Biological Pest Control

The Benefits of and Keys to Establishing A Successful Biological Control Program

As pest problems evolve, and traditional chemical controls become less effective or less available, more and more growers are looking to biological control programs to meet their pest control needs. Some of the benefits to a biological control program include:

- Safety issues are non-existent and protective clothing is not required.
- There is no re-entry interval (REI) or phytotoxicity associated with traditional pest control products.
- The chance of a pest developing resistance to a biological control program is also non-existent.

Biological controls are best introduced before pest populations reach a problem level. To establish a biological control program, there are 3 core building blocks that need to be implemented and followed:

1. Establish and maintain a sanitized growing environment -

It is important to establish Pre/Post and In-season cleaning programs for your facility to ensure you keep your growing environment free of weeds and other host environments for the unwanted pests. There are a number of products available to help you with this such as the following:

KleenGrow

A mild quaternary ammonium chloride compound designed to kill bacteria, and provide excellent mildew control in your greenhouse.

Strip-It

A combination cleaning and wetting agent helps remove white wash, algae, dirt, and calcium deposits from your greenhouse.

Horti-Klor

An active chlorinated detergent designed to help meet the highest greenhouse sanitation standards.

2. Monitoring & Scouting –

It is important to know what pests you are dealing with and when to introduce your beneficial biological control agents. Establishing a weekly scouting and monitoring program is essential. Use yellow and blue sticky cards (1 card/1,000-2,000ft^2) and an eye lens to monitor flying insects such as Western Flower Thrip, whitefly, fungus gnats, shoreflies and winged aphids, as well as your beneficial populations.

Keeping records of your observations will go a long way to ensuring the success of your biological program. Also use *ThriPher* (Thrip pheromone) lures at a rate of 1 per 1,000 ft^2 to help detect Thrip populations earlier and get a jump on your program.

3. Commitment to the Program -

It is essential that once you commit to a biological program you stay with it. Unlike traditional chemical control programs your results may be slower to develop and it is imperative that you begin the program ahead of your pest pressure and form a preventative perspective, as opposed to the curative mentality that is associated with most chemical control programs.

Commitment to a biological control program does not mean that all chemical controls are eliminated from your program. There is an ever-growing assortment of “bio-friendly” pest control products. You just need to be more diligent in your choice and application timing the chemical control products needed to control other problems or pests.

The following product charts will provide you with concise, to-the-point information about the leading biological control products available to combat the most common greenhouse pests. These include Fungus Gnats, Shoreflies, Aphids, Whitefly, Western Flower Thrip, Mealy Bug, and Spider Mites.

The **Biobest** website (www.biobestgroup.com) is also a great resource and has complete descriptions of the products listed in and the side effects of horticultural chemicals on beneficial insects.

Biological Pest Control

Fungus Gnats and Shore Flies

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Atheta Coriaria	**BIO-15109BI**	1 per m²	1 x 500, 1L tube = 5,000 ft²	Once at each planting	Place 5ml piles out of direct sunlight.	Establishes in soil. Attacks Fungus Gnat and Shore Fly larvae and Thrip pupae.
	BIO-17008		1 x 1,000, 1L tube = 10,000 ft²			
	BIO-17009		1 x 3,000, 5L = 30,000 ft²			
This predatory beetle is an extremely voracious and efficient predator of some of the most troublesome soil insects. The beetles are dark brown to shiny black, 3-4mm long and are completely covered in hair. They have 3 larval stages during which the larvae change from white to orange-brown. All mobile stages of the beetle actively search for prey. The adults have a large flight range which ensures good dispersion throughout the greenhouse and faster population development. They are applicable in several ornamental, vegetable and arboricultural crops and on different media, such as compost, coco-fiber or rock wool.						
Steinernema Feltiae (nematodes)	**BIO-15007**	½ million per m²	50 million pkg = 1,000 ft²	Apply every 7 – 14 days	Sprench on damp soil.	Do not apply in direct sunlight. NOTE: Double application rate if pests are present.
	BIO-17056	½ million per m²	50 million pkg = 1,000 ft²			
	BIO-15055	½ million per m²	5 x 250 million pkg = 25,000 ft²			
	BIO-17042	½ million per m²	250 million pkg = 5,000 ft²			
Other pests that are targeted are, larvae of fungus gnats and mushroom fly, adults and pupae of western flower Thrip, larvae of leaf miner. Kills the host by penetrating and the nematodes contain a symbiotic bacterium that kills insects. The bacterium releases once inside the insect, and then the nematodes multiply in the cadaver and then emerge. Good for ornamental, vegetable, soft fruits and tree nurseries.						

