STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

To: Board of Pesticides Control Members
From: Mary Tomlinson, Pesticides Registrar/Water Quality Specialist
RE: Extension of EPA SLN ME-160001 and EPA SLN ME-160001B, Sandea Herbicide, EPA Reg. No. 81880-18 and EPA Reg. No. 81880-18-10163 respectively, to control perennial broadleaf weeds in lowbush blueberries in the non-bearing year
Date: October 27, 2020
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Special Local Need registrations, ME-160001 and ME-160001B for Sandea Herbicide expire December 31, 2020. Dr. Lily Calderwood, University of Maine Cooperative Extension Wild Blueberry Specialist, is requesting an extension of the SLNs to control perennial broadleaf weeds in lowbush blueberry in the nonbearing year. Canyon Group and Gowan Company supported the SLNs in 2016 which provided stringent language to reduce risk of phytotoxicity and to place the burden of risk on the grower. This SLN will expire in two years, bridging the gap as Gowan Company revises the marketplace label to include the use and begins production and distribution. The SLN will permit growers to use Sandea currently in the marketplace according to the SLN directions until newly labeled product is available.

UMaine Extension considers this an important product in resistance management and is only one of two Group 2 pesticides listed on the extension herbicide chart for use in rotation to reduce resistance.

According to the FAO Mobility Classification used by the EPA, halosulfuron-methyl is borderline mobile to moderately mobile with a KOC of 100. The potential to runoff or leach into surface and ground water when applied to normal soils may lessen as pH decreases. Additional WIN-PST results based on a broadcast application at a rate greater than ¼ lb AI/A are provided below. Sandea would be applied at a rate of 0.047 lb Ai/A, as a single broadcast application, only in the nonbearing year. The risk to groundwater would be very low. Halosulfuron-methyl has not been detected in Maine groundwater surveys.

Solubility: At pH 5 is 15 ppm and at pH 7 is 1630 ppm
Field half-life: 14 days
Pesticide leaching potential: intermediate
Pesticide solution runoff potential: intermediate
Pesticide adsorbed runoff potential: Low

As a reminder, the EPA only permits and approves issuance of an SLN on a primary product registration. States are permitted to issue a state supplemental SLN for a distributor product based on a state approved SLN for the primary product. Canyon Group approved the SLN request by Gowan Company in

2016. Both the primary and the state supplemental SLNs for Sandea Herbicide are hereby submitted for the Board's approval.

Enclosed are supporting documents for your consideration to extend the SLN through December 31, 2022. Please let me know if you have any questions.

- Letter of request from Lily Calderwood, Ph.D., University of Maine Cooperative Extension
- Letter of support from Niki Yepez, Registration Specialist, Canyon Group/Gowan Company
- Sandea Herbicide draft Maine SLN labels
- Sandea Herbicide Section 3 label

References;

- https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-reporting-environmental-fate-and-transport
- http://www.fao.org/3/X2570E/X2570E06.htm
- WIN_PST 3.1.20. USDA NRC

September 21, 2020

Dear Mary Tomlinson,

On behalf of the University of Maine Cooperative Extension and lowbush (wild) blueberry producers in Maine, I request an extension of the 24C label for Sandea herbicide for use on broadleaf weeds in wild blueberry fields. Our current 24C label will expire on December 31, 2020. There has been a Sandea 24C label approved for use on this crop since 2016.

Broadleaf weeds compete with lowbush blueberry for nutrients, sunlight, and water. The successional habitat in which lowbush blueberry is grown exhibits the same conditions that favor certain broad leaf weeds. Through my Extension program, growers are encouraged to identify weeds in their fields and use cultural methods of weed management including sulfur application and mechanical weed removal before using chemical control. Some broadleaf weeds including the following listed on the Sandea label, horseweed (*Erigeron canadensis*), horsetail (*Equisetum arvense*), prickly lettuce (*Lactuca serriola),* and yellow nutsedge (*Cyperus exculentus*) grow well under conditions that also favor lowbush blueberry and therefore must be suppressed using herbicides. Sandea is a group 2 herbicide and therefore fills an important rotational niche, reducing the risk of resistance development. The UMaine Extension herbicide chart, which contains 21 products, only contains two Group 2 products.

My predecessor, David Yarborough, conducted a research trial on Sandea from 2012-2013. His findings support that Sandea should be applied according to the current 24C label that states a rate of 1/2-1 oz/acre. However, the "tank mix with hexazinone or terbacil" is not necessarily a required practice. Application should occur during the non-crop year before blueberry emergence in the spring or after complete dormancy in the fall.

I support the extension of the Sandea 24C label for lowbush blueberry in Maine. Paul David and Nikki Yepez of Gowan USA, LLC were recently sent a request for extension. Please let me know if the Board of Pesticide Control has any questions.

Sincerely,

Lily B. Calderwood

Dr. Lily Calderwood
University of Maine
Extension Wild Blueberry Specialist

Canyon Group LLC™
370 S. Main Street • Yuma, AZ 85364 • ph 928.783.8844 • fax 928.343.9255

October 26, 2020

Attention: Mary E. Tomlinson
Department of Agriculture
Maine Board of Pesticides Control
28 State House Station
Augusta, ME 04333

RE: Sandea Herbicide, EPA Reg. No. 81880-18, SLN Application ME-20XXXX for Blueberries.

Dear Mrs. Tomlinson:

Canyon Group is requesting a Special Local Need (SLN) ME-20XXXX, for use of Sandea (active ingredient Halosulfuron) on blueberries.

Wyman's of Maine supports this SLN. Sandea (a supplementally distributed product) is necessary to control many perennial broadleaf weeds which are not controlled by other herbicides on the market for the blueberry industry. Gowan has already received EPA approval to add this use to the Section 3 label but it will be another year before we can get the use added onto packaging.

Canyon Group gives permission to Gowan Company to issue a supplemental SLN for Sandea, EPA Registration number 81880-18-1163, and to distribute the product to growers.

In support of this application, I have enclosed the following:

- Application for/Notification of State Registration of a Pesticide To Meet a Special Local Need (EPA Form 8570-25)
- Proposed SLN no. ME-20XXXX Canyon
- Proposed SLN no. ME-20XXXX Gowan Company

If I can provide further information or documentation please contact me at (928) 819-1516 or nryan@gowanco.com.

Kind regards,

Nikki Yepez

Nikki Yepez
Regulatory Specialist

FIFRA

Section 24(c) Special Local Need Label

FOR DISTRIBUTION AND USE ONLY IN THE STATE OF MAINE

This label for SANDEA herbicide expires and must not be distributed or used in accordance with this SLN registration after December 31, 2022.

HALOSULFURON-METHYL	GROUP	2	HERBICIDE

SANDEA® HERBICIDE

EPA Reg. No 81880-18 EPA SLN NO. ME-20XXXX

ACTIVE INGREDIENT:	**% BY WT.**
Halosulfuron-methyl, methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl) -1-methylpyrazole-4- carboxylate	75.0%
OTHER INGREDIENTS	25.0%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

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 the time of application.
- Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the EPA registered label.

DIRECTIONS FOR USE

PREHARVEST INTERVAL

The required days between last application and harvest are given in ( ) after each crop name.

CROP	OZ/ACRE	DIRECTIONS FOR USE
13-07B LOWBUSH BLUEBERRIES (14)	1/2 - 1	Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. SANDEA should be tank mixed with products such as Velpar® Velossa (hexazinone ai's), or Sinbar® to broaden the spectrum of weeds controlled. • **Vegetative (Non-Crop) Year** • **Broadcast application <u>prior to breaking dormancy in the Spring, or after blueberries are completely dormant in the Fall</u> for control of labeled weeds.** Apply SANDEA as a single broadcast spray application. Applications applied 1 to 2 months prior to breaking dormancy will allow for better weed control.
		PRECAUTIONS: • Overlapping boom swaths increases the potential for phytotoxicity including leaf yellowing, reddening, and/or stunting • Consult "Use Precautions" and "For Optimum Results" of label for important usage information. • Preemergence applications of SANDEA when ground cover prevents contact with the soil will result in reduced or no residual activity. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS:** • Do not apply when frost is in the ground. • Do not apply to water saturated soils. • Do not apply to blueberries after vegetative bud break. • Do not apply to bushes established less than one year or to plants under stress. • Do not apply to areas where water is known to pond for periods of time following rainfall. • Do not apply SANDEA after the crop has progressed into budbreak or significant injury will occur. • Do not apply more than 1 application or 1 oz/A of product by weight (0.047 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.

24(c) Registrant: Canyon Group Company
P.O. Box 5569
Yuma, AZ 85366-5569

24C 10/27/2020

FIFRA

Section 24(c) Special Local Need Label

FOR DISTRIBUTION AND USE ONLY IN THE STATE OF MAINE

This label for SANDEA herbicide expires and must not be distributed or used in accordance with this SLN registration after December 31, 2022.

HALOSULFURON-METHYL	GROUP	2	HERBICIDE

SANDEA®

HERBICIDE

EPA Reg. No 81880-18-10163 EPA SLN NO. ME-20XXXX

ACTIVE INGREDIENT:	**% BY WT.**
Halosulfuron-methyl, methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl) -1-methylpyrazole-4- carboxylate	75.0%
OTHER INGREDIENTS	25.0%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

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24(c) Registrant: Gowan Company
P.O. Box 5569
Yuma, AZ 85366-5569

24C 10/27/2020

HALOSULFURON-METHYL	GROUP 2	HERBICIDE

SANDEA®

HERBICIDE

SANDEA® is a selective herbicide for control of listed broadleaf weeds and nutsedge

ACTIVE INGREDIENT:	**% BY WT.**
Halosulfuron-methyl, methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl) -1-methylpyrazole-4-carboxylate	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.)

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. • Call poison control center or doctor for treatment advice.
IF SWALLOWED	• Call poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling poison control center, doctor or going for treatment. For emergency information concerning this product, call toll free 1-888-478-0798.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

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

NET CONTENTS: 10 OUNCES

EPA Reg. No. 81880-18-10163
EPA Est. No. 67545-AZ-002
Item No. XXXXX
XXXXX-US-SANH-XX-XX-RXXXX

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

Gowan
The Go To Company

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

This product is toxic to non-target vascular plants. 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 cleaning equipment or disposing of equipment washwaters.

Halosulfuron-methyl is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

PRODUCT INFORMATION

SANDEA is a dry flowable formulation that selectively controls certain broadleaf weeds and nutsedges in selected crops. SANDEA is effective both preemergence and postemergence. SANDEA can be absorbed through roots, shoots and foliage and is translocated within the plant.

WEED RESISTANCE STATEMENT

Weeds can develop resistance to herbicides. Some weed biotypes have inherent resistance to certain herbicides. Also, repeated use of herbicides with similar modes of action can result in the development of resistance in weed populations. SANDEA, a member of the sulfonylurea family (Group 2), is an ALS enzyme inhibiting herbicide. To minimize the potential for resistance development and/or to control resistant weed biotypes, use a variety of cultural, mechanical, and chemical weed control tactics. Rotate with herbicides having different modes of action (e.g. non-ALS/AHAS materials). Contact your professional crop advisor, local cooperative extension specialist, or Gowan Company representative for additional information.

APPLICATION EQUIPMENT AND INSTRUCTIONS

Ground Applications:

SANDEA can be applied as a broadcast or band application. For band applications, use proportionally less spray mixture based on the area actually sprayed. Do not concentrate the band. Consult the "APPLICATION INSTRUCTIONS" section of this label for the rates and procedures that are appropriate for your growing region.

