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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_x_ Registration
__ Reregistration

(Under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
10163-254	MAY 25 2000

Term of Issuance: Conditional

Name of Pesticide Product: Sandea Herbicide

Name and Address of Registrant (include ZIP Code):

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

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 active named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is not to be construed as an endorsement or recommendation of this product by the Agency. In order to protect the public and the environment, the Administrator, in his opinion, may at any time suspend or cancel the registration if he believes it is not 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 as it has been covered by others.

This product is conditionally registered in accordance with section 3(c)(7)(A) and (B) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provided that you:

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

2. Make the labeling changes listed below before you release the product for shipment.

a. Add the phrase "EPA Registration No. 10163-254".

b. Add a statement prohibiting arial application or if you choose to have the product applied by aerial application, directions for application by air including the statments in the attachment Spray Drift Management must be added to the label.

3. Submit three (3) copies of your final printed labeling before you release the product for shipment.

Signature of Authorized EPA Official

Date: 5-25-00

EPA Form 8[illegible]

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If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of labeling is enclosed for your records.

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Attachment-Spray Drift Management

Under the heading **Spray Drift Management** the text should read as follows:

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this label).

Controlling Droplet Size

Volume-Use high flow rate nozzles to apply the highest practical spay volume. Nozzles with higher rated flows produce larger droplets.

Pressure-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy ~~protection~~ penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

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

Nozzle Orientation-Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length-For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun set and often continue into the morning. Their presence can be indicated by ground fog; however, if fog ~~if~~ not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves ~~literally~~ laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

ACCEPTED

MAY 25 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No 10163-254

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SANDEA™

HERBICIDE

SANDEA™ is a selective herbicide for postemergence control of listed broadleaf weeds and nutsedge in sweet corn.

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 EMERGENCY MEDICAL RESPONSE AND HAZARD COMMUNICATIONS *ONLY*, CALL 1 (800) 228-5625 EXT. 283

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 washwaters. 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.*

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

NET CONTENTS _____ POUNDS

EPA Reg. No. 10163-XXX
EPA Est. No.

Gowan

Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
www.gowanco.com

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GENERAL INFORMATION

Biological Information: The level of weed control following SANDEA™ application is dependent upon application rate, weed species and size at application time, and growing conditions. For best results, applications should be made to actively growing weeds at the heights defined in the "USE RATE GUIDE" sections of this label. Heavy infestations should be treated early before the weeds become too competitive with the crop. When early postemergence treatments are used, sequential applications may be required to control later weed flushes. Soon after SANDEA™ is applied, growth of susceptible weeds is inhibited, and susceptible weeds are no longer competitive with the crop. Following growth inhibition, the leaves and growing point begin to discolor. Complete control typically occurs within 7-14 days depending on the weed size, species and growing conditions.

APPLICATION EQUIPMENT AND INSTRUCTIONS

Applications may be made by ground equipment to healthy, actively growing weeds. For best results, avoid applications when weeds are under drought stress, disease, or insect damage. Rainfall or irrigation occurring within 4 hours after application may also reduce effectiveness.

Ground Application:

Apply SANDEA™ uniformly with properly calibrated ground equipment in 10 or more gallons of water per acre. Other water based spray carriers may be used for directed applications, avoiding contact with crop foliage. Select spray volumes that ensure thorough and uniform weed coverage. Choose nozzles which provide optimum spray distribution and coverage at the appropriate pressure (psi). Use only ground application equipment. Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during application.

Do not apply this product through any type of irrigation system.

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following application.

Thoroughly clean application equipment immediately after SANDEA™ use and prior to spraying a crop other than corn or grain sorghum. Prepare a tank cleaning solution which consists of a 1 percent solution of household ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Repeat the procedure with the *ammonia solution. Complete the cleaning process by rinsing with* clean water.

MIXING INSTRUCTIONS

Fill the spray tank to about three-fourths of the desired volume with water or carrier. Add the recommended amount of this product 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 nonionic surfactant and other adjuvants as the last ingredients in the tank.

Spray solutions should be applied with 24 hours of mixing.

Adjuvants: A nonionic surfactant (NIS) is the only adjuvant required in the spray solution. Use only nonionic surfactants which are approved by EPA for use on food crops and which contain at least 80 percent active ingredient. Use 0.25 to 0.5 percent nonionic surfactant concentration (1 to 2 quarts per 100 gallons of spray solution).

Crop oil concentrate (COC) may be used with SANDEA™ instead of nonionic surfactants. Do not use both NIS and COC in the spray mixture. Add COC to the spray mixture at 1% vol/vol (1 gallon per 100 gallons of spray mixture). Use only good quality petroleum or vegetable-based crop oil concentrates which contain at least 14 percent emulsifiers.

