BASF
We create chemistry

Saflufenacil	Group	14	Herbicide

SPECIMEN

Sharpen®

Powered by **Kixor®** Herbicide

For use in selected agricultural crops

Active Ingredient:

saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3, 6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide	29.74%
Other Ingredients:	70.26%
Total:	100.00%

Contains 2.85 pounds active ingredient saflufenacil per gallon formulated as a water-based suspension concentrate

EPA Reg. No. 7969-278 **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

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

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

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

Net Contents:

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- Protective eyewear such as face shield, goggles, or safety glasses

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

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 170.607(d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

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.
- 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

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Saflufenacil has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Saflufenacil may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Endangered Species Protection Requirements

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult http://www.epa.gov/espp/, or call 1-844-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months before their effective dates.

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

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.

Observe all precautions and limitations in this label and the labels of products used in combination with **Sharpen® Powered by Kixor® herbicide** (henceforth in this label referred to as **Sharpen** or **Sharpen herbicide**). The use of **Sharpen** not consistent with this label can result in injury to crops, animals or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF Corporation does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application in crops.

AGRICULTURAL USE REQUIREMENTS

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

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

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

NONAGRICULTURAL 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 treated areas without protective clothing until sprays have dried.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides.

Pesticide Disposal

Wastes resulting from this product must 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.

Container Handling

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 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.

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.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to take if 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.

Product Information

Sharpen® herbicide provides both contact burndown and rate-dependent residual preemergence broadleaf weed control (refer to **Table 1** and **Table 2** for lists, respectively). It can be used in select field and row crops [alfalfa, chickpea (garbanzo beans), corn (field, seed, silage, sweet, and popcorn), cotton, edible pea, field pea, forage grasses (cool-season and warm-season), grass grown for seed, lentils, rice, small grains, sorghum, soybean, fallow and postharvest croplands, pasture, and in noncropland areas. **Sharpen** does not control grass weeds and must be used sequentially or tank mixed with a grass herbicide for a complete weed control program. Refer to **Crop-specific Information** section for recommendations on herbicide tank mixtures or sequential programs.

Make burndown applications of **Sharpen** when broadleaf weeds are small and actively growing. An adjuvant is required with **Sharpen** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf weeds, use a higher application rate within an application rate range and/or higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Residual preemergence applications of **Sharpen** must be activated by at least 1/2 inch of rainfall or sprinkler irrigation before weed seedling emergence. When **Sharpen** is not activated, a labeled postemergence herbicide or cultivation may be needed to control weed escapes.

Sharpen may also be used for harvest aid/desiccation in select field and row crops (barley, wheat, and triticale; chia; dry edible beans; dry peas; oilseeds canola (rapeseed) subgroup 20A; oilseeds cottonseed subgroup 20C; oilseeds sunflower subgroup 20B; and soybean). Make harvest aid/desiccation applications when crops have reached physiological maturity or according to Extension Service recommendations in the use area.

Sharpen is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.

Table 1. Broadleaf Weeds Controlled by a Burndown Application of Sharpen® herbicide

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Amaranth, Palmer	*Amaranthus palmeri*	C	6
Bedstraw, catchweed	*Galium aparine*	C	3
Beggarticks, hairy	*Bidens pilosa*	C	6
Beggarweed, Florida	*Desmodium tortuosum*	C	6
Bindweed, field	*Convolvulus arvensis*	S[1]	6
Buckwheat, wild	*Polygonum convolvulus*	C	3
Canola, volunteer (rapeseed)	*Brassica* spp.	C	6
Carpetweed	*Mollugo verticillata*	C	6
Chickweed, common	*Stellaria media*	S	3
Cocklebur, common	*Xanthium strumarium*	C	6
Cotton, volunteer[2]	*Gossypium hirsutum*	C	≤ 6 leaves
Cowcockle	*Vaccaria pyramidata*	C	4
Dandelion	*Taraxacum officinale*	S[1]	6
Eveningprimrose, cutleaf	*Oenothera laciniata*	C	4
Falseflax, smallseed	*Camelina microcarpa*	C	4
Filaree, redstem	*Erodium cicutarium*	S	3
Fleabane, hairy	*Conyza bonariensis*	C	6
Flixweed	*Descurainia sophia*	C	6
Groundcherry, cutleaf	*Physalis angulata*	C	6
Groundsel, common	*Senecio vulgaris*	C	4
Hawksbeard, narrowleaf[2]	*Crepis tectorum*	C	6
Hemlock, poison[2]	*Conium maculatum*	C	6
Henbit	*Lamium amplexicaule*	S	3
Horseweed (marestail)	*Conyza canadensis*	C	6
Knotweed, prostrate	*Polygonum aviculare*	C	3
Kochia	*Kochia scoparia*	C	1 to 3 Suppression of button/puffball stage at < 1-inch tall
Ladysthumb	*Polygonum persicaria*	C	6
Lambsquarters, common	*Chenopodium album*	C	6
Lambsquarters, narrowleaf	*Chenopodium pratericola*	C	6
Lettuce, prickly	*Lactuca serriola*	C	6
Mallow, common	*Malva neglecta*	C	6
Mallow, little (cheeseweed)	*Malva parviflora*	C	6
Mallow, Venice	*Hibiscus trionum*	C	6
Marestail (horseweed)	*Conyza canadensis*	C	6
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*	C	6
Morningglory, ivyleaf	*Ipomoea hederacea*	C	6
Morningglory, palmleaf	*Ipomoea wrightii*	C	6
Morningglory, pitted	*Ipomoea lacunosa*	C	6
Morningglory, tall	*Ipomoea purpurea*	C	6

(continued)

Table 1. Broadleaf Weeds Controlled by a Burndown Application of Sharpen® herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Mustard, black	*Brassica nigra*	C	6
Mustard, tumble	*Sisymbrium altissimum*	C	6
Mustard, wild	*Sinapis arvensis*	C	6
Needles, Spanish[2]	*Bidens pilosa*	C	6
Nettle, burning	*Urtica urens*	C	4
Nightshade, black	*Solanum nigrum*	C	6
Nightshade, cutleaf	*Solanum triflorum*	C	6
Nightshade, Eastern black	*Solanum ptycanthum*	C	6
Nightshade, hairy	*Solanum saccharoides*	C	6
Parthenium	*Parthenium hysterophorus*	C	6
Pennycress, field	*Thlaspi arvense*	C	6
Pigweed, prostrate	*Amaranthus blitoides*	C	6
Pigweed, redroot	*Amaranthus retroflexus*	C	6
Pigweed, smooth	*Amaranthus hybridus*	C	6
Puncturevine	*Tribulus terrestris*	C	6
Purslane, common	*Portulaca oleracea*	C	3
Pusley, Florida	*Richardia scabra*	S	3
Ragweed, common[3]	*Ambrosia artemisiifolia*	C	6
Ragweed, giant	*Ambrosia trifida*	C	6
Rocket, London[2]	*Sisymbrium irio*	C	6
Sesbania, hemp	*Sesbania exaltata*	C	4
Shepherd's-purse	*Capsella bursa-pastoris*	C	6
Sida, prickly	*Sida spinosa*	C	6
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	6
Sowthistle, annual	*Sonchus oleraceus*	C	6
Sowthistle, spiny	*Sonchus asper*	C	6
Sunflower, common	*Helianthus annuus*	C	6
Tansymustard, pinnate	*Descurainia pinnata*	C	6
Texasweed	*Caperonia palustris*	C	6
Thistle, Canada	*Cirsium arvense*	S[1]	6
Thistle, Russian	*Salsola kali*	C	3
Velvetleaf	*Abutilon theophrasti*	C	6
Waterhemp[3]	*Amaranthus tuberculatus*	C	4
Willowweed	*Epilobium adenocaulon*	C	3

[1] Control of seedling stage and suppression of perennial growth stage.
[2] Not controlled in California
[3] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14**/**Group E** herbicides and will not be controlled by herbicides like **Sharpen**. See the **Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).

Table 2. Broadleaf Weeds Controlled with a Residual Preemergence Application of Sharpen® herbicide

Common Name	Scientific Name	C = Control S = Suppression[1]
Amaranth, Palmer	*Amaranthus palmeri*	C
Amaranth, Powell	*Amaranthus powellii*	C
Beggarweed, Florida	*Desmodium tortuosum*	C
Buckwheat, wild	*Polygonum convolvulus*	C
Burcucumber	*Sicyos angulatus*	S
Canola, volunteer (rapeseed)[2], all types	*Brassica* spp.	C
Carpetweed	*Mollugo verticillata*	C
Chickweed, common	*Stellaria media*	C
Cocklebur, common	*Xanthium strumarium*	C
Copperleaf, Virginia	*Acalypha virginica*	C
Galinsoga, smallflower	*Galinsoga parviflora*	C
Groundcherry, cutleaf	*Physalis angulata*	C
Horseweed (marestail)	*Conyza canadensis*	C
Jimsonweed	*Datura stramonium*	C
Kochia	*Kochia scoparia*	C
Ladysthumb	*Polygonum persicaria*	C
Lambsquarters, common	*Chenopodium album*	C
Mallow, Venice	*Hibiscus trionum*	C
Marestail (horseweed)	*Conyza canadensis*	C
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*	C
Morningglory, ivyleaf	*Ipomoea hederacea*	C
Morningglory, pitted	*Ipomoea lacunosa*	C
Morningglory, tall	*Ipomoea purpurea*	C
Mustard, wild	*Sinapis arvensis*	C
Nightshade, black	*Solanum nigrum*	C
Pennycress, field	*Thlaspi arvense*	C
Pigweed, prostrate	*Amaranthus blitoides*	C
Pigweed, redroot	*Amaranthus retroflexus*	C
Pigweed, smooth	*Amaranthus hybridus*	C
Pigweed, tumble	*Amaranthus albus*	C
Puncturevine	*Tribulus terrestris*	S
Purslane, common	*Portulaca oleracea*	C
Pusley, Florida	*Richardia scabra*	S
Ragweed, common	*Ambrosia artemisiifolia*	C
Ragweed, giant	*Ambrosia trifida*	C
Sida, prickly	*Sida spinosa*	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C
Starbur, bristly	*Acanthospermum hispidum*	C
Sunflower, common	*Helianthus annuus*	C
Texasweed	*Caperonia palustris*	C
Thistle, Russian	*Salsola kali*	C
Velvetleaf	*Abutilon theophrasti*	C
Waterhemp	*Amaranthus tuberculatus*	C

[1] Use **Sharpen** in tank mixes or sequential applications with other labeled herbicides that provide additional control of noted weeds.
[2] Not controlled in California

Mode of Action

Sharpen® herbicide is a potent inhibitor of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14** (WSSA)/**Group E** (HRAC). **Sharpen** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

While weed resistance to **Group 14**/**Group E** herbicides are relatively infrequent, populations of resistant biotypes are known to exist. The frequency of resistant biotypes may increase if **Group 14**/**Group E** herbicides are used repeatedly in the same field or in successive years as the primary control of the targeted species. If resistant biotypes dominate the weed population, it may result in partial or total loss of control by other **Group 14**/**Group E** herbicides. Weeds resistant to **Group 14**/**Group E** herbicides may be effectively managed using herbicide(s) from a different group.