Apply SANDEA in a spray volume that ensures thorough and uniform coverage. Use of 15 or more gal of water per acre is recommended unless otherwise directed in the "APPLICATION INSTRUCTIONS" section. Choose nozzles that provide optimum spray distribution and coverage to the target weed at the appropriate pressure (psi). Avoid streaking, skips, overlaps, and spray drift during application. Thoroughly clean equipment prior to mixing spray solution. Follow the clean-up procedures on the labels of applied products. If no directions are provided, follow the 6 steps outlined in the "Sprayer Tank Cleanout" section.

- When using ground application equipment, apply with nozzle height no more than 2 feet above the ground or crop canopy.
- Applicators are required to use an Extremely Coarse droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during "temperature inversions."

Rope-wick or Wiper Applications:

Apply by wiping SANDEA to the weeds using an absorbent material made of burlap, canvas, rope, sponge, or absorbent pad plumbed into a pipe reservoir filled with SANDEA. The absorbent material must maintain consistent moisture to allow for leaf wetness on targeted weeds, but not to a moisture level that allows for excess moisture to drip from the absorbent material. Selected equipment must be maintained and capable of preventing all contact of the herbicide solution with the crop or soil.

Adjust the height of the wiper applicator to ensure adequate contact with the weeds and so that no wiper contact point is at least 2 inches above the desirable vegetation. Optimum performance can be obtained when more of the weed is exposed to the herbicide solution and weeds are a minimum of 6 inches above the desirable vegetation. Weeds that do not come in contact with SANDEA will not be affected. Poor contact occurs when weeds are growing in dense clumps, in areas of severe weed infestation, when weed height varies dramatically or when operator speeds are too great. Terrain must be considered when making wiper applications. Sloping

ground can cause herbicide solution to migrate to one side, causing dripping on the lower end and drying of the wiper on the upper end of the applicator. Due to decreased efficacy do not apply this product when weeds are wet.

Mix only the amount of product that will be used during a 1-day application, as reduced product performance can occur from solutions held longer than 24 hours. Avoid leaks or dripping of the herbicide solution onto the crop as contact of this product to desirable vegetation could result in plant injury or destruction. Keep wiper surfaces clean. Clean wiper parts promptly after using SANDEA by thoroughly flushing with water.

When Using Motorized Ground Equipment:

Prior to application determine the per acre output of your applicator. If the output rate is unknown it may be obtained by evaluating the output at ~100% weed density. Apply a minimum of 1 oz SANDEA per acre by mixing the desired per acre rate of SANDEA, in ratio with your determined per acre output. Do not exceed the maximum labeled rate for your crop.

The applicator device will physically wipe this product directly onto the weed in between rows of crop plants (row middles) or over the top of crops for selectively controlling weeds. Operate wiper applicators at a ground speed of no greater than 5 miles per hour. To maintain performance applicator should control chemical application rate by adjusting travel speed to match weed density. In areas of dense weeds better results can be obtained when two applications are made in opposite directions. Refer to the specific crop section of this label for rates and directions for use.

Spot Treatment:

For spot treatment or application with a hand held device, mix 1/4 oz – 1 oz Sandea per 1 gallon of water. For best results, when using a hand held applicator, wipe the desired target weeds in a back and forth motion to ensure proper contact and coverage.

NOTE: When using a surfactant refer to the adjuvants section of this label.

Aerial Applications:

Apply this product or approved tank mixtures with properly calibrated equipment in 3 to 15 gal of water per acre.

Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during applications.

Spray Drift Management:

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. Do not allow this product to drift onto neighboring crops or non-crop area or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues or other undesirable results may occur. 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. Where states have more stringent regulations, they must be observed. The following drift management directions minimize off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications or to applications using dry formulations.

1. When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

2. Point nozzles backward parallel with the air stream, never point downwards more than 45 degrees. Where states have more stringent regulations, they must be observed.
3. When applying to crops via aerial application equipment, applicators must use ½ swath displacement upwind at the downwind edge of the field.

The importance of spray 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 may not prevent drift if applications are made improperly or under unfavorable environmental conditions (see the following "Wind", "Temperature and Humidity", and "Temperature Inversion" sections of this advisory).

Controlling initial droplet size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher flow rates produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy 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 the spray stream is released backwards, parallel to the air stream 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.

Controlling placement of spray droplets:

- **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 height** - Applications should not be greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. Greater application heights result in greater droplet size reduction through evaporation and greater movement in air currents. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- **Application speed** - Slower aircraft speeds within a safe range will produce less air turbulence and fewer small droplets.
- **Swath adjustment** - When applications are made with a crosswind, 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 distances should increase with increasing drift potential (wind speed, droplet size, etc.).

Key environmental factors:

- **Wind** - Drift potential is the lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided when wind speeds are below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Applicators 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 air currents that are 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 sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke detector. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive areas:

Pesticides 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).

Thoroughly clean application equipment immediately after the use of SANDEA. Prepare a tank cleaning solution that consists of a 1% solution of household ammonia (one quart of ammonia for every 25 gal 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 and begin agitation. Add the labeled amount of SANDEA. 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 (NIS) and other adjuvants as the last ingredients in the tank. Spray solutions should be applied within 24 hours after mixing.

ADJUVANTS

Unless otherwise stated, a NIS is recommended in the spray solution for postemergence applications or for preemergence applications where susceptible weeds are present prior to crop emergence. Use only nonionic-type surfactants that are approved for use on food crops and contain at least 80% active ingredients. Use 0.25 to 0.50% nonionic-type surfactant concentration (1 to 2 quarts per 100 gal of spray solution). Use of SANDEA without an adjuvant when weeds are present may result in reduced efficacy. Use of crop oil concentrate (COC) or silicone-based adjuvants can result in increased crop injury and reduced yields and are not recommended for postemergence applications over the crop, unless stated otherwise.

TANK MIXES

Unless stated in the “Application Instructions” section or allowed by supplemental labeling, tank mix combinations have not been evaluated and are the user’s responsibility. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use (For Example: first aid from one product, spray drift management from another). Users must follow the most restrictive directions and precautionary language of the products in the mixture. It is recommended that tank mixtures should be evaluated for miscibility and crop safety on a small test area prior to use. Tank mixtures should not be applied when the plants are under stress due to drought, water saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions.

SPRAYER TANK CLEANOUT

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

1. Drain tank; thoroughly rinse spray tank, boom, and hoses with clean water. Remove the nozzles and screens and clean separately in a bucket containing agent and water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia* (containing 3% ammonia) for every 100 gal 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

- Excessive amounts of water (greater than 1 inch) from rainfall or sprinkler irrigation soon after a preemergent application may cause crop injury. This potential injury can be enhanced if seeding depth is too shallow.
- Within 4 hours of a SANDEA application, avoid using overhead sprinkler irrigations or making applications when conditions favor rainfall.
- Properly crowned beds may minimize the potential for injury when broadcast applications of SANDEA are made over plastic mulch. Significant crop injury could result when spray residue is concentrated in the plant hole by irrigation or rainfall.
- SANDEA can cause injury or crop failure under cool and wet growing conditions that delay early seedling emergence, vigor or growth. Be especially cautious during the first planting of the season when these conditions are likely to occur.
- SANDEA may delay maturity of treated crops.
- 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.
- Use of soil or foliar-applied organophosphate insecticides on SANDEA treated crops may increase the potential for crop injury and/or the severity of the crop injury.
- Avoid spray drift outside of targeted area.
- SANDEA may be applied to labeled crops (including cultivars and/or hybrids of these) and used according to labeled directions. Not all hybrids/varieties have been tested for sensitivity to SANDEA. For untested varieties, a small amount of the field should be sprayed to determine potential sensitivity to its use.
- Thoroughly clean application equipment immediately after SANDEA use and prior to spraying another crop.
- Temporary yellowing or stunting of the crop may occur following SANDEA applications.
- Under certain environmental conditions, SANDEA applied over the top of a blooming crop may result in some bloom loss.
- Use of SANDEA without an adjuvant can result in reduced efficacy.

USE RESTRICTIONS

- Do not apply SANDEA using air assisted (air blast) field crop sprayers.
- Do not apply this product through any type of irrigation system.
- Do not apply more than 2 oz of SANDEA per acre per 12 month period (includes applications to the crop and to row middles/furrows).
- Do not make more than the maximum number of applications per year for each crop.
- CALIFORNIA ONLY SENSITIVE CROP:

PRUNES

Buffer Zones:

1. Aerial applications shall not be made closer than 4 miles.
2. Ground applications shall not be made closer than 1 mile from prunes unless wind direction during the application is away from prunes. When wind direction during the ground application is away from prunes, ground applications shall not be made closer than 1/2 mile from prunes.

COTTON

Buffer Zones:

1. Aerial applications shall not be made closer than 1 mile from cotton.
2. Ground applications shall not be made closer than 1 mile from cotton unless wind direction during the application is away from cotton. When wind direction during the ground application is away from cotton, ground applications shall not be made closer than 1/2 mile from cotton.

FOR OPTIMUM RESULTS

Control typically occurs within 7 to 14 days depending on the weed size, species and growing conditions. Heavy weed infestations should be treated early before the weeds become too competitive with the crop. Good coverage with SANDEA is essential. When applying SANDEA follow "Weed Controlled Chart" and "Application Timing" sections of the label for improved control. When adding approved adjuvant follow mixing instructions regarding adjuvant.

- For best results, wait to cultivate treated soil area for 7 to 10 days after a postemergence application of SANDEA unless otherwise specified.
- (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).
- To maximize control of annual weeds, it may be necessary to use sequential applications of SANDEA, but do not make more than the maximum number of applications per year for each crop. (Multiple flushes of seedlings, or treated perennials may sometimes re-grow from underground stems or roots).

For preemergence applications:

- Use a surfactant as directed in the "Adjuvants" section of this label to control susceptible weeds prior to crop emergence.
- Preemergent weed control may be improved by incorporating SANDEA with irrigation (1/4 to 1/2 inch maximum).
- Preemergence applications of SANDEA when weed coverage prevents contact with the soil will result in reduced or no residual activity.

For postemergence applications:

- Treat young actively growing broadleaf weeds 1 to 3 inches in height.
- Treat actively growing nutsedge plants at the 3 to 5 leaf stage.
- Wait 2 - 3 days after postemergent applications for to overhead irrigation.
- Avoid applications when crops are under drought, stress, disease, or insect damage.

