



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 13, 2020

Christina M. Dubas
Regulatory Manager
Nichino America, Inc.
4550 Linden Hill Rd. Suite 501
Wilmington, DE 19808

Subject: Registration Review Label Mitigation for Buprofezin
Product Name: Applaud 70DF Insect Growth Regulator
EPA Registration Number: 71711-21
Application Date: April 3, 2020
Decision Number: 561424

Dear Ms. Dubas:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Buprofezin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2
EPA Reg. No. 71711-21
Decision No. 561424

If you have any questions about this letter, please contact Jaclyn Pyne by phone at 703-347-0445, or via email at pyne.jaclyn@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

{Sub-label A: Crop-Use}

BUPROFEZIN GROUP 16 INSECTICIDE



APPLAUD® 70DF Insect Growth Regulator

ACTIVE INGREDIENT:

Buprofezin:[2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one].....**70.00%**

OTHER INGREDIENTS:.....**30.00%**

TOTAL**100.00%**

Contains 0.70 lb. buprofezin per lb. of product

EPA Reg. No. 71711-21

EPA Est. No. _____

[Alternate Brand Names: Applaud® Insect Growth Regulator, Centaur® WDG Insect Growth Regulator, and Talus® 70DF Insect Growth Regulator]

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • 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.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If in eyes	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-348-5832.	
NOTE TO PHYSICIAN: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.	

In case of fire or spills, information may be obtained by calling 1-800-424-9300.

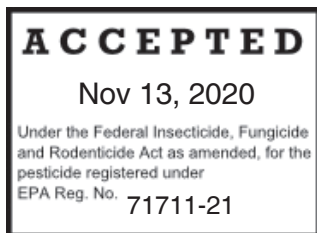
{Note to Reviewer: This language will be on the front of the booklet;} See inside booklet for Precautionary Statements and Directions for Use

{Note to Reviewer: This language will be on the label permanently affixed to the jug;} See attached booklet for Precautionary Statements and Directions for Use

Net Contents: _____

[Manufactured in _____,] [formulated in _____,] [and] [packaged in _____] for:

NICHINO AMERICA, INC.
4550 Linden Hill Road
Wilmington, DE 19808
888-740-7700



**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

Applicators applying this product by airblast application must apply using an enclosed cab or must wear:

- Chemical-resistant gloves made of neoprene \geq 14 mils and/or barrier laminate, nitrile rubber \geq 14 mils or butyl rubber \geq 14 mils
- Chemical-resistant headgear, if overhead exposure

Mixers and loaders must use engineering controls for mixing and loading, when applying this product aurally to orchards and vineyards.

STATEMENTS FOR CONTAMINATED PPE

Follow the 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.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- 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 clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or 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 washwater or rinsate.

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 requirement specific to your State or Tribe, consult the State/Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

For early entry into 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, wear:

- Coveralls
- Waterproof gloves
- Shoes plus socks

PRODUCT INFORMATION

APPLAUD® 70DF insect growth regulator (hereafter referred to as APPLAUD) is effective against the nymphal stages of [whiteflies], [scale], [psylla], [mealybugs], [planthoppers], and [leafhoppers] by inhibiting chitin biosynthesis, suppressing oviposition of adults, and reducing viability of eggs. APPLAUD is not an adulticide. Evidence of activity may be slower than typical contact insecticides as treated susceptible pests may remain alive on the plant for 3-7 days; however, pests have stopped feeding and any feeding damage during this time is typically very low.

APPLAUD is a contact insecticide, so thorough spray coverage is essential. Apply by ground or air in sufficient water volume. Orient nozzles to ensure good coverage. Use of higher volume of water will ensure better coverage, especially under adverse conditions such as hot, dry weather, and/or a dense canopy. The entire field should be treated. Apply when economic infestations occur based on local information.

Not for Sale, Sale Into, Distribution, and/or Use in Nassau and Suffolk Counties of New York State.

