

PROTECTING EDIBLE CROPS

 **Ornamentals**

syngenta[®]

Many operations are diversifying to include vegetable plants and herbs. Pre-finished containers of fruiting vegetables and herb plants can be produced with, and complementary to, spring and summer ornamentals. Fruiting vegetables such as tomatoes and peppers, and herbs such as basil and rosemary are popular favorites and well-suited for patio containers or garden transplants.



Products for Vegetable Production

There are several Syngenta products registered to help protect vegetable and herb plants grown for retail sales. Each has demonstrated effective control of many common diseases and insects that can affect vegetable production. Please consult the respective labels for specific directions on rates, use applications and labeled crops.

INSECT CONTROL			FRUITING VEGETABLES							
MOA	Insecticide	Insect targets	Brassica / Cole	Bulb crops	Cucurbits	Eggplant	Peppers	Tomatoes	Leafy vegetables	Herbs
17	Citation® insect growth regulator	Leafminers Fungus gnats Shore flies	X	X	X		X	X	X	
9B	*Endeavor® insecticide	Aphids Whiteflies	X		X	X	X	X	X	
4A	*Flagship® 25WG insecticide	Aphids Leafminers Whiteflies			X	X	X	X		
DISEASE CONTROL			FRUITING VEGETABLES							
MOA	Fungicide	Disease targets	Brassica / Cole	Bulb crops	Cucurbits	Eggplant	Peppers	Tomatoes	Leafy vegetables	Herbs
11	*Heritage® fungicide	Leaf spots Downy and powdery mildews Rust	X	X	X	X	X	X	X	X
40	Micora® fungicide	Downy mildew <i>Phytophthora</i> crown rot and Foliar blight	X			X	X	X	X	Basil
7+11	Mural® fungicide	Leaf spots Downy and powdery mildews			X	X	X	X		
7+3	*Postiva® fungicide	Leaf spots Powdery mildew			X	X	X	X		
49	*Segovis® fungicide	Downy mildew								Basil
4	*Subdue Maxx® fungicide	Downy mildew Damping off (<i>Pythium spp.</i>) <i>Phytophthora</i> crown rot and Foliar blight	X		X	X	X	X	X	X

*Registered for use on non-bearing fruits and nuts.

Beneficial Compatibility

Beneficial insects are often used to control insect pests during vegetable production. Knowing whether a chemical product is compatible is critical for a successful program and saves time, resources and labor. The compatibility of the following insecticides and biological control agents have been tested to help you avoid trial and error.

CLASS	POPULATION EFFECT
1	0-25% reduction
2	26-50% reduction

INSECTICIDE	<i>Amblyseius cucumeris</i>	<i>Amblyseius andersoni</i>	<i>Amblyseius swirskii</i>	<i>Aphidius spp.</i>	<i>Diglyphus isaea</i>	<i>Encarsia formosa</i>	<i>Eretmocerus eremicus</i>	<i>Phytoseiulus persimilis</i>	<i>Orius insidiosus</i>	<i>Steinernema feltiae</i>
Citation	1	1	1	1	1	1	1	1	1	1
Endeavor	1	1	1	2	1	1	1	1	1	1
Heritage	1	1	1	1	1	1	1	1	1	1
Micora	1	1	1	1	1	1	1	1	1	1
Subdue Maxx	-	-	-	-	-	1	1	1	1	1

*Dashes in the chart above indicate that data is unknown or was not tested.



Early blight on tomato,
Syngenta



Bacterial leaf spot on pepper,
Gary Vallad, University of Florida/IFAS



Downy mildew on cucumber,
Gary Vallad, University of Florida/IFAS



Target spot on tomato,
Gary Vallad, University of Florida/IFAS



Powdery mildew on tomato,
Syngenta



Late blight on tomato,
Syngenta

Common Insect & Disease Problems

While new vegetable varieties are often bred and screened for resistance to certain diseases, it is still important to scout and be aware of common problems such as leaf spots and mildews, as well as insects like two-spotted spider mites and whiteflies (*Bemisia* and *Trialeurodes spp.*). Identification should always be confirmed through a commercial or state diagnostic lab.

CROP	COMMON DISEASES	COMMON INSECTS
Tomatoes	<ul style="list-style-type: none"> Leaf spots (<i>Colletotrichum spp.</i>, <i>Corynespora spp.</i>, <i>Septoria spp.</i>) Early blight (<i>Alternaria spp.</i>) Phytophthora late blight (<i>Phytophthora infestans</i>) Bacterial leaf spots (<i>Xanthomonas spp.</i>, <i>Pseudomonas spp.</i>) Powdery mildew (<i>Oidiopsis sicula</i>) 	<ul style="list-style-type: none"> Aphids Leafminers Mites Thrips Whiteflies
Peppers, Eggplant	<ul style="list-style-type: none"> Phytophthora blight (<i>Phytophthora spp.</i>) Bacterial leaf spot (<i>Xanthomonas spp.</i>) Cercospora leaf spot (<i>Cercospora spp.</i>) Powdery mildew (<i>Sphaerotheca spp.</i>) 	<ul style="list-style-type: none"> Aphids Leafminers Mites Thrips Whiteflies
Cucurbits	<ul style="list-style-type: none"> Alternaria leaf spot Anthrachnose Downy mildew (<i>Pseudoperonospora cubensis</i>) Powdery mildew (<i>Sphaerotheca fuliginea</i>, <i>Erysiphe cichoracearum</i>) 	<ul style="list-style-type: none"> Aphids Whiteflies
Leafy vegetables	<ul style="list-style-type: none"> Downy mildew (<i>Bremia spp.</i>) Powdery mildew (<i>Erysiphe cichoracearum</i>) Leaf spots (<i>Cercospora spp.</i>, <i>Septoria spp.</i>) Botrytis gray mold Root & stem rot (<i>Pythium spp.</i>, <i>Rhizoctonia spp.</i>) 	<ul style="list-style-type: none"> Aphids Leafminers Thrips Whiteflies
Herbs	<ul style="list-style-type: none"> Downy mildew (<i>Plasmopara spp.</i>, <i>Peronospora spp.</i>) Powdery mildew (<i>Erysiphe spp.</i>, <i>Sphaerotheca spp.</i>) Leaf spots Botrytis 	<ul style="list-style-type: none"> Aphids Mites Thrips Whiteflies





Learn more about solutions for vegetable crops at
GreenCastOnline.com/Vegetables

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GS 9018_1_1

LGC 9315A 01-23