WEEDS CONTROLLED BY SANDEA ALONE
C = Control, S = Suppression, NA = No Activity

WEED SPECIES	PRE-EMERGENT ACTIVITY	POST-EMERGENT ACTIVITY	WEED HEIGHT (IN) 1 OZ/ACRE	WEED HEIGHT (IN) 2 OZ/ACRE
Amaranth, spiny[2] *Amaranth spinosus*	C[2]	C[2]	1 to 3	1 to 6
Bindweed, hedge *Calystegia sepium*	NA	S	1 to 2	1 to 4
Burcucumber *Sicyos angulatus*	NA	S	1 to 3	1 to 12
California arrowhead[3] *Sagittaria montevidensis*	NA	C[3]	1 to 2	*1 to 4*
Chickweed, common *Stellaria media*	C	NA	1 to 3	1 to 5
Cocklebur, common *Xanthium strumarium*	C	C	1 to 9	1 to 14
Corn spurry *Spergula arvensis*	C	C	1 to 2	1 to 4
Dayflower* *Commelina erecta*	C	S	1 to 2	1 to 4
Deadnettle, purple *Lamium purpureum*	C	NA	----	----
Devils Claw *Proboscidea louisianica*	NA	C	1 to 6	1 to 10
Eclipta* *Ecilpta prostrata*	C	S	1 to 2	1 to 4
Flatsedge, rice*[2] *Cyperus iria*	S[2]	C[2]	1 to 9	1 to 12
Fleabane, Philadelphia *Erigeron philadelphicus*	NA	C	1 to 3	1 to 3
Galinsoga *Galinsoga*	C	C	1 to 2	1 to 4
Golden crownbeard* *Verbesina encelioides*	NA	C	1 to 2	1 to 4

WEEDS CONTROLLED BY SANDEA ALONE C = Control, S = Suppression, NA = No Activity				
WEED SPECIES	**PRE-EMERGENT ACTIVITY**	**POST-EMERGENT ACTIVITY**	**WEED HEIGHT (IN) 1 OZ/ACRE**	**WEED HEIGHT (IN) 2 OZ/ACRE**
Goosefoot *Chenopodium*	C	C	1 to 2	1 to 4
Groundsel, common *Senecio vulgaris*	C	NA	----	----
Horseweed/Marestail[2] *Erigeron canadensis*	C[2]	NA	1 to 3	1 to 6
Horsetail *Equisetum*	NA	S	1 to 2	1 to 4
Jimsonweed *Datura stramonium*	C	NA	1 to 4	1 to 8
Jointvetch *Aeschynomene virginica*	NA	C	1 to 2	1 to 4
Kochia[2] *Kochia scoparia*	C[2]	S[2]	1 to 3	1 to 6
Ladysthumb *Polygonum persicaria*	C	C	1 to 3	1 to 6
Lambsquarter, common *Chenopodium album*	C	NA	1 to 3	1 to 5
Lettuce, prickly *Lactuca serriola*	C	NA	1 to 4	1 to 6
Mallow, common *Malva neglecta*	C	NA	1 to 3	1 to 5
Mallow, Venice *Hibiscus trionum*	C	C	1 to 3	1 to 12
Mayweed chamomile (dog fennel) *Anthemis cotula*	C	NA	----	----
Milkweed, common *Asclepias syriaca*	NA	S	1 to 5	1 to 12
Milkweed, honeyvine *Ampelamus albidus*	NA	S	1 to 3	1 to 6
Morningglory, ivyleaf[3] *Ipomoea hederacea*	NA	S[3]	1 to 3	1 to 4
Morningglory, tall[3] *Ipomoea purpurea*	NA	S[3]	1 to 3	1 to 4

WEEDS CONTROLLED BY SANDEA ALONE C = Control, S = Suppression, NA = No Activity				
WEED SPECIES	**PRE-EMERGENT ACTIVITY**	**POST-EMERGENT ACTIVITY**	**WEED HEIGHT (IN) 1 OZ/ACRE**	**WEED HEIGHT (IN) 2 OZ/ACRE**
Mustard, wild *Sinapis arevensis*	C	C	1 to 6	1 to 10
Nutsedge, yellow[1] *Cyperus esculentus*	S	C[1]	3 to 6	3 to 12
Nutsedge, purple[1] *Cyperus rotundus*	S	C[1]	3 to 6	3 to 12
Passionflower, maypop *Passiflora incarnata*	NA	C	1 to 3	1 to 3
Pigweed, redroot[2] *Amarunthus retrofiexus*	C[2]	C[2]	1 to 3	1 to 6
Pigweed, smooth[2] *Amaranthus hybridus*	C[2]	C[2]	1 to 3	1 to 6
Plantain *Plantago major*	C	NA	----	----
Pokeweed, common *Phytolacca Americana*	NA	C	1 to 3	1 to 6
Purslane *Portulaca oleracea*	S	NA	----	----
Radish, wild *Raphanus raphanistrum*	C	C	1 to 4	1 to 8
Ragweed, common[2] *Ambrosia artemisiifolia*	C[2]	C[2]	1 to 9	1 to 12
Ragweed, giant[2] *Ambrosia trifida*	NA	C[2]	1 to 3	1 to 6
Redstem[3] *Ammania auriculata*	NA	C[3]	1 to 2	1 to 4
Ricefield Bulrush[2] *Scirpus mucronatus*	NA	C[2]	1 to 2	1 to 4
Sesbania, hemp *Sesbania exaltata*	S	C	1 to 3	1 to 6
Sharppoint fluvellin*[4] *Kickxia elatine*	C	C[4]	----	----
Shepherdspurse *Capsella bursa-pastoris*	C	S	1 to 3	1 to 6

WEEDS CONTROLLED BY SANDEA ALONE C = Control, S = Suppression, NA = No Activity				
WEED SPECIES	**PRE-EMERGENT ACTIVITY**	**POST-EMERGENT ACTIVITY**	**WEED HEIGHT (IN) 1 OZ/ACRE**	**WEED HEIGHT (IN) 2 OZ/ACRE**
Sida, prickly* *Sida spinosa*	NA	S	1 to 2	1 to 4
Smallflower umbrella sedge[2] *Cyperus difformis*	NA	C[2]	1 to 2	1 to 4
Smartweed, Pennsylvania *Polygonum pensylvanicum*	C	S	1 to 3	1 to 6
Sunflower *Helianthus*	C	C	1 to 12	1 to 15
Velvetleaf *Abutilon theophrasti*	C	C	1 to 9	1 to 12
Willowherb *Epilobium ciliatum*	C	NA	----	----
Yellowcress, creeping *Rorippa sylvestris*	C	C	1 to 2	1 to 4

* **Except California**

1. Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.
2. Certain biotypes of this weed species are known to be resistant to ALS herbicides. Where these ALS-resistant biotypes are known to exist, an appropriate registered herbicide, active against the weed and with another mode of action, should be used alone or in tank mixtures with SANDEA to control these biotypes.
3. Use maximum label rates for best results.
4. Postemergence applications must be made when the basal diameter of the weed is the size of a U.S. quarter or smaller, and before stem elongation.

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APPLICATION INSTRUCTIONS
PREHARVEST INTERVAL

The required days between last application and harvest (PHI) are given in ( ) after each crop name.

CUCURBIT CROPS

CROP	OZ/ACRE	DIRECTIONS FOR USE
CUCUMBERS (14) *(including pickles)* **MUSKMELON** *(including cantaloupes)* **(57), HONEYDEWS (57), AND CRENSHAW MELONS (57)**	1/2 - 1	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. **Direct-seeded: Bare ground (no mulch)** • **Preemergence** - Apply SANDEA after planting, but prior to soil cracking. Use the lower rate on lighter textured soils with low organic matter. • **Postemergence** - Apply SANDEA after the crop has reached at least 3 to 5 true leaves but before first female flowers appear. SANDEA can be applied as an over-the-top application, a directed spray application, or with crop shields to minimize contact of the herbicide with the crop. **Direct-seeded: Plastic mulch** • **Pre-seeding** - Apply SANDEA following final bed shaping and just prior to the installation of the plastic mulch. Crop may be seeded into this treated area no sooner than 7 days after application and the installation of the plastic mulch unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. • **Postemergence** - Apply SANDEA after the crop has at least 3 to 5 true leaves but before first female flowers appear. SANDEA can be applied as an over-the-top application, a directed spray application, or with crop shields to minimize contact of the herbicide with the crop. Additional phytotoxicity may occur when applications are made over plastic due to concentration of product in the planting hole. **NOTE:** Over-the-top applications on plastic are not allowed in Northeastern and Midwestern states. **Transplanted: Bare ground (no mulch)** • **Pre-transplant** - Apply SANDEA as a pre-transplant application. Crop may be transplanted into this treated area no sooner than 7 days after application unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. Care should be taken to limit movement of SANDEA-treated surface soil during the transplanting process since if treated soil is moved into the transplant hole injury can occur.

CROP	OZ/ACRE	DIRECTIONS FOR USE
CUCUMBERS (14) *(including pickles)* **MUSKMELON** *(including cantaloupes)* **(57), HONEYDEWS (57), AND CRENSHAW MELONS (57)** *(cont'd)*	1/2 - 1	• **Post-transplant** - Apply SANDEA to transplants that are established and actively growing. Applications should not be made until plants are actively growing and in the 3 to 5 true leaf stage or no sooner than 14 days after transplanting unless local conditions demonstrate safety at an earlier interval, but before first female flowers appear. SANDEA may be applied as an over-the-top application, a directed spray application, or with crop shields to minimize contact of the herbicide with the crop. **Transplanted: Plastic mulch** • **Pre-transplant** - Apply SANDEA following final bed shaping and just prior to the installation of the plastic mulch. Crop may be transplanted into this treated area no sooner than 7 days after the application and the installation of the plastic mulch unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. Care should be taken to limit movement of SANDEA-treated surface soil during the transplanting process since if treated soil is moved into the transplant hole injury can occur. • **Post-transplant** - Apply SANDEA to transplants that are established, actively growing and in the 3 to 5 true leaf stage or no sooner than 14 days after transplanting unless local conditions demonstrate safety at an earlier interval, but before first female flowers appear. Apply SANDEA as an over-the-top application, a directed spray application, or with crop shields to minimize contact of the herbicide with the crop. Additional phytotoxicity can occur when applications are made over plastic due to concentration of product in the transplant hole. **NOTE:** Over-the-top applications on plastic are not allowed in Northeastern and Midwestern states.
		Direct-seeded and Transplant: • **Row Middle/Furrow Applications** - Apply SANDEA between rows of direct-seeded or transplanted crop. Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.

CROP	OZ/ACRE	DIRECTIONS FOR USE
CUCUMBERS (14) *(including pickles)* **MUSKMELON** *(including cantaloupes)* **(57), HONEYDEWS (57), AND CRENSHAW MELONS (57)** *(cont'd)*	1/2 - 1	**Split Applications for Nutsedge:** • Preemergence followed by postemergence for nutsedge control To maximize control of nutsedge, it may be necessary to use a postemergence application to those areas where the nutsedge has emerged later following a preemergence application. For these situations, use a spot treatment method treating only those areas of emerged nutsedge. Application rate should not exceed 1.0 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. Avoid contact of the herbicide with the planted crop. • Postemergence followed by postemergence for nutsedge control To maximize control of nutsedge, it may be necessary to use a second postemergence spot application to those areas where the nutsedge has emerged or re-grown. For these situations, use a spot treatment method treating only those areas of emerged nutsedge. Allow a minimum of 21 days between applications. Application rate should not exceed 1.0 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. Avoid contact of the herbicide with the planted crop.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Runners that come in contact with the plastic can pick up residual SANDEA and may exhibit a visual crop response. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. (includes applications to the crop and to row middle/furrows)	

CROP	OZ/ACRE	DIRECTIONS FOR USE
PUMPKINS and WINTER SQUASH (30)	1/2 - 3/4	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. For all applications where possible, apply 1/2 to 3/4 inch of sprinkler irrigation to settle the soil after planting and prior to application. **Direct-seeded:** • **Preemergence** - Apply SANDEA after planting, but prior to soil cracking. Use the lower rates on lighter textured soils with low organic matter. • **Postemergence** - Apply SANDEA after the crop has reached the 2 to 5 true leaf stage, preferably 4 to 5 true leaves, but before first female flowers appear. Use lower rates on lighter textured soils with low organic matter. **Transplanted:** • **Pre-transplant** - Apply SANDEA prior to transplant. Crop may be transplanted into this treated area no sooner than 7 days after application unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. Care should be taken to limit movement of SANDEA-treated surface soil during the transplanting process since if treated soil is moved into the transplant hole injury can occur. • **Post-transplant** - Apply SANDEA to transplants that are established, actively growing and in the 3 to 5 true leaf stage or no sooner than 14 days after transplanting unless local conditions demonstrate safety at an earlier interval, but before first female flowers appear. SANDEA can be applied as an over-the-top application, a directed spray application or with crop shields to minimize contact of the herbicide with the crop.
	1/2 - 1	Apply uniformly as a broadcast spray with ground equipment in a minimum of 15 gal of water per acre. **FOR PROCESSING ONLY - Direct-seeded:** • **Preemergence** - Apply SANDEA after planting, but prior to soil cracking. Use the lower rates on lighter textured soils with low organic matter. • **Postemergence** - Apply SANDEA after the crop has reached the 2 to 5 true leaf stage, but before first female flowers appear. Use lower rates on lighter textured soils with low organic matter. **Direct-seeded and Transplant:** • **Row Middle/Furrow Applications** - Apply SANDEA between rows of direct-seeded or transplanted crop while avoiding contact of the herbicide with the planted crop.

