat-specific programs below.

Early season applications to spring-seeded wheat must be made after tillering and before wheat reaches the 6-leaf stage.

Early season applications to fall-seeded wheat must be made after tillering and prior to the jointing stage.

Care should be taken in staging early developing wheat varieties, such as TAM 107, Madison, or Wakefield, to be certain that the application occurs prior to the jointing stage.

#### Specific Use Programs For Fall-seeded Wheat Only

Up to 1.33 pints of **BAS 452 18 H** per acre may be applied on fall-seeded wheat after the wheat begins to tiller for suppression of perennial weeds, such as field bindweed.

Applications may be made in the fall following a frost but before a killing freeze. Periods of extended stress such as cold and wet weather may enhance the possibility of crop injury. For fall applications only, **DO NOT** use if the potential for crop injury is not acceptable.

#### Preharvest Applications

**BAS 452 18 H** can be used to control weeds that may interfere with harvest of wheat. Apply up to 1.4 pints of

**BAS 452 18 H Herbicide** per acre as a broadcast or spot treatment to annual broadleaf weeds when wheat is in the hard dough stage and the green color is gone from the nodes (joints) of the stem. Best results will be obtained if application can be made when weeds are actively growing but before weeds canopy.

A waiting interval of 14 days is required before harvest.

**DO NOT** use preharvest-treated wheat for seed unless a germination test is performed on the seed with an acceptable result of 95% germination or better.

For control of additional broadleaf weeds or grasses, **BAS 452 18 H** may be tank mixed with other herbicides such as **Ally**<sup>®</sup> or glyphosate (e.g., **Roundup**<sup>®</sup>) that are registered for preharvest use in wheat.

**Preharvest use of BAS 452 18 H is not registered for use in California.**

### Wheat Tank Mixes

Table 6.	
Tank Mix Partner	Rate Per Acre
<b>Aim</b> <sup>®</sup>	0.3 ounce
<b>Ally</b>	0.05 to 0.1 ounce <sup>1</sup>
<b>Amber</b> <sup>®</sup>	0.14 to 0.28 ounce <sup>1</sup>
<b>Bronate</b> <sup>®</sup>	0.75 to 1.5 pints
<b>Buctril</b> <sup>®</sup>	1 to 1.5 pints
<b>Curtail</b> <sup>®</sup>	2 to 2.67 pints
<b>Express</b> <sup>®</sup>	0.083 to 0.167 ounce <sup>1</sup>
<b>Finesse</b> <sup>®</sup>	0.167 to 0.33 ounce <sup>1</sup>
<b>Glean</b> <sup>®</sup>	0.167 ounce <sup>1</sup>
<b>Harmony</b> <sup>®</sup> Extra	0.167 to 0.33 ounce <sup>1</sup>
<b>Karmex</b> <sup>®2</sup>	0.5 to 1.5 pounds
<b>2,4-D amine</b>	4 to 20 fluid ounces <sup>3</sup>
<b>Sencor</b> <sup>®2</sup>	0.25 to 0.375 pound ai
<b>Peak</b> <sup>®1</sup>	0.25 to 0.38 ounce
<b>Stinger</b> <sup>®</sup>	4 to 5.33 fluid ounces

<sup>1</sup>**DO NOT** use low rates of sulfonylurea herbicides, such as **Ally**, **Amber**, **Canvas**<sup>®</sup>, **Express**, **Finesse**, **Glean**, **Harmony Extra**, and **Peak** on more mature weeds or on dense vegetative growth.

<sup>2</sup>Tank mixes with **Karmex** and **Sencor** are for use in fall-seeded only.

<sup>3</sup>**BAS 452 18 H** contains 0.36 pound a.e. of 2,4-D per pint. When tank mixing with 2,4-D, **DO NOT** exceed 0.5 pound a.e. of 2,4-D.