Aphids

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Aphid Banker Plants (For Aphidius Colemani, Aphidius Mix I, and Aphidius Mix II)	**BIO-17038**	2 per Acre	Individual Pots	2/acre to start, then 1/acre each week to establish populations.	Place Aphid Banker Plants in Hanging Baskets	Start early and release Aphidius, Aphidius Mix, or Aphidoletes on Aphid Banker Plants.
Aphidius Colemani	**BIO-17035**	0.5 per m²	1 x 500 bottle = 10,000 ft²	Repeat 3X every 7 – 14 days	Place in Aphid bankers or in Aphid hotspots.	Aphidius Colemani attack Green Peach and Black Melon Aphids. 15ºC - 30ºC.
Colemani is very efficient for the biological control of small-sized aphids, especially the cotton aphid and the green peach aphid. It parasitizes adults and nymphs. Parasitism is easy to recognize by the golden-brown colored mummies. A single female can lay hundreds of eggs during the first 4 days of her adult life. A.Colemani has good searching ability and is able to find aphid colonies from a long distance by detecting "alarm signals" produced by an infected plant of the smell of honeydew secreted by its hosts. The presence of a parasitic wasp can cause panic in an Aphid colony, Aphids often let themselves fall to the ground where they usually die. They are applicable on all greenhouse crops on which suitable hosts occur.						
Aphidius Mix-I (500 A.Colemani / 250 A.Ervi)	**BIO-15020**	0.5 per m²	1 x 750 bottle = 15,000 ft²	Repeat 3X every 7 – 14 days	Release on Hotspots.	Mixture of Aphidius Ervi and Aphidius Colemani. Attacks Green Peach and Black Melon Aphids. 15ºC - 30ºC.
Aphid colonies often consist of several aphid species, it can be necessary to introduce both parasitic wasps ervi and colemani. Both parasitic wasps are look-a-like, but differ in size. Ervi is twice as large as colemani. Colemani controls cotton aphid and green peach aphid and Ervi controls potato aphids and foxglove aphid. Both species parasitize adults and nymphs. Parasitized aphids turn golden-brown coloured mummies. One single Aphidius can lay hundreds of eggs during the first 4 days of her life.						
Aphidius Mix-II (250 A.Colemani / 250 A.Ervi / 250 A.Matricariae / 125 A.Abdominalis)	**BIO-17236**	0.5 per m²	1 x 750 bottle = 15,000 ft²	Repeat 3X every 7 – 14 days	Release on Hotspots.	4-way mixture of A. Colemani, A. Ervi, A. Matricariae, and Aphelinus Abdominalis. Targets many Aphid types. 15ºC - 30ºC.
Our Aphidius Mix-II not only contains the widely used Aphidius Colemani and Aphidius Ervi, it also is supplemented with Aphidius Matricariae and Aphelinus Abdonminalis, both of which are also parasitic wasps. The Aphidius Matricariae targets the Green Peach Aphid specifically, while the Aphelinus Abdonminalis targets larger Aphid species such as the Foxglove Aphid and Potato Aphid and still host feeds on small Aphids. This unique parasitic wasp blend parasitizes adult and nymph Green Peach Aphid, Black Melon Aphid, Cotton Aphid, Potato Aphid, and Foxglove Aphid.						
Aphidoletes Aphidimyza	**BIO-17241**	1 per 2m²	1 x 2,000 bottle = 20,000 ft²	Repeat 3X weekly	Place directly on application boxes or 5ml piles. Release in hotspots, out of direct sunlight.	Attacks all Aphid species. Monitor for orange larvae 3 weeks after introduction. Night temp. must be above 16ºC.
Contrary to some other gall midge species, Aphidoletes aphidimyza does not cause damage by forming galls on leaves. The adults feed on pollen and nectar. A female has an excellent searching ability for aphid hot spots where she lays more than one hundred eggs. The larvae are voracious predators preferring almost all aphid species. Immediately after hedging they start sucking aphids empty. One larva needs minimum 5 aphids for its development, but it will kill more than necessary. Aphidoletes are applicable on several crops.						
Lacewing Larvae (C.Carnea)	**BIO-17029**	Hotspot	1 x 1,000 Larvae	As needed	Release in hotspots.	Repeat as necessary.
The big winged and golden eyed Chrysopa Carnea known as green lacewing often occurs spontaneously in greenhouses and open fields. The adult lacewing is not a predator but feeds on nectar, honeydew and pollen. However, the larvae are extremely greedy and very efficient in hot spots. One larva can eat up to 50 aphids per day. Chrysopa larvae also feed on other insects like mealy bugs, red spider mites, Thrips, Whiteflies and small caterpillars. It is applicable in different vegetable, fruit and ornamental crops, especially with a high temperature variation and/or changing relative humidity, as its activity hardly depends on temperature and does not depend on relative humidity.						

