PHEROBIO®
Ecological Pest Solutions

Semiochemicals
Biological control
Pheromone synthesis



Pheromone

2025-2026

PHEROBIO®
Ecological Pest Solutions

www.pherobio.com
info@pherobio.com

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. We've also developed smart devices combined with attractants, bringing digitalization to sustainability.





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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
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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.

Pheromone-based biocontrol

With more than 200 types of insect pheromone products, including mating disruption, attractants and traps, we can achieve accurate monitoring and efficient control of pests, providing a biological alternative to both biocontrol and traditional chemical application.

Crop health with immunity induction

Based on the concept of "immunity + nutrition", we developed VDAL, a novel biostimulant protein, which works as a plant immunity inducer for disease resistance, yield increase and abiotic stress tolerance, for better health of crops and high-quality agricultural development.

Smart agriculture

Our smart devices, software platforms and biotechnologies provide solutions for smart monitoring and biocontrol, comprehensively improving digitalization, intelligence and modernization of agricultural and forestry production management.

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 48 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. The R&D annual budget is around 10% of our total revenue, while more than 25% of our employees are working in the R&D department.



Patents & Qualifications

Up to date, the group has a total of 118 patents, including 37 invention patents (3 PCT patents, authorized in 13 countries), 58 utility model patents, 21 design patents, 2 Australian innovation patents, and 1 software copyright.

We are also a certified member of IBMA (International Biocontrol Manufacturers Association) and a long-term participant with APACE (Asia-Pacific Association of Chemical Ecologists).







Our products

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.



Our services

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.

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 mechanism. 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

MATESTER™

Mating disruption dispenser



Product overview

MATESTER™, a novel type of hand-applied mating disruption dispenser, offers the growers faster applications and stable performance to control target pests with season-long coverage.

Its unique features include:

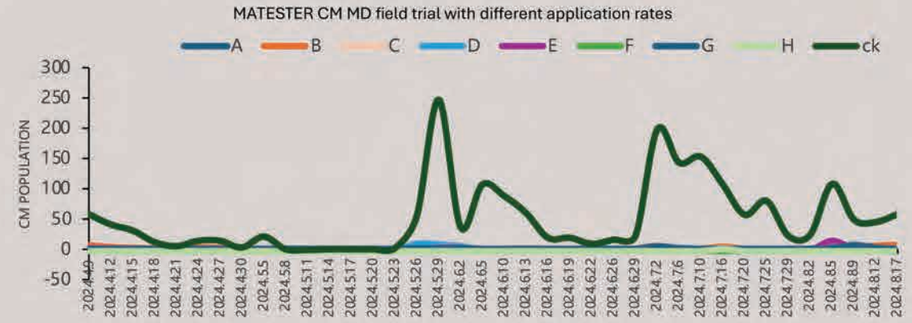
- Uni-body design, accessory-free, ready-to-use formulation which saves time to put on extra hooks.
- Low density application ranging from 25 to 120 units per hectare to save labor costs, compared to conventional dispensers of 500 units per hectare.

  Long-lasting full season performance ranging from 6-8 month, thanks to larger pheromone storage capsule.
- Light-weight formulation, easy to transport and applied in the field.

Product information

Product Name	Target Pest	Crop	Application Rate
MATESTER CM	*Cydia pomonella*	Apples, pears	120 units/ha
MATESTER OFM	*Grapholita molesta*	Apples, pears	90 units/ha
MATESTER EGVM	*Lobesia botrana*	Grapes, berries, olive	90 units/ha
MATESTER TUTA	*Tuta absoluta*	Tomato	90 units/ha
MATESTER FCM	*Thaumatotibia leucotreta*	Citrus	40 units/ha
MATESTER MNB	*Cryptophlebia ombrodelta*	Legumes	25 units/ha

Typical field performance



FEROMATE™

Mating disruption formulations



Product overview

FEROMATE™ DL200 is a classic tube dispenser with double dosage of the pheromone content. That allows the users to use only half of the application rate, comparing to the traditional dispensers with 500 units per hectare. DL200 can last for up to 200 days in the field.

