7969-329 1/21/2011 1/22

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:	Date of Issuance:
7969-324	JAN 21 2011

NOTICE OF PESTICIDE:
_x_ Registration
__ Reregistration
(under FIFRA, as amended)

Term of Issuance: unconditional

Name of Pesticide Product:
KIXOR herbicide

Name and Address of Registrant (include ZIP Code):
BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The Basic Formulation dated 10/08/2010 is acceptable.

This product is registered in accordance with FIFRA provided that you:

1. Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.

2. Make the following label revision:
   a. Revise "EPA REG. NO.7969-xxxx" to "EPA REG. NO. 7969-324." Assure that the establishment symbol and net contents are also added the final printed label.

3. Submit one (1) copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Signature of Approving Official:
Kathryn V. Montague
Project Manager 23
Herbicide Branch
Registration Division (7505P)

Kathryn V. Montague

Date: JAN 21 2011

EPA Form 8570-6

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BASF
The Chemical Company

Group 14 Herbicide

KIXOR®
herbicide

ACCEPTED
JAN 21 2011
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No 7969-324

A broadleaf herbicide for use in field and row agricultural crops, bearing and nonbearing tree and vine crops, and in non-crop

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-~~xxx~~ 324 **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 inside for complete **First Aid**, **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

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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. • **DO NOT** give any liquid to the person. • **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.

Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. For more options, refer to **Category A** on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (such as natural rubber, selection **Category A**)
- 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 Statement

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

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, such as a spill or equipment 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 washwaters 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 such as 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 1-800-447-3813 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 prior to 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.

AGRICULTURAL USE REQUIREMENTS

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

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

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

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

- Coveralls
- Chemical-resistant gloves, such as natural rubber ≥ 14 mils
- Shoes plus socks
- Protective eyewear

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

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 incineration, or by other procedures approved by state and local authorities.

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

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 spillage regarding 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 be taken in case material is released or spilled:

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

Product Information

Kixor® 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, fallow and postharvest croplands, for harvest aid/desiccation, in bearing and nonbearing fruit and nut trees and vineyards, and in non-crop areas. **Kixor herbicide** does not control grass weeds and must be used sequentially or tank mixed with a grass herbicide for a complete weed control program.

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Table 1. Broadleaf Weeds Controlled by a Burndown Application of Kixor® 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	*Gossypium hirsutum*	C	≤ 12 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, broadleaf	*Erodium botrys*	C	4
Filaree, redstem	*Erodium cicutarium*	S	3
Filaree, whitestem	*Erodium moschatum*	C	4
Fleabane, hairy	*Conyza bonariensis*	C	6
Flixweed	*Descurainia sophia*	C	6
Goosefoot, nettleleaf	*Chenopodium murale*	C	3
Groundcherry, cutleaf	*Physalis angulata*	C	6
Groundsel, common	*Senecio vulgaris*	C	4
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

(continued)

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

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Lettuce, miner's	*Claytonia perfoliata*	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
Mustard, black	*Brassica nigra*	C	6
Mustard, tumble	*Sisymbrium altissimum*	C	6
Mustard, wild	*Sinapis arvensis*	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
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[2]	*Ambrosia artemisiifolia*	C	6
Ragweed, giant	*Ambrosia trifida*	C	6
Rocket, London	*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

(continued)

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

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Sowthistle, annual	*Sonchus oleraceus*	C	6
Sowthistle, spiny	*Sonchus asper*	C	6
Spurge, garden	*Chamaesyce hirta*	C	6
Spurge, prostrate	*Chamaesyce humistrata*	C	6
Spurge, spotted	*Chamaesyce maculata*	C	6
Sunflower, common	*Helianthus annuus*	C	6
Tansymustard, green	*Descurainia incana*	C	6
Tansymustard, pinnate	*Descurainia pinnata*	C	6
Thistle, Canada	*Cirsium arvense*	S[1]	6
Thistle, Russian	*Salsola kali*	C	3
Velvetleaf	*Abutilon theophrasti*	C	6
Waterhemp[2]	*Amaranthus tuberculatus*	C	6
Willowweed	*Epilobium adenocaulon*	C	3

[1] Control of seedling stage and suppression of perennial growth stage.