Whitefly

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Encarsia Formosa	**BIO-17082**	3 per m²	1 x 5,000 Package = 15,000 ft²	Weekly	Hang card on crop stem or on side of pot. Distribute evenly throughout crop.	Attacks greenhouse Whitefly larvae at temperature range of 18ºC - 30ºC.
The parasitic wasp Encarsia formosa is applied on a wide range of greenhouse vegetable and ornamental crops to control greenhouse whiteflies. In crops with zero pest tolerance is an overkill approach recommended. Encarsia formosa lays its eggs preferably in 3rd and early 4th instar larvae. Parasitized larvae turn black and are therefore easily recognized. Parasitism of the tobacco whitefly is also possible. In this case, parasitized larvae turn brownish. During their life, a female Encarsia formosa parasitizes approximately 250 greenhouse whitefly larvae (max. of 450) and kills another 30 (max. of 70) by host-feeding.						
Eretmocerus eremicus	**BIO-17089**	3 per m²	1 x 10,000 Package = 30,000 ft²	Weekly	Hang card on crop stem or on side of pot. Distribute evenly throughout crop.	Attacks Greenhouse whitefly and sweet potato whitefly larvae. Withstands high temperatures.
This is a parasitic wasp that controls whitefly infestations. Female adults are yellow, have green eyes with three red dots, so five antenna segments in total. The males are yellow brown, have three antenna segments and are smaller than the females. They have a preference for second and third instar larvae of both tobacco and greenhouse whitefly. They are effective at high temperatures and parasitize around 150 whitefly larvae. At higher temps, females lay more eggs but do not live as long. They have a decreased pesticide sensitivity. Good for vegetable and ornamental crops.						
Amblyseius Swirskii	**BIO-17148**	100 per m² (10/ft²)	1 x 25,000 sprinkle tube = 2,500 ft²	Weekly	Hang card on crop stem or on side of pot. Distribute evenly throughout crop.	Attacks Greenhouse Whitefly and Sweet Potato Whitefly (Benisia) Larvae.
Amblyseius swirskii is a voracious predatory mite. The adults are beige and the nymphs are creamy white. Efficient biological control of whitefly and Thrips. The mite eats young Thrip larvae and also devours eggs and larvae of both greenhouse and tobacco whitefly. It is a generalist feeder; among other things it eats small pests such as spider mites and tarsonemid mites. It easily adapts to high temperatures and also feeds on pollen. Swirskii devours 5-10 prey a day but they need a satisfactory food source for fast population growth. The use of alternative food source Nutrimite is recommended during the first few months for optimal population growth.						