To aid in the prevention of developing resistant weeds, the following herbicide resistance management principles should be followed where practical:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields before application to ensure herbicides and rates will be appropriate for the weeds species and weed sizes present.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- Contact your **Sharpen** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistance weeds may be identified by these indicators:
  - failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - a spreading patch on non-controlled plants of a particular weed species; and
  - surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Sharpen** when applied according to label directions and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Sharpen** is applied postemergence (over the top) to any crop (except alfalfa, forage grasses, grass grown for seed, and rice).

Application Instructions

Sharpen may only be applied before crop emergence, except for harvest aid/desiccation uses and postemergence in alfalfa, forage grasses, grass grown for seed, and rice.

Application Rates

Application rates of **Sharpen** may vary depending on soil texture and organic matter. Refer to **Table 3** for soil texture groups used in this label.

Table 3. Soil Texture Groups

Coarse	Medium	Fine
Sand Loamy sand Sandy loam	Silt Silt loam Loam Sandy clay loam	Sandy clay Silty clay Silty clay loam Clay loam Clay

Refer to the **Crop-specific Information** section for specific application rate, timing, and restrictions and limitations by crop and use pattern.

Table 4. Use Rate Equivalency

Sharpen® herbicide Use Rate (fl ozs/A)	**Amount of Saflufenacil** (lb ai/A)
0.5	0.011
0.75	0.016
1.0	0.022
1.5	0.034
2.0	0.044
2.5	0.056
3.0	0.067
3.5	0.078
4.0	0.089
5.0	0.111
6.0	0.134

In California, **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** in a single application.

Application Methods and Equipment

Sharpen may be applied by ground or air. Thorough spray coverage is required for optimum broadleaf weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment for adequate spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Sharpen may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier. Additionally, **Sharpen** may be impregnated on and applied with dry bulk fertilizer.

Aerial Application Requirements - Helicopter

Water Volume. Use 15 or more gallons of water per acre.

DO NOT apply aerially with helicopter in California.

Applicators must follow these requirements to reduce the potential of spray drift to nontarget areas from aerial application with helicopter:

1. The distance of the outermost nozzles on the boom must not exceed 75 to 80% of rotor blade diameter.
2. Use **Accu-Flo™** .028 nozzles or larger. **DO NOT** use nozzles producing a smaller droplet size than **Accu-Flo** .028.
3. Orient nozzles so spray is released parallel to the airstream.
4. Without compromising aircraft safety, applications should be made at a height of 10 feet or less above the target vegetative canopy.
5. **DO NOT** apply when wind speed is greater than 10 miles per hour, during periods of temperature inversions or stable atmospheric conditions.
6. Avoid potential adverse effects to nontarget areas by maintaining a 50-feet buffer between the point of direct application and the **closest downwind edge** of sensitive terrestrial habitats (grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrub lands, and crop lands).

Aerial Application Requirements - Fixed-wing Aircraft

Water Volume. Use 3 or more gallons of water per acre for weed control application. Use a minimum of 5 gallons of water per acre for harvest aid/desiccation application.

DO NOT apply aerially with fixed-wing aircraft in California.

Applicators must follow these requirements to reduce the potential of spray drift to nontarget areas from aerial application:

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan.
2. Use low-drift nozzles (straight-stream nozzles, D-8 or larger). **DO NOT** use nozzles producing a mist droplet spray.
3. Nozzles must always point backward parallel with the airstream and never point downward more than 45 degrees.
4. Without compromising aircraft safety, application should be made at a height of 10 feet or less above the crop canopy or tallest plants.
5. **DO NOT** apply when wind speed is greater than 10 miles per hour, during periods of temperature inversions or stable atmospheric conditions.
6. Avoid potential adverse effects to nontarget areas by maintaining a 160-feet buffer between the point of direct application and the **closest downwind edge** of sensitive terrestrial habitats (grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrub lands, and crop lands).

Ground Application Requirements

Spray Carrier Volume. Use 5 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre for weed control application. Thorough spray coverage is required for control of emerged broadleaf weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity. Use a minimum of 5 to 10 gallons of water per acre for harvest aid/desiccation application.

Applicators must follow these requirements to reduce the potential of spray drift to nontarget areas from ground application:

1. Apply this product using nozzles which deliver **medium-to-coarse spray droplets** as defined by ASABE standard S-572 and as shown in nozzle manufacturer's catalogs. Flat-fan nozzles are recommended for burndown applications while flood-jet type nozzles are recommended for residual soil surface application. Nozzles that deliver coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e. weeds or soil surface). **DO NOT** use nozzles that produce fine (e.g. cone) spray droplets. In California, nozzles must be affixed to spray no higher than 20 inches above the spray target (e.g. top of weed foliage).
2. Apply this product only when the potential for drift to adjacent nontarget areas is minimal (e.g. when the wind is **10 MPH or less and is blowing away** from sensitive areas). **DO NOT** apply during periods of temperature inversions or stable atmospheric conditions.
3. Avoid potential adverse effects to nontarget areas by maintaining a 75-feet buffer (120-feet in California) between the application area and the **closest downwind edge** of sensitive terrestrial habitats (grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrub lands, and crop lands).

Ground Application (dry bulk fertilizer)

Sharpen® herbicide may be impregnated or coated onto dry bulk granular fertilizer carriers for residual soil surface application. Impregnation or coating may be conducted by in-plant bulk or on-board systems. Perform the mixing operation in well-ventilated areas.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application because of high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not recommended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **Sharpen** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **Sharpen** before blending with fertilizer to reduce plugging. **DO NOT** use drying agents when mineral oil is used. To avoid separation of **Sharpen** and mineral oil mixes in cold temperatures, keep mixture heated or agitate before blending with fertilizer. Mineral oil may be used with in-plant blending stations or on-board injection systems.

Generally, fertilizer application rates of at least 200 lbs to 700 lbs per acre of herbicide and fertilizer blend provide adequate distribution or coverage of **Sharpen** across the soil surface. Application must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at half rate and overlapped for a full rate offers a more uniform distribution. A shallow (less than 2 inches) incorporation is desirable for improved weed control. Deeper incorporation dilutes the herbicide layer near the soil surface and may result in unsatisfactory weed control.

To calculate the herbicide rate when using dry bulk fertilizer application:

$$\frac{\text{fl ozs herbicide per acre}}{\text{pounds fertilizer per acre}} \times 2000 = \text{fl ozs herbicide per ton of fertilizer}$$

Cleaning Spray Equipment

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

Spray Drift Management

It is the responsibility of the applicator to avoid spray drift at the application site, especially onto nontarget areas. The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

Controlling Droplet Size. The most effective way to reduce drift potential is to apply the largest droplets that provide sufficient coverage and control.

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 specified 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 Type. Use a nozzle type designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets.

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

Wind. Drift potential is lowest between wind speeds of 3 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. If applying at wind speeds less than 3 mph, the applicator must determine if:

1. Conditions of temperature inversion exist, or
2. Stable atmospheric conditions exist at or below nozzle height.

DO NOT make applications into areas of temperature inversions or stable atmospheric conditions.

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Wind Erosion. Avoid treating powdery, dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

Additives

For optimum burndown or harvest aid/desiccation activity with **Sharpen® herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil[1] (MSO)	1 gal/100 gals[2] (1% v/v)
PLUS	**PLUS**
ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
or	**or**
urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.

[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (less than 12.5 gallons per acre) aerial or ground application.

Refer to the **Crop-specific Information** section for specific adjuvant requirements for certain crop uses.

Use of AMS fertilizer is highly recommended when mixing **Sharpen** with glyphosate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf weeds or for desiccation will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

DO NOT add acidifying agents to the spray tank when applying **Sharpen**.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sharpen may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of burndown control of merged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

Tank mixes with contact herbicides (e.g. carfentrazone, paraquat) may reduce the burndown activity of **Sharpen**.

