



Alias[®] 2F

FLOWABLE INSECTICIDE

GROUP 4 INSECTICIDE

ACTIVE INGREDIENT

	% BY WT.
Imidacloprid: 1-[(6-Chloro-3-pyridinyl) methyl]- <i>N</i> -nitro-2-imidazolidinimine	21.8%

OTHER INGREDIENTS:	78.2%
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TOTAL:	100.0%
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Contains 2 lbs. of imidacloprid per gallon. Flowable insecticide.

Shake well before using.

EPA Reg. No. 66222-203

EPA Est. No. 37429-GA-001^{BT}; 37429-GA-002^{BO}
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCIÓN

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.)



Manufactured for:
**Makhteshim Agan
of North America, Inc.**

3120 Highwoods Blvd
Suite 100

Raleigh, NC 27604

M A N A

For additional First Aid, precautionary, handling,
and use statements, see inside of this booklet.

14284
120313-1.0

Net Contents: 1 Gallon

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 do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
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 ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of soap and water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 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.
HOT LINE NUMBER:	In case of emergency, contact PROSAR at 1-877-250-9291. Have the product container or label with you when calling a poison control center or doctor or going for treatment.
NOTE TO PHYSICIAN:	No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. 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, or using tobacco. Remove contaminated clothing and wash clothing before reuse. Keep children or pets away from treated area until dry.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (mixers and loaders) who handle this product for uses covered by the Worker Protection Standard (40 CFR Part 170) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC), or Viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment, PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems or enclosed cabs 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:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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. Wash thoroughly and change into clean clothing. Wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. 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 or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging.


This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Apply this product only as specified on this label. Extreme care must be taken to avoid runoff. Apply only to soil or other fill substrate that will accept the solution at the specified rate. Do not treat soil that is water-saturated or frozen or in any conditions where run-off or movement from the treated area (site) is likely to occur.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

DIRECTIONS FOR USE

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

Read entire label before using this product. This label must be in the possession of the user at the time of pesticide application.

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed crops and commercially grown ornamentals that are attractive to pollinators:



FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the

pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



FOR FOOD/FEED CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

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

ENDANGERED SPECIES PROTECTION REQUIREMENTS

This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult <http://www.epa.gov/espp/> or call 1-800-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

AGRICULTURAL USE REQUIREMENTS

Use this product 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 intervals. 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 12 hours.

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC), or Viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.
- Shoes plus socks

Resistance Management

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. ALIAS® 2F contains a Group 4A insecticide. Insect biotypes with acquired or inherent tolerance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by ALIAS 2F and to other Group 4A insecticides. The active ingredient in ALIAS 2F is a member of the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to ALIAS 2F. In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential, for each crop season:

- 1) make only a single, soil application of ALIAS 2F;
- 2) foliar applications of products from the same class not be made following a long residual, soil application of ALIAS 2F, or other neonicotinoid products.

If a soil application of ALIAS 2F has not been made during a crop season and foliar applications are to be made, avoid using a block of more than three consecutive applications of ALIAS 2F and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, MANA strongly encourages the rotation to a block of applications with effective products with a different mode of action before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect's ability to develop resistance to this class of chemistry.

Other Group 4A, neonicotinoid products, used as foliar treatments include: Actara, Assail, Calypso, Centric, Clutch, Couraze, Galiant, Impulse, Intruder, Leverage, Nuprid, Pasada, Provado, Trimax Pro, and Venom.

Other Group 4A, neonicotinoid products, used as soil/seed treatments include Admire Pro, Advise, Alias, Belay, Couraze, Cruiser, Gaucho, Macho, Macho Max, Nuprid, Platinum, Venom, and Widow.

Contact your Cooperative Extension specialist, certified crop advisor, and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org/>.

APPLICATION DIRECTIONS

Apply ALIAS 2F with ground or chemigation application equipment.

For soil applications of ALIAS 2F, direct product into the seed or root zone of crop. Failure to place ALIAS 2F into root-zone may result in loss of control or delay in onset of activity.

When applied as a soil application, optimum activity of ALIAS 2F results from applications to the root-zone of plants to be protected. The earlier ALIAS 2F is available to a developing plant, the earlier the protection begins. ALIAS 2F is continuously taken into the roots over a long period of time and the systemic nature of ALIAS 2F allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of ALIAS 2F, the control of insects, and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of ALIAS 2F applied affects the length of the plant protection period. Use the higher listed rates when infestations occur later in crop development or where pest pressure is continuous. ALIAS 2F will generally not control insects infesting flowers, blooms, or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts, and for insects not listed in the crop-specific, pests-controlled sections of this label. Additionally, specific ALIAS 2F application instructions are also provided in the crop-specific sections of this label.

Make broadcast foliar applications to seedling flats or trays or where product is intended to be washed from foliage to soil prior to drying on foliage.

Suppression, or less than complete control of certain diseases and insect pests including reduced feeding,

may also result from a ALIAS 2F application. Complete control of these pests may require supplemental control measures.

Application of ALIAS 2F is not allowed on crops grown for production of true seed intended for private or commercial planting but may be allowed under state specific, 24(c) supplemental labeling.

Additional information on ALIAS 2F uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants, or local Makhteshim Agan of North America, Inc. representatives.

Apply only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil media such as perlite, vermiculite, rock wool, or other soilless media, or plants growing hydroponically.

Pre-mix ALIAS 2F with water or other appropriate diluent prior to application. Keep ALIAS 2F and water suspension agitated to avoid settling.