CROP	OZ/ACRE	DIRECTIONS FOR USE
PUMPKINS and WINTER SQUASH (30) *(cont'd)*	1/2 - 1	If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • When rainfall or irrigation in excess of 3/4 inch occurs following a preemergence application and the crop is in the germination to early-seedling stage, there is the potential for significant plant stunting to occur. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications of 1 oz/A or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. (includes applications to the crop and to row middles).	
SUMMER SQUASH FOR PROCESSING (30) **(AR, OK and MO only)**	2/3 - 1	Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. **Direct-seeded:** • **Preemergence** - Apply SANDEA after planting, but prior to cracking. Use the lower rate on lighter textured soils with low organic matter.
	1/2 - 1	**Direct-seeded and Transplant:** • **Row Middle/Furrow Applications -** Apply SANDEA between rows of direct-seeded or transplanted summer squash. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed. Avoid contact of the herbicide with the planted crop.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications of 1 oz/A or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. (includes applications to the crop and to Row Middle/Furrows)	

CROP	OZ/ACRE	DIRECTIONS FOR USE
WATERMELONS (57) Only: AL, AR, AZ, CA, CT, DE, FL, GA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, NH, NJ, NY, OH, OK, OR, PA, RI, SC, TN, TX, VA, VT, WA, WV, WI	1/2 - 3/4	Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. **Direct-seeded: Bare ground** • **Preemergence** - Apply SANDEA after planting, but prior to soil cracking. Use the lower rate on lighter textured soils with low organic matter. Where soil is fumigated prior to planting, allow at least five days after soil fumigation before an application of SANDEA. **Direct Seeded: Plastic mulch** • **Pre-seeding** - Apply SANDEA following final bed shaping and just prior to the installation of the plastic mulch. Watermelons should be seeded into this treated area no sooner than 7 days after the application and the installation of the plastic mulch unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. SANDEA treated soil from the soil surface into the planting hole can result in crop injury. Care should be taken to limit movement of SANDEA treated surface soil during the transplant process. **Transplanted: Bare ground** • **Pre-transplant** - Apply SANDEA pre-transplant. Watermelons should be transplanted into this treated area no sooner than 7 days after application unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. Care should be taken to limit movement of SANDEA-treated surface soil during the transplanting process since if treated soils is moved into the transplant hole injury can occur. **Transplanted: Plastic mulch** • **Pre-transplant** - Apply SANDEA following final bed shaping and just prior to the installation of the plastic mulch. Watermelons should be transplanted into this treated area no sooner than 7 days after the application and the installation of the plastic mulch unless local conditions demonstrate safety at an earlier interval. Use the lower rate on lighter textured soils with low organic matter. Care should be taken to limit movement of SANDEA treated surface soil during the transplanting process since if treated soils is moved into the transplant hole injury can occur.

CROP	OZ/ACRE	DIRECTIONS FOR USE
WATERMELONS (57) **Only: AL, AR, AZ, CA, CT, DE, FL, GA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, NH, NJ, NY, OH, OK, OR, PA, RI, SC, TN, TX, VA, VT, WA, WV, WI** (*cont'd*)	1/2 - 1	**Direct-seeded and Transplant:** • **Row Middle Applications** - Apply SANDEA between rows of direct-seeded or transplanted crop, while avoiding contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Runners that come in contact with the plastic can pick up residual SANDEA and may exhibit a visual crop response. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 1 oz/A of product by weight (0.047 lb a.i./acre) per 12 month period. (includes applications to the crop and to row middle)	
OTHER COMMODITIES IN THE CUCURBIT VEGETABLES GROUP *Including but not limited to summer squash, gourd, watermelon* **(See text for PHI)**	1/2 - 1	**Direct-seeded and Transplant:** • **Row Middle/Furrow Applications** - Apply SANDEA between rows of direct-seeded or transplanted cucurbit vegetables while avoiding contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply within 30 days of harvest for squash/cucumber subgroup. • Do not apply within 57 days of harvest for melon subgroup. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period.	

FRUITING VEGETABLE CROPS

CROP	OZ/ACRE	DIRECTIONS FOR USE
PEPPERS, BELL/ CHILE (30) **AZ, CA, NM, TX and OK Only**	1/2 - 1	Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. **Direct-seeded:** • **Postemergence** - Apply SANDEA as a directed spray 28 days after planting or when the plants have reached a minimum of six inches in height, but prior to flowering. Use lower rates on lighter textured soils with low organic matter. **Transplanted:** • **Post-transplant** – Apply SANDEA as a directed spray 21 days after transplanting or when the plants have reached a minimum of six inches in height, but prior to flowering.
	1/2 - 1	**Direct-seeded and Transplant:** • **Row Middle/Furrow Applications** - Apply SANDEA between rows of direct-seeded or transplanted peppers while avoiding contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Not all pepper varieties have been tested. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. (includes applications to the crop and to row middle/furrows).	

CROP	OZ/ACRE	DIRECTIONS FOR USE
TOMATOES (30)	1/2 - 1	Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. **Direct-seeded:** • **Postemergence** - Apply SANDEA over-the-top once tomatoes have reached the 4 leaf stage through 30 days prior to harvest. Applications following bloom could cause some bloom drop under certain environmental conditions. Apply as a directed spray or with crop shield when these conditions are present. **Transplanted:** • **Pre-transplant on Bareground** - Apply SANDEA as a pre-plant application to bareground. Tomatoes can be transplanted into this treated area 7 days after the application unless local conditions demonstrate safety at an earlier interval. Use lower rate on lighter textured soils with low organic matter. SANDEA treated soil from the soil surface into the transplant hole can result in crop injury. Care should be taken to limit the movement of treated surface soil during the transplant process. • **Pre-transplant Under Plastic Mulch Applications** - Apply SANDEA following final bed shaping and just prior to the installation of the plastic mulch. Tomatoes can be transplanted into this treated area 7 days after the application and the installation of the plastic mulch unless local conditions demonstrate safety at an earlier interval. SANDEA treated soil from the soil surface into the transplant hole can result in crop injury. Care should be taken to limit movement of SANDEA treated surface soil during the transplant process. • **Post-transplant** - Apply SANDEA over-the-top, post directed or with crop shields to tomato transplants that are established, actively growing and a minimum of 14 days after transplanting unless local conditions demonstrate safety at an earlier interval. Applications following bloom could cause some bloom drop under certain environmental conditions. Application as a directed spray or with crop shields should be considered when conditions are present. **Direct-seeded and Transplant:** • **Row Middle/Furrow Applications -** Apply SANDEA between rows for the control of nutsedge and listed broadleaf weeds. Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.

CROP	OZ/ACRE	DIRECTIONS FOR USE
TOMATOES (30) (*cont'd*)	1/2 - 1	**Split Applications for Nutsedge** **Direct-seeded and Transplant:** • **Pre-transplant followed by postemergence for nutsedge control** To maximize control of nutsedge, it may be necessary to use a postemergence application to those areas where the nutsedge has broken through the plastic mulch. For these situations, use a spot treatment method treating only those areas of emerged nutsedge. Application rate should not exceed 3/4 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. SANDEA treated soil in the transplant hole may result in crop injury. If transplanting after herbicide application, care should be taken to limit movement of SANDEA treated soil during the transplant process. • **Postemergence followed by postemergence for nutsedge control** To maximize control of nutsedge, it may be necessary to use a postemergence spot application to those areas where the nutsedge has germinated or regrown. Allow a minimum of 21 days between applications. Application rate should not exceed 1 oz product per treated acre in these areas.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. (Includes applications to the crop and to row middle/furrows).	
FRUITING VEGETABLES GROUP (30) *Including but not limited to eggplant, peppers, tomatoes*	1/2 - 1	**Direct-seeded and Transplant:** • **Row Middle/Furrow Applications** - Apply SANDEA between rows of direct-seeded or transplanted fruiting vegetables while avoiding contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.

CROP	OZ/ACRE	DIRECTIONS FOR USE
FRUITING VEGETABLES GROUP (30) *Including but not limited to eggplant, peppers, tomatoes (Cont'd)*	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period.	

PERMANENT CROPS

CROP	OZ/ACRE	DIRECTIONS FOR USE
13-07B HIGHBUSH BLUEBERRIES (14)	1/2 - 2/3 1 - 4 year bushes 1/2 -1 >4 year bushes	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. Apply as a directed spray application to the ground on either side of the row. • **Preemergence and Postemergence directed application for control of labeled weeds:** Apply SANDEA as a single or sequential directed spray application. If small weeds are present tank mix with a postemergence broad-spectrum type herbicide to maximize and enhance the spectrum of broadleaf and grass control. Preemergence applications of SANDEA when ground cover prevents contact with the soil will result in reduced or no residual activity • **Postemergence directed application for control of nutsedge:** Apply SANDEA as a single directed spray application when nutsedge is fully emerged. Alternatively, two directed spray applications can be made. Apply first directed spray application to the initial nutsedge flush when it has reached the 3 to 5 leaf stage. If a second treatment is needed, it may be applied later in the season directed to secondary nutsedge emergence. To maximize control, apply SANDEA when nutsedge plants are in the 3 to 5 leaf stage. For best results, use a minimum of 0.75 oz/A of SANDEA. SANDEA may not control ALS resistant weeds.
	PRECAUTIONS: • Contact of SANDEA with the blueberry bushes should be avoided. Contact will result in temporary chlorosis of treated leaves. • Use of a shielded boom is recommended. • Consult "Use Precautions" and "For Optimum Results" of label for important usage information.	

PERMANENT CROPS

CROP	OZ/ACRE	DIRECTIONS FOR USE
13-07B HIGHBUSH BLUEBERRIES (14) *(Cont'd)*		**RESTRICTIONS:** • Minimum of 45 days between applications. • Do not concentrate the application rate into the treated swath. • Do not apply to bushes established less than one year or to plants under stress. • Do not apply to 'Elliott' variety bushes established less than four years. • Do not apply to areas where water is known to pond for periods of time following rainfall. • Do not contact foliage or green wood renewal canes with SANDEA. Herbicide uptake via contacted foliage or green canes will result in plant injury. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.
13-07A CANEBERRY SUBGROUP (14) (Blackberry; loganberry; raspberry, black and red; wild raspberry; cultivars, varieties and/or hybrids of these) **(For use in Oregon and Washington only)**	3/4 – 1 1/3	Apply SANDEA uniformly with ground equipment in a minimum of 15 gal of water per acre. • Apply as a broadcast directed spray application to the ground on either side of the row. Applications of SANDEA should be made pre-emergence up to and including primocane burndown. Do not apply to developing primocanes in season until hardened off. • **Preemergence and Postemergence directed application for control of labeled weeds:** Apply a single or sequential application based on weed pressure. If small weeds are present tank mix with a postemergence broad-spectrum type herbicide to maximize and enhance the spectrum of broadleaf and grass control. For preemergence control, do not apply SANDEA if excessive weed growth prevents contact with the ground. • **Postemergence directed application for control of nutsedge:** Apply SANDEA as a single directed spray application when nutsedge is fully emerged. Alternatively, two directed spray applications can be made. Apply first directed spray application to the initial nutsedge flush when it has reached the 3 to 5 leaf stage. If a second treatment is needed, it may be applied later in the season directed to secondary nutsedge emergence. To maximize control, apply SANDEA when nutsedge plants are in the 3 to 5 leaf stage. For best results, use a minimum of 0.75 oz/A of SANDEA.
	1	**Rope-wick or Wiper Applications:** • Row Middle/Furrow Application – Apply using a minimum of 1 oz per acre.