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or 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

Maintain agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
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-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum seasonal use rate** - Refer to **Crop-specific Information** section for maximum cropping seasonal application use rates for each crop and use pattern. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- Except for labeled harvest aid/desiccation uses and postemergence uses in alfalfa, forage grasses, grass grown for seed, and rice, **DO NOT** apply **Sharpen® herbicide** after crop emergence or severe crop injury will occur.
- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.
- **DO NOT** apply **Sharpen** through any type of irrigation system (e.g. chemigation).
- **Sharpen is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.**

Crop Rotation and Emergency Replanting Intervals

Refer to **Table 5** for the proper interval between **Sharpen** application and planting of rotational crops or replanting after crop failure (because of environmental factors including drought, frost, or hail, etc.). Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 5. Rotational Crop Planting and Emergency Replanting Intervals by Sharpen® herbicide Application Rate

Crop	Sharpen Rate (fl ozs/A)					
	1.0	2.0	3.0	4.0	5.0	6.0
	Rotational Crop Interval (months after application)[1]					
Alfalfa	4	5	6	7	8	9
Corn	0	0	0	0	0	0
Corn, sweet	0.5	1	2	3	4	4
Sorghum	0	0	0	0	1	1
Small grains[2]	0	0	0	0	3	3
Rice	0	0	0	0	4	4
Chickpea	0	0	2*	4	6	6
Edible pea	0	1	3	4	6	6
Field pea, dry	0	0	2	4	6	6
Edible bean[3]	0	1	3	4	6	6
Grass (forage, seed) Establishment	0	0	0	0	1	1
Soybean[4]	0 to 1	1 to 1.5	2 to 3	4	6	6
Lentil	0	1	3	4	6	6
Cotton[4]	1.5	3	4	6	6	9
Citrus fruit trees	1	1	4	4	4	4
Fig trees	3	3	4	4	4	4
Nut trees	3	3	4	4	4	4
Olive trees	3	3	4	4	4	4
Pomegranate trees	3	3	4	4	4	4
Pome fruit trees	3	3	4	4	4	4
Stone fruit trees	3	3	4	4	4	4
Sugarbeet	4	5	6	7	8	9
Sugarcane	4	4	6	7	8	9

(continued)

Table 5. Rotational Crop Planting and Emergency Replanting Intervals by Sharpen® herbicide Application Rate *(continued)*

Crop	Sharpen Rate (fl ozs/A)					
	1.0	2.0	3.0	4.0	5.0	6.0
	Rotational Crop Interval (months after application)[1]					
Sunflower	4	5	6	7	8	9
Cover crops (winter, spring)**	1	2	2	4	4	4
Other crops	4	5	6	7	8	9

[1] **DO NOT** include time when the soil is frozen.
[2] Small grains are defined in **Crop-specific Information** section of this label. For other small grains, use the rotational crop interval for **Other Crops**.
[3] Edible bean refers to blackeyed pea, crowder pea, cowpea, southern pea. Use the **Other Crops** rotational crop planting interval for beans not specifically listed in this table.
[4] The planting interval for these crops and rates is further defined in the respective **Crop-specific Information** section of this label. Use the longer interval within listed ranges for indicated crops grown on coarse-texture soils with organic matter less than 2.0%.
* Interval is 0 months in Idaho, Oregon, and Washington.
** Cover crops (winter, spring) may be planted after application of **Sharpen**, either inter-seeded into the current crop before harvest or after harvest of the current crop. Depending on the sensitivity of the sown cover crop to **Sharpen**, stand establishment may be reduced. If cover crops were sown less than 4 months after **Sharpen** application, **DO NOT** harvest cover crops as a food or feed crop, and **DO NOT** allow livestock to graze cover crops.

Crop-specific Information

Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label.

Depending on specific crop application directions, **Sharpen** may be applied for burndown control of emerged broadleaf weeds and/or residual control of germinating broadleaf weeds (refer to **Table 1** and **Table 2** for list of weeds controlled) before crop planting (preplant and/or preseed) or after planting but before crop emergence (preemergence) and for harvest aid/desiccation uses (refer to **Table 8** for list of crops).

For all crop-specific uses in this section, refer to **Table 5** for crop rotation intervals.

Thorough spray coverage is required for control of emerged broadleaf weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Alfalfa

Sharpen may be applied in the dormant season for postemergence broadleaf weed control (refer to **Table 1** for list of weeds controlled) in alfalfa production.

Before applying **Sharpen** to alfalfa, verify varietal dormancy rating with your local seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Sharpen may only be applied to established stands of alfalfa (defined as planted in the fall or spring which have gone through a first cutting/mowing) grown for forage and/or hay production.

Sharpen may cause transitory injury to alfalfa (leaf necrosis) under certain conditions, but new growth is normal and yield is typically not reduced. Disease, extremely cold weather, drought, extensive frost heaving, low or high pH, salinity, and other environmental pressures may weaken alfalfa stands and make the crop more susceptible to herbicidal injury.

Dormant-season Application for Burndown Weed Control

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in the dormant season [i.e. when alfalfa is not actively growing in fall (post-harvest), or during winter dormancy]. An adjuvant system is required for optimum broadleaf burndown activity (refer to **Additives** section for details).

For optimum postemergence control of emerged broadleaf weeds, apply **Sharpen** in a minimum of 10 gallons of water per acre.

Sequential applications of **Sharpen** may be made within the dormant season if the maximum cumulative amount does not exceed 2.0 fl ozs/A of **Sharpen**. Separate sequential dormant season burndown applications by at least 14 days.

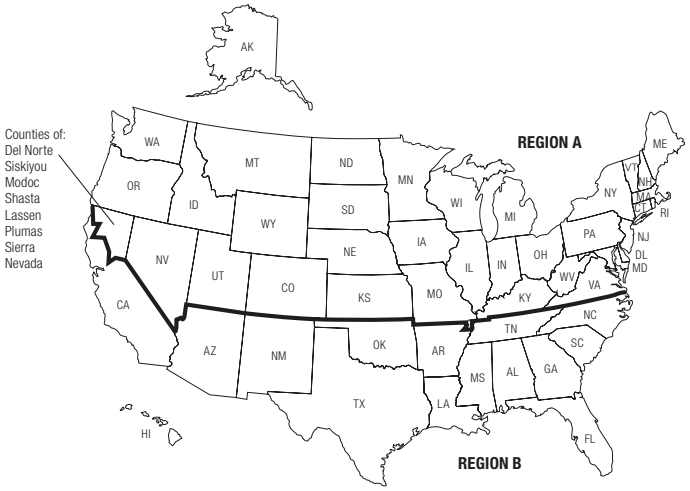
Timing of **Sharpen** applications in the dormant season depends on the geographical region where alfalfa is grown. Refer to the following United States map to identify the correct region and states within the region.

In **Region A**, apply **Sharpen® herbicide** at least 90 days before harvest or yield reductions of the first cutting may occur.

In **Region B**, apply **Sharpen** at least 75 days before harvest or yield reductions of the first cutting may occur.

Within **Region A**, only apply **Sharpen** in Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, and in the California counties of Del Norte, Lassen, Plumas, Modoc, Nevada, Shasta, Sierra, and Siskiyou.

Within **Region B**, only apply **Sharpen** in Arizona, New Mexico, Oklahoma, Texas, and the remaining counties in California.



Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** (0.044 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply **Sharpen** to alfalfa grown for seed production.
- **DO NOT** apply to alfalfa with more than 4 inches of growth. Application will result in burning of treated leaves and stems. Users must understand and accept this risk before applying **Sharpen** on alfalfa.
- **Preharvest Interval** (PHI) for alfalfa forage or hay when **Sharpen** is applied in dormant season: 28 days.
- **DO NOT** apply **Sharpen** to mixed stands of alfalfa with other forage legumes. **Sharpen** is not registered for use on other forage legumes.

Mixed Stands of Alfalfa and Perennial Cool-season Forage Grasses

Dormant-season application for burndown weed control. Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in the dormant season [i.e. when mixed stand is not actively growing in fall (postharvest), or during winter dormancy]. An adjuvant system is required for optimum broadleaf burndown activity (refer to **Additives** section for details).

Sequential applications of **Sharpen** may be made within the dormant season as long as the maximum cumulative amount does not exceed 2.0 fl ozs/A of **Sharpen**. Separate sequential dormant-season burndown applications by at least 14 days.

Timing of **Sharpen** application in the dormant season in **Region A** and **Region B** also applies to mixed stands of alfalfa and perennial cool-season forage grasses.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** (0.044 lb ai/A of saflufenacil) per cropping season.
- **Preharvest Interval** (PHI) and **Pregrazing Interval** (PGI) for alfalfa forage or hay in mixed-stand alfalfa/perennial cool-season forage grasses when **Sharpen** is applied in dormant season: 28 days.

Field Corn (grain, silage), Popcorn, Seed Corn, and Sweet Corn

Sharpen may be applied preplant surface, preplant incorporated, or preemergence to corn for broadleaf weed control (refer to **Table 1** and **Table 2** for lists of weeds controlled). Corn in this label refers to field corn (grown for grain or silage), popcorn, seed corn, and sweet corn (processing varieties only, not including sweet corn grown for seed or fresh market varieties). Before applying **Sharpen** to seed corn, processing sweet corn, or popcorn, verify the selectivity of **Sharpen** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Application Rate

Sharpen can be applied as part of a planned sequential (two-pass) weed control program.

Sharpen use rates applied as the residual component of a planned sequential (two-pass) program (see **Table 6** and **Table 7**) control or suppress listed weeds (**Table 1**) through early to mid-season.

Table 6. Residual Preemergence Rates of Sharpen in a Planned Sequential Program[1] in Field Corn and Popcorn

Soil Texture[2]	Rate by Soil Texture (fl ozs/A)
Coarse	2.0 to 2.5
Medium	2.5 to 3.0
Fine	3.0 to 3.5

[1] Application rates in **Table 6** eliminate early season broadleaf weed interference until cultivation or a labeled postemergence herbicide is applied.

[2] Refer to **Table 3** for definition of soil texture groups.

Table 7. Residual Preemergence Rates of Sharpen® herbicide in a Planned Sequential Program[1,2] in Processing Sweet Corn[3]

Soil Texture[4]	Rate by Soil Texture (fl ozs/A)
Coarse	2.0 (**DO NOT** apply on coarse soils with ≤ 3% organic matter)
Medium	2.0
Fine	2.0

[1] Apply in tank mix with **Outlook® herbicide** at labeled rates for processing sweet corn.
[2] Application rates in **Table 7** will eliminate early season weed interference until cultivation or a labeled postemergence herbicide is applied.
[3] Not for use in processing sweet corn in California.
[4] Refer to **Table 3** for definition of soil texture groups.

Application Timing

Early Preplant Surface Application (15 to 30 days before planting)

Early preplant surface applications are not recommended on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches, or for popcorn or processing sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Early preplant surface applications may be applied as part of a split application program where applications are made as part of the application timings described in this label. However, the cumulative total of sequential application rates must not exceed the maximum labeled rate for a given soil texture.

