



IPM Laboratories, Inc.

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Aphid Guard™ Aphid Banker Plant

Bank on your aphid natural enemies with Aphid Guard™

Support for aphid parasite *Aphidius colemani* and aphid midge, *Aphidoletes aphidimyza*

Aphid host/prey: *Rhopalosiphon padi*, bird cherry oat aphid

Aphid Host Plant: barley or wheat

Instructions:

Keep the grass healthy by dividing and replanting. Put 1/6 of the aphids from one banker plant into each of six 6 inch pots or 1/3 into each of three 10 inch pots, spacing the plants a bit so that they are not so crowded. Both grass and aphids prefer cooler temperatures, near 70° F with even moisture. Water gently, or set up a drip line to assure that the aphids are not knocked off the grass.

If aphid parasites or predators are already in the greenhouse, they will suppress the aphids on the Aphid Guard plant. Protect the aphids in a cage or under a hairnet for one or 2 weeks until they quadruple in number

If aphid parasites or predators are not yet in the greenhouse, grow the Aphid Guard for 1 to 2 weeks in its new pot before introducing the natural enemies.

New Pot Production:

Seed new pots weekly or biweekly. Barley, wheat, rye, and oats all serve well. Distribute grain in 6-10 inch pot at a rate of about 4 seeds per square inch. (For barley, use 2 teaspoons for a 6 inch pot and 5 teaspoons for a 10 inch pot). Allow six days for germination at about 70° F. Cereal germination declines as temperatures rise above 70° F.

Greenhouse Introduction Rate: Add 1 potted banker plant to 2000- 5000 square feet every week or two, evenly spacing them throughout the area. For larger areas, add new aphid banker plants weekly to assure constant aphid food for the natural enemies.

The rate of banker plants **per acre** varies with which aphid parasites or predators that you are trying to feed. To support parasites, if we aim for .25-.5 pots per thousand sq ft at the end of 10 weeks, then we eventually end up with 10 – 20 pots, but in week one, we only need 1 to 2 pots, week two another 1 to 2 pots, week 3 another 1 - 2 pots, etc. For the biweekly scheme, start with 2 - 4 pots.

Triple the numbers to support predators. Predators that can use aphid banker plants are *Aphidoletes aphidimyza* (the aphid midge) and *Scymnus creperus* (a tiny lady beetle produced by IPM Laboratories, Inc.)

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Aphid Culture Tips:

Shelter the new aphids from parasites and predators until they are numerous or the parasites and predators will prevent aphid increase. If you wish to keep a culture of aphids that are free of natural enemies, you must keep the natural enemies away from the aphids by protecting the plants with a finely woven screen or glass. Alternatively, you can grow some plants at a different site.

Grow or purchase the number of new banker plants to be added to the greenhouse every 1 or 2 weeks. If growing your own, you can transfer clean aphids to the new plants as soon as they are an inch high. "Share" the aphids from older parent plants by gently brushing one plant over the new plant.

For those of you that are growing your own aphids, you need twice as many aphid pots set aside for parents as the number of pots going into the greenhouse in any given week, one set destined for the greenhouse and one set destined as aphid parents. Thus one third of the banker plant purchase goes into the greenhouse, and two thirds goes to clean aphid production (unless you plan to purchase in your breeding stock weekly or biweekly). Thus, one banker plant unit will supply two 6 inch pots to be placed in the greenhouse, plus four 6 inch pots to be put into aphid production or one 10 inch pot for the greenhouse and two 10 inch pots for aphid production.

Aphid Parasite Tips:

Release about 100 *Aphidius colemani* per banker plant pot AFTER the aphids have had a couple of weeks to multiply on that pot. Observe the plants regularly for aphid mummies. Repeat the release with a fresh set of *Aphidius* the following week.

Caution:

- Watch the crop closely for aphid mummies. If you find aphid colonies in the crop that do not have any mummies, check the aphid species. *Aphidius colemani*, the parasite that reproduces on *R. padi* (the aphids on the banker plant) will not successfully attack potato aphid or foxglove aphid.
- Keep ornamental grasses away from the banker plant aphids until you have made sure that the aphids will not cause a problem for your crop. Even though the aphids are likely to colonize the ornamental crop and give excellent aphid control, be cautious and observant to be sure that a problem does not occur.

Is the cost of overnight freight a problem?

Ask about our new plant-free aphids. We offer the same number of aphids. The reduced size of the box reduces freight costs. For this product, you must have cereal plants to receive the aphids when they arrive since there is no food for the aphids in the shipment.

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