EcoLure
Attract Ladybirds, Lacewings and other beneficial insects to your garden to prey on pests
MAKHRO
HOME AND GARDEN

What is EcoLure?

EcoLure is a synthetic lure designed to attract predators and beneficial insects. I mimics natural scents that attract predatory insects.

Benefits

Eco-Friendly – reduces the need for chemical pesticides, promoting a more sustainable approach to pest management.
Selective Targeting – Attracts specific predators, reducing non target effects
Efficiency – Improves pest control by utilizing natural biological control agents

Application

Placed in areas where pest control is needed.

What will EcoLure attract?

Lacewing - Larvae of lacewings are generalist predators and attack almost any soft-bodied insect such as aphids, mites, whiteflies, mealybugs, thrips, scale crawlers, caterpillars, psyllids and eggs of all. Larva can kill 30-50 aphids per day.

Lady Beetle - Aggressive predator of aphids, mites, scale crawlers, caterpillar and beetle eggs and larvae, particularly Colorado potato beetle.

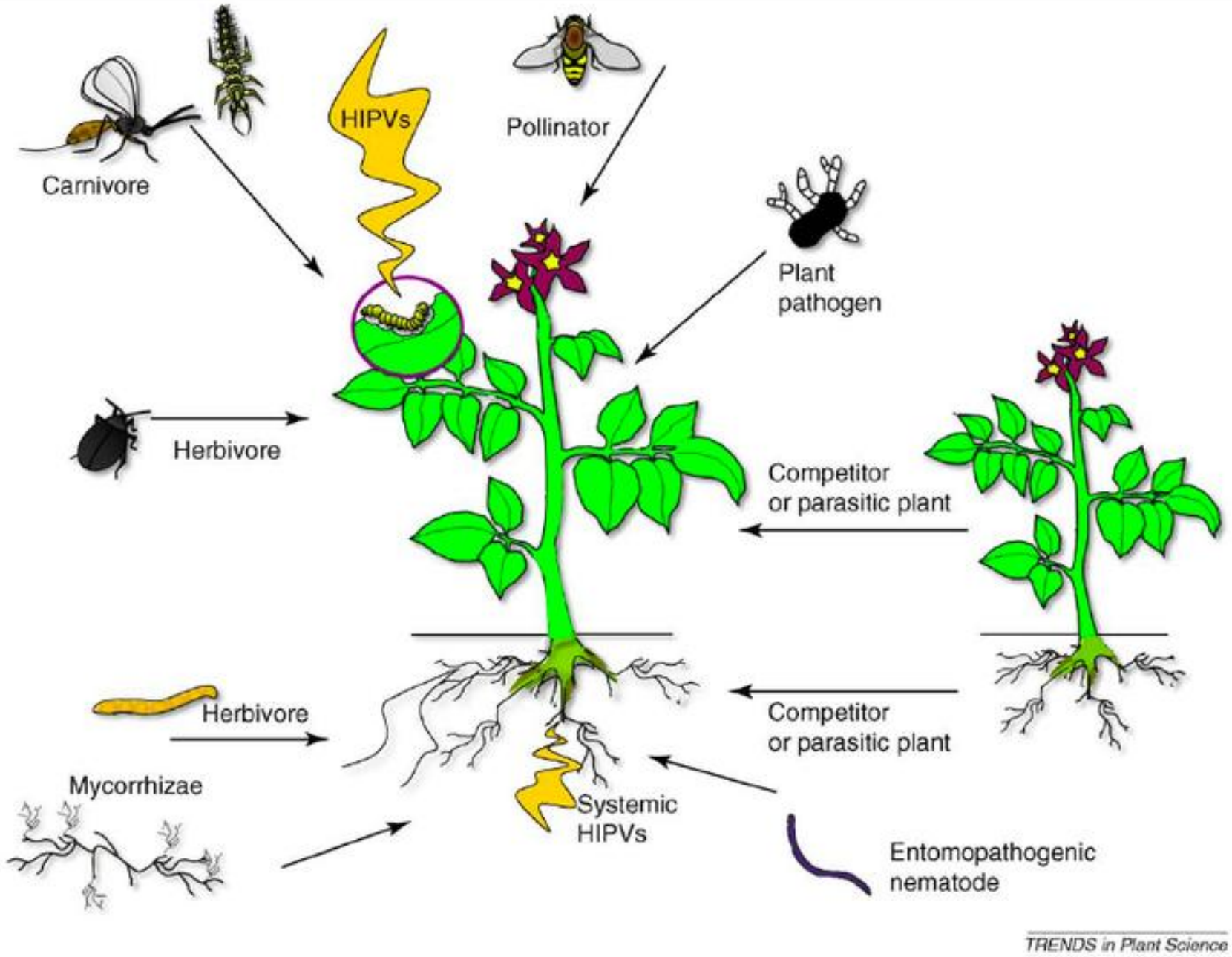
Syrphids - (Flower or Hover flies) Adult flies feed on pollen and nectar, whereas larvae feed on all soft-bodied insects. Larvae can consume 200-800 aphids in a 7-10 day period. They play an important role in suppressing populations of phytophagous insects.