Nonionic surfactants OR CO are the only additives necessary for SANDEA™ applications. Liquid nitrogen fertilizer solutions (e.g., 28-0-0) may be added to the spray solution to improve the control of certain species. However, a nonionic surfactant **OR** COC will still be necessary. Add liquid nitrogen fertilizer at the rate of 2 to 4 quarts per acre. Do not use liquid nitrogen fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur. A high quality, spray grade ammonium sulfate (e.g., 21-0-0) may be applied at a rate of 2 to 4 pounds per acre in place of liquid nitrogen fertilizer.

CROP RECOMMENDATIONS

Sweet Corn

Corn Growth Stage: SANDEA™ may be applied over-the-top or with drop nozzles from the spike through layby stage of the corn. Apply $^2/_3$ ounce (0.032 lb. active ingredient) of the product per acre broadcast over the top or with drop nozzles in sweet corn. Mechanical cultivation may be required to control weed species not on the SANDEA™ label. Avoid cultivation for at least 7 days following application. If necessary, **a sequential treatment** of this product at 2/3 ounce per acre may be applied only with drop nozzles ***semi-directed or directed*** *to avoid application into the corn plant whorl.* No more than 2 applications of SANDEA™ may be made per year in sweet corn. Any single application must not exceed 2/3 ounce per acre.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

SANDEA™ may be applied to sweet corn, however, the user assumes responsibility for such use. All hybrids/varieties have not been tested for sensitivity to SANDEA™ nor does Gowan Company have access to all seed company or processor data. Consequently, any injury arising from the use of SANDEA™ on sweet corn is the responsibility of the user. Do not apply SANDEA™ to sweet corn unless the seed company, processor or State Agricultural Extension Service has tested SANDEA™ on the particular hybrid/variety and specifically approves and recommends the use. SANDEA™ should not be applied to sweet corn if the crop is under severe stress due to drought, water-saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions. Refer to the following **WEEDS CONTROLLED** section for use rate recommendations.

SANDEA™ is not recommended for use on "Jubilee" sweet corn.

Gowan Company does not recommend application of SANDEA™ to sweet corn previously treated with soil applied organophosphate insecticides. Do not apply an organophosphate insecticide within 7 days before or 3 days after any SANDEA™ application.

WEEDS CONTROLLED
SANDEA™
Sweet Corn
USE RATE GUIDE
Use Rate – 2/3 ounce of product per acre
(0.032 pound active ingredient per acre)

Weed Species	Size Range. Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Nutsedge, purple, yellow	4 to 6
Passionflower, maypop	1 to 3
Pigweed, redroot [2]	1 to 3
Pokeweed, common	1 to 6
Ragweed, common:	1 to 9
Ragweed, giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf [2]	1 to 9

ROTATIONAL CROP INFORMATION

Labeled crops may be planted at specified time intervals following application of approved rates of SANDEA™. Use the time intervals listed below to determine the required time interval before planting.

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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
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
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 (Michigan only)	21
Sugarbeet and Red Beet	24
Spinach	24
Sugarbeet (ND, MN, Red River Valley)**	36

* In-crop and preplant applications of SANDEA™ to sweet corn are based on application rates and timings specific for use in sweet corn. Rotational intervals must be adhered to for planting new sweet corn crops after SANDEA™ applications in sweet corn crops that are lost or terminated. Rotational interval must be adhered to for planting sweet corn after any other registered SANDEA™ application.

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

LIST OF COMMON AND SCIENTIFIC NAMES OF BROADLEAF WEEDS.

Cocklebur, common
Xanthium strumarium

Fleabane, Philadelphia
Erigeron philadelphicus

Kochia
Kochia scoparia

Mallow, Venice
Hibiscus trionum

Nutsedge, yellow
Cyperus esculentus

Nutsedge, purple
Cyperus rotundus

Passionflower, maypop
Passiflora incarnata

Pigweed, redroot
Amaranthus retroflexus

Pokeweed, common
Phytolacca americana

Ragweed, common
Ambrosia artemisiifolia

Ragweed, giant
Ambrosia trifida

Smartweed, Pennsylvania
Polygonum pensylvanicum

Sunflower, common
Helianthus annuus

Velvetleaf
Abutilon theophrasti

STORAGE AND DISPOSAL

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

STORAGE: Store under cool, dry conditions (below 120 F). Do not store under moist conditions.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill for pesticide disposal or in accordance with applicable Federal, state or local procedures.

CONTAINER DISPOSAL: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

DISPOSAL AUTHORITIES: If none of the foregoing procedures is permitted by state and local authorities, then contact your State Pesticide or Environmental Control Agency, or your local Hazardous Waste Disposal office, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK OR FIRE), CALL CHEMTREC® (800) 424-9300.

For other product information, contact Gowan Company or see Material Safety Data Sheet.

NOTICE ON CONDITIONS OF SALE

Our recommendations for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.

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

EPA Text Pending: SANDEA™ (to EPA 04-05-00)