Preplant Surface and Preplant Incorporated Applications (up to 14 days before planting)

Sharpen can be applied at use rates specified in **Table 6** or **Table 7** to the soil surface or incorporated up to 14 days before planting on all soil types. For preplant incorporated application, apply **Sharpen** and incorporate into the upper soil surface (1 to 2 inches). Use a harrow, rolling cultivator, field cultivator, or other implement capable of uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

Preemergence Surface Application

Apply **Sharpen** at use rates specified in **Table 6** or **Table 7** as a broadcast spray to the soil surface after planting and before crop emergence. **Sharpen** must be applied before crop emergence or injury will occur.

Burndown plus Residual Weed Control

In addition to residual broadleaf weed control at any of the application timings previously described, **Sharpen** also provides burndown of emerged broadleaf weeds listed in **Table 1**. An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity. Burndown control of emerged grasses and/or additional broadleaf weeds not listed on the label requires a tank mix with another herbicide (like glyphosate).

Burndown Weed Control Only

If limited or no residual broadleaf weed control is desired, **Sharpen** can be applied at 1.0 fl oz/A (all soil types) with an adjuvant system any time before corn emergence for burndown of broadleaf weeds listed in **Table 1**. A burndown application of **Sharpen** can be followed by residual rates of **Sharpen** (**Table 6** or **Table 7**) or **Verdict® herbicide**. Separate sequential applications by at least 14 days. However, **DO NOT** apply more than the cropping seasonal maximum cumulative amount per acre of saflufenacil from all product sources per cropping season.

Crop-specific Use in Seed Corn. Apply **Sharpen** preplant surface or preemergence at 1.0 to 2.0 fl ozs/A with an adjuvant system for burndown broadleaf weed control in seed corn before crop emergence. **DO NOT** apply more than 1.0 fl oz/A on coarse soils. Sequential applications of **Sharpen** may be made with a minimum of 30 days between applications. **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Sharpen** per cropping season in seed corn.

State-specific Use in California. Apply **Sharpen** early preplant through preemergence at 2.0 fl ozs/A with an adjuvant system for burndown broadleaf weed control before crop emergence. Separate sequential applications of **Sharpen** by at least 14 days. **DO NOT** apply more than 2.0 fl ozs/A in a single application.

Crop-specific Restrictions

- **DO NOT** apply **Sharpen** after corn emergence or severe crop injury will occur.
- **DO NOT** apply **Sharpen** at more than 1.0 fl oz/A where an at-planting application of an organophosphate (OP) or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

  EXCEPTION: Sharpen may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice® 5G granular insecticide** is applied at planting as a band, T-band, or in-furrow. **Sharpen** may be applied with all other classes of at-planting insecticides including neonicotinoid and pyrethroids.
- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 0.134 lb ai/A of saflufenacil per cropping season in corn from all product sources.
- There is no required (preharvest) interval between a preplant surface, preplant incorporated, or preemergence application of **Sharpen** and the harvest of field corn grain, popcorn, seed corn and sweet corn ears. Corn forage, stover, and sweet corn cannery waste may be fed to livestock after harvest.

- Corn forage and silage must not be harvested, fed, or grazed sooner than 80 days after application.

Crop-specific Precautions

- **Sharpen® herbicide** use may result in delayed corn emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the corn seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed corn emergence or stunting.
- **Sharpen** applied to processing sweet corn planted at depth of 1/2 inch or less may result in crop injury.

Cotton

Use **Sharpen** as an early preplant burndown treatment before planting cotton.

Not for use in cotton in California.

Application Method, Rate, and Timing

Apply **Sharpen** as a broadcast spray at 1.0 fl oz/A plus recommended adjuvants (refer to **Additives** section for details) for control of actively growing broadleaf weeds (refer to **Table 1** for list of weeds controlled). Wait to plant cotton until at least **42 days** and an accumulation of 1 inch of rainfall and/or irrigation occurring after application to avoid crop injury. In areas with average annual rainfall less than 25 inches, the 42-day preplant interval is required after accumulation of 1 inch of rainfall and/or irrigation. **DO NOT** apply to coarse soils classified as sand with less than 1.5% organic matter or cotton injury may occur.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** (0.044 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply **Sharpen** with other **Group 14**/**Group E** herbicides (including flumioxazin) as a tank mix or sequential application within 30 days of planting because crop injury may result.

Crop-specific Precautions

- Use the most restrictive preplant interval with tank mixes of other cotton burndown herbicides.
- Cotton gin byproducts may be fed to livestock.

Fallow and Postharvest

Sharpen may be used as a burndown treatment to control broadleaf weeds at any time of the year during the fallow period following crop harvest and before the following crop is planted. **Sharpen** may also be applied for specific postharvest uses to burn down the remaining foliage after crop harvest.

Application Rate and Timing

Apply **Sharpen** as a broadcast burndown spray at 1.0 to 2.0 fl ozs/A plus recommended adjuvants (refer to **Additives** section for details). For best product performance, apply when broadleaf weeds are small and actively growing (refer to **Table 1** for list of weeds controlled). Thorough coverage of existing weeds is essential and higher spray volumes may be needed for best performance.

Sequential applications of **Sharpen** may be made with a minimum of 14 days between applications; but **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.

For residual broadleaf weed control, **Sharpen** may be applied at 2.0 to 4.0 fl ozs/A.

Specific rotational crop planting intervals must be observed between application of **Sharpen** and planting of the following crop (see **Table 5** for rotational crop planting intervals).

State-specific Use in California. Apply **Sharpen** as a broadcast burndown spray at 2.0 fl ozs/A with the recommended adjuvants. **DO NOT** apply more than 2.0 fl ozs/A in a single application.

Postharvest use on tomato vines. Apply **Sharpen** as a broadcast burndown spray at 1.0 to 2.0 fl ozs/A plus recommended adjuvants (refer to **Additives** section for details). Thorough spray coverage of existing tomato vines is essential and higher spray volumes may be needed for best performance. **DO NOT** apply before or during tomato fruit harvest. Not for use on tomato vines in California.

Forage Grasses Grown for Forage, Silage, and Hay Production

Sharpen may be applied for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled) in perennial cool-season and warm-season forage grasses grown in fields for forage (green chop), silage, or hay production.

Before applying **Sharpen** to forage grasses, verify the selectivity of **Sharpen** on your variety with your local seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Apply **Sharpen** only to established (defined as planted in fall or spring which has gone through a first cutting/mowing) stands of perennial cool-season and warm-season forage grasses.

Sharpen may cause transitory injury to forage grasses (leaf necrosis) under certain conditions, but new growth is normal and vigor is not reduced. Disease, extremely cold weather, drought, extensive frost heaving, low or high pH, salinity, and other environmental pressures may weaken grass stands and make the crop more susceptible to herbicidal injury.

Dormant-season Application for Burndown and Residual Weed Control in Warm-season and Cool-season Grasses

Apply **Sharpen® herbicide** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in the dormant season [i.e. when grasses are not actively growing in fall (postharvest), during winter dormancy, or in early spring before greenup]. An adjuvant system is required for optimum broadleaf burndown activity.

For additional residual broadleaf weed control, **Sharpen** can be applied anytime in the dormant season (as previously described) at 3.0 to 4.0 fl ozs/A (except in California).

Sequential applications of **Sharpen** may be made within the dormant season if the maximum cumulative amount does not exceed 4.0 fl ozs/A of **Sharpen**. Apply dormant-season burndown applications sequentially when the first burndown application is in fall (postharvest) or during winter dormancy, and the second application is in early spring before greenup. Separate sequential dormant-season burndown applications by at least 14 days.

Specific Adjuvant Requirements for Dormant-season Application in Warm-season and Cool-season Grasses. For optimum postemergence control of emerged broadleaf weeds, the following adjuvants are required for use with **Sharpen**:

- MSO at 1% volume/volume (v/v) plus AMS at 8.5 to 17.0 lbs/100 gallons

In-season Postemergence Application for Weed Control in Cool-season Grasses

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds in season (i.e. actively growing cool-season forage grasses). Make in-season applications before weeds reach the maximum size listed in **Table 1**. Postemergence application requires the addition of an adjuvant system.

Specific Adjuvant Requirements for In-season Postemergence Application in Cool-season Grasses outside of Idaho, Oregon, and Washington. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to cool-season grasses. Burndown weed control may be reduced when nitrogen-containing fertilizer is not included with **Sharpen**.
- Some cool-season grass species, including Timothy and orchardgrass, may exhibit crop response like leaf burn and leaf trapping when adding a nitrogen-containing fertilizer with postemergence application of **Sharpen**.

Specific Adjuvant Requirements for In-season Postemergence Application in Cool-season Grasses grown in Idaho, Oregon and Washington. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** apply **Sharpen** to Timothy and orchardgrass.
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to cool-season grasses. Burndown weed control may be reduced when nitrogen-containing fertilizer is not included with **Sharpen**.

In-season Postemergence Application for Weed Control in Warm-season Grasses

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds in season (i.e. actively growing warm-season forage grasses). In-season postemergence applications can be made in the spring after greenup. Make in-season applications before weeds reach the maximum size listed in **Table 1**. Postemergence application requires the addition of an adjuvant system.

DO NOT apply **Sharpen** in-season postemergence on Bahiagrass, buffalograss, and switchgrass.

DO NOT apply more than 1.0 fl oz/A of **Sharpen** in forage Bermudagrass applied in-season postemergence (i.e. after greenup) because higher rates may cause unacceptable grass injury.

Specific Adjuvant Requirements for Postemergence Application in Warm-season Grasses. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to warm-season grasses.

Sequential Applications in Warm-season and Cool-season Grasses

Sharpen may be applied as a sequential or split program when application(s) is in the dormant season and subsequent application(s) is postemergence in season after greenup. **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** per cropping season.

