OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
WASHINGTON, D.C. 20460

October 7, 2024

Kerry Sosa
Corteva Agriscience
9330 Zionsville Road
Indianapolis, IN 46268

Subject: PRIA Label Amendment – Amended Terms and Conditions, and Revised Labeling
Product Name: Transform CA
EPA Registration Number: 62719-727
Application Date: 05/24/23
Case Number: 631995

Dear Kerry Sosa,

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. Accordingly, EPA has approved the requested registration amendment, provided Corteva Agriscience ("Corteva") complies with all terms and conditions listed below.

Terms and Conditions

Corteva must comply with all the following terms and conditions. Release for shipment of these products constitutes acceptance of the below conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Endangered Species Protection and Formal Consultation

1. If, following formal consultation with Service(s), additional modifications are identified in any applicable Biological Opinion, EPA will notify Corteva in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary changes. Within 30 calendar days of receiving EPA's notice, Corteva must submit an amendment application incorporating the necessary changes, including amended labels. Alternatively, Corteva may respond by submitting a request for voluntary cancellation of this product. If Corteva fails to comply with this term, Corteva has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

Implementation of Revised Labeling

2. While there are two federally registered sulfoxaflor products approved for use in California under the 2021 labeling, California has not approved the most recent, 2021 versions of the labels for use in the state and it is EPA's understanding that there are no existing stocks of these products in California because existing stocks bearing the previous 2018 versions of the labels have been depleted. Accordingly, EPA does not believe that an existing stocks period is necessary. Any future product sold and distributed in California on or after **October 7, 2024** must bear labeling consistent with this approval letter.

EPA's Rationale for Approving This Registration Amendment

FIFRA section 3(c)(5) requires EPA to unconditionally approve a registration amendment if:

- "its composition is such as to warrant the proposed claims for it";[1]
- "its labeling and other material required to be submitted comply with the requirements of [FIFRA]";[2]
- "it will perform its intended function without unreasonable adverse effects on the environment";[3] and
- "when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment."[4]

Prior to approving the previous registrations and registration amendments for this product and others containing sulfoxaflor, EPA considered risks and benefits of approving these registrations and registration amendments. The Agency considered a large body of information to determine the potential impacts of using these products. In assessing the risks from use of products containing sulfoxaflor, EPA conducted both human health risk assessments and ecological and environment fate risk assessments. EPA also updated its previous ecological and environmental fate risk assessments in support of the 2023 draft biological evaluation (BE). EPA believes that that these risk assessments (and the benefits discussed below) are also applicable to the action to approve this amended registration.[5]

Human Health: Sulfoxaflor primarily affects the liver and nervous system, resulting in hepatotoxicity and development toxicity. Based on the weight of evidence, EPA determined that there is "suggestive" evidence of carcinogenic potential for sulfoxaflor, though not enough to establish linear quantification of cancer risk in humans. No cumulative effects were identified for sulfoxaflor. Dietary, residential, and occupational handler and post-application risks are not of concern for the registered uses.

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[1] FIFRA § 3(c)(5)(A), 7 U.S.C. § 136a(c)(5)(A). Here, EPA reviewed the proposed labeling and determined that the claims made for the product were consistent with composition of the product based on the data submitted.
[2] FIFRA § 3(c)(5)(B), 7 U.S.C. § 136a(c)(5)(B). Here, EPA reviewed the submitted labeling and other materials submitted and found them to be compliant with the requirements of FIFRA. Additionally, there are no data gaps.
[3] FIFRA § 3(c)(5)(C), 7 U.S.C. § 136a(c)(5)(C).
[4] FIFRA § 3(c)(5)(D), 7 U.S.C. § 136a(c)(5)(D).
[5] For all of the referenced risk assessments, benefits documents, and biological evaluations: see https://www.regulations.gov/docket/EPA-HQ-OPP-2010-0889/document.

Environmental Risk: Sulfoxaflor is considered non-persistent and is generally much less toxic to non-targets than alternatives (in some cases by orders of magnitude). Sulfoxaflor is classified as slightly toxic to practically non-toxic to fish and freshwater water column dwelling aquatic invertebrates on an acute exposure basis. While sulfoxaflor is considered highly toxic to saltwater invertebrates (mysid shrimp; *Americamysis bahia*) on an acute exposure basis, this is similar to other insecticides that have a common mechanism of action with sulfoxaflor. Overall, the uses of sulfoxaflor are likely to pose low risk to water column and benthic invertebrates, taking into account the use pattern proposed for registration.

