

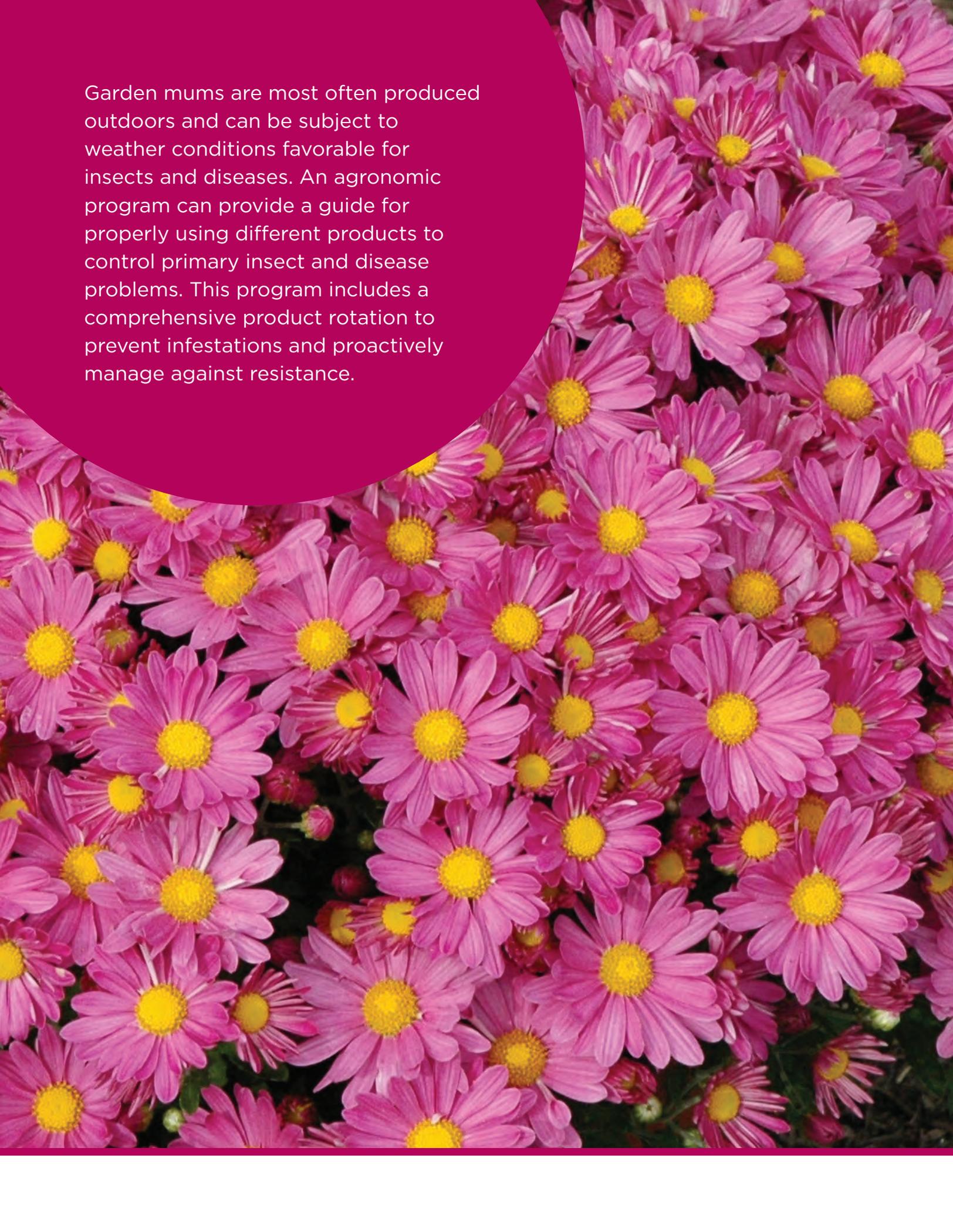
CHRYSANTHEMUM

AGRONOMIC PROGRAM

 **Ornamentals**

syngenta[®]

Garden mums are most often produced outdoors and can be subject to weather conditions favorable for insects and diseases. An agronomic program can provide a guide for properly using different products to control primary insect and disease problems. This program includes a comprehensive product rotation to prevent infestations and proactively manage against resistance.



