



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

62719-727

Date of Issuance:

3/22/18

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Transform CA

Name and Address of Registrant (include ZIP Code):

Jamey Thomas  
Regulatory Leader  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

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

Signature of Approving Official:

Venus Eagle, Product Manager 01  
Invertebrate-Vertebrate Branch 3, Registration Division (7505P)

Date:

3/22/18

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 62719-727.”
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

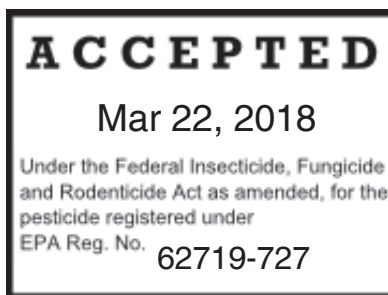
Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 12/11/17

If you have any questions, please contact Marianne Lewis by phone at (703) 308-8043, or via email at [lewis.marianne@epa.gov](mailto:lewis.marianne@epa.gov)

Enclosure



(Base label):

**Transform<sup>®</sup> CA****INSECTICIDE  
Isoclast Active**

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips on: barley, *Brassica* (cole) leafy vegetables (crop group 5), bulb vegetables (crop group 3-07), canola (rapeseed) (subgroup 20A), fruiting vegetables (crop group 8), leafy vegetables (except *Brassica*) (crop group 4), leaves of root and tuber vegetables (crop group 2), low growing berry (except strawberry) (subgroup 13-07G), okra, ornamentals (herbaceous and woody), pistachio, pome fruits (crop group 11), root and tuber vegetables (crop groups 1A and 1B), potatoes (crop groups 1C and 1D), small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F), stone fruits (crop group 12), succulent, edible podded, and dry beans, tree nuts (crop group 14), triticale, turfgrass, watercress, and wheat.

<b>SULFOXAFLO<sup>R</sup></b>	<b>Group</b>	<b>4C</b>	<b>INSECTICIDE</b>
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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 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, 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. Do not apply this product or allow it to drift to blooming crops or weeds while bees or other pollinating insects are actively foraging the treatment area. 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 50° F at the site of application.

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

This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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.

### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

### **(Storage and Disposal for rigid containers 5 gal or less)**

#### **Storage and Disposal**

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

**Pesticide Storage:** Store in original container only.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**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.

**(Storage and Disposal for nonrigid containers any size)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in original container only.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for refillable rigid containers greater than 5 gal)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in original container only.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. 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.

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in original container only.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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.

**Refer to label booklet for Directions for Use.**

**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 label booklet. 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 Reg. No. 62719-XXX

EPA Est. \_\_\_\_\_



Scan this code with a smart phone QR reader to access key information about this product at [mobile.dowagro.com/transform](http://mobile.dowagro.com/transform). You will have access to the product label, application rates, product efficacy results, and more, all from your smart phone!

To download and install a mobile QR code reader, visit [www.i-nigma.mobi](http://www.i-nigma.mobi) on your mobile device.

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

**NET WEIGHT** \_\_\_\_\_  
**Lot Number** \_\_\_\_\_

(Cover, shipping container):

# Transform<sup>®</sup> CA

## INSECTICIDE Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips on: barley, *Brassica* (cole) leafy vegetables (crop group 5), bulb vegetables (crop group 3-07), canola (rapeseed) (subgroup 20A), fruiting vegetables (crop group 8), leafy vegetables (except *Brassica*) (crop group 4), leaves of root and tuber vegetables (crop group 2), low growing berry (except strawberry) (subgroup 13-07G), okra, ornamentals (herbaceous and woody), pistachio, pome fruits (crop group 11), root and tuber vegetables (crop groups 1A and 1B), potatoes (crop groups 1C and 1D), small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F), stone fruits (crop group 12), succulent, edible podded, and dry beans, tree nuts (crop group 14), triticale, turfgrass, watercress, and wheat.

<b>SULFOXAFLO<sup>R</sup></b>	<b>Group</b>	<b>4C</b>	<b>INSECTICIDE</b>
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Other Ingredients .....	50%
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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.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**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 label booklet. If terms are unacceptable, return at once unopened.**

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EPA Reg. No. 62719-XXX

EPA Est. \_\_\_\_\_



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To download and install a mobile QR code reader, visit [www.i-nigma.mobi](http://www.i-nigma.mobi) on your mobile device.

