

83100-7

03/14/2008

1/74



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAR 14 2008

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Dr. Frank E. Sobotka  
Rotam Agrochemical Company  
660 Newtown-Yardley Road  
Suite 105  
Newtown, PA 18940

Subject: Updating Using Sites  
Rotam 2 Flowable Insecticide  
EPA Reg. No. 83100-7  
Your Submission date, January 7, 2008

Dear Dr. Sobotka:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable provide you make the following change:

1. Page 6; replace the "Recommendations" with the word "Requirements" in the Airblast (Air Assist) section.
2. Page 12 and 25 remove the word "recommendations" from the Tank Mix section of the title; and "Recommended" from the Field Crop section.
3. Page 11 change the word "should" to the word "must"

A stamped copy is enclosed for your records. Submit two (2) copies of your final printed labeling before you release the product for shipment. If there are questions call me at 703 305-5409.

Sincerely,

A handwritten signature in black ink, appearing to read "Dani Daniel".

Dani Daniel  
Insecticide - Rodenticide Branch  
Registration Division 7505C

2/74

[Front Booklet Cover/Front Container Cover]

# ROTAM<sup>®</sup> 2 Flowable Insecticide

**ACTIVE INGREDIENT:**

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....21.4%

**OTHER INGREDIENT**.....78.6%

**Total:**.....100.0%

Contains 2 pounds of imidacloprid per gallon.

SHAKE WELL BEFORE USING

EPA Reg. No.: 83100-7

EPA Est. No. 069821-CHN-005

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**FIRST AID  
(neonicotinoid)**

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advise.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>In case of emergency call toll free the Emergency Response Telephone No.: To be Added. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p><b>Note To Physician (neonicotinoid):</b> No specific antidote is available. Treat the patient symptomatically.</p>	

Manufactured by:  
**ROTAM AGROCHEMICAL COMPANY LIMITED**  
660 Newtown-Yardley Rd.  
Suite 105  
Newtown, PA 18940

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:  
MAR 14 2008**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
83100-7

**NET CONTENTS:  
1 GALLON (3.78 liters)**

**Table of Contents**

**Page**

PRECAUTIONARY STATEMENTS  
ENGINEERING CONTROLS STATEMENTS  
ENVIRONMENTAL HAZARDS  
CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY AND LIABILITY  
DIRECTIONS FOR USE  
AGRICULTURAL USE REQUIREMENTS  
SPRAY DRIFT MANAGEMENT  
RESISTANCE MANAGEMENT  
APPLICATION RECOMMENDATIONS  
CHEMIGATION USE DIRECTIONS  
ROTATIONAL CROPS  
FIELD CROPS  
    Foliar Applications and Rates for Field Crops  
        (Cotton, Potato, Tobacco)  
    Soil Applications and Rates for Field Crops  
        (Cotton, Potato, Tobacco)  
VEGETABLE and SMALL FRUIT CROPS  
    Foliar Applications for Vegetable and Small Fruit Crops  
        (Fruiting Vegetables, Globe Artichoke, Herbs, Head and Stem Brassica Vegetables,  
        Leafy Vegetables, Legumes vegetables, Root and Tuberos Vegetables,  
        Corm Vegetables, Strawberry)  
    Soil Applications for Vegetable and small Fruit Crops  
        (Cucurbit Vegetables, Greenhouse Vegetables, Fruiting Vegetables, Herbs, Head  
        and Stem Brassica Vegetables, Leafy Vegetables, Leafy Petiole Vegetables, Legume Vegetables,  
        Root Vegetables, Tuberos and Corm Vegetables, Strawberry, Sugarbeet)  
TREE, BUSH and VINE CROPS  
    Foliar Applications for Tree, Bush and Vine Crops  
        (Bushberry, Citrus, Coffee, Hop, Grape, Pome Fruit, Pomegranate, Stone Fruit, Tree Nuts,  
        Tropical Fruit)  
    Soil Applications for Tree, Bush and Vine Crops  
        (Banana and Plantain, Bushberry, Citrus (containerized), Citrus (Field), Coffee, Cranberry, Grape, Hop,  
        Pome Fruit, Pomegranate, Stone Fruit, Tree Nuts, Tropical Fruit)  
OTHER CROPS  
    Foliar and Field Applications for Other Crops  
        (Christmas Tree, Poplar/Cottonwood)  
STORAGE AND DISPOSAL

4/74

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

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

### Personal Protective Equipment (PPE)

#### Applicators and Other Handlers Must Wear:

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

### ENGINEERING CONTROLS STATEMENTS

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

**Important:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

### User Safety Recommendations:

#### User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. 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 or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting 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.

5/74

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ROTAM AGROCHEMICAL COMPANY LIMITED or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ROTAM AGROCHEMICAL COMPANY LIMITED and Seller harmless for any claims relating to such factors.

ROTAM AGROCHEMICAL COMPANY LIMITED warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ROTAM AGROCHEMICAL COMPANY LIMITED, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW ROTAM AGROCHEMICAL COMPANY LIMITED MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

In no event shall ROTAM AGROCHEMICAL COMPANY LIMITED or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ROTAM AGROCHEMICAL COMPANY LIMITED AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ROTAM AGROCHEMICAL COMPANY LIMITED OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

ROTAM AGROCHEMICAL COMPANY LIMITED and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ROTAM AGROCHEMICAL COMPANY LIMITED.

6/74

## 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.

### 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, polyvinylchloride (PVC) or viton
- Shoes plus socks

**OBSERVE 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.**

#### 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.

**For Aerial Applications:** The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or rotor diameter.

**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 aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

**Mixing and loading Requirements**

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

**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 air stream. The following specific drift management practices should be followed:

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

**No-Spray Zone Requirements for Soil and foliar 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. When using ROTAM 2 FLOWABLE on erodible soils, Best Management Practices for minimizing runoff should be employed. 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 are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

ROTAM 2 FLOWABLE Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by ROTAM 2 FLOWABLE and to other Group 4A products.

The active ingredient in ROTAM 2 FLOWABLE belongs to the neonicotinoid chemical class. **When applying as a foliar treatment** avoid using a block of more than three consecutive applications of ROTAM 2 FLOWABLE and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Rotam strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect pest's ability to develop resistance to this class of chemistry. **When applying as a soil treatment** it is recommended that no more than one application of ROTAM 2 FLOWABLE be made during a single growing season. Foliar applications of ROTAM 2 FLOWABLE, or other Group 4A products from the neonicotinoid chemical class should not be made following a long residual, soil application of ROTAM 2 FLOWABLE, or other neonicotinoid products.

