



OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Michael Kellogg, Agent  
For Alligare, LLC  
Pyxis Regulatory Consulting, Inc.  
4110 13<sup>th</sup>. St. NW  
Gig Harbor, WA 98332

JUN 13 2008

Subject: Notification(s) for Label Revisions under PRN 98-10 and PRN 2007-4  
Storage & Disposal and Primary Brand Name & Warranty Statement

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10 and 2007-4 dated April 29, 2008 for:

**EPA Registration 61842-13 "Sinbar Herbicide"**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10 and PRN 2007-4 and finds that the label changes requested fall within the scope of PRN-98-10 and PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on non-refillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



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

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OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Michael Kellogg, Agent  
For Tessengerlo Kerley, Inc.  
Pyxis Regulatory Consulting, Inc.  
4110 13<sup>th</sup>. St. NW  
Gig Harbor, WA 98332

Subject: Notification(s) for Label Revisions under PRN 98-10 and PRN 2007-4  
Storage & Disposal and Other Changes

Dear Registrant:

*(including Primary Brand Name change)*

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10 and 2007-4 dated April 29, 2008 for:

**EPA Registration 61842-13 "Sinbar Herbicide"**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10 and PRN 2007-4 and finds that the label changes requested fall within the scope of PRN-98-10 and PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

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If you have any questions, please contact me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

PYXIS REGULATORY CONSULTING, INC.

4110 136<sup>th</sup> St. NW  
Gig Harbor, WA 98332

Phone: 253-853-7369  
Fax: 253-853-5516  
Email: [www.PyxisRC.com](http://www.PyxisRC.com)

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April 29, 2008

Jim Tompkins (PM 25)  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202-4501

RE: Tessengerlo Kerley, Inc. – DuPont Sinbar<sup>®</sup> Herbicide (EPA Reg. No. 61842-13)  
Submission of Change in Primary Brand Name, Registrant Information, Revised Warranty and  
Changes to Container Disposal language per PRN 2007-4

Dear Mr. Tompkins,

On behalf of Tessengerlo Kerley, Inc. please find the enclosed label notification changing the primary brand name, revising the warranty language and updating the container disposal language for DuPont Sinbar Herbicide (EPA Reg. No. 61842-13). The DuPont Sinbar Herbicide registration was recently transferred to Tessengerlo Kerley, Inc. and as such, Tessengerlo Kerley, Inc. is making the following label changes:

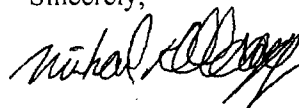
- 1) Change of primary brand name from “DuPont Sinbar Herbicide” to “Sinbar Herbicide”
- 2) Updated company information and EPA Reg. No. reflecting the registration transfer
- 3) Revised warranty language
- 4) Revised the container disposal language in accordance with PR Notice 2007-4

In support of this notification, please find the following:

1. Completed Application for Registration (EPA Form 8570-1)
2. One (1) copy of the Sinbar Herbicide labeling with changes tracked
3. One (1) copy of the Sinbar Herbicide labeling with changes incorporated
4. Letter of Authorization

Please feel free to call me if you have any questions or need any additional information.

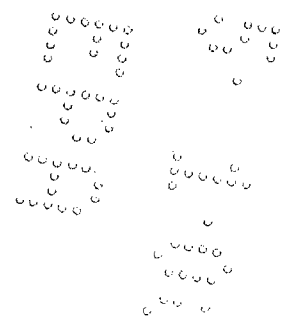
Sincerely,



Michael Kellogg

Enclosures

cc: Tessengerlo Kerley Inc.





United States  
Environmental Protection Agency  
Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

Application for Pesticide - Section I

Company/Product Number 61842-13	2. EPA Product Manager J. Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
1. Company/Product (Name) Tessenderlo Kerley, Inc. / DuPont Sinbar Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Tessenderlo Kerley Inc. c/o Pyxis Regulatory Consulting, Inc. 4110 136th St. NW Gig Harbor, WA 98332 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

**NOTIFICATION**  
JUN 13 2008

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of Change in Primary Brand Name, Registrant Information, Revised Warranty and Changes to Container Disposal language per PRN 2007-4.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
				<input checked="" type="checkbox"/> Paper	<input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 5 lbs.		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product		<input checked="" type="checkbox"/> Lithograph Paper glued Stenciled		<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Michael Kellogg	Title Agent	Telephone No. (Include Area Code) 253-853-7369
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Agent	
4. Typed Name Michael Kellogg	5. Date 4/29/08	

**Sinbar®**

Herbicide

Wettable Powder

Active Ingredient By Weight

Terbacil [3-tert-butyl-5-chloro-6-methyluracil]	80%
----------------------------------------------------	-----

Other Ingredients	20%
-------------------	-----

TOTAL	100%
-------	------

EPA Reg. No. 61842-13

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

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

**FIRST AID**

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-877-1737 for emergency medical treatment information.

Net Weight:

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS  
AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if swallowed. Wash thoroughly with soap and water after handling. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

**PERSONAL PROTECTIVE EQUIPMENT**

Some materials that are chemically resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

Long-sleeved shirt and long pants.

Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.

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

**ENGINEERING CONTROL STATEMENT**

When handlers use closed systems, or enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 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.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning of equipment or disposing of equipment washwaters.

Terbacil has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion. This chemical also has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

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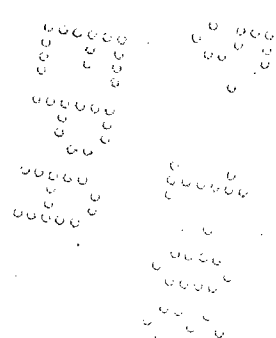
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**NOTIFICATION**

**JUN 13 2008**

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## GENERAL INFORMATION

SINBAR® herbicide is a wettable powder to be mixed in water and applied as a spray for selective weed control in certain crops. It is non-volatile, non-flammable, and non-corrosive to equipment.

SINBAR® controls susceptible weeds for an extended period of time; the degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soils low in clay or organic matter to obtain equivalent herbicide performance. Moisture is required to activate the chemical; best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks after application.

Observe all cautions and limitations on labeling of all products used in mixtures.

### USE PRECAUTIONS

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

Do not apply (except as recommended for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not use in home planting of fruits, nuts or other crops nor in apple or peach orchards interplanted with other trees or desirable plants. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds. Thoroughly clean all traces of SINBAR® from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water removing nozzle tips and screens (clean these parts separately).

Reduced weed control may occur when fields to be treated with SINBAR® have been previously treated with sludge, or other by-products, from sewage or manufacturing facilities that are high in organic matter.

### RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have

a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

### INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

### 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.

SINBAR® herbicide should be used only in accordance with recommendations on this label, or in separate published Tessenderlo Kerley, Inc. recommendations available through local dealers.

Tessenderlo Kerley, Inc. will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by Tessenderlo Kerley, Inc. User assumes all risk associated with such non-recommended use.

Do not use in the state of California.

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# AGRICULTURAL USES

## 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

## SELECTIVE USE IN CROPS

### WEED CONTROL

Best results are obtained if application is made shortly before or shortly after weed growth begins; if dense growth is present, remove tops and spray the ground. SINBAR® may not provide adequate control of established perennial grasses such as orchardgrass, bromes, fescues, and timothy. Control of perennial grasses may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced. For alfalfa, the soil should not be disturbed. See "Crops" section for recommended use rates for specific crops.

SINBAR®, at rates of 1/2 to 1 1/2 pounds per acre controls annual weeds including species of:

- |                            |                                |
|----------------------------|--------------------------------|
| Barley, wild               | <i>Hordeum leporinum</i>       |
| Brome, downy               | <i>Bromus tectorum</i>         |
| Chickweed                  | <i>Stellaria media</i>         |
| Crabgrass                  | <i>Digitaria spp.</i>          |
| Flixweed                   | <i>Descurainia sophia</i>      |
| Henbit                     | <i>Lamium amplexicaule</i>     |
| Lambsquarter               | <i>Chenopodium album</i>       |
| Lettuce, prickly           | <i>Lactuca serriola</i>        |
| Mustard, wild              | <i>Brassica kaber</i>          |
| Mustard, Jim Hill (tumble) | <i>Sisymbrium altissimum</i>   |
| Peppergrass, (seedling)    | <i>Lepidium latifolium</i>     |
| Ryegrass, annual           | <i>Lolium multiflorum</i>      |
| Shepherdspurse             | <i>Capsella bursa-pastoris</i> |
| Speedwell, snow (snoweed)  | <i>Veronica biloba</i>         |
| Tansymustard               | <i>Descurainia pinnata</i>     |
| Yellow rocket              | <i>Barbarea vulgaris</i>       |

Treatment will not control established perennial bindweeds Johnsongrass and Canada thistle.

Rates of 1 to 4 pounds per acre control annual weeds including species of:

- |               |                               |
|---------------|-------------------------------|
| Barnyardgrass | <i>Echinochloa crus-galli</i> |
|---------------|-------------------------------|

- |                                |                                 |
|--------------------------------|---------------------------------|
| Bluegrass, annual              | <i>Poa annua</i>                |
| Burnweed, American (fireweed)  | <i>Erechtites hieracifolia</i>  |
| Clover                         | <i>Trifolium spp.</i>           |
| Crotalaria, showy              | <i>Crotalaria spectabilis</i>   |
| Crowfootgrass                  | <i>Dactyloctenium aegyptium</i> |
| Dandelion (seedling)           | <i>Taraxacum officinale</i>     |
| Dog fennel (mayweed chamomile) | <i>Anthemis cotula</i>          |
| Fiddleneck, coast              | <i>Amsinckia intermedia</i>     |
| Foxtail                        | <i>Setaria spp.</i>             |
| Geranium, wild                 | <i>Geranium spp.</i>            |
| Guineagrass                    | <i>Panicum maximum</i>          |
| Horseweed (marestail)          | <i>Conyza canadensis</i>        |
| Jimsonweed                     | <i>Datura stramonium</i>        |
| Johnsongrass (seedling)        | <i>Sorghum halepense</i>        |
| Junglerice                     | <i>Echinochloa colona</i>       |
| Knotweed, prostrate            | <i>Polygonum aviculare</i>      |
| Knotweed, erect                | <i>Polygonum erectum</i>        |
| Natalgrass                     | <i>Rhynchosyris repens</i>      |
| Nightshade (annual)            | <i>Solanum spp.</i>             |
| Orchardgrass (seedling)        | <i>Dactylis glomerata</i>       |
| Paintbrush, Flora's            | <i>Emilia sunchifolia</i>       |
| Panicum                        | <i>Panicum spp.</i>             |
| Pepperweed (annual)            | <i>Lepidium perfoliatum</i>     |
| Purslane, common               | <i>Portulaca oleracea</i>       |
| Pusley, Florida                | <i>Richardia scabra</i>         |
| Ragweed, common                | <i>Ambrosia artemisiifolia</i>  |
| Sandbur (sandspur)             | <i>Cenchrus spp.</i>            |
| Signalgrass, broadleaf         | <i>Brachiaria platyphylla</i>   |
| Smartweed                      | <i>Polygonum spp.</i>           |