AGRONOMIC PROGRAM FOR 12-16 WEEK CROPS

WEEK	12 - 16 WEEK CROP (Treatment rates per 100 gal)	TARGET PROBLEMS
1 Transplant		
2	Endeavor® insecticide 5 oz.	Aphids, Whiteflies
3	Avid® 0.15 EC insecticide 8 fl. oz. (Spray)	Mites, Leafminers, Thrips, Whiteflies, Aphids
4	Subdue Maxx® fungicide 1 fl. oz. + Medallion® WDG fungicide 2 oz. + ¹ Mainspring® GNL insecticide 8 fl. oz. (Drench once) OR Mainspring GNL 4-6 fl. oz. (Spray on 2-3-week interval)	<i>Pythium, Rhizoctonia, Fusarium</i> Aphids, Leafminers, Thrips, Whiteflies, Worms
5	Avid 0.15 EC 8 fl. oz. (Spray)	Mites, Leafminers, Aphids
6	Mainspring GNL 4 fl. oz. (Spray)	Aphids, Leafminers, Thrips, Whiteflies, Worms
7	² Concert® II fungicide 35 fl. oz. (Spray - outside production only)	Leaf spots, <i>Fusarium</i> , Rust, Botrytis
8	Postiva® fungicide 10-16 fl. oz. + Segway® fungicide 3 fl. oz. (Drench)	Mid-to-late season root rot & <i>Fusarium</i> protection
9	Mainspring GNL 4-6 fl. oz. (Spray)	Aphids, Leafminers, Thrips, Whiteflies, Worms
10	Concert II 35 fl. oz. (Spray - outside production only)	Leaf spots, <i>Fusarium</i> , Rust, Botrytis
11	Mainspring GNL 4-6 fl. oz. (Spray)	Aphids, Leafminers, Thrips, Whiteflies, Worms
12	Mural® fungicide 6-7 oz. (Heavy spray directed at foliage and crown)	<i>Fusarium</i> , Rust, Botrytis
13-16 as needed	Avid 0.15 EC 8 fl. oz. OR Conserve® SC insecticide 6-11 fl. oz.	Thrips in flowers, Worms
	Palladium® fungicide 6 oz. OR ³ Mural 6-7 oz. (Spray)	Botrytis

¹Mainspring GNL drench provides ~8+ weeks protection against aphids, leafminers, thrips, whiteflies and worms.

²Replace with a copper fungicide or Dithane® 75 DF + Daconil® brand fungicide spray for bacterial leaf spots.

³In areas prone to rust, Mural can be used for additional protection.



***Fusarium*, early stages**
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***Fusarium*, late stages**
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Fusarium sporodochia
Syngenta



Internal vascular discoloration
Syngenta

COMMON INSECTS

Thrips, aphids and worms are common insects that can affect garden mums in production. Controlling thrips and aphids is especially important to prevent viruses. Thrips are a vector for Impatiens Necrotic Spot Virus (INSV) and Tomato Spotted Wilt Virus (TSWV). Aphids can spread Chrysanthemum Virus B (CVB).

COMMON DISEASES

Root and stem diseases caused by *Pythium* and *Fusarium spp.* pathogens are likely to emerge under high temperatures and moist conditions. Roots can be compromised by repeated wetting and drying resulting in wounds, which increase the risk of infection. Growing media with high soluble salts can also cause root burn and make plants more susceptible to attack.