### Between Crop Applications, Conservation Reserve Programs, General Farmstead and Fallow Systems

These uses are considered food/feed crops when harvested, grazed or foraged. Consult **Additives** for adjuvant restrictions and **Nonfood/Feed Use (Land not Harvested, Grazed or Foraged) Specific Information** for specific use directions.

### Nonfood/Feed Use (Land not Harvested, Grazed or Foraged) Specific Information

#### Between Crop Applications

#### Preplant Directions (Postharvest, Fallow, Crop Stubble, Set-aside) for Broadleaf Weed Control

**BAS 452 18 H** can be applied either postharvest in the fall, spring, or summer during the fallow period or to crop stubble/set-aside acres. Apply **BAS 452 18 H** as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (postharvest) and before a killing frost, or in the fallow cropland or crop stubble the following spring or summer.

See **Crop Rotational Restrictions in Restrictions and Limitations** for the recommended interval between application and planting to prevent crop injury.

#### Rates and Timings

Apply 0.5 to 5.5 pints of **BAS 452 18 H** per acre. Refer to **Table 1** to determine use rates for specific targeted weed species. Limited to 2 applications per year, **DO NOT** exceed a total of 8 pints of **BAS 452 18 H** per treated acre during a growing season. A minimum of 30 days is required between applications. For best performance, apply **BAS 452 18 H** when annual weeds are less than 6" tall, when biennial weeds are in the rosette stage and to perennial weed regrowth in late summer or fall following a mowing or tillage treatment. The most effective control of upright perennial broadleaf weeds, such as Canada thistle and Jerusalem artichoke, occurs if **BAS 452 18 H** is applied when the majority of weeds have at least 4" to 6" of regrowth or for weeds such as field bindweed and hedge bindweed that are in or beyond the full-bloom stage.

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts, such as rhizomes or bulblets, after the effective period for **BAS 452 18 H**. For seedling control, a follow-up program or other cultural practices could be instituted.

#### Between-crop Tank Mixes

In tank mixes with one or more of the following herbicides, apply 0.5 to 2 pints of **BAS 452 18 H** per acre for control of

annual weeds, or 2 to 8 pints of **BAS 452 18 H Herbicide** per acre for control of biennial and perennial weeds.

- |                                |                                       |                                  |
|--------------------------------|---------------------------------------|----------------------------------|
| • <b>Aim</b> <sup>®</sup>      | • <b>Finesse</b> <sup>®</sup>         | • <b>Sencor</b> <sup>®</sup>     |
| • <b>Ally</b> <sup>®</sup>     | • glyphosate                          | • <b>Tordon</b> <sup>®</sup> 22K |
| • <b>Amber</b> <sup>®</sup>    | • <b>Gramoxone</b> <sup>®</sup> Extra | • <b>Touchdown</b> <sup>®</sup>  |
| • atrazine                     | • <b>Kerb</b> <sup>®</sup>            | • 2,4-D                          |
| • <b>Curtail</b> <sup>®</sup>  | • <b>Landmaster</b> <sup>®</sup> BW   |                                  |
| • <b>Distinct</b> <sup>®</sup> | • <b>Paramount</b> <sup>®</sup>       |                                  |

## Conservation Reserve Programs and General Farmstead

**BAS 452 18 H** is recommended for use for Conservation Reserve Programs, general farmstead (noncropland only), weed and brush control, or use in State Recognized Noxious Weed areas (noncropland areas).

Refer to **Table 1** and **Table 2** for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of **BAS 452 18 H** per acre are for spot treatments only.

Limited to 2 applications per year, **DO NOT** exceed a total of 8 pints of **BAS 452 18 H** per treated acre during a growing season.

A minimum of 30 days between applications is required.

Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

For programs lands, such as Conservation Reserve Program, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

### Farmstead and Fencerow Treatment

#### Application Instructions

**BAS 452 18 H** may be applied using water or oil and water emulsions in spot application to control undesirable vegetation using handgun or similar types of application equipment.

