



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 19, 2022

Jordan Moseley
Regulatory Specialist
Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, NC 27419

Subject: Registration Review Label Mitigation for Pymetrozine
Product Name: MAINSPRING FLORA
EPA Registration Number: 100-1585
Application Date: December 17, 2020
Decision Number: 568946

Dear Mr. Moseley:

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

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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If you have any questions about this letter, please contact Marisa Wright by phone at 202-566-2335, or via email at wright.marisa@epa.gov.

Sincerely,

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

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

Enclosure

PYMETROZINE	GROUP	9B	INSECTICIDE
CYANTRANILIPROLE	GROUP	28	INSECTICIDE

Mainspring Flora™

Insecticide

For control of listed insect pests on all ornamental plants produced in commercial nurseries and greenhouses for distribution and sale, including flowering and foliage plants, bulbs, shrubs, vines and trees

For control of listed insect pests on all ornamental plants grown in residential, commercial and institutional landscapes and interior plantscapes, including flowering and foliage plants, bulbs, shrubs, vines and trees

Active Ingredients:

Pymetrozine*:	30.0%
Cyantraniliprole**:	10.0%
Other Ingredients:	60.0%
Total:	100.0%

*CAS No. 123312-89-0

**CAS No. 736994-63-1

Mainspring Flora™ is formulated as a water-dispersible granule and contains 0.3 pounds pymetrozine and 0.1 pound cyantraniliprole per pound product.

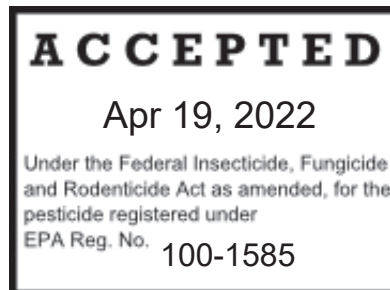
**KEEP OUT OF REACH OF CHILDREN.
CAUTION**

See additional precautionary statements and directions for use [in booklet][on label].

EPA Reg. No. 100-1585
EPA Est.

SCP

Net Weight



[Optional marketing statements]

1. [Listed for both chewing and sucking pests control]
2. [Labeled for thrips control]
3. [Labeled for whitefly control]
4. [Excellent for insecticide resistance management programs]
5. [Excellent choice for IPM programs]
6. [Has both contact and systemic activity]
7. [Systemic activity by foliar or soil application]
8. [Flexible application methods; can be foliar- or soil-applied]
9. [Taken up by the roots and systemically moves through the plant]
10. [Systemically protects plants from labeled insect pests]
11. [Root-absorbed, with systemic movement through plant]
12. [Systemically moves through the plant]
13. [Starts killing labeled insect pests upon ingestion [contact]]
14. [Insect feeding stops upon ingestion]

FIRST AID	
If in eyes	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.• Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical-resistant gloves made of: barrier laminate, butyl rubber \geq 14 mils, nitrile rubber \geq 14 mils, neoprene rubber \geq 14 mils, natural rubber \geq 14 mils, polyethylene, polyvinylchloride (PVC) \geq 14 mils, or Viton® \geq 14 mils

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

Engineering Control Statements

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

User Safety Recommendations

Users should:

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

Environmental Hazards

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

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This pesticide is toxic to aquatic invertebrates. 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/plants or weeds while bees are foraging in or adjacent to the treatment area.

- **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

Do not make ground applications within 25 feet of lakes, rivers, reservoirs, permanent streams, marshes, natural ponds, estuaries or coastal areas. Do not cultivate within 25 feet of the aquatic area to allow growth of a vegetative filter strip. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

- **Ground Water Advisory**

Cyantraniliprole may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Physical or Chemical Hazards

Do not place product near or allow product to come into contact with oxidizing substances (such as potassium permanganate) since a hazardous chemical reaction may occur.

PROTECTION OF POLLINATORS



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



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

This product can kill bees and other insect pollinators.

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

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

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

When Using This Product Take Steps To:

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

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to:

www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov.

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 SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA 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. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA 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 SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

Mainspring Flora must be used only in accordance with the directions of this label.

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.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR INSECT CONTROL, AND/OR ILLEGAL RESIDUES.