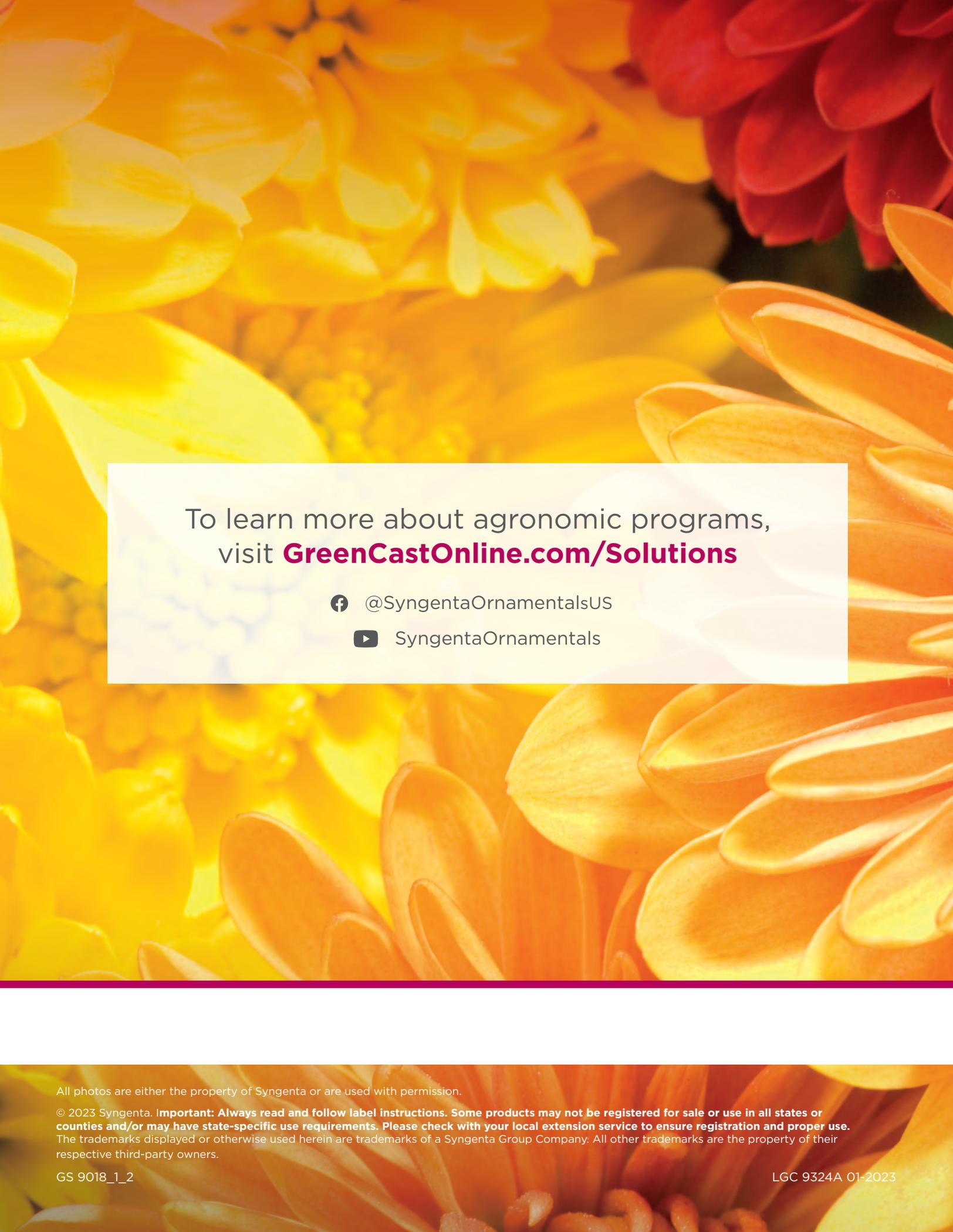
Frequent rain can spur infections by *Pythium spp.* Affected plants will appear pale green and show signs of wilt during the warm times of the day, recovering in the evening. As the disease progresses, plants become stunted and fail to recover.

Fusarium occurs more frequently when plants are stressed, so attention to proper growing practices and environmental conditions is essential. The pathogen often invades one side of the vascular system, resulting in a one-sided wilt. Foliage will appear lighter in color and wilt from the bottom up.

A PROGRAMMATIC APPROACH

Plant protection products are essential when the environmental conditions are conducive to pest development or when symptoms are first observed on mums. Application frequency should be based on the activity of the product, current environmental conditions, pest lifecycle and level of pressure. Additionally, it is critical to proactively prevent resistance by rotating products with different modes of action.





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