Section 18 Application
Transform WG Insecticide
for
Sorghum in Arizona

Section 18
Subpart B- Specific, Quarantine, and Public Health Exemptions

(a) General information required in an application for a specific exemption.

(1) Identity of contact persons.

Jack Peterson
Arizona Department of Agriculture
1688 West Adams Street
Phoenix, Arizona 85007
Phone: 602-542-3575
Fax: 602-542-0466
Email: jpeterson@azda.gov

(ii) Name and telephone number of qualified experts.

Dr. Peter Ellsworth
Extension Specialist in Integrated Pest Management / Professor of Entomology; Director, Arizona Pest Management Center
University of Arizona, Cooperative Extension
37860 W. Smith-Enke Rd., Maricopa, AZ 85138
Phone: 480.331.APMC
Fax: 520.568.2556
Email: peterell@cals.arizona.edu

Dr. Ayman Mostafa
Assistant Area Agent, Field Crops Integrated Pest Management
University of Arizona Cooperative Extension
4341 E. Broadway Rd., Phoenix, AZ 85040
Phone: 602.827.8213
Fax: 602.827.8292
Email: ayman@cals.arizona.edu

(2) Description of pesticide.

(A) Registration number and the name or the formulation(s) requested if a specific product is not desired.

Unregistered Product – **Previously Registered** under 62719-625
TRANSFORM WG Insecticide
A.I. sulfoxaflor

(B) Additional labeling.

(3) Description of the proposed use.

Transform WG will be applied by air or ground as a foliar sprayed insecticide to control sugarcane aphid, (*Melanaphis sacchari*), in Sorghum spp. that will be used for seed or forage.

(i) Sites to be treated, locations within the State.

Sorghum fields affected by aphid damage are across the state of Arizona. Primary sorghum producing counties are: Maricopa and Pinal Counties. However, production is not limited to these counties.

(ii) The method of application

Transform WG will be applied by air or ground. Chemigation will not be allowed.

(iii) Rate of application in terms of active ingredient and product

Rate for aphids in alfalfa will be 0.75 - 1.5 ounces of Transform WG product per acre of application. The above listed rate translates to 0.023 – 0.047 pounds of active ingredient applied per acre.

(iv) Total acreage.

NASS Data (2011–2015) showed about 26000 harvested acres of sorghum within Arizona. While it is unlikely that every acre would be treated with Transform WG insecticide, the numbers reflected throughout this application use 26,000 acre. (We believe some acres are already beyond saving, but others might require two applications.)

	Historical Production (acres)		
	Silage	**Seed**	**Total**
2011	15,000	6,000	21,000
2012	20,000	10,000	30,000
2013	15,000	17,000	32,000
2014	17,000	8,000	25,000
2015	20,000	4,000	24,000
5-yr Average	17,400	9,000	26,400

(v) Total amount in terms of both active ingredient and product.

Using the 26,000 harvested sorghum acres from the 2011–2015 USDA Census. The total amount of applied product is within the range of 19,500 – 78,000 ounces using the suggested minimum and maximum rate range of 0.75 oz. – 1.5 oz product per acre.

	Potential Application Total Product			
Acres	26,000	26,000	26,000	26,000
Rate	0.75 oz	1.5 oz	0.75 oz	1.5 oz
Application(s)	1	1	2	2
Total	19500 oz	39000 oz	39000 oz	78000 oz

Active ingredient potential total amount applied can be within the range of 598 – 2444 pounds using the suggested minimum and maximum rate range of 0.023 lbs and 0.047 lbs of active ingredient per acre.

	Potential Application Active Ingredient			
Acres	26,000	26,000	26,000	26,000
Rate	0.023 lbs	0.047 lbs	0.023 lbs	0.047 lbs
Application(s)	1	1	2	2
Total	598 lbs	1222 lbs	1196 lbs	2444 lbs

(vi) Applicable restrictions, qualifications of applicators
Arizona requires that anyone wanting to use a product under a Section 18 label apply with the Arizona Department of Agriculture (ADA) to provide information on how many acres and where the product will be used. Upon application, ADA will then provide them with a copy of the label and a permit number. All applications of the product under the Section 18 must then also be reported to the ADA within 4 days of the end of the week the application occurred on a form 1080 (copy in Appendix). Transform WG is not a restricted use pesticide so applicators do not need to be certified. However, in Arizona anyone using an agricultural use pesticide must have a grower's permit issued by our department.