In addition, treatment usually provides partial control of species of:

- |                  |                            |
|------------------|----------------------------|
| Groundsel        | <i>Senecio spp.</i>        |
| Horsenettle      | <i>Solanum carolinense</i> |
| Nutsedge, yellow | <i>Cyperus esculentus</i>  |
| Quackgrass       | <i>Agropyron repens</i>    |
| Sorrel, red      | <i>Rumex acetosella</i>    |

Rates of 2 to 3 pounds per acre control annual weeds

including species of:

- |                     |                                |
|---------------------|--------------------------------|
| Cinquefoil          | <i>Potentilla spp.</i>         |
| Hawkweed            | <i>Hieracium spp.</i>          |
| Redroot             | <i>Lachnanthes caroliniana</i> |
| Ryegrass, perennial | <i>Lolium perenne</i>          |
| Sedge, annual       | <i>Cyperus compressus</i>      |

Deleted: DuPont™

## APPLICATION INFORMATION

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

Unless otherwise directed, apply with a fixed-boom power sprayer properly calibrated to a constant speed and rate of delivery. Use sufficient spray volume to provide thorough and uniform coverage of the area to be treated.

Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

## SPRAY PREPARATION

**Mixing in water** - Fill tank 1/2 full with water. Start agitation system, add SINBAR® and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

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**USE RATES**

All dosages of SINBAR® are expressed as broadcast rates; for band treatment, use proportionately less. Where a range of dosages is given, use the lower rate on coarse textured soils (low in clay or organic matter) and the higher rate on fine textured soils (high in clay or organic matter).

**SOIL LIMITATIONS**

Crop injury may result from failure to observe the following: Unless otherwise directed, do not use SINBAR® on sand or gravel soil types. For other soil types (e.g. sandy loam and loamy sand) that contain less than 1% organic matter, limit initial use of SINBAR® to a small area to determine crop response prior to treating larger acreage. Severe crop injury may occur when SINBAR® is used on soils having less than 1% organic matter.

**REPLANTING**

Do not replant treated areas to any crop within 2 years after last application as injury to the subsequent crop(s) may result. In arid climates (10 inches of annual rainfall or less) or areas where drought conditions have prevailed for one or more years, or where normal irrigation practices were not followed after the last application of SINBAR®, a field bioassay should be completed prior to planting any desired crop(s). The results of the bioassay may require the two-year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test crop(s) strip should cross the entire field including knolls and low areas.

**CROPS**

**ALFALFA**

**Established Alfalfa (Established 1 year or longer)**

**U.S. (Except NORTHEAST)**

SINBAR® may be used for the control of seedling annual weeds in alfalfa established for 1 year or longer. Apply at rates of 1/2 to 1 1/2 pounds per acre. Make a single application of SINBAR® either in the fall after plants become dormant or in the spring before new plant growth begins. For semi-dormant and non-dormant varieties, apply in the fall or winter after the last cutting or in the spring before new growth begins. Apply before or after emergence of weeds but before they exceed either 2 inches in height or width. SINBAR® may not provide adequate control of established perennial grasses such as bromes, fescues, orchardgrass or timothy.

SINBAR® may be applied by aerial application equipment. Use a minimum spray volume of 5 gallons per acre.

NOTE: Do not apply to established stands after new growth begins in the spring as injury to the crop may result.

Do not apply to stands lacking good crop vigor (under stress) due to winter kill, insect or disease injury or other causes.

Do not use in California.

**NORTHEAST**

Apply SINBAR® at the rate of 3/4 to 1 1/2 pounds per acre (ground application only) to alfalfa that is dormant (fall through winter). Alternately, make the application in the spring before initial new growth exceeds 2 inches in height or to stubble after cutting, following hay removal and before regrowth exceeds 2 inches in height. Two applications may

be made but should be at least 60 days apart and must not exceed 1 1/2 pounds per year.

For winter annual weeds and early germinating summer annuals, applications of SINBAR® during dormancy or before new spring growth exceeds 2 inches in height provides the best results. Late germinating annual grasses and broadleaf weeds are controlled with an after cutting treatment. Where an early application is made for control of winter annual weeds and early germinating summer grasses and broadleaves are expected to be a problem, a second application (after cutting) may be applied for improved results, provided the total applied does not exceed 1 1/2 pounds per year.

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**POSTHARVEST APPLICATIONS-OKLAHOMA ONLY**

SINBAR® herbicide is recommended as a postharvest application on alfalfa, only in Oklahoma, for the control of pigweed (Amaranthus spp.) and the suppression \* of other warm season annual weeds such as crabgrass and foxtails.

Apply SINBAR® at the rate of 1/2 to 3/4 pound per acre to alfalfa stubble after cutting, following hay removal, and before alfalfa regrowth exceeds 2" in height. Two applications (dormant and/or postharvest) may be made but must be at least 60 days apart and must not exceed 2 pounds per year.

Best results are obtained when SINBAR® is applied prior to weed emergence but before weeds are 2" in height or width, and 3/4" of rainfall or sprinkler irrigation occurs within two weeks of application.

Do not apply after June 15 or to first year, spring-seeded alfalfa.

Do not apply more than 1/2 pound per acre to fall seeded, first year stands of alfalfa.

\*Suppression: Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated area. Degree of suppression and duration of effect on weeds will depend on weed density, condition of seed bed, timing, and amount of rainfall following application and growing conditions following application.

**Seedling Alfalfa (Established less than 1 year)**

**OREGON AND WASHINGTON:**

SINBAR® when applied at reduced rates of 1/4 to 1/2 pound per acre (depending on organic content of the soil and tap root depth) selectively controls downy brome, henbit, flixweed, Jim Hill mustard and shepherd's-purse in seedling alfalfa.

Apply SINBAR® after alfalfa is dormant in late winter or early spring but before alfalfa has more than 2" of new growth.

For best results on Downy Brome, apply SINBAR® at 1/2 pound per acre for preemergence and early postemergence control if sufficient rainfall occurs to move SINBAR® into the root zone before downy brome is beyond the 2-leaf stage. For control of downy brome on soils where lower rates of SINBAR® must be used, tank mix with pronamide herbicide.

**Sandy Soils with 0.5 - 0.9% Organic Matter -**

Apply 1/4 - 1/3 pound per acre to seedling alfalfa stands which have a minimum 6" tap root depth throughout the field. First time application should be limited to a small area to determine crop safety.



**Note:** User must accept risk of possible crop damage on these low organic matter sandy soils. Crop injury may result in areas of spray overlap.

**Soils with at least 1% Organic Matter -**

Apply 1/4 - 1/3 pound per acre on sandy soils where seedling alfalfa has a minimum 4" tap root depth throughout the field.

Apply 1/2 pound per acre on loam, silt and clay soils where seedling alfalfa has a minimum 4" tap root depth throughout the field.

**Note:** It is very important to determine seedling alfalfa tap root length throughout the field before using SINBAR®.

Alfalfa growing on north facing slopes, areas that do not receive enough moisture or are poorly drained and areas where weed competition is heavy can have smaller root systems compared to other areas of the field. Significant crop injury can occur in areas where the alfalfa root system is smaller than specified.

**TANK MIXTURES: WITH 2,4-DB**

SINBAR® in combination with rates as low as 1/2 pound active ingredient per acre (1 qt of 2 pounds per gallon product) of 2,4-DB may be used.

**PENNSYLVANIA AND VIRGINIA:**

Seedling and Established Stands -Common chickweed and henbit may be selectively controlled using SINBAR® in alfalfa at reduced rates of 1/3 to 1/2 pound per acre.

- Apply SINBAR® to alfalfa seeded from late summer to early fall that is at least 2" in height and has a minimum of 4 trifoliate leaves. Applications should be made in the fall or early spring before weeds exceed 2" in height.
- Apply SINBAR® to spring seeded alfalfa that has been established for 6 months or longer. Spring applications should be made before new growth exceeds 2" in height. Fall applications should be made to the stubble after the last cutting following hay removal, and before new growth exceeds 2" in height.

**TANK MIXES AND SEQUENTIAL TREATMENTS (Seedling and Established Alfalfa)**

SINBAR® can be applied either alone or in a program involving tank mixes and/or sequential treatments with other herbicides, fungicides, or insecticides registered for use on alfalfa. Tessenderlo Kerley, Inc. recommends that you first consult your state experiment station, university, or extension agent, or fieldsman as to expected crop response to mixtures or sequential treatments. If no information is available, limit the initial use to a small area.

**ALFALFA - USE PRECAUTIONS**

- Use on sand, loamy sand or gravelly soils, or on soils low in organic matter (less than 1 percent), may result in severe crop injury.
- Tank mixes and sequential treatments with other herbicides can increase the risk of crop injury. To avoid crop injury, when using in a tank mix with other herbicides, use the lower end of the use rate range for SINBAR® unless prior experience supports higher rates.

- When using any tank mix or sequential treatment for the first time, limit use to a small area to determine crop safety before treating large areas.
- Do not apply SINBAR® and paraquat as a sequential treatment as severe crop injury can occur.
- Do not use on alfalfa-grass mixtures or other mixed stands.
- Do not use with surfactants, unless specified otherwise in this labeling, or other supplemental labeling.
- Do not apply on snow covered or frozen ground, as injury to the crop or poor weed control may result.
- Applications should be made to young, actively growing weeds before they exceed 2" in height. Applications made at other growth stages may result in reduced weed control depending on the species, stage of growth and/or environmental conditions.
- Applications made to plants under stress and/or cold temperatures (less than 40° F) may result in reduced or no control.
- Avoid overlap as severe crop injury may result.
- Temporary yellowing, stunting and/or reduction of first cutting yield may occur when applications are made to new alfalfa growth, or actively growing seedling alfalfa.