In-season postemergence application of **Sharpen** may also be applied sequentially; separate sequential applications by at least 14 days. The maximum cumulative amount for in-season postemergence application must not exceed 2.0 fl ozs/A of **Sharpen**.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply **Sharpen** to mixed stands of grass and forage legumes (except dormant-season alfalfa, see **Alfalfa** use section) or to grass stands containing other desirable broadleaf species. **Sharpen** application will kill or cause severe injury to forage legumes and most broadleaf species.
- **DO NOT** apply **Sharpen** to stands of annual forage (e.g. forage sorghum, Sudangrass).

Crop-specific Precautions

- For a mixed stand of cool-season and warm-season grasses, follow use directions for warm-season grasses when applying **Sharpen® herbicide** in-season postemergence.
- There is no preharvest or pre-grazing interval for **Sharpen**-treated grass forage, hay, or pasture.

Grass Establishment

Sharpen may be applied for preemergence broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled) in fields when establishing stands of cool-season grasses grown for forage (in pastures for livestock grazing); for forage (green chop), silage, or hay production; or grown for seed production.

Before applying **Sharpen** preemergence to cool-season grasses, BASF recommends consulting with your local seed company (supplier) on the selectivity of **Sharpen** on your species and/or variety to help avoid potential injury to sensitive varieties.

Not for use in grass establishment in California.

Application Method, Rate, and Timing

Sharpen may be applied preplant, preplant incorporated, or preemergence in the fall or spring while establishing stands of cool-season grasses.

Sharpen may cause transitory injury to cool-season grasses under certain conditions. Disease, extremely cold weather, drought, extensive frost heaving, low or high pH, salinity, and other environmental pressures may weaken grass stands and make the crop more susceptible to herbicidal injury.

Burndown and Residual Weed Control

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast spray to the soil surface before grasses emerge. If burndown of emerged broadleaf weeds is desired, an adjuvant system (refer to **Additives** section for details) is required for optimum broadleaf burndown activity.

Sequential Applications

Sharpen may be applied as a sequential or split program when the initial application is made preplant or preemergence while establishing the stand, and the subsequent application(s) is postemergence in season after establishment. However, **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** per cropping season.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply **Sharpen** when establishing solid stands of warm-season grasses or mixed stands of cool-season and warm-season grasses.
- **DO NOT** apply **Sharpen** when establishing mixed stands of cool-season grasses and forage legumes or other desirable broadleaf species. **Sharpen** application will kill or cause severe injury to emerging alfalfa, clover, other legumes, and most broadleaf species.
- There is no preharvest or pre-grazing interval for **Sharpen**-treated grass harvested as forage or hay.

Grass Grown for Seed Production

Sharpen may be applied for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled) in perennial cool-season and warm-season grasses grown in fields for seed production.

Before applying **Sharpen** to grasses grown for seed production, verify the selectivity of **Sharpen** on your variety with your local seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Sharpen may be applied to new establishment seedling fields and to established fields (stands defined as planted in fall, spring, or summer that have gone through a first cutting/mowing) of perennial cool-season and warm-season grasses grown for seed production.

Sharpen may cause transitory injury to seed grasses (leaf necrosis) under certain conditions, but new growth is normal and vigor is not reduced. Disease, extremely cold weather, drought, extensive frost heaving, low or high pH, salinity, and other environmental pressures may weaken grass stands and make the crop more susceptible to herbicidal injury.

Cool-season Grasses

New Establishment Seedling Grass Seed Fields

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in new establishment seedling grass fields after the first tiller of the grass is fully established in fall or spring. If the seedling grass field was established in fall, **Sharpen** may also be applied sequentially in spring before greenup as a burndown spray. A maximum of two applications may be applied. Applications must be separated by at least 14 days; **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** during this period.

Burndown application requires the addition of an adjuvant system (see the following adjuvant section).

Established Grass Seed Fields

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds anytime in season (i.e. actively growing grass in spring after greenup until 1 week before boot stage).

Sharpen® herbicide may be applied as a single application or sequentially in season. A maximum of two applications may be applied. Sequential applications of **Sharpen** must be separated by at least 14 days; **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** in season. Postemergence application requires the addition of an adjuvant system (see the following adjuvant section).

Sequential Applications in Grass Seed Fields

Sharpen may be applied as a sequential or split program when the initial application(s) is during the period after a fully established first tiller in fall until spring greenup, and the subsequent application(s) is postemergence in season.

Specific Adjuvant Requirements for Burndown and Postemergence Applications. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% volume/volume (v/v)
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to seedling or established stands of cool-season grasses other than Kentucky Bluegrass. AMS may be added at 8.5 to 17 lbs/100 gallons to applications on Kentucky Bluegrass.

Warm-season Grasses

New Establishment Seedling Grass Seed Fields

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in new establishment seedling grass fields after the first rhizome or stolon of the grass is fully established. Sequential applications of **Sharpen** may be made until 1 week before boot stage. A maximum of two applications may be applied. Applications must be separated by at least 14 days; **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** during this period.

Burndown application requires the addition of an adjuvant system (see the following adjuvant section).

Established Grass Seed Fields

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds anytime in season (i.e. actively growing grass in spring after greenup until 1 week before boot stage).

Sharpen may be applied as a single application or sequentially in season. A maximum of two applications may be applied. Sequential applications of **Sharpen** must be separated by at least 14 days; **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** in season.

Postemergence application requires the addition of an adjuvant system (see the following adjuvant section).

Specific Adjuvant Requirements for Burndown and Postemergence Application. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to seedling or established stands of warm-season grasses.

Cool-season and Warm-season Grasses

Dormant-season Application in Established Grass Seed Stands for Burndown and Residual Weed Control

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in the dormant season [i.e. when grasses are not actively growing in fall (postharvest), during winter dormancy, or in early spring before greenup]. An adjuvant system is required for optimum broadleaf burndown activity (see the following adjuvant section).

For additional residual broadleaf weed control in established stands, apply **Sharpen** anytime in the dormant season (as previously described) at 3.0 to 4.0 fl ozs/A (except in California).

Specific Adjuvant Requirements for Dormant-season Applications in Cool-season and Warm-season Grasses. For optimum postemergence control of emerged broadleaf weeds, the following adjuvants are required for use with **Sharpen**:

- MSO at 1% v/v plus AMS at 8.5 to 17.0 lbs/100 gallons

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season on established grass seed stands and 4.0 fl ozs/A (0.089 lb ai/A of saflufenacil) on seedling grass seed stands.
- **Preharvest Interval** (PHI) for grass seed: 50 days.
- **DO NOT** apply **Sharpen** to bahiagrass, buffalograss, or switchgrass.

Crop-specific Precautions

- **Sharpen**-treated grass forage or hay may be grazed by or fed to livestock; there is no preharvest or pregrazing interval.
- Grass straw remaining after seed harvest may be used as livestock bedding and/or grazed by or fed to livestock.
- Grass seed screenings remaining after seed harvest and processing may be fed to livestock.

Harvest Aid/Desiccation

Sharpen may be used for harvest aid/desiccation in the crops listed in **Table 8**. Uniformly apply **Sharpen** as a broadcast spray by air or ground. Ground application is recommended at a minimum spray volume of 10 gallons/A. Aerial application is recommended at a minimum spray volume of 5 gallons/A. Thorough spray coverage and an MSO plus ammonium-based adjuvant system (refer to the **Additives** section) are required for optimum desiccation activity.

Sharpen® herbicide may be applied in a single application or sequential applications.

Harvest aid/desiccation uses are considered separate and **DO NOT** contribute to the maximum cumulative seasonal use rates of **Sharpen** when applied during the cropping season.

Refer to **Table 5** for rotational crop planting intervals.

Table 8. Crops for Harvest Aid/Desiccation

Crop	Application Timing	Sharpen® herbicide Use Rate (fl ozs/A)	PHI* (days)	Crop-specific Restrictions
Barley, (spring and winter) **Wheat,** (durum, spring, and winter) **Triticale**	Spray over the top of barley, wheat, and triticale that have reached physiological maturity (hard-dough stage; grain contains less than 30% moisture) or according to Extension Service recommendations in the use area. **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	3 (grain)	Desiccation-treated barley, wheat, and triticale straw may be grazed or fed to livestock. **DO NOT** apply to barley grown for malting purposes. Not for use for barley, wheat, and triticale desiccation in California.
Chia	Spray over the top of chia that have reached physiological maturity or according to Extension Service recommendations in the use area. **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	3 (grain)	**DO NOT** apply on chia grown for seed production. Desiccation-treated chia straw may be grazed or fed to livestock. Not for use for chia desiccation in California.
Dry Edible Beans *Phaseolus* spp. (all types) *Vigna* spp. [adzuki bean, mung bean] Garbanzo bean (Chickpea) Lentils	Spray over the top of dry edible beans that have reached physiological maturity (beans have at least 80% yellow/brown pods and no more than 30% of leaves still green for vine-type beans and lentils, and no more than 40% of leaves still green for bush-type beans; or according to Extension Service recommendations in the use area for other crops). **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	2 (dry edible beans)	**DO NOT** apply on dry edible beans grown for seed production. **DO NOT** graze or feed desiccation-treated hay or straw to livestock. **DO NOT** apply harvest aid/desiccation to green lentil varieties. Not for use for garbanzo bean (chickpea) and lentils desiccation in California.