[2] 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 **Kixor herbicide**. 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 Kixor® herbicide

Common Name	Scientific Name	C = Control S = Suppression[1]
Annual Broadleaf Weeds		
Amaranth, Palmer	*Amaranthus palmeri*	C
Amaranth, Powell	*Amaranthus powellii*	C
Beggarweed, Florida	*Desmodium tortuosum*	C
Buckwheat, wild	*Polygonum convolvulus*	C
Buffalobur	*Solanum rostratum*	C
Burcucumber	*Sicyos angulatus*	S
Carpetweed	*Mollugo verticillata*	C
Chamomile, mayweed	*Anthemis cotula*	C
Chickweed, common	*Stellaria media*	C

(continued)

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Table 2. Broadleaf Weeds Controlled with a Residual Preemergence Application of Kixor® herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression[1]
Annual Broadleaf Weeds *(continued)*		
Cocklebur, common	*Xanthium strumarium*	C
Copperleaf, Virginia	*Acalypha virginica*	C
Devil's-claw	*Proboscidea louisiana*	C
Eclipta	*Eclipta prostrata*	C
Fleabane, hairy	*Conyza bonariensis*	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, palmleaf	*Ipomoea wrightii*	C
Morningglory, pitted	*Ipomoea lacunosa*	C
Morningglory, tall	*Ipomoea purpurea*	C
Mustard, wild	*Sinapis arvensis*	C
Nightshade, black	*Solanum nigrum*	C
Nightshade, cutleaf	*Solanum triflorum*	C
Nightshade, Eastern black	*Solanum ptycanthum*	C
Nightshade, hairy	*Solanum saccharoides*	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

(continued)

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Table 2. Broadleaf Weeds Controlled with a Residual Preemergence Application of Kixor® herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression[1]
Annual Broadleaf Weeds *(continued)*		
Punctureveine	*Tribulus terrestris*	S
Purslane, common	*Portulaca oleracea*	C
Pusley, Florida	*Richardia scabra*	S
Ragweed, common	*Ambrosia artemisiifolia*	C
Ragweed, giant	*Ambrosia trifida*	C
Sesbania, hemp	*Sesbania exaltata*	C
Sida, prickly	*Sida spinosa*	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C
Sprangletop, red	*Leptochloa filiformis*	C
Spurge, nodding	*Chamaesyce nutans*	C
Spurge, spotted	*Chamaesyce maculata*	C
Starbur, bristly	*Acanthospermum hispidum*	C
Sunflower, common	*Helianthus annuus*	C
Thistle, Russian	*Salsola kali*	C
Velvetleaf	*Abutilon theophrasti*	C
Waterhemp	*Amaranthus tuberculatus*	C
Waterhemp, common	*Amaranthus rudis*	C

[1] **Kixor herbicide** should be used in tank mixes or sequential applications with other labeled herbicides that provide additional control of noted weeds.

Mode of Action

Kixor herbicide is a potent inhibitor of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14** (WSSA)/**Group E** (HRAC). **Kixor herbicide** 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 will usually die as they reach the soil surface or shortly after emergence.

Resistance Management

While weed resistance to protoporphyrinogen-oxidase-inhibiting herbicides is relatively infrequent, populations of resistant biotypes are known to exist. Resistance management practices include:

1. Following labeled application rate and weed growth stage recommendations
2. Avoiding repeated applications of herbicides with the same mode of action
3. Utilizing tank mixes and sequential applications with other effective herbicides possessing different modes of action
4. Using crop rotation so that crop competition, tillage or herbicides with alternative modes of action can be used to control weed escapes

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Application Instructions

Application Rates

Application rates of **Kixor® herbicide** 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 **Agricultural Crop Uses - Specific Information** section for specific application directions and the restrictions and limitations by crop and use pattern.

Application Methods and Equipment

Kixor herbicide may be applied by ground (banded, broadcast, or spot) or air. Thorough spray coverage is required for optimum broadleaf weed control and can be improved with proper adjuvant, nozzle and spray volume selection.

Aerial Application Requirements

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

The following measures must be followed to reduce the potential of spray drift to nontarget areas from aerial applications:

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or 90% of rotor blade diameter.
2. Use low-drift nozzles such as 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 be pointed downward more than 45 degrees.
4. Without compromising aircraft safety, applications should be made at a height of 10 feet or less above the crop canopy or tallest plants.
5. **DO NOT** apply during periods of temperature inversions or stable atmospheric conditions.
6. Avoid potential adverse effects to nontarget areas by maintaining a (150)[a] foot buffer between the point of direct application and the **closest downwind edge** of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, crop lands, and shrub lands).

[a] The buffer zone size is determined by use rate. Refer to the table below for the minimum buffer zone distance required for the intended use rate. Utilize the appropriate buffer zone distance from the table below in the buffer zone statement above.

Kixor herbicide Use Rate (fl ozs/A)	Saflufenacil Use Rate (lb ai/A)	Saflufenacil Use Rate (g ai/ha)	Buffer Zone Distance (feet)
1	0.022	25	26
2	0.045	50	66
3	0.067	75	100
4	0.089	100	100
5	0.111	125	120
6	0.134	150	150

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 applications. Use a minimum of 5 to 10 gallons of water per acre for harvest aid/desiccation applications.