- Easy to use classic design, comes with the EasyHook system for easier application.

- Lower density compared to competition, with only 250 units/ha.

FEROMATE™ Sprayable is a microencapsulated formulation, made from biodegradable material, which allows the growers to have a dynamic application for users that are more used to spraying.

30-day formulation for a more prolonged pest control.

- Full biodegradable formulation, eliminates the risk of microplastics.

Product information

Product Name	Target Pest	Crop	Application Rate
FEROMATE EGVM	*Lobesia botrana*	Grapes, berries, olive	250 units/ha
FEROMATE OFM	*Grapholita molesta*	Apples, pears	250 units/ha
FEROMATE CM	*Cydia pomonella*	Apples, pears	250 units/ha
FEROMATE PBW	*Pectinophora gossypiella*	Cotton	250 units/ha
FEROMATE DBM	*Plutella xylostella*	Brassicaceae	250 units/ha
FEROMATE BAW	*Spodoptera exigua/litura*	Polyphagous	250 units/ha
FEROMATE SPRAY CM	*Cydia pomonella*	Apples, pears	250 ml/ha
FEROMATE SPRAY Chilo	*Chilo suppressalis*	Rice	250 ml/ha
FEROMATE SPRAY EGVM	*Lobesia botrana*	Grapes, berries, olive	250 ml/ha
FEROMATE SPRAY OFM	*Grapholita molesta*	Apples, pears	250 ml/ha
FEROMATE SPRAY FAW	*Spodoptera frugiperda*	Corn	250 ml/ha

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

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.





Pheromone traps

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.



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.

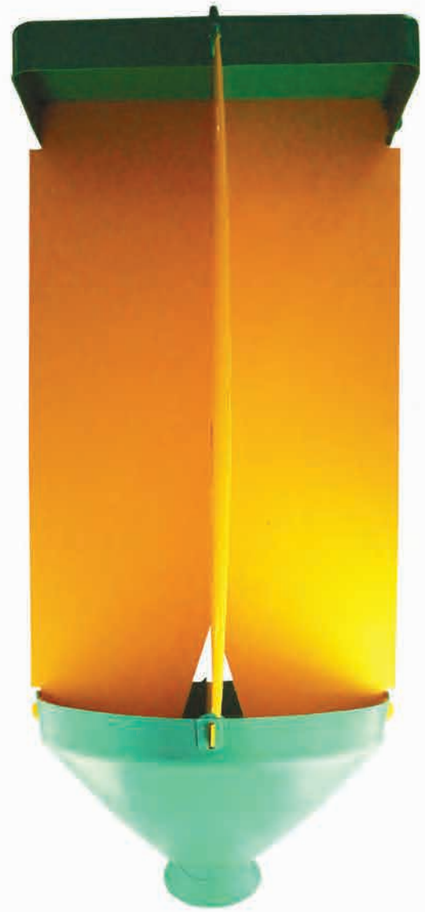




Forestry Traps

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 & Lures

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 perrenials.



Adoxophyes orana

Summer fruit tortrix

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



Ceratitis capitata

Mediterranean fruit fly

Attractant: Pheromone lure
Carrier: Plug lure
Trap: Delta trap, fruit fly trap



Aieurocanthus spiniferus

Orange spiny whitefly

Attractant: Kairomone
Carrier: Sachet lure
Trap: Sticky trap



Choristoneura longicellanus

Asiatic fruit tortrix

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



Amyeiois transitella

Navel orangeworm

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



Conogethes punctiferalis

Yellow peach 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



Cosmopolites sordidus

Banana weevil

Attractant: Kairomone
Carrier: Sachet lure
Trap: Beetle trap



Bactrocera cucurbitae

Melon fly

Attractant: Pheromone lure
Carrier: Sachet lure
Trap: Fruit fly trap



Cydia pomonella

Codling moth

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



Bactrocera dorsalis

Oriental fruit fly

Attractant: Pheromone lure
Carrier: Sachet lure
Trap: Fruit fly trap



Cydia pyrivora

Pear fruit moth

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



Diaphorina citri

Asian citrus psyllid

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Sticky trap



Attractants & Lures

Fruit pests
Fruit and nut orchards, vineyards, other producing perrenials.