CROP	OZ/ACRE	DIRECTIONS FOR USE
13-07A CANEBERRY SUBGROUP (14) (Blackberry; loganberry; raspberry, black and red; wild raspberry; cultivars, varieties and/ or hybrids of these) **(For use in Oregon and Washington only)** *(Cont'd)*		**PRECAUTIONS:** • For best results, use a non-ionic surfactant (NIS) with applications. • Consult "Use Precautions" and "For Optimum Results" for important usage information. • Contact of SANDEA with the caneberry bushes should be avoided. Contact will result in temporary chlorosis of treated leaves. • Use of a shielded boom is recommended. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS:** • Minimum of 45 days between applications. • Do not concentrate the application rate into the treated swath. • Do not apply to areas where water is known to pond for periods of time following rainfall. • Do not apply to bushes established less than one year or to plants under stress. • Do not contact foliage or green wood renewal canes with SANDEA. Herbicide uptake via contacted foliage or green canes will result in plant injury. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by air. • Do not apply to developing primocanes in season until hardened off.
11-10 POME FRUIT GROUP (14) (West of the Rockies) Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/ or hybrids of these	3/4 – 2	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. • **Postemergence application for control of nutsedge:** Apply SANDEA as a single broadcast application to orchard floor on either side of the row when nutsedge is fully emerged (early - midsummer). Alternatively, two applications can be made. Apply first application to the initial nutsedge flush when it has reached the 3-5 leaf stage. If a second treatment is needed, apply SANDEA later in the season directed to secondary nutsedge emergence. To maximize nutsedge control, do not apply if nutsedge has exceeded 12 inches in height. • **Preemergence and Postemergence application for control of labeled broadleaf weeds:** Apply SANDEA as a single or sequential broadcast application to orchard floor on either side of the row based on weed pressure. If small weeds are present, to maximize and enhance the spectrum of broadleaf control tank mix with a postemergence broad spectrum type herbicide. Preemergence applications of SANDEA when ground cover prevents contact with the soil will result in reduced or no residual activity.

CROP	OZ/ACRE	DIRECTIONS FOR USE
11-10 POME FRUIT GROUP (14) (West of the Rockies) Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these *(Cont'd)*		**PRECAUTIONS:** • For best results, use a NIS or penetrating type surfactant. • Avoid spray contact with tree foliage and fruit with spray or drift. • Consult "Use Precautions" and "For Optimum Results" sections for important usage information. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS:** • Do not apply when orchard temperatures exceed 85°F at the time of application. • Do not concentrate the application rate into the treated swath. • Do not apply to trees established in a permanent orchard less than one calendar year. • Do not apply to nursery stock. • Minimum of 45 days between applications. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.
11-10 POME FRUIT GROUP (14) (East of the Rockies) (Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these)	1/2 - 1	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. • **Postemergence application for control of nutsedge:** Apply SANDEA as a single broadcast application to orchard floor on either side of the row when nutsedge is fully emerged. Alternatively, two applications can be made. Apply first application to the initial nutsedge flush when it has reached the 3-5 leaf stage. If a second treatment is needed, it may be applied later in the season directed to secondary nutsedge emergence. To maximize nutsedge control, apply SANDEA when nutsedge plants are in the 3-5 leaf stage. For best results, use a minimum of 0.75 oz/A of SANDEA. • **Preemergence and Postemergence application for control of labeled broadleaf weeds:** Apply SANDEA as a single or sequential broadcast application to orchard floor on either side of the row based on weed pressure. For best results, apply to bare ground. If small weeds are present, to maximize and enhance the spectrum of broadleaf control tank when ground cover prevents contact with the soil will result in reduced or no residual activity. Mix with a postemergence broad-spectrum type herbicide. Preemergence applications of SANDEA when ground cover prevents contact with the soil will result in reduced or no residual activity.

CROP	OZ/ACRE	DIRECTIONS FOR USE
11-10 POME FRUIT GROUP (14) (East of the Rockies) (Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these) *(Cont'd)*		**PRECAUTIONS:** • For best results, use a NIS with postemergence applications. • Avoid spray or drift contact with tree foliage and fruit. • Consult "Use Precautions" and "For Optimum Results" sections for important usage information. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS:** • Do not apply when orchard temperatures exceed 85°F at the time of application. • Do not concentrate the application rate into the treated swath. • Do not apply to trees established in a permanent orchard less than one calendar year. • Do not apply to nursery stock. • Minimum of 45 days between applications. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.
TREE NUT CROP GROUP 14 including PISTACHIOS (1) ***(Excluding Almonds)***	2/3 - 1 1/3	Apply SANDEA as a directed spray to established tree nut crops. Established tree nut crops are defined as those that have been transplanted into their final growing location for a period of at least 12 months, and where the soil has firmly settled around the roots from packing and rainfall or irrigation. • Extreme care must be exercised to avoid contact of spray containing SANDEA with trunk, stems, roots, or foliage of tree nut crops, or severe damage or death may result. • Labeled rates are based on broadcast treatment. For band applications reduce the broadcast rate of SANDEA in proportion to the area actually sprayed. For all applications, adjust the rate of SANDEA to account for high volume output nozzles, such as off-center nozzles, and overlaps in the spray pattern. Use of controlled droplet application, spot application, irrigation, or chemigation equipment for application of this product is not recommended due to variations in the actual application rate. Excessive application rates can result in severe tree injury or death.

CROP	OZ/ACRE	DIRECTIONS FOR USE
TREE NUT CROP GROUP 14 including PISTACHIOS (1) ***(Excluding Almonds)*** (*cont'd*)	2/3 - 1 1/3	• Use a maximum of 1 oz by weight (0.047 lb active ingredient) SANDEA per acre on coarse textured soils classified as sands, loamy sands, and sandy loams with less than 18% clay and more than 65% sand, or on soils with less than 1% organic matter. Do not apply to gravely soils. For the best results apply SANDEA in the spring when nutsedge is not drought stressed and maximize the interval between application and subsequent irrigation. • Mechanical cultivation or mowing may be required to control weed species not on the SANDEA label. If so, a sequential treatment may be required to control weeds in areas of disturbed soil. • If SANDEA is applied to trees that have been weakened by or recovering from stress caused by, but not limited to, excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, winter injury, soil pan of any type, nutrient deficiency, or mechanical damage, severe injury or death may result. Application of SANDEA to weakened or stressed trees as described, especially in soils with less than 1% organic matter, significantly increases the probability of severe injury or death. • SANDEA may be applied at 2/3 to 1 1/3 oz by weight per acre in combination with glyphosate agricultural herbicides for control of emerged annual grasses, broadleaf weeds and nutsedge.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Refer to the "Rotational Crop Restrictions" for applicable rotational crop information. • Do not apply more than 2 applications or 2 2/3 oz/A of product by weight (0.125 lb active ingredient) per 12 month period. On coarse textured soils classified as sand, loamy sand, and sandy loam with less than 18% clay and more than 65% sand, or on soils with less than 1% organic matter, do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb ai/acre) per 12 month period. • Do not apply by rope-wick wiper application.	

FIELD CROPS

CROP	OZ/ACRE	DIRECTIONS FOR USE
BEANS, DRY (30)	1/2 - 2/3	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. **Direct-seeded:** • **Preemergence** - Apply SANDEA after planting but prior to soil cracking. Use the lower rate on lighter textured soils with low organic matter. • **Postemergence** - Apply SANDEA when plants have 1 to 3 trifoliate leaves, but before flowering. Applications with a weed size of 6 inches or below will allow for the greatest control. Make only one broadcast application per season. • Only apply as a post directed row middle or furrow application in the state of California. **Tank Mixtures for Dry Beans:** • It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture. • Tank mixtures for additional broadleaf weed control can be added. • Tank mixtures for postemergent grass control, including but not limited to TARGA® or other graminicides can be added.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" sections for important usage information. • Not all varieties have been tested for tolerance. Under adverse growing conditions (dry or excessive moisture, cool weather, etc.), maturity of the treated crop may be delayed which can influence harvest date, yield, and quality. • Use of COC or MSO adjuvant may cause temporary crop response when plants are under stress. **RESTRICTIONS:** • COC or MSO adjuvants can only be used in the states of CO, MN, NE, ND, and SD. • Do not apply more than 2 applications of 2/3 OZ/A per crop cycle, not to exceed 2 OZ/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.	
	1/2 - 1	• Row Middle/Furrow Applications for Dry Beans - Apply SANDEA between crop rows while avoiding contact of the herbicide with the planted crop. Reduce rate and spray volume in proportion to area actually sprayed.

CROP	OZ/ACRE	DIRECTIONS FOR USE
BEANS, DRY (30) (*cont'd*)	**PRECAUTIONS:** • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 1 oz/A of product by weight (0.047 lb a.i./acre) per crop-cycle, not to exceed 2 oz/A (0.094 lb a.i./acre) per 12 month period (includes applications to the crop and to row middles/furrows). • Do not apply by rope-wick wiper application.	
BEANS, SUCCULENT SNAP (30) *(including lima beans)*	1/2 - 1	**Direct-seeded:** • **Preemergence** - Apply SANDEA after planting but prior to soil cracking. Use the lower rate on lighter textured soils with low organic matter. • Apply uniformly with ground equipment in a minimum of 15 gal of water per acre.
	1/2 - 2/3	**Direct-seeded:** • **Postemergence** – Apply SANDEA over-the-top after the crop has reached the 2 to 4 trifoliate leaf stage, but before flowering. Use the lower rate on lighter textured soils with low organic matter. Directed sprays may limit crop injury.
	1/2 - 1	• **Row Middle/Furrow Applications -** Apply SANDEA between crop rows while avoiding contact of the herbicide with the planted crop. Reduce rate and spray volume in proportion to area actually sprayed.
	PRECAUTIONS: • Application of SANDEA may cause temporary stunting. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS:** • Do not apply more than 2 applications or 1 oz/A of product by weight (0.047 lb a.i./acre) per crop-cycle, not to exceed 2 oz/A (0.094 lb a.i./acre) per 12 month period (includes applications to the crop and to row middles/furrows). • Do not apply by rope-wick wiper application.	
	1/2 – 1	**Preplant or At Planting:** Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. • Incorporation: Apply and incorporate 1/2 to 1 oz SANDEA with EPTAM 7-E at a depth of approximately 2 inches just before planting. Use lower rate on lighter textured soils with low organic matter. Refer to EPTAM 7-E label for specific incorporation directions. Rotary hoe lightly during or shortly after emergence of the beans to break any crust that occurs.