Benefits: Sulfoxaflor is registered for use against economically important and hard-to-control target insects on a variety of crops. Further, sulfoxaflor is considered to perform better than many registered alternatives in many crop/pest scenarios—providing control via fewer applications and without the need for tank mix combinations—in crop/pest scenarios such as pecans/aphids, citrus/psyllids and soybeans/aphids.

Additional Mitigations to Address Potential Effects to Listed Species: This label amendment adds necessary mitigation measures to address potential effects to listed species in California. In February 2024, Corteva inquired about requesting a label amendment to add labeling language referencing spatially explicit Pesticide Use Limitation Areas (PULAs) for these registrations. EPA has determined that these mitigation measures are sufficient for the Agency to predict no potential likelihood of jeopardy to listed species or adverse modification (J/AM) to any designated critical habitats in California. These mitigations also serve to minimize the potential for take of listed species.

The following mitigation measures are contained in the PULA:

- When applying via ground application methods, use a 20 m (~65 ft) on-field downwind buffer;
- When applying via aerial application methods, use a 60 m (~200 ft) on-field downwind buffer;
- Crops included: all crops on Sequoia CA (62719-728) and Transform CA (62719-727) labels;
- 51 counties included: Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba

In EPA's final BE, EPA predicted a potential likelihood of future jeopardy for 21 listed species from off-site exposure to sulfoxaflor via spray drift (18 listed terrestrial plants and 3 listed terrestrial invertebrates) in California, all residing in the 51 counties above. Additionally, EPA predicted a potential likelihood of future adverse modification to 9 designated CHs in California, again located in the 51 counties above (with the exception of small fragments of the designated CH for the Thread-leaved brodiaea (*Brodiaea filifolia*) that are located in San Diego County). Although San Diego County was not included in the above proposed list of counties, the Bulletin

and associated PULA for CH includes both the 51 counties and these small fragments of San Diego County. After evaluating Corteva's proposed label amendments, including verifying the species and critical habitat locations and the application method-dependent buffer distances, EPA determined that by incorporating these mitigations, EPA would not predict a potential likelihood of future J/AM for any relevant listed species (21) and designated CH habitats (9) in California.

Decision: In weighing sulfoxaflor's aforementioned ecological and human health profile and benefits, EPA determined previously that the benefits from the use of sulfoxaflor outweigh its potential risks.[6] After consideration and for the aforementioned reasons, EPA continues to believe that the FIFRA registration standard is met and is approving these registration amendments.

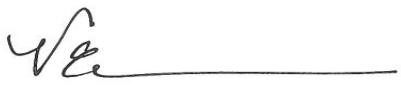
Conclusion

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. Consistent with Terms 1 and 2 above, and not withstanding 40 C.F.R. § 152.130(c), you may only distribute or sell[7] this product under either the final stamped label associated with this approval letter.

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 FIFRA 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 C.F.R. § 156.10(a)(5) lists 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 product will be referred to EPA's Office of Enforcement and Compliance.

If you have any questions, please contact Gene Benbow at 703-712-9669 or at benbow.gene@epa.gov.

Sincerely,



Venus Eagle, Product Manager 01
Invertebrate and Vertebrate Branch 3
Registration Division (7505P)
Office of Pesticide Programs

[6] See supra note 5.
[7] *See* FIFRA § 2(gg), 7 U.S.C. § 136(gg); 40 C.F.R. § 152.3.

[Note to Reviewer: The notation of (Base Label) indicates the text that will be affixed on the container and will remain if the booklet is removed.]

(Base label):

SULFOXAFLOR	GROUP	4C	INSECTICIDE

Transform® CA

INSECTICIDE
with Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips on: alfalfa, artichoke (globe), asparagus, avocado, barley, *Brassica* head and stem vegetables (crop group 5-16), *Brassica* leafy greens (subgroup 4-16B), bulb vegetables (crop group 3-07), cacao, canola (rapeseed) (subgroup 20A), celtuce, Christmas tree plantations, citrus fruit (crop group 10), commercial sod farms, corn (field, pop, sweet, grown for seed), cotton, cucurbit vegetables (crop group 9), Florence fennel, fruiting vegetables (crop group 8), kohlrabi, leafy greens (subgroup 4-16A), leafy petiole vegetables (subgroup 22B), leaves of root and tuber vegetables (crop group 2), low growing berry (subgroup 13-07G) (except strawberry), millet, oats, okra, ornamentals (herbaceous and woody, in greenhouses and nurseries), pineapple, pome fruits (crop group 11), rice, root and tuber vegetables (subgroup 1A), rye, small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F), sorghum, stone fruits (crop group 12-12), succulent, edible podded, and dry beans, sunflower (subgroup 20B), teff, teosinte, tree nuts (crop group 14-12), triticale, tuberous and corm vegetables (subgroup 1C), and wheat.