- **RESTRICTIONS:** Do not apply ALIAS 2F in enclosed structures such as planthouses or greenhouses except as specifically instructed in the **TOBACCO, CUCURBIT VEGETABLES, FRUITING VEGETABLES** and **GREENHOUSE VEGETABLES**, (Mature plants in production greenhouses): Cucumber, Tomato only sections of this label.
- Regardless of formulation or method of application, do not apply more than 0.5 pounds active ingredient imidacloprid per acre per year, including seed treatment, soil, and foliar uses, unless specified within a crop-specific application section for a given crop.
- Do not apply with aerial application equipment.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species.

MIXING INSTRUCTIONS

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation, add ALIAS 2F. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. ALIAS 2F may also be used with other pesticides. Please see **Compatibility** section of this label. When tank mixtures of ALIAS 2F and other pesticides are involved, prepare the tank mixture as instructed above and follow suggested **Mixing Order** below.

Mixing Order

When pesticide mixtures are needed, add wettable powders or wettable granules first, ALIAS 2F and other suspension concentrate (flowable) products second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility

Test compatibility of the intended mixture before adding ALIAS 2F to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Do not use if poor mixing or formation of precipitates that do not readily redisperse occurs which indicates an incompatible mixture.

CHEMIGATION

Types of Irrigation Systems: Make soil chemigation applications of ALIAS 2F only to crops through chemigation as specified in crop-specific application sections and only through low-pressure systems unless specifically listed for a given crop. Do not apply ALIAS 2F through any other type of irrigation system.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact Cooperative Extension Service specialists, equipment manufacturers, or other experts.

Chemigation Monitoring: A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Drift: Do not apply when wind speed favors drift beyond the area intended for treatment.

Required System Safety Devices: The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank 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 pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems: Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems

connected to public water systems must contain a functional reduced-pressure zone, back flow preventer (RPZ), or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank 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 pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the airstream as much as possible and by avoiding excessive spray boom pressure.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy, and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions during Temperature Inversions

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light

to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. 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 mixing.

Mixing and Loading Requirements

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

Airblast (Air Assist) for Tree Crops and Vineyards

Airblast sprayers carry droplets into the canopy of trees/vines via a radially or laterally directed air stream. The following specific drift management practices should be followed:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows).
- Only spray inward, toward the orchard or vineyard, for application to the outside rows.

No-Spray Zone Requirements for Soil and Foliar Applications

Do not apply by ground within 25 feet or by air within 150 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using MANA ALIAS 2F on erodible soils, Best Management Practice for minimizing runoff should be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

ROTATIONAL CROPS*

Replant treated areas with any crop specified on an imidacloprid label or any crop for which a tolerance exists for the active ingredient as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval must be observed.

IMMEDIATE PLANT-BACK:

All crops on this label plus the following crops not on this label: barley, canola, corn (field, pop, and sweet), rapeseed, sorghum, sugarbeet, and wheat

30-DAY PLANT-BACK:

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans, and safflower

10-MONTH PLANT-BACK:

Onion and bulb vegetables

12-MONTH PLANT-BACK:

All Other Crops

*Plant cover crops for soil building or erosion control at any time, but do not graze or harvest for food or feed.

FIELD CROPS

COTTON

Pests Controlled	Fl. oz. /1000 row-feet	Fl. oz. /A
Cotton aphid, Plant bugs, Thrips, Whiteflies	1.3	17-21.1 (depending on row-spacing)

Restrictions:

- Pre-Harvest Interval (PHI): 14 days
- Maximum ALIAS 2F soil application amount allowed per year: 21.1 fl. oz. /A (0.33 lb active ingredient /A). (Regardless of formulation or method of application, apply no more than 0.5 lb. active ingredient /A per year, including seed treatment, soil, and foliar uses.)
- Do not graze treated fields after any application of ALIAS 2F .

Applications: Apply specified dosage (one time application) in one of the following methods:

- In-furrow spray during planting directed on or below seed.
- In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting.
- Chemigation into root-zone through low-pressure drip or trickle irrigation.

PEANUT

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers Whiteflies	16-24
Pest Suppressed	
Thrips	16-24
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 14 days • Maximum ALIAS 2F allowed per year: 24 fl. oz./A (0.38 ai/A) <p>Applications: Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • In-furrow spray during planting directed on or below seed; • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. <p>*Not for use in CA unless otherwise directed by state-specific 24(c) supplemental labeling.</p> <p>Important Note: Increases in Tomato spotted wilt virus (TSWV) incidence have been observed with applications of ALIAS 2F on multiple varieties of peanut. This may also be the case with other tospoviruses, or other viruses transmitted by various thrips species or perhaps other pests. Prior to applying ALIAS 2F to peanuts, consult with the State, Cooperative Extension Service, or a Makhteshim Agan of North America, Inc. representative, for recommendations. Growers are advised to weigh insect control benefits against potential increase in viral disease levels. In areas where TSWV or other tospovirus are endemic, growers are encouraged to use virus resistant varieties and consult the University of Georgia, Tomato spotted wilt virus index, before applying ALIAS 2F.</p>	

POTATO

Pests Controlled	Fl. oz. / 1000 row-feet	Fl. oz. /A
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid	0.9-1.3	13-20
Pests/Diseases Suppressed		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis Wireworms (with in-furrow spray at-planting)	0.9-1.3	13-20
Restrictions: <ul style="list-style-type: none"> • Maximum ALIAS 2F allowed per year: 20 fl. oz. /A (0.31 lb active ingredient /A) Applications: Apply specified dosage (one time application) in one of the following methods: <ul style="list-style-type: none"> • In-furrow spray during planting directed on seed pieces or seed potatoes. • Subsurface side-dress on both sides of the row covered with 3 or more inches of soil. • Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil. • Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, ALIAS 2F applications must be placed below soil surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, make at-plant applications of ALIAS 2F in a 2 to 4 inch band (width of planter shoe opening) and completely cover. 		

