

**PHEROBIO™**

Ecological Pest Solutions



# Pheromone

2025-2026



## **Pursuing sustainable, economical and ecological solutions, for a greener planet**

Our mission is to support both growers and the planet. We produce state-of-the-art pheromone and semiochemical based products and services. These products serve as key components in various integrated pest management (IPM) strategies that aim to decrease toxicity and increase productivity in a sustainable manner.

Mating disruption formulations target primary pests by interfering with mating communication. Traps and lures are used to detect, monitor and in some instances mass trap damaging insect pests.

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Please contact us if your requested product is not on this list.

Please be noted that Pherobio will add, remove or make amends to any products on this listing without further notice. Use this catalog as a reference only.

Pherobio Technology Co., Ltd

[www.pherobio.com](http://www.pherobio.com)

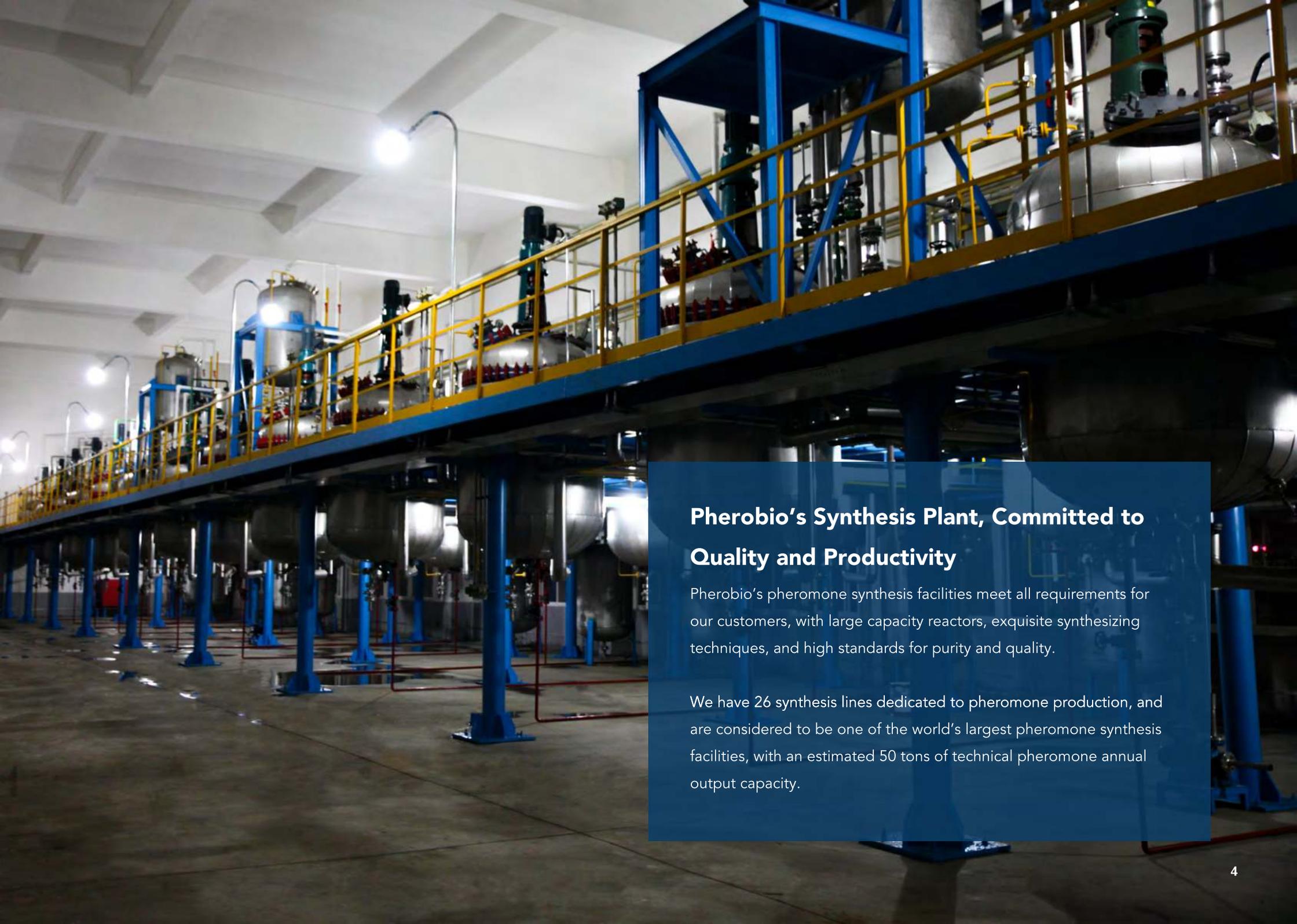
[info@pherobio.com](mailto:info@pherobio.com)



## World's Reliable Source of Semiochemical & Bio-control Products

Established in 2003, Pherobio Technology is active world-wide and engaged in research and development, production, and marketing of bio-control products and technologies. For almost two decades we have focused on pheromone based, ecological pest management solutions. With over 200 products in our portfolio we serve growers and consumers in many market sectors including producers of vegetables, grains, fruits, fibers and forests.