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

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

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

## APPLICATION INSTRUCTIONS

**Soil Application:** Applications of ROTAM 2 FLOWABLE Insecticide should direct product into the seed or root-zone of crop. Failure to place ROTAM 2 FLOWABLE into root-zone may result in loss of control or delay in onset of activity. ROTAM 2 FLOWABLE may be applied with ground or chemigation application. Do not apply with aerial application equipment. Broadcast, foliar applications are only recommended to seedling flats or trays, or where product is intended to be washed from foliage to soil prior to drying on foliage.

Optimum activity of ROTAM 2 FLOWABLE results from applications to the root-zone of plants to be protected. The earlier ROTAM 2 FLOWABLE is available to a developing plant, the earlier the protection begins. ROTAM 2 FLOWABLE is continuously taken into the roots over a long period of time and the systemic nature of ROTAM 2 FLOWABLE allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of ROTAM 2 FLOWABLE, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of ROTAM 2 FLOWABLE applied affects the length of the plant protection



9/74

period. Higher rates are recommended when infestations occur later in crop development, or where pest pressure is continuous. ROTAM 2 FLOWABLE will generally not control insects infesting flowers, blooms or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts and for insects not listed in the crop-specific, pests controlled sections of this label. Additional, specific ROTAM 2 FLOWABLE application recommendations are also 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 an ROTAM 2 FLOWABLE applications. Complete control of these pests/diseases may require supplemental control measures.

ROTAM 2 FLOWABLE use on crops grown for production of true seed intended for private or commercial planting is generally not recommended but may be allowed under State specific, supplemental labeling. As with any insecticide, care should be taken to minimize exposure of ROTAM 2 FLOWABLE to honey bees and other pollinators. Additional information on ROTAM 2 FLOWABLE uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, or a private consultant.

ROTAM 2 FLOWABLE should be pre-mixed with water or other appropriate diluent prior to application. Keep ROTAM 2 FLOWABLE and water suspension agitated to avoid settling.

Do not apply more than 0.50 lbs active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop-specific Recommended Applications section for a given crop.

**Foliar Application:** ROTAM 2 FLOWABLE should be applied as a directed or broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment and spray adjuvant if necessary to obtain thorough coverage. Failure to provide adequate coverage and retention of ROTAM 2 FLOWABLE on leaves and fruit may result in loss of insect control or delay in onset of activity. ROTAM 2 FLOWABLE may be applied with properly calibrated ground or aerial application equipment. Minimum recommended spray volumes unless otherwise specified on crop specific recommended application sections are 10 gallons/Acre by ground application and 5 gallons/Acre through aerial equipment. ROTAM 2 FLOWABLE may also be applied by overhead chemigation (see additional CHEMIGATION DIRECTIONS FOR USE section below) if allowed in crop specific recommended application section.

ROTAM 2 FLOWABLE use on crops grown for production of true seed intended for private or commercial planting is generally not recommended but may be allowed under State specific supplemental labeling. As with any insecticide, care should be taken to minimize exposure of ROTAM 2 FLOWABLE to honey bees and other pollinators. Use of ROTAM 2 FLOWABLE on crops requiring bee pollination should be avoided during bloom and a minimum of 10 days prior to bloom. Additional information on ROTAM 2 FLOWABLE uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, or consultants.

Do not apply more than 0.5 lbs. active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop specific recommended applications section for a given crop.

### **Mixing Instructions**

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation add ROTAM 2 FLOWABLE. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. ROTAM 2 FLOWABLE may also be used with other pesticides and/or fertilizer solutions. (Please see Compatibility Note below.) When tank mixtures of ROTAM 2 FLOWABLE and other pesticides are involved, prepare the tank mixture as recommended above and follow suggested Mixing Order below.

19/74

**Mixing Order**

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

**Compatibility Note**

Test compatibility of the intended mixture before adding ROTAM 2 FLOWABLE to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used.

**CHEMIGATION USE DIRECTIONS**

**Types of Irrigation Systems**

Chemigation applications of ROTAM 2 FLOWABLE may only be made to crops through chemigation systems as specified in crop-specific Application sections of this label.

**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, you should contact State Extension Service specialists, equipment manufacturers or other experts.

**Water Volume**

Overhead foliar chemigation applications should be made as concentrated as possible. Retention of ROTAM 2 FLOWABLE on target site of insect infestation is necessary for optimum activity. Chemigation of ROTAM 2 FLOWABLE in water volumes exceeding 0.1 inches/Acre are not recommended.

**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

11/74

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

## **FIELD CROPS**

### **Foliar Applications and Rates for Field Crops**

Apply specified rate per acre as foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. ROTAM 2 FLOWABLE may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. ROTAM 2 FLOWABLE may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

12/74

**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, a 12-month plant-back interval should be observed.

**IMMEDIATE PLANT-BACK:**

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

**30-DAY PLANT-BACK:**

Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans (soil applications only) and safflower.

**10-MONTH PLANT-BACK:**

Onions and bulb vegetables.

**12-MONTH PLANT-BACK:**

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.

13/74

**COTTON**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>	
Cotton aphid Cotton fleahopper Bandedwinged whitefly Plant bugs (excludes <i>Lygus hesperus</i> ) Green stink bug Southern green stink bug Bollworm/Budworm (ovicidal effect)	2.0 to 4.0	
<b>Pests Suppressed</b>		
Lygus bug ( <i>Lygus hesperus</i> ) Whiteflies (other than bandedwinged whitefly)	3.0 to 4.0	
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 14 days            Minimum interval between applications: 7 days            Maximum ROTAM 2 FLOWABLE allowed per season: 20 fluid ounces/Acre (0.31 lb AI/A)            Do not graze treated fields after any application of ROTAM 2 FLOWABLE.</p> <p><b>Applications</b>            ROTAM 2 FLOWABLE may be applied through properly calibrated ground, aerial or chemigation application equipment.</p>		
<b>Tank Mix Recommendations</b>		
<b>Pests Controlled (in addition to pests listed above)</b>	<b>Rotam 2 Flowable Rate fluid ounces/Acre</b>	<b>Bidrin® 8* Rate fluid ounces/Acre</b>
<b>For early season control of:</b> Thrips	2.0 – 3.0	1.6 – 3.2
<b>For mid to late season control of:</b> Plant bugs Stink bugs (including Brown stink bug) Grasshoppers Saltmarsh caterpillar Cotton leafperforator	2.5 – 3.8	4.0 – 8.0
<p><b>Notes and Restrictions (in addition to Notes and Restrictions listed above)</b>            *Refer to the Bidrin® 8 product label for specific use recommendations; observe all restrictions and precautions that appear on the label.</p>		