(viii) Duration of the Proposed Use:
As soon as approved through October 31, 2016.

(ix) Earliest Possible Harvest Date:
On average harvest dates begin October 1 through November.

(4) Alternative methods of control - Please refer to letter from Dr. Peter Ellsworth and the New Mexico application

(i) Why currently registered pesticide is not available in adequate, effective, ineffective for the given situation -.

(ii) Alternative practices

(5) Effectiveness of proposed use – Please refer to the New Mexico application.

(6) Discussion of residues for food uses, the food likely to contain such residues.

The anticipated residue levels can be found in previous applications approved for this same use by the EPA. "Applications made in accordance with the" Section 18 "provisions are not expected to result in combined residues of sulfoxaflor, including its metabolites and degradates, in or on sorghum commodities in excess of the following time limited tolerances: sorghum, forage at 0.4 ppm, sorghum, grain at 0.3 ppm; and sorghum, stover at 0.9 ppm; and the established permanent tolerance for aspirated grain fractions at 20 ppm. The agency has determined that these levels are adequate to protect the public health. Time limited tolerances in connection with this action have been established in 40 CFR 180.668(b)."

(7) Risk information (Please refer to New Mexico application)

- Minimum Treatment Interval: Do not make applications less than 14 days apart.
- Preharvest Interval: Do not apply within 14 days of harvest for grain or 7 days of harvest for forage, fodder or hay harvest.
- Restricted entry interval (REI): 24 hours
- Do not make more than two applications per acre per year.

- Do not apply more than a total of 3 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.
- Do not apply by chemigation.

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made 30 minutes after sunset and 3 hours before sunrise, or when the temperature is below 55 degrees F at the application site. (Label language for AZ)

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

(8) Coordination shall indicate that such agencies have been contacted

The Arizona Game and Fish and the Arizona Department will be notified upon submittal of the pending application and provided a copy of the application. Any correspondence will be forwarded onto the EPA. The Arizona Department of Environmental Quality has reviewed this AI and allowed it to be registered in the state previously.

(9) Notification of registrant

Please see letter of support provided by Dow AgroSciences (included in Appendix A).

(10) Description of proposed enforcement programs

The Arizona Department of Agriculture is the state lead agency for pesticides. We regulated distribution, sale, use, and disposal of pesticides. In addition, since we are the SLA for pesticides we work under a performance partnership grant with the EPA to enforce provisions of FIFRA. We do neutral inspections of applications for compliance and to ensure labels are followed (including Section 18 labels).

Arizona requires that anyone wanting to use a pesticide under a Section 18 label apply with the Arizona Department of Agriculture (ADA) and to provide information on how many acres and how much of the product will be used. The ADA then provides the applicant with a copy of the label. This makes the applicator of Transform known to the ADA so that inspections can occur as appropriate. In addition a requirement of use under the Section 18 will be to report to the ADA on a form 1080. Transform is not a restricted use pesticide so there are no other restrictions or qualifications for the applicators. Applicants will not be targeted without reason and will be inspected if they come up in the neutral inspection scheme of the ADA. If this is the case ADA will conduct a use inspection to review and ensure the product was applied properly. Arizona has a professional industry of Pest Control Advisors (PCAs) who are typically engaged to write recommendations for pesticide use by growers. PCAs are rigorously tested and have a high level of continuing education requirements so they are educated and informed. The University of Arizona Cooperative Extension

has been providing outreach on this pest and are gearing up to ensure PCAs across Arizona are aware of this available use and help to ensure the product is used in accordance with the Section 18 requirements.

(b) Information required for a specific exemption

(1) The scientific and common name of the pest or pest complex;

Melanaphis sacchari- sugarcane aphid

(2) A discussion of the events which brought about the emergency condition; - Please refer to the New Mexico application as well as the letter from Dr. Ellsworth.

(3) A discussion of the anticipated risks to endangered or threatened species, beneficial organisms, or the environment that would be remedied by the proposed use of the pesticide; - Please refer to New Mexico application

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made 30 minutes after sunset and 3 hours before sunrise, or when the temperature is below 55 degrees F at the application site.

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

(4) A discussion of the anticipated significant economic loss, together with data and other information supporting the discussion, which addresses all of the following: - Please refer to New Mexico application.