INSECTS CONTROLLED

- **Whiteflies:** Ash whitefly, Bandedwinged whitefly, Greenhouse whitefly, Silverleaf whitefly, Sweetpotato whitefly
- **Mealybugs:** Apple mealybug, Citrus mealybug, Comstock mealybug, Gill's mealybug, Grape mealybug, Longtailed mealybug, Madeira mealybug, Mexican mealybug, Obscure mealybug, Striped mealybug, Vine mealybug
- **Leafhoppers and Planthoppers:** Brown planthopper, Cherry leafhopper, Eastern grape leafhopper, Glassy-winged sharpshooter, Potato leafhopper, Variegated leafhopper, Western grape leafhopper, White apple leafhopper
- **Pear Psylla**
- **Scales**
 - **Armored Scales:** Boisduval scale, Cactus scale, California red scale, Coconut scale, Fern scale, Florida red scale, Oystershell scale, San Jose scale, Walnut scale
 - **Margarodid Scale:** Cottony cushion scale

{Sub-label A: Crop-Use}

- **Soft Scales:** Barnacle scale, Black scale, Brown soft scale, Citricola scale, European fruit lecanium scale, False oleander scale, Frosted scale, Hemispherical scale, Indian wax scale and other wax scales, Tessellated scale, White peach scale

USE RESTRICTIONS

- Do not apply this product in residential areas
- Do not apply this product through any type of irrigation system
- Fogging is prohibited on orchards and vineyards.
- Do not apply this product to orchards/vineyards and typical field crops by mechanically pressurized handgun
- For aerial applications, do not apply this product within 10 feet of residential areas including schools, homes, playgrounds, recreational areas, athletic fields, residential lawns, gardens, and other areas where children may be present when using a medium droplet size.
- Do not use anionic surfactants with this product.

ROTATIONAL CROP RESTRICTIONS

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Cereal grains	30 days following application
All other crops	60 days following application

RESISTANCE MANAGEMENT

For resistance management, APPLAUD contains a Group 16 insecticide. Any insect population may contain individuals naturally resistant to APPLAUD and other Group 16 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 APPLAUD or other Group 16 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.

{Sub-label A: Crop-Use}

- 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 Nichino America representatives at 1-888-740-7700.

APPLICATION DIRECTIONS

Applications should be made immediately after the spray solution is prepared. Thorough spray coverage is essential for effective control. Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. For best results, apply when pest populations are beginning to build, before reaching economic thresholds. Consult your local agricultural advisor or state cooperative extension service for recommendations.

MIXING DIRECTIONS

Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

APPLAUD ALONE: Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the balance of the water to the spray tank with agitation running.

APPLAUD TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Begin with clean equipment. Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with $\frac{3}{4}$ amount of water. Do not use oil as carrier or include other additives in the finished spray.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

- 1) products in water-soluble packets
- 2) wettable powders
- 3) water-dispersible granulars and/or soluble powders
- 4) flowable liquids
- 5) emulsifiable concentrates
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

Note: It is recommended that the compatibility of APPLAUD in any tankmix combination be tested before use. To determine the physical compatibility with other products, use a jar test, as described below:

Using a quart (qt) jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then flowable liquids, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

SPRAY DRIFT MANAGEMENT

Aerial Applications

MANDATORY SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Applicators must use $\frac{1}{2}$ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- The boom length must not exceed 75% of the wingspan for airplanes or 90% of the rotor blade diameter for helicopters.
- Do not apply during temperature inversions.

Ground Applications

MANDATORY SPRAY DRIFT

Airblast applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer rows.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed.

AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

SPRAY DRIFT

Boom-less Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift

SPRAY DRIFT

Handheld Technology Applications

Take precautions to minimize spray drift.