14/74

**PEANUT**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers Whiteflies	3.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 14 days Minimum interval between applications: 5 days Maximum PROVADO allowed per crop season: 8.4 fluid ounces/Acre (0.13 lb AI/Acre)	

15/74

**POTATO**

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers	3.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Minimum Interval between applications: 7 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 12.0 fluid ounces/Acre (0.19 lb A/A)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial application equipment.</p>	

**TOBACCO**

Pests Controlled	Rate fluid ounces/Acre
Aphids	1.6 – 3.2
Flea beetles Japanese beetle	3.2
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 14 days            Minimum interval between applications: 7 days            Maximum number of ROTAM 2 FLOWABLE allowed per crop season: 18 fluid ounces/Acre (0.28 lb A/A)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial application equipment.</p>	

16/74

## Soil Applications and Rates for Field Crops

### COTTON

Pests Controlled	Rate fluid ounces/1000 row-feet	Rate Fluid ounces/Acre
Cotton aphid Plant bugs Thrips Whiteflies	1.3	17.0 – 21.1 (Depending on row-spacing)

#### Notes and Restrictions

Maximum ROTAM 2 FLOWABLE allowed per crop season: 21.1 fluid ounces/Acre (0.33 lb ai/Acre)

Regardless of formulation or method of application, apply no more than 0.5 lb active ingredient of ROTAM 2 FLOWABLE, ROTAM 2 FLOWABLE®, Trimax or Leverage per acre per season, including seed treatment as Gaucho, 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 ROTAM 2 FLOWABLE. Please see Resistance Management section of this label.

#### Applications:

Apply specified dosage of ROTAM 2 FLOWABLE Insecticide in one of the following methods:

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



**POTATO**

Pests Controlled	Rate fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid	0.9 – 1.3	13.0 – 20.0
<b>Pests / Diseases Suppressed</b>		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis (PLRV) Wireworms (with in-furrow spray at-planting)	0.9 – 1.3	13.0 – 20.0

**Notes and Restrictions**

Maximum ROTAM 2 FLOWABLE allowed per crop season: 20.0 fluid ounces/Acre (0.31 lb AI/Acre)

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:

1. In-furrow spray during planting directed on seed pieces or seed potatoes;
2. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil;
3. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil;
4. Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, ROTAM 2 FLOWABLE 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 ROTAM 2 FLOWABLE may be made in a 2 to 4 inch band (width of planter shoe opening) and completely covered.

18/74

**POTATO  
(Seed Piece Treatment)**

Pests Controlled	Rate fluid ounces/100 lbs seed	Rate fluid ounces/Acre*
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato psyllid Wireworms (seed-piece protection)	0.4 – 0.8	8.0 – 16.0
<b>Pests / Diseases Suppressed</b>		
Symptoms of: Potato leaf roll virus (PLRV) Potato yellows Net necrosis (PLRV)	0.8	16.0
<p><b>Notes and Restrictions</b>                      Maximum ROTAM 2 FLOWABLE allowed per crop season: 20.0 fluid ounces/Acre (0.31 lb AI/Acre)                      Do not use treated seed-pieces for food, feed, or fodder. Do not apply any subsequent application of ROTAM 2 FLOWABLE (in-furrow), Gaucho®, Leverage® or ROTAM 2 FLOWABLE® following an ROTAM 2 FLOWABLE seed-piece treatment.</p> <p><b>Application</b>                      Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part ROTAM 2 FLOWABLE. Agitate or stir spray solution as needed. Fungicidal or inert absorbent dusts may be applied after ROTAM 2 FLOWABLE application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed pieces as soon as possible after treating avoiding prolonged exposure of ROTAM 2 FLOWABLE treated seed-pieces to sunlight and in accordance with the recommendation of your local Extension specialist.</p> <p>Consult your local crop protection product dealer for information relevant to your area.</p> <p>* Based on a seeding rate of 2000 lbs/acre.</p>		

**TOBACCO**

19/74

Pests Controlled	Rate fluid ounces/1000 plants (as seedling tray drench)	Rate fluid ounces/1000 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
<b>Pests / Diseases Suppressed</b>		
Cutworms Symptoms of: Tomato spotted wilt virus	1.4 – 2.8	1.8 – 2.8
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 14 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Uniform, broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash ROTAM 2 FLOWABLE from foliage into potting media. Failure to wash ROTAM from foliage may result in a reduction in pest control. Transplants should be handled carefully during setting to avoid dislodging treated potting media from roots.</li> <li>2. In-furrow spray or transplant-water drench during setting.</li> <li>3. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. Important</li> </ol> <p><b>Note:</b> Proper tray drench applications of ROTAM have been shown to be the most efficacious method of application. However, the specified rate of ROTAM 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 ROTAM into the plant and a delay in control.</p>		

**VEGETABLE and SMALL FRUIT CROPS**

**Foliar Applications for Vegetable and Small Fruit Crops**

Apply specified rate per acre as foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. ROTAM 2 FLOWABLE may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. ROTAM 2 FLOWABLE may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

## FRUITING VEGETABLES

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

20/74

Pests Controlled	Rate fluid ounces/Acre
Aphids Colorado potato beetle Leafhoppers Whiteflies	3.0
Pepper weevil (Pepper only)	5.0

### Notes and Restrictions

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 5 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 15 fluid ounces/Acre (0.24 lb AI/A)

### Applications

For all pests listed except pepper weevil, apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2

FLOWABLE may be applied through properly calibrated ground or aerial application equipment.

For pepper weevil, apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray by ground equipment to infested area, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimal control.

Applications of ROTAM 2 FLOWABLE must be incorporated into a full-season program, where alternations of effective products from multiple classes of chemistry and different modes of action are utilized in a blocked or windowed approach. For additional information, please contact your Extension Specialist or crop advisor.

21/74

**GLOBE ARTICHOKE**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers	3.2 – 8.0
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 14 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.</p>	

22/74

**HERBS**

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/Acre
Aphids Flea beetles Leafhoppers Whiteflies	2.8

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 5 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 8.4 fluid ounces/Acre (0.13 lb AI/Acre)

**Applications**

ROTAM 2 FLOWABLE 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.

**Note**

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

23/174

**BRASSICA (COLE) LEAFY VEGETABLES**

Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai Lon) broccoli, Chines (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip (tops or leaves)

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Flea beetles Leafhoppers Whiteflies	3.0
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minim interval between applications: 5 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 15.0 fluid ounces/Acre (0.19 lb AI/A)	

24/74

### LEAFY GREEN VEGETABLES

Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), 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 chickory), 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)<sup>1</sup>, Watercress (upland)<sup>1</sup>

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	3.0

**Notes and Restrictions**  
 Pre-Harvest Interval (PHI): 7 days  
 Minim interval between applications: 5 days  
 Maximum ROTAM 2 FLOWABLE allowed per crop season: 15 fluid ounces/Acre (0.23 lb AI/A)

**Applications**  
 Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.



25/74

**LEGUMES VEGETABLES (except soybean, dry)**

**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 bean (fava), chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean, lentil, Pigeon pea, soybean (immature seed), Sword bean.**

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies	2.8

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 7 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 8.4 fluid ounces/Acre (0.13 lb A/A)

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.

