44501AT0041

NET CONTENTS: 1 GALLON

atomes

# ATO FLYCIDE

**ACTIVE INGREDIENT:**

| | |
|---|---|
| Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine | 21.4% |
| **OTHER INGREDIENTS** | 78.6% |
| **TOTAL** | 100.0% |

Contains 2 pounds of imidacloprid per gallon.

**—SHAKE WELL BEFORE USING—**
**STOP – Read the label before use**

## KEEP OUT OF REACH OF CHILDREN

## CAUTION

**EPA Reg. No. 42750-110-91853** **EPA Est. No. 42750-MO-001**

Sold By:
**Atomes**
3485 Ashby, Ville Saint Laurent, Quebec, Canada H4R 2K3

**See inside booklet for additional PRECAUTIONARY STATEMENTS.**

## FIRST AID

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF IN EYES:** 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.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

In case of emergency call CHEMTREC toll free at 1-800-424-9300. Have a 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.

## 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 the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL: Non-refillable containers (1, 2.5, 30 & 55 gallon):** Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **(Non-refillable ≤5 gallons):** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. 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. **(Non-refillable >5 gallons):** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows (all sizes):** 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 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. **Refillable container (≥250 gallon & bulk):** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

PEEL HERE TO OPEN

atomes

# ATO FLYCIDE

***For uses in pest management and suppression of insects that may vector diseases and maintenance of plant health.***

Sold By:

***Atomes***
3485 Ashby
Ville Saint Laurent
Quebec Canada
H4R 2K3

**FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE, CALL CHEMTREC 1-800-424-9300**

AD121913B

| | |
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**NOTE TO PHYSICIAN:** No specific antidote is available. Treat the patient symptomatically.

**See inside booklet for additional PRECAUTIONARY STATEMENTS.**

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION!** Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

**Applicators and Other Handlers Must Wear:**

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton.
3. Shoes plus socks

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

## ENGINEERING CONTROLS STATEMENTS

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

**User should:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees 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 the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

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

**TAKE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.**

# 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.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment- and weather-related factors determine 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.

**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, maintained 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.

**For Aerial Applications:**
Mount the spray boom on the aircraft so as to minimize drift caused by wing tip vortices. Use the minimum practical boom length. Do Not exceed 75% of the wing span or rotor diameter.

**Airblast (Air Assist) Specific Recommendations for Tree Crops and Vineyards**
Airblast sprayers carry droplets into the canopy of trees/vines via a radially- or laterally-directed airstream. Follow specific drift practices:

- 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 applications to the outside rows.

**No-Spray Zone Requirements for 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.

**No-Spray Zone Requirements for Soil Applications**
Do not apply within 25 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. Employ the best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

**Endangered Species Notice**
Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

**Resistance Management**
Some insects may develop resistance to imidacloprid after repeated use. Users should incorporate resistance management practices such as rotating classes of insecticides when possible.

Insect species that have acquired a tolerance to imidacloprid and other neonicotinoid (Group 4A) insecticides may become dominant if Group 4A is used repeatedly. This can eventually result in the loss of this class of insecticides as a viable control.

Do not make over three consecutive applications of ATO FLYCIDE and/or other Group 4A neonicotinoid class products having a similar mode of action. Following a neonicotinoid series of treatments, Atomes recommends rotation to application with products that control with a different mode of action before making more applications of neonicotinoid products. Using a rotation of insecticide classes approach, along with other IPM practices, is an effective strategy for minimizing insect pest's resistance to this class of chemistry.

Soil applications of neonicotinoid class insecticides to crops should be factored into the resistance management plans for foliar applications to the crops.

Other Group 4A neonicotinoid products labeled for foliar treatments include: Actara, Assail, CALYPSO®, Centric, Intruder, LEVERAGE® and TRIMAX®. Other Group 4A neonicotinoid products used as soil treatment include: ADMIRE® and Platinum.

Additional information on insect resistance management can be obtained from your local extension specialist, certified crop advisor, product manufacturer or visit the Insecticide Resistance Action Committee (IRAC) on the web at http://irac-online.org/.

## DIRECTIONS FOR USE

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

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

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 and commercially grown ornamentals that are attractive to pollinators:

1. 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.

2. FOR FOOD CROPS AND COMMERCIALLY 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.

## AGRICULTURAL USE REQUIREMENTS

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

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

**Exception:** If the product is soil-injected or soil-incorporated, 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, polyvinyl chloride (PVC) or viton
- Shoes plus socks

## 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 the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:**

**Non-refillable containers (1, 2.5, 30 & 55 gallon):** Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**(Non-refillable ≤5 gallons):** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. 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.

*(continued)*

# STORAGE AND DISPOSAL *(cont.)*

**CONTAINER DISPOSAL:**

**(Non-refillable >5 gallons):** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows (all sizes):** 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 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.

**Refillable container (≥250 gallon & bulk):** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

Do not apply this product through any type of irrigation system unless it is specified in the “Application” section.

## SOIL APPLICATION INSTRUCTIONS

For soil application, direct applications of ATO FLYCIDE into the seed or root-zone of crop. Lack of correct application of ATO FLYCIDE into seed or root-zone could result in lessened or delayed efficacy. ATO FLYCIDE may be applied with directed ground or chemigation application. Do not apply with aerial application equipment. Only use 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.

Best results of ATO FLYCIDE application are achieved when applications are made to the root-zone of plants. Earlier application of ATO FLYCIDE to developing plant results in earlier protection. ATO FLYCIDE is a systemic insecticide and moves from the plant’s root system to the upper vegetative parts via the xylem tissue. This movement results in extended activity of ATO FLYCIDE, to control insects that can vector detrimental virus transmission. Use the higher specified rate when insecticidal pressure occurs later in the plant’s development cycle or when insect pressure is heavy and/or continuous. Despite the systemic nature of ATO FLYCIDE, it usually does not control insects that infest flowers, blooms or fruit. Insects attacking these parts of a plant generally require a foliar-type insecticide application. More specific ATO FLYCIDE application instructions are provided in the crop-specific sections of this label.

Suppression, or less than complete control of certain diseases and insect pests including reduced feeding may also result from a ATO FLYCIDE application. Residual control of these pests/diseases may require supplemental control measures.

ATO FLYCIDE use on crops grown for production of true seed intended for private or commercial planting is not allowed except under State specific 24(c) labeling. Contact your local Cooperative Extension Service, PCAs, consultants or local Atomes representative for application on these types of crops.

Pre-mix ATO FLYCIDE with water or other appropriate diluents prior to application. Maintain constant agitation to avoid settling.