In addition to weed species listed in **Table 1** and **Table 2**, these treatments may be used to control or suppress woody plant species listed in **Table 7**.

To prepare oil and water emulsions, mix in the order and proportions indicated below.

The solution should remain milky colored without an oily layer on top when under agitation. If an oily layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

**DO NOT** exceed 27.5 gallons of spray solution per treated acre per application. Twenty-seven and a half gallons of spray solution contains 0.7 pound acid equivalent of dicamba and 2.0 pounds acid equivalent of 2,4-D. Spray plants to wet. **DO NOT** allow this spray mix to contact desirable vegetation.

To control brush, briars, and weeds along fencerows surrounding pasture and ranch lands and fallow fields, use a tank mix of 2.5% of **BAS 452 18 H**, 87.5% water, 10% diesel oil, and sufficient emulsifier (to mix the diesel and emulsifier). The diesel oil in this tank mix will damage or kill desirable grasses and should not be used in pastures or where damage to desirable species cannot be tolerated.

1. **Water.** Begin by agitating a thoroughly clean sprayer tank with the desired quantity of clean water. Maintain constant agitation during complete mixing procedure.
2. **Emulsifier.** Add 0.5% volume to volume.
3. **BAS 452 18 H.** Add 2.5 gallons per 100 gallons of total intended solution.
4. **Diesel Oil.** Add 10 gallons per 100 gallons of total intended solution.

Maintain constant agitation during application. Under good agitation, the spray solution should be milky white with no oil layer on top. If an oil layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

#### Spraying Foliar Applications

1. Spray when leaves have reached full size but have not hardened due to drought or maturity.
2. Spray individual plants to wet with handgun.
3. For larger stems (up to 3" in diameter) and hard-to-control species, direct spray stream to base of stems to wet the stem at soil surface in addition to wetting the foliage.
4. **DO NOT** apply under drip line of desirable trees or adjacent to desirable vegetation.

#### Dormant Basal Applications

1. Increase diesel oil content to 15% or 15 gallons of diesel oil per 100 gallons of total solution.
2. Spray in late winter and early spring before plants break dormancy.
3. Spray the bottom 24" of the target stem to wet on all sides.
4. For larger stems (up to 3" in diameter) and hard-to-kill species, direct the spray solution to the base of target stems to wet the soil at the stem/soil junction in addition to wetting the stem.
5. **DO NOT** apply under drip line of desirable trees or adjacent to desirable vegetation.

#### Cut-surface Treatments

Apply **BAS 452 18 H** in an undiluted state as a cut-surface treatment to control unwanted trees and prevent sprouts of cut trees.

**Frill or Girdle Treatments:** Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint the cut surface with **BAS 452 18 H**.

**Stump Treatments:** Spray or paint freshly cut surface with **BAS 452 18 H**. The cambium layer (the area adjacent to the bark) should be thoroughly wet. Treat stumps within 6 hours after cutting.

Limited to one basal spray or cut surface application per year.

21023

Table 7.

The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut-surface treatments.

Alder	Kudzu
Ash	Locust, Black
Aspen	Maple
Basswood	Mesquite
Beech	Oak
Blackberry	Oak, Poison
Blackgum	Olive, Russian
Cedar	Persimmon, Eastern
Cherry	Pine
Chinquapin	Plum, Sand (Wild Plum)
Cottonwood	Poplar
Creosotebush	Rabbitbrush
Dewberry	Redcedar, Eastern
Dogwood	Rose, McCartney
Elm	Rose, Multiflora
Grape	Sagebrush, Fringe
Greenbriar	Sassafras
Hawthorn (Thornapple)	Spruce
Hemlock	Sumac
Hickory	Sweetgum
Honeylocust	Sycamore
Honeysuckle	Tarbrush
Hornbeam	Willow
Huckleberry	Witchhazel
Huisache	Yaupon
Ivy, Poison	Yucca