With VDAL™, and other products in development, we are developing a portfolio of natural and biologically-based products for plant health management and IPM that compliment pheromone-based IPM strategies.



## **Pherobio's Synthesis Plant, Committed to Quality and Productivity**

Pherobio's pheromone synthesis facilities meet all requirements for our customers, with large capacity reactors, exquisite synthesizing techniques, and high standards for purity and quality.

We have 26 synthesis lines dedicated to pheromone production, and are considered to be one of the world's largest pheromone synthesis facilities, with an estimated 50 tons of technical pheromone annual output capacity.



## **Research and development, for better agriculture**

As a technology company, we have always put our R&D as a top priority; to serve growers with novel and innovative bio-control products.

Our team consists of various highly specialized researchers including chemists, biologists and engineers experienced in semiochemical synthesis, formulation, application technology, entomology, chemical ecology, agronomy and forestry.



## **Our products**

With pheromone-based products as the core of our products and services, we aim to provide solutions that are safe for the environment, affordable and easy to use. We are committed to providing growers with advanced, practical, and comprehensive biological control products and services.

Most of our products revolve around using naturally occurring compounds produced by insects, or the plants they infest. These biological compounds are formulated in a variety of ways to help growers detect, monitor, and trap pests; as well as disrupt mating and repel target pests.



## Monitoring & Mass Trapping

The pheromone lures and traps we produce are key components of integrated pest management (IPM) programs. Pherobio's pheromone lures are environmentally friendly, long lasting, and species specific, which means that only the target pests are attracted and caught. We have a wide variety of traps that are optimized for attraction and catch.

Pheromone lures and traps are widely used to detect pests and for monitoring of their populations. This allows growers and pest control professionals to apply IPM in an informed manner. In some instances lures and traps can be used to suppress populations, for example using female sex pheromone to trap males in an effort to annihilate their population and reproduction success.



## How do pheromone traps work?

Pheromones are chemical substances emitted and received by insects to communicate with. Pheromone lures mimic natural emitted sex pheromone, to attract male adult insects.

With recommended pheromone traps, the target insects are attracted and then restrained.

Pheromones are species specific and because of its natural mechanism, no resistance will be generated among insect.



## Early detection & protection

Early detection and identification of pests is crucial for determining IPM control strategies that can lead to increased yields, chemical treatments can be reduced, used more precisely, or replaced by other control strategies. We manufacture lures and traps for early detection of many damaging insects of crops, fruits, trees and stored commodities.

## Pheromone Traps

Pheromone traps are essential tools for restraining attracted target pests when used with pheromone lures. Traps are designed with distinguishing shapes, to be suitable for the biological behaviors of different insects.

## Fruit Fly Traps

We offer a wide range of fruit fly solutions that include several trap designs. These traps are durable and proven effective, from the basic McPhail trap to a lite version of Cap Traps.



## Crop Traps

Various traps designed for trapping medium to large sized moths. They are durable and specially designed for insects damaging crops, including *Spodoptera spp.*, *Helicoverpa spp.* etc.



# Delta Traps

We manufacture two models of delta traps, one designed for single use and the other for repeated use. Delta traps are widely used for reliable and economic insect trapping.