Only for use in California.

ACCEPTED
10/07/2024
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 62719-727

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

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 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 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.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms. 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. Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 6:00 am or after 7:00 pm local time or when the temperature is below 50°F at the site of application.

The RT_{25} (Residual Time to 25% mortality; the length of time over which field weathered foliar residues remain toxic to honey bees) for this product is ≤ 3 hours.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Refer to label booklet for Directions for Use.

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.

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. 62719-727 EPA Est. _____

Produced for
Corteva Agriscience LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ____
Lot Number _____

[Note to Reviewer: The notation of (Cover, shipping container) indicates the text that will appear on the cover of the booklet and shipping container.]

(Cover, shipping container):

SULFOXAFLOR	GROUP	4C	INSECTICIDE

Transform® CA

INSECTICIDE
with Isoclast Active

For control or suppression of aphids, fleahoppers, plant bugs, stink bugs, whiteflies and certain psyllids, scales, and thrips on: alfalfa, artichoke (globe), asparagus, avocado, barley, *Brassica* head and stem vegetables (crop group 5-16), *Brassica* leafy greens (subgroup 4-16B), bulb vegetables (crop group 3-07), cacao, canola (rapeseed) (subgroup 20A), celtuce, Christmas tree plantations, citrus fruit (crop group 10), commercial sod farms, corn (field, pop, sweet, grown for seed), cotton, cucurbit vegetables (crop group 9), Florence fennel, fruiting vegetables (crop group 8), kohlrabi, leafy greens (subgroup 4-16A), leafy petiole vegetables (subgroup 22B), leaves of root and tuber vegetables (crop group 2), low growing berry (subgroup 13-07G) (except strawberry), millet, oats, okra, ornamentals (herbaceous and woody, in greenhouses and nurseries), pineapple, pome fruits (crop group 11), rice, root and tuber vegetables (subgroup 1A), rye, small fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F), sorghum, stone fruits (crop group 12-12), succulent, edible podded, and dry beans, sunflower (subgroup 20B), teff, teosinte, tree nuts (crop group 14-12), triticale, tuberous and corm vegetables (subgroup 1C), and wheat.

Only for use in California.

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.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

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.

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. 62719-727 EPA Est. _____

Produced for
Corteva Agriscience LLC
9330 Zionsville Road
Indianapolis, IN 46268

NET WEIGHT ____
Lot Number _____

[Page 1 through end]:

Table of Contents

Precautionary Statements

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 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 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.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms. 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. Risk to managed bees and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 6:00 am or after 7:00 pm local time or when the temperature is below 50°F at the site of application.

The RT_{25} (Residual Time to 25% mortality; the length of time over which field weathered foliar residues remain toxic to honey bees) for this product is ≤ 3 hours.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

This product must be used in strict accordance with the Directions for Use.

Only for use in California.

ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

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.

Nonrefillable rigid containers larger than 5 gal:
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 suitable for conventional insecticide spraying. Aerial applications may be made using fixed wing aircraft or helicopter. Aerial application is permitted for the following crops: alfalfa, barley, corn (field, pop, sweet, grown for seed), cotton, leaves of root and tuber vegetables (crop group 2), millet, oats, root and tuber vegetables (subgroup 1A), rye, sorghum, soybean, succulent, edible podded and dry beans, teff, teosinte, triticale, tuberous and corm vegetables (subgroup 1C), and wheat.

Prepare only the amount of spray solution required to treat the measured acreage. The low rates within the specified rate range may be used for light infestations and the higher rates within the specified rate range for moderate to heavy infestations of the target pests. 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.

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.

Resistance Management Recommendations
For resistance management, Transform CA contains a Group 4C insecticide. Any insect/mite 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 insecticide resistance, take the following steps:

- 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 recommendations 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 or 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.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Corteva at 1-800-258-3033.

Mixing Directions

Application Rate Reference Table

Application Rate of Transform CA (oz/acre)	Active Ingredient Equivalent (lb ai/acre)
0.75	0.023
1.00	0.031
1.50	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
It is the pesticide user's responsibility to ensure that all products 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.