26/74

### ROOT, TUBEROUS and CORM VEGETABLES

Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)<sup>1</sup>, Burdock (edible)<sup>1</sup>, Canna (edible, Queensland arrowroot), carrot<sup>1</sup>, Cassava (bitter & sweet)<sup>1</sup>, Celeriac<sup>1</sup>, Chayote (root), Chervil (turnip-rooted)<sup>1</sup>, Chickory<sup>1</sup>, Chufa, Dasheen (taro)<sup>1</sup>, Ginger, Ginseng, Horseradish, Kava, Leren, Parsley (turnip-rooted), Parsnip<sup>1</sup>, Radish<sup>1</sup>, Oriental radish (diakon)<sup>1</sup>, Rutabaga<sup>1</sup>, Salsify (black)<sup>1</sup>, Salsify (oyster plant), Salsify (Spanish), Skirret, Sweetpotato, Tanier (cocoyam)<sup>1</sup>, Tumeric, Turnip<sup>1</sup>, Yam bean (jicama, manioc pea), Yam (true)<sup>1</sup>

For recommended applications on potato see Field Crops section

Pests Controlled	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Whiteflies	2.8
<p><b>Note and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Minimum interval between applications: 5 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 2.8 fluid ounces/Acre on radish;            8.4 fluid ounces/Acre (0.13 lb A/A) on other crops Maximum ROTAM 2 FLOWABLE            applications per crop season: 1 on radish; 3 on other crops</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested            area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly            calibrated ground or aerial equipment.</p> <p><sup>1</sup> Tops or greens from these crops may be utilized for food or feed.</p>	

27/74

**STRAWBERRY**

<b>Pest Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Spittlebugs Whiteflies	3.0
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 5 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 9 fluid ounces/Acre (0.14 lb A/A) Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.</p>	

## Soil Applications for Vegetable and Small Fruit Crops

### CUCURBIT VEGETABLES

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

<b>Field Applications</b> (See details below for additional planthouse applications)	
<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Cucumber beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	16.0 - 24.0
<b>Pests / Diseases Suppressed</b>	
Bacterial wilt (as vectored by various cucumber beetles) Leaf silvering resulting from whitefly feeding	16.0 - 24.0
<p><b>Notes and Restrictions</b>                      Pre-Harvest Interval (PHI): 21 days                      Maximum ROTAM 2 FLOWABLE allowed per application: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>                      Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray directed on or below seed;</li> <li>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;</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;</li> <li>5. Post-seeding drench, transplant-water drench, or hill drench;</li> <li>6. Subsurface side-dress on both sides of each row. ROTAM 2 FLOWABLE must be incorporated into root-zone.</li> </ol>	
<b>Planthouse Applications</b>	
<b>Pests Controlled</b>	<b>Rate fluid ounces/1000 Plants</b>
Aphids Whiteflies	0.1
<p><b>Notes and Restrictions</b>                      Maximum amount ROTAM 2 FLOWABLE applied in the planthouse: 0.1 fluid ounces (0.00156 lb AI)/1000 plants.                      Maximum number ROTAM 2 FLOWABLE applications in planthouse: 1</p>	

**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 ROTAM 2 FLOWABLE from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ROTAM 2 FLOWABLE 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 cucurbit vegetables have been tested for tolerance to ROTAM 2 FLOWABLE 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.

30/74

**GREENHOUSE VEGETABLES**

**(Mature plants in production greenhouses) Cucumber, Tomato, only**

<b>Pests Controlled</b>	<b>Rate fluid ounces/1000 plants</b>
Aphids Whiteflies	1.4

**Notes and Restrictions:**

Pre-harvest Interval (PHI): 0 days

Maximum number ROTAM 2 FLOWABLE applications per crop season: 1

**Application**

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.

Applications should be made when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficials (*Orius sp.*) can occur when ROTAM 2 FLOWABLE is applied.

Many varieties of vegetables have been tested for tolerance to ROTAM 2 FLOWABLE and show good safety. However, certain varieties may show more sensitivity to ROTAM 2 FLOWABLE. Therefore, treatment of a few plants is recommended before treating the whole greenhouse.

31/74

**FRUITING VEGETABLES**

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

<b>Field Applications</b> (See details below for additional planthouse applications)	
<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Colorado beetle potato Flea beetles Leafhoppers Thrips (foliage-feeding thrips, only) Whiteflies	Okra and Pepper 16.0 – 32.0 Other Crops 16.0 – 24.0
<b>Pests / Diseases Suppressed</b>	
Symptoms of: Tomato mottle virus Tomato spotted wilt virus Tomato yellow leaf curl virus	Okra and Pepper 16.0 – 32.0 Other Crops 16.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 21 days            Maximum ROTAM 2 FLOWABLE allowed on pepper and okra crops per application: 32.0 fluid ounces/Acre            Maximum ROTAM 2 FLOWABLE allowed on other fruiting vegetable crops per application: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray directed on or below seed;</li> <li>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;</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;</li> <li>5. Post-seeding drench, transplant-water drench, or hill drench;</li> <li>6. Subsurface side-dress on both sides of each row. ROTAM 2 FLOWABLE must be incorporated into root-zone.</li> </ol>	
<b>Planthouse Applications</b>	
<b>Pests Controlled</b>	<b>Rate fluid ounces/1000 Plants</b>
Aphids Whiteflies	0.1

**Notes and Restrictions**

Maximum amount ROTAM 2 FLOWABLE applied in the planthouse: 0.1 fluid ounces (0.00156 lb AI)/1000 plants.

Maximum number ROTAM 2 FLOWABLE applications in planthouse: 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 ROTAM 2 FLOWABLE from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash ROTAM 2 FLOWABLE 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 ROTAM 2 FLOWABLE 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.



**HERBS**

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/Acre
Aphids Flea beetles Leafhoppers Whiteflies	16.0 – 24.0
<b>Pests Suppressed</b>	
Thrips (foliage feeding thrips only)	16.0 – 24.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 14 days

Maximum ROTAM 2 FLOWABLE allowed per season: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)

**Applications**

Apply specified dosage 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.