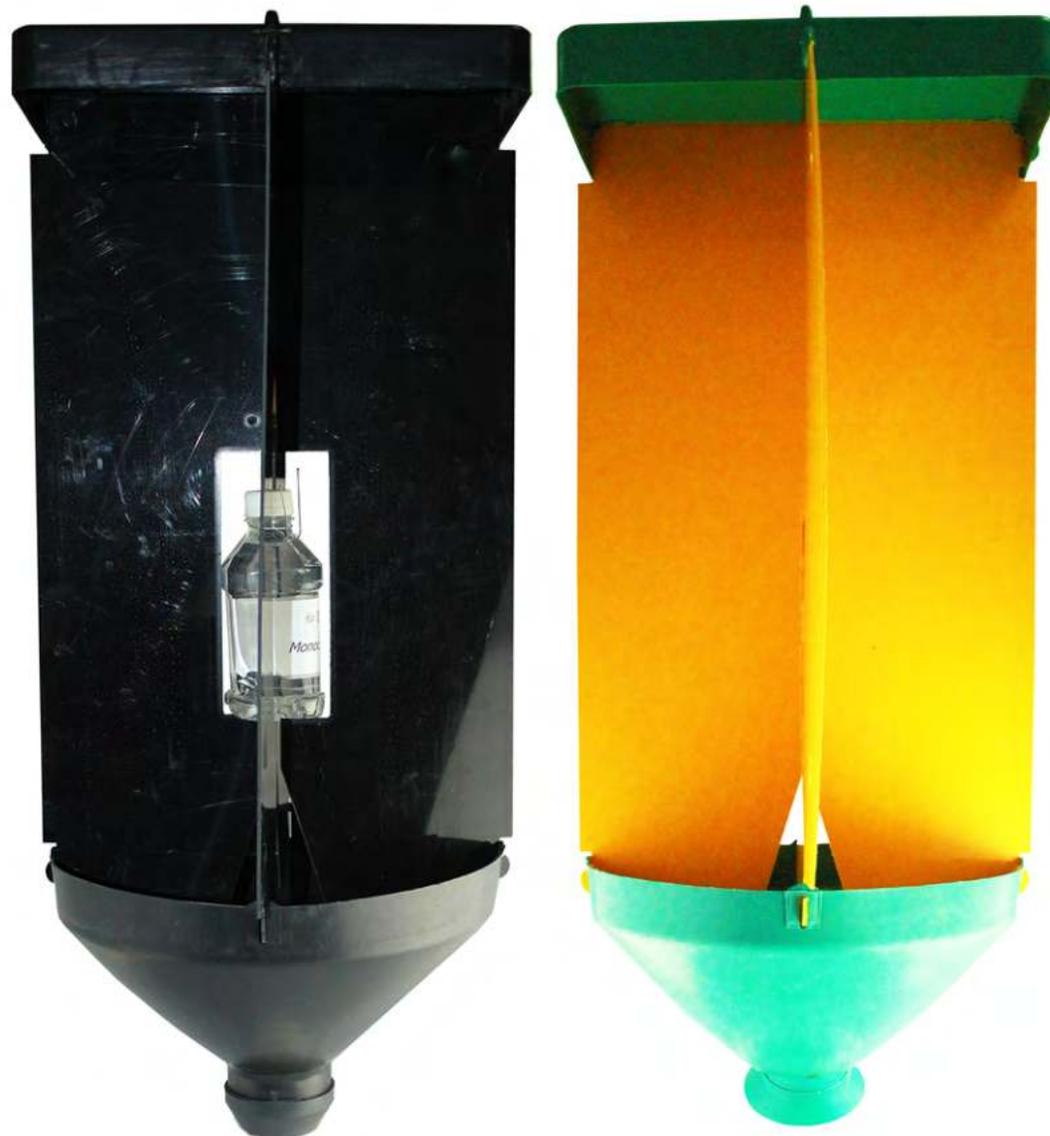
## Wing Traps

Wing traps are universal traps designed for trapping small to medium sized moths. They are durable and can be reused, and work for many pest species.



## Forestry Traps

Forest pests require specialized traps for attraction and capture. Color can influence visual attraction with bark beetles generally preferring black traps and other species, such as longhorn beetles colored traps.



## Attractants

Our attractants include pheromone lures replicating the naturally occurring compounds produced by the target insects. Certain lures include kairomones that are plant produced compounds that are attractive to the target pests. Currently we have more than 100 types of attractants in our portfolio, formulated in a variety of dispensers.



# Fruit Pests

Fruit and nut orchards, vineyards, other producing perennials.



*Adoxophyes orana*  
**Summer fruit tortrix**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Bactrocera cucurbitae*  
**Melon fly**

**Attractant:** Pheromone lure  
**Carrier:** Vial  
**Trap:** McPhail trap, Fruit fly trap



*Aleurocanthus spiniferus*  
**Orange spiny whitefly**

**Attractant:** Kairomone  
**Carrier:** Sachet  
**Trap:** Sticky trap



*Bactrocera dorsalis*  
**Oriental fruit fly**

**Attractant:** Pheromone lure  
**Carrier:** Vial  
**Trap:** McPhail trap, Fruit fly trap



*Amyelois transitella*  
**Navel orangeworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Carposina sasakii*  
**Peach fruit moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Archips breviplicanus*  
**Asiatic leafroller**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Ceratitis capitata*  
**Mediterranean fruit fly**

**Attractant:** Pheromone lure  
**Carrier:** Sachet  
**Trap:** Delta trap, McPhail trap, Fruit fly trap

# Fruit Pests

Fruit and nut orchards, vineyards, other producing perennials.