**SOIL APPLICATION RESTRICTIONS:**

- Do not apply more than 0.50 lb. active ingredient per acre, per year, regardless of formulation or method of application, unless specified within a crop-specific, "Applications" section for a given crop.
- Do not make soil applications with aerial equipment.

## FOLIAR APPLICATION INSTRUCTIONS

For foliar applications, thorough coverage of foliage without runoff is required for maximum insecticidal efficacy. Use of adequate spray volumes and correctly calibrated application equipment is critical. Use of a spray adjuvant may enhance thorough coverage. Lack of adequate coverage and retention of ATO FLYCIDE on foliage and fruit can delay or lessen insect control. ATO FLYCIDE may be applied with ground or aerial application equipment that has been properly calibrated.

Minimum rate spray volumes (unless otherwise specified on crop sections) are:

- 10 gallons/Acre by ground application equipment.
- 5 gallons/Acre through aerial equipment.

ATO FLYCIDE may also be applied by overhead chemigation (see "CHEMIGATION DIRECTIONS FOR USE" section below) if allowed in crop specific application section.

ATO FLYCIDE application to crops grown for production of true seed intended for private or commercial planting may be allowed under state-specific 24(c) labeling. Additional information on ATO FLYCIDE uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Atomes representatives.

**FOLIAR APPLICATION RESTRICTIONS:**

- DO NOT apply foliar applications of ATO FLYCIDE in Enclosed Structures Such as Greenhouses or Planthouses.
- Do not exceed application of more than 0.5 lb. active ingredient per acre, per year, regardless of formulation or method of application, unless specified within a crop specific rate applications section for a given crop.

## MIXING INSTRUCTIONS FOR SOIL AND FOLIAR APPLICATIONS

1. Add 50% of the required amount of water to the spray tank.
2. Begin agitation.
3. Add labeled rate of ATO FLYCIDE.
4. Add balance of water needed.

Maintain sufficient agitation during both mixing and application. ATO FLYCIDE may be tank mixed with other pesticides and/or fertilizer solutions. Refer to "Compatibility Note" below. When tank mixing ATO FLYCIDE with other pesticides, prepare the tank mixture as specified above and follow suggested "Mixing Order" below.

**Mixing Order for Tank Mixes**
1. Wettable powders
2. ATO FLYCIDE, or other flowables second
3. Emulsifiable concentrates

Maintain good agitation as each pesticide is added. Do not add the next product 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 Note**
Unless the applicator has prior knowledge of the compatibility of the intended tank mixture, perform a small-scale test by adding proportionate amounts of each ingredient in the appropriate order, to a clear pint or quart sized jar. Cap and shake for 5 minutes, then let set for 5 minutes. Any visual indication of poor mixing or formation of precipitates that cannot be easily re-dispersed indicates incompatibility and the mixture that should not be used.

## USE IN CHEMIGATION SYSTEMS

**Types of Irrigation Systems for Soil Application:** Chemigation applications of ATO FLYCIDE may only be made to crops through chemigation systems as specified in crop-specific "Application" sections and only through low-pressure irrigation systems unless specifically stated for a given crop. Do not apply ATO FLYCIDE through any other type of irrigation system.

**Types of Irrigation Systems for Foliar Application:** Chemigation applications of ATO FLYCIDE may be made to crops through overhead sprinkler chemigation systems if specified in crop-specific sections. Do not apply ATO FLYCIDE through any other type of irrigation system. Make ATO FLYCIDE foliar chemigation applications as concentrated as possible. Retention of ATO FLYCIDE on target site of insect infestation is necessary for optimum activity. Chemigation of ATO FLYCIDE in water volumes exceeding 0.10 inch/Acre is not recommended.

**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 State 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 system 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, backflow 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 the 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.

## ROTATIONAL CROPS*

Treated areas may be replanted 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 there is a 12-month plantback interval.

| PLANTBACK INTERVAL* | COMMENTS |
|---|---|
| Immediate Plantback: | Any crop listed on this label plus the following crops not on this label: barley, canola, cardoon, Chinese celery, corn (field, sweet and pop), rapeseed, sorghum, sugar beet, and wheat |
| 30-Day Plantback: | Cereals (including buckwheat, millet, oats, rice, rye and triticale), safflower |
| 12-Month Plantback: | All other crops |

*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

# FIELD CROPS

## COTTON (Soil Application)

| Pests Controlled | Rate: Fluid ounces per 1,000 row feet | Rate: Fluid ounces per acre |
|---|---|---|
| Cotton aphid, Plant bugs, Thrips, Whiteflies | 1.3 | 17.0–20.1 (depending on row-spacing) |

**Applications: Apply specified dosage 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.

**Restrictions:**
- Maximum ATO FLYCIDE allowed per year when making soil applications: 21.1 fluid ounces per acre (0.33 lb. active ingredient per acre).
- Apply no more than 0.5 lb. active ingredient per acre per year, including seed treatment, soil, and foliar uses.
- Do not apply more than a total of 6 applications of the active ingredient per season.
- Do not graze treated fields after any application of ATO FLYCIDE. Please see “Resistance Management” section of this label.

## COTTON (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea hoppers, Bandedwinged whitefly, Plant bugs (east of Rocky Mountains), Green stink bug, Southern green stink bug, Bollworm/Budworm (ovicidal effect) | 2.0–4.0 (3.0 : CA only) |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Lygus bug (west of Rocky Mountains), Whiteflies (other than bandedwinged whitefly) | 3.0–4.0 (3.0 : CA only) |

**Applications:** Apply as foliar spray at specified rate per acre when insect pressure reaches economic threshold. Uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. ATO FLYCIDE may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid. Apply only through properly calibrated ground, aerial or chemigation application equipment insuring thorough coverage.

**Restrictions:**
- Pre-Harvest Interval (PHI): 14 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 20.0 fluid ounces/Acre (0.31 lb. AI/A); For CA: 17.6 fluid ounces/Acre (0.28 lb. AI/A)
- Regardless of formulation or method of application, apply no more than 0.5 lb. active ingredient per acre per year, including seed treatment, soil, and foliar uses.
- Maximum number of ATO FLYCIDE applications per crop year: 6
- Do not graze treated fields after any application of ATO FLYCIDE.