**APPLICATION RATE CHART FOR
APPLAUD**

Atemoya; Avocado; Biriba; Cherimoya; Custard Apple; Feijoa; Guava; Ilama; Jaboticaba; Passion Fruit; Soursop; Starfruit; Sugar Apple;		
Pest	Rate/Acre	Directions for Use
Scales	34.5 oz/acre (1.5 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 20 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS Limited to Florida, Hawaii, and Puerto Rico</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 69.0 oz of product per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 21 days. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be made when early crawler emergence occurs. • Scales: Apply at early crawler emergence. • Thorough spray coverage is essential.
Leafhoppers Mealybugs Whiteflies	9.0 to 12.0 oz/acre (0.40 to 0.53 lb ai/acre)	

Black Sapote; Canistel; Mamey Sapote; Mango; Papaya; Sapodilla; Star Apple		
Pest	Rate/Acre	Directions for Use
Leafhoppers Mealybugs Scales Whiteflies	9.0 to 12.0 oz/acre (0.40 to 0.53 lb ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 20 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS Limited to Florida, Hawaii, and Puerto Rico</p> <ul style="list-style-type: none"> • Do not make more than 5 applications per growing season • Allow at least 14 days between applications. • Do not apply more than 45.0 oz of product per acre per growing season. • Do not apply more than 1.97 lbs ai per acre per growing season. • Preharvest Interval (PHI): 3 days. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be made when early crawler emergence occurs. • Scales: Apply at early crawler emergence. • Thorough spray coverage is essential.

Banana		
Pest	Rate/Acre	Directions for Use
Leafhoppers Mealybugs Scales Whiteflies	7.0 oz/acre (0.31 lb ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 15 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 4 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 27.0 oz of product per acre per growing season. • Do not apply more than 1.18 lbs ai per acre per growing season. • Preharvest Interval (PHI): 1 day. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. Consult local or state agricultural authorities for details. • Thorough spray coverage is essential. Use of a higher volume of water will ensure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.

{Sub-label A: Crop-Use}

Citrus Fruits (Crop Group 10-10)		
Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; Mount White lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliolate orange; unqi fruit; cultivars, varieties, and/or hybrids of these		
Pest	Rate/Acre	Directions for Use
Black scale California red scale Citricola scale Cottony cushion scale Glassy-winged sharpshooter Mealybugs Wax scale	34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 500 gallons of water per acre. • Apply with sufficient water volume according to tree size. • Thorough spray coverage of the fruit, foliage, and wood is essential for maximum results. • When using the minimum water volume, trees must not exceed 10 feet tall, tree canopy must be opened up, and tractor speed must not exceed 1.5 miles per hour. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not apply more than 92.0 oz of product per acre per growing season. • Do not apply more than 4.0 lbs ai per acre per growing season. • Do not make more than 2 applications per growing season. • Allow at least 60 days between applications. • Preharvest Interval (PHI): 3 days. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Red scale: Applications should begin at early crawler emergence. • Citricola scale: Apply after complete crawler hatch. Spring applications can provide suppression and minimize honeydew accumulation. • Cottony cushion scale: Applications should occur after complete crawler hatch. • All other pests: Application should be made when early crawler emergence occurs. • Thorough spray coverage is essential.

{Sub-label A: Crop-Use}

Citrus Fruits (Crop Group 10-10) - For Florida and Texas Only		
<p>Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; Mount White lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliolate orange; uniq fruit; cultivars, varieties, and/or hybrids of these</p>		
Pest	Rate/Acre	Directions for Use
<p>Soft scales Armored scales</p>	<p>34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)</p>	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 250 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS Limited to Florida and Texas only.</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 60 days between applications. • Do not apply more than 92.0 oz of product per acre per growing season. • Do not apply more than 4.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 3 days. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Thorough coverage is essential for optimum control. • Choice of water volume should be based on tree canopy size and location of the scale insect within the tree canopy. • Applications should be made at the beginning of crawler hatch and emergence.

Coffee		
Pest	Rate/Acre	Directions for Use
<p>Mealybugs Scales</p>	<p>23.0 oz/acre (1.0 lb ai/acre)</p>	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 4 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 91.0 oz of product per acre per growing season. • Do not apply more than 4.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 0 day. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when population level reaches economic threshold. • Thorough spray coverage is essential.