**Notes**

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

34/74

### HEAD and STEM BRASSICA VEGETABLES

Including: 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, Turnip tops (leaves)

Pests Controlled	Rate fluid ounces/Acre (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 21 days            Maximum ROTAM 2 FLOWABLE allowed per application: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray directed on or below seed;</li> <li>3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1½" with sufficient irrigation within 24 hours of application;</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;</li> <li>5. Post-seeding drench, transplant-water drench, or hill drench;</li> <li>6. Subsurface side-dress on both sides of each row. ROTAM 2 FLOWABLE must be incorporated into root zone.</li> </ol>	

**LEAFY VEGETABLES**

Including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), 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), Raddicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland).

Pests Controlled	Rate fluid ounces/Acre (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 21 days            Maximum ROTAM 2 FLOWABLE allowed per application: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray directed on or below seed;</li> <li>3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1½" with sufficient irrigation within 24 hours of application;</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;</li> <li>5. Post-seeding drench, transplant-water drench, or hill drench;</li> <li>6. Subsurface side-dress on both sides of each row. ROTAM 2 FLOWABLE must be incorporated into root zone.</li> </ol>	

**LEAFY PETIOLE VEGETABLES**

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

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	10.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 45 days            Maximum ROTAM 2 FLOWABLE allowed per application: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray directed on or below seed;</li> <li>3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1½" with sufficient irrigation within 24 hours of application;</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;</li> <li>5. Post-seeding drench, transplant-water drench, or hill drench;</li> <li>6. Subsurface side-dress on both sides of each row. ROTAM 2 FLOWABLE must be incorporated into root-zone.</li> </ol>	

**LEGUME VEGETABLES (except soybean, dry)**

**Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean**  
 Bean (*Lupinus spp.*, includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus spp.*, includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna spp.*, includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (*Pisum spp.*, includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea) Other Beans and Peas [Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean]

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Thrips (foliage-feeding thrips, only) Whiteflies	16.0 – 24.0
<b>Pests / Diseases Suppressed</b>	
Symptoms of: Bean common mosaic virus (BCMV) Bean golden mosaic virus (BGMV) Beet curly top hybrigeminivirus (BCTV)	16.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 21 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. In-furrow spray at planting directed on or below seed;</li> <li>3. In a narrow (2" or less) surface band over seed-line during planting incorporated to a depth of 1 to 1 1/2" with sufficient irrigation within 24 hours following application;</li> <li>4. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;</li> <li>5. As a post-seeding drench, transplant drench, or hill drench.</li> </ol>	

**ROOT VEGETABLES**

Including: Beet (garden)<sup>1</sup>, Burdock (edible)<sup>1</sup>, Carrot<sup>1</sup>, Celeriac<sup>1</sup>, Chervil (turnip-rooted)<sup>1</sup>, Chicory<sup>1</sup>, Ginseng, Horseradish, Parsley (turnip-rooted), Parsnip<sup>1</sup>, Radish<sup>1</sup>, Oriental radish (diakon)<sup>1</sup>, Rutabaga<sup>1</sup>, Salsify (oyster plant), Salsify (black)<sup>1</sup>, Salsify (Spanish), Skirret and Turnip<sup>1</sup>.

Pests Controlled	Rate fluid ounces/1000 row- feet	Rate fluid ounces/Acre
Aphids Flea beetles Thrips (foliage feeding thrips only) Leafhoppers Whiteflies	0.7 – 1.7	10.0 – 24.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 21 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)

Maximum ROTAM 2 FLOWABLE applications per crop season: 1

**Application**

Apply specified dosage of ROTAM 2 FLOWABLE 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 (rate specified per 1000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting;
3. In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

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

<sup>1</sup> Tops or greens from these crops may be utilized for food or feed.

**TUBEROUS and CORM VEGETABLES**

Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Cassava (bitter & sweet)<sup>1</sup>, Chayote (root), Chufa, Dasheen (taro)<sup>1</sup>, Ginger, Leren, Sweetpotato, Tanier (cocoyam)<sup>1</sup>, Turmeric, Yam bean (jicama, manoiç pea), Yam (true)<sup>1</sup> (For recommended applications on potato see Field Crops section).

Pests Controlled	Rate fluid ounces/1000 row-feet	Rate fluid ounces/Acre
Aphids Flea beetles Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	0.7 – 1.7	10.0 – 24.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms)  
 Maximum ROTAM 2 FLOWABLE allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb AI/Acre) Maximum ROTAM 2 FLOWABLE applications per crop season: 1

**Applications**

- Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:
1. In-furrow spray (rate specified per 1000 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 ounces/1000 row-feet no later than 45 days after-planting. Observe same PHI as above.

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

<sup>1</sup>Tops or greens from these crops may be utilized for food or feed.

40/  
174

**STRAWBERRY <sup>1</sup>**

<b>Annual And Perennial Crops</b>	
<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Whiteflies	24.0 – 32.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 14 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>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;</li> <li>2. As a plant material or plant hole treatment just prior to, or during transplanting.</li> </ol> <p>The rate applied affects the length of control. Use higher rates where infestations may occur later in crop development or where pest pressure is continuous.</p>	
<b>Post-harvest Use on Perennial Crops</b>	
<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	16.0 – 24.0



**Notes and Restrictions**

Pre-Harvest Interval (PHI): 14 days

Maximum ROTAM 2 FLOWABLE allowed per season: 24.0 fluid ounces/Acre (0.38 lb AI/A)

**Applications**

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

beetles. Apply specified dosage of ROTAM 2 FLOWABLE 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 1000 gallons of water followed by 0.10 to 0.25 inches irrigation.

**Important Note:** All soil-surface applications must be followed by 0.25 inches of rainfall or overhead irrigation water per acre within 2

hours of application. Failure to adequately incorporate ROTAM 2 FLOWABLE into egg-deposition zone may result in decreased activity of beetle grubs.

<sup>1</sup> Do not use both application methods on the same crop in the same season.

**SUGARBEET**

(for use only in CA)

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies Flea beetles	6.0 – 12.0
<b>Pests / Diseases Suppressed</b>	
Symptoms of: Western yellows / Beet curly top hybrigeminivirus (BCTV)	6.0 – 12.0

**Notes and Restrictions**

Maximum ROTAM 2 FLOWABLE allowed per crop season: 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

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE in the following method:

1. Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either

during the bedding operation immediately prior to planting or at the time of planting.

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

42/74

**ROTAM 2 FLOWABLE INSECTICIDE CONVERSION CHART FOR LINEAR APPLICATION**

RATE fluid ounces/Acre	RATE fluid ounces/1000 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 ROTAM 2 FLOWABLE rate applied affects the length of control and to a considerable extent, the degree of control or effect.