(i) Historical net and gross revenues for the site;

SORGHUM						
56SORGHUM, GRAIN		4,000	92 BU / ACRE	368,000 BU	9.2 $ / CWT	1,896,000
50SORGHUM, SILAGE		20,000	22 TONS / ACRE	440,000 TONS		
SORGHUM	24,000					

NASS 2015

The SCA is a new pest to Arizona. We do not have economic data on this pest. Previously sorghum was a low input crop requiring very little maintenance. The introduction of this pest has changed all that. Ken Narrimore, PCA, who likely does the most sorghum in the state, provided the following information. Growers in AZ look to produce about 25 tons of silage/acre. The price is around $30/ton. The grow budget for sorghum in AZ is around $600 – 650/acre, this is without any overhead costs which are quite variable but will run $20 to $50/ac. So you can look at the potential profit of anywhere from $50 – 130/acre with overhead costs. Conventionally

used organophosphates are providing at the max, 5 days control. Sivanto is 10 -14 days, which is not considered in practice to be good control. You could potentially make 3 applications of Sivanto, however, as part of a resistance management program this is not recommended, and the fact that Sivanto is quite expensive. Applications costs with Sivanto run about $35/acre.

Unfortunately at this time there are growers that are just chopping the crop now without waiting for grain or starch development. Trying to stop the loss in nutrient value and palatability.

(ii) The estimated net and gross revenues for the site without the use of the proposed pesticide; and

(iii) The estimated net and gross revenues for the site with the use of the proposed pesticide.

Order of information following: (attached and copied below unless otherwise indicated)

Letters
Request: Director Mark W. Killian, Arizona Department of Agriculture

Need: University of Arizona, Dr. Peter Ellsworth

Az Farm Bureau, Ana Kennedy Otto
Mike Buben, Independent PCA
Ken Narramore, Independent Crop Advisor – Small Business
Greg Green, Sorghum Grower
KC Gingg, Sorghum Grower – Dairy

Permission: Brian Brett, Dow Agrosciences

Draft Label (sections did not all copy – attachment is complete)

New Mexico Application (attachment only)

DOUGLAS A. DUCEY
Governor

MARK W. KILLIAN
Director

Arizona Department of Agriculture

1688 W. Adams Street, Phoenix, Arizona 85007
(602) 542-3575 FAX (602) 542-0466

September 16, 2016

Tawanda Maignan
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 7505P
Washington, DC 20460

Dear Ms. Maignan:

This letter is to request that the State of Arizona be granted an emergency exemption. The request is for the use of Transform WG (sulfoxaflor) for the control of sugarcane aphid (Melanaphis sacchari) in grain sorghum. Less than one month ago, the state of Arizona had not previously detected this pest in the state. Now the calls that are coming in from the pest control advisors, growers, and university specialists are that it has exploded. The sorghum development is being delayed. Some of the sorghum is at the point where it may not produce grain. The amount of honeydew on the crops are at levels that chopping will be problematic as the equipment is going to gum up. In addition there are concerns that with this level of honeydew, mold will be a problem and there will be loss in nutrient value as well as palatability to cattle.

We would like the use to begin as soon as possible and the request to be for one year. In all likelihood we will be coming in again, in less than one year, to request another exemption for this use. When this is approved Dow Agrosciences will put the dates on the Arizona label. Arizona requires for the use of a product approved under a Section 18 Specific Exemption, that a permit and the Section 18 label be obtained from the department. The permit requires use reporting. With this it allows us a good mechanism to track usage.

Please review our submittal and accompanying documentation and let Jack Peterson know as soon as a decision is made regarding this use. Our growers and dairies are desperate for something to help with this serious pest problem.

Thank you for your consideration.

Mark W. Killian
Director

Arizona Farm Bureau Federation
325 S. Higley Rd, Suite 210
Gilbert, AZ 85296

September 15, 2016

Jack Peterson Associate
Director, Environmental
Services Division
Arizona Department of Agriculture
1688 W. Adams St.
Phoenix, AZ 85007

Dear Associate Director Peterson,

It has been brought to our attention that a number of Arizona Farm Bureau members who grow sorghum in Maricopa and Pinal Counties have been negatively impacted by a pest new to Arizona- the sugarcane aphid. Crop damage is described as dried up plants resulting from the honeydew excreted by the sugarcane aphid that leads to mold growth which in turn inhibits the ability of the plant to generate energy through photosynthesis. Yield loss estimates provided by growers and pest control advisors range from 20 to 30 percent. One of the chemical treatments known to be effective in reducing sugarcane aphids is Transform, however it not labeled for use in the state. We support a Section 18 Specific Emergency Exemption of Transform for use on sorghum in Arizona to assist in treating the infestation of sugarcane aphid.