Biological Pest Control

biobest BIOLOGICAL SYSTEMS

Thrips

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Amblyseius Cucumeris (1L shaker tube w/ bran)	**BIO-16915**	100 per m² (10/ft²)	1 x 20,000 sprinkle tube = 2,000 ft²	Repeat weekly.	Sprinkle of leaves.	Start application as soon as possible. A. Cucumeris feeds on Thrips larvae only.
	BIO-17015		1 x 50,000 sprinkle tube = 5,000 ft²			
Amblyseius cucumeris is a predatory mite for the control of Thrips larvae and spider mite. They are very mobile and also feed on pollen, enabling it to survive without prey. They can be introduced preventatively in pollen-bearing crops.						
Amblyseius Cucumeris mini sachet (250 mites/sachet)	**BIO-17136**	1 sachet per 2 trays or 1 per pot	Sachet with hook - 500/box	Repeat every 4 weeks.	Hang on plants out of direct light or wedge hook between trays.	Start application as soon as possible. A. Cucumeris feed on Thrips larvae only.
	BIO-17137		Sachet with hook - 1,000/box			
ABS-Mini breeding sachet hook easily onto plant support sticks, allowing for continuous reproduction and constant release of the predatory mite in the crop; more efficient than "broadcasting" the mites on the crop.						
Amblyseius Cucumeris mini sachet on stakes	**BIO-17022**	1 sachet per 2 trays or 1 per pot	500	Repeat every 4 weeks.	Push stake into pot, leave finger space between soil and sachet bottom.	Insert stake into soil making sure sachet does not come in contact w/ soil surface.
	BIO-17014		1,000			
See above Cucumeris comments.						
Amblyseius Swirskii	**BIO-17148**	100 per m² (10/ft²)	1 x 25,000 sprinkle tube = 2,500 ft²	Repeat weekly.	Sprinkle of leaves.	Start application ASAP. A. Swirskii feeds on Thrips and Whitefly larvae as well as spider mite.
	BIO-17219	1 Sachet/pot	1 x 100 Sachets = 100 pots	Repeat every 4 weeks	Hang sachet from plant or pot out of direct sunlight.	Release in hot spot areas or on plants that are very attractive to Thrips.
Amblyseius swirskii is a voracious predatory mite. The adults are beige and the nymphs are creamy white. Efficient biological control of whitefly and Thrips. The mite eats young Thrips larvae and also devours eggs and larvae of both greenhouse and tobacco whitefly. It is a generalist feeder, among other things it eats small pests such as spider mites and tarsonemid mites. It easily adapts to high temperatures and also feeds on pollen. Swirskii devours 5-10 prey a day but they need a satisfactory food source for fast population growth. The use of alternative food source Nutrimite is recommended during the first few months for optimal population growth.						
Steinernema Feltiae (nematodes)	**BIO-15007**	1/2 million per m²	50 million Pkg = 1000 ft²	Apply every 7 - 14 days.	Sprench on damp soil.	Do not apply in direct sunlight.
	BIO-17056	1/2 million per m²	50 million Pkg = 1000 ft²			
	BIO-15055	1/2 million per m²	5 x 250 million pkg = 25,000 ft²			
	BIO-17042	1/2 million per m²	250 million pkg = 5,000 ft²			