POTATO - seed piece treatment

Pests Controlled	Fl. oz. / 100 lbs. of seed	Fl. oz. /A*
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid Wireworms (seed-piece protection)	0.4-0.8	8-16
Pests/Diseases Suppressed		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis	0.8	16
Restrictions:		
<ul style="list-style-type: none"> • Maximum ALIAS 2F allowed per year when making seed piece treatment applications: 16 fl. oz. /A (0.24 lb. active ingredient /A) • Do not use treated seed-pieces for food, feed, or fodder. • Do not apply any subsequent application of ALIAS 2F (in-furrow), or any other imidacloprid product, following a ALIAS 2F seed-piece treatment. 		
<p>Application: Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part ALIAS 2F. Agitate or stir spray solution as needed. Apply fungicidal or inert absorbent dusts after ALIAS 2F application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating, avoiding prolonged exposure of ALIAS 2F treated seed-pieces to sunlight and in accordance with the recommendation of your local Extension service.</p>		
* Based on a seeding rate of 2000 lbs. /A.		

TOBACCO

Pests Controlled	Fl. oz. / 1000 plants (as seedling tray drench)	Fl. oz. / 1000 plants (in-furrow or transplant-water)
Aphids	1.0	1.4
Flea beetles		
Mole crickets	1.4-2.8	1.8-2.8
Whiteflies		
Wireworms		
Pests/Disease Suppressed		
Cutworms	1.4-2.8	1.8-2.8
Symptoms of: Tomato spotted wilt virus (TSWV)		
Restrictions:		
<ul style="list-style-type: none"> • Maximum ALIAS 2F allowed per year: 32 fl. oz. /A (0.5 lb. active ingredient /A) • Pre-Harvest Interval (PHI): 14 days 		
Applications(one time application): Apply specified dosage in one of the following methods:		
<ul style="list-style-type: none"> • Uniform, broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash ALIAS 2F from foliage into potting media. Failure to wash ALIAS 2F from foliage may result in a reduction in pest control. Handle transplants carefully during setting to avoid dislodging treated potting media from roots. • In-furrow spray or transplant-water drench during setting. • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 		
Important Note: Proper tray drench applications of ALIAS 2F have been shown to be the most efficacious method of application. However, apply the specified rate of ALIAS 2F as a combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of ALIAS 2F into the plant and a delay in control.		

VEGETABLE AND SMALL FRUIT CROPS**CUCURBIT VEGETABLES¹ - soil treatment**

Crops of Crop Group 9 Including: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

Field Applications. See details below for additional planthouse application instructions.

Pests Controlled	Fl. oz. /A
Aphids Cucumber beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	16-24
Pests/ Diseases Suppressed	
Bacterial wilt (as vectored by various cucumber beetles) Leaf silvering resulting from whitefly feeding	16-24

Restrictions:

- Pre-Harvest Interval (PHI): 21days
 - Maximum ALIAS 2F allowed per crop season: 24 fl. oz. /A (0.38 lb/active ingredient /A)
- ¹ Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications(one time application): Apply the specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray directed on or below seed.
- Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application.
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
- Post-seeding drench, transplant-water drench, or hill drench.
- Subsurface side-dress on both sides of each row. ALIAS 2F must be incorporated into root-zone.

CUCURBIT VEGETABLES¹ (continued)

Planthouse Applications	
Pest Controlled	Rate: Fl. oz. per 1000 plants
Aphids Whiteflies	0.1
Restrictions: <ul style="list-style-type: none">• Maximum amount ALIAS 2F applied in the planthouse: 0.1 fl. oz. (0.00156 lb. active ingredient per 1000 plants)• Maximum number ALIAS 2F applications in planthouse: 1 ¹ Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.	
Applications(one time application): Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following methods: <ul style="list-style-type: none">• Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash ALIAS 2F from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ALIAS 2F from foliage may result in reduced pest control.• Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray. The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.	
Important Note: Not all varieties of cucurbit vegetables have been tested for tolerance to ALIAS 2F applied to seedling flats. Treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.	

GREENHOUSE VEGETABLES¹

Mature plants in production greenhouses: Cucumber, Tomato only

Pests Controlled	Fl. oz. / 1000 plants
Aphids Whiteflies	1.4
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 0 day • Maximum number ALIAS 2F applications per crop season: 1 ¹ Not for use on crops grown for seed unless allowed by state-specific 24 (c) labeling.	
Applications: Apply specified dosage in a minimum of 16 gallons of water for tomatoes and 21 gallons of water for cucumbers using soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment. Make applications only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil medias such as perlite, vermiculite, rock wool or other soil-less media, or plants growing hydroponically. Do not apply to immature plants since phytotoxicity may occur. Make applications when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficials (<i>Orius</i> spp.) can occur when ALIAS 2F is applied. Many varieties of vegetables have been tested for tolerance to ALIAS 2F and show good safety. However, certain varieties may show more sensitivity to ALIAS 2F. Therefore, treat a few plants before treating the whole greenhouse.	