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**TREE FRUIT**

**NON-BEARING FRUIT TREES (Young, Newly Planted)**

SINBAR® is recommended for use in newly planted and young non-bearing Apple, Apricot, Cherry, Peach, Pear, and Plum trees.

For control of annual weeds in newly-planted fruit trees, apply SINBAR® at 0.5 to 1 pound per acre by ground application.

Make the first application after a significant rainfall or irrigation event that will allow the soil to settle around the base of the tree prior to application. Make 1 to 2 applications per season.

SINBAR® may be tank mixed with KARMEX® XP to broaden the weed control spectrum in Apples and Peaches.

In the Columbia Basin of Washington, make a single application in either the spring or the fall.

Do not use on soils that are coarser than sandy loam.

Do not use on soils with less than 1% organic matter.

Do not use more than 1 pound per acre per year.

Do not use in the state of California.

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**APPLES, PEACHES**

SINBAR® herbicide may be used alone or in a tank mixture with other herbicides registered for use in Apples and Peaches, such as, glyphosate, paraquat, oryzalin, pendimethalin, simazine, diuron and nonflurazon. Refer to the tank mixture partner label for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

Make a band or broadcast application of SINBAR® as a directed spray; avoid contact of foliage and fruit with spray

or mist. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth. Where complete weed control to harvest is desired, additional weed control measures may be required during the growing season.

When crops are grown under furrow irrigation or under raised-berm flood irrigation (trees 4 to 6 inches above the waterline), apply SINBAR® only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows or trees grown under flat flood or basin irrigation. Do not use on eroded areas where sub-soil or tree roots are exposed as injury to trees may result.

To determine organic matter content of the soil, take a composite of several samples of soil. Take soil samples down to 6 inches deep. Remove any surface debris from sampling area prior taking the sample.

Do not graze or feed forage from treated areas to livestock.

Do not apply SINBAR® within 60 days of harvest.

Do not use in the state of California.

In the Columbia Basin of Washington, make a single application in either the spring or the fall.

**SINBAR® Alone**--Use only under trees established in the orchard for at least 3 years.

**SINBAR® -- Pounds Per Acre**

Soil Texture Description	1 to 2% Organic Matter	More Than 2% Organic Matter
Sandy loam	2	3
Loam, silt loam, silt	2½	3½
Clay loam, clay	3	4

**SINBAR® + a diuron containing herbicide, such as KARMEX® XP** -- Use only under trees established in the orchard for at least 1 year.

**SINBAR® + KARMEX® XP -- Pounds Per Acre**

Soil Texture Description	1 to 2% Organic Matter	More Than 2% Organic Matter
Sandy loam	1+1	1½ + 1½
Loam, silt loam, silt	1½ + 1½	2+2
Clay loam, clay	2+2	2+2

**ASPARAGUS**

**Direct Seeded**--Plant seed 1½ inches deep in coarse soils and 1 inch deep in fine soils. During planting operation, spray activated charcoal (such as Aqua NuChar<sup>†</sup> or Gro-Safe<sup>††</sup>) as a 1 inch band on soil surface directly over rows at a rate of 300 pounds per acre (broadcast basis equivalent to 15 pounds per acre where row spacing is 20 inches). Follow with SINBAR® as a single spray at 1 to 2 pounds per acre. Use the lower rate on coarser soils and the higher rate on finer soils.

**Established Beds**--Apply 1½ to 2½ pounds SINBAR® per acre prior to spear emergence. Application may be made

immediately after clean cutting. Use the lower rate on coarse textured soils and the higher rate on fine soils.

Do not apply more than 1¼ pounds per acre per application.

In the Columbia Basin, use SINBAR® at 0.5 pound per acre on coarse textured soils having 0.5 to 0.9% organic matter. On coarse textured soils have 1.0% organic matter or more, use SINBAR® at 0.5 to 0.75 pounds per acre. On medium to fine textured soils, SINBAR® can be used at 1.0 to 2.0 pounds per acre. When using SINBAR® for the first time on a particular field, use the lowest recommended rate for that soil until experience demonstrates that higher rates can be used safely.

Apply before weeds emerge or to small weeds (1/2 to 2 inches tall or across).

High organic soils absorb SINBAR® so that it is substantially inactivated as a soil residual herbicide. On these soils, weed control is provided by postemergence foliar uptake only. Apply 1 to 2 applications of SINBAR® not exceeding 2½ pounds per acre per year.

**Note:** Do not use on areas where subsoil or roots are exposed. Do not use on plants that are diseased or lacking in vigor, as injury to the crop may result. Do not harvest within 5 days after application. Treated areas may be planted to asparagus one year after application. Otherwise, do not replant to any other crop within two years after last application.

<sup>†</sup> Aqua NuChar - Registered trademark of Westvaco Corp.

<sup>††</sup> Gro-Safe - Registered trademark of ICI Americas, Inc.

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**BLUEBERRIES**

Treat only plantings established for 1 year or more. Make a single band or broadcast application to ground beneath bushes; avoid contact of foliage and fruit with spray or mist. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth. Do not use on eroded areas where subsoil or roots are exposed, nor on plants that are diseased or lacking in vigor, as injury to the plants may result. Treated areas may be planted to blueberries one year after last application.

**Pounds SINBAR® in Min. 25 Gals. Water Per Acre**

Soil Texture Description	1 to 3% Organic Matter	More Than 3% Organic Matter
Sand, Loamy Sand	Do not use	2
Sandy Loam, Loam, Silt Loam, Silt, Sandy Clay	2	3
Sandy Clay Loam, Silty Clay, Silty Clay Loam, Clay	3	3
Clay Loam	3	3

**MAINE, MARYLAND, NEW JERSEY**

Apply as directed above, or, for broader spectrum weed control apply as a tank mix with KARMEX® XP:

**Pounds SINBAR® + KARMEX® XP Per Acre**

Soil Texture Description	1 to 3% Organic Matter	More Than 3% Organic
Sand, Loamy Sand	Do not use	2+2
Sandy Loam	2+2	2½+2
Loam, Silt Loam, Silt, Sandy Clay, Sandy Clay Loam	2½+2	3+2
Silty Clay, Silty Clay Loam, Clay, Clay Loam	3+2	3+2

Do not replant areas treated with SINBAR® + KARMEX® XP to crops other than blueberries within two years after application, as injury to those crops may result.

**CANEBERRIES**

(Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries, Youngberries)-- Treat only plantings established for 1 year or more. Make a single band or broadcast application of 1 to 2 pounds per acre in a minimum of 20 gals. of water to the soil beneath the canes in the fall or early spring before fruitset and before weeds emerge or during the early stage of weed growth. Do not spray foliage nor use on eroded areas where subsoil or roots are exposed, nor apply to plants that are diseased or lacking vigor as injury to the plant may result. Treated areas may be planted to mint, alfalfa, blueberries, apples or peaches 1 year after last treatment. Do not replant to other crops within 2 years of last application. Do not apply within 70 days before harvest.

**GRASS SEED CROPS**

SINBAR® is recommended for weed control in the following grass seed crops: Kentucky Bluegrass, Bromegrass, Creeping Red Fescue, Chewings Fine Fescue and Tall Fescue. Grass seed crops must be established for at least one growing season prior to the SINBAR® application.

**Application Information**

SINBAR® herbicide is to be mixed in water and applied as a spray by fixed-boom ground application equipment. Apply in sufficient spray volume to ensure thorough coverage of the area to be treated. Avoid overlapping of the spray swath and shut off boom while either starting, stopping, slowing or turning to prevent crop injury.

For best results, straw, trash and/or duff should be removed from the field prior to application. Also, where field burning is practiced, allow wind and rain to disperse and dilute the ash prior to application. Weed control may not be satisfactory if there is a heavy layer of ash or straw on the field at time of application.

Best weed control is obtained when the application is made after rainfall or irrigation has recharged the soil profile but before weeds have become established. Approximately 0.5 to 1.0 inch of rainfall or irrigation is needed to move SINBAR® into the weed root zone. Weed control is best

when the rainfall or irrigation occurs within two weeks after application. Weed control may not be satisfactory if weeds become well established before rainfall/irrigation moves SINBAR® into the weed root zone.

**Application Timing**

Apply after harvest during the fall and winter months. For early fall applications, wait until soil and air temperatures have moderated with daytime temperatures in the 70's or lower and nighttime temperatures in the 50's or lower. Treatments made during hot weather in the fall can result in crop injury.

**Application Rates**

Where a rate range is indicated, use the lower end of the rate range on coarse textured soils, (e.g., sandy loam, loam) and the higher rate range on fine textured soils, (e.g., silt loam, clay loam).

**Tank Mixes**

SINBAR® may be tank mixed with other registered herbicides. When using a tank mix for the first time, test the spray mixture on a small area to determine crop safety before treating large areas.

**Checking Soil Classification and Organic Matter**

Before using SINBAR®, determine the soil classification and organic matter content of the grass seed crop area to be treated. To obtain a representative soil classification and organic matter content for the test area, take several 0-6 inch deep soil samples from different areas and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

**Soils With 1.0 to 1.4% Organic Matter**

Apply SINBAR® at 0.5 pound per acre in Tall Fescue.

**Soils With 1.5 to 1.9% Organic Matter**

Apply SINBAR® at 0.5 to 0.75 pound per acre in Kentucky Bluegrass, and at 0.5 pound per acre in Tall Fescue.

**Soils With at least 2% Organic Matter**

Apply SINBAR® at the rate of 0.5 to 1.0 pound per acre for control of seedling annual broadleaf weeds in Kentucky Bluegrass, Bromegrass, Creeping Red Fescue, Chewings Fine Fescue and Tall Fescue. For control of seedling grasses, use 0.75 to 1.0 pound per acre.

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**WEEDS CONTROLLED**

Bluegrass, annual	<i>Poa annua</i>
Brome, downy (cheatgrass)	<i>Bromus tectorum</i>
Henbit	<i>Lamium alexicaule</i>
Ryegrass, annual	<i>Lolium multiflorum</i>
Ventenata	<i>Ventenata dubia</i>
Parent Crop Seedlings	

**Use Precautions - Grass Seed Crops**

Different varieties of grass grown for seed may be sensitive to SINBAR®. When using SINBAR® on a new variety, treat a small area of the field to determine crop sensitivity prior to treating large areas.

Crop injury may occur if applications of SINBAR® are made to an actively growing grass seed crop. Applications of SINBAR® to grass seed crops under stress caused by any environmental conditions, such as cold weather, excessive moisture, drought, disease, insects or nematodes, may result in crop injury.