Row-spacing X ROTAM 2 FLOWABLE rate combinations in shaded blocks may not provide adequate residual pest control and are not recommended for long-term, residual control. Use higher labeled rates where infestations may occur later in crop development or where pest pressure is continuous. Rotam Agrochemical Company Limited offers no warranty for use of ROTAM 2 FLOWABLE at rates below 0.7 fluid ounces/1000 row-feet.

43/  
74

## TREE, BUSH and VINE CROPS

### Foliar Applications for Tree, Bush and Vine Crops

Apply specified rate per acre as foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. ROTAM 2 FLOWABLE may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. ROTAM 2 FLOWABLE may be tank mixed with other insecticides as recommended for knockdown of pests or for improved control of other pests.

### BANANA and PLANTAIN

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Thrips	6.4
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 0 day Minimum interval between applications: 14 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area insuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial application equipment. Aerial application of ROTAM 2 FLOWABLE 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.</p>	

44/74

**BUSHBERRY**

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

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers/Sharpshooters	2.4 – 3.2
Blueberry maggot Japanese beetle (adults) Thrips	4.8 – 6.4
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 3 days Minimum interval between applications: 7 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 32 fluid ounces/Acre (0.5 lb AI/A) Maximum number of ROTAM 2 FLOWABLE 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 actively foraging.</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.</p>	

45/  
74

**CANEBERRY (Crops of the Caneberry)**

**Blackberry** (*Rubus* spp. - including Andean Blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyene 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, Blackcap, Caneberry, Framboise, Frambueso, Himbeere, Keriberry, Mayberry, Red raspberry, Thimbleberry, Tulameen, Yellow raspberry, and varieties and/or hybrids of these, and Wild raspberry)

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers Thrips	6.4
<b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 3 day Minimum interval between applications: 7 days Maximum PROVADO allowed per crop season: 19.2 fluid ounces/Acre (0.3 lb A/A) Do not apply pre-bloom or during bloom or when bees are actively foraging.	

46/74

**CITRUS**

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

Pests Controlled	Rate fluid ounces/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)
<b>Pests Suppressed</b>	
Thrips	8.0 – 16.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 10 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 32 fluid ounces/Acre (0.5 lb AI/A)

Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control to results from ground application. Scales – time applications to the crawler stage. Treat each generation.

47/74

**COFFEE**

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers Whiteflies	6.4
<b>Pest Suppressed</b>	
Scales	6.4
<p><b>Notes and Restrictions:</b>            Pre-Harvest Interval (PHI): 7 days            Minimum interval between applications: 7 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications:</b>            Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area insuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial application equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control relative to results from ground application.</p>	

**GRAPE**

American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate fluid ounces/Acre
Mealybugs Leafhoppers/Sharpshooters	2.4 – 3.2
<b>Pests / Diseases Suppressed</b>	
Grapeleaf Skeletonizer	3.0 – 3.2
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 0 days            Minimum interval between applications: 14 days            Maximum ROTAM 2 FLOWABLE allowed per season: 6.4 fluid ounces/Acre (0.1 lb AI/Acre)</p> <p><b>Applications</b>            ROTAM 2 FLOWABLE may be applied by ground application only.</p>	

48/  
74

**HOP**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids	6.4
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 28 days Minimum interval between applications: 21 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 24.0 fluid ounces/Acre (0.3 lb AI/A)</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment.</p>	



49/74

**POME FRUIT**

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

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers	3.2 – 6.4
Aphids (except woolly apple aphid) Apple maggot Leafminers San Jose scale	6.4
<b>FOR PEAR, ONLY</b> Mealybugs Pear psylla	16.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 7 days

Minimum interval between applications: 10 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)

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

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control to results from ground application.

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 ROTAM 2 FLOWABLE while most leafhoppers are in the nymphal stage.

Leafminer – for first generation leafminer control, make application as soon as pollination is complete and bees are removed from the orchard. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, optimal control is 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. ROTAM 2 FLOWABLE 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.

50/74

**POMEGRANATE**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers/Sharpshooters Whiteflies	6.4
<b>Pest Suppressed</b>	
Scales	6.4
<b>Notes and Restrictions:</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 7 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 19.2 fluid ounces/Acre (0.3 lb AI/A) Do not apply pre-bloom or during bloom or when bees are actively foraging.	

**STONE FRUIT**

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

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
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)	6.4
<b>Pest Suppressed</b>	
Plum curculio Stink bugs	6.4

**Notes and Restrictions for Apricot, Nectarine, Peach**

Pre-Harvest Interval (PHI): 0 day

Minimum interval between applications: 7 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 19.2 fluid ounces/Acre (0.3 lb AI/A)

Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application.

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

**Notes and Restrictions for Cherries, Plums, Plumcot, Prune**

Pre-Harvest Interval (PHI): 7 day

Minimum interval between applications: 10 days

Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)

Minimum application volume (water): 50 GPA – ground application; 25 GPA – aerial application

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

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control relative to results from ground application.

**TREE NUTS**

Almond, Beechnut, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Rate fluid ounces/Acre
Aphids (except Black pecan aphid) Leafhoppers/Sharpshooters Phylloxera sp. (leaf infestations) Spittlebugs Whiteflies	2.8 - 5.6
Black pecan aphid Mealybugs San Jose scale	6.4
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Minimum interval between applications: 6 days            Maximum ROTAM 2 FLOWABLE allowed per crop season: 22.8 fluid ounces/Acre (0.36 lb AI/A)            Minimum application volume (water): 50 GPA – ground application, 25 GPA – aerial application            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation. Two applications on a 10 to 14-day interval may be required to achieve control.</p>	

**TROPICAL FRUIT**

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

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers/Sharpshooters Mealybugs Thrips (Foliage feeding thrips only) Whiteflies	6.4
<b>Pest Suppressed</b>	
Scales	6.4

**Notes and Restrictions**  
 Pre-Harvest Interval (PHI): 7 days  
 Minimum interval between applications: 10 days  
 Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)  
 Maximum number ROTAM 2 FLOWABLE applications per crop season: 5  
 Do not apply pre-bloom or during bloom or when bees are actively foraging.

**Applications**  
 Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control relative to results from ground application.