FRUITING VEGETABLES¹

Crops of Crop Group 8 plus Okra including: Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento, and sweet), Tomato, Pepinos, Tomatillo

Field Applications. See details below for additional planthouse applications.	
Pests Controlled	Fl. oz. /A
Aphids Colorado potato beetle Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	Okra and Pepper: 16-32 Other Crops: 16-24
Diseases Suppressed	Fl. oz. /A
Symptoms of: Tomato mottle virus Tomato spotted wilt virus Tomato yellow leaf curl virus	Okra and Pepper: 16-32 Other Crops: 16-24

Restrictions:

- Pre-Harvest Interval (PHI): 21 days
 - Maximum ALIAS 2F allowed on pepper and okra crops per crop season: 32 fl. oz./A (0.5 lb A.I. /A)
 - Maximum ALIAS 2F allowed on other fruiting vegetable crops per per crop season: 24 fl. oz./A (0.38 lb AI/ /A)
- [†] Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray directed on or below seed.
- Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application.
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
- Post-seeding drench, transplant-water drench, or hill drench.
- Subsurface side-dress on both sides of each row. Incorporate ALIAS 2F into root-zone.

FRUITING VEGETABLES' (continued)**Planthouse Applications****Pest Controlled****Fl. oz. per 1000 plants**

Aphids
Whiteflies

0.1

Restrictions:

- Maximum amount ALIAS 2F applied in the planthouse: 0.1 fl. oz. (0.00156 lb A.I.) per 1000 plants.
 - Maximum number ALIAS 2F applications in planthouse: 1
- [†] Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications: Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

- Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash ALIAS 2F from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ALIAS 2F from foliage may result in reduced pest control.
- Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.

Important Note: Not all varieties of fruiting vegetables have been tested for tolerance to ALIAS 2F applied to seedling flats. Treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

GLOBE ARTICHOKE

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers	16-32
Restrictions:	
<ul style="list-style-type: none"> • Pre-harvest interval (PHI): 7 days • Maximum ALIAS 2F allowed per year when making soil applications: 32 fl. oz. /A (0.5 lb AI /A) 	
Applications(one time application): Apply specified dosage in the following method:-	
<ul style="list-style-type: none"> • In-furrow spray at planting directed on or below seed. • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	

HERBS

Crops of Crop Subgroup 19A including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood.

Pests Controlled	Fl. oz. /A
Aphids Flea beetles Leafhoppers Whiteflies	16-24
Pests Suppressed	
<ul style="list-style-type: none"> • Thrips (foliage feeding thrips only) 16-24 	
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 14 days • Maximum ALIAS 2F per crop season: 24 fl. oz./A (0.38 lb AI/A). 	
Applications(one time application): Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • In-furrow spray during planting directed on or below seed. • In-furrow spray or transplant-water drench during setting or transplanting. • Shankd-into or below eventual seed-line. • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. 	
Notes: Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, treat only a small area or small number of plants of each listed above and evaluate prior to commercial use.	

BRASSICA (COLE) LEAFY VEGETABLES¹

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lan*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip tops (leaves)

Pests Controlled	Fl. oz. /A (on 36 inch rows)
Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies	10-24
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum MANA ALIAS 2F allowed per crop season when making soil applications 24 fl. oz./A (0.38 lb AI /A) <p>¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.</p> <p>Applications(one time application): Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray directed on or below seed. • Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application. • Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting. • Post-seeding drench, transplant-water drench, or hill drench. • Subsurface side-dress on both sides of each row. ALIAS 2F must be incorporated into root-zone. 	

LEAFY VEGETABLES¹

Crops of Crop Subgroup 4A plus Watercress including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate: Fl. oz. /A (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10-24

Restrictions:

- Pre-Harvest Interval (PHI): 21 days
 - Maximum ALIAS 2F allowed per crop season: 24 fl. oz. /A (0.38 lb AI /A)
- †Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray directed on or below seed.
- Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application.
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
- Post-seeding drench, transplant-water drench, or hill drench.
- Subsurface side-dress on both sides of each row. ALIAS 2F must be incorporated into root-zone.

LEAFY PETIOLE VEGETABLES¹

Crops of Crop Subgroup 4B including: Cardoon, Celery, Celtuce, Chinese celery (fresh leaves and stalk only), Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

Pests Controlled	Rate: Fl. oz. /A
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10-24

Restrictions:

- Pre-Harvest Interval (PHI): 45 days
 - Maximum ALIAS 2F allowed per crop season: 24 fl. oz./A (0.38 lb AI /A)
- †Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray directed on or below seed.
- Narrow (2 inches or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours of application.
- Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
- Post-seeding drench, transplant-water drench, or hill drench.
- Subsurface side-dress on both sides of each row. ALIAS 2F must be incorporated into root-zone.

LEGUME VEGETABLES' except soybean, dry**Crops of Crop Group 6 including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean****Bean** (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)**Bean** (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)**Bean** (*Vigna* spp., includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)**Pea** (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)**Other Beans and Peas** [Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean]

Pests Controlled	Rate: Fl. oz. /A
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	16-24
Diseases Suppressed	
Symptoms of: Bean common mosaic virus (BCMV) Bean golden mosaic virus (BGMV) Beet curly top hybrigeminivirus (BCTV)	16-24
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum ALIAS 2F allowed per crop season: 24 fl. oz./A (0.38 lb AI /A) 	
†Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.	
Applications(one time application): Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • In-furrow spray at planting directed on or below seed. • In a narrow (2 inches or less) surface band over seed-line during planting incorporated to a depth of 1 to 1 ½ inches with sufficient irrigation within 24 hours following application. • In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. • As a post-seeding drench, transplant drench, or hill drench. 	