- Do not allow livestock to graze in treated fields or feed hay produced before harvest. Feeding of straw after seed harvest is allowed.
- Do not apply within 90 days of harvest.
- Do not use SINBAR® on soils having less than 1.0% Organic Matter, or on gravelly soils or on thinly covered or exposed subsoil areas (clay knobs).
- Do not make more than one application of SINBAR® per year.

**HYBRID POPLAR PLANTINGS**

SINBAR® herbicide is recommended for control of weeds to aid in the establishment of hybrid poplar plantings.

**USE RATES AND SOIL RESTRICTIONS**

Apply SINBAR® at 1 to 2 lbs. per acre. Use 1 to 1½ lbs. per acre on coarse textured soils and 1½ to 2 lbs. per acre on medium to fine textured soils. Do not use on gravelly soils or on any soil having less than 0.5% organic matter as injury to trees may result.

**APPLICATION TIMING**

Apply in late winter or early spring as a uniform broadcast spray before or after planting but prior to bud swell, or as a directed spray after bud swell.

**Preplant:** If application is made prior to planting, take precautions to prevent treated soil (usually top 1") from coming into contact with roots of trees during the planting process as injury may result.

**Postplant:** If application is made after planting, it is best to wait until rain or irrigation has settled the soil around the newly planted trees before applying SINBAR®.

If trees are dormant, a broadcast application can be made. If buds have started to swell, use a directed spray pattern that prevents SINBAR® from contact with trees as injury may result.

**FOR BEST WEED CONTROL RESULTS**

Apply SINBAR® before weeds emerge or after emergence while weeds are small. Rainfall or overhead irrigation is necessary to move SINBAR® into the weed root zone before weeds become well established. If weeds are present at time of treatment, add a surfactant at 1 to 2 qts. per 100 gals. of spray solution.

**TANK MIXES**

SINBAR® herbicide can be tank mixed with other products that are registered for use on hybrid poplars and where the labeled method of application and timing of application are the same as for SINBAR®.

**PRECAUTIONS**

- Do not apply to trees which are under stress from low fertility, disease, insect damage, severe weather conditions or water saturated soils, as injury may occur. Severe weather stress, disease or insect damage following application may also result in crop injury.
- Do not apply to frozen soil.
- Do not apply through any type of irrigation system.
- Do not plant treated areas to any other crop for 2 years after last application.

- When using SINBAR® herbicide for the first time on a new hybrid line, limit use to a small area to determine selectivity before using on a field scale.
- When using SINBAR® with a glyphosate herbicide, avoid contact with foliage, green stems, trees or other desirable vegetation because severe damage may result.

**MINT (Peppermint, Spearmint)**

**Preemergence Application:** Make a single broadcast application of 1 to 2 pounds per acre before mint emerges. Preemergence treatments may be applied by either ground or aerial application equipment. Use a minimum spray volume of 5 gallons per acre for aerial applications.

**Midwest:** Apply in the spring just after the last cultivation.

**Pacific Northwest:**

**West of Cascade Mountains--**Apply in spring or fall after last cultivation.

**East of Cascade Mountains--**Apply any time after the first settling rain in the fall, but not when ground is frozen. If moisture is inadequate to activate the chemical, irrigation by sprinkler must follow fall or winter treatment as soon as soil thaws in the spring (or promptly after spring treatment) or poor weed control may result.

**MINT - WEEDS CONTROLLED (Pacific Northwest)**

**1 to 2 pounds per acre**

Chickweed	<i>Stellaria media</i>
Dog fennel	<i>Anthemis cotula</i>
Filaree	<i>Erodium spp</i>
Henbit	<i>Lamium amplexicaule</i>
Mustard, Jim Hill	<i>Sisymbrium altissimum</i>
Nightshade (annual)	<i>Solanum spp</i>
Pepperweed, annual	<i>Lepidium perfoliatum</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Tansymustard	<i>Descurainia pinnata</i>

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**WEEDS SUPPRESSED\***

Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual	<i>Poa annua</i>
Brome, downy	<i>Bromus tectorum</i>
Falseflax, smallseed	<i>Camelina microcarpa</i>
Knotweed	<i>Polygonum spp</i>
Lambsquarter	<i>Chenopodium alba</i>
Nutsedge	<i>Cyperus spp</i>
Quackgrass	<i>Elytrigia repens</i>
Thistle, Russian	<i>Salsola iberica</i>
Vetch	<i>Vicia spp</i>

\*Suppression - a visible reduction in plant population and/or plant vigor as compared to an untreated area and generally not accepted as control.

**Postemergence Application (Midwest and Pacific Northwest):**

Apply 1 to 1½ pounds per acre before weeds are 2" tall (or across) and grasses are 1" tall (or across). Add 1/2 to 1 pt. surfactant to each 25 gals. of spray; non-phytotoxic superior-type spray oil may be substituted at the rate of 1 gal. per acre. If preemergence treatment has not been applied, a second postemergence application may be made but do not exceed 2 pounds total per acre per season. Do not apply within 60 days of harvest.

**Preemergence + Postemergence:** Apply as directed above. Do not apply more than 2 pounds total per acre per season; do not apply within 60 days of harvest.

**Note:** For either newly planted roots or established mint, soil must be well prepared before preemergence application.

Crop injury and/or poor weed control may result if application is made to ground which is cloddy or compacted, resulting in exposed or improperly covered roots. Do not apply to newly planted roots that are diseased or lacking in vigor, nor on thinly covered or exposed subsoil areas as injury to the crop may result. Use of insecticides in fields where SINBAR® is applied may result in injury to the mint; observe use limitations on insecticide labels. Treated areas may be planted to mint one year after last application.

**STRAWBERRY  
MATTED-ROW STRAWBERRY PRODUCTION  
SYSTEMS**

**Planting Year**

Apply 2 to 3 ounces of SINBAR® per acre after transplanting but before new runner plants start to root. If strawberry transplants are allowed to develop new foliage prior to SINBAR® application, the application must be followed immediately by 0.5 to 1 inch of irrigation or rainfall to wash the SINBAR® off the strawberry foliage. Otherwise severe injury may result.

Apply 2 to 6 ounces of SINBAR® per acre starting in late summer or early fall for control of winter annual weeds. If strawberry plants are not dormant at the time of the SINBAR® application, the application must be followed immediately by 0.5 to 1 inch of irrigation or rainfall to wash the SINBAR® off the strawberry foliage. Otherwise severe injury may result.

To extend weed control through harvest of the following year, apply 2 to 4 ounces SINBAR® per acre just prior to mulching in the late fall.

**Harvest Year**

After post-harvest renovation, before new growth begins in midsummer, apply 4 to 8 ounces of SINBAR® per acre.

To extend weed control through harvest of the following year, apply 4 to 8 ounces of SINBAR® per acre just prior to mulching in the late fall.

**ANNUAL PRODUCTION UNDER PLASTIC MULCH  
(Florida Only)**

Make a once-per-crop application of 4 ounces of SINBAR® per acre after bedding but prior to transplanting. Rainfall or irrigation is required for SINBAR® activation.

**USE PRECAUTIONS**

Do not apply more than 8 ounces per acre per season of SINBAR® unless otherwise directed.

Do not apply within 110 days of harvest.

Do not apply SINBAR® to soils with less than 0.5% organic matter.

For coarse soils (sands, sandy loam) with 0.5 to 1% organic matter, use a maximum of 3 ounces per acre per single application and a maximum of 6 ounces per acre per season.

For coarse soils with less than 2% organic matter but greater than 1% organic matter, and for all medium and fine soils with less than 2% organic matter, use a maximum of 4 ounces per acre per single application and a maximum of 8 ounces per acre per season.

Avoid spray overlap, as crop injury may result.

A SINBAR® treatment may reduce runner production or plant stand.

A reduction in residual weed control may occur under adverse environmental conditions such as heavy rainfall or when low rates are used on soil high in organic matter.

**VARIETIES**

Strawberry varieties vary in their sensitivity to SINBAR®. Prior to adoption as a field practice, determine the varietal tolerance under expected field conditions to avoid the potential for widespread injury.

**ROTATIONAL GUIDELINES**

Alfalfa, apples, blueberries, mint, peaches, and strawberries may be planted one year after the last SINBAR® application.

Do not plant any other crop within two years after application, as injury to the crop may occur.

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**SUGARCANE**

Because sugarcane varieties vary in their resistance to herbicides, determine tolerance to SINBAR® prior to adoption as field practice to prevent possible crop injury. For additional information, review the local university variety/herbicide guidelines for sugarcane. Do not use on varieties which are known to be susceptible to herbicide, such as 48-103 (Louisiana), 50-28 (Texas), 53-263 (Hawaii) or P.R. 1048 (Puerto Rico). Do not use where cane is grown on thinly covered sub-soils or rocky areas as injury to cane may result. Do not replant treated areas to any crop other than sugarcane or pineapple within 2 years after last application as injury to subsequent crops may result. Do not exceed 3 pounds SINBAR® per acre per year. Do not apply within 120 days of harvest.

**Louisiana**--For best control of seedling johnsongrass; apply at 1 to 1½ pounds per acre in the fall after planting and before cane emerges; repeat application at same rate in the early spring before weeds emerge.

As a layby treatment immediately after last cultivation, apply 1/2 pounds per acre as a directed spray to row middles (treated area not to exceed 50% of row width). Do not apply over the top of cane as injury to the crop may result.

**Texas**--Apply broadcast at 1 to 1½ pounds per acre in the fall to stubble cane or to plant cane before emergence; repeat application at same rate in early spring. Use 1/3 of above broadcast rates when band-treating 1/3 of the area.

**Hawaii**--Make a single preemergence broadcast application of 1 to 1½ pounds per acre on plant or ratoon cane before cane emerges. Longevity of control is enhanced if application is made during the relatively dry season (March through October).

**Puerto Rico**--Make a single preemergence broadcast application of 1 to 2½ pounds per acre on plant cane only.

Note: Preemergence treatments (prior to sugarcane emergence) may be applied by either ground or aerial application equipment. Use a minimum spray volume of 5 gallons per acre for aerial applications.

### SPRAY DRIFT MANAGEMENT

The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

### IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (greater than 150–200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions! See the Wind; Temperature and Humidity; and Temperature Inversions sections below.

