



Biological Control Agents (BCAs): Poinsettia Insect Management

BCA Insect Control					
Pest	BCA	Rate Units/m ²	Rate Units/ft ²	Release strategy	Application Notes
Whiteflies Sweet potato whitefly (<i>Bemisia tabaci</i>); Greenhouse whitefly (<i>Trialeurodes vaporariorum</i>) Note: ¹ Especially in stock plant production during the warmest time of the year, it is a good idea to take a ‘pitchfork’ approach using both wasp species and <i>Amblyseius swirskii</i> . ² Blister packs are the preferred release method for <i>Eretmocer</i> to ensure the best possible hatch rate of pupa, as <i>Eretmocer</i> only hatches from one side of the pupa	<i>Encarsia formosa</i>	5 – 10	0.5 – 1	Start Introducing in propagation and continue weekly introductions until early November.	Avoid exposure of cards or blister packs to direct sunlight. Establish a monitoring system of a minimum of 25 yellow sticky cards/ha (10 cards per acre.) The most common whitefly species in Poinsettia is <i>Bemisia tabaci</i> . For best results <i>Eretmocer</i> effects both whitefly species. <i>Encarsia formosa</i> is not effective against <i>Bemisia tabaci</i> .
	<i>Eretmocer</i> <i>eremicus</i>	5 – 10	0.5 – 1		
	<i>Amblyseius swirskii</i>	50 (when loose)	5 (when loose)	Introduce on rooted cuttings before transplant. Synchronize second introduction just prior to spacing.	Ensure good foliage coverage to guarantee a higher number of predatory mites ending up on each plant. A battery-operated blower can be used for better coverage and saving time.
		1 sachet/10-inch pot of <i>Poinsettia</i> or per stock plant		Introduce sachets at sticking and again after transplanting into next phase pots.	Replace the sachets with a new batch every 4 - 5 weeks.
Thrips Western Flower Thrips (<i>Frankliniella occidentalis</i>); Chili Thrips (<i>Scirtothrips dorsalis</i>); Poinsettia thrips (<i>Echinothrips americanus</i>); and other species Note: Most thrips species do not develop well on Poinsettia crop as it is not a great host plant. Thrips damage early in the crop typically is a carry-over from previous crop and disappears as the crop matures. There is one thrips species that does develop in Poinsettia: <i>Echinothrips americanus</i> .	<i>Amblyseius swirskii</i>	50 (when loose)	5 (when loose)	Introduce on rooted cuttings before transplant. Synchronize second introduction just prior to spacing.	Ensure good foliage coverage to guarantee a higher number of predatory mites ending up on each plant. A battery-operated blower can be used for better coverage and saving time.
		1 sachet/10 inches pot of <i>Poinsettia</i> or per stock plant			Ensure the sachets are in contact with plant foliage for better results.
	<i>Stratiolaelaps scimitus</i> (= <i>Hypoaspis miles</i>)	100	10	Release first on the organic substrate during propagation and repeat after planting to other containers containing organic material.	Release full rate during propagation. Release half rate after planting if full rate used during propagation. Both species can be mixed and applied together.
	<i>Dalotia coriaria</i> (= <i>Atheta coriaria</i>)	2	0.2		Note: Both species do not do well in Oasis plug. In that situation apply after transplanting at full rate.
	<i>Steinernema feltiae</i> (NemaShield)	250K - 300K	25K - 30K	Apply during propagation.	Ensure a constant agitation/aeration of the suspension during application. Remove filters and keep a low pressure for best results. This product is also effective for the control of fungus gnats.



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Two-spotted Spider Mites (<i>Tetranychus urticae</i>)	<i>Phytoseiulus persimilis</i>	6 – 8	0.6 – 0.8	Release when first spider mites are detected. Continue releasing for 4 weeks for better results.	Consider using indicator plants (bush beans) for biocontrol monitoring. Note: <i>Phytoseiulus persimilis</i> is not effective against Lewis mites.
	<i>Amblyseius californicus</i>	6 – 8	0.6 – 0.8		
	<i>Amblyseius fallacis</i>	6 – 8	0.6 – 0.8		
Lewis mites (<i>Eotetranychus lewisi</i>)	<i>Amblyseius andersoni</i>	4 – 6	0.4 – 0.6		
Fungus gnats (<i>Bradysia</i> spp.) and Shore flies (<i>Scatella</i> spp.)	<i>Stratiolaelaps scimitus</i> (= <i>Hypoaspis miles</i>)	100	10	Release first on the organic substrate during propagation and repeat after planting to other containers containing organic material.	Release full rate during propagation. Release half rate after planting if full rate was used during propagation. Both species can be mixed and applied together. Note: Both species do not do well in Oasis plugs. In that situation apply after transplanting, at full rate.
	<i>Dalotia coriaria</i> (= <i>Atheta coriaria</i>)	2	0.2		
	<i>Steinernema feltiae</i> (NemaShield)	250K - 300K	25K - 30K	Apply during propagation.	Ensure a constant agitation/aeration of the suspension during application. Remove filters and keep a low pressure for best results. This product is also effective for the control of thrips.
Aphids (<i>Aphis gossypii</i> ; <i>Myzus persicae</i> ; <i>M. nicotianae</i>) Note: It is very rare to see aphids in Poinsettia crops, but occasionally they do show up.	<i>Aphidius colemani</i>	0.25 – 1.0	0.025 – 0.1	Release every week until control has been achieved.	Release at least once per week until control has been achieved.
	<i>Aphidoletes aphidimyza</i>	1	0.1	Release at first signs of aphid presence.	Keep as part of the aphid biocontrol strategy until control is achieved.
	<i>Chrysoperla</i> spp.	10 – 20	1 - 2	Use mainly as a hot spot control strategy.	Release for a knock-down effect on hot spots.

Refer to our guide on [“Utilizing Dips: Clean up incoming plant material”](#) for more details on how to use some of our other products to reduce the risks of ‘hitch hikers’ on your young plant material coming in through the door. Contact your Biological Control Advisor or Biological Solutions Advisor for additional information.