## Cotton Tank Mix Instructions

| Pests Controlled (in addition to pests listed above) | ATO FLYCIDE Rate: fluid ounces per acre | Bidrin® 8* Rate: fluid ounces per acre |
|---|---|---|
| **For early-season control of:** Thrips | 2.0–3.0 | 1.6–3.2 |
| **For mid- to late-season control of:** Plant bugs, Stink bugs (including Brown stink bug), Grasshoppers, Saltmarsh caterpillar, Cotton leafperforator | 2.0–3.0 | 4.0–8.0 |
| **Restrictions (in addition to Restrictions listed above):**<br>• Pre-Harvest Interval (PHI): 14 days<br>• Minimum interval between applications: 7 days<br>• Maximum ATO FLYCIDE allowed per year: 20.0 fluid ounces/Acre (0.31 lb. AI/A); For CA: 17.6 fluid ounces/acre (0.28 lb. AI/A)<br>• Maximum number of ATO FLYCIDE applications per year: 6<br>• Do not graze treated fields after any application of ATO FLYCIDE.<br>*Refer to the Bidrin® 8 product label for specific use rates; follow all restrictions and precautions that appear on the label. | | |

## PEANUT (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 3.0 |
| **Restrictions for Peanut Foliar Application:**<br>• Pre-Harvest Interval (PHI): 14 days<br>• Minimum interval between applications: 5 days<br>• Maximum ATO FLYCIDE allowed per year: 8.4 fluid ounces/Acre (0.13 lb. AI/A) | |

## POTATO (Soil Application)

| Pests Controlled | Rate: Fluid ounces per 1,000 row feet | Rate: Fluid ounces per acre |
|---|---|---|
| Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Potato psyllid | 0.9–1.3 | 13.0–20.0 (depending on row spacing) |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per 1,000 row feet** | **Rate: Fluid ounces per acre** |
| Wireworms or in response to symptoms of: Potato leaf roll virus (PLRV), Potato yellows, Net necrosis | 0.9–1.3 | 13.0–20.0 (depending on row spacing) |

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

- 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 directed below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression. ATO FLYCIDE 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, at-plant applications of ATO FLYCIDE may be made in a 2- to 4-inch band (width of planter shoe opening) and completely covered.

**Restrictions for Potato Soil Application:**

- Maximum ATO FLYCIDE allowed per year when making soil applications: 20.0 fluid ounces per acre (0.31 lb. active ingredient per acre)

## POTATO (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Potato psyllid | 3.0 |

**Application:** Apply as a broadcast or directed spray to infested area. Apply only through properly calibrated ground, aerial or chemigation application equipment ensuring thorough coverage.

**Restrictions for Potato Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum Interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 12.1 fluid ounces/Acre (0.19 lb. AI/A)

## SOYBEANS (Foliar Application)[1]

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Bean leaf beetle, Cucumber beetles/Rootworm Adults, Japanese beetle (adults), Leafhoppers, Whiteflies | 3.0 |

**Restrictions for Soybean Foliar Application:**
- Pre-Harvest Interval (PHI): 21 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 9.0 fluid ounces/Acre (1.14 lbs. AI/Acre)

[1]Use not permitted in California unless otherwise directed by state 24(c) labeling.

## TOBACCO (Soil Application)

| Pests Controlled | Rate: Fluid ounces per 1,000 plants (as seeding tray drench) | Rate: Fluid ounces per 1,000 plants (in-furrow or transplant-water) |
|---|---|---|
| Aphids, Flea beetles | 1.0 | 1.4 |
| Mole crickets, Whiteflies, Wireworms | 1.4–2.8 | 1.8–2.8 |
| **Pests/Diseases Suppressed** | | |
| Cutworms<br>Symptoms of: Tomato spotted wilt virus (TSWV) | 1.4–2.8 | 1.8–2.8 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**
1. Broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting. Follow as soon as possible with overhead irrigation to wash ATO FLYCIDE from foliage into potting media. Failure to wash ATO FLYCIDE from foliage may result in a reduction in pest control. Handle transplants carefully during setting to avoid dislodging treated potting media from roots.
2. In-furrow spray or transplant-water drench during setting.
3. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Note:** Proper drench applications to plants in trays with ATO FLYCIDE are generally the best method of application. However, the specified rate of ATO FLYCIDE may be applied as 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 ATO FLYCIDE into the plant and a delay in control.

**Restrictions for Tobacco Soil Application:**
- Pre-Harvest Interval (PHI): 14 days
- Maximum ATO FLYCIDE allowed per year is 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)

## TOBACCO (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per 1,000 plants (as broadcast or directed spray to infested area) |
|---|---|
| Aphids | 1.6–3.2<br>(Use higher rate when insect pressure is heavy) |
| Flea beetles, Japanese beetles | 3.2 |

**Applications:** Apply specified dosage of ATO FLYCIDE as a broadcast or directed spray to infested area.

Apply only through properly calibrated ground, aerial or chemigation application equipment ensuring thorough coverage.

**Restrictions for Tobacco Foliar Application:**

- Pre-Harvest Interval (PHI): 14 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year is 17.9 fluid ounces/Acre (0.28 lb. AI/A)

## VEGETABLE AND SMALL FRUIT CROPS

For foliar application, uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. ATO FLYCIDE may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

Apply only through properly calibrated ground, aerial or chemigation application equipment ensuring thorough coverage.

### CUCURBIT VEGETABLES[1] (Soil Application Only)

Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourds (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*)

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Cucumber beetles, Leafhoppers, Thrips (foliage-feeding thrips only), Whiteflies | 16.0–24.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| Bacterial wilt (as vectored by various cucumber beetles), Leaf silvering resulting from whitefly feeding | 16.0–24.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

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

**Restrictions for Cucurbit Vegetables Soil Application:**

- Preharvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

## CUCURBIT VEGETABLES (Planthouse Application)[1]

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

| Pests Controlled | Rate: Fluid ounces per 1,000 plants |
|---|---|
| Aphids, Whiteflies | 0.1 |

**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:**

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash ATO FLYCIDE from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ATO FLYCIDE from foliage may result in reduced pest control;
2. 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 fruiting vegetables have been tested for tolerance to ATO FLYCIDE applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

**Restrictions for Cucurbit Vegetables Planthouse Application:**

- Maximum amount applied in the planthouse: 0.1 fluid ounce (0.00156 pound AI)/1,000 plants
- Maximum number of applications in planthouse: 1.

## GLOBE ARTICHOKE (Foliar Application Only)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids and Leafhoppers | 3.2 – 8.0 |

Use higher rates when pest pressure more severe.

**Restrictions for Globe Artichoke Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 14 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)

## GREENHOUSE VEGETABLES[1] (Soil Application Only)(Mature plants in production greenhouses)

**Cucumber, Tomato Only**

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

| Pests Controlled | Rate: Fluid ounces per 1,000 plants |
|---|---|
| Aphids and Whiteflies | 1.4 |

**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. 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 beneficial (*Orius* sp.) can occur when ATO FLYCIDE is applied.

Many varieties of vegetables have been tested for tolerance to ATO FLYCIDE and show good safety. However, certain varieties may show more sensitivity to ATO FLYCIDE. Therefore, treatment of a few plants is recommended before treating the whole greenhouse.