Follow these directions for food crops & commercially grown ornamentals that are attractive to pollinators:



FOR OUTDOOR APPLICATIONS TO FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT WHICH ARE ATTRACTIVE TO POLLINATORS

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

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

prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



FOR OUTDOOR APPLICATIONS TO NON-AGRICULTURAL PRODUCTS:

Do not apply Mainspring Flora while bees are foraging. Do not apply Mainspring Flora to plants that are flowering. Only apply after all flower petals have fallen off.

Use Restrictions

- **DO NOT** apply at rates greater than those listed on this label for any plant grown indoors or outdoors. See Tables 1 and 2 for specific Use Restrictions.
- **DO NOT** apply through any type of irrigation system.
- **DO NOT** apply by aerial application.
- In Nassau and Suffolk Counties, State of New York:
 - Mainspring Flora Insect Control may only be applied for listed greenhouse and interior plantscape uses on listed ornamental plants.
 - **DO NOT** apply Mainspring Flora to any outdoor use site, including shade houses, lath houses or other non-enclosed ornamental production structures.
- FOR PLANTS GROWN IN CONTAINERS:
 - **DO NOT** apply within 900 feet of any well where depth to groundwater is less than 30 feet; OR
 - If depth the groundwater is less than 30 feet, a runoff and leaching management system is required.
- FOR PLANTS GROWN IN GROUND:
 - **DO NOT** apply if:
 - Soil contains greater than 60% sand AND
 - Soil contains less than 3% organic matter AND
 - Depth to groundwater is less than 30 feet

Use Precautions

- Avoid spray overlap, as plant injury may occur.

Spray Drift Advisories for Outdoor Applications

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS

Importance of Droplet Size

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

Controlling Droplet Size – Ground Boom

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

Boom Height – Ground Boom

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

Shielded Sprayers

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

Temperature and Humidity

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

Temperature Inversions

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

Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Handheld Technology Applications:

Take precautions to minimize spray drift

USE INFORMATION

Mainspring Flora controls listed insect pests on ornamental plants, ornamental bulb, corm and tuber crops, conifers, Christmas trees and non-bearing fruit and nut trees

grown in greenhouses and nurseries (including field- and container-grown plants grown outdoors and in shade houses, lath houses and other ornamental production structures), conifer nurseries, retail nurseries, residential and commercial landscapes, and interior plantscapes.

Mainspring Flora is a systemic product that can be applied as a foliar spray. When applied as a foliar spray, the product exhibits translaminar and locally systemic movement and provides residual control of foliar insect pests. Foliar applications are rainfast shortly after the spray solution has dried.

Apply Mainspring Flora when pests are first observed and populations are low to prevent targeted insects from building to damaging levels. Mainspring Flora has residual activity in the plant and will control insects that move onto the plant after treatment.

Mode of Action

Mainspring Flora controls a broad range of chewing and sucking pests. Insecticidal activity is primarily through ingestion which results in paralysis, rapid inhibition of feeding (within hours), and disruption of other key physiological functions. Depending on the individual target pest, mortality usually occurs in two to seven days. While insect pests may still be visible on the plant, they are no longer feeding resulting in less plant injury.

Integrated Pest Management (IPM) Programs

Mainspring Flora may be used in an integrated pest management program (IPM) to control ornamental pests. If Mainspring Flora is tank-mixed with a product that negatively impacts beneficial arthropods, the full benefit of Mainspring Flora to an IPM program may not be realized.

Resistance Management

PYMETROZINE	GROUP	9B	INSECTICIDE
CYANTRANILIPROLE	GROUP	28	INSECTICIDE

For resistance management, Mainspring Flora contains a Group 9B/pymetrozine and a Group 28/cyantraniliprole insecticide. Any insect population may contain individuals naturally resistant to Endeavor and other Group 9B and Group 28 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same areas. Appropriate resistance-management strategies should be followed.

Other Insect Resistance Management (IRM) Practices

To delay insecticide resistance, take the following steps:

- Rotate the use of Mainspring Flora or other Group 9B insecticides within a

growing season, or among growing seasons, with different groups that control the same pests.

- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.

Contact your local Syngenta representative, retailer, or extension specialist for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

Plant Safety

Mainspring Flora has been shown to be safe when applied at the recommended rates to the listed plants. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to Mainspring Flora. Neither the manufacturer nor the seller has determined whether Mainspring Flora can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The user should conduct small scale testing at the recommended rates to ensure plant safety prior to broad scale commercial use on plant genera, species and varieties not listed in this label.

SPRAY EQUIPMENT

Proper maintenance and calibration of spray equipment are essential for optimal insect pest control. If you have questions about calibration, contact a State Extension Service specialist, the equipment manufacturer or other experts.

- Use sufficient water to provide thorough, uniform coverage.
- Use sprayer nozzles that provide accurate, uniform application.
- Calibrate sprayer to ensure delivery of adequate spray volume per unit area.

Application Equipment Cleaning

Prior to application, start with clean, well-maintained application equipment. Immediately following application, thoroughly clean all application equipment to reduce the risk of forming hardened deposits that might become difficult to remove. Drain application equipment. Thoroughly rinse application equipment and flush hoses, boom and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean equipment near wells, water sources, or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

MIXING PROCEDURES

Prepare the amount of spray mixture appropriate for the immediate applications. Thoroughly clean spray equipment before using this product. Agitate vigorously for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

The pH of application mixtures containing Mainspring Flora should be adjusted to a pH of 8 or less using a commercially available acidifier. Adjust the pH of application mixtures after all products being applied have been added to the tank and uniformly mixed.

Mainspring Flora Alone: Add $\frac{1}{2}$ of the required amount of water to the mix tank. With the agitator running, add the Mainspring Flora to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Mainspring Flora has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Mainspring Flora in Tank Mixtures: Mainspring Flora is compatible with most insecticide and fungicide products. However, the physical compatibility of Mainspring Flora with tank mix partners should be tested before use. To determine the physical compatibility of Mainspring Flora with other products, use a jar test, as described below, to test the physical compatibility of Mainspring Flora with tank-mix partners.

Tank-mixing Sequence

Add different formulation types in the sequence indicated below. Allow time for complete mixing and dispersion after the addition of each product.

1. Water-soluble bags
2. Water-dispersible granules
3. Wettable powders
4. Mainspring and other water-based suspension concentrates
5. Water-soluble concentrates
6. Oil-based suspension concentrates
7. Emulsifiable concentrates
8. Adjuvants, surfactants, oils
9. Soluble fertilizers
10. Drift retardants

Compatibility Test: Since pesticides, adjuvants, and fertilizers can vary in quality, always **check tank-mix compatibility with tank-mix partners before each use**. Be especially careful when using **complete** suspension or fluid fertilizers as carriers, as serious compatibility problems are more likely to occur with these products. Commercial application equipment may improve tank-mix compatibility in some instances. The following test assumes a spray volume of 25 gal/A. For other spray volumes, make appropriate changes in the components. Check tank-mix compatibility using this procedure:

1. Add 1 pt of carrier (either the water or liquid fertilizer to be used in the spray operation) to each of two clear 1-qt jars with tight lids.
2. To **one** of the jars, add $\frac{1}{4}$ tsp. or 1.2 mL of a commercially available tank-mix compatibility agent approved for this use ($\frac{1}{4}$ tsp is equivalent to 2 pt/100 gallons spray). Invert the jar, then shake or stir gently to ensure thorough mixing.
3. To **both** jars, add the appropriate amount of each tank-mix partner. If more than one tank-mix partner is to be used, add them separately with dry formulations (wettable powders or water dispersible granules) first, followed by liquid flowables, capsule suspensions, emulsifiable concentrates and finally adjuvants. After each

addition, invert the jar, shake or stir gently to thoroughly mix. The appropriate amount of each tank-mix partner for this test is as follows:

Dry formulations: For each pound to be applied per acre, add 1.5 level tsp to each jar.

Liquid formulations: For each pint to be applied per acre, add 0.5 tsp or 2.5 mL to each jar.