Weeds Listed in this Label	
Common Name	Scientific Name
<b>ANNUALS</b>	
<b>Beebalm, spotted</b>	<i>Monarda punctata</i>
<b>Broomweed</b>	<i>Gutierrezia dracunculoides</i>
<b>Buckwheat, wild</b>	<i>Polygonum convulvulus</i>
<b>Buffalobur</b>	<i>Solanum rostratum</i>
<b>Burdock</b>	<i>Arctium</i> spp.
<b>Buttercup, corn</b>	<i>Ranunculus arvensis</i>
<b>Chickweed, common</b>	<i>Stellaria media</i>
<b>Cockle, cow</b>	<i>Agrostemma githago</i>
<b>Cocklebur, common</b>	<i>Xanthium strumarium</i>
<b>Coreopsis, plains</b>	<i>Coreopsis tinctoria</i>
<b>Croton, woolly</b>	<i>Croton capitatus</i>
<b>Devil's claw</b>	<i>Proboscidea luisianica</i>
<b>Dogfennel</b>	<i>Eupatorium capillifolium</i>
<b>Eveningprimrose, cutleaf</b>	<i>Oenothera lacinata</i>
<b>Falseflax, smallseed</b>	<i>Linum catharticum</i>
<b>Fleabane, annual</b>	<i>Erigeron annuus</i>
<b>Flixweed</b>	<i>Descurainia sophia</i>
<b>Henbit</b>	<i>Lamium amplexicaule</i>
<b>Knotweed spp.</b>	<i>Polygonum aviculare</i>
<b>Kochia</b>	<i>Kochia scoparia</i>
<b>Lambsquarters, common</b>	<i>Chenopodium album</i>
<b>Mallow, common</b>	<i>Malva neglecta</i>
<b>Morningglory, ivyleaf</b>	<i>Ipomea hederacea</i>
<b>Morningglory, tall</b>	<i>Ipomea purpurea</i>
<b>Mustard, annual</b>	<i>Brassica</i> spp.
<b>Mustard, tansy</b>	<i>Descurainia pinnata</i>
<b>Nightshade, black</b>	<i>Solanum nigrum</i>
<b>Pennycress, field</b>	<i>Thlaspi arvense</i>
<b>Pepperweed, Virginia</b>	<i>Lepidium virginicum</i>
<b>Pigweed, prostrate</b>	<i>Amaranthus blitoides</i>
<b>Pigweed, redroot</b>	<i>Amaranthus retroflexus</i>
<b>Pigweed, smooth</b>	<i>Amaranthus hybridus</i>
<b>Pigweed, tumble</b>	<i>Amaranthus albus</i>
<b>Poorjoe</b>	<i>Diodia teres</i>
<b>Purslane, common</b>	<i>Portulaca oleracea</i>
<b>Ragweed, common</b>	<i>Ambrosia artemisiifolia</i>
<b>Ragweed, giant</b>	<i>Ambrosia trifida</i>
<b>Ragweed, lanceleaf</b>	<i>Ambrosia bidentata</i>
<b>Ragweed, Western</b>	<i>Ambrosia psilostachya</i>
<b>Sedge</b>	<i>Cyperus compressus</i>
<b>Shepherdspurse</b>	<i>Capsella bursa-pastoris</i>
<b>Smartweed, Pennsylvania</b>	<i>Polygonum pennsylvanicum</i>
<b>Sneezeweed, bitter</b>	<i>Helenium amurum</i>
<b>Sowthistle, annual</b>	<i>Sonchus oleraceus</i>
<b>Sunflower</b>	<i>Helianthus annuus</i>
<b>Thistle, Russian</b>	<i>Salsola iberica</i>
<b>Velvetleaf</b>	<i>Abutilon theophrasti</i>