**Restrictions for Greenhouse Vegetables Soil Application:**

- Pre-Harvest Interval (PHI): 0 days
- Maximum number ATO FLYCIDE applications per crop season: 1

## FRUITING VEGETABLES (Soil Application)

**Eggplant, Ground Cherry, Okra, Pepper (including Bell peppers, Chili peppers, Cooking peppers, Pimentos and Sweet peppers), Tomato, Pepinos, Tomatillo**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Thrips (foliar-feeding thrips only), Whiteflies | 16.0–24.0<br><br>For Okra and Pepper apply 16.0–32.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| For suppression in response to symptoms of Tomato mottle virus, Tomato spotted wilt virus, Tomato yellow leaf curl virus | 16.0–24.0<br><br>For Okra and Pepper apply 16.0–32.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

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

**Restrictions for Fruiting Vegetables Soil Application:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed on pepper and okra crops per crop season: 32.0 fluid ounces/Acre (0.50 lb. ai/acre)
- Maximum ATO FLYCIDE allowed on other fruiting vegetable crops per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)
- Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

## FRUITING VEGETABLES[1] (Foliar Application)

**Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Pepinos, Tomatillo**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Colorado potato beetle, Leafhoppers, Whiteflies | 3.0 |
| Pepper Weevil (Pepper only) | 5.0 (Make applications prior to a damaging population becoming established.) |

Applications of ATO FLYCIDE must be part of a full-season resistance management program that uses alternate applications products from multiple classes of chemistry and different modes of action. For pepper weevil, apply specified dosage of ATO FLYCIDE by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimum control.

**Restrictions for Fruiting Vegetables Foliar Application:**

- Pre-Harvest Interval (PHI): 0 days
- Minimum interval between applications: 5 days
- Maximum ATO FLYCIDE allowed per crop season: 15.2 fluid ounces/Acre (0.24 lb. AI/A)

## FRUITING VEGETABLES[1] (Planthouse Application)

[1]Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

| Pests Controlled | Rate: Fluid ounces per 1,000 plants |
|---|---|
| Aphids and Whiteflies | 0.1 |

**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:**

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash ATO FLYCIDE from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ATO FLYCIDE from foliage may result in reduced pest control;
2. 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.

**Restrictions for Fruiting Vegetables Planthouse Application:**

- Maximum amount ATO FLYCIDE applied in the planthouse: 0.1 fluid ounce (0.00156 lb. AI)/1,000 Plants
- Maximum number ATO FLYCIDE applications in planthouse: 1

**Important Note:** Not all varieties of fruiting vegetables have been tested for tolerance to ATO FLYCIDE applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

## HEAD and STEM BRASSICA VEGETABLES[1] (Soil Application)

**Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo 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)**

## LEAFY GREEN VEGETABLES[1] (Soil Application)

**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)**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids and Whiteflies | 10.0 – 24.0<br>(based on 36-inch row spacing) |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**

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

**Restrictions for Head and Stem Vegetables and Leafy Green Vegetables Soil Application:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

## HERBS (Foliar Application)

**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 | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea beetles, Leafhoppers and Whiteflies | 2.8 |

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Atomes strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

1. ATO FLYCIDE may be applied through properly calibrated ground and aerial application equipment. Thorough coverage with direct contact of the spray material to the target pests is required for optimum control. The addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's recommended use rate may improve coverage and control.

**Restrictions for Herbs Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum ATO FLYCIDE allowed per crop season: 8.4 fluid ounces/Acre (0.13 lb. AI/Acre)

## HERBS (Soil Application)

**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 | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea beetles, Leafhoppers and Whiteflies | 16.0–24.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| Thrips (foliage-feeding thrips only) | 16.0–24.0 |

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Atomes strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

1. In-furrow spray during planting directed on or below seed;
2. In-furrow spray or transplant-water drench during setting or transplanting;
3. Shanked-into or below eventual seed-line;
4. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Herbs Soil Application:**

- Pre-Harvest Interval (PHI): 14 days
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

## HEAD and STEM BRASSICA VEGETABLES[1] (Foliar Application)

**Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai lon) broccoli, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens**

## LEAFY GREEN VEGETABLES[1] (Foliar Application)

**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)**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea beetles, Leafhoppers, Whiteflies | 3.0 |

**Restrictions for Head and Stem Brassica Vegetables and Leafy Green Vegetables for Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum ATO FLYCIDE allowed per crop season: 15.2 fluid ounces/Acre (0.24 lb. AI/A)

## LEAFY PETIOLE VEGETABLES[1] (Soil Application Only)

**Cardoon, Celery, Chinese celery (fresh leaves and stalk only), Celtuce, Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 10.0–24.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

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

**Restrictions for Leafy Petiole Vegetables Soil Application:**

- Pre-Harvest Interval (PHI): 45 days
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

## LEGUME VEGETABLES[1] (except Soybean, dry)(Soil Application)

**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)**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Thrips (foliar-feeding only), Whiteflies | 16.0–24.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| In response to symptoms of Bean common mosaic virus (BCMV), Bean golden mosaic virus (BGMV), Beet curly top hybrigeminivirus (BCTV) | 16.0–24.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray at planting directed on or below seed;
3. In a narrow (2" or less) surface band over seed-line during planting incorporated into a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours following application;
4. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
5. As a post-seeding drench, transplant drench, or hill drench.

**Restrictions for Legume Vegetables Soil Application:**

- Preharvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

## LEGUME VEGETABLES[1] (except Soybean, dry)(Foliar Application)

**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 pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)**
**OTHER BEANS AND PEAS (Broad been [fava], chickpea [garbanzo bean], Guar, Jackbean, Lablab bean [hyacinth bean], Lentil, Pigeon pea, soybean [immature seed], Sword bean)**

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 2.8 |

**Restrictions for Legume Vegetables Foliar Application:**
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per crop season: 8.3 fluid ounces/Acre (0.13 lb. AI/A)

## ROOT VEGETABLES[1] (Soil Application)

**Beet (garden)[2], Carrot[2], Burdock (edible)[2], Celeriac[2], Chervil (turnip-rooted)[2], Chicory[2], Ginseng, Horseradish, Parsley (turnip-rooted), Parsnip[2], Radish[2], Oriental radish (daikon)[2], Rutabaga[2], Salsify (oyster plant), Salsify (black)[2], Salsify (Spanish), Skirret, Turnip[2]**

[1]Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.
[2]Tops or greens from these crops may be utilized for food or feed.

| Pests Controlled | Rate: Fluid ounces per 1,000 row feet | Rate: Fluid ounces per acre |
|---|---|---|
| Aphids, Flea Beetles, Leafhoppers, Whiteflies | 0.7–1.7 | 10.0–24.0 (depending on row spacing) |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**
1. Chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray (rate specified per 1,000 row-feet) or shanked-in 1 to 2 inches below seed depth during planting;
3. In a narrow (2" 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:** Rate applied affects the length of control. Use higher listed rates where infestations occur later in crop development, or where pest pressure is continuous. ATO FLYCIDE rates less than 0.7 fluid ounce/1,000 row-feet will not provide adequate residual pest control. ATO FLYCIDE-treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

**Restrictions for Root Vegetables Soil Application:**
- Pre-Harvest Interval (PHI): 21 days.
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre).
- Maximum ATO FLYCIDE applications per crop season: 1.