The following measures must be followed to reduce the potential of spray drift to nontarget areas from ground applications:

1. Apply this product using nozzles which deliver **medium-to-coarse spray droplets** as defined by ASAE 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 applications. 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.
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)[a] foot buffer between the application area and the **closest downwind edge** of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, crop lands, and shrub lands).

[a] The buffer zone size is determined by use rate. Refer to the table below for the minimum buffer zone distance required for the intended use rate. Utilize the appropriate buffer zone distance from the table below in the buffer zone statement above.

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Kixor® herbicide Use Rate (fl ozs/A)	Saflufenacil Use Rate (lb ai/A)	Saflufenacil Use Rate (g ai/ha)	Buffer Zone Distance (feet)
1	0.022	25	13
2	0.045	50	33
3	0.067	75	50
4	0.089	100	50
5	0.111	125	60
6	0.134	150	75

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 recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles. Use the minimum number of nozzles that provide uniform coverage.

Nozzle Type. Use a nozzle type that is 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 **Kixor herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
Methylated seed oil (MSO)[1]	1 gal/100 gals (1% v/v)[2]
PLUS	**PLUS**
Ammonium sulfate (AMS) **or** Urea ammonium nitrate (UAN)	8.5 to 17 lbs/100 gals (1% to 2% w/v) **or** 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 (< 12.5 gallons per acre) aerial or ground applications.

Use Precautions

- **Maximum seasonal use rate** - Refer to **Agricultural Crop Uses - 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.
- **Rainfastness - Kixor herbicide** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.

Crop Rotation Intervals

Use **Table 4** to determine the proper interval between **Kixor® herbicide** application and planting of rotational crops.

Table 4. Rotational Crop Planting Interval by Kixor herbicide Application Rate

Crop	Kixor herbicide Rate (fl ozs/A)					
	1.0	2.0	3.0	4.0	5.0	6.0
	Rotational Crop Interval (months after application)[1]					
Sugar beet	4	5	6	7	8	9
Sunflower	4	5	6	7	8	9
Other crops	4	5	6	7	8	9

[1] **DO NOT** include time when the soil is frozen.

Agricultural Crop Uses – Specific Information

This section provides maximum good agricultural use pattern directions for **Kixor herbicide** in specific crops.

Depending on specific crop application directions, **Kixor herbicide** 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 lists of weeds controlled).

Bearing and Nonbearing Fruit and Nut Trees

Kixor herbicide may be applied in the following individual bearing or nonbearing crops within the fruit tree and tree nut crop groupings:

Citrus Fruits	
Calamondin	Lime
Citrus citron	Mandarin (satsuma)
Clementine	Orange (sweet and sour)
Citrus hybrids	Pummelo
Grapefruit	Tangelo
Kumquat	Tangerine
Lemon	
Pome Fruits	
Apple	Pear
Crabapple	Pear, oriental
Loquat	Quince
Mayhaw	

Stone Fruits	
Apricot	Plum, chicksaw
Aprium	Plum, Damson
Cherry, sweet	Plum, Japanese
Cherry, tart	Plumcot
Nectarine	Pluot
Peach	Prune
Plum	
Tree Nuts	
Almond	Filbert (hazelnut)
Beechnut	Hickory nut
Brazil nut	Macadamia nut
Butternut	Pecan
Cashew	Pistachio
Chestnut	Walnut
Chinquapin	

Application Method, Rates, and Timings

Apply **Kixor herbicide** at 1.0 to 2.0 oz/A plus the recommended adjuvants (refer to **Additives** section for details) as a postemergence-directed spray application either as a uniform broadcast, or banded, or spot application directed at the base of the tree trunks while targeting emerged broadleaf weeds (refer to **Table 1** for weeds controlled). Spray contact of tree foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury.

Kixor herbicide may be applied either in a single application or sequentially up to 3 times per year. Sequential applications must be separated by at least 21 days.

Applications can be made to newly planted or replacement citrus trees after irrigation or rainfall has settled the soil, while nut trees, pome fruit trees, and stone fruit trees must be established for at least 12 months prior to application. Trunk shields should be used until adequate bark has formed to protect trees from potential herbicide injury (typically by 2 to 3 years after establishment).

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than 2.0 oz/A of **Kixor herbicide** in a single application.
- **DO NOT** apply more than a maximum cumulative amount of 6.0 ozs/A of **Kixor herbicide** per cropping season.
- **Kixor herbicide** may be applied any time up to or on the day of tree fruit harvest.
- Wait at least 7 days after **Kixor herbicide** application before harvesting tree nuts.

Bearing and Nonbearing Grape Vineyards

Kixor® herbicide may be applied in bearing and nonbearing grape vineyards.