Other pests that are targeted are, larvae of fungus gnats and mushroom fly, larvae of leaf miner. Kills the host by penetrating and the nematodes contain a symbiotic bacterium that kills insects. The bacterium releases once inside the insect, and then the nematodes multiply in the cadaver and then emerge. Good for ornamental, vegetable, soft fruits and tree nurseries.						
Orius Insidiosus	**BIO-17112**	0.5 per m²	1 x 1,000 bottle = 20,000 ft²	Repeat as necessary.	Hot spot application or evenly distribute through greenhouse.	Release out of direct sunlight in small piles or in application boxes.
	BIO-17114		1 x 2,000 bottle = 40,000 ft²			
Orius Insidiosus is an excellent predator for Thrips. Adult Orius eat all Thrips stages, while younger Orius nymphs only eat Thrips larvae. Orius can also feed on other prey such as aphids, mites or moth eggs. They sometimes kill more insects than strictly necessary for their own feeding. Orius also eat pollen, allowing preventative introductions in pollen bearing crops. In order to optimize Thrip control, a combined release with predatory mites is the best strategy.						
Atheta Coriaria	**BIO-17006**	1 per m²	1 x 500, 1L Tube = 5000 ft²	Once at each planting.	Place 5ml Piles out of direct sunlight.	Establishes in soil. Attacks Fungus Gnat and Shore Fly Larvae and Thrip Pupae.
	BIO-17008		1 x 1000, 1L Tube = 10,000 ft²			
	BIO-17009		1 x 3000, 5L = 30,000 ft²			
All mobile staged on the predatory beetle Atheta Coriaria are extremely voracious and efficient predators of some of the most troublesome soil insect pests such as larvae of fungus gnats, shore flies as well as the pupae of Thrips. The adults have a large flight range, ensuring a good dispersion throughout a greenhouse. It is applicable in several ornamental, vegetable and arboricultural crops and on different media such as compost, coconut fiber or rock wool.						
Hypoaspis spp.	**BIO-17090**	100 per m² (10/ft²)	1 x 25,000 Tube = 2,500 ft²	Once on plugs, pots and again when transplanting.	Sprinkle lightly on soil.	Establishes in soil. Attacks Fungus Gnat larvae and Thrips pupae.
These mites are brown and robust and they live in the top layer of soil. They feed on harmful soil dwelling pests and can survive without prey for several weeks. They eat the larvae of fungus gnats and those of shoreflies, it also eats Thrip pupae. Both the nymph and adults feed on harmful soil pests and each mite can eat up to 5 prey a day. They contribute to reducing Thrip pupae and in the absence of prey they survive on algae and plant debris.						
ThriPher Lures	**BIO-17131**	1 per 100 m²	Package of 10 Lures	Replace lures every 4 – 6 weeks.	Place the ThriPher lure in one of the holes of the blue BUG-SCAN sticky traps.	Store lures in sealed package at temperature of -18ºC for up to 2 years or at 4ºC for up to 8 weeks.
ThriPher lures contain a sexual aggregation pheromone (Neryl (S)-2-methyl butanoate) to attract western flower Thrips. For a period of 4 – 6 weeks, both male and female adult Thrips are attracted and lured away from their shelters. This pheromone is specific to western flower Thrips; so harmless Thrips and beneficial insects are left alone.						