*Choristoneura longicellanus*

**Asiatic fruit tortrix**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Diaphorina citri*

**Asian citrus psyllid**

**Attractant:** Pheromone lure  
**Carrier:** Vial, PVC lure  
**Trap:** Sticky trap



*Conogethes punctiferalis*

**Yellow peach moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Ectopis obliqua*

**Back arched bug**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Cydia pomonella*

**Codling moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Empoasca vitis*

**Smaller green leafhopper**

**Attractant:** Pheromone lure  
**Carrier:** Vial, PVC lure  
**Trap:** Sticky trap



*Cydia pyrivora*

**Pear fruit moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Grapholita funebrana*

**Plum fruit moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

# Fruit Pests

Fruit and nut orchards, vineyards, other producing perennials.



*Grapholita molesta*  
**Oriental fruit moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Paranthrene regalis*  
**Grape clearwing moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Leucoptera malifoliella*  
**Pear leaf blister moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Phyllocnistis citrella*  
**Citrus leafminer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Lobesia botrana*  
**European grapevine moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Phyllonorycter ringoniella*  
**Apple leafminer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Lyonetia clerkella*  
**Apple leaf miner**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Thaumatotibia leucotreta*  
**False codling moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

## **Fruit Pests** Fruit and nut orchards, vineyards, other producing perennials.



*Yponomeuta padella*

**Cherry ermine moth**

- Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap
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*Zeuzera pyrina*

**Leopard moth**

- Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

# Crop Pests

Vegetable, grain field and row crops, greenhouse crops.



*Agrotis fucosa*  
**Common cutworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Arna pseudoconspersa*  
**Tea tussock moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Agrotis ipsilon*  
**Black cutworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Athetis lepigone*  
**Owlet moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Agrotis segetum*  
**Turnip moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Chilo infuscatellus*  
**Yellow top borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap, Funnel trap



*Apolygus lucorum*  
**Small green plant bug**

**Attractant:** Kairomone  
**Carrier:** Vial  
**Trap:** Bucket trap



*Chilo sacchariphagus*  
**Spotted borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

## Crop Pests

Vegetable, grain field and row crops, greenhouse crops.



*Chilo suppressalis*  
**Striped rice stem borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap, Funnel trap



*Helicoverpa armigera*  
**Cotton bollworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Cnaphalocrocis medinalis*  
**Rice leaf folder**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Helicoverpa assulta*  
**Oriental tobacco budworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Cylas formicarius*  
**Sweet potato weevil**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Helicoverpa zea*  
**American cotton bollworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Etiella zinckenella*  
**Pulse pod borer moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Holcocerus hippophaecolus*  
**Seabuckthorn carpenter moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

# Crop Pests

Vegetable, grain field and row crops, greenhouse crops.



*Homoeosoma nebulella*

## Sunflower moth

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Pectinophora gossypiella*

## Pink bollworm

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Mamestra brassicae*

## Cabbage moth

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Phthorimaea operculella*

## Potato tuber moth

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Maruca vitrata*

## Bean pod borer

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Plutella xylostella*

## Diamondback moth

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Ostrinia furnacalis*

## Asian corn borer

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Riptortus clavatus*

## Bean bug

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

# Crop Pests

Vegetable, grain field and row crops, greenhouse crops.



*Scirpophaga incertulas*

**Yellow stem borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Spodoptera litura*

**Taro caterpillar**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Sesamia inferens*

**Purple stem borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Spodoptera littoralis*

**Cotton leafworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Bucket trap, Vertical trap



*Spodoptera exigua*

**Beet armyworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Vertical trap



*Tuta absoluta*

**Tomato leafminer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Spodoptera frugiperda*

**Fall armyworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Bucket trap, Vertical trap

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Insect pictures are for reference only, please do not use them for insect identification.

# Forestry Pests

Commercial forests, plantations, reserves, nursery, ornamental trees.



*Agrilus planipennis*  
**Emerald ash borer**

**Attractant:** Pheromone lure  
**Carrier:** Sachet lure  
**Trap:** Prism trap



*Cydia trasi*  
**Chinese tortrix**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Coleophora abducta*  
**Larch casebearer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Dendrolimus kikuchii*  
**Japanese pine moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Cossus cossus*  
**Carpenter moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Dendrolimus punctatus*  
**Masson pine moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Cydalima perspectalis*  
**Box tree moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Bucket trap, Wing trap



*Dendrolimus spectabilis*  
**Japanese pine caterpillar**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap

# Forestry Pests

Commercial forests, plantations, reserves, nursery, ornamental trees.