Drosophila melanogaster

Common fruit fly

Attractant: Pheromone lure
Carrier: Sachet lure
Trap: Fruit fly trap



Lyonetia clerkella

Apple leaf miner

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



Ectropis obliqua

Back arched bug

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



Empoasca vitis

Smaller green leafhopper

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Sticky trap



Phyllocnistis citrella

Citrus leafminer

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



Phyllonorycter ringoniella

Apple leafminer

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



Grapholita molesta

Oriental fruit moth

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



Leucoptera malifoliella

Pear leaf blister moth

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



Yponomeuta padella

Cherry ermine moth

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



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, Vertical trap



Chilo infuscatellus

Yellow top borer

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



Agrotis ipsilon

Black cutworm

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



Chilo sacchariphagus

Spotted borer

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



Agrotis segetum

Turnip moth

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



Chilo suppressalis

Striped rice stem borer

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



Archips breviplicanus

Asiatic leafroller

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



Cnaphalocrocis medinalis

Rice leaf folder

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



Apolygus lucorum

Small green plant bug

Attractant: Kairomone
Carrier: Vial lure
Trap: Bucket trap



Cylas formicarius

Sweet potato weevil

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



Etiella zinckenella

Pulse pod borer moth

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



Athetis lepigon

Owlet moth

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



Helicoverpa armigera

Cotton bollworm

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



Attractants & Lures

Crop pests
Vegetable, grain field and row crops, greenhouse crops.



Helicoverpa assulta

Oriental tobacco budworm

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



Helicoverpa assulta

Oriental tobacco budworm

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



Plutella xylostella

Diamondback moth

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



Homoeosoma nebulella

Sunflower moth

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



Mamestra brassicae

Cabbage moth

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



Scirpophaga incertulas

Yellow stem borer

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



Maruca vitrata

Bean pod borer

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



Scirpophaga innotata

Rice white stemborer

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



Ostrinia furnacalis

Asian corn borer

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



Sesamia inferens

Purple stem borer

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



Pectinophora gossypiella

Pink bollworm

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



Spodoptera exigua

Beet armyworm

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

Crop pests
Vegetable, grain field and row crops, greenhouse crops.



Spodoptera frugiperda

Fall armyworm

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



Spodoptera litura

Tobacco cutworm

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



Spodoptera littoralis

Cotton leafworm

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

If your requested product is not on this list please contact us at: info@pherobio.com.
Insect pictures are for reference only, please do not use them for insect identification.



Attractants & Lures

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



Agrilus planipennis

Emerald ash borer

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Prism trap



Coleophora obducta

Larch casebearer

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



Cydalima perspectalis

Box tree moth

Attractant: Pheromone lure
Carrier: Rubber plug
Trap: Delta trap, Bucket trap



Cydia trasias

Chinese tortrix

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



Dendrolimus punctatus

Masson pine moth

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



Dendrolimus superans

Siberian silk moth

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



Dioryctria abietella

Cone pyralid

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



Holcocerus hippophaecolus

Chinese carpenterworm

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



Ips spp.

Ips bark beetle

Attractant: Kairomone
Carrier: Sachet lure
Trap: Beetle trap

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



Hyphantria cunea

Fall web worm

Attractant: Pheromone lure
Carrier: Rubber plug
Trap: Delta trap, Bucket trap



Lymantria dispar

Gypsy moth

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



Monochamus alternatus

Japanese pine sawyer

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Beetle trap



Paranthrene tabaniformis

Poplar clearwing moth

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



Rhynchophorus ferrugineus

Red palm weevil

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Funnel trap



Semanotus bifasciatus

Juniper bark borer

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Beetle trap



Tetropium fuscum

Brown spruce longhorn beetle

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Beetle trap



Xylosandrus spp.