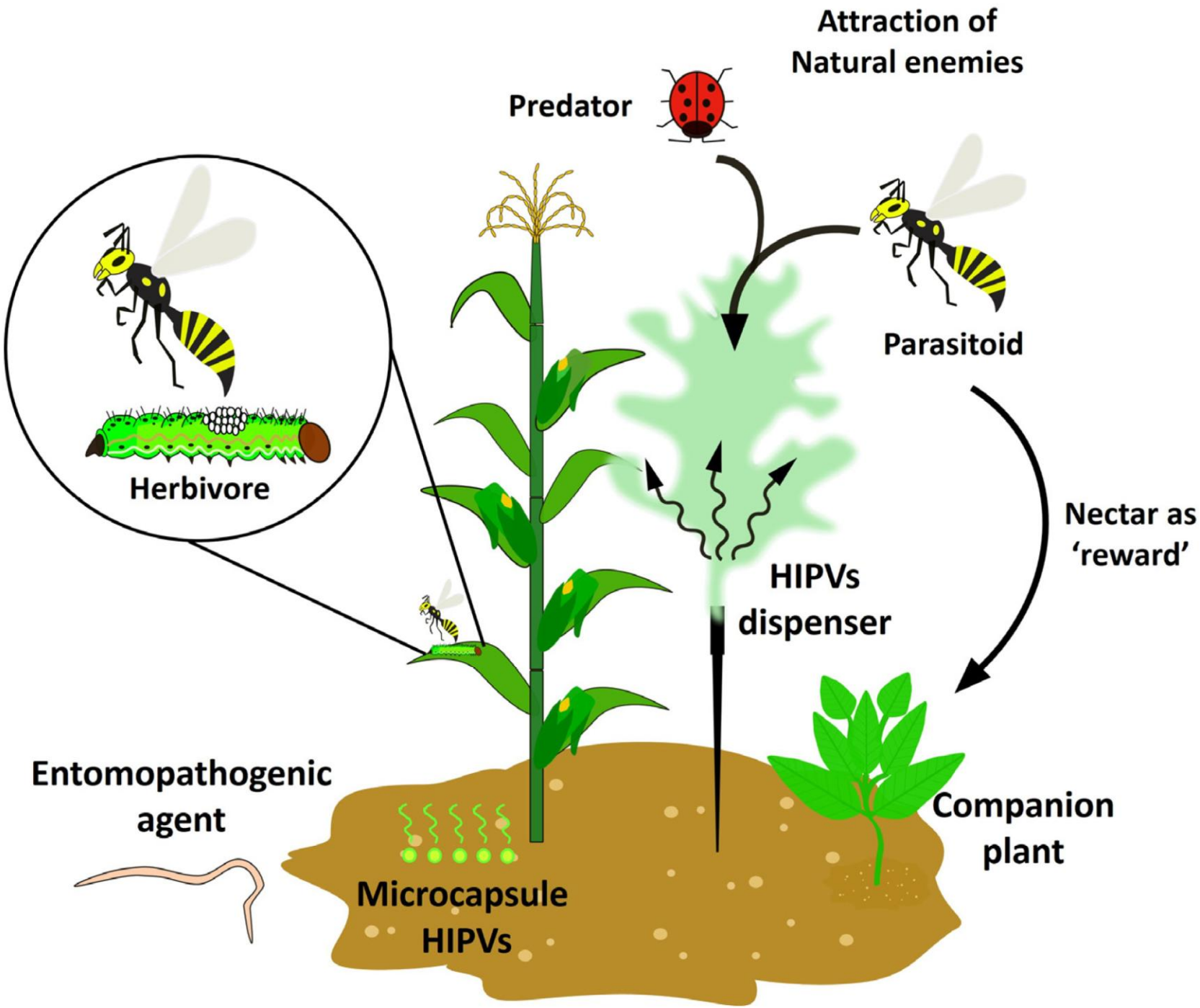
Orius - Minute Pirate Bug. A generalist predator in many crops, ornamentals, and landscape. Adults and nymphs feed on small insects and eggs of aphids, mites, psyllids, thrips, whiteflies, and small caterpillars.