CROP	OZ/ACRE	DIRECTIONS FOR USE
6B SUCCULENT SHELLED PEA AND BEAN SUBGROUP (30) (Any succulent shelled cultivar of bean (Phaseolus) including lima bean, green; broad bean, succulent; (vigna) including blackeyed pea, cowpea, southern pea	1/2	**Preemergence application for control of labeled broadleaf weeds -** Apply SANDEA as a single broadcast application after planting but before crop emergence. Application of SANDEA may cause significant, temporary stunting and delay maturity of peas resulting in delayed harvest. This product is available to the end-user /grower solely to the extent that the benefit and utility, in the sole opinion of the end-user/ grower, outweigh the extent of potential injury associated with the use of this product.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS**: • Do not apply more than 1 application or 1/2 oz/A of product by weight (0.023 lb a.i./acre) per 12 month period. • Do not feed to livestock. • Do not apply SANDEA to English peas and garden peas. • Do not apply by rope-wick wiper application.	
	1/2 - 1	**Postemergence** – Apply SANDEA uniformly with ground equipment in a minimum of 15 gal of water per acre. Apply as a directed spray when plants have 2 to 4 trifoliate leaves and before flowering. Make one broadcast application. Directed sprays are recommended to limit crop injury. Not all varieties have been tested for tolerance. Under adverse growing conditions (dry or excessive moisture, cool weather, etc.), maturity of the treated crop may be delayed which can influence harvest date, yield, and quality. For untested varieties, a small area of the field should be sprayed to determine potential sensitivity to its use.
	PRECAUTIONS: • For best results, use a NIS with applications. • Consult "Use Precautions" and "For Optimum Results" for important usage information. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS**: • Do not apply more than 2 applications or 1 oz/A of product by weight (0.047 lb a.i./acre) per crop cycle, not to exceed 2 oz/A (0.094 lb a.i./ acre) per 12 month period. • Do not feed to livestock. • Do not apply SANDEA to Adzuki beans, English peas and garden peas. • Do not apply by rope-wick wiper application.	

CROP	OZ/ACRE	DIRECTIONS FOR USE
CORN, FIELD AND FIELD CORN GROWN FOR SEED (30)	2/3 - 1 1/3	**Postemergence** - Apply SANDEA over-the-top or with drop nozzles from the spike-through layby stage of field corn. **Tank Mixtures for Corn Only** It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture. Ensure that spray equipment is set up to avoid applying an excessive rate directly over the rows and into the whorl of the cornstalk. To insure good spray coverage of weeds and to reduce the risk of spraying directly into the whorl, tank mix applications made after corn is 24 inches tall should be directed or semi-directed using drop nozzles. **SANDEA Post Field Corn Applications** It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture. Before mixing in the spray tank, it is recommended that compatibility be tested by mixing all components in a small container in proportionate quantities. For tank mixtures, add individual formulations to a spray tank in the following sequence: water soluble bags, dry flowables, emulsifiable concentrates, drift control additive, water soluble liquids followed by NIS or COC. Tank mixtures should not be applied if the crop is under severe stress due to drought, water-saturated soils, poor fertility (especially low nitrogen levels), hail, frost, insects or when the maximum daytime temperature is above 92° F at time of application. Tank mix applications under these conditions may cause temporary crop injury. Tank mixtures for additional broadleaf weed control, including but not limited to 2,4-D, Armezon™, atrazine, Buctril®, Callisto®, dicamba, Impact®, Laudis® or Yukon® can be added. Tank mixtures for postemergence grass control, including but not limited to Accent®, Beacon®, Option® or Steadfast® can be added. Tank mixtures for additional postemergence grass and broadleaf control, including but not limited to Roundup® brands or glyphosate (glyphosate-tolerant corn only) or Ignite® and Liberty® (LibertyLink® hybrids only) can be added. **SANDEA and SOIL RESIDUALS in emerged corn** Alachlor, acetochlor, metolachlor and dimethenamid may be tank mixed with SANDEA for residual control of foxtails and other grass weeds in field corn.

CROP	OZ/ACRE	DIRECTIONS FOR USE
CORN, FIELD AND FIELD CORN GROWN FOR SEED (30) (*cont'd*)	2/3 - 1 1/3	**SANDEA Soil Applications** When used exclusively with Pioneer IR field corn hybrids, SANDEA may be soil applied at the rate of 1 1/3 to 2 oz per acre (0.062 to 0.094 lb of active ingredient per acre) for residual control of velvetleaf, common cocklebur, common lambsquarters, common ragweed, pigweed, smartweed, sunflower and other difficult to control weeds. This product is labeled as an early pre-plant surface-applied, pre-plant incorporated, or preemergence treatment. SANDEA offers effective broadleaf control across all tillage systems and is intended for use in tank mixtures with preemergence grass herbicides, including but not limited to: alachlor, acetochlor, metolachlor and dimethenamid active ingredient materials Refer to the labels for these products, or any other grass preemergence herbicide used for use instructions, weeds controlled, and application restrictions.
	PRECAUTIONS: • Refer to "Mixing Instructions" and "Use Rate Guides" for detailed information on SANDEA application. **RESTRICTIONS**: • Do not apply more than 2 applications or 2 2/3 oz/A of product by weight (0.125 lb a.i./acre) per 12 month period. • Refer to the "Rotational Crop Restrictions" for applicable rotational crop information. • Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage. • Do not apply by rope-wick wiper application.	
CORN, SWEET AND POPCORN (30)	2/3 - 1	Apply SANDEA over-the-top or with drop nozzles from the spike through layby stage of the corn. If necessary, a sequential treatment of this product at 2/3 oz per acre may be applied only with drop nozzles semi-directed or directed to avoid application into the corn plant whorl.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not apply more than 2 applications of SANDEA per 12 month period in sweet corn or popcorn. • Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage. • Do not use SANDEA on "Jubilee" sweet corn. All varieties have not been tested for sensitivity to SANDEA. • Do not apply by rope-wick wiper application.	

CROP	OZ/ACRE	DIRECTIONS FOR USE
COTTON (28)	2/3 - 1 1/3	Apply SANDEA as a directed spray in hooded equipment for postemergent weed control in emerged cotton. Applications may be made anytime after cotton emergence until row closure inhibits use of hooded spray equipment. The applicator is responsible for maintaining proper spray speed and equipment position so spray mist does not contact cotton plants.
		PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not apply more than 2 applications or 1 1/3 oz/A of product by weight (0.062 lb a.i./acre) per 12 month period. • Refer to the "Rotational Crop Information" for applicable rotational crop restrictions. • Do not apply by rope-wick wiper application.
MILLET, PROSO (0 Millet Forage) (50 Millet Grain and Straw) (37 Millet Hay)	1/2 - 2/3	Millet Growth Stage: SANDEA, alone, can be applied from the 2 leaf through layby stage (before grain head emergence). Temporary stature reduction may occur to the crop following application of SANDEA if the proso millet is under stress. This effect will be most evident 7 to 10 days after application. The crop will quickly recover under normal growing conditions. Applications should be made after weed emergence and actively growing. If adding a tank mix, refer to the tank mix section of this label. **TANK MIXTURES** It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture. Tank mixtures for additional broadleaf weed control, including but not limited to 2,4-D, and dicamba can be added. Insecticide and fungicide products can be tank mixed with SANDEA.

<table>
<tr><th>CROP</th><th>OZ/ACRE</th><th>DIRECTIONS FOR USE</th></tr>
<tr><td>MILLET, PROSO
(0 Millet Forage)
(50 Millet Grain and Straw)
(37 Millet Hay)
(Cont'd)</td><td>1/2 - 2/3</td><td>Listed day intervals following an application of SANDEA.
<table>
<tr><th rowspan="2">CROP</th><th colspan="3">All Animals (Lactating and Non-lactating)</th></tr>
<tr><th>Pre-Grazing Interval (PGI)</th><th>Pre-Harvest Interval (PHI)</th><th>Pre-Slaughter Interval (PSI)</th></tr>
<tr><td>Millet Forage</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Millet Grain</td><td>N/A</td><td>50</td><td>0</td></tr>
<tr><td>Millet Straw</td><td>N/A</td><td>50</td><td>0</td></tr>
<tr><td>Millet Hay</td><td>N/A</td><td>37</td><td>0</td></tr>
</table></td></tr>
<tr><td></td><td colspan="2">PRECAUTIONS:
• Consult "Use Precautions" and "For Optimum Results" for important usage information.
• Refer to "Mixing Instructions" and "Use Rate Guides" for detailed information on SANDEA application.
RESTRICTIONS:
• Do apply more than 1 application or 2/3 oz/A of product by weight (0.031 lb a.i./acre) per 12 month period.
• 0 Day Pre grazing interval for grass forage for ALL animals (lactating and non-lactating).
• Do not apply by rope-wick wiper application.</td></tr>
<tr><td>RICE
(48, CA 69)</td><td>2/3 - 1 1/3</td><td>Pre-plant, at planting, preemergence and postemergence applications to rice
• Pre-plant:
Apply SANDEA at 2/3 oz per acre in combination with glyphosate or other suitable agricultural herbicides for burn down of emerged annual grasses, broadleaf weeds and nutsedge. If this product is applied pre-plant burn down, refer to "TIME INTERVAL BEFORE PLANTING" table in complete directions for use.
• Preemergence and Postemergence:
Apply SANDEA for postemergent weed control from prior to the emergence of rice until after permanent flood is established. Apply SANDEA at 2/3 to 1 1/3 oz/A, with the total application rate not to exceed 1 1/3 oz/A of product (0.062 lb a.i./acre) per 12 month period.
SANDEA can be applied as a foliar spray or dry broadcast.
SANDEA can be tank mixed with propanil containing rice herbicides (e.g. Stam and propanil 4E) at 2/3 to 1 1/3 oz per acre of this herbicide and labeled rates of the tank mix products.</td></tr>
</table>

CROP	OZ/ACRE	DIRECTIONS FOR USE
RICE (48, CA 69) *(Cont'd)*	2/3 - 1 1/3	Foliar applications of SANDEA can be made at the 3 to 5 leaf stage of rice when weeds have 2 to 4 leaves. Dry broadcast applications can be made at the 1 to 2 leaf stage of rice when weeds have two leaves or less. SANDEA can also be applied post flood with dry broadcast applications of SANDEA at 2/3 to 1 1/3 oz with the total application rate not to exceed 1 1/3 oz/A of product (0.062 lb a.i./acre) per 12 month period. With all foliar applications of SANDEA use a minimum 3 to 15 gal of water per acre for aerial equipment and a minimum of 10 gal of water per acre for ground equipment. It is best to apply spray solutions the day they are mixed. Water levels in rice fields and checks should remain static (3 to 6 inch depth) following dry broadcast applications of SANDEA. Do not reintroduce water into rice fields or checks for at least five days following dry broadcast applications of SANDEA. Rice fields and checks may be irrigated to maintain water level, but this may reduce weed control. Control of emerged weeds with foliar applications is best when 70% to 80% of the weed foliage is exposed. Control of submerged weeds is best when weeds have 2 leaves or less. Do not reintroduce water into rice fields or checks for at least 24 hours following foliar applications of SANDEA. **SANDEA Tank Mixture Options in Rice** It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.
		Before mixing in the spray tank, it is recommended that compatibility be tested by mixing all components in a small container in proportionate quantities. For tank mixtures, add individual formulations to a spray tank in the following sequence: water soluble bags, dry flowables, emulsifiable concentrates, drift control additive, water soluble liquids followed by NIS or COC. Tank mixtures should not be applied if the crop is under severe stress due to drought, poor fertility (especially low nitrogen levels), hail, frost and insects. Tank mix applications under these conditions may cause temporary crop injury. • **Preemergence & Pre-Plant Applications:** Tank mixtures for additional preemergence weed control, including but not limited to Bolero®, Command® 3ME, glyphosate, pendimethalin or quinclorac can be added.