*Dendrolimus superans*  
**Siberian silk moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Holcocerus insularis*  
**Carpenterworm**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Dendrolimus tabulaeformis*  
**Chinese pine caterpillar**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Hyphantria cunea*  
**Fall web worm**

**Attractant:** Pheromone lure  
**Carrier:** Sachet  
**Trap:** Delta trap, Bucket trap



*Dioryctria abietella*  
**Cone pyralid**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Lymantria dispar*  
**Gypsy moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Dioryctria sylvestrella*  
**Maritime pine borer**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug  
**Trap:** Delta trap, Wing trap



*Monochamus alternatus*  
**Japanese pine sawyer**

**Attractant:** Pheromone + Kairomone  
**Carrier:** Vial  
**Trap:** Beetle trap

# Forestry Pests

Commercial forests, plantations, reserves, nursery, ornamental trees.



*Paranthrene tabaniformis*

## Poplar clearwing moth

**Attractant:** Pheromone lure

**Carrier:** Rubber plug

**Trap:** Delta trap, Wing trap

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*Rhynchophorus ferrugineus*

## Red palm weevil

**Attractant:** Pheromone lure

**Carrier:** Sachet lure

**Trap:** Funnel trap

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*Tetropium fuscum*

## Brown spruce longhorn beetle

**Attractant:** Kairomone

**Carrier:** Vial

**Trap:** Beetle trap

---



*Semanotus bifasciatus*

## Juniper bark borer

**Attractant:** Kairomone

**Carrier:** Vial

**Trap:** Beetle trap

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## Pantry & Stored Product Pests



*Cadra cautella*  
**Almond moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Lasioderma serricorne*  
**Cigarette beetle**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Cadra figulilella*  
**Raisin moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Oryzaephilus surinamensis*  
**Saw toothed grain beetle**

**Attractant:** Kairomone  
**Carrier:** Sachet  
**Trap:** Delta trap, Bucket trap



*Ephestia elutella*  
**Tobacco moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Plodia interpunctella*  
**Indian meal moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Ephestia kuehniella*  
**Mediterranean flour moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Sitophilus granarius*  
**Grain weevil**

**Attractant:** Kairomone  
**Carrier:** Vial lure  
**Trap:** Delta trap, Wing trap

## Pantry & Stored Product Pests



*Sitophilus oryzae*  
**Lesser grain weevil**

**Attractant:** Kairomone  
**Carrier:** Vial lure  
**Trap:** Delta trap, Wing trap



*Trogoderma granarium*  
**Khapra beetle**

**Attractant:** Kairomone  
**Carrier:** Sachet  
**Trap:** Delta trap, Bucket trap



*Sitophilus zeamasis*  
**Greater grain weevil**

**Attractant:** Kairomone  
**Carrier:** Vial lure  
**Trap:** Delta trap, Wing trap



*Tinea pellionella*  
**case-bearing clothes moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap



*Tineola bisselliella*  
**Webbing clothes moth**

**Attractant:** Pheromone lure  
**Carrier:** Rubber plug, PVC lure  
**Trap:** Delta trap, Wing trap

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## Mating Disruption

Our mating disruption dispensers, and pheromone microencapsulation technology, act to suppress the pest population by disrupting the ability of males to find females in a mating disruption treated field or orchard. Dispensers are designed for season long pheromone release and are easily applied to tree branches with a simple twist. This technology allows users to manage the targets pests efficiently and ecologically.

# Simple, stable and reliable tool for controlling pests

**High efficiency:** Excellent approach with proactive protection.

**Simple application:** Easier to apply with dynamic formulations and proactive control.

**Less environmental footprint:** Low application rate and very little direct contact.

**Species specific:** Spare beneficials, only control the targets.

**Long field life:** Season long control, faster application.



Environmentally friendly



Species specific



Residue & resistance free



Safe and non-toxic



## Mating Disruption Dispensers



*Cydia pomonella*  
**Codling moth**

**Major hosts:**  
Apple, pear, walnut, apricot, peach,  
plum, cherry, chestnut

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**Available formulation:** Feromate dispenser  
**Field life:** 180 days under optimum conditions

**Methodology:**  
Dispensers release highly concentrated and natural identical insect sex pheromone, confusing male insects and disrupt their mating behaviors with the females. This results the reduction of target insect population, cuts down larvae by blocking the mating process. Using the dispenser is clean and safe to control the pests, most of the time more economical.