Application Method, Rates, and Timings

Apply **Kixor herbicide** at 1.0 oz/A plus the recommended adjuvants (refer to **Additives** section for details) as a postemergence-directed spray application either as a uniform broadcast, banded, or spot application to the vineyard floor as a directed treatment beneath the vines and/or in areas between rows while targeting emerged broadleaf weeds (refer to **Table 1** for weeds controlled). Spray contact of vine foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury, particularly at early stages of leaf development.

Kixor herbicide may be applied either in a single application or sequentially 3 times per year. Sequential applications must be separated by at least 21 days.

Vines must be established for at least 9 months prior to application. Trunk shields should be used until adequate bark has formed (typically until 3 years after establishment).

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than 1.0 oz/A of **Kixor herbicide** in a single application.
- **DO NOT** apply more than a maximum cumulative amount of 3.0 ozs/A of **Kixor herbicide** per cropping season.
- **Kixor herbicide** may be applied any time up to or on the day of harvest of grapes.

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

Kixor herbicide may be applied preplant surface, preplant incorporated, or preemergence to corn. Corn in this label refers to field corn (grown for grain, seed, or silage), popcorn, and sweet corn (not including sweet corn grown for seed).

Application Rates

Kixor herbicide can be applied as part of a broadleaf weed control program (refer to **Table 1** and **Table 2** for lists of weeds controlled). Application rates for **Kixor herbicide** when applied alone, in tank mix, or sequentially are provided in **Table 5** for field corn and **Table 6** for popcorn and sweet corn.

Table 5. Residual Preemergence Rates of Kixor herbicide in Field Corn

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture[1]	**Organic Matter**	
	≤ 1.5%	**> 1.5%**
Coarse[2]	2.0	2.5
Medium	3.5	4.0
Fine	4.0	6.0

[1] Refer to **Table 3** for definitions of soil texture groups.
[2] Use on coarse soils with less than 1.5% organic matter may result in crop injury.

Table 6. Residual Preemergence Rates of Kixor herbicide in Popcorn and Sweet Corn

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture[1]	**Organic Matter**	
	≤ 1.5%	**> 1.5%**
Coarse	DO NOT USE	2.0
Medium	2.5	3.0
Fine	3.0	6.0

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

Application Timings

Fall Applications For use only in Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin

Kixor herbicide may be applied in the fall to control weeds in conventional, minimum tillage, or no-till corn production systems planted the following spring. Apply from 4.0 to 6.0 fluid ounces of **Kixor herbicide** per acre to medium-textured and fine-textured soils with greater than 2.5% organic matter. Fall applications must be made after October 1.

Broadcast surface apply **Kixor herbicide** in the fall after crop harvest when soil temperatures at the 4-inch depth are sustained at less than 55° F and before the ground freezes. Tillage operations may be conducted before or after applying **Kixor herbicide**. If following an application, tillage should be no more than 2-inches to 3-inches deep to uniformly incorporate the herbicide into the upper soil surface. If a sequential application program (fall application followed by spring application of **Kixor herbicide**) is used, the maximum combined rate of **Kixor herbicide** that may be applied is 6.0 fluid ounces per acre per crop season.

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

Application rates in **Table 5** should be used when making early preplant surface applications, using the highest application rate for a given soil texture. Early preplant surface applications are not recommended on coarse soils, in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches, or for popcorn or sweet corn.

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 prior to planting)

Kixor® herbicide can be applied at use rates specified in **Table 5** or **Table 6** to the soil surface or incorporated up to 14 days before planting on all soil types. For preplant incorporated applications, apply **Kixor herbicide** and incorporate into the upper soil surface (1 to 2 inches). Use a harrow, rolling cultivator, field cultivator or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

Preemergence Surface Application

Apply **Kixor herbicide** at use rates specified in **Table 5** or **Table 6** as a broadcast spray to the soil surface after planting and before crop emergence. **Kixor herbicide** must be applied before crop emergence or injury will occur.

Burndown plus Residual Weed Control

In addition to residual broadleaf weed control obtained at any of the application timings described above, **Kixor herbicide** will also provide burndown of emerged broadleaf weeds listed in **Table 1**.

Burndown Weed Control Only

If limited or no residual broadleaf weed control is desired, **Kixor herbicide** can be applied at 1.0 fl oz/A (all soil types) with an adjuvant system any time prior to corn emergence to provide burndown of broadleaf weeds listed in **Table 1**.

Crop-specific Restrictions and Limitations

- **DO NOT** apply **Kixor herbicide** after corn emergence or severe crop injury will occur.
- Separate sequential applications by at least 14 days.
- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Kixor herbicide** (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.
- Corn forage and silage can be harvested, fed, or grazed 80 or more days after application.