## TUBEROUS AND CORM VEGETABLES[1] (Soil Application)

**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], Tumeric, Yam bean (jicama, manioc pea), Yam (true)[2]**
(For applications on potato see "Field Crop" section.)

[1]Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.
[2]Tops or greens from these crops may be utilized for food or feed.

| Pests Controlled | Rate: Fluid ounces per 1,000 row feet | Rate: Fluid ounces per acre |
|---|---|---|
| Aphids, Flea Beetles, Leafhoppers, Whiteflies | 0.7–1.7 | 10.0–24.0 (depending on row spacing) |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**
1. In-furrow spray (rate specified per 1,000 row feet) over planting material (hulis) or shanked-in 1 to 2 inches below hulis depth at planting;
2. Side-dress not more than 0.6 fluid ounce/1,000 row feet no later than 45 days after planting. Observe same PHI as above.

**NOTE:** Rate applied affects the length of control. Use higher rates where infestations occur later in crop development, or where pest pressure is heavy or continuous. ATO FLYCIDE rates less than 0.7 fluid ounce/1,000 row feet will not provide adequate residual pest control. ATO FLYCIDE-treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

**Restrictions for Tuberous and Corm Vegetables Soil Application:**
- Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms).
- Maximum ATO FLYCIDE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre).
- Maximum ATO FLYCIDE applications per crop season: 1.

## ROOT, TUBEROUS and CORM VEGETABLES[1] (Foliar Application)

**Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)[2], Burdock (edible)[2], Canna (edible, Queensland arrowroot), carrot[2], Cassava (bitter & sweet)[2], Celeriac[2], Chayote (root), Chervil (turnip-rooted)[2], Chickory[2], Chufa, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip[2], Radish[2], Oriental radish (daikon)[2], Rutabaga[2], Salsify (black), Salsify (oyster plant), Salsify (Spanish), Skirret, Sweet potato[2], Tanier (cocoyam)[2], Tumeric, Turnip[2], Yam bean (jicama, manioc pea), Yam (true)[2]**

[1]Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.
[2]Tops or greens from these crops may be utilized for food or feed.

(For applications on potato, see "Field Crop Section".)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea Beetles, Leafhoppers, Whiteflies | 2.8 |

**Restrictions for Root, Tuberous and Corm Vegetables Foliar Application:**
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 5 days
- Maximum ATO FLYCIDE allowed per crop season: 2.8 fluid ounces/Acre on radish; 8.3 fluid ounces/Acre (0.13 lb. AI/A) on other crops.
- Maximum ATO FLYCIDE applications per crop season: 1 on radish; 3 on other crops

## STRAWBERRY[1,2] (Soil Application) (Annual and Perennial crops)

[1]Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.
[2]Do not use both application methods on the same crop in the same season.

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Whiteflies | 24.0–32.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**
1. 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;
2. As a plant material or plant hole treatment just prior to, or during transplant.

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

**Restrictions for Strawberries (annual and perennial crops) Soil Application:**
- Pre-Harvest Interval (PHI): 14 days
- Maximum ATO FLYCIDE allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

## STRAWBERRY (Soil Application) (Post-harvest use on Perennial crops)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle) | 16.0–24.0 |

Apply a single application post-harvest to coincide with renovation of strawberry fields and during active egg-laying period of beetles.

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**
1. As a ground spray via boom or backpack sprayer in a minimum of 20 gallons of water per acre;
2. 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;
3. As a chemigation application with 600 to 1,000 gallons of water followed by 0.10 to 0.25 inch irrigation.

**Important Note:** All soil-surface applications must be followed by 0.25 inch of rainfall or overhead irrigation water per acre within 2 hours of application. Failure to adequately incorporate ATO FLYCIDE into egg-deposition zone may result in decreased activity of beetle grubs.

**Restrictions for Strawberry (Post-harvest use on Perennial Crops) Soil Application:**
- Pre-Harvest Interval (PHI): 14 days
- Maximum ATO FLYCIDE allowed per year: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

## STRAWBERRY (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Spittlebugs, Whiteflies | 3.0 |

**Restrictions for Strawberries Foliar Application:**
- Pre-Harvest Interval (PHI): 7 days
- Maximum interval between applications: 5 days
- Maximum ATO FLYCIDE allowed per crop season: 9.1 fluid ounces/Acre (0.14 lb. AI/A)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

## SUGARBEET[1] (Soil Application Only)(For use only in CA)

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Flea beetles, Leafhoppers, Whiteflies | 6.0–12.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| For suppression in response to symptoms of Western yellows/Beet curly top hybrigeminivirus (BCTV) | 6.0–12.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in the following method:**
Apply specified dosage in sufficient carrier volume to ensure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting.

The low rate may be applied to aid establishment of stands in whitefly areas, or for early-season control of other pests listed.

**Restrictions for Sugarbeet Soil Application:**
- Maximum ATO FLYCIDE allowed per year: 12.0 fluid ounces/Acre (0.18 lb. AI/Acre)
- Maximum imidacloprid allowed per season: 0.18 lb. AI/Acre (from any formulation) on any row spacing
- Do not apply pre-bloom or during bloom or when bees are foraging.

| CONVERSION CHART FOR LINEAR APPLICATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RATE Fl. oz./ Acre | Rate in Fluid Ounces/1,000 Row Feet Based On Average Row Spacing (in inches): | | | | | | | |
| | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| 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 |

**Important Note:** The ATO FLYCIDE rate applied affects the length of control and the degree of control. Row-spacing X ATO FLYCIDE rate combinations in shaded blocks may not provide and are not recommended for long-term, residual control. Use higher specified rates where pest pressure may occur later in crop development or where pest pressure is severe or continuous. Atomes offers no warranty for use of ATO FLYCIDE at rates below 0.7 fluid ounce/1,000 row-feet.