Growers in Arizona have essentially been blindsided by the sugarcane aphid. University of Arizona Cooperative Extension posted an online article, "Sugarcane Aphid: A New Threat to Sorghum in Arizona" less than a month ago on August 30, 2016.[1] The authors describe the infestation in fields in Maricopa and Stanfield, Arizona as "overwhelming with plants completely covered in stickiness from the honeydew excreted by the aphids." It does not help that the aphids are known to be prolific reproducers where one-to-three new offspring can be born as aphids transform from nymph to adult in five days.[2]

Dimethoate and Lordsban are both organophosphates that have shown little effectiveness in controlling the sugarcane aphid even after retreatment according to pest control advisors in both Pinal and Maricopa Counties. There has been some effective treatment with Silvanto, however it has a 14 day pre harvest restriction interval. Transform is therefore critically needed for two reasons 1) it has a 7 day pre

[1] Mostafa, Ayman and Peter Ellsworth. "Sugarcane Aphid: A New Threat to Sorghum in Arizona." August 30, 2016. Available online at: https://arizonaag.com/2016/08/30/sugarcane-aphid-a-new-threat-to-sorghum-in-arizona/. Accessed on September 13, 2016.
[2] Fitchette, Todd. "California, Ariz. Strategizes on sugarcane aphid control." Western Farm Press. August 9, 2016.

harvest interval for forage and can be used to treat late season aphid infestations and 2) to prevent resistance build up.

In Arizona sorghum is primarily grown as a forage crop and used as feed stock for dairy cows. The quality of the crop determines the quality of the feed. Lactating cows require high quality feed. A number of sorghum growers who have sugarcane aphid infestation have had to harvest their crop early. Not only are there yield losses from the early harvest, but there is also a loss of nutrient value because the sorghum has not fully developed. Again because Transform has a shorter pre-harvest interval and can be used to treat late season aphid infestations, it is critical that Arizona sorghum growers have this crop protection tool available.

Additionally, with low commodity prices unexpected and uncontrollable pest infestations where treatment options are limited with either poor result or higher treatment costs, the effect on grower profitability can be devastating. From both an agronomic and economic standpoint, a Section 18 Specific Emergency Exemption of Transform for use on sorghum in Arizona is critically important for the control of sugarcane aphid, which is literally wreaking havoc on the state's sorghum crop.

Sincerely,

Ana M. Kennedy Otto
Government Relations Manager

Good morning Mr Peterson,

I am an Independent PCA primarily in the Buckeye and Palo Verde, Arizona areas.
The Sugarcane Aphid (SCA) has presented quite a new set of challenges for a variety of reasons. Currently we are limited to one rather expensive resource to control/suppress this pest (Sivanto). Sorghum is not considered a high value crop however, it is a large part of the "feed ration" with Dairies. The infestations from SCA in our sorghum is directly causing losses in yield and quality. The economic losses are expected to be between 20% and Total loss.
Typically our sorghum is cut for silage and the process requires a level of quality including moisture. The SCA dries out the plant extensively and covers the plant with Honeydew. The Honeydew causes large issues from contamination to providing a food source for secondary infections such as varies molds.

In the past, the "pest" issues in our Silage Sorghum, has been limited to weeds and Armyworm with most growers ignoring the losses from Armyworm. Sorghum is not considered a profititable crop to growers so any unexpected monetary inputs are a hardship. With that said, many fields have been treated with Sivanto and with one of my attached images, you can see the dead aphids along with renewed colonization of more SCA. One of the attached images shows the initial colonization while another shows the extent the infestations reach in a very short period of time.

We have from 14-45 days left to mature this current crop. The SCA multiplies at a logarithmic rate and without treatments, we are faced with huge economic and quality losses (20-100% loss). We need Transform to finish this crop with any reasonable expectation of control. The cost of the Sivanto, at $25 per acre plus application at $10, is a deterrent for many growers to treat. The cost of Transform is about half that cost and would also allow some fields to be treated a second time with another product.