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9330 Zionsville Road  
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**NET WEIGHT \_\_\_\_\_  
Lot Number \_\_\_\_\_**



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**Precautionary Statements**

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**Hazard to Humans and Domestic Animals****DANGER**

**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, 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. Do not apply this product or allow it to drift to blooming crops or weeds while bees or other pollinating insects are actively foraging the treatment area. 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 50° F at the site of application.

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

This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. 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.

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**Directions for Use**

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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. Read all Directions for Use carefully before applying.

### **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 or disposal.

**Pesticide Storage:** Store in original container only.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

#### **Nonrefillable rigid containers 5 gallons or less:**

**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.

#### **Nonrefillable nonrigid containers:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### **Refillable rigid containers larger than 5 gal:**

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. 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.

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**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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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 following 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® CA 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 CA per acre regardless of the spray volume used.

**Use Precautions****Integrated Pest Management (IPM) Programs**

Transform CA is recommended for IPM programs in labeled crops. Apply Transform CA 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 CA 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 CA is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of Transform CA in an IPM program may be reduced.

**Insecticide Resistance Management (IRM)**

For resistance management, Transform CA contains a Group 4C insecticide. Any insect population may contain individuals naturally resistant to Transform CA and other Group 4C insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay development of insecticide resistance, the following practices are recommended:

- Rotate the use of Transform CA or other Group 4C insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendation provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.

- Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
- When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
- Mixtures become less effective if resistance is already developing to one of both active ingredients, but they may still provide pest management benefits.
- The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- 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 CA (oz/acre)	Active Ingredient Equivalent (lb ai/acre)
0.75	0.023
1	0.031
1.5	0.047
1.75	0.055
2.25	0.071
2.75	0.086

### Transform CA – 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 CA. 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 CA – Tank Mix

When tank mixing Transform CA with other materials, conduct 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.

### Tank Mixing Restrictions:

DO NOT TANK MIX ANY PESTICIDE PRODUCT WITH TRANSFORM CA without first referring to the following website: [isoclasttankmix.com](http://isoclasttankmix.com)

- This website contains a list of active ingredients that are currently prohibited from use in tank mixture with this product. Only use products in tank mixture with this product that: 1) are registered for the intended use site, application method and timing; 2) are not prohibited for tank mixing by the label of the tank mix product; and 3) do not contain one of the prohibited active ingredients listed on

isoclasttankmix.com website.

- Applicators and other handlers (mixers) must access the website within one week prior to application in order to comply with the most up-to-date information on tank mix partners.
- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank 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 CA 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**

### **Not for Residential Use**

Do not apply Transform CA in greenhouses or other enclosed structures used for growing crops.

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

### **Spray Drift Management**

**Wind:** To reduce off-target drift and achieve maximum performance, apply when wind velocity favors on-target product deposition (approximately 3-10 mph). 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 or coarser spray nozzles (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.

### **Orchard/Grove Spraying Application**

**Dilute Spray Application:** This application method is based upon the premise that all plant parts are thoroughly wetted, to the point of runoff, with spray solution. To determine the number of gallons of dilute spray required per acre, contact your state agricultural experiment station, certified pest control advisor, or extension specialist for assistance.

**Concentrate Spray Application:** This application method is based upon the premise that all the plant parts are uniformly covered with spray solution but not to the point of runoff as with a dilute spray. Instead, a lower spray volume is used to deliver the same application rate per acre as used for the dilute spray.

### **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. Do not apply when wind speed exceeds 10 mph.

### **Spray Adjuvants**

The addition of agricultural adjuvants to sprays of Transform CA 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.

### **Chemigation Application**

Transform CA may be applied through properly equipped chemigation systems for insect control in potatoes. Do not apply Transform CA by chemigation to other crops unless otherwise specified by a state-specific 24(c) label.

**Use Directions for Chemigation:** Transform CA may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of

irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing Transform CA must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

**Chemigation Preparation:** The following use directions are to be followed when this product is applied through irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of Transform CA needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

**Chemigation Equipment Calibration:** In order to calibrate the irrigation system and injector to apply the mixture containing Transform CA, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation, and the system should be monitored during operation.