## TREE, VINE AND FRUIT CROPS

For foliar application, uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Base retreatment on field scout reports. ATO FLYCIDE may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

### BANANA and PLANTAIN (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 6.4 |

**Applications:** Apply specified dosage of ATO FLYCIDE as a broadcast or directed spray to infested area ensuring thorough coverage. ATO FLYCIDE may be applied through properly calibrated ground or aerial application equipment. Aerial application of ATO FLYCIDE may result in slower activity and reduced control relative to results from ground application. Addition of an organosilicone adjuvant at a rate not to exceed 2.0 fluid ounces/100 gallons finished spray solution may improve coverage and pest control.

**Restrictions for Banana and Plantain Foliar Application:**
- Pre-Harvest Interval (PHI): 0 days
- Minimum interval between applications: 14 days
- Maximum ATO FLYCIDE allowed per year: 3.2 fluid ounces/Acre (0.5 lb. AI/A)

## BANANA and PLANTAIN (Soil Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers | 16.0 – 32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 16.0 – 32.0 |

**Applications: Apply specified dosage in the following method:**
Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Banana and Plantain Soil Application:**
- Pre-Harvest Interval (PHI): 0 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)

## BUSHBERRY (Soil Application)

**Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Japanese beetle (adults, feeding on foliage), White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle) | 16.0–32.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**
- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
- 18-inch band on each side of the row followed with 0.25 inch of irrigation immediately after application.

For optimal grub control, apply ATO FLYCIDE to control 1st or 2nd instar larvae. Application may be made post-bloom up to 7 days prior to harvest, or post-harvest until October 1st. For optimum control of Japanese beetle larvae, make applications from June 1 to July 15. Do not apply during bloom.

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 ATO FLYCIDE to moist soil. If necessary, apply one hour of irrigation water immediately before application of ATO FLYCIDE. To ensure maximum efficacy apply 1/2 to 1 inch of irrigation water or rainfall within 24 hours of applying ATO FLYCIDE to facilitate movement into the soil and into the root-zone.

**Restrictions for Bushberry Soil Application:**
- Pre-Harvest Interval (PHI): 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## BUSHBERRY (Foliar Application)

**Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Japanese beetles (adults),<br>Blueberry Maggot and Thrips | 4.8–6.4<br>(Use higher rates when pest pressure is more severe)<br><br>For control of Blueberry maggot, apply 6.4 fluid ounces per acre. |
| Aphids and Leafhoppers/Sharpshooters | 2.4–3.2<br>(Use higher rates when pest pressure is more severe) |

**Restrictions for Bushberry Foliar Application:**

- Pre-Harvest Interval (PHI): 3 days
- Maximum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Maximum number of ATO FLYCIDE applications per crop season: 5
- Maximum application volume (water): 20.0 GPA – ground; 5.0 GPA – aerial.
- Do not apply pre-bloom or during bloom or when bees are foraging.

## CANEBERRY (Soil Application)

**BLACKBERRY *(Rubus* spp. – including Andean Blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, Common blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thornless berry, Evergreen blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth blackberry, Marionberry, Moras, Mures deronce, Nectarberry, Northern dewberry, Olallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zarzamora, and varieties and/or hybrids of these).**

**RASPBERRY *(Rubus* spp. – including Bababerry, Black raspberry, Thimbleberry, Tulameen, Yellow raspberry, and varieties and/or hybrids of these, and Wild raspberry)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Rootgrubs *(Scarabaeidae),*<br>Rootworms *(Chrysomelidae)* | 16.0–32.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

- As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gals. of water per acre;
- As a chemigation application with 600 to 1,000 gals. water.

Best control may be achieved when application is made post-bloom immediately after bees are removed. Applications should target early instar larvae.

ATO FLYCIDE 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 ATO FLYCIDE 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.

Apply ATO FLYCIDE to moist soil.

Immediately upon application, ATO FLYCIDE must be incorporated into root-zone by 0.1–0.3 inch water/Acre, 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.

**Restrictions for Caneberry Soil Application:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## CANEBERRY (Foliar Application)

**BLACKBERRY *(Rubus* spp. – including Andean Blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, Common blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thornless berry, Evergreen blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth blackberry, Marionberry, Moras, Mures deronce, Nectarberry, Northern dewberry, Olallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zarzamora, and varieties and/or hybrids of these).**

**RASPBERRY *(Rubus* spp. – including Bababerry, Black raspberry, Thimbleberry, Tulameen, Yellow raspberry, and varieties and/or hybrids of these, and Wild raspberry)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Thrips | 6.4 |

**Restrictions for Caneberry Foliar Application:**
- Pre-Harvest Interval (PHI): 3 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 19.2 fluid ounces/Acre (0.3 lb. ai/acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## CITRUS (Field)(Soil Application)

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Asian citrus psyllid, Blackfly, Citrus leafminer, Leafhopper/Sharpshooters, Mealybugs, Scales, Termites (FL only) | 16.0 – 32.0 |
| **Pests/Diseases Suppressed** | **Rate: Fluid ounces per acre** |
| Thrips (foliage-feeding thrips only) and in response to symptoms of *Citrus tristeza* virus (CTV) through vector control and Citrus yellows | 32.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**

1. 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. Soil should be lightly pre-wetted to break soil surface tension prior to applications of ATO FLYCIDE. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move ATO FLYCIDE into root-zone. Allow 24 hours before initiating subsequent irrigations.
2. Soil surface band spray on both sides of the tree. Bands should overlap 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.
3. 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. Only recommended for 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.

**Restrictions for Citrus (Field) Soil Application:**

- Pre-Harvest Interval (PHI): 0 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)

## CITRUS (Field)(Foliar Application)

**Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, and other cultivars and/or hybrids of these**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Asian citrus psyllid, Black fly, Leafhoppers/Sharpshooters, Leafminers, Mealy bugs, Scales, Whiteflies | 8.0–16.0 (depending on tree size, target pest and infestation pressure) |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Thrips | 8.0–16.0 |

**Applications:** Aerial application of ATO FLYCIDE may result in slower activity and reduced control relative to results from ground application.

Scales – Time applications to the crawler stage. Treat each generation. Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to that applied in the diluted application. The 16.0 fluid ounce/Acre rate is based on full-sized trees. This rate may be reduced proportionally for smaller trees.

**Restrictions for Citrus (Field) Foliar Application:**
- Pre-Harvest Interval (PHI): 0 days
- Maximum interval between applications: 10 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

## CITRUS (Containerized)

**Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, and other cultivars and/or hybrids of these**

| Pests Controlled | Rate per cubic foot of container media |
|---|---|
| Aphids, Asian citrus psyllid, Blackfly, Leafhoppers/Sharpshooters, Leafminers, Mealybugs, Scales, Whiteflies | 0.75 milliliter |
| Citrus root weevil (larval complex) | 1.25–2.5 milliliters |
| **Pests Suppressed** | **Rate per cubic foot of container media** |
| Citrus Thrips | 2.5 milliliters |

**Applications:**
Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of ATO FLYCIDE 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, treatment should be made at planting prior to insect infestation. Repeat if necessary. For control of larvae of the citrus root weevil complex, make application prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestation.