(continued)

Table 8. Crops for Harvest Aid/Desiccation *(continued)*

Crop	Application Timing	Sharpen® herbicide Use Rate (fl ozs/A)	PHI* (days)	Crop-specific Restrictions
Dry Peas Dry field peas	Spray over the top of dry peas that have reached physiological maturity (peas with at least 80% yellow/brown pods and no more than 30% of leaves still green for vine-type peas, and no more than 40% of leaves still green for bush-type peas; or according to Extension Service recommendations in the use area). **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	3 (dry peas)	Desiccation-treated pea vines may be grazed or fed to livestock. Not for use for dry peas desiccation in California.
Oilseeds Canola (Rapeseed) Subgroup 20A *Brassica juncea* Crambe Flax Gold-of-pleasure (Camelina) Mustard seed Rapeseed (Canola)	Spray over the top of crop(s) that has reached physiological maturity [70% to 80% bolls turn to brown for flax; seeds in the middle pods have started to turn in color for Brassica juncea, canola (rapeseed), and mustard; or according to Extension Service recommendations in the use area for other crops]. **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	3 (seed)	**DO NOT** apply on oilseed crops grown for seed production. Not for use for oilseeds canola (rapeseed) desiccation in California.
Oilseeds Cottonseed Subgroup 20C Cotton (Cottonseed) including: Spindle pick harvested cotton Stripper harvested cotton	Spray over the top of cotton that has reached physiological maturity (according to local State Agricultural Extension Service guidelines, including nodes above cracked boll, accumulated heat units after cutout, or at least 60% to 70% boll opening). **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.** Large plant size, dense canopy, and environmental conditions not conducive for defoliation may require a second defoliation application 5 to 7 days later.	Single application: 0.5 to 2.0 Maximum cumulative amount per cropping season for defoliation/desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	5 (cotton)	**Sharpen**-treated gin trash may be fed to livestock.

(continued)

Table 8. Crops for Harvest Aid/Desiccation *(continued)*

Crop	Application Timing	Sharpen® herbicide Use Rate (fl ozs/A)	PHI* (days)	Crop-specific Restrictions
Oilseeds Sunflower Subgroup 20B Safflower Sunflower	Spray over the top of crop(s) that has reached physiological maturity (seed moisture less than 36% for sunflower; when heads are fully mature for safflower; or according to Extension Service recommendations in the use area). For many sunflower varieties, the back of the sunflower heads are yellow and the bracts are turning brown at this timing. **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.** Minor frost events up to 3 days after **Sharpen** application may reduce harvest aid effects and cause sunflower to dry down less efficiently.	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 4.0 (0.089 lb ai/A of saflufenacil)	7 (seed)	**DO NOT** apply on oilseed crops grown for seed production. **DO NOT** use after multiple minor frosts or single significant frost event.
Soybean	Spray over the top of soybeans that have reached physiological maturity (all pods and seeds have no more green color). **Indeterminate Varieties** Greater than 65% brown pods and greater than 70% leaf drop or when seed moisture is 30% or less. **Determinate Varieties** Beans are fully developed, more than 50% leaf drop, and remaining leaves are yellowing. **Allow up to 10 days for optimum desiccation effect. Actual time to harvest depends on environmental and atmospheric conditions which may increase or decrease time period stated here.**	Single application: 1.0 to 2.0 Maximum cumulative amount per cropping season for desiccation uses: 2.0 (0.044 lb ai/A of saflufenacil)	3 (soybean seed)	**DO NOT** apply on soybean grown for seed production. **DO NOT** graze or feed desiccation-treated hay or straw to livestock.

* PHI = preharvest interval, minimum time elapsed between last **Sharpen** application and harvest of treated seed

Tank Mixes

Cotton

Sharpen® herbicide may be tank mixed with other cotton defoliant products including, but not limited to: ethephon, ethephon plus AMADS, ethephon plus cyclanilide, sodium chlorate, thidiazuron, thidiazuron plus diuron, tribufos, glyphosate, or paraquat. Refer to the other product's label for restrictions on tank mixing, precautions, and rotational restrictions. The most restrictive labeling applies to tank mixes.

All Other Crops

Apply **Sharpen** with a labeled rate of glyphosate for additional preharvest weed control. **Sharpen** also may be tank mixed with other registered harvest aid/desiccation products. Read and follow the applicable restrictions and limitations and directions for use on the glyphosate and other tank mix product labels, and to confirm they are labeled for the specific crop to be desiccated. The most restrictive labeling applies to tank mixes.

DO NOT apply tank mix of **Sharpen** and glyphosate for harvest aid/desiccation on crops grown for seed production.

Leafy Spurge Control

Sharpen applied in tank mix with **Plateau® herbicide** controls leafy spurge when applied late spring/early summer in forage grasses, pasture, and other areas described in the **Noncropland Areas** section of this label. This tank mix also controls additional weeds listed on the respective **Sharpen** and **Plateau** labels. **Sharpen** and **Plateau** tank mix may be applied by ground or air as a uniform broadcast application or spot treatment.

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A plus **Plateau** at 4.0 to 6.0 fl ozs/A to leafy spurge when it reaches the yellow bract (pre-bloom) stage in late spring/early summer. **DO NOT** apply this tank mix as a fall application because control may not be satisfactory.

Spray Additives. Sharpen plus **Plateau** tank mix requires the use of an effective adjuvant system. For best results, use NIS at 0.25% v/v plus AMS at 8.5 to 17.0 lbs/100 gallons [1% to 2% weight/volume (w/v)]. Crop oil concentrate (COC) or MSO may also be used with this tank mixture when injury (stunting, necrosis) to grasses is acceptable.

Water Volume. Use 5 or more and 10 or more gallons of water per acre for aerial and ground application, respectively. Thorough coverage of weeds is essential, and higher spray volumes may be necessary for better performance on a heavy population of leafy spurge.

Leafy spurge not controlled in California.

Legume Vegetables [chickpea, edible pea, field pea (dry), and lentil]

Sharpen may be applied preplant surface, preplant incorporated, and/or preemergence in legume crops specified in this section for broadleaf weed control (refer to **Table 1** and **Table 2** for lists of weeds controlled).

Application Method, Rate, and Timing

See the specific application rate and timing recommendations as they vary by legume crop. With burndown application, an adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity.

Before applying **Sharpen** to any of the specified legume crops, verify the selectivity of **Sharpen** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Use of **Sharpen** may result in delayed crop emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.

Chickpea (garbanzo bean)

Sharpen is for use in all types of chickpeas.

Burndown. Apply **Sharpen** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control before crop emergence. Sequential applications of **Sharpen** may be made with a minimum of 14 days between applications.

Burndown plus Residual. Apply **Sharpen** early preplant through preemergence at 2.0 fl ozs/A for burndown plus residual broadleaf weed control before crop emergence. Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting. Sequential applications of **Sharpen** may be made with a minimum of 30 days between applications.

State-specific Use in Idaho, Oregon, and Washington. The most effective weed control is achieved with a sequential program of **Sharpen**. Initially apply **Sharpen** early preplant at 1.0 fl oz/A for burndown broadleaf weed control. Make a sequential **Sharpen** application at least 14 days later preplant through preemergence at 1.0 to 3.0 fl ozs/A for burndown plus residual broadleaf weed control before crop emergence. Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence and or stunting.

DO NOT apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Sharpen** (0.089 lb ai/A saflufenacil) per cropping season in chickpeas.

Edible Peas

Sharpen® herbicide is for use **ONLY** on the following edible peas:

- Edible-podded peas (sugar snap pea)
- Succulent peas (English pea, garden pea, green pea, marrowfat pea)

State-specific Use in Idaho, Illinois, Iowa, Michigan, Minnesota, New York, Oregon, Washington, and Wisconsin. Apply **Sharpen** preplant incorporated or preemergence at 0.75 fl oz/A in English or sugar snap peas for residual suppression of the following broadleaf weeds:

- Black nightshade
- Common lambsquarters
- Redroot pigweed
- Velvetleaf

Preplant incorporated - Apply **Sharpen** up to one week before planting. **DO NOT** incorporate deeper than 3 inches.

Preemergence - Apply **Sharpen** up to 3 days after planting but before cracking stage or emergence, or severe crop injury will occur. Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting.

Sequential applications of **Sharpen** may be made with a minimum of 30 days between applications. **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** (0.045 lb ai/A saflufenacil) per cropping season in edible peas.

Field Peas

Sharpen is for use **ONLY** on dry field peas including Austrian winter peas.

Burndown. Apply **Sharpen** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control before crop emergence. Sequential applications of **Sharpen** may be made with a minimum of 30 days between applications.

Burndown plus Residual. Apply **Sharpen** early preplant through preemergence at 2.0 fl ozs/A for burndown plus residual broadleaf weed control before crop emergence. Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting. Sequential applications of **Sharpen** may be made with a minimum of 30 days between applications.

DO NOT apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Sharpen** (0.089 lb ai/A saflufenacil) per cropping season in dry field peas.

Lentils

Sharpen may be applied to green-type and red-type lentils. **DO NOT** apply **Sharpen** to Spanish brown lentils.

State-specific Use in Minnesota, Montana, North Dakota, South Dakota, and Wyoming. Apply **Sharpen** early preplant to preemergence at 0.75 fl oz/A for burndown broadleaf weed control before crop emergence. For only limited residual activity on broadleaf weeds, **Sharpen** may also be applied preplant incorporated at 0.75 to 2.0 fl ozs/A. Sequential applications of **Sharpen** may be made with a minimum of 14 days between applications. **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** (0.045 lb ai/A saflufenacil) per cropping season in lentils.

DO NOT use **Sharpen** for lentils grown in any other state including California.

Use Advisory for Lentils. Lentil injury may be observed depending on factors including rainfall, soil type, seeding depth, and variety. Rainfall shortly after **Sharpen** application can result in slight injury to the crop. Lentils will be more susceptible to injury from **Sharpen** on coarse-texture and low-organic matter soils. Injury usually appears as leaf tissue necrosis on the outer edges of the leaves. Lentils will grow out of injury symptoms, and yield will not be impacted at labeled rates. Soil residual herbicides may increase the sensitivity of lentils to **Sharpen** and should not be combined as a tank mix or sequential treatment within 30 days of planting in a lentil weed control program.

Crop-specific Restrictions

- **DO NOT** apply **Sharpen** if cold and/or wet conditions are present or predicted to occur within 1 week of application.
- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply **Sharpen** with other products containing **Group 14**/**Group E** herbicides (including sulfentrazone or flumioxazin) as a tank mix partner or sequential application within 30 days of planting because crop injury may result.