FIG		
Pest	Rate/Acre	DIRECTIONS FOR USE
Scales	46 oz/acre (2.0 lb ai/acre)	<ul style="list-style-type: none"> • For ground application, use a minimum of 15 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Allow at least 14 days between applications. • Do not make more than 2 applications per crop cycle. • Do not apply more than 92 oz (4 lb ai) per acre per crop cycle. • Do not make more than 2 applications per year. • Pre-Harvest Interval (PHI): 14 days. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Good coverage is essential. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy. • Use the higher application rate and spray volume when treating a rapidly increasing insect population.

{Sub-label A: Crop-Use}

FRUIT, SMALL, VINE CLIMBING, EXCEPT FUZZY KIWIFRUIT, SUBGROUP 13-07F		
Amur river grape; gooseberry; grape; kiwifruit, hardy; Maypop; schisandra berry; cultivars, varieties, and/or hybrids of these		
Pest	Rate/Acre	Directions for Use
European fruit lecanium scale	12.0 oz/acre (0.53 lb ai/acre)	<ul style="list-style-type: none"> Apply by ground using a minimum of 50 gallons of water per acre. Water volumes should be adjusted based on the size of the grape canopy. Higher water volumes should be used for dense canopies. For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Do not make more than 2 applications per growing season. Allow at least 14 days between applications.
Leafhoppers Mealybugs	9.0 to 12.0 oz/acre (0.40 to 0.53 lb ai/acre)	<ul style="list-style-type: none"> Do not apply more than 24.0 oz of product per acre per growing season. Do not apply more than 1.05 lbs ai per acre per growing season. Preharvest Interval (PHI): 7 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> Leafhoppers: Apply when majority of the population is at the early nymphal stage. Mealybugs: Application should be made when early crawler emergence occurs. Thorough spray coverage is essential. Orient nozzles to ensure good coverage. Use of a higher volume of water will ensure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.
Mealybugs	24.0 oz/acre (1.05 lbs ai/acre)	<ul style="list-style-type: none"> Apply by ground using a minimum of 50 gallons of water per acre. Water volumes should be adjusted based on the size of the grape canopy. Higher water volumes should be used for dense canopies. For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <p>This application rate allowed in California and Arizona only.</p> <ul style="list-style-type: none"> Do not apply more than 24.0 oz of product per acre per growing season. Do not apply more than 1.05 lbs ai per acre per growing season. Preharvest Interval (PHI): 30 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> Mealybugs: Application should be made when early crawler emergence occurs. Thorough spray coverage is essential. Orient nozzles to ensure good coverage. Use of a higher volume of water will ensure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.

TROPICAL AND SUBTROPICAL, SMALL FRUIT, INEDIBLE PEEL, SUBGROUP 24A, PULASAN AND RAMBUTAN

Aisen; bael fruit; Burmese grape; cat's-eyes; inga; longan; lychee; madras-thorn; manduro; matisia; mesquite; mongongo, fruit; pawpaw, small-flower; satinleaf; Sierra Leone-tamarind; Spanish lime; velvet tamarind; wampi; white star apple; cultivars, varieties, and hybrids of these commodities.

Pest	Rate/Acre	Directions for Use
Scales	34.5 oz/acre (1.5 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 75 gallons per acre spray volume. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 69.0 oz of product per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 21 days

{Sub-label A: Crop-Use}

TROPICAL AND SUBTROPICAL, SMALL FRUIT, EDIBLE PEEL, SUBGROUP 23A

Acerola; African plum; agritos; almondette; appleberry; arbutus berry; bayberry, red; bignay; breadnut; cabeluda; carandas-plum; Ceylon iron wood; Ceylon olive; cherry-of-the-Rio-Grande; Chinese olive, black; Chinese olive, white; chirauli-nut; cocoplum; desert-date; false sandalwood; fragrant manjack; gooseberry, Abyssinian; gooseberry, Ceylon; gooseberry, otaheite; governor's plum; grumichama; guabiroba; guava berry; guava, Brazilian; guava, Costa Rican; guayabillo; illawarra plum; Indian-plum; Jamaica-cherry; jambolan; kaffir-plum; kakadu plum; kapundung; karanda; lemon aspen; mombin, yellow; monos plum; mountain cherry; olive; persimmon, black; pitomba; plum-of-Martinique; rukam; rumberry; sea grape; sete-capotes; silver aspen; water apple; water pear; water berry; wax jambu; cultivars, varieties, and hybrids of these commodities