**Restrictions for Containerized Citrus:**
- Pre-Harvest Interval (PHI): 0 day
- Maximum application is 0.5 mL/0.1 $ft^3$ of container soil.
- Maximum application per year is 3.0 mL/plant
- Do not apply during pre-bloom or bloom period when bees are foraging.

## COFFEE (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 6.4 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 6.4 |

**Applications:** Apply specified dosage in one ATO FLYCIDE as a broadcast or directed spray to infested area ensuring thorough coverage. ATO FLYCIDE may be applied through properly calibrated ground or aerial application equipment. Aerial application of ATO FLYCIDE may result in slower activity and reduced control relative to results from ground application.

**Restrictions for Coffee Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## COFFEE (Soil Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 16.0 – 32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 16.0 – 32.0 |

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

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

**Restrictions for Coffee Soil Application:**

- Pre-Harvest Interval (PHI): 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## CRANBERRY (Soil Application Only)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Rootgrubs *(Scarabaeidae),*<br>Rootworms *(Chrysomelidae)* | 16.0–32.0 |

**Applications: Apply ATO FLYCIDE to moist soil. Apply specified dosage of ATO FLYCIDE in one of the following methods:**

1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gals. of water per acre;
2. As a chemigation application with 600 to 1,000 gals. water

Immediately upon application, ATO FLYCIDE must be incorporated into root-zone by 0.1 to 0.3 inch water/Acre, 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.

**Rootgrubs and Rootworms:**
Best control can be achieved by applying post-bloom (after bees removed) to coincide with the early instar larvae stage.

ATO FLYCIDE has not been tests for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the ATO FLYCIDE and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response with 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the pre-mix test, do not apply the tank mix to larger acreage.

**Restrictions for Cranberry Soil Application:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## GRAPE (Soil Application)

**American bunch grape, Muscadine grape, and Vinifera grape**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Mealybugs, Leafhoppers/Sharpshooters, *Phylloxera** spp. | 16.0–32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Pierce's disease | 24.0–32.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**

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

For optimum results, make application(s) between bud-break and the pea-berry stage.

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

**Restrictions for Grape Soil Application:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)

## GRAPE (Foliar Application)

**American bunch grape, Muscadine grape, and Vinifera grape**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Leafhoppers/Sharpshooters and Mealybugs | 2.4–3.2<br>(Use higher rates when pest pressure is more severe) |
| Grapeleaf skeletonizer | 3.0 |

**Applications:**

Control can usually be achieved with ground applications that provide more thorough coverage of foliage. Aerial applications may only provide suppression due to lack of thorough coverage.

**Restrictions for Grape Foliar Application:**

- Pre-Harvest Interval (PHI): 0 days
- Maximum interval between applications: 14 days
- Maximum ATO FLYCIDE allowed per year: 6.0 fluid ounces/Acre (0.1 lb. AI/A)

## HOPS (Soil Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids | 19.2 |
| **Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**<br>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;<br>2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;<br>3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.<br>**Restrictions for Hops Soil Application:**<br>• Pre-Harvest Interval (PHI): 60 days<br>• Maximum ATO FLYCIDE allowed per year: 19.2 fluid ounces/Acre (0.30 lb. AI/Acre) | |

## HOPS (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids | 6.4 |
| **Restrictions for Hops Foliar Application:**<br>• Pre-Harvest Interval (PHI): 28 days<br>• Maximum interval between applications: 21 days<br>• Maximum ATO FLYCIDE allowed per year: 19.2 fluid ounces/Acre (0.30 lb. AI/A) | |

## POMEGRANATE (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers/Sharpshooters, and Whiteflies | 6.4 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 6.4 |
| **Restrictions for Pomegranate Foliar Application:**<br>• Pre-Harvest Interval (PHI): 7 days<br>• Minimum interval between applications: 7 days<br>• Maximum ATO FLYCIDE allowed per year: 19.2 fluid ounces/Acre (0.3 lb. AI/Acre)<br>• Do not apply pre-bloom or during bloom or when bees are foraging. | |

## POMEGRANATE (Soil Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers/Sharpshooters, and Whiteflies | 16.0–24.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**
1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Pomegranate Soil Application:**
- Pre-Harvest Interval (PHI): 0 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## STONE FRUIT (Soil Application)

**Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids (including woolly apple aphid) and Leafhoppers | 16.0–24.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**
1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Stone Fruit Soil Application:**
- Pre-Harvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed per year: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## STONE FRUIT (Foliar Application)

**Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Green June beetle, Japanese beetle, Leafhoppers/ Sharpshooters, Plant bugs, Rose chafer, San Jose scale | 3.2–6.4 |
| Cherry fruit fly (maggot of Eastern and Western) | 4.8–6.4 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Plum curculio and Stink bugs | 6.4 |

- Aerial application of ATO FLYCIDE may result in slower activity and reduced control relative to results from ground application.
- Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application

**Restrictions for Apricot, Nectarine, Peach Foliar Application:**
- Pre-Harvest Interval (PHI): 0 day
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 19.2 fluid ounces/Acre (0.30 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

**Restrictions for Cherries, Plums, Plumcot, Prune Foliar Application:**
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 10 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## STONE FRUIT (Preplant, Root Dip Application)

| Pests Controlled | Rate: Fluid ounces per 10 gallons of root dip solution |
|---|---|
| Black peach aphid (infesting roots) | 2.0 |

**Applications:**
Mix ATO FLYCIDE at 2.0 fluid ounces per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the ATO FLYCIDE solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

## POME FRUIT (Soil Application)

**Apple, crabapple, loquat, mayhaw, pear (including Oriental pear), quince**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids (including woolly apple aphid) and Leafhoppers | 16.0 – 24.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**
1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Pome Fruit Soil Application:**
- Pre-Harvest Interval (PHI): 21 days
- Maximum ATO FLYCIDE allowed per year: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## POME FRUIT (Foliar Application)

**Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Leafhoppers | 3.2 – 6.4 |
| Aphids (except woolly apple aphid), Leafminers, San Jose scale | 6.4 |
| Mealybugs, Pear psylla (FOR PEAR ONLY) | 16.0 |

**Applications:**
Leafhoppers – Apply low rate for low to moderate populations of white apple leafhoppers and high rate for high populations or for other leafhopper species. Apply ATO FLYCIDE while most leafhoppers are in the nymphal stage.