Phytoseiulus - A predatory mite that feeds exclusively on spider mites. Can devour several dozen mite eggs in a day and two to three adults.

HIPV’s

HIPVs (herbivore-induced plant volatiles) volatiles that a plant produces in response to herbivory. These can either be compounds that a plant does not biosynthesise unless it is damaged or compounds that are also synthesised by undamaged plants but in larger amounts by damaged plants.


Carnivore
HIPVs
Pollinator
Plant
pathogen
Herbivore
Competitor
or parasitic plant
Herbivore
Competitor
or parasitic plant
Mycorrhizae
Systemic
HIPVs
Entomopathogenic
nematode
TRENDS in Plant Science


Attraction of
Natural enemies
Predator
Parasitoid
Herbivore
HIPVs
dispenser
Nectar as
‘reward’
Entomopathogenic
agent
Companion
plant
Microcapsule
HIPVs

Kairomone

A **kairomone** (a coinage using the Greek καιρός *opportune moment*, paralleling pheromone[1][2][3]) is a semiochemical, emitted by an organism, which mediates interspecific interactions in a way that benefits an individual of another species which receives it and harms the emitter.[4] This "eavesdropping" is often disadvantageous to the producer (though other benefits of producing the substance may outweigh this cost, hence its persistence over evolutionary time). The kairomone improves the fitness of the recipient and in this respect differs from an allomone (which is the opposite: it benefits the producer and harms the receiver) and a synomone (which benefits both parties). The term is mostly used in the field of entomology (the study of insects). Two main ecological cues are provided by kairomones; they generally either indicate a food source for the receiver, or the presence of a predator, the latter of which is less common or at least less studied.

Predators use them to find prey

An example of this can be found in the Ponderosa Pine tree (*Pinus ponderosa*), which produces a terpene called myrcene when it is damaged by the Western pine beetle. Instead of deterring the insect, it acts synergistically with aggregation pheromones which in turn act to lure more beetles to the tree. [*citation needed*]

Specialist predatory beetles find bark beetles (their prey) using the pheromones the bark beetles produce. In this case the chemical substance produced is both a pheromone (communication between bark beetles) and a kairomone (eavesdropping). This was discovered accidentally when the predatory beetles and other enemies were attracted to insect traps baited with bark beetle pheromones.[5]

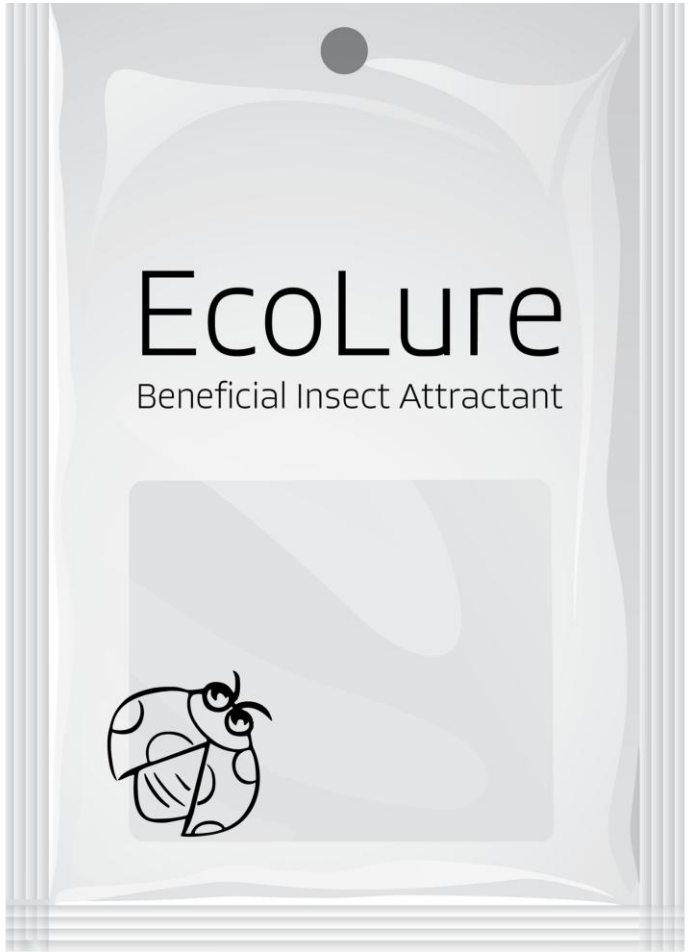
Pheromones of different kinds may be exploited as kairomones by receivers. The German wasp, *Vespula germanica*, is attracted to a pheromone produced by male Mediterranean fruit flies (*Ceratitis capitata*) when the males gather for a mating display, causing the death of some. In contrast, it is the alarm pheromone (used to communicate the presence of a threat) of an ant (*Iridomyrmex purpureus*) that a spider predator is attracted to.[4]

