

FIFRA §24(c) REGISTRATION
EPA SLN NO: IN-020002

REGISTRATION FOR SPECIAL LOCAL NEED
FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF INDIANA

Sandea[®]
Herbicide

FOR USE ON CUCUMBERS, PUMPKINS, WINTER SQUASH,
CANTALOUPEs, HONEYDEW MELONS, AND CRENSHAW MELONS

SANDEA[®] is a selective herbicide for the control of listed broadleaf weeds and nutsedge.

ACTIVE INGREDIENT:	% BY WT.
* Halosulfuron-methyl	75.0%
OTHER INGREDIENTS	25.0%
	Total 100.0%

KEEP OUT OF REACH OF CHILDREN
CAUTION

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

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes eye irritation. Harmful if swallowed. Avoid contact with eyes or clothing.

FIRST AID

IF IN EYES: Immediately flush with water. Get medical attention.

IF SWALLOWED: Remove visible particles from mouth and rinse mouth thoroughly with water. Spit out rinse water. Swallow clean water to dilute. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE 1-888-478-0798
PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

NET CONTENTS ____ OUNCES

EPA Reg. No. 10163-254
EPA Est. No. 11773-IA-1

Gowan

Gowan Company
P. O. Box 5569
Yuma, AZ 85366-5569

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

APPLICATION RATES AND TIMING

CROP	RATE/ACRE	COMMENTS **
CUCUMBERS	½ -1 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. Direct seeded: <ul style="list-style-type: none"> • Pre-emergence – apply after planting, but prior to cracking. Use lower range rates on lighter textured soils with low organic matter. Heavy rainfall and/or cool/wet weather following an application during the germination and early growth period may result in severe crop injury and/or reduced stands.
	¼ to 2/3 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. Direct Seeded: <ul style="list-style-type: none"> • Post-emergence - apply after the crop has reached the 2-5 true leaf stage, but before flowering. Irrigation or rainfall occurring within 4 hours after a Sandea application may reduce effectiveness. Temporary yellowing or stunting may occur following post-emergence application.
		<ul style="list-style-type: none"> • Do not apply Sandea Herbicide within 30 days of harvest. • A maximum of 2 applications may be made per crop. • Do not apply more than 1 2/3 oz. Sandea per acre per year.
PUMPKINS AND WINTER SQUASH	½ to 2/3 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. Direct Seeded: <ul style="list-style-type: none"> • Pre-emergence - apply after planting, but prior to cracking. Use the lower rate on lighter textured soils with low organic matter. Heavy rainfall and/or cool/wet weather following an application during the germination and early growth period may result in severe crop injury and/or reduced stands.
	½ to 2/3 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. Direct Seeded: <ul style="list-style-type: none"> • Post-emergence - apply after the crop has reached the 2-5 true leaf stage, but before flowering. Irrigation or rainfall occurring within 4 hours after a Sandea application may reduce effectiveness. Temporary yellowing or stunting may occur following post-emergence application.
		<ul style="list-style-type: none"> • Do not apply Sandea Herbicide within 30 days of harvest. • A maximum of 2 applications may be made per crop. • Do not apply more than 1 oz. Sandea per acre per year.
CANTALOUPE, HONEYDEW MELONS, CRENSHAW MELONS,	½ -1 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. <ul style="list-style-type: none"> • Direct-seeded Pre-emergence – apply after planting, but prior to cracking. Use lower range rates on lighter textured soils with low organic matter. • Pre-Plant Under Plastic Mulch – Sandea Herbicide may be applied as a pre-plant application under plastic mulch. Apply Sandea Herbicide after final bed shaping and just prior to installation of the plastic mulch. The crop may be transplanted into the treated area 7 days after the application and installation of the plastic mulch. Use lower rates on lighter textured soils with low organic matter. Heavy rainfall and/or cool/wet weather following an application during the germination and early growth period may result in severe crop injury and/or reduced stands.
	½ to 2/3 oz.	Apply uniformly with ground equipment in a minimum of 15 gallons of water per acre. <ul style="list-style-type: none"> • Post-emergence - apply after the crop has reached the 2-5 true leaf stage, but before flowering. Irrigation or rainfall occurring within 4 hours after a Sandea application may reduce effectiveness. Temporary yellowing or stunting may occur following post-emergence application. • Post-transplant - Sandea Herbicide may be used on transplants grown on bare ground. Transplants must be established and actively growing prior to a Sandea Herbicide application. Delay application for at least 14 days after transplanting to allow for plant establishment. Do not apply if transplants are under stress, weak, and/or not actively growing.
		<ul style="list-style-type: none"> • Do not apply Sandea Herbicide within 57 days of harvest. • A maximum of 2 applications may be made per crop. • Do not apply more than 1 2/3 oz. Sandea per acre per year.