### CONTROLLING DROPLET SIZE - GENERAL TECHNIQUES

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use a higher-capacity nozzle instead of increasing pressure.
- **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.

### CONTROLLING DROPLET SIZE - AIRCRAFT

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

### BOOM LENGTH AND HEIGHT

- **Boom Length (aircraft)** - The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- **Boom Height (aircraft)** - Application more than 10 feet above the canopy increases the potential for spray drift.
- **Boom Height (ground)** - Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

### WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

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

### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

### SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature 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 generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift, and not interfering with uniform deposition of the product.

### AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

**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).

**SPRAY EQUIPMENT CLEAN OUT**

Thoroughly clean all traces of SINBAR® from application equipment immediately after use. Flush the tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Dispose of the equipment wash water by applying it to a use-site listed on this label.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

SINBAR® is a registered trademark of Tessenderlo Kerley, Inc.

KARMEX® is a registered trademark of E. I. duPont de Nemours and Company

**Deleted:** Container Disposal

**Deleted:** For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.  
**For Fiber Sacks:** Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities.  
**For Fiber Drums With Liners:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.  
**For Paper and Plastic Bags:**

**Deleted:** DuPont™

**Deleted:** Container Refilling and Disposal (For Containers up to 250 gal): This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than DuPont™ SINBAR®. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night. ¶

**Container Disposal for Bulk Containers:** When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product.  
**DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** ... [1]

**Deleted:** The DuPont Oval Logo, DuPont™, SINBAR® and

**Deleted:** are trademarks or

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**CONDITIONS OF SALE - LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES**

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Tessenderlo Kerley, Inc. or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Tessenderlo Kerley, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use, subject to the factors noted above which are beyond the control of Tessenderlo Kerley, Inc. Except as warranted by this label, Tessenderlo Kerley, Inc. makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness

for any particular purpose. To the extent consistent with applicable law, the exclusive remedy against Tessenderlo Kerley, Inc. for any cause of action relating to the handling or use of this product is a claim of damage, and in no event shall damages or any other recovery of any kind against Tessenderlo Kerley, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, Tessenderlo Kerley, Inc. shall not be liable and any and all claims against Tessenderlo Kerley, Inc. are waived, for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of Tessenderlo Kerley, Inc. breach of warranty, strict liability in tort, or any other cause of action. Tessenderlo Kerley, Inc. and the seller offer this product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

**Manufactured for:**  
Tessenderlo Kerley, Inc.  
2255 North 44<sup>th</sup> Street, Suite 300  
Phoenix, AZ 85008-3279  
1-800-525-2803

**Deleted: LIMITATION OF WARRANTY AND LIABILITY¶**

NOTICE: Read This Limitation of Warranty and Liability Before Buying or Using This Product. If the Terms Are Not Acceptable, Return the Product at Once, Unopened, and the Purchase Price Will Be Refunded. ¶

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product; crop injury, or; injury to non-target crops or plants. ¶

DuPont does not agree to be an insurer of these risks. TO THE FULLEST EXTENT PERMITTED BY LAW, WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS. ¶

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. ¶

DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. ¶

TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE ¶ ... [2]

**Deleted: For product information call: 1-888-6-DUPONT¶**  
Internet address:  
<http://cropprotection.dupont.com/>¶  
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**Container Refilling and Disposal (For Containers up to 250 gal):** This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than DuPont™ SINBAR®. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

**Container Disposal for Bulk Containers:** When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-441-3637. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

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**DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT, OR AT THE ELECTION OF DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

# Sinbar®

Herbicide

## Wettable Powder

Active Ingredient	By Weight
Terbacil [3-tert-butyl-5-chloro-6-methyluracil]	80%
Other Ingredients	20%
TOTAL	100%

EPA Reg. No. 61842-13

EPA Est. No.

### KEEP OUT OF REACH OF CHILDREN CAUTION

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

#### FIRST AID

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-877-1737 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemically resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.

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

#### ENGINEERING CONTROL STATEMENT

When handlers use closed systems, or enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 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.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning of equipment or disposing of equipment washwaters.

Terbacil has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion. This chemical also has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

Net Weight:

## GENERAL INFORMATION

SINBAR® herbicide is a wettable powder to be mixed in water and applied as a spray for selective weed control in certain crops. It is non-volatile, non-flammable, and non-corrosive to equipment.

SINBAR® controls susceptible weeds for an extended period of time; the degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soils low in clay or organic matter to obtain equivalent herbicide performance. Moisture is required to activate the chemical; best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks after application.

Observe all cautions and limitations on labeling of all products used in mixtures.

### USE PRECAUTIONS

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

Do not apply (except as recommended for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not use in home planting of fruits, nuts or other crops nor in apple or peach orchards interplanted with other trees or desirable plants. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds. Thoroughly clean all traces of SINBAR® from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water removing nozzle tips and screens (clean these parts separately).

Reduced weed control may occur when fields to be treated with SINBAR® have been previously treated with sludge, or other by-products, from sewage or manufacturing facilities that are high in organic matter.

### RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have

a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

### INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

### 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.

SINBAR® herbicide should be used only in accordance with recommendations on this label, or in separate published Tessenlerlo Kerley, Inc. recommendations available through local dealers.

Tessenlerlo Kerley, Inc. will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by Tessenlerlo Kerley, Inc.. User assumes all risk associated with such non-recommended use.

Do not use in the state of California.

## AGRICULTURAL USES

### 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

### SELECTIVE USE IN CROPS

#### WEED CONTROL

Best results are obtained if application is made shortly before or shortly after weed growth begins; if dense growth is present, remove tops and spray the ground. SINBAR® may not provide adequate control of established perennial grasses such as orchardgrass, bromes, fescues, and timothy. Control of perennial grasses may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced. For alfalfa, the soil should not be disturbed. See "Crops" section for recommended use rates for specific crops.

SINBAR®, at rates of 1/2 to 1 1/2 pounds per acre controls annual weeds including species of:

Barley, wild	<i>Hodeum leporinum</i>
Brome, downy	<i>Bromus tectorum</i>
Chickweed	<i>Stellaria media</i>
Crabgrass	<i>Digitaria spp.</i>
Flixweed	<i>Descurainia sophia</i>
Henbit	<i>Lamium amplexicaule</i>
Lambsquarter	<i>Chenopodium album</i>
Lettuce, prickly	<i>Lactuca serriola</i>
Mustard, wild	<i>Brassica kaber</i>
Mustard, Jim Hill (tumble)	<i>Sisymbrium altissimum</i>
Peppergrass, (seedling)	<i>Lepidium latifolium</i>
Ryegrass, annual	<i>Lolium multiflorum</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Speedwell, snow (snowweed)	<i>Veronica biloba</i>
Tansymustard	<i>Descurainia pinnata</i>
Yellow rocket	<i>Barbarea vulgaris</i>

Treatment will not control established perennial bindweeds Johnsongrass and Canada thistle.

Rates of 1 to 4 pounds per acre control annual weeds including species of:

Barnyardgrass	<i>Echinochloa crus-galli</i>
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Bluegrass, annual	<i>Poa annua</i>
Burnweed, American (fireweed)	<i>Erechtites hieracifolia</i>
Clover	<i>Trifolium spp.</i>
Crotalaria, showy	<i>Crotalaria spectabilis</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Dandelion (seedling)	<i>Taraxacum officinale</i>
Dog fennel (mayweed chamomile)	<i>Anthemis cotula</i>
Fiddleneck, coast	<i>Amsinckia intermedia</i>
Foxtail	<i>Setaria spp.</i>
Geranium, wild	<i>Geranium spp.</i>
Guineagrass	<i>Panicum maximum</i>
Horseweed (maretail)	<i>Coryza canadensis</i>
Jimsonweed	<i>Datura stramonium</i>
Johnsongrass (seedling)	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colona</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Knotweed, erect	<i>Polygonum erectum</i>
Natalgrass	<i>Rhynchelytrum repens</i>
Nightshade (annual)	<i>Solanum spp.</i>
Orchardgrass (seedling)	<i>Dactylis glomerata</i>
Paintbrush, Flora's	<i>Emilia sonchifolia</i>
Panicum	<i>Panicum spp.</i>
Pepperweed (annual)	<i>Lepidium perfoliatum</i>
Purslane, common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scraba</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Sandbur (sandspur)	<i>Cenchrus spp.</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
Smartweed	<i>Polygonum spp.</i>

In addition, treatment usually provides partial control of species of:

Groundsel	<i>Senecio spp.</i>
Horsenettle	<i>Solanum carolinense</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Quackgrass	<i>Agropyron repens</i>
Sorrel, red	<i>Rumex acetosella</i>

Rates of 2 to 3 pounds per acre control annual weeds including species of:

Cinquefoil	<i>Potentilla spp.</i>
Hawkweed	<i>Hieracium spp.</i>
Redroot	<i>Lachnanthes caroliniana</i>
Ryegrass, perennial	<i>Lolium perenne</i>
Sedge, annual	<i>Cyperus compressus</i>

### APPLICATION INFORMATION

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

Unless otherwise directed, apply with a fixed-boom power sprayer properly calibrated to a constant speed and rate of delivery. Use sufficient spray volume to provide thorough and uniform coverage of the area to be treated.

Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

### SPRAY PREPARATION

**Mixing in water** - Fill tank 1/2 full with water. Start agitation system, add SINBAR® and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

**USE RATES**

All dosages of SINBAR® are expressed as broadcast rates; for band treatment, use proportionately less. Where a range of dosages is given, use the lower rate on coarse textured soils (low in clay or organic matter) and the higher rate on fine textured soils (high in clay or organic matter).

**SOIL LIMITATIONS**

Crop injury may result from failure to observe the following: Unless otherwise directed, do not use SINBAR® on sand or gravel soil types. For other soil types (e.g. sandy loam and loamy sand) that contain less than 1% organic matter, limit initial use of SINBAR® to a small area to determine crop response prior to treating larger acreage. Severe crop injury may occur when SINBAR® is used on soils having less than 1% organic matter.

**REPLANTING**

Do not replant treated areas to any crop within 2 years after last application as injury to the subsequent crop(s) may result. In arid climates (10 inches of annual rainfall or less) or areas where drought conditions have prevailed for one or more years, or where normal irrigation practices were not followed after the last application of SINBAR®, a field bioassay should be completed prior to planting any desired crop(s). The results of the bioassay may require the two-year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test crop(s) strip should cross the entire field including knolls and low areas.