Cotton

Use **Kixor herbicide** as an early preplant burndown treatment prior to planting cotton or at-planting preemergence to cotton.

Application Rates and Timings

Apply **Kixor herbicide** as an early preplant burndown broadcast spray at 1.0 to 2.0 fl oz/A plus recommended adjuvants (refer to **Additives** section for details) for the control of actively growing broadleaf weeds (refer to **Table 1** for list of weeds controlled). Wait to plant cotton until at least **21 to 42 days** and an accumulation of 1 inch of rainfall and/or irrigation occurring after application to avoid crop injury. In geographic areas with average annual rainfall less than 25 inches, the 42-day preplant interval is required after the accumulation of 1 inch of rainfall and/or irrigation. **Kixor herbicide** may also be applied as an at-planting preemergence broadcast spray at 2.0 fl oz/A.

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than a maximum cumulative amount of 2.0 fl ozs/A of **Kixor herbicide** per cropping season.
- Cotton gin byproducts may be fed to livestock.

Fallow and Postharvest

Kixor herbicide 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. **Kixor herbicide** may also be used for specific postharvest uses to burndown the remaining foliage after crop harvest.

Application Rates and Timings

Apply **Kixor herbicide** as a broadcast burndown spray at 1.0 to 2.0 fl ozs/A plus recommended adjuvants (refer to **Additives** section for details).

Sequential applications may be made with a minimum of 14 days between applications; but **DO NOT** exceed a maximum seasonal cumulative amount of 6.0 fl ozs/A of **Kixor herbicide** per cropping season.

For residual broadleaf weed control, **Kixor herbicide** may be applied at 2.0 to 6.0 fl ozs/A.

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Specific rotational crop intervals must be observed between an application of **Kixor® herbicide** and planting of the following crop (see **Table 4** for crop rotation intervals).

Postharvest use on tomato vines. Apply **Kixor herbicide** 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 prior to or during tomato fruit harvest.

Legume Vegetables (chickpea, edible bean, edible pea, field pea, and lentil)

Kixor herbicide may be applied preplant surface, preplant incorporated, and/or preemergence in legume vegetable crops of **Crop Group 6** (A, B, C) specified in this section for broadleaf weed control.

Application Rates and Timings

Specific application rates and timings vary by legume crop.

Chickpea (garbanzo bean)

Kixor herbicide is for use in all types of chickpeas. Apply **Kixor herbicide** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control prior to crop emergence. For residual activity on broadleaf weeds, **Kixor herbicide** may also be applied preplant incorporated or preemergence at up to 4.0 fl ozs/A. Sequential applications may be made with a minimum of 14 days between applications.

Edible Beans

Kixor herbicide is for use on the following edible bean types:

- Edible-podded *Phaseolus* beans (runner bean, snap bean, wax bean)
- Succulent *Phaseolus* beans (lima bean [green], broad bean)
- Dry *Phaseolus* beans (field bean, kidney bean, lima bean [dry], navy bean, pinto bean, tepary bean)
- Dry beans (broad, guar, lablab)
- Edible-podded *Vigna* beans (asparagus bean, Chinese longbean, moth bean, yardlong bean)
- Succulent *Vigna* beans (blackeyed pea, cowpea, Southern pea)
- Dry *Vigna* beans (adzuki bean, blackeyed pea, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea)
- Dry *Lupinus* beans (grain lupin, sweet lupin, white lupin, white sweet lupin)

Apply **Kixor herbicide** early preplant through preemergence at 0.75 fl oz/A for burndown broadleaf weed control prior to crop emergence. For only limited residual activity on broadleaf weeds, **Kixor herbicide** may also be applied preplant incorporated or preemergence at 0.75 to 2.0 fl ozs/A. Sequential applications may be made with a minimum of 14 days between applications.

Edible Peas

Kixor herbicide is for use on the following edible peas:

- Edible-podded peas (dwarf pea, edible-pod pea, pigeon pea, snow pea, sugar snap pea)
- Succulent peas (English pea, garden pea, green pea, pigeon pea)
- Dry peas (pigeon pea)

Apply **Kixor herbicide** early preplant through preemergence at 0.75 fl oz/A for burndown broadleaf weed control prior to crop emergence. For only limited residual activity on broadleaf weeds, **Kixor herbicide** may also be applied preplant incorporated or preemergence at 0.75 to 2.0 fl ozs/A. Sequential applications may be made with a minimum of 14 days between applications.

Field Peas

Kixor herbicide is for use on the following field peas:

- Dry field peas

Apply **Kixor herbicide** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control prior to crop emergence. For residual activity on broadleaf weeds, **Kixor herbicide** may also be applied preplant incorporated or preemergence at up to 4.0 fl ozs/A. Sequential applications may be made with a minimum of 30 days between applications.