Let me know if I can help with any additional data of proof of our need for Transform.

Michael J Buben
Independent PCA, Arizona.
aerovision@cox.net
623.694.3595

Mr. Peterson,

I know you are aware of the recent finding of Sugarcane Aphid in Arizona. I write to you with an urgent request to grant a Section 18 for the use of Transform in sorghum for control of this devastating pest. I serve as a board member of the Arizona Crop Protection Association and am a crop consultant working mostly in western Maricopa county. I consult on approximately 2500 acres of sorghum.

Over the past two weeks I have treated most of that acreage for Sugarcane Aphid and was unable to maintain control for more than 5 days using traditional chemistries like Chlorpyrifos and Dimethoate. With the poor results from these treatments, large amounts of honeydew deposits have been deposited on the leaves and I fear we are facing huge potential yield and quality losses easily exceeding 30-50% of our traditional 25 tons per acre. From a quality standpoint I fear our losses could be worse. It is questionable that the plants will be able to make grain given the Sugarcane Aphid levels we are experiencing.

We currently only have one effective product in Sivanto. However, it is unlikely we will be able to maintain control of Sugarcane Aphid with a single Sivanto application. I am also concerned about insect resistance as well as the cost per acre to treat this pest in a lower value crop like sorghum. While effective, Sivanto is targeted and priced for higher value crops.

I believe a Section 18 should be granted for the immediate use of Transform which has proven to be effective for Sugarcane Aphid control and is currently registered under Section 18 in multiple states.

I am attaching a few photos representative of the sugarcane aphid pressure we are facing.

Your immediate assistance in this matter would be greatly appreciated by the sorghum growers of our state.

Kenneth Narramore
Verde Agricultural Service, LLC
Arizona Crop Protection Association

Hey Jack,
Attached are some photos that may help in getting an exemption for Transform. I have about 1,000 acres of sorghum and have treated about 800 of them with Sivanto. The others have not been infested with the aphid yet. Sivanto was my choice from hearing of others results, looks good so far. The price is pretty hard to make work for growers, and still not sure how long of control we will get. Another option for growers is greatly needed. Thank you.

Greg Green
Fertizona - Buckeye, L.L.C.
623.377.8670

Dear Mr. Peterson,

I am a farmer and partner of a dairy in Buckeye, and also farm in Palo Verde and Tonopah. My farm typically double crops sorghum after corn silage, wheat, or barley. In the past, solely weeds have encroached on already slim sorghum silage profit margins. Now, however, the Sugarcane Aphid (SCA) has become an immediate threat.

Limited to few, costly resources to contain the pest, such as Sivanto at steep charge of $25/acre, farmers are in dire need of a added product such as Transform. This compound, at half the cost, would greatly benefit the sorghum farmer that is already experiencing a 20% to total loss on his/her crop.

As a dairy farmer, I have also seen the detrimental quality loss resulting from the present honeydew caused by the SCA. The loss of moisture, as a consequence of the honeydew, has frustrated dairymen who are unable to silage the sorghum. The grain heads do not mature, and over all quality is reduced.

The repercussions of the SCA infestation extend much further than the sorghum farmer. Transform is a critical weapon, urgently needed to combat this rapid economic hardship.

KC Gingg
Farmer, Dairman
Buckeye, Arizona

Dow AgroSciences

Dow AgroSciences LLC **www.dowagro.com**

9330 Zionsville Road 308/3E Indianapolis,
IN 46268 (317) 337-0000

13 September 2016

Jack Peterson
Assistant Director
Arizona Department of Agriculture
Environmental Services Division
1688 West Adams Street
Phoenix, AZ 85007-2617

LETTER OF SUPPORT FOR SECTION 18 REQUEST FOR TRANSFORM® WG INSECTICIDE TO CONTROL SUGARCANE APHIDS IN SORGHUM

Dear Mr. Peterson;

Dr. Peter Ellsworth, IPM Coordinator and Director of Arizona Pest Management Center with the University of Arizona, brought to our attention a request for the use of Transform® WG insecticide (a.i. sulfoxaflor; EPA Reg. No.
62719-625) on sorghum in Arizona. Sugarcane aphid has just recently been confirmed in Arizona. This pest can spread quickly and reach epidemic numbers in a short time, causing significant crop loss.