Spider Mites

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Amblyseius Californicus	**BIO-17228**	Low 2 per m² High 100 per m²	1 x 5,000 Bottle = 25,000 ft²	Weekly for at least 2 applications.	Introduce on pollen producing plants or on low spider mite infestations.	Can resist temperatures between 8ºC and 35ºC and low humidity. Can be used preventatively. Use in conjunction with P.Persimilis in hot spots.
	BIO-17017		1 x 25,000 Bottle = 125,000 ft²			
	BIO-17016	1 sachet/2.5 running meters	100 sachets with hook	Replace every 4 – 6 weeks.	Hang sachet from plant or pot out of direct sunlight.	
	BIO-17019		500 sachets with hook			
Amblyseius Californicus is an effective predatory mite against different species of spider mite. They are translucent with a brown-orange spot in the shape of an X on its back. It feeds on all stages on the two-spotted spider mite. It controls pest mites such as broad mite and cyclamen mite. It has a strong preference for the greenhouse spider mite, but also feeds on other mites, Thrips and pollen. It is most effective at low prey density and is less sensitive to warm and dry conditions. It tolerated cold conditions and can survive on pollen and in the absence of prey can even survive without food for a while. It eats an average of 5 prey a day and the adults prefer eating larvae and nymphs of the greenhouse spider mite. The larvae mainly eat the eggs of greenhouse spider mite.						
Phytoseiulus Persimilis	**BIO-17145**	Low 2 per m² High 100 per m²	1 x 2,000 Bottle = 5,000 ft²	Weekly for 3 weeks.	Introduce once spider mites have been found.	Mist Plants w/ water to remove webbing, and increase % relative humidity.
	BIO-15133		1 x 25,000 Bottle = 70,000 ft²			
Phytoseiulus Persimilis is a highly voracious predatory mite. It is efficient worldwide for the control of spider mites. Every day, the adult mite devours about 20 spider mite eggs or larvae, 10 nymphs or 5 adult spider mites. Under normal circumstances, this predatory mite population will outgrow any spider mite population. Adult females lay a lot of eggs in their lifetime. They can save your crops from spider mite infestations in a few days.						
Nutrimite Predatory Mite Food	**BIO-15065**	500 grams /Hectare / application	500 grams	Every 14 days, minimum of 2 – 3 application	Apply using mechanical dispersion with blower.	Product can be stored for up to two years if kept at -18ºC.
A pollen source to supplement Amblyseius Californicus and Amblyseius Swirskii during a biological control program. By providing a food source during low pest pressure, you can increase your biological population in preparation for increased pest pressure. Excellent in a preventative program for ornamentals and vegetables.						

Biological Pest Control

Mealybug

Bio Name	E/S Part#	Application Rate	Package Size	Frequency	Directions	Special Instructions
Cryptolaemus Montrouzieri (Must be ordered 2 weeks in advance)	**BIO-17030**	Hot Spot	250/Unit Larvae	Weekly as needed.	Place on leaves, out of sunlight.	Female can lay up to 10 eggs a day. It takes 32 days for an egg to reach maturity. Female live for about 2 months.
	BIO-15022		500/Unit Adult			

The black-brown colored lady beetle is a voracious mealybug predatory in both larval and adult stages. Female adults can lay a total of 400 eggs in hot spots and a single Cryptolaemus larva may consume up to 250 mealybugs. When prey is scarce, they also feed on aphids and soft scales. Cryptolaemus larvae are covered with white waxy threads, superficially resembling its prey. This form of aggressive mimicry makes them inconspicuous in a mealy bug colony. ***Typical order lead-time is two (2) weeks.***

Miscellaneous Products

Item	E/S Part #	Package Size	Instructions / Comments
Bio Box	**BIO-17037**	50/Case	The Bio-Box is a tool for spreading beneficial insects such as Aphidoletes in any crop. Boxes can be used for many weeks.
	BIO-17037-UNIT	1's	
Yellow Sticky Card	**YELLGL-10X25-20**	10cm x 25cm Card (20/Pack)	1 Card per 1,000 – 2,000 ft². Hang 20 – 30 cm above crop.
Yellow Sticky Card	**YELLGL-25X40-20**	25cm x 40cm Card (20/Pack)	Hotspots. Use for mass trapping.
Yellow Sticky Tape	**YELLOWGLUE125**	15cm x 125-meter roll	Large hotspots. Use for mass trapping.
Blue Sticky Card	**BLUEGLUE10**	10cm x 25cm Card (10/Pack)	1 Card per 1,000 – 2,000 ft². Hang 20 – 30 cm above crop to trap Thrips.
ThriPher Lures	**BIO-17131**	10/Pack	Rate: 1 per 20,000ft². Apply to yellow or blue sticky card. Attracts male and female Thrips.