Xylosandrus bark beetle

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Beetle trap

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Attractants & Lures

Pantry & stored-product pests



Cadra cautella

Almond moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Cadra figulilella

Raisin moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Ephestia elutella

Tobacco moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Ephestia kuehniella

Mediterranean flour moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Lasioderma serricorne

Cigarette beetle

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



Oryzaephilus surinamensis

Saw toothed grain beetle

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Delta trap, Bucket trap



Plodia interpunctella

Indian meal moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Sitophilus granarius

Grain weevil

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Delta trap, Bucket trap



Sitophilus oryzae

Lesser grain weevil

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Delta trap, Bucket trap



Sitophilus zeamasis

Greater grain weevil

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Delta trap, Bucket trap



Tinea pellionella

Case-bearing clothes moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Tineola bisselliella

Webbing clothes moth

Attractant: Pheromone lure
Carrier: PVC lure
Trap: Delta trap, Wing trap



Trogoderma granarium

Khapra beetle

Attractant: Pheromone lure+Kairomone
Carrier: Sachet lure
Trap: Delta trap, Bucket trap

Specialty attractants



Fruitfly attractant - For male & female

An excellent biocontrol solution for attracting both male and female fruit flies. Unlike traditional lures (ME) that primarily target males, this product ensures comprehensive population suppression by attracting the reproductive females responsible for crop damage. Its natural, biologically derived formulation makes it safe, environmentally sustainable, and highly effective, offering growers a reliable, residue-free tool to monitor infestations and reduce fruit fly populations.



Snail & slug attractant

Introducing a powerful biological attractant for sustainable snail and slug management—an innovative tool designed for both monitoring and attract-and-kill strategies. This natural formulation effectively draws snails and slugs into traps, allowing growers to detect early infestations, assess population levels, and directly reduce pest pressure in the field.



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 phero-mone/kairomone during production.
They are light-weighted, easy to use, 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 signifi-cantly.



Home & Garden Products

Leveraging 18 years of experiences on pheromone, we have brought our expertise into the more dedicated and caring market - in 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.





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.



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*.

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.



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 cocktroaches searching for food in the classic design roach traps.



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, as well as PLT (Pheromone light trap), a trapping system combined with light and pheromone to boost the efficacy.

PLT

Pheromone Light Trap



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

Three distinguishing models of the PLTs have their unique functionalities for different scenarios.



PLT-A:

More durable and equipped with a larger solar panel and battery, PLT-A 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 cloud functions 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.

AID

Automatic Insect Disruptor



AID

Automatic Insect Disruptor

AID is a solar-powered mating disruption 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.

Highlights:

Solar-powered, no need to change batteries. This powerful device works for 7 days even without sunlight.

Built-in timer allows the device to apply pheromone only in the needed hours for the best efficacy, cost-saving.

Built durable to last for a very long period in the field. The larger pheromone contents allows very low application rate, saves labor.

Non-aerosol can and mechanical spraying system allows the device to be transported with ease.

Product information

Product Name	Target Pest	Crop	Application Rate
AID EGVM	*Lobesia botrana*	Grapes, berries, olive	5 units/ha
AID OFM	*Grapholita molesta*	Apples, pears	5 units/ha
AID CM	*Cydia pomonella*	Apples, pears	5 units/ha
AID Chilo	*Chilo suppressalis*	Rice	5 units/ha
AID TUTA	*Tuta absoluta*	Tomato	6 units/ha

AIM Series

Automatic Insect Monitor



AIM Series

Automatic Insect Monitor

AIMs are solar-powered monitoring devices with insect capture counter andmany more features, made to collect pest and climate data.