Lentils

Apply **Kixor herbicide** early preplant through preemergence at 0.75 fl oz/A for burndown broadleaf weed control prior to crop emergence. For only limited residual activity on broadleaf weeds, **Kixor herbicide** may also be applied preplant incorporated or preemergence at 0.75 to 2.0 fl ozs/A. Sequential applications may be made with a minimum of 14 days between applications.

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Kixor herbicide** per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 0.089 lb ai/A of saflufenacil per cropping season on any legume vegetable crop from all product sources.

- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- Legume forage may be fed or grazed 65 or more days after application.

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

Kixor® herbicide may be applied preplant surface, preplant incorporated, or preemergence to small grains for broadleaf weed control (refer to **Table 1** and **Table 2** for lists of weeds controlled). Small grains in this label refers to barley, canaryseed, millet, oats, rye, triticale, and wheat (including durum, spring and winter).

Application Rates and Timings

Apply **Kixor herbicide** for burndown and/or residual control of broadleaf weeds early preplant through preemergence at 1.0 to 6.0 fl ozs/A. An adjuvant system (refer to the **Additives** section for details) is required for optimum broadleaf burndown activity.

Sequential applications of **Kixor herbicide** may be made as needed prior to small grain emergence. Early preplant applications may be applied as part of a split application program where the first application is made early preplant and the second application is made preemergence. Separate sequential applications by at least 14 days.

Winter Wheat Dormancy Application. For residual broadleaf weed control, apply **Kixor herbicide** at 1.0 to 6.0 fl ozs/A to dormant winter wheat only. **DO NOT** apply until dormant period or during and/or after spring greenup (dormancy break). Water or liquid fertilizer may be used as the spray carrier.

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Kixor herbicide** per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 0.134 lb ai/A of saflufenacil per cropping season in small grains from all product sources.
- **DO NOT** apply after small grain emergence or crop injury will occur.
- Small grain forage and hay can be fed or grazed 30 or more days after application.

Sorghum (all types)

Kixor herbicide may be applied preplant surface, preplant incorporated, or preemergence to sorghum (all types specified in the following list) for broadleaf weed control (refer to **Table 1** and **Table 2** for lists of weeds controlled).

Kixor herbicide is for use on the following sorghum types:

- Grain sorghum (milo, durra, kaffir-corn, Indian millet, great millet, grand millet, kaoliang, Chinese sorghum, shattercane, guineacorn, sorgo comun)
- Sweet sorghum (sorgo, sorgo duice, Zuckerhirse, sorgo doux)

Application Rates

Application rates for **Kixor herbicide** when applied alone, in tank mix, or sequentially are provided in **Table 7** for grain sorghum and **Table 8** for sweet sorghum.

Table 7. Residual Preemergence Rates of Kixor herbicide in Grain Sorghum

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture[1]	**Organic Matter**	
	≤ 1.5%	**> 1.5%**
Coarse	DO NOT USE	2.0
Medium	2.5	3.0
Fine	3.0	6.0

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

Table 8. Residual Preemergence Rates of Kixor herbicide in Sweet Sorghum

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture[1]	**Organic Matter**	
	≤ 1.5%	**> 1.5%**
Coarse	DO NOT USE	2.0
Medium	2.5	3.0
Fine	3.0	6.0

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

Application Timings

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

Application rates in **Table 7** and **Table 8** should be used when making early preplant surface applications, using the highest application rate for a given soil texture. Early preplant surface applications are not

recommended on coarse soils or in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches.

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 prior to planting)

Kixor® herbicide can be applied at use rates specified in **Table 7** and **Table 8** to the soil surface or incorporated up to 14 days before planting on all soil types. For preplant incorporated applications, apply **Kixor herbicide** and incorporate into the upper soil surface (1 to 2 inches). Use a harrow, rolling cultivator, field cultivator or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

Preemergence Surface Application

Apply **Kixor herbicide** at use rates specified in **Table 7** and **Table 8** as a broadcast spray to the soil surface after planting and before crop emergence. **Kixor herbicide** must be applied before crop emergence or injury will occur.

Burndown plus Residual Weed Control

In addition to residual broadleaf weed control obtained at any of the application timings described above, **Kixor herbicide** will also provide burndown of emerged broadleaf weeds listed in **Table 1**.

Burndown Weed Control Only

Kixor 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) any time prior to sorghum emergence to provide burndown of weeds listed in **Table 1**.

Crop-specific Restrictions and Limitations

- **DO NOT** apply **Kixor herbicide** after sorghum emergence or severe crop injury will occur.
- Separate sequential applications by at least 14 days.
- **DO NOT** apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Kixor herbicide** per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 0.134 lb ai/A of saflufenacil per cropping season in sorghum from all product sources.
- Sorghum forage can be harvested, fed, or grazed 70 days or more after application.