ROOT VEGETABLES¹

Crops of Crop Subgroup 1B except Sugarbeet plus Kava* including: Beet (garden)², Burdock (edible)², Carrot², Celeriac², Chervil (turnip-rooted)², Chicory², Ginseng, Horseradish, Kava^{2*}, Parsley (turnip-rooted), Parsnip², Radish², Oriental radish (diakon)², Rutabaga², Salsify (oyster plant), Salsify (black)², Salsify (Spanish), Skirret, and Turnip²

Pests Controlled	Fl. oz. / 1000 row-feet	Fl. oz. /A
Aphids Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	0.7-1.7	10-24

Restrictions:

- Pre-Harvest Interval (PHI): 21 days
 - Maximum ALIAS 2F allowed per crop season: 24 fl. oz./A (0.38 lb AI /A)
 - Maximum ALIAS 2F applications per crop season: 1
- ¹Not for use on crops grown for seed unless allowed by a state-specific 24(c) labeling.
²Tops or greens from these crops may be utilized for food or feed.
^{*}Not for use in CA.

Application: Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- In-furrow spray (rate specified per 1000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting.
- In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

Important Note: The rate applied affects the length of control. Use the higher listed rates where infestations occur later in crop development, or where pest pressure is continuous. ALIAS 2F rates less than 0.7 fl. oz./1000 row-feet will not provide adequate residual pest control. ALIAS 2F treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

TUBEROUS and CORM VEGETABLES¹

Crops of Crop Subgroup 1C including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Cassava (bitter and sweet)², Chayote (root), Chufa, Dasheen (taro)², Ginger, Leren, Sweet potato, Tanier (cocoyam)², Turmeric, Yam bean (jicama, manioc pea), Yam (true)² (For applications on potato see **FIELD CROPS** section)

Pests Controlled	Fl. oz. / 1000 row-feet	Fl. oz. /A
Aphids Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	0.7-1.7	10-24

Restrictions:

- Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms)
- Maximum ALIAS 2F allowed per crop season: 24 fl. oz./A (0.38 lb AI /A)
- Maximum ALIAS 2F applications per crop season: 1

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

²Tops or greens from these crops may be utilized for food or feed.

Applications: Apply specified dosage in one of the following methods:

- In-furrow spray (rate specified per 1000 row-feet) over planting materials (hulis) or shanked-in 1 to 2 inches below hulis depth at planting.
- Side-dress not more than 0.6 fl. oz./1000 row-feet no later than 45 days after planting. Observe the same PHI as above.

Important Note: The rate applied affects the length of control. Use the higher listed rates where infestations occur late in crop development, or where pest pressure is continuous. ALIAS 2F rates less than 0.7 fl. oz./1000 row-feet may not provide adequate residual pest control. ALIAS 2F treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

STRAWBERRY**Annual and Perennial Crops**

Pests Controlled	Fl. oz. /A
Aphids Whiteflies	24-32

Restrictions:

- Pre-Harvest Interval (PHI): 14 days
 - Maximum ALIAS 2F allowed per crop season: 32 fl. oz./A (0.50 lb AI /A)
- Do not use both application methods on the same crop in the same season.

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening.
- As a plant material or plant hole treatment just prior to, or during transplanting.
- As a band spray over-the-row in a minimum of 20 gallons of water /A, followed immediately by overhead irrigation to incorporate product into root-zone. Do not use plastic or other mulches that limit movement of ALIAS 2F into root zone.
- Do not apply immediately prior to bud opening or during bloom when bees are foraging

The rate applied affects the length of control. Use the higher listed rates where infestations occur later in crop development or where pest pressure is continuous.

Post-harvest Use on Perennial Crops

Pests Controlled	Fl. oz. /A
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	16-24

Restrictions:

- Pre-Harvest Interval (PHI): 14 days
 - Maximum post harvest ALIAS 2F allowed per year: 24 fl. oz./A (0.38 lb AI /A)
- Do not use both application methods on the same crop in the same season.

Applications: Apply a single application post harvest to coincide with renovation of strawberry fields and during active egg-laying period of beetles. Apply specified dosage of ALIAS 2F in one of the following methods:

- As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water /A.
- As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The bandwidth should be equivalent to the width of the anticipated fruiting bed.
- As a chemigation application with 600 to 1000 gallons of water followed by 0.1 to 0.25 inches irrigation.

Important Note: Follow all soil-surface applications with 0.25 inches of rainfall or overhead irrigation water /A within 2 hours of application. Failure to adequately incorporate ALIAS 2F into egg-deposition zone may result in decreased activity.

SUGARBEET - For use only in CA

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers Whiteflies Flea beetles	6.0-12.0
Diseases Suppressed	
Symptoms of: Western yellows/Beet curly top hybrigeminivirus (BCTV)	6.0-12.0
Restrictions:	
<ul style="list-style-type: none"> • Maximum ALIAS 2F allowed per year: 12.0 fl. oz./A (0.18 lb AI /A) • Do not apply immediately prior to bud opening or during bloom or when bees are foraging. 	
†Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.	
Applications(one time application): Apply specified dosage in the following method:	
<ul style="list-style-type: none"> • Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting. 	
Apply the low rate to aid establishment of stands in whitefly areas, or for early season control of the other pests listed.	