CROP	OZ/ACRE	DIRECTIONS FOR USE
RICE (48, CA 69) (*cont'd*)	2/3 - 1 1/3	• **Postemergence Applications:** Tank mixtures for additional broadleaf weed control, including but not limited to Grandstand®, propanil and propanil products, Aim®, Facet®, Basagran®, Londax®, Grasp®, Regiment® , NewPath®, Beyond® and 2-4-D can be added. Tank mixtures for postemergence grass control, including but not limited to Newpath®, Beyond®, propanil, Facet®, Grasp®, and Regiment® can be added. Insecticide and fungicide products can be tank mixed with SANDEA®. Sequential Applications - SANDEA can be applied sequentially with Ordram®, Bolero®, Clincher®, Regiment® and Shark®. Read the Ordram, Bolero, Clincher, Regiment and Shark labels for application information, restrictions and precautions.
		PRECAUTIONS: • Avoid using SANDEA on rice fields which have a history of weed biotypes resistant to ALS herbicides. • For best results, use 0.25 to 0.5% NIS which contains at least 80% active ingredient with foliar applications of SANDEA. • Refer to "Application Equipment and Instructions" for spray drift management techniques. • Refer to "Mixing Instructions" and "Use Rate Guides" sections of this label for detailed information on SANDEA application. **RESTRICTIONS**: • Do not apply within 48 days of harvest. • Do not apply within 69 days of harvest in California. • Do not exceed more than 2 applications per 12 month period. • Do not apply by rope-wick wiper application.
SORGHUM, GRAIN (MILO) (30)	2/3 - 1	**Postemergence** - Apply SANDEA from the 2 leaf through layby stage (before grain head emergence). Temporary stature reduction may occur to the crop following application of SANDEA if the grain sorghum is under stress. This effect will be most evident 7 to 10 days after application. The crop will quickly recover under normal growing conditions. **Tank Mixtures for Grain Sorghum** Tank mixtures with SANDEA can include, but are not limited to atrazine, Buctril® or 2,4-D. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.

CROP	OZ/ACRE	DIRECTIONS FOR USE
SORGHUM, GRAIN (MILO) (30) *(Cont'd)*	**PRECAUTIONS:** • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not apply more than 1 application or 1 oz/A of product by weight (0.047 lb a.i./acre) per 12 month period. • Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage. • Do not apply by rope-wick wiper application.	
SUGARCANE (30)	2/3 - 1 1/3	When used alone, apply SANDEA prior to planting, prior to emergence or after the emergence of the sugarcane, and until row closure. Mechanical cultivation may be required to control weed species not on the label. If so, a **sequential treatment** may be required to control weeds in areas of disturbed soil. Apply SANDEA at 2/3 to 1 1/3 oz by weight per acre (0.031 to 0.062 lb active ingredient per acre) in combination with glyphosate agricultural herbicides for pre-plant burn down of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane. **Tank Mixtures for Sugarcane** Tank mixtures with SANDEA can include, but are not limited to Asulox®, atrazine , Callisto®, Envoke®, Evik® , glyphosate, or 2,4-D. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Refer to the "Rotational Crop Restrictions" for applicable rotational crop information. • Do not apply more than 3 applications (including pre-plant applications) or 2 2/3 oz/A (0.125 lb a.i./acre) per 12 month period. • Following application to foliage allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage. • Do not apply by rope-wick wiper application.	

OTHER CROPS AND APPLICATIONS

CROP	OZ/ACRE	DIRECTIONS FOR USE
ALFALFA (14) **AZ, CA & NM**	2/3 - 1	**Established Fields** • **Postemergence Broadcast -** Apply SANDEA as a broadcast application to established alfalfa. Alfalfa should be well established in the field for a minimum of 6 months prior to application of SANDEA. Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. Use a water volume that will provide uniform coverage of plants. It is recommended to make an application as soon as possible after removal of hay from the field and prior to an irrigation to minimize crop injury. Wait for at least 48 hours after application before irrigation. • **Postemergence Spot Treatment -** Apply SANDEA as a spot treatment application to only those areas of emerged nutsedge. Application rate should not exceed 3/4 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. • **Postemergence followed by Postemergence -** To maximize control of nutsedge, it may be necessary to use a second postemergence spot application to those areas where the nutsedge has emerged or re-grown. For these situations, use a spot treatment method treating only those areas of emerged nutsedge. Application rate must not exceed 3/4 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. This use pattern will result in greater potential of growth and yield reduction. Research has shown that alfalfa growth and yields will be reduced for one or more cuttings after a SANDEA application. Application of SANDEA to alfalfa where re-growth exceeds 6" will result in greater yield reduction. Symptoms may be temporary. Follow all directions carefully to minimize potential reduced plant growth and yield. Apply uniformly with ground equipment in a minimum of 20 gal of water per acre. Use a water volume that will provide uniform coverage of plants.
		PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.

CROP	OZ/ACRE	DIRECTIONS FOR USE
ARTICHOKE (5)	1 - 2	Apply SANDEA uniformly with ground equipment in a minimum of 15 gal of water per acre. Apply as a broadcast application to the ground on either side of the row and winter ditches while avoiding crop foliage. • **Row Middle** - Apply SANDEA between rows of perennial artichokes for the control of nutsedge and listed broadleaf weeds. Applications should be made when oxalis is in full bloom. Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. To maximize nutsedge control, apply when plants are in the 3 to 5 leaf stage. Application of SANDEA may cause significant, temporary stunting and delay maturity of artichokes if sprayed directly. This product is available to the end-user /grower solely to the extent that the benefit and utility, in the sole opinion of the end-user/ grower, outweigh the extent of potential injury associated with the use of this product.
		PRECAUTIONS: • For best results, use a NIS with applications. • Consult "Use Precautions" and "For Optimum Results" for important usage information. • Use rates are broadcast per acre. Reduce rate and spray volume in proportion to area actually sprayed. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS**: • Do not apply by air. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.

CROP	OZ/ACRE	DIRECTIONS FOR USE
ASPARAGUS (1)	1/2 - 1 1/2	Apply uniformly with ground equipment in a minimum of 15 gal per acre. **Nursery, Transplanted Crowns and Established Beds** • **Postemergence/Post transplant -** Apply SANDEA to asparagus before or during the harvesting season. SANDEA may cause a temporary stunting or twisting of fern on certain asparagus varieties when applied during spear emergence. The addition of surfactants and postemergent grass herbicides may accentuate the crop response. Spectrum and degree of weed control may be reduced where SANDEA is used without a surfactant. • **Post-harvest** - Apply SANDEA at the end of the harvest season. Under heavy nutsedge pressure, split applications are recommended. Contact with the fern may cause temporary yellowing. A NIS or COC should be used with post-harvest applications. Crop injury will be minimized and weeds control will be more effective when applications are made with drop nozzles as a directed spray below the ferns to allow for more complete coverage of target weeds. • **Split application for enhanced control of nutsedge -** Apply a split application with 3/4 to 1 oz product per acre during the cutting/harvesting season when the first flush of nutsedge is in the 3 to 5 leaf stage, followed by a second application of 3/4 to 1 oz product per acre at least 21 to 30 days later up to lay-by to control later flushes of nutsedge. SANDEA can be applied post-harvest during the fern stage. Contact with the fern may cause temporary yellowing. Crop injury will be minimized and nutsedge more effectively controlled when applications are made with drop nozzles directing the spray below the ferns allowing for more complete coverage of nutsedge.
	PRECAUTIONS: • For first year transplants, apply no sooner than six weeks after fern emergence. • NIS can be used east of the Rockies to enhance weed control. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not use NIS west of the Rockies. • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.	

CROP	OZ/ACRE	DIRECTIONS FOR USE
FALLOW GROUND	2/3 - 1 1/3	Applications of SANDEA to fallow ground.
	PRECAUTIONS: • Refer to the "Weeds Controled" section of this label for weed control recommendations. • Consult "Use Precautions" and "For Optimum Results" for important usage information. **RESTRICTIONS**: • Do not apply more than 2 applications or 2 2/3 oz of product by weight (0.125 lb a.i./acre) per 12 month period. • Refer to the "Rotational Crop Restrictions" for applicable rotational crop information. • Do not apply by rope-wick wiper application.	
OKRA (30)	1/2 - 1	• **Direct-seeded and Transplant:** **Row Middle/Furrow Applications/Shielded Spray** - Apply SANDEA between rows of direct-seeded or transplanted okra, while avoiding contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
	PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" sections for important usage information. **RESTRICTIONS**: • Do not apply more than 2 applications or 2 oz/A of product by weight (0.094 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.	
CROP GROUP 17 PASTURE, RANGELAND & CRP FORAGE GRASSES/ HAY (37)	2/3 – 1 1/3	**Established Fields** • **Postemergence Broadcast –** Apply SANDEA as a broadcast application to established Pasture & Rangeland. Apply uniformly with ground equipment in a minimum of 10 gal of water per acre. Use a water volume that will provide uniform coverage of plants. It is recommended to make an application as soon as possible after removal of hay or before weeds exceed label height restriction. Wait for at least 48 hours after application before irrigation. • **Postemergence Spot Treatment** – Apply SANDEA as a spot treatment application to only those areas of emerged nutsedge. Application rate should not exceed 3/4 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants.

<table>
<tr><th>CROP</th><th>OZ/ACRE</th><th>DIRECTIONS FOR USE</th></tr>
<tr><td>CROP GROUP 17 PASTURE, RANGELAND & CRP FORAGE GRASSES/ HAY (37)
(cont'd)</td><td>2/3 – 1 1/3</td><td>
• Postemergence followed by Postemergence - To maximize control of nutsedge, it may be necessary to use a second postemergence spot application to those areas where the nutsedge has emerged or re-grown. For these situations, use a spot treatment method treating only those areas of emerged nutsedge. Application rate should not exceed 3/4 oz product per treated acre in these areas. Use a water volume that will allow for good coverage of the plants. This use pattern will result in greater potential of growth and yield reduction.
<u>TANK MIXTURES</u>
It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.
Tank mixtures for additional broadleaf weed control, including but not limited to 2,4-D, dicamba and, Grazon® can be added.
Labeled insecticides, including CONFIRM®, and labeled fungicide products can be tank mixed with SANDEA.
Listed day intervals following an application of SANDEA.
<table>
<tr><th rowspan="2">CROP</th><th colspan="3">Lactating and Non-lactating Animals</th></tr>
<tr><th>Pre-Grazing Interval (PGI)</th><th>Pre-Harvest Interval (PHI)</th><th>Pre-Slaughter Interval (PSI)</th></tr>
<tr><td>Pasture, Rangeland, CRP and Forage Grasses/ Hay</td><td>0</td><td>37</td><td>0</td></tr>
</table>
PRECAUTIONS:
• Consult "Use Precautions" and "For Optimum Results" for important usage information.
• Refer to "Mixing Instructions" and "Use Rate Guides" for detailed information on SANDEA application.
RESTRICTIONS:
• Do not apply more than 2 applications or 1 1/3 oz/A of product by weight (0.062 lb a.i./acre) per 12 month period.
• 0 Day pre grazing interval for lactating and non-lactating animals.
• Do not apply by rope-wick wiper application.
</td></tr>
</table>