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.

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

Restrictions:

- This product must be used in strict accordance with the Directions for Use.
- Not for residential use.
- Only for use in California.
- Do not apply Transform CA in greenhouses or other enclosed structures used for growing food crops/edible plants.
- Do not treat seeding plants grown for transplant in greenhouses, shade houses, or field plots.
- Do not apply by air except for the following crops: alfalfa, barley, corn (field, pop, sweet, grown for seed), cotton, leaves of root and tuber vegetables (crop group 2), millet, oats, root and tuber vegetables (subgroup 1A), rye, sorghum, succulent, edible podded and dry beans, teff, teosinte, triticale, tuberous and corm vegetables (subgroup 1C), and wheat.

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.

Airblast Sprayer: When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy

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 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.

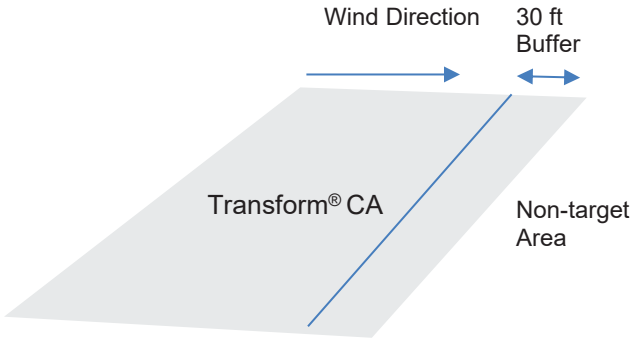
Aerial Application
Apply in a minimum spray volume of 3 gallons per acre. Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle 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.

Buffer Zone
Applicator must maintain a 30 foot downwind buffer (in the direction in which the wind is blowing) from any non-target area except:

- Roads, paved or gravel surfaces.
- Planted agricultural fields.
- Agricultural fields that have been prepared for planting.
- Areas covered by the footprint of a building, shade house, silo, feed crib, or other man-made structure with walls and/or a roof.

To maintain the required downwind buffer zone:

- Measure wind direction prior to the start of any swath that is within 30 feet of a non-target area.
- No application swath can be initiated in, or into an area that is within 30 feet of a non-target area if the wind direction is towards the non-target area.



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, it is recommended to use a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Chemigation Application – Potatoes Only
Transform CA may be applied through properly equipped chemigation systems for insect control in potatoes. Only apply through overhead sprinkler irrigation systems. Do not apply Transform CA by chemigation to other crops.

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
Alfalfa, artichoke (globe), asparagus, avocado, barley, *Brassica* head and stem vegetables (crop group 5-16), *Brassica* leafy greens (subgroup 4-16B), bulb vegetables (crop group 3-07), bushberry (subgroup 13-07B), cacao, caneberry (subgroup 13-07A), canola (rapeseed) (subgroup 20A), celtuce, Christmas tree plantations, citrus fruit (crop group 10), commercial sod farms, corn (field, pop, sweet, grown for seed), cotton, cucurbit vegetables (crop group 9), Florence fennel, fruiting vegetables (crop group 8), kohlrabi, leafy greens (subgroup 4-16A), leafy petiole vegetables (subgroup 22B), millet, oats, okra, ornamentals (herbaceous and woody, in greenhouses and nurseries), pineapple, pistachio, pome fruits (crop group 11), rice, root and tuber vegetables (subgroup 1A), rye, small-fruit vine climbing (except fuzzy kiwifruit) (subgroup 13-07F) and low growing berries (subgroup 13-07G) (except strawberry), sorghum, soybean, stone fruits (crop group 12-12), strawberry, succulent, edible podded and dry beans, sunflower (subgroup 20B), teff, teosinte, tree nuts (crop group 14-12), triticale, tuberous and corm vegetables (subgroup 1C), and wheat.	no restrictions
all other crops grown for food or feed	30 days

Use Directions

Alfalfa

Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
Tarnished plant bug Western tarnished plant bug	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

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

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

Restrictions:
- **Preharvest Interval:** Do not apply within 7 days of grazing, or forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per cutting.
- The maximum single aerial application rate is 2.25 oz/acre of Transform CA (0.071 lb ai/acre of sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.
- Do not apply to crops grown for seed.