**Application:**  
450-550 dispensers per hectare, apply evenly on branches. Dispensers contain metal wires for easy twisting application.



*Grapholita molesta*  
**Oriental fruit moth**

**Major hosts:**  
Peach, apple, quince, pear, plum,  
cherry, apricot, nectarine

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**Available formulation:** Feromate dispenser  
**Field life:** 180 days under optimum conditions

**Methodology:**  
Dispensers release highly concentrated and natural identical insect sex pheromone, confusing male insects and disrupt their mating behaviors with the females. This results the reduction of target insect population, cuts down larvae by blocking the mating process. Using the dispenser is clean and safe to control the pests, most of the time more economical.

**Application:**  
450-550 dispensers per hectare, apply evenly on branches. Dispensers contain metal wires for easy twisting application.

# Mating Disruption Dispensers



*Lobesia botrana*  
**European grapevine moth**

**Major hosts:**  
Grape

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**Available formulation:** Feromate dispenser  
**Field life:** 180 days under optimum conditions

## **Methodology:**

Dispensers release highly concentrated and natural identical insect sex pheromone, confusing male insects and disrupt their mating behaviors with the females. This results the reduction of target insect population, cuts down larvae by blocking the mating process. Using the dispenser is clean and safe to control the pests, most of the time more economical.

## **Application:**

450-550 dispensers per hectare, apply evenly on branches. Dispensers contain metal wires for easy twisting application.



*Pectinophora gossypiella*  
**Pink bollworm**

**Major hosts:**  
Cotton

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**Available formulation:** Feromate dispenser  
**Field life:** 100 days under optimum conditions

## **Methodology:**

Dispensers release highly concentrated and natural identical insect sex pheromone, confusing male insects and disrupt their mating behaviors with the females. This results the reduction of target insect population, cuts down larvae by blocking the mating process. Using the dispenser is clean and safe to control the pests, most of the time more economical.

## **Application:**

450-550 dispensers per hectare, apply evenly on branches. Dispensers contain metal wires for easy twisting application.



## Smart Devices

Pherobio introduced smart devices and bringing innovation to the mating disruption and monitoring market. Pherobio's smart devices include AIM™ (Auto Insect Monitor), a smart device for insect monitoring, and AID™ (Auto Insect Disruptor), a smart device for mating disruption.

## AID - Automatic Insect Disruptor

AID™ is a solar-powered MD device that can spray with a timer, we also have a cloud version that allows users to control it remotely through multiple platforms. AID™ uses non-aerosol bottled pheromone for the application.

- A brand new LITE version device with less environmental footprint
- Very low application density comparing to traditional dispensers
- Durable and very long field life
- Less labor intensive thanks to lower rate of application
- Accessible on multiple platforms including mobile phone, tablet or PC
- Built-in GPS and cloud functions



## AIM - Automatic Insect Monitor

AIM™ is a solar-powered monitoring device with insect capture counter and many more features, made to collect pest and climate data.

- A brand new LITE model with AI pest recognition
- Species specific pest monitoring with pheromone
- Monitors climate with mini-weather module
- Check catches or modify functions online
- Accessible on multiple platforms including mobile phone, tablet or PC
- Built-in GPS



Pest identification



Cloud features



Multiple platform



Climate monitoring



# Monitoring pests, from anywhere.

## Now with AI pest recognition.

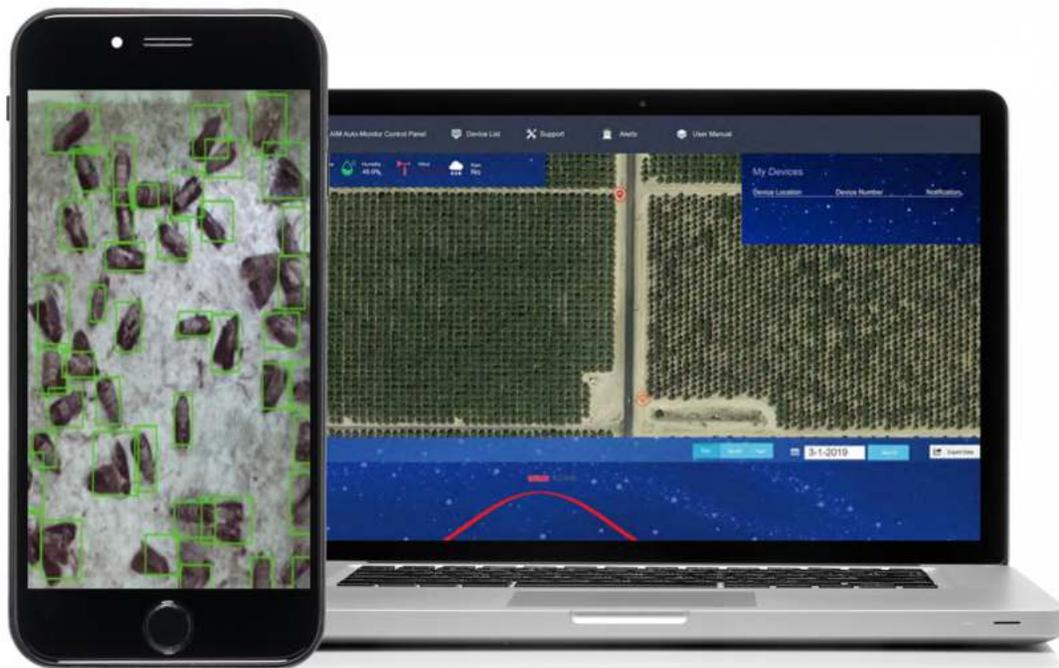
Self-diagnose and warning notifications when device fails or damaged;