Pest	Rate/Acre	Directions for Use
Scales	34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using 110 to 500 gallons per acre spray volume. Apply in sufficient water volume to provide adequate coverage for tree size. Thorough coverage is critical for adequate control. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 50 days between applications. • Do not apply more than 92.0 oz of product per acre per growing season. • Do not apply more than 4.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 21 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Black scale: Applications should occur after complete crawler hatch. • All other scales: Apply at early crawler emergence. • Thorough spray coverage is essential. Orient nozzles to ensure good coverage. Use of a higher volume of water will ensure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.

{Sub-label A: Crop-Use}

Pear and Asian Pear		
Pest	Rate/Acre	Directions for Use
Mealybugs Pear psylla Scales	34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 80 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 7 days between applications. • Do not apply more than 69.0 oz of product per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 14 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Pear Psylla: For best results of controlling 1st and 2nd instars, apply pre-bloom or at petal fall. In-season, apply early when smaller pear psylla nymphs are present. For best results, tankmix with an adulticide. • Mealybugs or San Jose scale: Apply pre-bloom or at first crawler emergence. • Other scales: Apply at first crawler emergence. • Thorough spray coverage is essential. • Phytotoxicity may occur in Asian Pear varieties, normally limited to applications made prior to petal fall.

Persimmon		
Pest	Rate/Acre	Directions for Use
Mealybugs Soft Scales European Fruit Lecanium Scale Frosted Scale	34.5 oz/acre (1.5 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground using a minimum of 100 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Do not apply more than 69.0 of product oz per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Allow at least 14 days between applications. • Preharvest Interval (PHI): 14 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be made at the beginning of crawler emergence. • Scales: Application should be made at the beginning of crawler emergence of the scale generation being targeted.

Pome Fruits (Crop Group 11-10) – Except Pear and Asian Pear (See Application Rate Chart for Pear and Asian Pear) apple, azarole, crabapple, loquat, mayhaw, medlar, quince, quince (Chinese), quince (Japanese), tejocote, cultivars, varieties and/or hybrids of these.		
Pest	Rate/Acre	Directions for Use
Leafhoppers	9.0 to 12.0 oz/acre (0.40 to 0.53 lb ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 80 gallons of water per acre. For low-volume sprayers, use a minimum of 20 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre.
Mealybugs Scales	34.5 oz/acre (1.5 lbs ai/acre)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 1 application per growing season. • Do not apply more than 34.5 oz of product per acre per growing season. • Do not apply more than 1.5 lbs ai per acre per growing season. • Preharvest Interval (PHI): 14 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • San Jose scale: Application can be made at dormant, delayed dormant, pre-bloom or in-season at early crawler emergence. • Other scales: Apply at early crawler emergence. • Mealybugs: Application should be made from dormant, delayed dormant to petal fall when nymphs are present. Apply in-season at early crawler emergence. • Thorough spray coverage is essential.

Pomegranate		
Pest	Rate/Acre	Directions for Use
Whiteflies	12.0 to 34.5 oz/acre (0.53 to 1.5 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre.
Mealybugs Scales	34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 69.0 oz of product per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 14 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Brown soft scale: Application can be made at dormant timing, targeting the overwintering population or at crawler emergence. • San Jose scale: Application can be made at dormant, delayed dormant, pre-bloom or in-season at early crawler emergence. • Other scales: Apply at early crawler emergence. • Mealybugs: Application should be made when early crawler emergence occurs. • Whiteflies: Apply at early nymph threshold. • Thorough spray coverage is essential.