Soybean

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

Application Rates and Timings

Fall Applications

Apply **Kixor herbicide** at 1.0 to 4.0 fl ozs/A for burndown broadleaf weed control after the prior crop is harvested. Applications must be made prior to first killing frost. Fall applications can be made to all soil types.

Spring Applications

Apply **Kixor herbicide** early preplant through preemergence at 1.0 fl oz/A for burndown broadleaf weed control prior to crop emergence.

For enhanced burndown and/or residual broadleaf weed control, apply **Kixor herbicide** at 1.5 to 4.0 fl ozs/A. When using these rates, add 14 to 30 days, respectively, to the minimum preplant intervals listed in **Table 9**.

Soybean Planting Interval

Dependent on soil texture and organic matter, an interval between **Kixor herbicide** application and planting may be required (see **Table 9**). These intervals must be observed prior to planting soybean or crop injury may occur.

Table 9. Minimum Preplant Intervals Required Between Kixor herbicide Application at 1.0 fl oz/A and Soybean Planting

Minimum Preplant Interval (days) by Soil Texture and Organic Matter Content		
Soil Texture[1]	Organic Matter	
	≤ 2.0%	> 2.0%
Coarse	DO NOT USE	14
Medium	14	None
Fine	None	None

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

Crop-specific Restrictions and Limitations

- **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Kixor herbicide** per cropping season.
- Sequential applications **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.
- Soybean forage may be fed or grazed 65 or more days after application.

Sunflower

Kixor® herbicide may be used for harvest aid/desiccation in sunflower.

Application Rates and Timings

Uniformly apply **Kixor herbicide** at 1.0 to 2.0 fl ozs/A as a broadcast spray over the top of sunflower that has reached physiological maturity (seed moisture is less than 36%) and at least 7 days prior to harvest. For many sunflower varieties, the back of the sunflower heads are yellow and the bracts are turning brown at this timing. Thorough spray coverage and an MSO adjuvant system (refer to the **Additives** section for details) is required for optimum desiccation activity.

Up to 2 sequential applications may be made, but the total cumulative amount of **Kixor herbicide** applied must not exceed 4.0 fl ozs/A.

Crop-specific Restrictions and Limitations

- **DO NOT** apply **Kixor herbicide** on sunflower grown for seed production.
- **DO NOT** apply more than a maximum cumulative amount of 4.0 fl ozs/A of **Kixor herbicide** per cropping season.
- Sunflower seed can be harvested 7 or more days after application.

Non-Crop Uses – Specific Information

Kixor herbicide may be used for selective or nonselective burndown control of emerged broadleaf weeds and/or residual control of germinating broadleaf weeds (refer to **Table 1** and **Table 2** for lists of weeds controlled) in Christmas tree plantations, conifer and hardwood plantations and various noncropland areas. This section provides use directions for **Kixor herbicide** in non-crop situations.

Application Rates

Application rates for **Kixor herbicide** when applied alone, in tank mix, or sequentially for non-crop uses are given in **Table 10**.

DO NOT apply more than a maximum cumulative amount of 6.0 fl ozs/A of **Kixor herbicide** per year for non-crop uses.

Kixor herbicide may be applied either in a single application or sequentially. Sequential applications must be separated by at least 14 days.

Table 10. Application Rates for Non-crop Uses

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 [such as 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 applications to weeds > 6 inches.

[b] To provide effective residual control of labeled weed species, **Kixor herbicide MUST** be used at the maximum use rate of 6 fl ozs/A.

Christmas Tree Plantations

Application Methods, Rates, and Timing

Kixor® herbicide may be used as a postemergence-directed application in Christmas tree plantations to control broadleaf weeds. Apply **Kixor herbicide** plus the recommended adjuvant (refer to **Additives** section for details) as a postemergence-directed spray application either as a uniform broadcast application or as a uniform banded or as a spot application directed at the base of trees while targeting emerged weeds. Spray contact of needles or buds either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury.

Christmas trees must be established for at least 9 months prior to application.

DO NOT make over-the-top applications to Christmas trees or severe injury will occur.

Conifer and Hardwood Plantations

Application Method, Rates and Timings

Apply **Kixor herbicide** for the control of undesirable plants during site preparation operations conducted prior to the planting and establishment of conifer and hardwood plantations.

DO NOT apply **Kixor herbicide** as an over-the-top spray on desirable conifer or hardwood plantings or severe injury will occur.