Cloud protocol for over-the-air cloud system updates;

5-7 days independent battery life with no/low sunlight level;

Working in extreme temperature conditions from  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ ;

Customizable user control panel and dashboard.





## **PLT Series** Pheromone Light Traps

The PLT series combines both pheromone lures and specified light spectrum to boost the attraction of targeted pests. Using light as a source of attraction also allows us to catch both males and females of the targeting pests, a novel method to achieve population control with pheromone traps.

The PLT traps are all equipped with solar panels as a power source and a rechargeable battery to last longer even in cloudy days.

## PLT Series Pheromone Light Traps

The 3 distinguishing models of the PLT series has their unique functionalities for different scenarios.

**PLT-A:** More durable and equipped with a larger solar panel, which can meet the normal use requirements for longer rainy periods.

**PLT-B:** A portable and light version trap, which provides two-band light sources and three colors of sticky inserts.

**PLT-C:** This higher end model combines the Internet of Things technology to achieve remote control of the equipment and automatic on-and-off at multiple times throughout the day. Insect pheromone trapping and circulating air ducts ensure that pests are specifically trapped and effectively controlled.





## Home & Garden

Leveraging 18 years of experience on pheromone, we have brought our expertise into the more dedicated and caring market - people's homes and gardens, to protect those who value the most. Our home & garden product series are insecticide-free with low environmental footprint, and relatively safer than conventional insecticides.

We now have more than 6 different consumer products for pantry moth, several clothes moth species, garden insects, tobacco beetles and cockroach.



## Pantry & clothes moth traps

Ready-to-use pheromone traps targeting various species of pantry moth and clothes moth, including *Plodia interpunctella*, *Ephestia elutella*, *Ephestia kuehniella*, *Tineola bisselliella* and *Tinea pellionella*. These insects feed on pantry and clothes fibers so they can cause damage to food and clothing.



## MightyCatch™ pantry moth traps

An extra large version of pantry moth traps that target various pantry moth species, including *Plodia interpunctella*, *Ephestia elutella* and *Ephestia kuehniella*. The MightyCatch™ traps are 30% larger than regular moth traps so they can catch more moths.



## Moth Bag Series

The moth bag traps are pantry moth traps designed with hangers for better application in kitchens or pantries. It targets most of the pantry moths including *Plodia interpunctella*, *Ephestia elutella* and *Ephestia kuehniella*.



## MightyCatch™ clothes moth traps

Clothes moth traps with a hanger design for better application in wardrobes and clothes stands. The MightyCatch™ clothes moth traps target clothes moths including *Tineola bisselliella* and *Tinea pellionella*.



## Cockroach trap

Ready-to-use cockroach traps with individual food baits. Attracts various species of cockroaches. The baits release strong food source scent and trap cockroaches searching for food in the classic design roach traps.



## Mini sticky traps

Mini sticky traps are the perfect monitoring tool for homes and gardens with decorative plants. They can attract aphids, whiteflies, thrips, gnats and flies, which are juice-sucking insects that can harm the growth of plants. Made into various shapes, they can both serve as decorative and pest control tools.



## **Sticky Traps**

Our sticky traps are used for monitoring or mass trapping small to medium sized pests in orchards and crop fields. Sticky traps come with different colors like yellow, blue and green, for different pest preferences.

Besides traditional sticky traps, Pherobio also developed improved versions, including pheromone or kairomone in our traps, to increase the catch rate.