4. After adding all ingredients, put lids on and tighten, then invert each jar 10 times to fully mix. Let the mixtures stand for 15-30 minutes and then assess by looking for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry dry formulations in water before addition, or (B) add the compatibility agent directly into liquid formulations, before addition to the tank-mixture. If these procedures are followed but incompatibility is still observed, do not use the tank mixture.

If mixture is physically compatible, add ½ of the required amount of water to the mix tank. Start the agitator before adding any tank mix partners. Add products in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Mainspring Flora, liquid flowables, liquids, and emulsifiable concentrates.

Always allow each tank-mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

Note: If using Mainspring Flora in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank-mix partner, including Mainspring Flora. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using Mainspring Flora in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations which appear on the product label. Follow the most restrictive label precautions and limitations and do not exceed labeled application rates for any product. This product should not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

Do not tank-mix Mainspring Flora insecticide with products such as Daconil® Weatherstik, Dithane™ Rainshield, or any product containing a sticker component in its

formulation. This will limit absorption of Mainspring Flora by the plant, reducing control of labeled pests.

APPLICATION DIRECTIONS

SECTION 1: COMMERCIAL ORNAMENTAL NURSERY AND GREENHOUSE PRODUCTION

The following **AGRICULTURAL USE REQUIREMENTS** box containing Worker Protection Standards pertains to the use of this product in any commercial nurseries and greenhouses in which ornamental plants are produced for distribution and sale, including wholesale and retail nurseries, Christmas tree farms, and forestry and conifer nurseries.

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.

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, wear:

- Coveralls
- Socks and shoes
- Chemical-resistant gloves **made** of any waterproof material

1.1 Foliar Application (indoor and outdoor)

Foliar application rates are listed in **Table 1**. Thorough spray coverage of the plant is essential for optimum control. Apply when conditions do not favor drift from the target area and avoid spray overlap.

Apply Mainspring Flora when pest populations are low to prevent the increase of that population to damaging levels.

When making foliar applications to plants with hard-to-wet foliage, such as holly, ivy, or pine, the addition of a nonionic or organosilicone-based surfactant to improve coverage is recommended. Follow use directions and rate recommendations. Do not use adjuvants with binding or sticking properties, as these may reduce absorption of Mainspring Flora by the plant. If concentrate, mist-type or other low volume application equipment is used to apply Mainspring Flora, apply the same amount of product per area as you would use if applying with higher application volumes.

Table 1. Foliar Applications (indoor and outdoor)

Ornamental Plants in Commercial Production		
Breeding crops	Flowering plants grown for seed production	Pot and bedding plants
Bulb, corm and tuber crops (such as tulips, calla lilies)	Foliage plants	Shrubs
Evergreens, including conifers	Ground covers	Trees, including non-bearing fruit and nut trees*
Flowering Plants	Palms	Vines (non-bearing)*
	Perennial plants	
Target Pests	Application Rate	Use Directions
Aphids including: Green Peach Aphid (<i>Myzus persica</i>) Melon Aphid (<i>Aphis gossypii</i>) Leafminer (<i>Liriomyza</i>)	4 – 12 oz per 100 gallons 0.4 – 1.2 tsp per gallon 1.1 – 3.4 g per gallon	Begin applications prior to or when pests first appear. Reapply after 14 days to keep populations from increasing. Use higher listed rates when longer residual control is needed.
Japanese beetle adults, other leaf-feeding beetles (such as viburnum leaf beetle larvae) Lace bugs Leaf-feeding caterpillars (such as armyworms, loopers, fall webworms) Soft scales (such as oak lecanium scales) Thrips (foliar-feeding) Whiteflies (including) Silverleaf whitefly (<i>Bermisia</i> spp. – Biotype B & Q) Greenhouse Whitefly (<i>Trialeurodes vaporariorum</i>)	8 – 12 oz per 100 gallons 0.8 – 1.2 tsp per gallon 2.2 – 3.4 g per gallon	
All pests listed above – maximum residual control	16 oz per 100 gallons 1.6 tsp per gallon 4.4 g per gallon	

USE RESTRICTIONS

- **Maximum Single Application Rate - Outdoors and Indoors:** Do not apply more than 16.7 oz Mainspring Flora per acre per application (equal to 0.31 lb pymetrozine and 0.10 lb cyantraniliprole per acre per application).
- **Maximum Total Application Rate – Outdoors and Indoors:**
 - Do not apply more than 66.8 oz Mainspring Flora per acre per calendar year. Do not apply more than 1.25 lb pymetrozine or 0.42 lb cyantraniliprole per acre per calendar year from Mainspring Flora or any pymetrozine- or cyantraniliprole containing products.
- **Minimum Reapplication Interval:** Do not reapply within 7 days.