Dow AgroSciences has been asked to support a request from the sorghum industry for a Section 18 Emergency Exemption registration for Transform WG for use on sorghum. With this letter we acknowledge such support. Transform WG provides excellent efficacy against aphids and the active ingredient, sulfoxaflor, also represents a new sulfoximine class of chemistry with a novel mode of action. As such, sulfoxaflor controls pests resistant to other classes of chemistry.. Transform is also a selective insecticide with little or no activity against predators and parasites, which makes it a strong fit for Integrated Pest Management programs that seek to preserve beneficials.

If you have further questions, please do not hesitate to

call me. Sincerely,

Brian L Bret, Ph.D.
State Regulatory
Manager Dow
AgroSciences
blbret@dow.com
916-780-7477

Cc: Dr. Peter Ellsworth, University of Arizona, peterell@cals.arizona.edu
Dr. James Thomas, DAS Federal Regulatory Manager
AZ Correspondence
Files

Transform® WG

Registration Notes:

This Section 18 labeling is provided in two components: (1) The base label and label booklet containing all of the information needed to use this product, except crop-specific use directions; and (2) crop-specific use directions which must be approved by EPA which allow use in a specific state. Component (1) allows the product to be shipped to locations where it can be used in anticipation of EPA-approval of crop-specific use directions in component (2).

(Base label):

(logo) Dow Agrosciences

Transform® WG

INSECTICIDE
ISOCLAST ACTIVE

ATTENTION

- **Section 18 Specific Exemption**

- **For Use Only in States with a Valid Section 18 Label**

This product cannot be used without a valid state-specific Section 18 label which must be in the possession of the user at the time of application.

Active Ingredient:
sulfoxaflor 50%
Other Ingredients 50%
Total 100%

Contains 50% active ingredient on a weight basis.

Keep Out of Reach of Children

DANGER PELIGRO

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

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Precautionary Statements
Hazard to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • Harmful If Swallowed

Do not get in eyes or on clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

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

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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
- Shoes plus socks

Storage and Disposal

Do not contaminate water, food or feed by storage and disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Return any unopened, unused container of this unregistered product to the manufacturer or distributor, or dispose of it in accordance with Resource Conservation and Recovery Act regulations, following the expiration of the emergency exemption.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

Carefully read, understand and follow label use rates and restrictions. Apply the amount specified in the mixing directions tables with properly calibrated aerial or ground spray equipment. Prepare only the amount of spray solution required to treat the measured acreage. The low rates may be used for light infestations of the target pests and the higher rates for moderate to heavy infestations. Transform® WG insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Transform WG per acre regardless of the spray volume used.

Refer to state-specific Section 18 label for additional precautionary information including Directions for Use. This product cannot be used without a valid state-specific Section 18 label. The Section 18 label must be in the possession of the user at the time of application. The Section 18 label can be obtained from state and/or county authorities where it is valid. Please contact your Dow AgroSciences representative for further information.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of state specific Section 18 label. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Est. _____

Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ___ LB

(Cover, shipping container):

(logo) Dow Agrosciences

Transform® WG

INSECTICIDE
ISOCLAST ACTIVE

ATTENTION

• Section 18 Specific Exemption

• For Use Only in States with a Valid Section 18 Label

This product cannot be used without a valid state-specific Section 18 label which must be in the possession of the user at the time of application.

Active Ingredient:
sulfoxaflor 50%
Other Ingredients 50%
Total 100%

Contains 50% active ingredient on a weight basis.

Keep Out of Reach of Children

DANGER PELIGRO

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

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Precautionary Statements
Hazard to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • Harmful If Swallowed

Do not get in eyes or on clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 am or after 7:00 pm local time or when the temperature is below 55^{o} F at the site of application.

Refer to the Directions for Use for crop specific restrictions and additional advisory statements to protect pollinators.