Beehive Pollinators

Name	E/S Part#	Application Rate	Package Size	Directions / Comments
Standard "A" Hive	**BEEHIVEA-STD**	1 hive per 20,000 ft²	Min. of 60-70 Workers and Pupae	Set in crop on stand above ground. Remove sugar water cap. Hive will last 10 weeks.
Medium "C" Hive	**BEEHIVEC-MED**	1 hive per 5,000 ft²	Min. of 30-40 Workers and Pupae	Set in crop on stand above ground. Remove sugar water cap. Hive will last 4 weeks.

Outdoor hives also available – please call our office for details.

Biological Control Chemical Compatibility Chart

The below chart highlights select commercial Insecticides and Fungicides and their side effects on more commonly used Beneficial Insects. Visit the Biobest website (www.biobestgroup.com) for a more comprehensive information of the beneficials and side effects of horticultural chemicals on them.

Application Method
S = Spraying
D = Dusting
I = Irrigation

Persistence
W = Weeks
D = Days

Safe < 25% mortality.
25-50% mortality, efficacy may be somewhat reduced.
50-75% mortality, risk of failure before persistence period is over.
>75% mortality, introduce after persistence period is over.

		Application Mode	A.andersoni	A.californicus	A.cucumeris	A.swirskii	Aphidius spp.	Aphidoletes aphydimyza	Chrysopa carnea (Lacewing)	Diglyphus isaea	Encarsia Formosa	Erectmocerus spp.	Feltiella acarisuga	Hypoaspis spp.	Nematodes	Orius insidiosus	Phytoseiulus persimilis
INSECTICIDES	**Altus**	I	?	?	?			?		?	?		?	?	?	?	?
	Botanigard (Beauvaria bassiana)	S	?	3D				?		?		?	?		?		
	Dipel (BT var kurstaki) *BIO*	S															
	Dyno-Mite 75WP (Pyridaben)	S		5D						1W	2W	1W					2D
	Enstar EW (S-kinoprene)	S	?			?				?			?				
	Fujimite (Fenpyroximate)	S	?	5D				2W				?		?	?		2W
	Kontos (Spirotetramat)	I	?	?	?		?	?	?	?	?	?	?	?	?	?	?
	Kontos (Spirotetramat)	S									4W	4W	?	?	?		
	Safers Insecticidal Soap *BIO*	S	?														
	Success 480 (Spinosad)	S			2W	2W									?	2W	1W
	Success 480 (Spinosad)	I													?		
	Tristar 70WSP (Acetamiprid)	S		5D	5D	3W					2W			1W	?	6W	1W
FUNGICIDES	**Copper Spray** (Copper Oxychloride)	S	?			?	?			?			?		?		?
	Daconil (Chlorothalonil)	S															
	Nova 40WP (Myclobutanil)	S								?			?				
	Phyton-27 (Copper Component)	S	?			?	?			?							
	Rootshield/Plus (Trichoderma harzianum / virens) *BIO*	S		?	?	?		?	?	?	?	?	?	?	?		
	Senator 50SC (Thiophanate-methyl)	S			2W			?			3D		?				2W
	Subdue Maxx (Metalaxyl)	S		?						?		?					
	Truban (Etridiazole)	I				?										?	

ORDERING BIOLOGICAL CONTROL PRODUCTS

- **Orders for biological products must be placed weekly by no later than FRIDAY 3:00 P.M. CST to ensure delivery to Even-Spray's warehouse for the following Tuesday or Wednesday morning. Statutory holidays may affect order deadline and delivery dates.**
- **Inbound air freight charges may apply; please contact our office for more details. The maximum inbound freight charge per order is $60.00.**
- **All biologicals are considered special order; all sales are final.**

www.biobestgroup.com
www.plantproducts.com
www.evenspray.com