*Non-bearing fruit and nut trees and vines are plants that will not bear edible fruit or nuts for one year after application.

SECTION 2: LANDSCAPE ORNAMENTALS AND INTERIOR PLANTSCAPES

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

2.1 Foliar Application (indoor and outdoor)

Foliar application rates are listed in **Table 1**. Thorough spray coverage of the plant is essential for optimum control. Apply when conditions do not favor drift from the target area and avoid spray overlap.

Apply Mainspring Flora when pest populations are low to prevent the increase of that population to damaging levels.

When making foliar applications to plants with hard-to-wet foliage, such as holly, ivy, or pine, the addition of a nonionic or organosilicone-based surfactant to improve coverage is recommended. Follow use directions and rate recommendations. Do not use adjuvants with binding or sticking properties, as these may reduce absorption of Mainspring Flora by the plant. If concentrate, mist-type or other low volume application equipment is used to apply Mainspring Flora, apply the same amount of product per area as you would use if applying with higher application volumes.

Table 2. Foliar Applications (indoor and outdoor)

Ornamental Plants		
Plants in interior plantscapes	Plants in outdoor landscapes	Potted plants and trees*
Target Pests	Application Rate	Use Directions
Aphids including: Green Peach Aphid (<i>Myzus persica</i>) Melon Aphid (<i>Aphis gossypii</i>) Leafminer (<i>Liriomyza</i>)	4 – 12 oz per 100 gallons 0.4 – 1.2 tsp per gallon 1.1 – 3.4 g per gallon	Begin applications prior to or when pests first appear. Reapply after 14 days to keep populations from increasing. Use higher listed rates when longer residual control is needed.
Japanese beetle adults, other leaf-feeding beetles (such as viburnum leaf beetle larvae) Lace bugs Leaf-feeding caterpillars (such as armyworms, loopers, fall webworms) Soft scales (such as oak lecanium scales) Thrips (foliar-feeding) Whiteflies (including) Silverleaf whitefly (<i>Bermisia</i> spp. – Biotype B & Q) Greenhouse Whitefly (<i>Trialeurodes vaporariorum</i>)	8 – 12 oz per 100 gallons 0.8 – 1.2 tsp per gallon 2.2 – 3.4 g per gallon	Begin applications prior to or when pests first appear. Reapply after 14 days to keep populations from increasing. Use higher listed rates when longer residual control is needed.
All pests listed above – maximum residual control	16 oz per 100 gallons 1.6 tsp per gallon 4.4 g per gallon	

USE RESTRICTIONS

- **Maximum Single Application Rate - Outdoors and Indoors:**
 - Do not apply more than 16.7 oz Mainspring Flora per acre per application (equal to 0.31 lb pymetrozine and 0.10 lb cyantraniliprole per acre per application).
- **Maximum Total Application Rate – Outdoors and Indoors:**
 - Do not apply more than 66.8 oz Mainspring Flora per acre per calendar year. Do not apply more than 1.25 lb pymetrozine or 0.42 lb cyantraniliprole per acre per calendar year from Mainspring Flora or any pymetrozine- or cyantraniliprole containing products.
- **Minimum Reapplication Interval:**
 - Do not reapply within 7 days.

*Non-bearing fruit and nut trees and vines are plants that will not bear edible fruit or nuts for one year after application.

STORAGE AND DISPOSAL

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

Pesticide Storage

Do not subject to temperatures below 32 degrees F. Store in original container, in a cool, dry place inaccessible to children and pets. Product is hygroscopic. Keep the container tightly closed.

Pesticide Disposal

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Container Handling [bags]

Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Container Handling [less than or equal to 50 pounds]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
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SCP

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