**CROPS**

**ALFALFA**

**Established Alfalfa (Established 1 year or longer)**

**U.S. (Except NORTHEAST)**

SINBAR® may be used for the control of seedling annual weeds in alfalfa established for 1 year or longer. Apply at rates of 1/2 to 1 1/2 pounds per acre. Make a single application of SINBAR® either in the fall after plants become dormant or in the spring before new plant growth begins. For semi-dormant and non-dormant varieties, apply in the fall or winter after the last cutting or in the spring before new growth begins. Apply before or after emergence of weeds but before they exceed either 2 inches in height or width. SINBAR® may not provide adequate control of established perennial grasses such as bromes, fescues, orchardgrass or timothy.

SINBAR® may be applied by aerial application equipment. Use a minimum spray volume of 5 gallons per acre.

NOTE: Do not apply to established stands after new growth begins in the spring as injury to the crop may result.

Do not apply to stands lacking good crop vigor (under stress) due to winter kill, insect or disease injury or other causes.

Do not use in California.

**NORTHEAST**

Apply SINBAR® at the rate of 3/4 to 1 1/2 pounds per acre (ground application only) to alfalfa that is dormant (fall through winter). Alternately, make the application in the spring before initial new growth exceeds 2 inches in height or to stubble after cutting, following hay removal and before regrowth exceeds 2 inches in height. Two applications may

be made but should be at least 60 days apart and must not exceed 1 1/2 pounds per year.

For winter annual weeds and early germinating summer annuals, applications of SINBAR® during dormancy or before new spring growth exceeds 2 inches in height provides the best results. Late germinating annual grasses and broadleaf weeds are controlled with an after cutting treatment. Where an early application is made for control of winter annual weeds and early germinating summer grasses and broadleaves are expected to be a problem, a second application (after cutting) may be applied for improved results, provided the total applied does not exceed 1 1/2 pounds per year.

**POSTHARVEST APPLICATIONS-OKLAHOMA ONLY**

SINBAR® herbicide is recommended as a postharvest application on alfalfa, only in Oklahoma, for the control of pigweed (Amaranthus spp.) and the suppression \* of other warm season annual weeds such as crabgrass and foxtails.

Apply SINBAR® at the rate of 1/2 to 3/4 pound per acre to alfalfa stubble after cutting, following hay removal, and before alfalfa regrowth exceeds 2" in height. Two applications (dormant and/or postharvest) may be made but must be at least 60 days apart and must not exceed 2 pounds per year.

Best results are obtained when SINBAR® is applied prior to weed emergence but before weeds are 2" in height or width, and 3/4" of rainfall or sprinkler irrigation occurs within two weeks of application.

Do not apply after June 15 or to first year, spring-seeded alfalfa.

Do not apply more than 1/2 pound per acre to fall seeded, first year stands of alfalfa.

\*Suppression: Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated area. Degree of suppression and duration of effect on weeds will depend on weed density, condition of seed bed, timing, and amount of rainfall following application and growing conditions following application.

**Seedling Alfalfa (Established less than 1 year)**

**OREGON AND WASHINGTON:**

SINBAR® when applied at reduced rates of 1/4 to 1/2 pound per acre (depending on organic content of the soil and tap root depth) selectively controls downy brome, henbit, flixweed, Jim Hill mustard and shepherd's-purse in seedling alfalfa.

Apply SINBAR® after alfalfa is dormant in late winter or early spring but before alfalfa has more than 2" of new growth.

For best results on Downy Brome, apply SINBAR® at 1/2 pound per acre for preemergence and early postemergence control if sufficient rainfall occurs to move SINBAR® into the root zone before downy brome is beyond the 2-leaf stage. For control of downy brome on soils where lower rates of SINBAR® must be used, tank mix with pronamide herbicide.

**Sandy Soils with 0.5 - 0.9% Organic Matter -**

Apply 1/4 - 1/3 pound per acre to seedling alfalfa stands which have a minimum 6" tap root depth throughout the field. First time application should be limited to a small area to determine crop safety.

**Note:** User must accept risk of possible crop damage on these low organic matter sandy soils. Crop injury may result in areas of spray overlap.

**Soils with at least 1% Organic Matter -**

Apply 1/4 - 1/3 pound per acre on sandy soils where seedling alfalfa has a minimum 4" tap root depth throughout the field.

Apply 1/2 pound per acre on loam, silt and clay soils where seedling alfalfa has a minimum 4" tap root depth throughout the field.

**Note:** It is very important to determine seedling alfalfa tap root length throughout the field before using SINBAR®.

Alfalfa growing on north facing slopes, areas that do not receive enough moisture or are poorly drained and areas where weed competition is heavy can have smaller root systems compared to other areas of the field. Significant crop injury can occur in areas where the alfalfa root system is smaller than specified.

**TANK MIXTURES: WITH 2,4-DB**

SINBAR® in combination with rates as low as 1/2 pound active ingredient per acre (1 qt of 2 pounds per gallon product) of 2,4-DB may be used.

**PENNSYLVANIA AND VIRGINIA:**

Seedling and Established Stands -Common chickweed and henbit may be selectively controlled using SINBAR® in alfalfa at reduced rates of 1/3 to 1/2 pound per acre.

- Apply SINBAR® to alfalfa seeded from late summer to early fall that is at least 2" in height and has a minimum of 4 trifoliolate leaves. Applications should be made in the fall or early spring before weeds exceed 2" in height.
- Apply SINBAR® to spring seeded alfalfa that has been established for 6 months or longer. Spring applications should be made before new growth exceeds 2" in height. Fall applications should be made to the stubble after the last cutting following hay removal, and before new growth exceeds 2" in height.

**TANK MIXES AND SEQUENTIAL TREATMENTS (Seedling and Established Alfalfa)**

SINBAR® can be applied either alone or in a program involving tank mixes and/or sequential treatments with other herbicides, fungicides, or insecticides registered for use on alfalfa. Tessenderlo Kerley, Inc. recommends that you first consult your state experiment station, university, or extension agent, or fieldman as to expected crop response to mixtures or sequential treatments. If no information is available, limit the initial use to a small area.

**ALFALFA - USE PRECAUTIONS**

- Use on sand, loamy sand or gravelly soils, or on soils low in organic matter (less than 1 percent), may result in severe crop injury.
- Tank mixes and sequential treatments with other herbicides can increase the risk of crop injury. To avoid crop injury, when using in a tank mix with other herbicides, use the lower end of the use rate range for SINBAR® unless prior experience supports higher rates.

- When using any tank mix or sequential treatment for the first time, limit use to a small area to determine crop safety before treating large areas.
- Do not apply SINBAR® and paraquat as a sequential treatment as severe crop injury can occur.
- Do not use on alfalfa-grass mixtures or other mixed stands.
- Do not use with surfactants, unless specified otherwise in this labeling, or other supplemental labeling.
- Do not apply on snow covered or frozen ground, as injury to the crop or poor weed control may result.
- Applications should be made to young, actively growing weeds before they exceed 2" in height. Applications made at other growth stages may result in reduced weed control depending on the species, stage of growth and/or environmental conditions.
- Applications made to plants under stress and/or cold temperatures (less than 40° F) may result in reduced or no control.
- Avoid overlap as severe crop injury may result.
- Temporary yellowing, stunting and/or reduction of first cutting yield may occur when applications are made to new alfalfa growth, or actively growing seedling alfalfa.

**TREE FRUIT**

**NON-BEARING FRUIT TREES (Young, Newly Planted)**

SINBAR® is recommended for use in newly planted and young non-bearing Apple, Apricot, Cherry, Peach, Pear, and Plum trees.

For control of annual weeds in newly-planted fruit trees, apply SINBAR® at 0.5 to 1 pound per acre by ground application.

Make the first application after a significant rainfall or irrigation event that will allow the soil to settle around the base of the tree prior to application. Make 1 to 2 applications per season.

SINBAR® may be tank mixed with KARMEX® XP to broaden the weed control spectrum in Apples and Peaches.

In the Columbia Basin of Washington, make a single application in either the spring or the fall.

Do not use on soils that are coarser than sandy loam.

Do not use on soils with less than 1% organic matter.

Do not use more than 1 pound per acre per year.

Do not use in the state of California.

**APPLES, PEACHES**

SINBAR® herbicide may be used alone or in a tank mixture with other herbicides registered for use in Apples and Peaches, such as, glyphosate, paraquat, oryzalin, pendimethalin, simazine, diuron and norflurazon. Refer to the tank mixture partner label for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

Make a band or broadcast application of SINBAR® as a directed spray; avoid contact of foliage and fruit with spray

or mist. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth. Where complete weed control to harvest is desired, additional weed control measures may be required during the growing season.

When crops are grown under furrow irrigation or under raised-berm flood irrigation (trees 4 to 6 inches above the waterline), apply SINBAR® only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows or trees grown under flat flood or basin irrigation. Do not use on eroded areas where sub-soil or tree roots are exposed as injury to trees may result.

To determine organic matter content of the soil, take a composite of several samples of soil. Take soil samples down to 6 inches deep. Remove any surface debris from sampling area prior taking the sample.

Do not graze or feed forage from treated areas to livestock.

Do not apply SINBAR® within 60 days of harvest.

Do not use in the state of California.

In the Columbia Basin of Washington, make a single application in either the spring or the fall.

**SINBAR® Alone**--Use only under trees established in the orchard for at least 3 years.

**SINBAR® -- Pounds Per Acre**

Soil Texture Description	1 to 2% Organic Matter	More Than 2% Organic Matter
Sandy loam	2	3
Loam, silt loam, silt	2½	3½
Clay loam, clay	3	4

**SINBAR® + a diuron containing herbicide, such as KARMEX® XP** -- Use only under trees established in the orchard for at least 1 year.

**SINBAR® + KARMEX® XP -- Pounds Per Acre**

Soil Texture Description	1 to 2% Organic Matter	More Than 2% Organic Matter
Sandy loam	1+1	1½ + 1½
Loam, silt loam, silt	1½ + 1½	2+2
Clay loam, clay	2+2	2+2

**ASPARAGUS**

**Direct Seeded**--Plant seed 1½ inches deep in coarse soils and 1 inch deep in fine soils. During planting operation, spray activated charcoal (such as Aqua NuChar<sup>†</sup> or Gro-Safe<sup>††</sup>) as a 1 inch band on soil surface directly over rows at a rate of 300 pounds per acre (broadcast basis equivalent to 15 pounds per acre where row spacing is 20 inches). Follow with SINBAR® as a single spray at 1 to 2 pounds per acre. Use the lower rate on coarser soils and the higher rate on finer soils.