**Soil Applications for Tree, Bush and Vine Crops****BANANA and PLANTAIN**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leafhoppers	16.0 - 32.0
<b>Pest Suppressed</b>	
Scales	16.0 - 32.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 0 day

Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb A/A)

**Applications**

Apply specified dosage in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**BUSHBERRY**

Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

Pests Controlled	Rate fluid ounces/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
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. 18-inch band on each side of the row followed with 0.25 inches of irrigation immediately after application.</li> </ol> <p>For optimal grub control, apply ROTAM 2 FLOWABLE 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.</p> <p>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.</p> <p>Apply ROTAM 2 FLOWABLE to moist soil. If necessary, apply one hour of irrigation water immediately before application of ROTAM 2 FLOWABLE. To ensure maximum efficacy, 1/2 to 1 inch of irrigation water or rainfall should be applied or received within 24 hours of application of ROTAM 2 FLOWABLE to facilitate movement into the soil and into the root-zone.</p>	

**CITRUS (Containerized)**

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

Pests Controlled	Rate ml/ft <sup>3</sup> container media
Aphids Asian citrus psyllid Black fly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Whiteflies	0.75
Citrus root weevil (larval complex)	1.25 – 2.50
<b>Pests / Diseases Suppressed</b>	
Citrus thrips (foliage feeding thrips only)	2.50
<p><b>Application</b>            Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of ROTAM 2 FLOWABLE 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. Retreat if necessary. For control of larvae of the citrus root weevil complex, application should be made prior to neonate larvae entering potting media. Utilize higher dosage for heavy infestations.</p>	



**CITRUS (Field)**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Asian citrus psyllid Black fly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Termites (FL only) Whiteflies	16.0 – 32.0
<b>Pests / Diseases Suppressed</b>	
Citrus nematode Symptoms of: Citrus tristeza virus (CTV) through vector control Citrus yellows Thrips (foliage feeding thrips only)	32.0

**Notes and Restrictions**

Pre-Harvest Interval (PHI): 0 day

Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)

**Applications**

Apply specified dosage of ROTAM 2 FLOWABLE 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 ROTAM 2 FLOWABLE. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move ROTAM 2 FLOWABLE 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;

4. 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.

**COFFEE**

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppes Leafminer	16.0 – 32.0
<b>Pest Suppressed</b>	
Scales	16.0 – 32.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.5 lb AI/Acre)            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;</li> <li>3. Basal, soil drench in sufficient water to insure incorporation into the root-zone followed by irrigation.</li> </ol>	

**CRANBERRY**

Pests Controlled	Rate fluid Ounces/Acre
Rootgrubs ( <i>Scarabaeidae</i> ) Rootworms ( <i>Chrysomelidae</i> )	16.0 – 32.0
<p><b>Notes and Restrictions</b>                      Pre-Harvest Interval (PHI): 30 days                      Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)                      Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>                      Apply ROTAM 2 FLOWABLE to moist soil. Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal of water per acre;</li> <li>2. As a chemigation application with 600 to 1000 gal water.</li> </ol> <p>Immediately upon application, ROTAM 2 FLOWABLE must be incorporated into root-zone by 0.1 - 0.3 inches 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.</p> <p><b>Rootgrubs and Rootworms</b>                      Best control may be achieved when application is made post-bloom immediately after bees are removed. Applications should target early instar larvae.                      ROTAM 2 FLOWABLE 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 ROTAM 2 FLOWABLE and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.</p>	

**GRAPE**

American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate fluid ounces/Acre
European fruit lecanium Mealybugs Leafhoppers/Sharpshooters <i>Phylloxera</i> * spp	16.0 – 32.0
<b>Pests / Diseases Suppressed</b>	
Pierce's disease	24.0 – 32.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 30 days            Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.50 lb AI/Acre)</p> <p><b>Applications</b>            Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;</li> <li>2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;</li> <li>3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.</li> </ol> <p>For optimum results, make application(s) between bud-break and the pea-berry stage.            * Repeated and regular use of ROTAM 2 FLOWABLE over several, consecutive growing seasons controls existing <i>Phylloxera</i> infestations over time or prevents <i>Phylloxera</i> from becoming established.</p>	

6/74

**HOP**

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids	19.2
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 60 days Maximum ROTAM 2 FLOWABLE allowed per season: 19.2 fluid ounces/Acre (0.3 lb AI/Acre)</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE in one of the following methods: Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment; Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation; Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.</p>	

62/74

**POME FRUIT**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids (including woolly apple aphid) Leafhoppers	16.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): <b>21 days</b>            Maximum ROTAM 2 FLOWABLE allowed per season: <b>24.0 fluid ounces/Acre (0.38 lb AI/Acre)</b>            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage in the following method:            1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</p>	

**POMEGRANATE**

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters Whiteflies	16.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 0 day            Maximum ROTAM 2 FLOWABLE allowed per season: <b>32.0 fluid ounces/Acre (0.5 lb AI/Acre)</b>            Do not apply pre-bloom or during bloom or when bees are actively foraging</p> <p><b>Applications</b>            Apply specified dosage in the following method:            1. Chemigation into the root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</p>	

63/74

**STONE FRUIT**

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

<b>In-field, Soil Application</b>	
<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids (including woolly apple aphid) Leafhoppers	16.0 – 24.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 21 days            Maximum ROTAM 2 FLOWABLE allowed per season: 24.0 fluid ounces/Acre (0.38 lb AI/Acre)            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage in the following method:            1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</p>	
<b>Pre-plant, Root Dip Application</b>	
<b>Pest Controlled</b>	<b>Rate fluid ounces/10 gallons root-dip solution</b>
Black peach aphid (infesting roots)	2.0
<p>Mix ROTAM 2 FLOWABLE 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 ROTAM 2 FLOWABLE solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.</p>	

64/74

**TREE NUTS**

Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Rate fluid ounces/Acre
Aphids Leafhoppers/Sharpshooters Mealybugs Spittlebugs Termites Whiteflies	16.0 – 32.0
<b>Pests / Diseases Suppressed</b>	
Pecan scab (from reduction in honeydew deposition)	16.0 – 32.0
Thrips (foliage-feeding thrips only)	32.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 7 days            Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.5 lb AI/Acre)            Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage prior to or at onset of pest infestation in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent irrigation equipment. Pre-wet soil prior to applications of ROTAM 2 FLOWABLE and allow soil to dry following application and prior to subsequent irrigation;</li> <li>2. Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site;</li> <li>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.</li> <li>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.</li> </ol> <p><b>Remarks</b>            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.</p>	



65/74

**TROPICAL FRUIT**

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

Pests Controlled	Rate fluid ounces/Acre
Aphids Avocado lacebug Leafhoppers Whiteflies	24.0 – 32.0
<b>Pest Suppressed</b>	
Scales Thrips (foliage feeding thrips only)	32.0
<p><b>Notes and Restrictions</b>            Pre-Harvest Interval (PHI): 6 days            Maximum ROTAM 2 FLOWABLE allowed per season: 32.0 fluid ounces/Acre (0.5 lbs AI/Acre). Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage in the following method:            1. Chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</p>	

66/74

## OTHER CROPS

### FOLIAR AND FIELD APPLICATIONS FOR OTHER CROPS

Apply specified rate per acre as foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. A spray adjuvant may be used to improve coverage. ROTAM 2 FLOWABLE may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. ROTAM 2 FLOWABLE may be tank mixed with other insecticides as an application for knockdown of pests or for improved control of other pests.