**Chemigation Operation:** Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injection system to be thoroughly flushed clean before stopping the system.

**Chemigation Restrictions:**

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

**Chemigation Specific Equipment Requirements:**



- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

### Rotational Crop Restrictions

The following rotational crops may be planted at intervals defined below following the final application of Transform CA at specified rates for a registered use.

Crop	Re-Planting Interval
Barley, triticale, wheat, Brassica (cole) leafy vegetables (crop group 5), bulb vegetables (crop group 3-07), canola (rapeseed) (subgroup 20A), fruiting vegetables (crop group 8), okra, leafy vegetables (crop group 4), watercress, ornamentals, pome fruits (crop group 11), potatoes (crop group 1C and 1D), root and tuber vegetables (crop group 1A and 1B), small-fruit vine climbing (subgroup 13-07F) (except fuzzy kiwi) and low growing berries (except strawberry) (subgroup 13-07G)), stone fruits (crop group 12), succulent, edible podded and dry beans, treenuts (crop group 14), and turfgrass.	no restrictions
all other crops grown for food or feed	30 days

### Use Directions

#### Barley, Triticale and Wheat

##### Pests and Application Rates:

Pests	Transform CA (oz/acre)
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Aphids, including Russian wheat aphid and greenbug	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
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**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 Rate:** Use a higher rate in the rate range for heavy pest populations.

**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.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per crop.
- Do not apply more than a total of 2.8 oz of Transform CA (0.09 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Brassica (Cole) Leafy Vegetables (Crop Group 5)<sup>1</sup>**

<sup>1</sup>Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo, Chinese broccoli (gia lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens, white flowering broccoli

**Pests and Application Rates:**

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not use on crops grown for seed.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Bulb Vegetables (Crop Group 3-07)<sup>1</sup>**

<sup>1</sup>Bulb vegetables (crop group 3-07) including beltsville bunching onion, bulb daylilly, bulb fritillaria, bulb garlic, bulb lily, bulb onion, bulb shallot, Chinese bulb onion, Chinese fresh leaf chive, elegans hosta, fresh leaf chive, fresh leaf shallot, fresh onion, garlic, great-headed bulb garlic, green onion, kurrat, lady's leek, leek, leaf fritillaria, macrostem onion, pearl onion, potato bulb onion, serpent bulb garlic, tree onion tops, Welsh onion, wild leek, and cultivars, varieties, and/or hybrids of these

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
onion thrips (suppression only)	2.75 (0.086 lb ai/acre)

**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.

#### Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not use on crops grown for seed.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

#### Canola (Rapeseed) (Subgroup 20A)<sup>1</sup>

<sup>1</sup>Canola (rapeseed) (subgroup 20A) including borage, canola, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sesame, sweet rocket, and cultivars, varieties and/or hybrids of these

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.5 – 0.75 (0.016 – 0.023 lb ai/acre)

**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 Rate:** Use a higher rate in the rate range for heavy pest populations.

#### Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of grain, straw, forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than two applications per year.
- Do not apply more than a total of 1.5 oz of Transform CA (0.046 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

#### Fruiting Vegetables (Crop Group 8)<sup>1</sup> and Okra

<sup>1</sup>Fruiting vegetables (crop group 8) including bell pepper, eggplant, groundcherry, hot pepper, pepino, pepper (except black), pimento, sweet pepper, tomatillo, tomato

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
plant bugs	1.5 – 2.25 (0.047 - 0.071 lb ai/acre)
greenhouse whitefly (outdoors) silverleaf whitefly sweetpotato whitefly	2 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

#### Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

#### Leafy Vegetables (Except *Brassica*) (Crop Group 4)<sup>1</sup> and Watercress

<sup>1</sup>Leafy vegetables (except *Brassica*) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, Chinese spinach, corn salad, cos (romaine), dandelion, dock, edible-leaved chrysanthemum, endive (escarole), finocchio, Florence fennel, garden cress, garden purslane, garland chrysanthemum, head lettuce, leaf lettuce, leafy amaranth, New Zealand spinach, orach, parsley, radicchio (red chicory), rhubarb, spinach, sweet anise, sweet fennel, Swiss chard, tampala, upland cress, vine spinach, winter cress, winter purslane, yellow rocket