Artichoke (globe)

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)
whitefly (suppression)	2.25 – 2.75 (0.071 – 0.086 lb ai/acre)

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your company representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

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

Restrictions:
- **Preharvest Intervals:** Do not apply within 3 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 calendar year.
- Do not apply by air.
- Artichoke must be harvested before bloom.

Asparagus

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
thrips (suppression)	2.25 – 2.75 (0.071 - 0.086 lb ai/acre)

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your company representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

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

Restrictions:
- **Preharvest Interval:** Apply to asparagus ferns only after harvest of spears.
- **Minimum Treatment Interval:** Do not make applications less than 15 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 calendar year.
- Do not apply by air.
- Asparagus must be harvested before bloom.

Avocado

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
thrips (suppression only)	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your company representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

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

Restrictions:
- **Preharvest Intervals:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 15 days apart.
- Do not apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Barley, Oats, Rye, Teff, Triticale and Wheat

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids, including Russian wheat aphid and greenbug	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)

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

Application Rate: Use the 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.
- The maximum single aerial application rate is 1.5 oz/acre of Transform CA (0.047 lb ai/acre sulfoxaflor).
- Do not apply more than a total of 2.8 oz of Transform CA (0.09 lb ai of sulfoxaflor) per acre per calendar year.

Brassica Head and Stem Vegetables (Crop Group 5-16)[1] and Kohlrabi

[1]*Brassica* head and stem vegetables (crop group 5-16) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, Chinese cabbage (bok choy), Chinese cabbage (napa), cultivars, varieties, and hybrids of these commodities

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 company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Bulb Vegetables (Crop Group 3-07)[1]

[1]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 tops, 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 company 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Cacao

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Black citrus aphid	1.2 (0.038 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your company 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 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 28 days apart.
- Do not make more than four applications per crop.
- Do not apply more than a total of 4.8 oz of Transform CA (0.14 lb ai of sulfoxaflor) per acre per calendar year.
- Do not apply by air.

Canola (Rapeseed) (Subgroup 20A)[1]

[1]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 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 company representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use the 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 apply this product at any time between 3 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Christmas Tree Plantations

Pests	Transform CA oz/100 gallons	Transform CA oz/acre
Aphids mealybugs such as: citrus mealybug	0.75 – 1.12 (21 – 31 g)	1.5 – 2.25 (0.047 – 0.071 lb ai/acre) (42 – 63 g)
lacebug pine needle scale (time application to the crawler stage)	1.12 (31 g)	2.25 (0.071 lb ai/acre) (63 g)
scale (time application to the crawler stage) such as cottony cushion	1.37 (38 g)	2.75 (0.086 lb ai/acre) (77 g)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 50°F at the site of application, will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

Application Timing: Time applications to reach larvae when small or just hatching. Time application for scale to the crawler stage. A 14-day re-treatment schedule may be necessary to maintain control. Consult with your company representative, state agricultural experiment station, certified pest control advisor, or extension specialist for information on application timing for specific pests in your area.

Application Rate: The rate of Transform CA applied per acre will depend upon tree size and severity of infestation. Use the higher rate in the rate range for large trees or heavy infestations. Apply in sufficient volume to ensure thorough coverage.

Restrictions:
- **Minimum Treatment Interval**: Do not make applications less than 14 days apart.
- Do not apply this product at any time between 7 days prior to bloom and until after petal fall.
- Do not make more than two consecutive applications.
- Do not make more than four applications per crop per year.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.
- Do not apply by air.

Citrus Fruit (Crop Group 10)[1]

[1]Citrus Fruit (crop group 10) including citrus citron, grapefruit, kumquat, lemon, lime, orange (sweet), orange (sour) tangelo, tangerine, and hybrids of these

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphid	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
Asian citrus psyllid citrus snow scale mealybugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
Citrus thrips Florida red scale	2.75 (0.086 lb ai/acre)
Suppression only: California red scale citricola scale	2.75 (0.086 lb ai/acre

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 50°F at the site of application, will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

Application Timing: Treat in accordance with local economic thresholds. Consult your company representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area. Time application for scales to the crawler stage.

Application Rate: Use the 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 15 days apart.
- Do not apply any time between 18 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Commercial Sod Farms

Pests and Application Rates:

Pests	Transform CA (oz/acre)
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 calendar 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 apply by air.

Corn (Field, Pop, Sweet, Grown for Seed), Millet, Sorghum and Teosinte
Not for use on sweet sorghum.

Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)

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

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

Restrictions:
Sweet Corn
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not apply product 3 days before bloom or until after seed set.
- Do not make more than two applications per acre per year.
- The maximum single aerial application rate is 1.5 oz/acre of Transform CA (0.047 lb ai/acre sulfoxaflor).
- Do not apply more than a total of 3.0 oz of Transform CA (0.09 lb ai of sulfoxaflor) per acre per calendar year.

Corn (Field, Pop, Grown for Seed) Millet, Sorghum and Teosinte
- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, forage, fodder, or hay harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not apply product 3 days before bloom or until after seed set.
- Do not make more than two applications per acre per year.
- The maximum single aerial application rate is 1.5 oz/acre of Transform CA (0.047 lb ai/acre sulfoxaflor).
- Do not apply more than a total of 3.0 oz of Transform CA (0.09 lb ai of sulfoxaflor) per acre per calendar year.

• Do not use on sweet sorghum.

Cotton

Pests and Application Rates:

Pests	Transform CA (oz/acre)
cotton aphid	0.75 – 1.0 (0.023 – 0.031 lb ai/acre)
cotton fleahopper	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)
tarnished plant bug western tarnished plant bug	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)
sweetpotato whitefly, silverleaf whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
Suppression only: brown stink bug, southern green stink bug, thrips	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g. 2 hours prior to sunset or when the temperature is below 50º F at the site of application will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

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

Application Rate: Use the higher rate in the rate range for heavy pest populations. Two applications may be required for optimum tarnished plant bug control under high pest pressure or heavy immigration of plant bugs from other crops.

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not make more than two applications during bloom. Do not make more than one application of this product during bloom between the period of 6:00 am to 7:00 pm (daytime).
- Do not make more than four applications per acre per year.
- Do not make more than two consecutive applications per crop.
- The maximum single aerial application rate is 2.25 oz/acre of Transform CA (0.071 lb ai/acre sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.

Cucurbit Vegetables (Crop Group 9)[1]

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, cantaloupe, casaba, chayote, Chinese cucumber, Chinese okra, crenshaw melon, crookneck squash, cucumber, cucuzza, edible gourd, golden pershaw melon, hechima, honey balls, honeydew melon, hyotan, mango melon, Persian melon, pineapple melon, pumpkin, Santa Claus melon, scallop squash, snake melon, spaghetti squash, straightneck squash, summer squash, true cantaloupe, vegetable marrow, watermelon, winter squash, and other varieties and/or hybrids of these

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Aphids	0.75 (0.023 lb ai/acre)
silverleaf whitefly sweetpotato whitefly	2.0 – 2.25 (0.063 – 0.071 lb ai/acre)
thrips (suppression only)	2.25 (0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 50°F at the site of application, will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

Application Timing: Treat in accordance with local economic thresholds. Consult your company 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 the 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 two applications to blooming cucurbits. Do not make more than one application of this product to blooming cucurbits during the period of 6:00 am to 7:00 pm (daytime).
- 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 calendar year.
- Do not apply by air.

Fruiting Vegetables (Crop Group 8)[1] and Okra

[1]Fruiting vegetables (crop group 8) including bell pepper, eggplant, groundcherry, 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	2.0 – 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 company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Leafy Greens (Subgroup 4-16A)[1], *Brassica* Leafy Greens (Subgroup 4-16B)[2], Leafy Petiole Vegetable (Subgroup 22B)[3], Celtuce, and Florence Fennel

[1]Leafy greens (subgroup 4-16A) including amaranth, Chinese; amaranth, leafy; aster, Indian; blackjack; cat's whiskers; cham-chwi; cham-na-mul; chervil, fresh leaves; chipilin; chrysanthemum, garland; cilantro, fresh leaves; corn salad; cosmos; dandelion, leaves; dang-gwi, leaves; dillweed; dock; dol-nam-mul; ebolo; endive; escarole; fameflower; feather cockscomb; Good King Henry; huauzontle; jute, leaves; lettuce, bitter; lettuce, head; lettuce, leaf; orach; parsley, fresh leaves; plantain, buckhorn; primrose, English; purslane, garden; purslane, winter; radicchio; spinach; spinach, Malabar; spinach, New Zealand; spinach, tanier; Swiss chard; violet, Chinese, leaves; cultivars, varieties, and hybrids of these commodities