EXCEPTION: Sharpen at 1.0 fl oz/A in field pea and at 1.0 to 2.0 fl ozs/A in chickpea may be tank mixed or sequentially applied with other **Group 14**/**Group E** herbicides when grown in **Idaho**, **Montana**, **North Dakota**, **Oregon**, **South Dakota**, and **Washington**.

- There is no required (preharvest) interval between a preplant or preemergence application of **Sharpen** and the harvest of mature legume pods or seeds.
- Legume forage must not be fed or grazed sooner than 65 days after application.

Crop-specific Precautions

- Plant legumes at least 1/2-inch deep to reduce risk of crop injury from **Sharpen** application.

Pasture

Sharpen® herbicide may be applied for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled) in perennial cool-season and warm-season forage grasses grown in pastures or Federal Conservation Reserve Program (CRP) land for livestock grazing.

Before applying **Sharpen** to forage grasses, verify the selectivity of **Sharpen** on your variety with your local seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Apply **Sharpen** only to established (defined as planted in fall or spring which has gone through a first cutting/mowing) stands of perennial cool-season and warm-season forage grasses.

Sharpen may cause transitory injury to forage grasses (leaf necrosis) under certain conditions, but new growth is normal and vigor is not reduced.

Disease, extremely cold weather, drought, extensive frost heaving, low or high pH, salinity, and other environmental pressures may weaken grass stands and make the crop more susceptible to herbicidal injury.

Dormant-season Application for Burndown and Residual Weed Control in Warm-season and Cool-season Grasses

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast burndown spray to emerged broadleaf weeds in the dormant season [i.e. when grasses are not actively growing in fall (postharvest), during winter dormancy, or in early spring before greenup]. An adjuvant system is required for optimum broadleaf burndown activity.

For additional residual broadleaf weed control, **Sharpen** can be applied anytime in the dormant season (as previously described) at 3.0 to 4.0 fl ozs/A (except in California).

Sequential applications of **Sharpen** may be made within the dormant season if the maximum cumulative amount does not exceed 4.0 fl ozs/A of **Sharpen**. Apply dormant-season burndown applications sequentially when the first burndown application is made fall (postharvest) or during winter dormancy, and the second application is in early spring before greenup. Separate sequential dormant-season burndown applications by at least 14 days.

Specific Adjuvant Requirements for Dormant-season Application in Warm-season and Cool-season Grasses. For optimum postemergence control of emerged broadleaf weeds, the following adjuvants are required for use with **Sharpen**:

- MSO at 1% volume/volume (v/v) plus AMS at 8.5 to 17.0 lbs/100 gallons

In-season Postemergence Application for Weed Control in Cool-season Grasses

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds in season (i.e. actively growing cool-season forage grasses). Make in-season applications before weeds reach the maximum size listed in **Table 1**. Postemergence application requires the addition of an adjuvant system.

Specific Adjuvant Requirements for In-season Postemergence Application in Cool-season Grasses outside of Idaho, Oregon, and Washington. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to cool-season grasses. Burndown weed control may be reduced when nitrogen-containing fertilizer is not included with **Sharpen**.
- Some cool-season grass species, including Timothy and orchardgrass, may exhibit crop response like leaf burn and leaf trapping when adding a nitrogen-containing fertilizer with postemergence application of **Sharpen**.

Specific Adjuvant Requirements for In-season Postemergence Application in Cool-season Grasses grown in Idaho, Oregon and Washington. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v
- **DO NOT** apply **Sharpen** to Timothy and orchardgrass.
- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen** to cool-season grasses. Burndown weed control may be reduced when nitrogen-containing fertilizer is not included with **Sharpen**.

In-season Postemergence Application for Weed Control in Warm-season Grasses

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A as a broadcast postemergence spray to control emerged broadleaf weeds in season (i.e. actively growing warm-season forage grasses). In-season postemergence application can be made in spring after greenup. Make in-season applications before weeds reach the maximum size listed in **Table 1**. Postemergence application requires the addition of an adjuvant system.

DO NOT apply **Sharpen** in-season postemergence on Bahiagrass, buffalograss, and switchgrass.

DO NOT apply more than 1.0 fl oz/A of **Sharpen** in forage Bermudagrass applied in-season postemergence (i.e. after greenup) because higher rates may cause unacceptable grass injury.

Specific Adjuvant Requirements for Postemergence Application in Warm-season Grasses. For optimum postemergence control of emerged broadleaf weeds, the following adjuvant is required for use with **Sharpen**:

- MSO at 1% v/v

- **DO NOT** add nitrogen-containing fertilizers when applying **Sharpen® herbicide** to warm-season grasses.

Sequential Applications in Warm-season and Cool-season Grasses

Sharpen may be applied as a sequential or split program when application(s) is made in the dormant season and subsequent application(s) is made postemergence in season after greenup. **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** per cropping season.

In-season postemergence applications of **Sharpen** may also be applied sequentially; separate sequential applications of **Sharpen** by at least 14 days. The maximum cumulative amount for in-season postemergence applications must not exceed 2.0 fl ozs/A of **Sharpen**.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply **Sharpen** to mixed stands of grass and forage legumes (except dormant-season alfalfa, see **Alfalfa** use section) or to grass stands containing other desirable broadleaf species. **Sharpen** application will kill or cause severe injury to forage legumes and most broadleaf species.
- **DO NOT** apply **Sharpen** to stands of annual forage (e.g. forage sorghum, Sudangrass).

Crop-specific Precautions

- For a mixed stand of cool-season and warm-season grasses, follow use directions for warm-season grasses when applying **Sharpen** in-season postemergence.
- There is no preharvest or pre-grazing interval for **Sharpen**-treated grass forage, hay, or pasture.

Rice

Sharpen may be applied preplant, preemergence, or postemergence in rice for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled; refer to **Table 9** for additional rice-specific weeds controlled).

Rice in this label refers to drilled or dry-seeded, and water-seeded rice. Before applying **Sharpen** to rice, verify the selectivity of **Sharpen** on your variety or hybrid with your local seed company (supplier) and/or BASF representative to help avoid potential injury to sensitive varieties or hybrids.

Application Method, Rate, and Timing

Preplant and Preemergence Burndown plus Residual Weed Control

Apply **Sharpen** as a broadcast burndown spray preplant through preemergence (0 to 3 days after rice planting) at 1.0 to 2.0 fl ozs/A. An adjuvant system including MSO and AMS (refer to **Additives** section for details) is required for optimum broadleaf burndown activity. For best product performance, apply when broadleaf weeds are small and actively growing. Thorough spray coverage of emerged weeds is required; higher spray volumes may be needed for best performance.

For additional residual broadleaf weed control, **Sharpen** can be applied preplant through preemergence at 3.0 to 4.0 fl ozs/A.

Postemergence Weed Control

Apply **Sharpen** for postemergence control of small and actively growing emerged broadleaf weeds at 1.0 to 2.0 fl ozs/A. Postemergence application can be made before or after flooding when rice has reached the 3-leaf stage up to internode elongation. **DO NOT** apply **Sharpen** to rice in the spike to 2-leaf stage. On rice grown in Texas, **DO NOT** apply **Sharpen** postemergence.

Tank mixes with products formulated as emulsifiable concentrates (EC) may enhance the crop injury potential of **Sharpen** in postemergence application.

Table 9. Additional Weeds Controlled in Rice by Postemergence Application of Sharpen

Common Name	Scientific Name	Maximum Height (inches)
Dayflower	*Commelina* spp.	3
Ducksalad	*Heteranthera limesa*	3
Eclipta	*Eclipta alba*	4
Flat sedge	*Cyperus iria*	3
Jointvetch, Indian	*Aeschynomene indica*	3
Jointvetch, Northern	*Aeschynomene virginica*	3
Redstem	*Ammannia* spp.	4
Sesbania	*Sesbania exaltata*	8
Texasweed	*Caperonia palustris*	3
Water hyssop	*Bacopa eisenii*	3
Woolly croton	*Croton capitatus*	3

Adjuvant Requirements for Postemergence-specific Application in Rice. For optimum postemergence control of emerged broadleaf weeds in rice, the following adjuvants are required with **Sharpen**:

- Use a crop oil concentrate (COC) at 1 pint/A to 1 quart/A.
- **DO NOT** use MSO or severe crop injury may occur.
- **DO NOT** use NIS as a substitute for COC or poor performance on broadleaf weeds will occur.

Rice Crop Response. Temporary leaf burn and/or speckling may occur after postemergence application; new growth and development is unaffected with rapid recovery in good growing conditions. Severe leaf burn and/or stand loss may occur in stressful growing conditions (e.g. low soil fertility, seedling/foliar disease, extreme hot or cold weather, high soil pH, high soil salt concentration, or drought).

Sequential Applications

Sequential applications of **Sharpen® herbicide** may be made in rice, but **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** per cropping season.

Separate sequential applications of **Sharpen** by at least 14 days.

Preplant or preemergence burndown applications may be applied as part of a sequential application program when the first application is preplant or preemergence, and the sequential application(s) is postemergence. Postemergence applications may be sequentially made before or after flooding. For postemergence application, **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Sharpen** per cropping season.

State-specific Use in California. Apply **Sharpen** as a broadcast burndown spray at 2.0 fl ozs/A at least 15 days before rice planting and 45 days before a permanent flood is established. An adjuvant system (refer to **Additives** section for details) is required for optimum broadleaf burndown activity. **DO NOT** apply **Sharpen** after paddy flooding or postemergence to the crop. **DO NOT** apply more than 2.0 fl ozs/A in a single application. **DO NOT** apply within 45 days of permanent flooding in water-seeded rice paddies. **DO NOT** use released tailwater for irrigation of adjacent crops.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Sharpen** (0.134 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply micronutrients or macronutrients as a tank mix partner for postemergence applications or crop injury will occur.
- **Sharpen** may be applied to rice fields used for crustacean (including crayfish) production and commercial fish production.
- **DO NOT** apply **Sharpen** to rice fields that will also be used for mollusk production during the treatment year.
- **DO NOT** release flood water from treated fields for 7 days after **Sharpen** application.