** Research has shown potential for delayed crop plant growth after emergence following a Sandea® Herbicide application. Symptoms may be temporary. Follow all directions and use precautions carefully to minimize potential delayed plant growth.

FOR OPTIMUM RESULTS

- Follow mixing instructions regarding adjuvants.
- For pre-emergence applications, if weeds are present prior to crop emergence, use a surfactant as directed below.
- Pre-emergent activity of Sandea Herbicide may be enhanced by incorporating the product with 0.25 – 0.5 inch of water via overhead irrigation following application. Sandea Herbicide should not be mechanically incorporated.
- For post-emergence applications, treat young, actively growing weeds after the crop has reached at least the 2 true leaf stage. Best results will be obtained by waiting to irrigate 5 to 7 days after a post-emergence Sandea Herbicide application. Wait to cultivate treated soil area for 7 to 10 days. A timely cultivation may be necessary to control suppressed weeds, weeds that were bigger than the maximum recommended size at application, weeds that emerge after an application or weed species not on the Sandea label.
- Annual weeds at times may have multiple flushes of seedlings, or treated perennials may sometimes regrow from underground stems or roots, depending upon rainfall and other environmental conditions. To maximize control of such weeds, it may be necessary to use sequential applications of Sandea Herbicide.
- Sandea Herbicide can be applied as a banded application. Use proportionally less spray mixture based on the soil area actually sprayed. See the "APPLICATION RATES AND TIMING" section for additional details on the use of Sandea Herbicide.

MIXING INSTRUCTIONS

Fill the spray tank to about three-fourths of the desired volume. Add the recommended amount of Sandea Herbicide as listed in the "WEEDS CONTROLLED" sections. Complete the filling process while maintaining agitation. Remove the hose from the mixing tank immediately after filling to avoid siphoning back into the carrier source. Add non-ionic surfactant as the last ingredient in the tank. Spray solutions should be applied within 24 hours after mixing.

ADJUVANTS

A **nonionic surfactant (NIS)** is the only adjuvant required in the spray solution for post-emergence applications to target weeds. Use only nonionic surfactants which are approved by EPA for use on food crops. Use 0.25 percent nonionic concentration (1 quart per 100 gallons of spray solution). Use of crop oil concentrate (COC) or silicone-based adjuvants will result in reduced yields are not recommended for post-emergence applications over the crop.

SPRAYER TANK CLEANOUT

To avoid subsequent injury to desirable crops, clean all mixing and spray equipment immediately following applications of Sandea Herbicide as follows:

1. Drain tank; thoroughly rinse spray tank, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of household ammonia (containing 3% ammonia) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Again flush the hoses, boom, and nozzles with the cleaning solution and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. The rinsate may be disposed of on-site or at an approved disposal facility.

* Equivalent amount of an alternate strength ammonia solution can be used in the clean out procedure. Carefully read and follow the individual cleaner instructions.

USE PRECAUTIONS

- Do not apply Sandea by air.
- Do not apply Sandea using air assisted (air blast) field crop sprayers.
- Do not apply this product through any type of irrigation system.
- Heavy rainfall and/or excessive irrigation soon after application may cause crop injury. This potential injury can be enhanced if seeding depth is too shallow.
- Under cool temperature conditions that can delay early seedling emergence or growth, Sandea can cause injury or crop failure. Be especially cautious during first planting of season when this condition is likely to occur.
- Sandea may delay maturity of treated crops.
- Follow all recommended crop rotation intervals as listed in this label.
- Sandea should not be applied if the crop or target weeds are under stress due to drought, water saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions.
- Do not apply Sandea to crops treated with soil applied organophosphate insecticides.
- Do not apply an organophosphate insecticide within 7 days before or 3 days after any Sandea application.
- This label must be in the possession of the user at the time of pesticide application.
- Follow all other applicable directions, restrictions, and precautions on the EPA-registered label. It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- Other crops on this label may be replanted following applications of Sandea without restriction. All other crops should follow the intervals in the table below.
- Other crops on this label may be replanted following applications of Sandea without restriction. All other crops should follow the intervals in the table below.
- In the event of crop failure, the crop may be planted back into the treated area at the user's risk for potential phytotoxicity to the subsequent crop.
- Avoid spray drift outside of targeted area.