Stone Fruits (Crop Group 12-12)		
<p>Apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these</p>		
Pest	Rate/Acre	Directions for Use
Mealybugs Scales	34.5 oz/acre (1.5 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 50 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per growing season. • Allow at least 14 days between applications. • Do not apply more than 69.0 oz of product per acre per growing season. • Do not apply more than 3.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 14 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be made when early crawler emergence occurs. • San Jose scale: Application can be made at dormant, delayed dormant, or pre-bloom when scale is in the black cap stage, or in-season at early crawler emergence. • Other scales: Apply at early crawler emergence. • Thorough spray coverage is essential.

Tree Nuts (Crop Group 14-12)		
African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these.		
Pest	Rate/Acre	Directions for Use
Mealybugs Scales	34.5 to 46.0 oz/acre (1.5 to 2.0 lbs ai/acre)	<ul style="list-style-type: none"> • Apply by ground application using a minimum of 100 gallons of water per acre. • For aerial applications, apply in a minimum finished spray volume of 5 gallons per acre. <p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Do not make more than 1 application per growing season. • Do not apply more than 46.0 oz of product per acre per growing season. • Do not apply more than 2.0 lbs ai per acre per growing season. • Preharvest Interval (PHI): 60 days <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Mealybugs: Application should be made when early crawler emergence occurs. • San Jose scale: Application can be made at dormant or delayed dormant when scale is in the black cap stage, or in-season at early crawler emergence. • Other scales: Apply at early crawler emergence or when scales are at a susceptible early nymphal stage. • Thorough spray coverage is essential.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, unopened, in a cool, dry place.

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 plastic container less than 50 pounds]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or other methods allowed by state and local authorities.

[Nonrefillable plastic container greater than 50 pounds]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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 the procedure two more times.

Alternatively, for pressure rinsing, pressure rinse as follows: Empty the remaining contents into application equipment or mix tank. Hold container upside down over application equipment or a 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

[Nonrefillable paper and plastic bags]

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or other methods allowed by state and local authorities.

In case of fire or spills, information may be obtained by calling 1-800-424-9300.

IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability, or otherwise.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT.

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062020

BUPROFEZIN GROUP 16 INSECTICIDE



APPLAUD® 70DF Insect Growth Regulator

ACTIVE INGREDIENT:

Buprofezin: [2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one]..... **70.00%**

OTHER INGREDIENTS:..... **30.00%**

TOTAL..... **100.00%**

Contains 0.70 lb. buprofezin per lb. of product

EPA Reg. No. 71711-21

EPA Est. No. _____

[**Alternate Brand Names:** Applaud® Insect Growth Regulator, Centaur® WDG Insect Growth Regulator, and Talus® 70DF Insect Growth Regulator]

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • 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.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If in eyes	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-348-5832.	
NOTE TO PHYSICIAN: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.	

In case of fire or spills, information may be obtained by calling 1-800-424-9300.

{Note to Reviewer: This language will be on the front of the booklet;} See inside booklet for Precautionary Statements and Directions for Use

{Note to Reviewer: This language will be on the label permanently affixed to the jug;} See attached booklet for Precautionary Statements and Directions for Use

Net Contents: _____

[Manufactured in _____,] [formulated in _____,] [and] [packaged in _____] for:

NICHINO AMERICA, INC.

4550 Linden Hill Road

Wilmington, DE 19808

888-740-7700

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

STATEMENTS FOR CONTAMINATED PPE

Follow the 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.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4–6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- 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 clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

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 requirement specific to your State or Tribe, consult the State/Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

For early entry into 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, wear:

- Coveralls
- Waterproof gloves
- Shoes plus socks

PRODUCT INFORMATION

APPLAUD® 70DF insect growth regulator (hereafter referred to as APPLAUD) is effective against the nymphal stages of [whiteflies], [scales], [psylla], [mealybugs], [planthoppers], and [leafhoppers] by inhibiting chitin biosynthesis, suppressing oviposition of adults, and reducing viability of eggs. APPLAUD is not an adulticide. Evidence of activity may be slower than typical contact insecticides as treated susceptible pests may remain alive on the plant for 3-7 days; however, pests have stopped feeding and any feeding damage during this time is typically very low.