<b>Weeds Listed in this Label</b> <i>(continued)</i>	
<b>Common Name</b>	<b>Scientific Name</b>
<b>BIENNIALS AND PERENNIALS</b>	
<b>Bindweed, field</b>	<i>Convolvulus arvensis</i>
<b>Bittercress</b>	<i>Cardamine</i> spp.
<b>Buckeye</b>	<i>Aesculus</i> spp.
<b>Bullnettle</b>	<i>Cnidoscopus stimulosus</i>
<b>Chicory</b>	<i>Cichorium intybus</i>
<b>Clover spp.</b>	<i>Trifolium</i>
<b>Dandelion, common</b>	<i>Taraxacum officinale</i>
<b>Dewberry, Southern</b>	<i>Rubus trivialis</i>
<b>Dock, curly</b>	<i>Rumex crispus</i>
<b>Elderberry</b>	<i>Sambucus canadensis</i>
<b>Goldenrod, Missouri</b>	<i>Solidago missouriensis</i>
<b>Goldenweed, common</b>	<i>Isocoma coronopifolia</i>
<b>Groundsel</b>	<i>Senecio vulgaris</i>
<b>Honeysuckle</b>	<i>Lonicera</i>
<b>Horsenettle</b>	<i>Solanum</i>
<b>Ivy, poison</b>	<i>Rhus radicans</i>
<b>Knapweed, black</b>	<i>Centaurea nigra</i>
<b>Knapweed, Russian</b>	<i>Centaurea repens</i>
<b>Knapweed, spotted</b>	<i>Centaurea maculosus</i>
<b>Lettuce, prickly</b>	<i>Lactuca serriola</i>
<b>Marshelder</b>	<i>Iva annua</i>
<b>Mesquite</b>	<i>Prosopis juliflora</i>
<b>Milkweed</b>	<i>Asclepias</i>
<b>Nightshade, silverleaf</b>	<i>Solanum elaeagnifolium</i>
<b>Persimmon, Eastern</b>	<i>Diospyros virginiana</i>
<b>Rabbitbrush</b>	<i>Chrysanthemum pulchellus</i>
<b>Ragwort, tansy</b>	<i>Senecio jacobia</i>
<b>Redvine</b>	<i>Brunnichia ovata</i>
<b>Sagebrush, fringed</b>	<i>Artemisia frigida</i>
<b>Smartweed, swamp</b>	<i>Polygonum coccineum</i>
<b>Sorrel, red (Sheep sorrel)</b>	<i>Rumex acetosella</i>
<b>Sowthistle, perennial</b>	<i>Sonchus arvensis</i>
<b>Spurge, leafy</b>	<i>Euphorbia esula</i>
<b>Starthistle, yellow</b>	<i>Centauria solstitialis</i>
<b>Tallow Tree, Chinese</b>	<i>Sapium sebiferum</i>
<b>Thistle, bull</b>	<i>Cirsium vulgare</i>
<b>Thistle, Canada</b>	<i>Cirsium arvense</i>
<b>Thistle, musk</b>	<i>Carduus nutans</i>
<b>Thistle, plumeless</b>	<i>Carduus acanthoides</i>
<b>Vetch</b>	<i>Vicia</i> spp.
<b>Yankee weed</b>	<i>Eupatorium compositifolium</i>

### Food/Feed Crop Uses

This product can be used on the following:

\***Conservation Reserve Program Land**  
 \***Fallow Systems (Between Crop Applications)**  
 \***General Farmstead**  
**Grass (Hay or Silage)**  
**Pastures**  
**Rangeland**  
**Sorghum**  
**Sugarcane**  
**Wheat**

See inside for complete **Restrictions and Limitations** and **Application Instructions**.

\*These crops are considered Food/Feed crops only when harvested, grazed or foraged. Otherwise, they are considered as non-Food/Feed uses.

230123

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1008

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for Injunctive Relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to EPA Web Site: <http://www.epa.gov/espp>.

**NOTIFICATION**

FEB 26 2009

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007969-00133.20090130.NVA 2009-04-069-0024  
Supersedes: NVA 2008-04-069-0307

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