Small Grains (barley, oats, pearl millet, proso millet, rye, triticale, and wheat)

Sharpen may be applied preplant surface, preplant incorporated, or preemergence to small grains for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled). Small grains in this label refers to wheat (including durum, spring, and winter), barley, oats, millet (pearl and proso), rye, and triticale. Before applying **Sharpen** to small grains, verify the selectivity of **Sharpen** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Burndown. Apply **Sharpen** for burndown and/or residual control of broadleaf weeds early preplant through preemergence at 1.0 to 2.0 fl ozs/A. **Sharpen** at 2.0 fl ozs/A provides limited residual control of broadleaf weeds. Performance depends on amount of rainfall for activation, soil texture, and broadleaf species/population. An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf burndown activity.

Burndown plus Residual Control in Wheat. Apply **Sharpen** in winter wheat and spring wheat early preplant through preemergence at 3.0 to 4.0 fl ozs/A for burndown plus residual control of broadleaf weeds. Performance depends on amount of rainfall for activation, soil texture, and broadleaf species/populations. An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf burndown activity. Not for use at these use rates in California.

Sequential Applications. Sharpen may be applied sequentially as needed before small grain emergence. Early preplant application may be applied as part of a split application program when the first application is early preplant and the second application is preemergence. Separate sequential applications of **Sharpen** by at least 30 days in millet and by at least 14 days in all other small grains.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Sharpen** (0.089 lb ai/A of saflufenacil) per cropping season.
- **DO NOT** apply after small grain emergence or crop injury will occur.
- Small grain forage and hay must not be fed or grazed sooner than 30 days after application.
- **DO NOT** apply to other types of millet (e.g. foxtail millet) or severe crop injury may occur.
- **DO NOT** apply to millet grown in soils with a pH of 7.8 or above or crop injury may occur.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Sorghum (grain)

Sharpen may be applied preplant or preemergence to sorghum (grain sorghum) for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled). Before applying **Sharpen** to sorghum, verify with your local seed company (supplier) the selectivity of **Sharpen** on your hybrid or variety to help avoid potential injury to sensitive hybrids or varieties.

Burndown Weed Control

Sharpen® herbicide can be applied at 1.0 to 2.0 fl ozs/A (all soil types) with an adjuvant system (refer to the **Additives** section for details) anytime before sorghum emergence for burndown of weeds listed in **Table 1**. A burndown application of **Sharpen** can be followed by residual rates of **Verdict® herbicide**. Sequential applications must be separated by at least 14 days. However, **DO NOT** apply more than the cropping seasonal maximum cumulative amount per acre of saflufenacil from all product sources.

State-specific Use in California. Apply **Sharpen** early preplant through preemergence at 2.0 fl ozs/A with an adjuvant system for burndown broadleaf weed control before crop emergence. Separate sequential applications by at least 14 days. **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** in a single application.

Crop-specific Restrictions

- **DO NOT** apply **Sharpen** after sorghum emergence or severe crop injury will occur.
- **DO NOT** apply **Sharpen** at more than 1.0 fl oz/A within 30 days of planting where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred or severe injury may result.

  EXCEPTION: Sharpen may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice® 5G granular insecticide** is applied at planting as a band, T-band, or infurrow. **Sharpen** may be applied with all other classes of at-planting insecticides including neonicotinoids and pyrethroids.
- **DO NOT** apply more than a maximum cumulative amount of 0.111 lb ai/A of saflufenacil per cropping season in sorghum from all product sources.
- Sorghum forage must not be harvested, fed, or grazed sooner than 70 days after application.

Soybean

Sharpen may be applied in fall and/or in spring as a preplant surface or preemergence burndown application in conventional-till, reduced-till, or no-till soybeans for broadleaf weed control (refer to **Table 1** and **Table 2** for list of weeds controlled). An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity.

Use of **Sharpen** may result in delayed soybean emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.

Not for use in soybean in California.

Application Method, Rate, and Timing

Fall Application

Apply **Sharpen** at 1.0 to 2.0 fl ozs/A for burndown broadleaf weed control after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Spring Application

Apply **Sharpen** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control before crop emergence.

Apply **Sharpen** early preplant at 1.5 or 2.0 fl ozs/A for burndown plus residual broadleaf weed control.

Soybean Planting Interval

Depending on **Sharpen** use rate, soil texture, and organic matter, an interval between **Sharpen** application and planting may be required (see **Table 10** and **Table 11**) or crop injury may occur.

Table 10. Minimum Soybean Planting Intervals

Minimum Preplant Interval (days) Required between Sharpen Application and Soybean Planting		
Sharpen Use Rate (fl ozs/A)	**Soil Texture[1]**	
	Coarse Soils with ≤ 2.0% Organic Matter	**All Other Soils**
1.0	30	0
1.5	30	14
2.0	44	30

[1] Refer to **Table 3** for definition of soil texture groups.

Table 11. Minimum Soybean Planting Intervals with other Group 14/Group E Herbicides

Minimum Preplant Interval (days) Required between Sharpen Application and Soybean Planting when Tank Mixed or Sequentially Applied with a Group 14/Group E Herbicide[1]		
Sharpen Use Rate (fl ozs/A)	**Soil Texture[2]**	
	Coarse Soils with ≤ 2.0% Organic Matter	**All Other Soils**
1.0	30	14*
1.5	30	30
2.0	44	30

[1] **Group 14**/**Group E** herbicides including sulfentrazone or flumioxazin
[2] Refer to **Table 3** for definition of soil texture groups.
* Interval for reduced-till and no-till soybean only. Interval for conventional-till soybean is 30 days.

Crop-specific Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Sharpen® herbicide** (0.089 lb ai/A of saflufenacil) per cropping season. Sequential applications of **Sharpen MUST** be separated by at least 30 days.
- **DO NOT** apply more than a maximum cumulative amount of 0.089 lb ai/A of saflufenacil per cropping season in soybean from all product sources.
- **DO NOT** apply when soybean has reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply **Sharpen** within 30 days of planting where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.
- Always use the most restrictive preplant interval of all inclusive herbicides when applying **Sharpen** as part of a tank mix.
- Soybean forage must not be fed or grazed sooner than 65 days after application.

Crop-specific Precautions

- Contact your local retailer or BASF representative before applying **Sharpen** to natto soybeans to verify tolerance and help avoid potential injury.
- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.
- **Group 14**/**Group E** herbicides labeled for postemergence application in soybean may be used 14 days or more after soybean emergence. Refer to other products' labels for use directions.

Noncropland Areas

DO NOT apply **Sharpen** in any residential setting.

Sharpen may be used:

- In noncropland areas including fence rows, nonirrigation ditchbanks, dry irrigation ditchbanks, and on farmstead areas (barnyards, lanes, driveways, machinery or implement yards, windbreaks)

Application Method, Rate, and Timing

Sharpen may be applied in a single application or sequentially with an interval of 14 days or more.

Application rates for **Sharpen** when applied alone, in tank mix, or sequentially are in **Table 12**.

Use Restrictions

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs of **Sharpen** (0.134 pound active ingredient saflufenacil) per acre per year.
- In California, **DO NOT** apply more than 2.0 fl ozs/A of **Sharpen** in a single application.
- **DO NOT** apply **Sharpen** to irrigation ditchbanks that contain irrigation water or will contain irrigation water within 2 weeks.

Table 12. Application Rates in Noncropland Areas

Application	Application Target	Application Rate (fl ozs/A)
Postemergence	Weed size < 6 inches	2 to 4
	Weed size ≥ 6 inches and/or heavier weed infestations	4 to 6[a]
Postemergence + Residual	Burndown + Residual preemergence weed control	6[b]
Tank Mixes with Glyphosate		
Accelerated Burndown	Accelerated burndown of broadleaf weeds and/or control of glyphosate-tolerant species [e.g. horseweed (marestail)]	1 to 2
Accelerated Burndown + Residual	Accelerated burndown of broadleaf weeds plus control of glyphosate-tolerant species with residual preemergence weed control	6[b]

[a] Partial control or suppression may result with application to weeds more than 6 inches.
[b] For effective residual control of labeled weed species, **Sharpen** MUST be used at the maximum use rate of 6 fl ozs/A.

Spot Treatment

Sharpen may be applied as a spot treatment to emerged broadleaf weeds. Consult the following chart for the amount of **Sharpen** to make various gallons of spray mix for spot treatments applied to actively growing broadleaf weeds and sizes referenced in **Table 1**. Spray thoroughly to wet weed foliage but not to the point of runoff.

To maximize performance, refer to the **Additives** section for recommended adjuvant and rate to add to the spray mix.

Each spray mix is equivalent to applying **Sharpen® herbicide** at 2.0 fl ozs/A in a spray volume of 100 gallons per acre. Applications of a spot spray mix should not be made to an equivalent area less than what is shown in the chart or exceed the equivalent broadcast rate of 2.0 fl ozs/A.

Spot treatments may be applied via an ATV-mounted (all-terrain vehicle-mounted) or tractor-mounted sprayer equipped for low-pressure hand wand application. **DO NOT** apply spot treatments using high-pressure hand wands.

Spray Mix (gallons)	**Spray Mix Treatment Area** (sq ft)	**Sharpen** (fl oz)
10	4,356	0.2
25	10,890	0.5
50	21,780	1.0

Selective Weeding

Apply **Sharpen** up to 2.0 fl ozs/A as a postemergence spray plus the recommended adjuvant (refer to **Additives** section for details) as a uniform broadcast application or spot treatment for selective broadleaf weed control.

Tank Mixes for Selective Weeding

Broad-spectrum postemergence and/or residual control of grasses or additional broadleaf weeds requires a tank mix with another herbicide. **Sharpen** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products:

- glyphosate

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Tank Mix Partners

Outlook Herbicide (dimethenamid-P), EPA Reg. No. 7969-156
Plateau Herbicide (imazapic), EPA Reg. No. 241-365
Verdict Herbicide (dimethenamid-P + saflufenacil), EPA Reg. No. 7969-279

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