Sandea Herbicide may be applied to cucumbers, winter squash, pumpkins, cantaloupes, honeydew melons and crenshaw melons, however the user assumes responsibility for such use. All hybrids/varieties have not been tested for sensitivity to Sandea Herbicide. Any plant injury arising from the use of Sandea is the responsibility of the user.

WEEDS CONTROLLED BY SANDEA

(Post-emergence applications only)

<u>Weed species</u>	<u>1/2 - 2/3 oz/Acre Weed Height (inches)</u>	<u>1 oz/Acre Weed Height (inches)</u>
Cocklebur, common	1 to 9	9 to 14
Fleabane, Philadelphia	1 to 3	-
Galinsoga	1 to 3	-
Kochia	1 to 3	-
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	-	1 to 6
Mustard, wild	-	4 to 6
Nutsedge ¹ , Yellow	1 to 3	4 to 6
Nutsedge ¹ , Purple	1 to 3	4 to 6
Pigweed, redroot	1 to 3	4 to 6
Pokeweed, common	1 to 6	-
Radish, wild	-	4 to 6
Ragweed, common	1 to 9	9 to 12
Ragweed, giant	1 to 3	4 to 6
Smartweed, Pennsylvania	1 to 2	-
Sunflower, common	1 to 12	12 to 15
Velvetleaf	1 to 9	9 to 12

¹Heavy infestations of nutsedge may require sequential applications. An earlier treatment maybe required to prevent nutsedge from competing with the crop.

WEEDS SUPPRESSED BY SANDEA

(Post-emergence application only)

<u>Weed species</u>	<u>1/2 - 2/3 oz/Acre Weed Height (inches)</u>	<u>1 oz/Acre Weed Height (inches)</u>
Burcucumber	1 to 3	4 to 12
Kochia	-	3 to 6
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	-
Morningglory	-	1 to 3

WEEDS CONTROLLED BY SANDEA

(Pre-emergence application only)

(1/2 to 1 oz/Acre)

Cocklebur, common
Galinsoga
Jimsonweed
Kochia
Lambsquarter, common
Mustard, wild
Nutsedge, yellow
Nutsedge, purple
Pigweed, redroot
Pigweed, smooth
Radish, wild
Ragweed, common
Smartweed, Pennsylvania
Sunflower, common
Velvetleaf

*Suppression only

TIME INTERVAL BEFORE PLANTING

(Months after treatment with SANDEA)

CROP	MONTHS
IR/IMR Field Corn	0
Sugarcane	0
IT Field Corn	1
Normal Field Corn	1
Barley (winter)	2
Forage Grasses	2
Grass Grown for Seed	2
Oats	2
Proso Millet	2
Rice	2
Rye (winter)	2
Seed corn	2
Sorghums	2
Spring cereal crops	2
Wheat (winter)	2
Popcorn, Sweet corn	3
Cotton	4
Peanuts	6
Tomato (transplant)	8
Alfalfa	9
Clovers	9
Dry Beans	9
Field Peas	9

CROP	MONTHS
Peas	9
Potatoes	9
Cucumbers, Pumpkins, Squash	9
Snap Beans	9
Soybeans	9
Peppers	10
Eggplant	12
Radish	12
Cabbage	15
Canola	15
Carrot	15
Mint	15
Broccoli, Cauliflower, Collards	18
Leeks, Onions	18
Lettuce crops	18
Sunflowers	18
Sugarbeet (Indiana only)	21
Sugarbeet and Red Beet	24
Spinach	24
Sugarbeet (ND, MN, Red River Valley)**	36

** Also includes other regions where rainfall is sparse or irrigation is required.

Halosulfuron-methyl is manufactured by Nissan Chemical Industries, Ltd. Product is protected by U.S. Patent No. 4,668,277

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SLN Working: IN-020002 Sandea cuc, pun, can, ws, hon, cren (04-09-02)