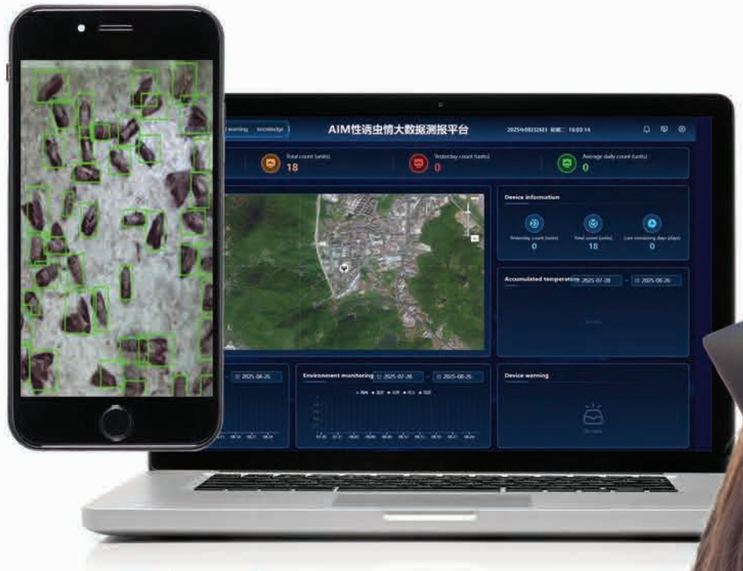
· Brand new LITE model with AI pest recognition
· Species specific pest monitoring with pheromone
· Monitors climate with mini-weather module, working conditions from -20°C to 60°C;
· Self-diagnose and warning notifications when device fails or damaged
· Accessible on multiple platforms including mobile phone, tablet or PC
· Built-in GPS, over-the-air updates

Pest identification

Cloud features

Multiple platform

Climate monitoring





Monitoring pests, from anywhere.

Now with AI pest recognition

AIM

Automatic Insect Monitor

AIM is a pest monitoring system utilizes computer internet technology combined with insect pheromone technology to monitor and forecast the population of the target pests. The devices include AIM 3.0S, AIM 4.0S, and AIM-T.
This system can monitor and provide early warning for specific target pests, meeting the needs of a variety of common pests, including forestry pests, fruit tree pests, agricultural pests, storage pests, and quarantine pests.

Species-specific monitoring

Mini weather station

Camera with AI recognition



AIM-Lite

Automatic Insect Monitor

The AIM-lite Pest Monitoring Systems are streamlined and portable versions of the AIM series. Compared with the standard models, AIM-lite removes the meteorological data collection and insect trap imaging functions, making the units lighter and more convenient to deploy. Current models include AIM-lite-D, AIM-lite-E and AIM-lite-DHC.



Multiple deployment options are available:
the unit can be installed independently to monitor and provide early warnings on target pest occurrences within a designated area; or it can be deployed in combination with the AIM system, integrating meteorological data collection and other functions to enable more comprehensive monitoring and analysis of pest dynamics.



AIM-MINI

Automatic Insect Monitor

AIM-MINI achieves efficient and precise trapping with pheromones, while equipped with a high-definition camera, it captures images for AI-powered identification, allowing users to monitor pest data and statistical reports directly via mobile phone or computer—providing real-time insights without the need for on-site inspections. This significantly reduces labor costs while delivering robust data support for agricultural production and pest management.

Featuring a Type-C charging port, the device operates with an ultra-low static power consumption of just 0.001W and offers a battery life of over 240 days on a single charge. With an IP67 waterproof rating and a durable alloy-reinforced housing resistant to sun exposure, it meets the demands of diverse application scenarios.



Precise
attraction with pheromone



Clear
vision with AI camera



Analytical
information with one click



AIM-MINI

AIM-MINI-B

AIM-LT

AIM Monitoring Light Trap

AIM-LT integrates optical, electrical, and digital control technologies, and is compatible with pest monitoring and control platforms. It enables functions such as far-infrared automated insect processing, image capture and upload, and fully automated operation. Without the need for human supervision, the system can autonomously complete insect attraction, elimination, drainage, specimen collection, imaging, data uploading, and automated insect analysis.

Through a cloud-based platform, all monitoring data are presented on mobile phones, computers, and other terminals, allowing users to intuitively observe, analyze, and forecast insect occurrence and development. This provides valuable support for agricultural modernization while meeting both pest monitoring and specimen collection requirements.