Rate: Fl. oz./A	INSECTICIDE CONVERSION CHART FOR LINEAR APPLICATION							
	Fl. oz./1000 row-feet Based on <u>average</u> row spacing (in inches):							
	10	15	20	24	30	36	40	48
6	0.115	0.17	0.23	0.28	0.34	0.41	0.46	0.55
8	0.15	0.23	0.31	0.37	0.46	0.55	0.61	0.73
10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
12	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
14	0.27	0.40	0.54	0.67	0.80	0.94	1.07	1.21
16	0.31	0.46	0.61	0.77	0.92	1.07	1.22	1.38
18	0.34	0.52	0.69	0.86	1.03	1.21	1.38	1.55
20	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72
22	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89
24	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
26	0.50	0.75	0.99	1.24	1.49	1.74	1.99	2.24
28	0.54	0.80	1.07	1.34	1.61	1.87	2.14	2.41
30	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58
32	0.61	0.92	1.22	1.52	1.84	2.14	2.45	2.75

TREE, BUSH, and VINE CROPS

BANANA and PLANTAIN

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers	16-32
Pests Suppressed	
Scales	16-32
Restrictions:	
<ul style="list-style-type: none">• Pre-Harvest Interval (PHI): 0 day• Maximum ALIAS 2F allowed per year: 32 fl. oz. /A (0.5 lb AI per A)	
Applications(one time application): Apply specified dosage in the following method:	
<ul style="list-style-type: none">• Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.	

BUSHBERRY

Crops of Crop Subgroup 13B Including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

Pests Controlled	Fl. oz. /A
Japanese beetle: (adults, feeding on foliage) White grub complex: (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)	16-32
Restrictions:	
<ul style="list-style-type: none">• Pre-Harvest Interval (PHI): 7 days• Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI /A)• Do not apply pre-bloom or during bloom or when bees are foraging.	
Applications(one time application): Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none">• Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.• 18-inch band on each side of the row followed by irrigation immediately after application.	
For optimal grub control, apply ALIAS 2F to control 1 st or 2 nd instar larvae. Make application post-bloom up to 7 days prior to harvest, or post-harvest until October 1 st . For optimum control of Japanese beetle larvae, make applications from June 1 to July 15.	
Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.	
Apply ALIAS 2F to moist soil. If necessary, apply one hour of irrigation water immediately before application of ALIAS 2F. To ensure maximum efficacy of soil surface spray, apply 1/2 to 1 inch of irrigation water or rainfall within 24 hours of application of ALIAS 2F to facilitate movement into the soil and into the root-zone.	

CANEBERRY**Crops of Crop Subgroup 13A including:**

Blackberry (*Rubus eubatus*, including bingleberry, black satin berry, boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, Lavacaberry, Loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these)

Raspberry (black and red, *Rubus occidentalis*, *Rubus strigosus*, *Rubus idaeus*)

Pests Controlled	Fl. oz. /A
Aphids	16-32
Leafhoppers	
Whiteflies	
Rednecked cane borer	24-32
Pests Suppressed	
Thrips (foliage feeding thrips only)	16-32
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 7 days • Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI /A) • Do not apply pre-bloom or during bloom or when bees are foraging. 	
Soil Application(one time application): Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • Basal, soil drench in a minimum of 500 gallons solution /A. 	

CITRUS (Containerized)

Crops of Crop Group 10 Including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, Tangelo, and other cultivars and/or hybrids of these.

Pests Controlled	ml/ft³ container media
Aphid, Asian citrus psyllid, Blackfly, Citrus leafminer, Leafhoppers/Sharpshooters, Mealybugs, Scales, Whiteflies	0.75
Citrus root weevil (larval complex)	1.25 – 2.50
Pests Suppressed	ml/ ft³ container media
Citrus thrips (foliage feeding thrips only)	2.5

Restrictions:

Do not apply pre-bloom or during bloom when bees are foraging.

Maxium Rate: 2.5 ml/ ft³ container media

Application(one time application): Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of ALIAS 2F per container as a soil drench or through low-pressure drip or trickle irrigation water. Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container. For optimal results, make treatment at planting prior to insect infestation. Re-treat if necessary. For control of larvae of the citrus root weevil complex, make application prior to neonate larvae entering potting media. Utilize the higher listed dosage for heavy infestations.

CITRUS (Field)

Crops of Crop Group 10 Including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tanger), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, Tangelo, and other cultivars and/or hybrids of these.

Pests Controlled	Fl. oz. /A
Aphids Asian citrus psyllid Blackfly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Termites (FL only) Whiteflies	16-32
Pests/Diseases Suppressed	
Citrus nematode Symptoms of: Citrus tristeza virus (CTV) through vector control Citrus yellows Thrips (foliage feeding thrips only)	32

Restrictions:

- Pre-Harvest Interval (PHI): 0 day

Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI /A) **Applications(one time application):** Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. For optimum results, apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation. Lightly pre-wet soil to break soil surface tension prior to applications of ALIAS 2F. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move ALIAS 2F into root-zone. Allow 24 hours before initiating subsequent irrigations.
- Soil surface band spray on both sides of the tree. Overlap bands at the tree base to create a continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable for very coarse soils with 0.75% organic matter or less.
- Drench to base of tree not exceeding one-quart total solution per tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree. Use only on trees up to 8 feet tall.
- For control of existing termite infestations, apply specified dosage in 1 to 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk.
- For suppression of citrus nematode, apply specified dosage through low-pressure chemigation or soil surface band spray only, ensuring complete coverage of the root system and utilizing application directions stated above for the respective application method. Repeated and regular use of ALIAS 2F over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

COFFEE

Pests Controlled	Fl. oz. /A
Aphids, Leafhoppers, Leafminers	16-32
Pests Suppressed	Fl. oz. /A
Scales	16-32

Restrictions:

