

GROWERTALKS

Features

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Biocontrol Lingo

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Arthropod—Invertebrate animals that are often segmented. They have exoskeletons. This term includes insects, spiders and crustaceans.

Artificial diet—When something is reared on a food source that they wouldn't feed on in the wild. This can be a food made in a lab, not an actual insect.

Augmentative biological control—Releasing beneficials to supplement the already present local beneficials to control a pest issue.

Bang board—A piece of white or black plastic used by scouts to shake plant foliage over. The beneficials and pests on the plant will fall onto the plastic, making them easy to see.

Banker plant—Plants that are grown to help support beneficial insects by providing food (like pollen, nectar or other arthropods) that they cannot get (or get enough) from the crop. Commonly used plants include peppers, barley and alyssum.

Beneficials—The good guys.

Biological control (Biocontrol)—The use of natural enemies to control pests. Most commonly insects, mites and nematodes are used to control problems. Biocontrol can also encompass the use of microbials, like fungi and bacteria.

Biological control agents (BCAs)—Referring to the insects, mites and nematodes used to control pests. Technically, it could include biopesticides, but most often when people use this term they're talking about the larger agents, including insects, mites and nematodes, as opposed to fungi, bacteria or viruses.

Biopesticides—Pesticides that are derived from natural sources; they're further classified as biochemical or biological pesticides. Biologically based products commonly contain fungi, bacteria or viruses.

Blister pack—A delivery system for flying beneficials and some predatory mites where they can be hung and a flap opened for the beneficials to fly out of.

Blower—A commercial or homemade device for blowing beneficials over a larger area onto a crop.

Carrier—When purchasing beneficials, they need to have media for them to live in while traveling. Examples are buckwheat hulls, sawdust, vermiculite or peat moss.

Conservation biological control—Approaching your pest management program using your native and naturalized

beneficials. Spray products are selected to minimize impact on them.

Cucs (slang)—Short for the predatory mite *Amblyseius cucumeris*. Used for controlling some thrips species, broad mites and other pests.

Ectoparasitoid—A parasitoid that lives on the external surface of its host, feeding on it and killing it in the process. An example would be *Diglyphus* wasps.

Endoparasitoid—A parasitoid that lives inside of its host, feeding on it and killing it in the process.

Entomopathogenic—Something that produces disease in an insect. Often referring to fungi or beneficial nematodes.

Factitious host—When a beneficial is reared on a different diet than it would normally feed on in the wild. It's used to reduce rearing costs.

Generalist—An insect or mite that will feed on many different food sources.

Hex cell—Slice of corrugated cardboard that lacewing larvae are reared and shipped in.

Hyperparasitoid—A parasitoid that uses another parasitoid as a host. Not good in a biological control program.

In vitro—Term often used when talking about rearing beneficial nematodes. In vitro refers to a rearing method where the nematodes are reared on an artificial medium and NOT on a live insect.

In vivo—Term often used when talking about rearing beneficial nematodes. In vivo refers to a rearing method where the nematodes are reared inside of an insect host.

Insect—Type of arthropod that normally has three body regions: head with antennae, thorax and abdomen. Normally have two pair of wings, but not always.

Insectary—Facility where beneficial insects, mites and nematodes are grown. Basically an insect farm.

Insectary plants—Similar to banker plants, but these are used primarily for pollen and nectar for beneficials and pollinators. Often planted outside to attract local beneficials to the commercial crop, but also can be used indoors.

Intraguild predation—When a natural enemy feeds on another natural enemy. The natural enemies often share the same food source.

Inundative biological control—Releasing large numbers of beneficials to control a pest issue. Often done on a regular schedule because the beneficials aren't expected to establish.

Macro biocontrol agents—The larger beneficials like insects and mites.

Micro biocontrol agents—The microscopic beneficials like bacteria, fungi and viruses.

Mite—Invertebrate animals that have two body parts. No wings or antennae.

Mummy—The golden or black swollen aphid body after it's been parasitized by a wasp. They remain on the plants even after the new parasitoid has emerged.

Natural enemies—Term for the beneficials that eat pests. Normally, it's used for insects, mites and nematodes, but can also include pathogens.

Naturalized—An organism that wasn't native to an area, but through many generations is now established.

Nematodes—Non-segmented worm. Can be parasitic or free-living. In agriculture, some are beneficial, however, there are also pest species that can attack plants.

P Mite (slang)—Short for the predatory mite *Phytoseiulus persimilis*. Used for controlling twospotted spider mites.

Parasite—An organism that feeds on another organism, but may or may not harm the host. Examples would be a mosquito or flea.

Parasitoid—An insect that lays its egg inside of its prey, ultimately resulting in the death of the host. An example would be *Aphidius sp.* feeding on aphids.

Pesticide compatibility—How a pesticide will impact natural enemies and microbials. Not just will it kill them, but how long will the product persist on the crop, thus potentially impacting beneficials. This includes insecticides, miticides, fungicides and PGRs.

Predator—An insect or mite that feeds on other organisms. Often feeds on a few different species. Lacewings, minute pirate bugs and ladybird beetles are a few examples.

Predatory mite—Mites used to feed on pest insects and mites.

- Type I predatory mites—Highly specific. Mites that only feed on a specific group/family of mites. An example would be *Phytoseiulus persimilis* that only feed on twospotted spider mites.
- Type II predatory mites—Broadly specific. These mites still prefer the spider mite family, but will feed on other food sources like insects, mites and pollen. An example would be *Neoseiulus californicus*.
- Type III predatory mites—Generalist. These mites have a wide food range. They feed on mites, insects, pollen and even fungi. An example would be *Amblydromalus limonicus*.

Rove beetle—Common name for the predatory beetle species *Dalotia coriaria*.

Sachet—Release system used for certain predatory mites. Small packets (similar to a sugar packet) either on a hook or a stick. Most are slow-release, but some can be rapid-release depending on the specific mite species. Slow-release contain a food source to nourish the beneficial mites over the release period (typically four to six weeks).

Specialist—An insect or mite that only feeds on a specific species.

Sticky cards—Yellow or blue cards that have adhesive on them. Used to trap flying insects for scouting and monitoring populations.

Strats (slang)—Short for the predatory mite *Stratiolaelaps scimitus*. Formally called *Hypoaspis miles*. Used to control soil-dwelling pests.

Supplemental feeding—Beneficial foods such as pollen that feed and support beneficials when pests are scarce.

Trap crop—Sacrificial plants that are grown to try and pull insects out of a commercial crop. This allows the trap crop plants to be removed or treated with pesticides. **GT**

Suzanne Wainwright-Evans is the owner of Buglady Consulting, now in business 20 years. She specializes in biological control agents and troubleshooting pest issues in ornamentals, cannabis and other specialty crops.