APPLAUD is a contact insecticide, so thorough spray coverage is essential. Apply by ground or air in sufficient water volume. Orient nozzles to ensure good coverage. Use of higher volume of water will ensure better coverage, especially under adverse conditions such as hot, dry weather, and/or a dense canopy. The entire field should be treated. Apply when economic infestations occur based on local information.

Not for Sale, Sale Into, Distribution, and or Use in Nassau and Suffolk Counties of New York State.

INSECTS CONTROLLED

- **Whiteflies:** Ash whitefly, Bandedwinged whitefly, Greenhouse whitefly, Silverleaf whitefly, Sweetpotato whitefly
- **Mealybugs:** Apple mealybug, Citrus mealybug, Comstock mealybug, Gill's mealybug, Grape mealybug, Longtailed mealybug, Madeira mealybug, Mexican mealybug, Obscure mealybug, Striped mealybug, Vine mealybug
- **Leafhoppers and Planthoppers:** Brown planthopper, Cherry leafhopper, Eastern grape leafhopper, Glassy-winged sharpshooter, Potato leafhopper, Variegated leafhopper, Western grape leafhopper, White apple leafhopper
- **Pear Psylla**
- **Scales**

{Sub-label B: Greenhouse Food-Use and Ornamental Plants}

- **Armored Scales:** Boisduval scale, Cactus scale, California red scale, Coconut scale, Fern scale, Florida red scale, Oystershell scale, San Jose scale, Walnut scale
- **Margarodid Scale:** Cottony cushion scale
- **Soft Scales:** Barnacle scale, Black scale, Brown soft scale, Citricola scale, European fruit lecanium scale, False oleander scale, Frosted scale, Hemispherical scale, Indian wax scale and other wax scales, Tessellated scale, White peach scale

USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Do not apply this product in residential areas.
- Fogging applications are restricted to greenhouse uses, nursery ornamentals, field-grown ornamentals, and Christmas tree farms.
- For aerial applications, do not apply this product within 10 feet of residential areas including schools, homes, playgrounds, recreational areas, athletic fields, residential lawns, gardens, and other areas where children may be present when using a medium droplet size.
- Fogging is prohibited on orchards and vineyards.
- Do not apply this product to orchards/vineyards and typical field crops by mechanically pressurized handgun
- Do not use anionic surfactants with this product.

ROTATIONAL CROP RESTRICTIONS

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Cereal grains	30 days following application
All other crops	60 days following application

RESISTANCE MANAGEMENT

For resistance management, APPLAUD contains a Group 16 insecticide. Any insect population may contain individuals naturally resistant to APPLAUD and other Group 16 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 APPLAUD or other Group 16 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

{Sub-label B: Greenhouse Food-Use and Ornamental Plants}

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 Nichino America representatives at 1-888-740-7700.

APPLICATION DIRECTIONS

Applications should be made immediately after the spray solution is prepared. Thorough spray coverage is essential for effective control. Applications may be made with high, low or ultra-low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. For best results, apply when pest populations are beginning to build, before reaching economic thresholds. Consult your local agricultural advisor or state cooperative extension service, or regional Nichino America, Inc. representative for recommendations.

To avoid contact with the treated area, begin by fogging area of greenhouse furthest from the entrance/exit walking backwards as the fog/spray is applied. Finish application at the entrance/exit of the greenhouse.

For stationary fogging applications, leave the treatment area during application.

For backpack sprayer and mechanically-pressurized-handgun applications: Apply by ground with 100 gallons of water per acre.

MIXING DIRECTIONS

Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

APPLAUD ALONE: Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the balance of the water to the spray tank with agitation running.