- Pre-Harvest Interval (PHI): 7 days
 - Maximum ALIAS 2F allowed per year: 32 fl. oz. /A (0.5 lb AI /A)
 - Do not apply pre-bloom or during bloom or when bees are foraging.
- Applications(one time application):** Apply specified dosage in one of the following methods:
- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
 - Subsurface side-dress shanked into the root-zone on both side of the plants followed by irrigation.
 - Basal, soil drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

CRANBERRY

Pests Controlled	Fl. oz. /A
Rootgrubs (<i>Scarabaeidae</i>) Rootworms (<i>Chrysomelidae</i>)	16-32
<p>Restrictions:</p> <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 30 days • Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI/A) • Do not apply pre-bloom or during bloom or when bees are foraging. <p>Applications(one time application): Apply ALIAS 2F to moist soil. Apply specified dosage in one of the following methods:</p> <ul style="list-style-type: none"> • As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal of water /A. • As a chemigation application with 600 to 1000 gal water. <p>Immediately upon application, incorporate ALIAS 2F into root-zone by 0.1-0.3 inches water/A, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.</p> <p>Rootgrubs and Rootworms</p> <p>Make application post-bloom immediately after bees are removed. Target applications to early instar larvae.</p> <p>ALIAS 2F has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the ALIAS 2F and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.</p>	

GRAPE-

Including: American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate: Fl. oz. /A
European fruit lecanium Leafhoppers/Sharpshooters Mealybugs <i>Phylloxera</i> * spp	16-32
Pest/Disease Suppressed	
Grapeleaf skeletonizer Nematodes Pierce's disease	24-32

Restrictions:

- Pre-Harvest Interval (PHI): 30 days
- Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI/A)

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
- Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.
- For suppression of nematodes, apply 32 fl. oz. in a single application or two 16 fluid ounce applications on a 30 to 45 day interval. Apply treatment(s) only by 1) chemigation into root-zone through above ground low-pressure drip, trickle, micro-sprinkler, or equivalent equipment; or 2) French plow technique, followed immediately by sufficient irrigation to move the product into the entire root-zone of the plant. Repeated and regular use of ALIAS 2F over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

For optimum results, make application(s) between bud-break and the pea-berry stage. Use a total of 32 fl. oz./A under any of the following conditions:

1. Where vigorous vine growth is expected;
2. In warmer growing areas;
3. Where mealybug and European fruit lecanium populations are expected to be heavy;
4. Where vine populations exceed 600 /A, or;
5. For suppression of nematodes.

*Repeated and regular use of ALIAS 2F over several, consecutive growing seasons controls existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.

HOPS

Pest Controlled	Rate: Fl. oz. /A
Aphids	19.2

Restrictions:

- Pre-Harvest Interval (PHI): 60 days
- Maximum ALIAS 2F allowed per year: 19.2 fl. oz./A (0.3 lb AI/A)

Applications(one time application): Apply specified dosage in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.
- Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
- Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

POME FRUIT**Crops of Crop Group 11 Including:** Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Fl. oz. /A
Aphids (including woolly apple aphid) Leafhoppers	16-24
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum ALIAS 2F allowed per year: 24 fl. oz./A (0.38 lb AI/A) • Do not apply pre-bloom or during bloom or when bees are foraging Applications(one time application): Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation into the root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equip-ment. 	

POMEGRANATE

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers/Sharpshooters Whiteflies	16-32
Restrictions: <ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 0 day • Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI /A) • Do not apply pre-bloom or during bloom or when bees are foraging. Applications(one time application): Apply specified dosage in the following method: <ul style="list-style-type: none"> • Chemigation into the root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equip-ment. 	

STONE FRUIT

Crops of Crop Group 12 Including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson, and Japanese), Plumcot, Prune (fresh and dried)

In-field, Soil Application	
Pests Controlled	Fl. oz. /A
Aphids (including woolly apple aphid) Leafhoppers	16-24
Restrictions:	
<ul style="list-style-type: none"> • Pre-Harvest Interval (PHI): 21 days • Maximum ALIAS 2F allowed per year: 24 fl. oz./A (0.38 lb AI/A) • Do not apply pre-bloom or during bloom or when bees are foraging. 	
Applications(one time application): Apply specified dosage in the following method:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. 	
Pre-plant, Root Dip Application	
Pest Controlled	Fl. oz. per 10 gallons root-dip solution
Black peach aphid (infesting roots)	2.0
Mix ALIAS 2F at 2.0 fl. oz. per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the ALIAS 2F solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.	

TREE NUTS Crops of Crop Group 14 except almond including: Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Fl. oz. /A
Aphids Leafhoppers/Sharpshooters Mealybugs Spittlebugs Termites Whiteflies	16-32
Pests/Diseases Suppressed	Fl. oz. /A
Pecan scab (from reduction in honeydew deposition)	16-32
Thrips (foliage-feeding thrips only)	32

Restrictions:

- Pre-Harvest Interval (PHI): 7 days
- Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications(one time application): Apply specified dosage prior to or at onset of pest infestation in one of the following methods:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent irrigation equipment. Pre-wet soil prior to applications of ALIAS 2F and allow soil to dry following application and prior to subsequent irrigation.
- Emitter or spot application in a minimum of 4 fl. oz. of mixture per emitter site.
- Shank or subsurface side-dress, injected to a depth just above or just within the root zone and between the trunk and drip line of the tree canopy. Product should be applied in a minimum of 10 gallons /A using multiple shanks on both sides of trees. Ensure product placement is below sod or orchard floor debris. Irrigation covering entire treated area should follow within 48 hours to promote uptake by root system.
- For control of termites, apply specified dosage to slightly moist soil as a high-volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk. Utilize sufficient carrier volume to penetrate the soil to a depth of 18-24 inches to obtain optimum control. Allow soil to dry following treatment and prior to applying any irrigation.