Precise, intelligent monitoring for biocontrol

Broad-spectrum monitoring & analysis

- Multiple species attraction and collection
- AI recognition with high resolution camera
- Precise counting system for accuracy
- Biological way for mass trapping
- Forecast and warning system
- Self-cleaning trap with ease





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 TGAIs to enchance the formulations.

Z5-Decenyl acetate
CAS: 67446-07-5
Insects:
Agrotis segetum
Agrotis fucosa
Anarsia lineatella

Z9-Hexadecen-1-ol acetate
CAS: 34010-20-3
Insects:
Spodoptera frugiperda
Helicoverpa armigera
Helicoverpa assulta

(9Z,12E)-Tetradecadien-1-ol
CAS: 1332863-51-0
Insects:
Plodia interpunctella
Spodoptera exigua
Spodoptera litura

(Z,Z)-11,13-Hexadecadienal
CAS: 71317-73-2
Insects:
Amyelois transitella
Herpetogramma licarsisalis

Z7-Dodecenyl acetate
CAS: 14959-86-5
Insects:
Spodoptera frugiperda

(Z)-9-Hexadecenal
CAS: 56219-04-6
Insects:
Helicoverpa assulta
Helicoverpa armigera

(E)-5-Dodecen-1-ol acetate
CAS: 16676-97-4
Insects:
Anarsia lineatella

7E, 9Z-Dodecadienyl acetate
CAS: 55774-32-8
Insects:
Lobesia botrana

Z7-Tetradecenal
CAS: 65128-96-3
Insects:
Plodia interpunctella
Cadra cautella
Anagasta kuehniella

(Z)-10-Tetradecenyl acetate
CAS: 35153-16-3
Insects:
Lithocolletis ringoniella
Phyllonorycter platani

(E)-5-Dodecen-1-ol
CAS: 40642-38-4
Insects:
Anarsia lineatella
Grapholita molesta
Cryptophlebia ombrodelta

Z,E-9,11-Tetradecadienyl acetate
CAS: 50767-79-8
Insects:
Spodoptera litura
Spodoptera littoralis
Dioryctria abietella

Z7-Hexadecenal
CAS: 56797-40-1
Insects:
Helicoverpa assulta
Helicoverpa armigera
Helicoverpa virescens

(Z)-10-Hexadecenal
CAS: 68279-24-3
Insects:
Helicoverpa assulta
Helicoverpa armigera
Spodoptera exempta

(E)-10-Hexadecenal
CAS: 72698-30-7
Insects:
Ostrinia furnacalis
Cnaphalocrocis medinalis
Scirpophaga excerptalis

(Z,Z)-7,11-Hexadecadienyl acetate
CAS: 52207-99-5
Insects:
Pectinophora gossypiella
Chionodes psiloptera
Platyedra subcinerea

7Z,11Z,13E-Hexadecatrienal
CAS: 888042-38-4
Insects:
Phyllocnistis citrella

(Z)-11-Hexadecenal
CAS: 38363-29-0
Insects:
Helicoverpa armigera
Helicoverpa assulta
Spodoptera frugiperda

(E)-12-Tetradecenyl acetate
CAS: 35153-21-0
Insects:
Cnaphalocrocis medinalis
Ostrinia furnacalis

(E,Z)-4,10-Tetradecadienyl acetate
CAS: 105700-87-6
Insects:
Phyllonorycter ringoniella

Z8-Dodecenyl acetate
CAS: 28079-04-1
Insects:
Grapholita molesta
Grapholita funebrana
Ecdytolopha torticornis

(Z)-11-Tetradecen-1-yl acetate
CAS: 20711-10-8
Insects:
Ostrinia nubilalis
Adoxophyes reticulana
Archips podana

E-2-Octadecenal
CAS: 51534-37-3
Insects:
Tineola bisselliella

(Z,Z)-7,11-Hexadecadienal
CAS: 96883-54-4
Insects:
Phyllocnistis citrella
Phyllocnistis insignis
Phyllocnistis vitegenella

E8-Dodecenyl acetate
CAS: 38363-29-0
Insects:
Grapholita molesta
Grapholita funebrana
Ecdytolopha torticornis

