



Dow AgroSciences

Dow AgroSciences LLC

9330 Zionsville Road

Indianapolis, IN 46268-1054 USA

## Transform<sup>®</sup> WG

For Control of Sugarcane Aphid (*Melanaphis sacchari*) in Sorghum

Section 18 Emergency Exemption

File symbol: 16NC03

**FOR DISTRIBUTION AND USE ONLY IN NORTH CAROLINA UNDER SECTION 18 EMERGENCY EXEMPTION**

**NC STATE RESTRICTED USE PESTICIDE: WHEN USED IN NORTH CAROLINA, APPLICATIONS CAN ONLY BE MADE BY LICENSED/CERTIFIED APPLICATORS OR BY PERSONS UNDER THEIR DIRECT SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE LICENSED/CERTIFIED APPLICATORS CERTIFICATION**

**This Section 18 Emergency Exemption is effective May 5, 2016 and expires April 8, 2017.**

- 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<sup>®</sup> 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 North Carolina Department of Agriculture and Consumer Services

### 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  $\leq$  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.

® Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

R396-112

Approved: 05/05/16

Replaces: R396-104