**Established Beds**--Apply 1½ to 2½ pounds SINBAR® per acre prior to spear emergence. Application may be made

immediately after clean cutting. Use the lower rate on coarse textured soils and the higher rate on fine soils.

Do not apply more than 1½ pounds per acre per application.

In the Columbia Basin, use SINBAR® at 0.5 pound per acre on coarse textured soils having 0.5 to 0.9% organic matter. On coarse textured soils have 1.0% organic matter or more, use SINBAR® at 0.5 to 0.75 pounds per acre. On medium to fine textured soils, SINBAR® can be used at 1.0 to 2.0 pounds per acre. When using SINBAR® for the first time on a particular field, use the lowest recommended rate for that soil until experience demonstrates that higher rates can be used safely.

Apply before weeds emerge or to small weeds (1/2 to 2 inches tall or across).

High organic soils absorb SINBAR® so that it is substantially inactivated as a soil residual herbicide. On these soils, weed control is provided by postemergence foliar uptake only. Apply 1 to 2 applications of SINBAR® not exceeding 2½ pounds per acre per year.

**Note:** Do not use on areas where subsoil or roots are exposed. Do not use on plants that are diseased or lacking in vigor, as injury to the crop may result. Do not harvest within 5 days after application. Treated areas may be planted to asparagus one year after application. Otherwise, do not replant to any other crop within two years after last application.

<sup>†</sup> Aqua NuChar - Registered trademark of Westvaco Corp.

<sup>††</sup> Gro-Safe - Registered trademark of ICI Americas, Inc.

**BLUEBERRIES**

Treat only plantings established for 1 year or more. Make a single band or broadcast application to ground beneath bushes; avoid contact of foliage and fruit with spray or mist. Apply either in the spring or after harvest in the fall before weeds emerge or during early seeding stage of weed growth. Do not use on eroded areas where subsoil or roots are exposed, nor on plants that are diseased or lacking in vigor, as injury to the plants may result. Treated areas may be planted to blueberries one year after last application.

**Pounds SINBAR® in Min. 25 Gals. Water Per Acre**

Soil Texture Description	1 to 3% Organic Matter	More Than 3% Organic Matter
Sand, Loamy Sand	Do not use	2
Sandy Loam, Loam, Silt Loam, Silt, Sandy Clay	2	3
Sandy Clay, Loam, Silty Clay, Silty Clay Loam, Clay	3	3
Clay Loam	3	3

**MAINE, MARYLAND, NEW JERSEY**

Apply as directed above, or, for broader spectrum weed control apply as a tank mix with KARMEX® XP:

**Pounds SINBAR® + KARMEX® XP Per Acre**

Soil Texture Description	1 to 3% Organic Matter	More Than 3% Organic
Sand, Loamy Sand	Do not use	2+2
Sandy Loam	2+2	2½+2
Loam, Silt Loam, Silt, Sandy Clay, Sandy Clay Loam	2½+2	3+2
Silty Clay, Silty Clay Loam, Clay, Clay Loam	3+2	3+2

Do not replant areas treated with SINBAR® + KARMEX® XP to crops other than blueberries within two years after application, as injury to those crops may result.

**CANEBERRIES**

(Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries, Youngberries)--Treat only plantings established for 1 year or more. Make a single band or broadcast application of 1 to 2 pounds per acre in a minimum of 20 gals. of water to the soil beneath the canes in the fall or early spring before fruitset and before weeds emerge or during the early stage of weed growth. Do not spray foliage nor use on eroded areas where subsoil or roots are exposed, nor apply to plants that are diseased or lacking vigor as injury to the plant may result. Treated areas may be planted to mint, alfalfa, blueberries, apples or peaches 1 year after last treatment. Do not replant to other crops within 2 years of last application. Do not apply within 70 days before harvest.

**GRASS SEED CROPS**

SINBAR® is recommended for weed control in the following grass seed crops: Kentucky Bluegrass, Bromegrass, Creeping Red Fescue, Chewings Fine Fescue and Tall Fescue. Grass seed crops must be established for at least one growing season prior to the SINBAR® application.

**Application Information**

SINBAR® herbicide is to be mixed in water and applied as a spray by fixed-boom ground application equipment. Apply in sufficient spray volume to ensure thorough coverage of the area to be treated. Avoid overlapping of the spray swath and shut off boom while either starting, stopping, slowing or turning to prevent crop injury.

For best results, straw, trash and/or duff should be removed from the field prior to application. Also, where field burning is practiced, allow wind and rain to disperse and dilute the ash prior to application. Weed control may not be satisfactory if there is a heavy layer of ash or straw on the field at time of application.

Best weed control is obtained when the application is made after rainfall or irrigation has recharged the soil profile but before weeds have become established. Approximately 0.5 to 1.0 inch of rainfall or irrigation is needed to move SINBAR® into the weed root zone. Weed control is best

when the rainfall or irrigation occurs within two weeks after application: Weed control may not be satisfactory if weeds become well established before rainfall/irrigation moves SINBAR® into the weed root zone.

**Application Timing**

Apply after harvest during the fall and winter months. For early fall applications, wait until soil and air temperatures have moderated with daytime temperatures in the 70's or lower and nighttime temperatures in the 50's or lower. Treatments made during hot weather in the fall can result in crop injury.

**Application Rates**

Where a rate range is indicated, use the lower end of the rate range on coarse textured soils, (e.g., sandy loam, loam) and the higher rate range on fine textured soils, (e.g., silt loam, clay loam).

**Tank Mixes**

SINBAR® may be tank mixed with other registered herbicides. When using a tank mix for the first time, test the spray mixture on a small area to determine crop safety before treating large areas.

**Checking Soil Classification and Organic Matter**

Before using SINBAR®, determine the soil classification and organic matter content of the grass seed crop area to be treated. To obtain a representative soil classification and organic matter content for the test area, take several 0-6 inch deep soil samples from different areas and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

**Soils With 1.0 to 1.4% Organic Matter**

Apply SINBAR® at 0.5 pound per acre in Tall Fescue.

**Soils With 1.5 to 1.9% Organic Matter**

Apply SINBAR® at 0.5 to 0.75 pound per acre in Kentucky Bluegrass, and at 0.5 pound per acre in Tall Fescue.

**Soils With at least 2% Organic Matter**

Apply SINBAR® at the rate of 0.5 to 1.0 pound per acre for control of seedling annual broadleaf weeds in Kentucky Bluegrass, Bromegrass, Creeping Red Fescue, Chewings Fine Fescue and Tall Fescue. For control of seedling grasses, use 0.75 to 1.0 pound per acre.

**WEEDS CONTROLLED**

Bluegrass, annual	<i>Poa annua</i>
Brome, downy (cheatgrass)	<i>Bromus tectorum</i>
Henbit	<i>Lamium aplexicaule</i>
Ryegrass, annual	<i>Lolium multiflorum</i>
Ventenata	<i>Ventenata dubia</i>
Parent Crop Seedlings	

**Use Precautions - Grass Seed Crops**

Different varieties of grass grown for seed may be sensitive to SINBAR®. When using SINBAR® on a new variety, treat a small area of the field to determine crop sensitivity prior to treating large areas.

Crop injury may occur if applications of SINBAR® are made to an actively growing grass seed crop. Applications of SINBAR® to grass seed crops under stress caused by any environmental conditions, such as cold weather, excessive moisture, drought, disease, insects or nematodes, may result in crop injury.



- Do not allow livestock to graze in treated fields or feed hay produced before harvest. Feeding of straw after seed harvest is allowed.
- Do not apply within 90 days of harvest.
- Do not use SINBAR® on soils having less than 1.0% Organic Matter, or on gravelly soils or on thinly covered or exposed subsoil areas (clay knobs).
- Do not make more than one application of SINBAR® per year.

### HYBRID POPLAR PLANTINGS

SINBAR® herbicide is recommended for control of weeds to aid in the establishment of hybrid poplar plantings.

#### USE RATES AND SOIL RESTRICTIONS

Apply SINBAR® at 1 to 2 lbs. per acre. Use 1 to 1½ lbs. per acre on coarse textured soils and 1½ to 2 lbs. per acre on medium to fine textured soils. Do not use on gravelly soils or on any soil having less than 0.5% organic matter as injury to trees may result.

#### APPLICATION TIMING

Apply in late winter or early spring as a uniform broadcast spray before or after planting but prior to bud swell, or as a directed spray after bud swell.

**Preplant:** If application is made prior to planting, take precautions to prevent treated soil (usually top 1") from coming into contact with roots of trees during the planting process as injury may result.

**Postplant:** If application is made after planting, it is best to wait until rain or irrigation has settled the soil around the newly planted trees before applying SINBAR®.

If trees are dormant, a broadcast application can be made. If buds have started to swell, use a directed spray pattern that prevents SINBAR® from contact with trees as injury may result.

#### FOR BEST WEED CONTROL RESULTS

Apply SINBAR® before weeds emerge or after emergence while weeds are small. Rainfall or overhead irrigation is necessary to move SINBAR® into the weed root zone before weeds become well established. If weeds are present at time of treatment, add a surfactant at 1 to 2 qts. per 100 gals. of spray solution.

#### TANK MIXES

SINBAR® herbicide can be tank mixed with other products that are registered for use on hybrid poplars and where the labeled method of application and timing of application are the same as for SINBAR®.

#### PRECAUTIONS

- Do not apply to trees which are under stress from low fertility, disease, insect damage, severe weather conditions or water saturated soils, as injury may occur. Severe weather stress, disease or insect damage following application may also result in crop injury.
- Do not apply to frozen soil.
- Do not apply through any type of irrigation system.
- Do not plant treated areas to any other crop for 2 years after last application.

- When using SINBAR® herbicide for the first-time on a new hybrid line, limit use to a small area to determine selectivity before using on a field scale.
- When using SINBAR® with a glyphosate herbicide, avoid contact with foliage, green stems, trees or other desirable vegetation because severe damage may result.

### MINT (Peppermint, Spearmint)

**Preemergence Application:** Make a single broadcast application of 1 to 2 pounds per acre before mint emerges. Preemergence treatments may be applied by either ground or aerial application equipment. Use a minimum spray volume of 5 gallons per acre for aerial applications.