[2]*Brassica* Leafy Greens (subgroup 4-16B) including arugula; broccoli, Chinese; broccoli raab; cabbage, abyssinian; cabbage, Chinese, bok choy; cabbage, seakale; collards; cress, garden; cress, upland; hanover salad; kale; maca, leaves; mizuna; mustard greens; radish, leaves; rape greens; rocket, wild; shepherd's purse; turnip greens; watercress; cultivars, varieties, and hybrids of these commodities

[3]Leafy Petiole Vegetable (subgroup 22B) including cardoon; celery; celery, Chinese; fuki; rhubarb; udo; zuiki; cultivars, varieties, and hybrids of these commodities

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 company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Leaves of Root and Tuber Vegetables (Crop Group 2)[1]

[1]Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, hanover salad, oriental radish (daikon), parsnip, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanier, 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 company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- The maximum single aerial application rate is 1.5 oz/acre of Transform CA (0.047 lb ai/acre of sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.

Ornamentals (Herbaceous and Woody) Growing in Greenhouses and Nurseries

Pests and Application Rates:

Pests	Transform CA (oz/3 gallons)	Transform CA (oz/100 gallons)	Transform CA (oz/acre)
aphids mealybugs such as: citrus mealybug Lygus Bugs	0.02 – 0.03 (0.63 – 1.0 g)	0.75 – 1.12 (21 – 31 g)	1.5 –2.25 (0.047 – 0.071) lb ai/acre) (42 – 63 g product/acre)
lacebug whiteflies pine needle scale (time application to the crawler stage)	0.03 (1.0 g)	1.12 (31 g)	2.25 (0.071 lb ai/acre) (63 g product/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 50°F at the site of application, will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

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

Application Rate: Transform CA may be used up to a maximum labeled rate of 1.37 oz per 100 gallon or 2.75 oz per acre, per application on ornamentals as a general treatment regardless of the target insect pest. Do not exceed 2.2 oz per acre if plants are in bloom. 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: Uniform coverage of both upper and lower leaf surfaces is critical for effective insect control but avoid excessive runoff.

Phytotoxicity: Transform CA has been tested alone on a wide variety of herbaceous and woody ornamental plants without phytotoxic symptoms. However, because it is not possible to test all possible tank mix combinations (including adjuvants) and ornamental plant species, varieties, and cultivars, and because environmental factors and varietal and plant stage of growth may affect phytotoxic expression, it is recommended that a small group of test plants be treated at the specified use rate of Transform CA either alone or in tank mix combinations and observed for at least 5 to 7 days to determine phytotoxicity before treating large numbers of those plants. **Important:** The user assumes responsibility for determining if Transform CA is safe to treated plants when applied either alone or in tank mixtures under commercial growing conditions.

Restrictions – Greenhouses
A greenhouse is defined as a structure or space enclosed with a nonporous covering inside which plants are produced

- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Regardless of the crop or pest being treated do not apply Transform CA more than 6 times in a 12-month period inside a greenhouse or a structure that can be altered to be closed or open.
- Do not make more than two consecutive applications.
- Do not apply to edible crops (any stage), for use on ornamentals only.
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per crop per calendar year.
- Not for residential use.

Restrictions – Nurseries
A nursery is defined as a facility engaged in the outdoor production of plants.

- **Minimum Treatment Interval:** Do not make applications less than 15 days apart.
- Do not make more than two consecutive applications.
- Do not make more than four applications per crop per year.
- Do not make more than one application during bloom. The single application during bloom must not exceed a rate of 2.25 oz (0.071 lb/ai per acre).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year for crops grown in-ground.
- Not for use on food crops or edible plants.
- For nonfood ornamental crops grown in containers, do not apply more than 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per crop per calendar year.
- Not for residential use.
- Do not apply by air.

Pineapple

Pests and Application Rates:

Pests	Transform CA (oz/acre)
mealybugs	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)

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

Application Rate: Use the 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 15 days apart.
- Do not make more than two applications per acre per year.

- Do not apply more than a total of 5.5 oz of Transform CA (0.18 lb ai of sulfoxaflor) per acre per calendar year.
- Do not apply by air.