CROP	OZ/ACRE	DIRECTIONS FOR USE
RHUBARB (60)	1/2 - 1	Apply uniformly with ground equipment in a minimum of 15 gal of water per acre. Apply SANDEA as a single broadcast application to dormant rhubarb. The timing of the application should be as late as possible, or just prior to the breaking of rhubarb dormancy. Application of SANDEA may cause significant crop stunting. It is recommended that the user begin with a the lower rate to determine potential sensitivity to its use along with speed and degree of recovery.
		PRECAUTIONS: • Consult "Use Precautions" and "For Optimum Results" for important usage information. • For best results use a NIS if labeled weeds are emerged. • SANDEA may not control ALS resistant weeds. **RESTRICTIONS**: • Do not apply more than 2 applications or 1 oz/A of product by weight (0.047 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.
TURFGRASS SOD	2/3 - 1 1/3	SANDEA is a selective herbicide for postemergence control of sedges such as purple and yellow nutsedge in sod farms. This product will not injure nearby established ornamentals, trees, and shrubs when used according to label directions. For postemergence control of purple or yellow nutsedge found in established turfgrass, apply 2/3 to 1 1/3 oz by weight of this product per acre (0.031 to 0.062 lbs. a.i./acre) after nutsedge has reached the 3 to 5 leaf stage of growth. Use the lower rate in light infestations and the higher rate in heavy infestations. A second treatment may be required 6 to 10 weeks after the initial treatment. As a sequential treatment, when new purple or yellow nutsedge plants have reached the 3 to 5 leaf stage of growth, apply 2/3 to 1 1/3 oz by weight of this product per acre (0.031 to 0.062 lb a.i./acre). Use the lower rate in light infestations and the higher rate in heavy infestations. Use 0.25 to 0.5% NIS concentration (1 to 2 quarts per 100 gal of spray solution) for broadcast applications. For high volume applications, do not exceed 1 quart of surfactant per acre. Use only NIS which contains at least 80% active material. Refer to the surfactant label and observe all precautions, mixing and application instructions. When applied as directed under the conditions described, the following established turfgrasses are tolerant to application of this product:

<table>
<tr><th>CROP</th><th>OZ/ACRE</th><th>DIRECTIONS FOR USE</th></tr>
<tr><td>TURFGRASS SOD
(cont'd)</td><td>2/3 - 1 1/3</td><td>
<table>
<tr><th colspan="2">Established Cool-Season Grasses</th></tr>
<tr><td>Bentgrass, creeping
(Agrostis stolonifera)</td><td>Fescue, fine
(Festuca rubra)</td></tr>
<tr><td>Blue Grass, Kentucky
(Poa pratensis)</td><td>Fescue, tall
(Festuca arundinacea)</td></tr>
<tr><td>Ryegrass, perennial
(Lolium perenne)</td><td></td></tr>
</table>
<table>
<tr><th colspan="2">Established Warm-Season Grasses</th></tr>
<tr><td>Bahiagrass
(Paspalum notatum)</td><td>Seashore paspalum
(Paspalum vaginatum)</td></tr>
<tr><td>Bermudagrass
(Cynodun dactylon)</td><td>St. Augustinegrass
(Stenotaphrum secundatum)</td></tr>
<tr><td>Buffalograss
(Buchloe dactyloides)</td><td>Kikuyugrass
(Pennisetum clandestinum)</td></tr>
<tr><td>Centipedegrass
(Eremochloa ophiuroides)</td><td>Zoysiagrass
(Zoysia japonica)</td></tr>
</table>
Fallow Treatments in Turfgrass Seed and Sod Production Areas
This product may be used on fallow areas prior to establishing turfgrass plants. Allow 4 weeks between application and seeding or sodding of turfgrass.
<u>Tank Mixtures for Turfgrass Renovation</u>
SANDEA plus GLYPHOSATE AGRICULTURAL HERBICIDES plus NIS
For non-selective control of all vegetation prior to turfgrass renovation, SANDEA may be applied at 2/3 oz by weight per acre in combination with glyphosate agricultural herbicides for pre-plant burndown of emerged annual grasses, broadleaf weeds and nutsedge.
Refer to the glyphosate agricultural herbicide label for use instructions, weeds controlled, and application restrictions.
It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.</td></tr>
<tr><td></td><td colspan="2">PRECAUTIONS:
• For best results, do not mow turf for 2 days before or 2 days after application.</td></tr>
</table>

<table>
<tr><th>CROP</th><th>OZ/ACRE</th><th>DIRECTIONS FOR USE</th></tr>
<tr><td>TURFGRASS SOD AND SEED FARMS (cont'd)</td><td></td><td>• This product is effective if no rainfall occurs within 3 hours, but best results are obtained with no rainfall or irrigation for at least 8 hours.
• This product may be used on seeded, sodded, or sprigged turfgrass that is well established. Allow the turf to develop a good root system and uniform stand before application.
• Avoid application of SANDEA when turfgrass or nutsedge is under stress since turf injury and poor nutsedge control may result.
RESTRICTIONS:
• Do not apply as an over the top spray to desirable shrubs or trees.
• Do not exceed the recommended amount of surfactant due to the potential for turf injury at higher rates.
• Do not apply more than 2 applications or 2 2/3 oz/A of product by weight (0.125 lb a.i./acre) per 12 month period.
• Do not apply by rope-wick wiper application.</td></tr>
<tr><td>GRASSES GROWN FOR SEED</td><td>2/3 – 1 1/3</td><td>ESTABLISHED GRASSES
For postemergence control of listed broadleaf weeds and nutsedge found in established grasses grown for seed, apply 2/3 to 1 1/3 oz by weight of this product per acre (0.031 to 0.062 lbs. a.i./acre). Postemergence applications for control of sharppoint fluvellin must be made when the basal diameter of the weed is the size of a U.S. quarter or smaller, and before stem elongation.
For postemergence applications, use 0.25 to 0.5% NIS concentration (1 to 2 quarts per 100 gal of spray solution) for broadcast applications. For high volume applications, do not exceed 1 quart of surfactant per acre. Use only NIS which contains at least 80% active material. Refer to the surfactant label and observe all precautions, mixing and application instructions.
When applied as directed under the conditions described, the following established grasses are tolerant to application of this product:
<table>
<tr><th colspan="2">Established Cool-Season Grasses</th></tr>
<tr><td>Bentgrass, creeping
(Agrostis stolonifera)</td><td>Fescue, fine
(Festuca rubra)</td></tr>
<tr><td>Blue Grass, Kentucky
(Poa pratensis)</td><td>Fescue, tall
(Festuca arundinacea)</td></tr>
<tr><td>Ryegrass, perennial
(Lolium perenne)</td><td>Orchardgrass
(Dactylis glomerata L.)</td></tr>
</table>
TALL FESCUE GROWN FOR SEED
For postemergence control of listed broadleaf weeds, apply 2/3 to 1 1/3 oz by weight of this product per acre (0.031 to 0.062 lb a.i./acre) after the crop is well established.</td></tr>
</table>

CROP	OZ/ACRE	DIRECTIONS FOR USE
GRASSES GROWN FOR SEED		**PRECAUTIONS:** • For best results, do not mow grasses for 2 days before or 2 days after application. • This product is effective if no rainfall occurs within 3 hours, but best results are obtained with no rainfall or irrigation for at least 8 hours. • This product may be used on labeled grass seed crops that are well established. Allow grass to develop a good root system and uniform stand before application. *See specific use directions for spring planted tall fescue. • Avoid application of SANDEA when grass seed crops or weeds are under stress since crop injury and poor weed control may result. • Applications made in late fall or spring when grass seed crops are actively growing may result in injury. • Certain perennial ryegrass varieties have shown sensitivity to sulfonylurea herbicides. **RESTRICTIONS**: • Do not apply as an over the top spray to desirable shrubs or trees. • Do not exceed the recommended amount of surfactant due to the potential for crop injury at higher rates. • Do not apply more than 2 applications or 2 2/3 oz/A of product by weight (0.125 lb a.i./acre) per 12 month period. • Minimum of 14 days between applications. • Do not apply by rope-wick wiper application.
FENCE ROWS, FUEL STORAGE AREAS, LUMBER-YARDS, TANK FARMS, RIGHT-OF WAY AND ROADSIDES	2/3 - 1 1/3	**Broadcast Applications:** Apply SANDEA as a postemergence spray at 2/3 - 1 1/3 oz by weight of this product per acre (0.031 to 0.062 lb ai/A) to roadsides and other industrial sites. A second treatment can be applied 6 to 10 weeks after the initial treatment. **Spot Treatments:** Mix 1/4 oz to 1 oz of SANDEA per 1 gal of water. For best results, when using a hand held applicator, spray the desired target weeds in a back and forth motion to ensure proper contact and coverage. This product will control purple and yellow nutsedge and control and/or suppress listed broadleaf weeds (see weeds controlled chart for additional information). **NOTE:** This product can be tank mixed with Glyphosate herbicide. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

CROP	OZ/ACRE	DIRECTIONS FOR USE
FENCE ROWS, FUEL STORAGE AREAS, LUMBER-YARDS, TANK FARMS, RIGHT-OF WAY AND ROADSIDES *(Cont'd)*		**PRECAUTIONS:** • When using a surfactant refer to the adjuvants section of the label. • Consult "Use Precautions" and "For Optimum Results" for important usage information. • SANDEA may not control ALS resistant weeds. • Consult your local Gowan Sales Representative for more information. **RESTRICTIONS**: • Do not apply more than 2 applications or 2 2/3 oz/A of product by weight (0.125 lb a.i./acre) per 12 month period. • Do not apply by rope-wick wiper application.

ROTATIONAL CROP RESTRICTIONS

Rotation intervals below may need to be extended if drought or cool conditions prevail. Rotation intervals may need to be extended on drip irrigated crops in Arizona and California. Gowan Company recommends that the end user test this product in order to determine its suitability for such intended use. When using SANDEA in tank mixes, refer to the individual product labels being tank mixed. To determine rotational crop restrictions follow the longest rotational limitation of the product being tank mixed.

TIME INTERVAL BEFORE PLANTING

CROP	MONTHS	EXCEPTIONS
CROPS NOT SPECIFICALLY LISTED	36	
Alfalfa	9	
Apples*	9	
Barley (winter)	2	
Beans, Dry	0	
Beans, Snap	9	2 months in the Northeast, Midwest, and Southeast, 3 months in TX
Blueberry*	9	
Broccoli	18	3 months for muck soils in FL
Cabbage	15	3 months for muck soils in FL
Caneberry*	9	
Canola	15	
Carrot	15	
Cauliflower	18	3 months for muck soils in FL

CROP	MONTHS	EXCEPTIONS
Cereal crops, Spring	2	
Clovers	9	
Collards	18	
Corn, IR/IMR Field	0	
Corn, Normal Field and IT Field	1	
Corn, Seed	2	
Corn, Sweet and Pop	3	
Cotton	4	
Cucumbers	9	2 months in the Northeast, Midwest, and Southeast, 3 months in TX
Eggplant	12	4 months for FL Transplants
Forage Grasses	2	
Grapes*	9	
Lettuce crops	18	3 months for muck soils in FL
Melons	9	2 months in the Southeast and TX
Mint	15	
Oats	2	
Onions and Leeks	18	
Peanuts	6	
Pears*	9	
Peas	9	
Peas, Field	9	
Peppers	10	4 months FL Transplants and 3 months in TX
Potatoes	9	
Pumpkins	9	2 months in the Southeast
Proso Millet	2	
Radish	12	3 months for muck soils in FL
Rice	0	
Rye (winter)	2	
Sorghums	2	
Soybeans	9	Where soil pH is less than 7.5 the interval is 5 months
Spinach	24	3 months for muck soils in FL
Squash	9	2 months in the Southeast

CROP	MONTHS	EXCEPTIONS
Strawberries	36	6 months for annual FL Transplants
Sugarbeet (Michigan only)	21	
Sugarbeet (ND, MN, Red River Valley)	36	
Sugarbeet and Red Beet	24	Where rainfall is sparse or irrigation is required, the time interval is 36 months.
Sugarcane	0	
Sunflowers	18	
Tomato	8	2 months in the Northeast, Midwest, and Southeast, 3 months in TX
Tree Nut*	9	
Wheat (winter)	2	

* After a SANDEA application, the soil must be plowed and cross disked.

STORAGE AND DISPOSAL

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

PESTICIDE 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: Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. 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 OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS

Important: Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our directions for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer and User.

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Manufactured by Nissan Chemical Industries, Ltd.