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

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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

- Shoes plus socks

Storage and Disposal

Do not contaminate water, food or feed by storage and disposal.
Pesticide Storage: Store in original container only.
Pesticide Disposal: Return any unopened, unused container of this unregistered product to the manufacturer or distributor, or dispose of it in accordance with Resource Conservation and Recovery Act regulations, following the expiration of the emergency exemption.
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

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Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of state specific Section 18 label. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

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Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ____ LB

Accepted 07/11/16

DOW Dow AgroScience

Transform® WG

For Control of Sugarcane Aphid (*Melanaphis sacchari*) in Sorghum
Section 18 Emergency Exemption
File symbol: XXXXXX

FOR DISTRIBUTION AND USE ONLY IN ARIZONA UNDER SECTION 18 EMERGENCY EXEMPTION
This Section 18 Emergency Exemption is effective XXXXXXX and expires XXXXX.

- This labeling must be in the possession of the user at the time of application.
- It is in violation of federal law to use this product in a manner inconsistent with its labeling.
  - Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
  - Any adverse effects resulting from the use of Transform WG under this emergency exemption must be immediately reported to the Arizona Department of Agriculture

Directions for Use

Use Precautions

Integrated Pest Management (IPM) Programs
Transform WG is recommended for IPM programs in labeled crops. Apply Transform WG when field scouting indicates target pest densities have reached the economic threshold, i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control. Other than reducing the target pest species as a food source, Transform WG does not have a significant impact on most parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites or spiders. The feeding activities of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. If Transform WG is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of Transform WG in an IPM program may be reduced.

Insecticide Resistance Management (IRM)
Transform WG contains a Group 4C insecticide. Insect biotypes with acquired resistance to Group 4C insecticides may eventually dominate the insect population if Group 4C insecticides are used repeatedly in the same field or area, or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Transform WG or other Group 4C insecticides.

To delay development of insecticide resistance, the following practices are recommended:
- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide subgroup, 4C) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Base insecticide use upon comprehensive IPM programs.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Dow AgroSciences by calling 800-258-3033.

Mixing Directions

Application Rate Reference Table

Application Rate of Transform WG (oz/acre)	Active Ingredient Equivalent (lb ai/acre)
0.75	0.023
1.5	0.047

Transform WG – Alone

Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation and add the required amount of Transform WG. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

Transform WG - Tank Mix
When tank mixing Transform WG with other materials, conduct a compatibility test (jar test) using relative proportions of the tank mix ingredients prior to mixing ingredients in the spray tank. If foliar fertilizers are used, the jar test should be repeated with each batch of fertilizer utilizing the mixing water source. Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Mixing Order for Tank Mixes: Fill the spray tank with water to 1/4 to 1/3 of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:
1. Transform WG and other water dispersible granules
2. Wettable powders
3. Suspension concentrates and other liquids

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:
4. Emulsifiable concentrates and water-based solutions
5. Spray adjuvants, surfactants and oils
6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Application Directions

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. Apply Transform WG as a foliar spray at the rate indicated for target pest. The following directions are provided for ground and aerial application of Transform WG. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Spray Drift Management
Wind: Do not apply when wind speed exceeds 10 mph as uneven spray coverage and drift may result.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium to coarse spray nozzles (i.e., with median droplet size if 341 µm or greater) for ground and non-ULV aerial application according to ASABE (S-572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size except where indicated for specific crops.

Ground Application
To prevent drift from groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Row Crop Application

Use calibrated power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles to obtain uniform crop coverage. Use a minimum of 5 to 10 gallons per acre, increasing volume with crop size and/or pest pressure. Use hollow cone, twin jet flat fan nozzles or other atomizer suitable for insecticide spraying to provide a fine to coarse spray quality (per ASABE S-572.1, see nozzle catalogs). Under certain conditions, drop nozzles may be required to obtain complete coverage of plant surfaces. Follow manufacturer's specifications for ideal nozzle spacing and spray pressure. Minimize boom height to optimize uniformity of coverage and maximize deposition (optimize on-target deposition) to reduce drift.

Aerial Application
Apply in a minimum spray volume of 3 gallons per acre. Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Spray Adjuvants
The addition of agricultural adjuvants to sprays of Transform WG may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Pests and Application Rates:

Pests	Transform WG (oz/acre)	Comments
Sugarcane aphid	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)	Use a higher rate in the rate range for heavy pest populations.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Method: Control of sugarcane aphid may be contingent on thorough coverage to the crop. Use sufficient water to get full coverage of the canopy. It is recommended that a minimum of 5 gallons of water be applied by air.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- A restricted entry interval (REI) of 24 hours must be observed.
- Do not make more than two applications per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.

- Do not apply product ≤ 3 days pre-bloom or until after seed set.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

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