**Midwest:** Apply in the spring just after the last cultivation.

#### Pacific Northwest:

**West of Cascade Mountains--**Apply in spring or fall after last cultivation.

**East of Cascade Mountains--**Apply any time after the first settling rain in the fall, but not when ground is frozen. If moisture is inadequate to activate the chemical, irrigation by sprinkler must follow fall or winter treatment as soon as soil thaws in the spring (or promptly after spring treatment) or poor weed control may result.

### MINT - WEEDS CONTROLLED (Pacific Northwest)

#### 1 to 2 pounds per acre

Chickweed	<i>Stellaria media</i>
Dog fennel	<i>Anthemis cotula</i>
Filaree	<i>Erodium spp</i>
Henbit	<i>Lamium amplexicaule</i>
Mustard, Jim Hill	<i>Sisymbrium altissimum</i>
Nightshade (annual)	<i>Solanum spp</i>
Pepperweed, annual	<i>Lepidium perfoliatum</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Tansymustard	<i>Descurainia pinnata</i>

### WEEDS SUPPRESSED\*

Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual	<i>Poa annua</i>
Brome, downy	<i>Bromus tectorum</i>
Falseflax, smallseed	<i>Camelina microcarpa</i>
Knotweed	<i>Polygonum spp</i>
Lambsquarter	<i>Chenopodium alba</i>
Nutsedge	<i>Cyperus spp</i>
Quackgrass	<i>Elytrigia repens</i>
Thistle, Russian	<i>Salsola iberica</i>
Vetch	<i>Vicia spp</i>

\*Suppression - a visible reduction in plant population and/or plant vigor as compared to an untreated area and generally not accepted as control.

#### Postemergence Application (Midwest and Pacific Northwest):

Apply 1 to 1½ pounds per acre before weeds are 2" tall (or across) and grasses are 1" tall (or across). Add 1/2 to 1 pt. surfactant to each 25 gals. of spray; non-phytotoxic superior-type spray oil may be substituted at the rate of 1 gal. per acre. If preemergence treatment has not been applied, a second postemergence application may be made but do not exceed 2 pounds total per acre per season. Do not apply within 60 days of harvest.

**Preemergence + Postemergence:** Apply as directed above. Do not apply more than 2 pounds total per acre per season; do not apply within 60 days of harvest.

**Note:** For either newly planted roots or established mint, soil must be well prepared before preemergence application.

Crop injury and/or poor weed control may result if application is made to ground which is cloddy or compacted, resulting in exposed or improperly covered roots. Do not apply to newly planted roots that are diseased or lacking in vigor, nor on thinly covered or exposed subsoil areas as injury to the crop may result. Use of insecticides in fields where SINBAR® is applied may result in injury to the mint; observe use limitations on insecticide labels. Treated areas may be planted to mint one year after last application.

**STRAWBERRY  
MATTED-ROW STRAWBERRY PRODUCTION  
SYSTEMS**

**Planting Year**

Apply 2 to 3 ounces of SINBAR® per acre after transplanting but before new runner plants start to root. If strawberry transplants are allowed to develop new foliage prior to SINBAR® application, the application must be followed immediately by 0.5 to 1 inch of irrigation or rainfall to wash the SINBAR® off the strawberry foliage. Otherwise severe injury may result.

Apply 2 to 6 ounces of SINBAR® per acre starting in late summer or early fall for control of winter annual weeds. If strawberry plants are not dormant at the time of the SINBAR® application, the application must be followed immediately by 0.5 to 1 inch of irrigation or rainfall to wash the SINBAR® off the strawberry foliage. Otherwise severe injury may result.

To extend weed control through harvest of the following year, apply 2 to 4 ounces SINBAR® per acre just prior to mulching in the late fall.

**Harvest Year**

After post-harvest renovation, before new growth begins in midsummer, apply 4 to 8 ounces of SINBAR® per acre.

To extend weed control through harvest of the following year, apply 4 to 8 ounces of SINBAR® per acre just prior to mulching in the late fall.

**ANNUAL PRODUCTION UNDER PLASTIC MULCH  
(Florida Only)**

Make a once-per-crop application of 4 ounces of SINBAR® per acre after bedding but prior to transplanting. Rainfall or irrigation is required for SINBAR® activation.

**USE PRECAUTIONS**

Do not apply more than 8 ounces per acre per season of SINBAR® unless otherwise directed.

Do not apply within 110 days of harvest.

Do not apply SINBAR® to soils with less than 0.5% organic matter.

For coarse soils (sands, sandy loam) with 0.5 to 1% organic matter, use a maximum of 3 ounces per acre per single application and a maximum of 6 ounces per acre per season.

For coarse soils with less than 2% organic matter but greater than 1% organic matter, and for all medium and fine soils with less than 2% organic matter, use a maximum of 4 ounces per acre per single application and a maximum of 8 ounces per acre per season.

Avoid spray overlap, as crop injury may result.

A SINBAR® treatment may reduce runner production or plant stand.

A reduction in residual weed control may occur under adverse environmental conditions such as heavy rainfall or when low rates are used on soil high in organic matter.

**VARIETIES**

Strawberry varieties vary in their sensitivity to SINBAR®. Prior to adoption as a field practice, determine the varietal tolerance under expected field conditions to avoid the potential for widespread injury.

**ROTATIONAL GUIDELINES**

Alfalfa, apples, blueberries, mint, peaches, and strawberries may be planted one year after the last SINBAR® application.

Do not plant any other crop within two years after application, as injury to the crop may occur.

**SUGARCANE**

Because sugarcane varieties vary in their resistance to herbicides, determine tolerance to SINBAR® prior to adoption as field practice to prevent possible crop injury. For additional information, review the local university variety/herbicide guidelines for sugarcane. Do not use on varieties which are known to be susceptible to herbicide, such as 48-103 (Louisiana), 50-28 (Texas), 53-263 (Hawaii) or P.R. 1048 (Puerto Rico). Do not use where cane is grown on thinly covered sub-soils or rocky areas as injury to cane may result. Do not replant treated areas to any crop other than sugarcane or pineapple within 2 years after last application as injury to subsequent crops may result. Do not exceed 3 pounds SINBAR® per acre per year. Do not apply within 120 days of harvest.

**Louisiana**--For best control of seedling johnsongrass; apply at 1 to 1½ pounds per acre in the fall after planting and before cane emerges; repeat application at same rate in the early spring before weeds emerge.

As a layby treatment immediately after last cultivation, apply 1/2 pounds per acre as a directed spray to row middles (treated area not to exceed 50% of row width). Do not apply over the top of cane as injury to the crop may result.

**Texas**--Apply broadcast at 1 to 1½ pounds per acre in the fall to stubble cane or to plant cane before emergence; repeat application at same rate in early spring. Use 1/3 of above broadcast rates when band-treating 1/3 of the area.

**Hawaii**--Make a single preemergence broadcast application of 1 to 1½ pounds per acre on plant or ratoon cane before cane emerges. Longevity of control is enhanced if application is made during the relatively dry season (March through October).

**Puerto Rico**--Make a single preemergence broadcast application of 1 to 2½ pounds per acre on plant cane only.

Note: Preemergence treatments (prior to sugarcane emergence) may be applied by either ground or aerial application equipment. Use a minimum spray volume of 5 gallons per acre for aerial applications.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

### IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (greater than 150–200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions! See the Wind; Temperature and Humidity; and Temperature Inversions sections below.

### CONTROLLING DROPLET SIZE - GENERAL TECHNIQUES

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use a higher-capacity nozzle instead of increasing pressure.
- **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.

### CONTROLLING DROPLET SIZE - AIRCRAFT

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

### BOOM LENGTH AND HEIGHT

- **Boom Length (aircraft)** - The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- **Boom Height (aircraft)** - Application more than 10 feet above the canopy increases the potential for spray drift.
- **Boom Height (ground)** - Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

## WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

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

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

## SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature 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 generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift, and not interfering with uniform deposition of the product.

## AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

### 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).

### SPRAY EQUIPMENT CLEAN OUT

Thoroughly clean all traces of SINBAR® from application equipment immediately after use. Flush the tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Dispose of the equipment wash water by applying it to a use-site listed on this label.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

SINBAR® is a registered trademark of Tessenderlo Kerley, Inc.

KARMEX® is a registered trademark of E. I. duPont de Nemours and Company

### CONDITIONS OF SALE – LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Tessenderlo Kerley, Inc., or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Tessenderlo Kerley, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use, subject to the factors noted above which are beyond the control of Tessenderlo Kerley, Inc. Except as warranted by this label, Tessenderlo Kerley, Inc. makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose. To the extent consistent with applicable law, the exclusive remedy against Tessenderlo Kerley, Inc. for any cause of action relating to the handling or use of this product is a claim of damage, and in no event shall damages or any other recovery of any kind against Tessenderlo Kerley, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, Tessenderlo Kerley, Inc. shall not be liable and any and all claims against Tessenderlo Kerley, Inc. are waived, for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of Tessenderlo Kerley, Inc. breach of warranty, strict liability in tort, or any other cause of action. Tessenderlo Kerley, Inc. and the seller offer this product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

**Manufactured for:**  
Tessenderlo Kerley, Inc.  
2255 North 44<sup>th</sup> Street, Suite 300  
Phoenix, AZ 85008-3279  
1-800-525-2803

# Tessengerlo KERLEY

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July 29, 2005

To Whom It May Concern:

RE: Letter of Authorization

Dear Sir or Madam:

Please let this letter serve to confirm that Pyxis Regulatory Consulting, Inc. is authorized to act as agent for Tessenderlo Kerley, Inc. (EPA Company Number 61482), before the U.S. Environmental Protection Agency and state governmental agencies in all matters regarding our pesticide registrations pursuant to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136 et seq. and state law.

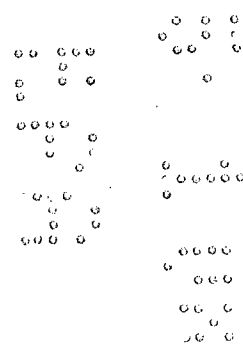
If you have any questions, please do not hesitate to contact me.

Sincerely,



Dawn Kominski  
Directory Regulatory Affairs  
Tessenderlo Kerley, Inc

cc: Pyxis Regulatory Consulting, Inc.



TESSENDERLO KERLEY, INC., member of TESSENDERLO GROUP

P.O. Box 15627, Phoenix, Arizona 85060-5627  
2255 North 44th Street, Suite 300, Phoenix, Arizona 85008-3279  
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