Z-12-Tetradecenyl acetate
CAS: 35153-20-9
Insects:
Ostrinia furnacalis
Ostrinia nubilalis

3E, 5Z-Dodecadienyl acetate
CAS: 174659-87-1
Insects:
Bonagota cranaodes

(E,Z)-3,8-Tetradecadien-1-ol acetate
CAS: 163041-87-0
Insects:
Tuta absoluta

Z-8-Dodecen-1-ol
CAS: 40642-40-8
Insects:
Grapholita molesta
Grapholita funebrana
Ecdytolopha torticornis

(Z)-13-Octadecenal
CAS: 58594-45-9
Insects:
Chilo suppressalis
Chilo sacchariphagus
Scirpophaga incertulas

(5E,7Z)-5,7-Dodecadienal
CAS: 75539-65-0
Insects:
Malacosoma californicum
Dendrolimus houi

E3,Z8,Z11-Tetradecatriene acetate
CAS: 163041-94-9
Insects:
Tuta absoluta

Z-9-Dodecen-1-ol acetate
CAS: 16974-11-1
Insects:
Cydia pomonella
Endopiza viteana
Eucosma sonomana

9Z,12E-Tetradecadienyl acetate
CAS: 30507-70-1
Insects:
Plodia interpunctella
Ephestia kuehniella
Ephestia elutella

(8E,10E)-Dodecadien-1-ol
CAS: 33956-49-9
Insects:
Cydia pomonella

Z,Z-2,13-Octadecadienyl acetate
CAS: 86252-65-5
Insects:
Zeuzera pyrina
Paysandisia archon

VDAL™

Novel Biostimulant

Our VDAL protein offers the growers a purely natural plant biostimulant, which promotes growth, induces disease and abiotic stress resistance, and increase yield and quality.

VDAL protein is derived from Verticillium dahlia Asp-f2 like, induces immune responses in plants by causing reactive oxygen species bursts in crops. VDAL can be apply on various crops and fruits including wheat, rice, corn, peanut, almost all kinds of vegetables and fruit, by seed treatment as well as foliar spraying.





Induce disease resistance

Activating plant's immune system against fungal and bacterial diseases.

Improve quality & yield

Improving crop quality and yield starting from the initial stage.



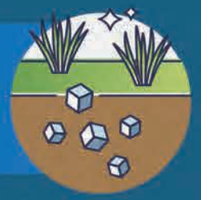


Promote seed & root

Promoting germination and form stronger roots for healthier plants.

Increase strees tolerance

Increasing abiotic stress tolerance like drought and extreme conditions.



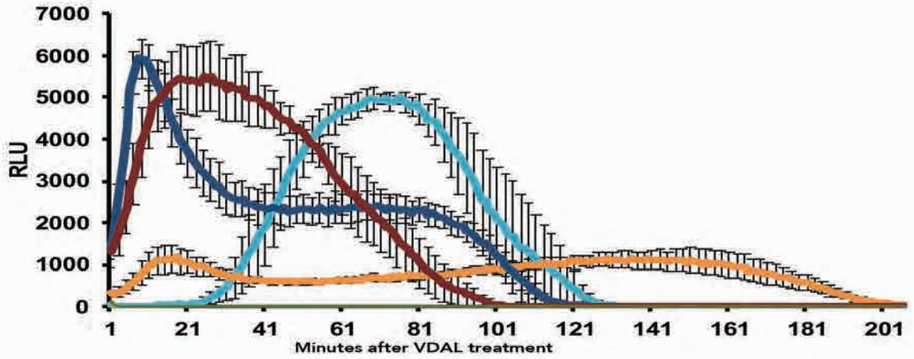
VDAL

Verticillium dahlia Asp-f2 like protein

VDAL protein modulates crop metabolism and gene expression, by enhancing photosynthesis and upregulating genes encoding light-harvesting antenna proteins and increasing chlorophyll content, thereby improving chloroplast photosynthetic capacity. This promotes seed germination and seedling vigor, leading to significant yield improvement.