APPLAUD TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Begin with clean equipment. Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with $\frac{3}{4}$ amount of water. Do not use oil as carrier or include other additives in the finished spray.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

- 1) products in water-soluble packets
- 2) wettable powders
- 3) water-dispersible granulars and/or soluble powders
- 4) flowable liquids
- 5) emulsifiable concentrates
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

{Sub-label B: Greenhouse Food-Use and Ornamental Plants}

Note: It is recommended that the compatibility of APPLAUD in any tankmix combination be tested before use. To determine the physical compatibility with other products, use a jar test, as described below:

Using a quart (qt) jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then flowable liquids, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

SPRAY DRIFT MANAGEMENT

Ground Applications

MANDATORY SPRAY DRIFT

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

{Sub-label B: Greenhouse Food-Use and Ornamental Plants}

- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed.

AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

SPRAY DRIFT

Boom-less Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift

SPRAY DRIFT

Handheld Technology Applications

Take precautions to minimize spray drift.

APPLICATION RATE CHART FOR APPLAUD

Greenhouse Tomatoes and Peppers		
Pests	Dilution Rate (oz/100 gallons)	Directions for Use
Leafhoppers Mealybugs Planthoppers	9.0 oz/100 gal (0.56 lbs product/100 gal) (0.40 lbs ai/100 gal)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Apply no more than 2 applications per growing cycle. • Allow at least 5 days between applications. • Do not apply more than 18.0 oz (1.12 lbs product) per acre per growing cycle. • Preharvest Interval (PHI): 1 day <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • 100 gallons of finished spray solution will typically cover 1 acre. • Treatment should be applied when population level reaches economic threshold. Consult local and state agricultural authorities for details. • Apply in sufficient water to obtain complete coverage of all plant parts. Good coverage is essential. • Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) ground equipment only. • Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. • Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.
Whiteflies	6.0 to 9.0 oz/100 gal (0.38 to 0.56 lbs product/100 gal) (0.26 to 0.40 lbs ai/100 gal)	

{Sub-label B: Greenhouse Food-Use and Ornamental Plants}

Ornamental Plants		
in greenhouses; lath and shadehouses; nurseries; landscape ornamentals; ground covers; field-and container-grown ornamentals; non-bearing fruit and nut trees and vines in nurseries; Christmas trees		
Pests	Dilution Rate oz/100 gallons	Directions for Use
Leafhoppers Mealybugs Planthoppers	12.0 oz/100 gal (0.75 lbs product/ 100 gal) (0.53 lbs ai/100 gal)	<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> • Make no more than 2 applications per crop per growing season. • Do not apply more than 28.0 oz (1.76 lbs product) per acre per growing cycle. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • 100 gallons of finished spray solution will typically cover 1 acre. • Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) ground equipment only. • Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information. • Apply the specified dosage as a foliar spray in sufficient water for complete, uniform coverage, including stems and underside of leaves. Spray to the point of runoff. • Whiteflies, Leafhoppers or Planthoppers: Make first application as soon as adult insects begin to appear. • Mealybugs: Make first application as soon as insect activity is observed. • Scales: Make first application when crawlers are emerging. • If additional insecticide applications are required for control, use another class of chemistry or a different Insect Growth Regulator (IGR) with a different mode of action before making subsequent applications of buprofezin. • Consult local or state agricultural authorities for details concerning economic thresholds for each target pest.
Scales	14.0 oz/100 gal (0.88 lbs product/ 100 gal) (0.61 lbs ai/ 100 gal)	
Whiteflies	6.0 oz/100 gal (0.38 lbs product/100 gal) (0.26 lbs ai/100 gal)	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, unopened, in a cool, dry place.

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 plastic container less than 50 pounds]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or other methods allowed by state and local authorities.

[Nonrefillable plastic container greater than 50 pounds]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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 the procedure two more times.

Alternatively, for pressure rinsing, pressure rinse as follows: Empty the remaining contents into application equipment or mix tank. Hold container upside down over application equipment or a 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

[Nonrefillable paper and plastic bags]

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

In case of fire or spills, information may be obtained by calling 1-800-424-9300.

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IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

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