Site Preparation Application

Apply **Kixor herbicide** plus the recommended adjuvant (refer to **Additives** section for details) as a uniform broadcast application during preplant site preparation for the control of wildling pine seedlings (including loblolly pine [*Pinus taeda*], Virginia pine [*P. virginiana*], and shortleaf pine [*P. echinata*]) and other undesirable herbaceous broadleaf weed species in plantations.

Wildling Pine Control

For best control of wildling pine, tank mix **Kixor herbicide** with glyphosate (refer to specific glyphosate label for appropriate use rates) and make foliar applications in the spring to summer when wildling pine seedlings are actively growing. Fall applications may not provide consistent control. Proper spray coverage is essential for best control. Use a minimum spray volume of 15 gallons of water per acre for aerial applications. For ground applications, use a minimum spray volume of 30 gallons of water per acre for broadcast foliar applications to provide maximum spray coverage.

Noncropland Areas

Kixor herbicide may be used:

- In noncropland areas including fence rows, nonirrigation ditchbanks, petroleum tank farms, pumping installations, railroads, rights-of-way (utility, pipeline, highway), storage areas, and utility plant sites
- For the establishment and maintenance of natural areas (such as wildlife management areas, wildlife openings, and wildlife habitats)

Selective Weeding

Apply **Kixor herbicide** 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 for selective broadleaf weed control in unimproved turf and native grass areas. Transitory injury (leaf necrosis) may be observed under certain conditions, but new growth is normal and vigor is not reduced.

DO NOT feed or allow animals to graze areas of grass treated with **Kixor herbicide** within 365 days of treatment.

Bareground

Kixor herbicide will provide contact burndown plus residual preemergence control of annual broadleaf weeds. Apply **Kixor herbicide** plus the recommended adjuvant (refer to **Additives** section for details) as a uniform broadcast application. To provide effective residual broadleaf weed control, **Kixor herbicide** must be applied at the maximum use rate of 6.0 fl ozs/A. The actual length of residual control is dependent on factors such as soil type, organic matter, weed pressure, and rainfall amounts after application. Adequate precipitation is necessary to activate **Kixor herbicide**. Dry weather following application may reduce effectiveness.

Pine Control

Broadcast Application. Apply **Kixor herbicide** to provide rapid brownout of volunteer pine, including loblolly pine (*Pinus taeda*) and Virginia pine (*P. virginiana*). For best results, apply **Kixor herbicide** plus the recommended adjuvant (refer to **Additives** section for details) as a uniform broadcast application at 6.0 fl ozs/A in a tank mix with glyphosate (refer to glyphosate label for specific use rates). Make foliar applications in the spring to summer when volunteer pine are actively growing. Fall applications may not provide consistent control. Use a minimum spray volume of 50 gallons water per acre for broadcast foliar applications to provide the maximum spray coverage.

Selective Stem Application. Apply **Kixor® herbicide** to provide rapid brownout of individual volunteer pine trees (including loblolly pine [*Pinus taeda*] and Virginia pine [*P. virginiana*]) using a directed-foliar individual plant treatment. Make selective stem applications of **Kixor herbicide** using backpack or hydraulic handgun equipment. For best results, apply **Kixor herbicide** at a rate range of 0.5% to 1.0% v/v plus glyphosate (refer to glyphosate label for the recommended use rate). The proper spray pattern for selective stem applications is to uniformly wet all the foliage on the target pine species tree, but **DO NOT** drench the target vegetation causing spray solution to run off. Excessive wetting of foliage to runoff is not recommended. For best results, make selective stem applications with methylated seed oil or crop oil concentrate at 1% v/v as the adjuvant. Apply **Kixor herbicide** up to but **DO NOT** exceed 16.0 fl ozs/A (0.356 pound active ingredient saflufenacil per acre) with selective stem applications.

Leafy Spurge Control

Kixor herbicide applied in tank mixture with **Plateau® herbicide** will control leafy spurge when applied late spring/early summer in noncropland areas as described above. This tank mixture will also control additional weeds listed on the respective **Kixor herbicide** and **Plateau** labels. **Kixor herbicide** plus **Plateau** tank mix may be applied by either ground or air.

Apply **Kixor herbicide** 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 resultant control may not be satisfactory.

DO NOT feed or allow animals to graze areas of grass treated with **Kixor herbicide** within 365 days of treatment.

Spray Additives for Leafy Spurge Control. Kixor herbicide plus **Plateau** tank mix requires the use of an effective adjuvant system. For best results, use a nonionic surfactant at 0.25% volume/volume (v/v) plus ammonium sulfate at 8.5 to 17.0 lbs/100 gals [1% to 2% weight/volume (w/v)]. Crop oil concentrate or methylated seed oil may also be used with this tank mixture when injury (stunting, necrosis) to grasses is acceptable.

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

Conditions of Sale and Warranty

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

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