Pome Fruits (Crop Group 11)[1]

[1]Pome fruits (crop group 11) including apples, crabapple, loquat, mayhaw, pears, quince

Pests and Application Rates:

Pests	Transform CA (oz/acre)
aphids white apple leafhopper	0.75 – 1.5 (0.023 - 0.047 lb ai/acre)
plant bugs woolly apple aphid	1.5 – 2.75 (0.047 – 0.086 lb ai/acre)
mealybugs	2.25 – 2.75 (0.071 – 0.086 lb ai/acre)
pear psylla (suppression only) San Jose scale (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your company 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 the 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 apply this product at any time between 3 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Rice

Pests and Application Rates:

Pests	Transform CA (oz/acre)
Suppression only: brown stink bug, rice stink bug, southern green stink bug	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your company 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 14 days of grain or straw harvest.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not make more than four applications per acre per year.
- 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 calendar year.
- Do not release floodwater within 7 days of an application.
- Do not use treated rice fields for the aquaculture of edible fish and crustaceans.
- Do not apply by air.

Root and Tuber Vegetables (Subgroup 1A)[1]

[1] Root and Tuber Vegetables (subgroup 1A) including black salsify, carrot, celeriac, chicory, edible burdock, garden beet, ginseng, horseradish, oriental radish, parsnip, radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, turnip, turnip-rooted chervil, turnip-rooted parsley

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 company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- The maximum single aerial application is 1.5 oz/acre of Transform CA (0.047 lb ai/acre of sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.

Small Fruit Vine Climbing (except Fuzzy Kiwifruit) (Subgroup 13-07F)[1] and Low Growing Berry (Subgroup 13-07G) (except strawberry)[2]

[1]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

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

Pests and Application Rates:

Pests	Transform CA (oz/acre)
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 company representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

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

Restrictions:
- **Preharvest Interval:**
  - Subgroup 13-07F – Do not apply within 7 days of harvest
  - Subgroup 13-07G – Do not apply within 1 day of harvest
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Stone Fruits (Crop Group 12-12)[1]

[1]Stone fruits (crop group 12-12) including apricot, nectarine, peach, plum, prune, sweet cherry, tart cherry

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) western flower thrips (suppression only)	2.75 (0.086 lb ai/acre)

Application Timing: Treat in accordance with local economic thresholds. Consult your company 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 the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Succulent, Edible Podded and Dry Beans[1]

[1]Succulent, edible podded, and dry beans including adzuki bean, asparagus bean, bean, blackeyed pea, broad bean, chickpea, Chinese longbean, cowpea, fava bean, field bean, garbanzo bean, grain lupin, 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 lupin, sword bean, tepary bean, wax bean, white lupin, white sweet lupin, 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 company representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use the 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 apply this product at any time between 7 days prior to bloom and until after petal fall.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- The maximum single aerial application rate is 1.5 oz/acre of Transform CA (0.047 lb ai/acre of sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.

Sunflower (Subgroup 20B)[1]

[1]Sunflower (subgroup 20B) including calendula; castor oil plant; chinese tallowtree; euphorbia; evening primrose; jojoba; niger seed; rose hip; safflower; stokes aster; sunflower; tallowwood; tea oil plant; vernonia; cultivars, varieties, and/or hybrids of these

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 – 2.75 (0.047 – 0.086 lb ai/acre)
Thrips (suppression only)	2.75 (0.086 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Also, limiting application to times when managed bees and native pollinators are least active, e.g., 2 hours prior to sunset or when the temperature is below 55°F at the site of application, will minimize risk to bees. The RT_{25} for this product is less than or equal to 3 hours.

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your company representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

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

Restrictions:
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not make more than two applications per crop. Do not make more than one application of this product during bloom between the period of 6:00 am to 7:00 pm (daytime).
- Do not apply more than a total of 5.5 oz of Transform CA (0.172 lb ai of sulfoxaflor) per acre per calendar year.
- Do not apply by air.

Tree Nuts (Crop Group 14-12)[1]

[1]Tree nuts (crop group 14-12) including almonds, cashew, chestnut, filbert (hazelnut), macadamia nut, pecan, pistachio, 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 company 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 the 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 15 days apart.
- Do not apply this product at any time between 7 days prior to bloom and until after petal fall.
- 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 calendar year.
- Do not apply by air.

Tuberous and Corm Vegetables (Subgroup 1C)[1]

[1]Tuberous and corm vegetables (subgroup 1C) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, potato, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean

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 company 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 the 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 apply this product until after petal fall.
- Do not make more than four applications per crop.
- Do not make more than two consecutive applications per crop.
- The maximum single aerial application rate is 2.25 oz/acre of Transform CA (0.071 lb ai/acre sulfoxaflor).
- Do not apply more than a total of 8.5 oz of Transform CA (0.266 lb ai of sulfoxaflor) per acre per calendar year.

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2. Replacement of amount of product used

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