Remarks: Use the higher listed rates when applied by shank or subsurface side dress, used on larger trees, soils with high clay content, for high plant populations, and/or where extended control is desired. Under some conditions, control may not occur for 14 or more days or until two (2) irrigations have been made. Applications made later in the season may result in reduced efficacy.

TROPICAL FRUIT

Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Jaboticaba, Guava, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu

Pests Controlled	Fl. oz. /A
Aphids, Avocado lacebug, Leafhoppers, Whiteflies	24-32
Pests Suppressed	
Scales, Thrips (foliage feeding thrips only)	32

Restrictions:

- Pre-Harvest Interval (PHI): 6 days
- Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI/A).
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications(one time application): Apply specified dosage in the following method:

- Chemigation through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment.

OTHER SITES

CHRISTMAS TREE

Pests Controlled	Fl. oz. /A
White grub complex (damage from grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)	16-32
Restrictions:	
<ul style="list-style-type: none"> • Maximum ALIAS 2F allowed per year: 32 fl. oz./A (0.5 lb AI/A) 	
Applications(one time application): Soil incorporation and movement of ALIAS 2F to the root-zone is required for activity. ALIAS 2F can be incorporated most readily when applied to moist soil. Apply specified dosage in one of the following methods:	
<ul style="list-style-type: none"> • Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler, or equivalent equipment. • 18-inch band on each side of the row (small trees) to full broadcast application (large trees) followed by rainfall or 0.25-1 inch of irrigation within 12 hours after application. 	
For optimal grub control, apply ALIAS 2F during adult flight activity, or up to mid-July, when 1 st instar larvae are present.	

POPLAR/COTTONWOOD*

(includes members of the genus *Populus* grown for pulp or timber)

Field Applications. See details below for Cuttings/Whips Applications.	
Pests Controlled	Fl. oz. /A
Aphids Cottonwood leaf beetle	16-32
Pests Suppressed	
<i>Phylloxera popularia</i>	16-32
Restrictions:	
<ul style="list-style-type: none"> • Maximum ALIAS 2F allowed at-plant per year: 32 fl. oz./A (0.5 lb AI/A) • Do not apply pre-bloom or during bloom or when bees are foraging. 	
*Not for use in CA.	
Applications(one time application): Apply specified dosage in the following method:	
<ul style="list-style-type: none"> • Chemigation through low-pressure drip irrigation. • For narrow-row, cutting orchards/nurseries used for plant propagation, shank into root-zone followed by adequate irrigation to promote uptake. (Adequate irrigation depends on soil moisture level at application. Under dry conditions, use 0.25 inches/A). 	
For Cottonwood leaf beetle, protection against damage will occur when application is made early-season, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.	
For <i>Phylloxera</i> , apply early in the year from break of dormancy through May.	

Cutting/Whip Applications. See details above for Field Applications.

Pest Controlled	Cutting/Whip Soaking Solution fl. oz. ALIAS 2F Needed per 100 gallons
Cottonwood leaf beetle	13.2-26.6 (unhydrated cuttings/whips) 26.6-32.0 (partially hydrated cuttings/whips)
Pests Suppressed	Cutting/Whip Soaking Solution fl. oz. ALIAS 2F Needed per 100 gallons
Aphids <i>Phylloxera popularia</i>	13.2-26.6 (unhydrated cuttings/whips) 26.6-32.0 (partially hydrated cuttings/whips)

Restrictions:

- Maximum ALIAS 2F allowed at-plant per year: 32 fl. oz./A (0.5 lb A/A)

Applications(one time application): Moisture content of cuttings/whips prior to application, the solution concentration, and the length of soaking interval interact to affect the amount of product absorbed into plant material. For a constant soaking interval of 24 hours, drier cuttings/whips absorb a higher quantity of solution and require a lower concentration. Conversely, more hydrated cuttings/whips absorb less solution and require a higher concentration. Soaking of cuttings/whips should occur in a covered container in absence of UV light. Not all *Populus* spp. clones/varieties/hybrids have been tested for crop safety. Without specific knowledge about a particular *Populus* spp. clone/variety/hybrid, Makhteshim Agan of North America, Inc. suggests that small numbers of cuttings/whips of each be treated and evaluated prior to commercial use.

Apply ALIAS 2F in one of the following cuttings/whips soaking methods:

- For freshly cut (unhydrated) cuttings/whips, soak plant material in specified solution concentration for 24 hours prior to cold storage. After removal from cold storage, plant as needed.
- For previously hydrated cuttings/whips removed from cold storage, allow plant material to reach room temperature and soak in specified solution concentration for 24 hours prior to planting.

Take proper care in disposal of any residual soaking solution. Apply solution to existing trees or other registered crops as long as all product label precautions and restrictions are observed.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of reach of children, preferably in a locked storage area. Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

PESTICIDE DISPOSAL: Open dumping is prohibited. Pesticide wastes are toxic. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the hazardous waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Rigid, Nonrefillable containers small enough to shake (i.e. with capacities equal to less than five gallons).

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. Then offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Pressure Rinse as Follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

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.

Refilling or Returning Containers

If refilling or returning container is planned, end users are not authorized to remove tamper evident cables, one way valves or clean container.

Recycle or Disposal of Containers

End users are authorized to remove tamper evident cable as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY**.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

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