Applications

Like pheromones (communication chemicals used within a species), kairomones can be utilized as an 'attracticide' to lure a pest species to a location. However, they might also be used to lure desired species. Kairomones produced by the hosts of parasitic wasps have been used in an attempt to attract them and keep them around in crops where they reduce herbivory, but this could instead result in fewer attacks on the herbivorous pest if the applied kairomone distracts them from finding real hosts.[4] For example, studies have shown that kairomones are effective in attracting female African sugarcane borers to deposit eggs on dead leaf material.[16]
Recent discoveries have highlighted that predators are attracted to the odour of co-existing predators.[17]
Kairomones have been extensively studied, and some are in successful usage, in Florida's *Anastrepha suspensa* eradication zone in support of the citrus, and various other orchard industries there.[18]

Mesostigmata, Phytoseiidae, Amblyseiinae		
Amblyseius potentillae	K	
Phytoseiulus persimilis	A	Predatory mite
Phytoseiulus persimilis	K	Predatory mite
Coleoptera, Coccinellidae, Coccinellinae, Coccinellini		
Coccinella septempunctata	A	Seven-spotted ladybird
Coleomegilla maculata	A	Pink spotted lady beetle
Cycloneda munda	A	Polished ladybird beetle
Harmonia axyridis	A	Asian ladybird beetle
Hippodamia convergens	A	Convergent lady beetle
Hippodamia parenthesis	A	Parenthesis lady beetle
Propylea quatuordecimpunctata	A	Fourteen-spotted ladybird
Coleoptera, Coccinellidae, Scymninae, Stethorini		
Stethorus punctum picipes	A	Spider mite destroyer
Diptera, Syrphidae, Syrphinae, Syrphini		
Eupeodes corollae	A	Vagrant hoverfly
Meliscaeva auricollis	A	Migrant hoverfly
Syrphus ribesii	A	Currant hover fly
Diptera, Syrphidae, Syrphinae, Toxomerini		
Toxomerus marginatus	A	Small hover fly
Neuroptera, Chrysopidae, Chrysopinae, Chrysopini		
Chrysopa nigricornis	A	Black-horned green lacewing
Chrysopa oculata	A	Golden-eye lacewing
Chrysoperla carnea	A	Common green lacewing
Chrysoperla lucasina	A	Confused green lacewing
Chrysoperla pallida	A	

CONTAINS 1 POWERFUL LURE!



Target market

- Home Garden market
- Greenhouses
- Landscapers
- Arborists
- Pest control companies – public spaces
- Forest & land management

CROP	TRAPS & LURES (PULL)	LURE	PEST	NATURAL ENEMY	RESULTS
Strawberry	Optiroll super plus blue		Thrips	Predatory mites	95% reduction in thrips numbers
Strawberry	Green-vane bucket trap		Capsids	lacewing	65% reduction in capsid damage
Blueberry	Optiroll super midge white		Blueberry midge	Hoverfly	65% reduction in blueberry midge larvae
Pear	Impact board-yellow		Pear sucker	Ladybird	60% reduction in pear sucker nymphs
Cabbage	Impact board-yellow		Cabbage whitefly	Parasitic wasp	39% reduction in cabbage whitefly
Tomato	Tuta roll Black		*Tuta absoluta*	*Macrolophus*	Trials in progress
Palm	Bucket trap and Rhylure		Red palm weevil	Earwig	55% increase in trap catch of red palm weevil