## Fruit fly & thrip traps

Our ready-to-use pheromone sticky traps include fruit fly traps, melon fly traps and thrip traps. These traps are coated with corresponding pheromone/kairomone during production. They are light-weighted, cost efficient and more effective for monitoring or mass trapping



## Pheromone sticky traps

Sticky traps with different colors can attract pests like thrips, whiteflies, aphids, fruit flies and gnats, which respond to certain colors including yellow, blue, green or red. We also have two models of sticky traps with aggregation pheromone for aphids and thrips, which can increase the catch rate significantly.

LOT-5559363s56

PHEROMONE LIBRARY

Z-11-HEXADECENYL ACETATE

DATE 15-08-23

## Technical Pheromone

Our state-of-the-art synthesis facility allows us to produce technical grade pheromone in a large capacity upto 50 metric tons annually. We also constantly seek new and advanced synthesis products and techniques to improve our efficiency and quality.

Choose from more than 50 different kinds of pheromone TGAs to enhance the formulations.

## **Z5-Decenyl acetate**

CAS: 67446-07-5

## **(Z)-7-Dodecen-1-ol acetate**

CAS: 14959-86-5

## **Z7-tetradecenal**

CAS: 65128-96-3

## **Z7-Hexadecenal**

CAS: 56797-40-1

## **7Z,11Z,13E-Hexadecatriena**

CAS: 888042-38-4

## **Z8-Dodecenyl Acetate**

CAS: 28079-04-1

## **E8-Dodecenyl Acetate**

CAS: 38363-29-0

## **Z-8-Dodecen-1-ol**

CAS: 40642-40-8

## **(9Z)-Dodecen-1-ol Acetate**

CAS: 16974-11-1

## **Z9-Hexadecen-1-olacetate**

CAS: 34010-20-3

## **(Z)-9-Hexadecenal**

CAS: 56219-04-6

## **(Z)-10-Tetradecenyl Acetate**

CAS: 35153-16-3

## **(Z)-10-Hexadecenal**

CAS: 68279-24-3

## **(Z)-11-HEXADECENAL**

CAS: 38363-29-0

## **(Z)-11-TETRADECEN-1-YL ACETATE**

CAS: 20711-10-8

## **Ethyl 11(Z)-octadecenoate**

CAS: 137202-20-1

## **Z-12-Tetradecenylacetate**

CAS: 35153-20-9

## **(Z)-13-Octadecenal**

CAS: 58594-45-9

## **9Z,12E-Tetradecadienyl acetate**

CAS: 30507-70-1

## **(9Z,12E)-Tetradecadien-1-ol**

CAS: 1332863-51-0

## **(E)-5-Dodecen-1-ol acetate**

CAS: 16676-97-4

## **(E)-5-Dodecen-1-ol**

CAS: 40642-38-4

## **(E)-10-Hexadecenal**

CAS: 72698-30-7

## **(E)-12-Tetradecenyl acetate**

CAS: 35153-21-0

## **E-2-Octadecenal**

CAS: 51534-37-3

## **Ethyl trans-2,cis-4-decadienoate**

CAS: 3025-30-7

## **3E, 5Z-Dodecadienyl Acetate**

CAS: 174659-87-1

## **(5E,7Z)-5,7-Dodecadienal**

CAS: 75539-65-0

## **(8E,10E)-Dodecadien-1-ol**

CAS: 33956-49-9

## **(Z,Z)-11,13-Hexadecadienal**

CAS: 71317-73-2

## **7E, 9Z-Dodecadienyl Acetate**

CAS: 55774-32-8

## **Z,E-9,11-TETRADECADIENYL ACETATE**

CAS: 50767-79-8

## **(Z,Z)-7,11-hexadecadien-1-yl**

CAS: 52207-99-5

## **(E,Z)-4,10-tetradecadienyl acetate**

CAS: 105700-87-6

## **Z,Z-7,11-Hexadecadienal**

CAS: 96833-53-3

## **(E,Z)-3,8-Tetradecadien-1-ol acetate**

CAS: 163041-87-0

## **E3,Z8,Z11-Tetradecatriene acetate**

CAS: 163041-94-9

## **Z,Z-2,13-Octadecadienyl acetate**

CAS: 86252-65-5

## **3Z,13Z-Octadecadienyl Acetate**

CAS: 53120-27-7

## **E,E-2,4-Hexadienyl acetate**

CAS: 1516-17-2

## **(E)-2-Hexenyl (E)-2-hexenoate**

CAS: 54845-28-2

## **(3Z)-3-Hexenoic acid(2E)-2-hexenyl ester**

CAS: 153367-21-6



Semiochemicals  
Biological control  
Pheromone synthesis