### FOLIAR APPLICATIONS

#### CHRISTMAS TREE

Pests Controlled	Rate fluid ounces/Acre
Aphids Adelgids Sawflies	3.2 – 6.4
<p><b>Notes and Restrictions</b> <b>Pre-Harvest Interval (PHI): 7 days</b> Minimum interval between applications: 7 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control relative to results from ground application. Gall-forming adelgids – time applications to coincide with full bud-swell or first bud-break of earliest bud-breaking trees. Once galls form spraying will be ineffective.</p>	

67/  
74

**POPLAR/COTTON WOOD**

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

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Leaf beetles	3.2 – 6.4
<p><b>Notes and Restrictions</b> Pre-Harvest Interval (PHI): 7 days Minimum interval between applications: 10 days Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A).</p> <p>Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b> Apply specified dosage of ROTAM 2 FLOWABLE as a broadcast or directed spray to infested area ensuring thorough coverage. ROTAM 2 FLOWABLE may be applied through properly calibrated ground or aerial equipment. Aerial application of ROTAM 2 FLOWABLE may result in slower activity and reduced control relative to results from ground application.</p>	

## FIELD APPLICATIONS

### CHRISTMAS TREE

Pests Controlled	Rate fluid ounces/Acre
White grub complex (damage from grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and oriental beetle)	16 – 32
<p><b>Notes and Restrictions</b>            Maximum ROTAM 2 FLOWABLE allowed per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/A)</p> <p><b>Applications</b>            Soil incorporation and movement of ROTAM 2 FLOWABLE to the root-zone is required for activity. ROTAM 2 FLOWABLE can be incorporated most readily when applied to moist soil. Apply specified dosage in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> <li>2. 18-inch band on each side of the row (small trees) to full broadcast application (large trees) followed by rainfall or 0.25 – 1 inch of irrigation within 12 hours after application.</li> </ol> <p>For optimal grub control, apply ROTAM 2 FLOWABLE during adult flight activity, or up to mid-July, when 1<sup>st</sup> instar larvae are present.</p>	

**POPLAR/COTTOWOOD**

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

Field applications(see details below for Cutings/Whips Application)

<b>Pests Controlled</b>	<b>Rate fluid ounces/Acre</b>
Aphids Cottonwood leaf beetle	16.0 – 32.0
<b>Pest Suppressed</b>	
<i>Phylloxerina popularia</i>	16.0 – 32.0
<p><b>Notes and Restrictions</b>            Maximum ROTAM 2 FLOWABLE allowed at-plant per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/Acre) Do not apply pre-bloom or during bloom or when bees are actively foraging.</p> <p><b>Applications</b>            Apply specified dosage in the following method:            1. Chemigation through low-pressure drip irrigation.            2. For narrow-row, cutting orchards/nurseries used for plant propagation, shank into root-zone followed by adequate irrigation to promote uptake. (Adequate irrigation depends on soil moisture level at application. Under dry conditions, 0.25 inches/Acre is recommended).</p> <p>For Cottonwood leaf beetle, protection against damage will occur when application is made early- season, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.            For <i>Phylloxerina</i>, apply early in the year, from break of dormancy through May.</p>	
<b>Cutting/Whip Applications See details above for Field Application Recommendations.</b>	
<b>Pest Controlled</b>	<b>Cutting/Whip Soaking Solution fluid ounces ROTAM 2 FLOWABLE Needed per 100 gallons</b>
Cottonwood leaf beetle	13.3 – 26.6 (unhydrated cuttings/whips) 26.6 – 40.1 (partially hydrated cuttings/whips)
<b>Pests Suppressed</b>	
Aphids <i>Phylloxerina popularia</i>	13.3 – 26.6 (unhydrated cuttings/whips) 26.6 – 40.1 (partially hydrated cuttings/whips)

**Notes and Restrictions**

Maximum ROTAM 2 FLOWABLE allowed at-plant per crop season: 32.0 fluid ounces/Acre (0.5 lb AI/Acre)

**Applications**

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

Apply ROTAM 2 FLOWABLE in one of the following cuttings/whips soaking methods:

For freshly cut (unhydrated) cuttings/whips, soak plant material in specified solution concentration for 24 hours prior to cold storage. After removal from cold storage, plant as needed.

For previously hydrated cuttings/whips removed from cold storage, allow plant material to reach room temperature and soak in specified solution concentration for 24 hours prior to planting. Proper care should be taken in disposal of any residual soaking solution. Solution may be applied to existing trees or other registered crops as long as all product label precautions and restrictions are observed.

71/  
74

## 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. You may contact the Rotam Emergency Response for decontamination procedures or any other assistance that may be necessary. **FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC AT 1-800-424-9300**

**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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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EPA Registered: TBA

**ROTAM AGROCHEMICAL COMPANY LIMITED**  
660 Newtown-Yardley Rd.  
Suite 105  
Newtown, PA 18940

**NET CONTENTS:  
1 GALLON**

72/74

[Container Label/Remains on Container after Booklet is Removed]

# ROTAM<sup>®</sup> 2 Flowable Insecticide

## ACTIVE INGREDIENT:

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....21.4%

**OTHER INGREDIENT**.....78.6%

**Total:**.....100.0%

Contains 2 pounds of imidacloprid per gallon.

SHAKE WELL BEFORE USING

See additional precautionary statements and directions for use in booklet.

### 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, polyvinylchloride (PVC) or viton
- Shoes plus socks

EPA Reg. No.: 83100-7

EPA Est. No. 069821-CHN-005



[Product Code # TBA]

## KEEP OUT OF REACH OF CHILDREN CAUTION

### FIRST AID (neonicotinoid)

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>In case of emergency call toll free the Emergency Response Telephone No.: To be Added.</b>  <b>Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</b></p>	
<p><b>Note To Physician (neonicotinoid):</b> No specific antidote is available. Treat the patient symptomatically.</p>	

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or 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 or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting 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.

74/74

### 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. You may contact the Rotam Emergency Response for decontamination procedures or any other assistance that may be necessary. **FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC AT 1-800-424-9300**

**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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EPA Registered: TBA

Manufactured by:  
ROTAM AGROCHEMICAL COMPANY LIMITED  
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Suite 105  
Newtown, PA 18940

**NET CONTENTS:  
1 GALLON (3.78 liters)**