Leafminer – For first-generation leafminer control, make application after pollination is complete and bees are no longer present in the orchard. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, better control will be obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. ATO FLYCIDE will not control late instar larvae.

Mealybugs – Apply maximum gallonage for tree with ground equipment. Ensure good spray coverage of the trunk and scaffolding limbs or other resting sites of mealybugs.

Rosy apple aphid – Apply prior to leafrolling caused by rosy apple aphid.

San Jose scale – Time applications to the crawler stage. Treat each generation.

*(continued)*

## POME FRUIT (Foliar Application) *(cont.)*

**Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince**

The amount of ATO FLYCIDE required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees. To calculate the rate needed on smaller trees, multiply the pest specific rate (e.g., for aphid control, 1.6 fluid ounces/100 gallons) times the number of 100 gallons of spray solution required to thoroughly wet foliage just prior to the point of runoff, on one acre of the trees being treated. For concentrate sprays, apply the same amount of ATO FLYCIDE per acre as would be applied in a dilute spray based on tree size and foliage volume.

Aerial application of ATO FLYCIDE may result in slower activity and reduced control compared to ground application due to less thorough coverage.

**Restrictions for Pome Fruit Foliar Application:**

- Pre-Harvest Interval (PHI): 7 days
- Maximum interval between applications: 10 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## TREE NUTS (Foliar Application)

**Crop Group 14 (except almond): Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids (except black pecan aphid), Leafhoppers/Sharpshooters, *Phylloxera* sp. leaf infestations, Spittlebugs and Whiteflies | 2.8–5.6 |
| Black pecan aphid, Mealybugs and San Jose scale | 6.4 |

Time applications for control of San Jose scale according to crawler stage, treating each successive generation. Two applications on a 10- to 14-day interval may be required to achieve control.

**Restrictions for Tree Nuts Foliar Application:**

- **Do not apply to almonds.**
- Pre-Harvest Interval (PHI): 7 days
- Maximum ATO FLYCIDE allowed per year: 22.8 fluid ounces/Acre (0.36 lb. AI/Acre)
- Minimum application volume (water): 50 GPA – ground application, 25 GPA – aerial application.
- Do not apply within 10 days prior to bloom or during bloom when bees are foraging.

## TREE NUTS (Soil Application)

**Crop Group 14 (except almond): Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers/Sharpshooters, Mealybugs, Spittlebugs, Termites and Whiteflies | 16.0–32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Pecan Scab (from reduction in honeydew deposition) | 16.0–32.0 |
| Thrips (foliage-feeding thrips only) | 32.0 |

**Applications: Apply specific dosage of ATO FLYCIDE in one of the following methods:**

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent irrigation equipment. Pre-wet soil prior to applications of ATO FLYCIDE and allow soil to dry following application and prior to subsequent irrigation.
2. Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site.
3. 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 per acre 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.
4. 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.

Use the higher rates when applied by shank or subsurface sidedress, 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.

**Restrictions for Tree Nuts Soil Application:**

- **Do not apply to almonds.**
- Pre-Harvest Interval (PHI): 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/Acre)
- Do not apply within 10 days prior to bloom or during bloom when bees are foraging.

## TROPICAL FRUIT (Soil Application)

**Acerola, Avocado, Black Sapote, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Spanish lime, Star apple, Starfruit, Wax jambu**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers, Whiteflies | 24.0–32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 32.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in one of the following methods:**
1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Restrictions for Tropical Fruit Soil Application:**
- Preharvest Interval (PHI): 6 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## TROPICAL FRUIT (Foliar Application)

**Acerola, Avocado, Black sapote, Canistel, Feijoa, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Pulasan, Rambutan, Sapodilla, Spanish lime, Star apple, Starfruit, Wax jambu**

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Leafhoppers/Sharpshooters, Thrips, and Whiteflies | 6.4 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| Scales | 6.4 |

Aerial application of ATO FLYCIDE may result in slower activity and reduced control compared to ground application due to less thorough coverage.

**Restrictions for Tropical Fruit Foliar Application:**
- Pre-Harvest Interval (PHI): 7 days
- Minimum interval between applications: 10 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## OTHER CROPS

### POPLAR/COTTONWOOD (Soil Application)

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids and Cottonwood leaf beetle | 16.0–32.0 |
| **Pests Suppressed** | **Rate: Fluid ounces per acre** |
| *Phylloxerina popularia* | 16.0–32.0 |

**Applications: Apply specified dosage of ATO FLYCIDE in the following method:**
1. Chemigation through low-pressure drip irrigation.

For Cottonwood leaf beetle, protection against damage will occur when application is made early, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.

For *Phylloxerina,* apply early in the year, from break of dormancy through May.

**Restrictions for Poplar/Cottonwood Soil Application:**
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## POPLAR/COTTONWOOD (Foliar Application)

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

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids and leaf beetle | 3.2–6.4<br>(Use higher rates when pest pressure is more severe) |

Apply as foliar spray at specified rate per acre when insect pressure reaches economic threshold. Uniform coverage is required to achieve best control and a spray adjuvant may help improve coverage. Two applications may be required to achieve control when initial insect populations are high. Retreatment should be based on field scout reports. ATO FLYCIDE may be tank mixed with other labeled insecticides to increase control or control pests not controlled by imidacloprid.

Aerial application of ATO FLYCIDE may result in slower activity and reduced control compared to ground application due to less thorough coverage.

**Restrictions for Poplar/Cottonwood Soil Application:**
- Minimum interval between applications: 10 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)
- Do not apply pre-bloom or during bloom or when bees are foraging.

## CHRISTMAS TREE (Foliar Application)

| Pests Controlled | Rate: Fluid ounces per acre |
|---|---|
| Aphids, Adelgids and Sawflies | 3.2–6.4<br>(Use higher rates when pest pressure is more severe) |

Aerial application of ATO FLYCIDE may result in slower activity and reduced control compared to ground application due to less thorough coverage.

Gall-forming adelgids – Time applications to coincide with full bud-swell or first bud-break of earliest bud-breaking trees. After galls form, spraying will no longer be effective.

**Restrictions for Christmas Trees Foliar Application:**
- Minimum interval between applications: 7 days
- Maximum ATO FLYCIDE allowed per year: 32.0 fluid ounces/Acre (0.50 lb. AI/A)

## IMPORTANT: READ BEFORE USE

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## NOTES

## NOTES

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| 5.5" X 5.5" | 5.25" X 4.5" | |
| **LABEL COLORS** | **BOOKLET COVER COLORS** | **BOOKLET INSIDE COLORS** |
| BL | YE MA CY BL | YE MA CY BL |
| PATTERN VARNISH: ☒ YES ☐ NO | | |

Form: CS 006B - 11/8/2011

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