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.0 (0.023 - 0.031 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not use on crops grown for seed.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Leaves of Root and Tuber Vegetables (Crop Group 2)<sup>1</sup>**

<sup>1</sup>Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, broccoli raab, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, hanover salad, oriental radish (daikon), parsnip, raab, raab salad, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanager, true yam, turnip, turnip-rooted chervil

**Pests and Application Rates:**

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Leafhoppers	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not use on crops grown for seed.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Ornamentals (Herbaceous and Woody) Growing Outdoors, in Nurseries (Including Conifer Seed Orchards), or in Greenhouses  
(Non-residential use only)**

**Pests and Application Rates:**

Pests	Transform CA (oz/gal)	Transform CA (oz/100 gal)	Transform CA (oz/acre)
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aphids, such as: green peach aphid rose aphid	0.008	0.8	1.5 (0.047 lb ai/acre)
mealybugs, such as: mealybug, juniper mealybug, maple mealybug, taxus others scales, such as: carnelia scale euonymus scale fletcher scale pine needle scale others whiteflies, such as: greenhouse whitefly silverleaf whitefly	0.013	1.4	2.25 – 2.75 (0.071 – 0.086 lb ai/acre)

**Application Method:** Dilute Transform CA in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom) in a manner to provide complete and uniform plant coverage. Two applications may be required for optimum control of whiteflies.

Transform CA may be aerially applied to commercially grown ornamentals only. Aerial or ground applications in product agriculture or directed ground applications to individual plants are permitted. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground applications.

**Application Rate:** Transform CA may be used up to a maximum labeled rate of 0.013 oz per gallon (1.4 oz per 100 gallons, 2.75 oz per acre) per application on trees and ornamentals as a general treatment regardless of the target insect pest. Use pest specific rates when a single insect pest or group of insect pests within a rate category is the only intended target.

**Spray Volume:** Attempt to penetrate dense foliage, but avoid over spraying to the point of excessive runoff. Uniform coverage of both upper and lower leaf surfaces is critical for effective insect control.

**Restrictions:**

- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per year.
- Do not make more than two consecutive applications.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- Not for residential use.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Pome Fruits (Crop Group 11)<sup>1</sup>**

<sup>1</sup>Pome fruits (crop group 11) including apples, crabapple, loquat, mayhaw, pears, quince

**Pests and Application Rates:**

	<b>Transform CA</b>
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Pests	(oz/acre)
aphids	0.75 – 1.5
white apple leafhopper	(0.023 - 0.047 lb ai/acre)
plant bugs	1.5 – 2.75
woolly apple aphid	(0.047 – 0.086 lb ai/acre)
pear psylla (suppression only)	2.75
San Jose scale (suppression only)	(0.086 lb ai/acre)

**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. Time application for San Jose scale to the crawler stage.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Root and Tuber Vegetables (Crop Groups 1A and 1B)<sup>1</sup>**

<sup>1</sup>Root and tuber vegetables (crop group 1) including bitter black salsify, carrot, celeriac, chayote (root), chicory, chufa, daikon, dasheen, edible burdock, garden beet, ginseng, horseradish, lobok, lo pak, oriental radish, parsnip, radish, red Chinese radish, red Japanese radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, turnip, turnip-rooted chervil, turnip-rooted parsley, white Chinese radish, white Japanese radish, winter radish, and other cultivars or hybrids of these

**Pests and Application Rates:**

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
Leafhoppers	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.75 (0.063 – 0.086 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not use on crops grown for seed.



- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

### Potatoes (Crop Groups 1C and 1D)<sup>1</sup>

<sup>1</sup>Root and tuber vegetables (crop group 1) including arracacha, arrowroot, bitter black salsify, bitter cassava, chayote (root), Chinese artichoke, chufa, daikon, dasheen, edible canna, ginger, Jerusalem artichoke, leren, lobok, lo pak, potato, radish, sweet cassava, sweet potato, tanier, true yam, turmeric, yam, yam bean, and other cultivars or hybrids of these

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
Leafhoppers	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
Potato psyllid silverleaf whitefly sweetpotato whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)

**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. Two applications may be required for optimum control of whiteflies.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

#### Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

### Small Fruit Vine Climbing (Except Fuzzy Kiwifruit) (Subgroup 13-07F)<sup>1</sup> and Low Growing Berry (Subgroup 13-07G)<sup>2</sup> except Strawberry

<sup>1</sup>Small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F) including amur river grape, gooseberry, grape, hardy kiwifruit, maypop, schisandra berry, and cultivars, varieties and/or hybrids of these

<sup>2</sup>Low growing berry (except strawberry) (subgroup 13-07G) including bearberry, bilberry, lowbush blueberry, cloudberry, cranberry, lingonberry, muntries, partridgeberry, and cultivars, varieties and/or hybrids of these



**Pests and Application Rates:**

<b>Pests</b>	<b>Transform CA (oz/acre)</b>
grape leafhopper mealybugs plant bugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
thrips (suppression only)	2.75 (0.086 lb ai/acre)

**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 Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest of small fruit vine climbing (except fuzzy kiwifruit) and within 1 day of harvest of low growing berry.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

**Stone Fruits (Crop Group 12)<sup>1</sup>**

<sup>1</sup>Stone fruits (crop group 12) including apricot, nectarine, peach, plum, prune, sweet cherry, tart cherry

**Pests and Application Rates:**

<b>Pests</b>	<b>Transform CA (oz/acre)</b>
aphids	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
San Jose scale (suppression only) western flower thrips (suppression only)	2.75 (0.086 lb ai/acre)

**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. Time application for San Jose scale to the crawler stage.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.

- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

### Succulent, Edible Podded and Dry Beans<sup>1</sup>

<sup>1</sup>Succulent, edible podded, and dry beans including adzuki bean, asparagus bean, bean, blackeye pea, broad bean, chickpea, Chinese longbean, cowpea, fava bean, field bean, garbanzo bean, grain lupine, green lima bean, jackbean, kidney bean, lablab bean, lima bean, moth bean, mung bean, navy bean, pinto bean, rice bean, runner bean, snap bean, sweet lupine, sword bean, tepary bean, wax bean, white lupine, white sweet lupine, yardlong bean

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
plant bugs	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
Suppression only: brown stink bug southern green stink bug	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

**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 Rate:** Use a higher rate in the rate range for heavy pest populations.

#### Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.
- Do not use on soybeans.

### Tree Nuts (Crop Group 14)<sup>1</sup> and Pistachio

<sup>1</sup>Tree nuts (crop group 14) including almonds, cashew, chestnut, filbert (hazelnut), macadamia nut, pecan, walnut

#### Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
San Jose scale (suppression only)	2.75 (0.086 lb ai/acre)

**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. Time application for San Jose scale to the crawler stage.

**Application Rate:** Use a higher rate in the rate range for heavy pest populations.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not apply this product until after petal fall.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

## **Turfgrass**

(For application only to commercial sod farms)

**Pests and Application Rates:**

<b>Pests</b>	<b>Transform CA (oz/acre)</b>
aphids (greenbug)	1.5 (0.047 lb ai/acre)
chinch bugs (suppression only)	2.75 (0.086 lb ai/acre)

**Application Method:** Dilute Transform CA in water and apply using suitable hand- or power-operated application equipment (such as tractor-mounted, portable pump-up, backpack, hydraulic, boom, turf “spray gun”) in a manner to provide complete and uniform plant coverage.

**Restrictions:**

- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per year.
- Do not feed treated grass cuttings (hay) or seed screenings to livestock or use hay for livestock bedding.
- Do not apply to golf courses, parks, playgrounds, athletic fields, or residential lawns.
- Do not make aerial applications to turfgrass.
- Do not use on crops grown for seed.
- If blooming vegetation is present 12 feet out from the downwind edge of the field, a downwind 12-foot on-field buffer must be observed.

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## **Terms and Conditions of Use**

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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.

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## **Warranty Disclaimer**

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**Inherent Risks of Use**

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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 (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), 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. To the extent consistent with applicable law all such risks shall be assumed by buyer.

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**Limitation of Remedies**

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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

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