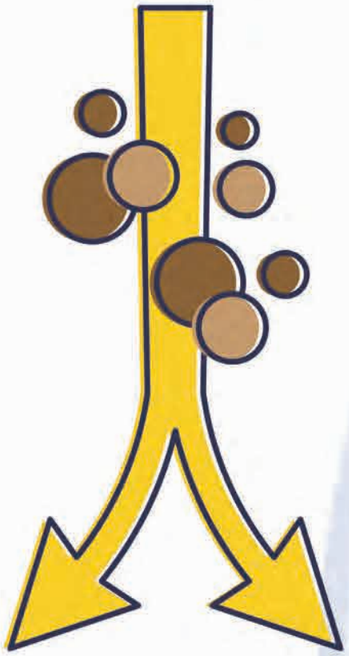
VDAL significantly regulates galactose and glucose biosynthesis and modulates expression of key enzyme genes involved in starch and soluble sugar metabolic pathways, ultimately improving fruit quality.

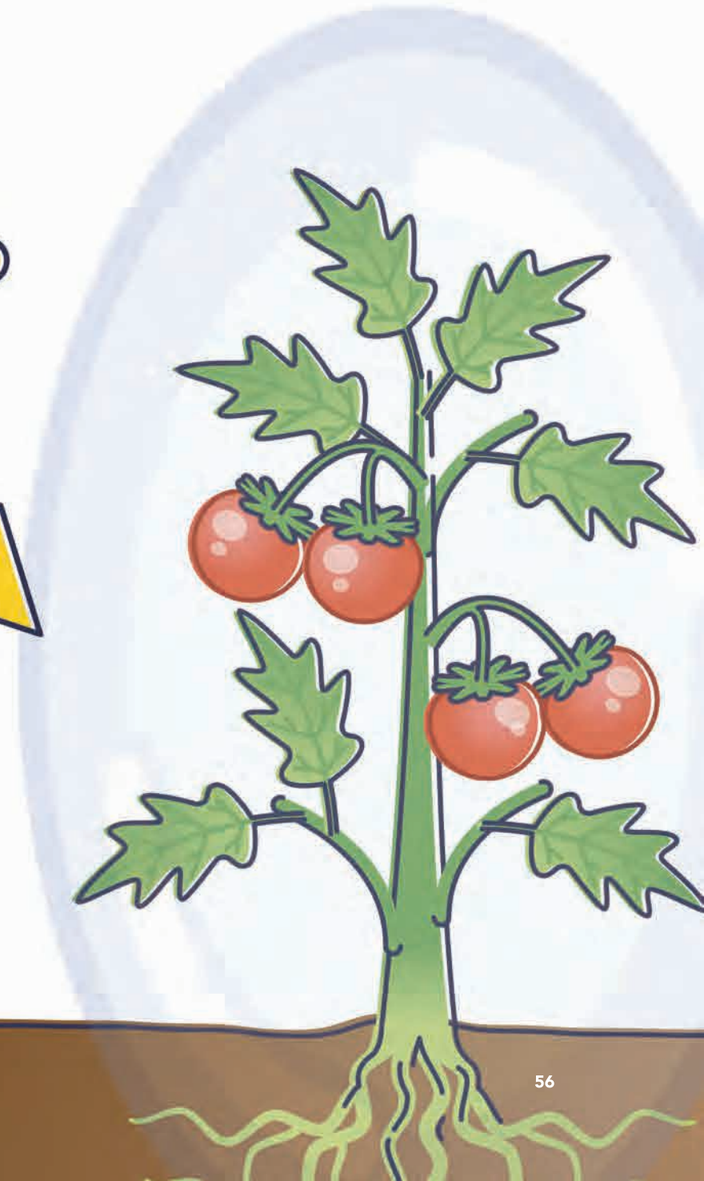
VDAL triggers a strong and sustained ROS burst in multiple crop species.





VDAL extensively modulates eight phytohormone signaling pathways (including cytokinin, jasmonic acid and brassinosteroid) by regulating key genes. It physically interacts with plant E3 ubiquitin ligases and activates both PTI (pattern-triggered immunity) and ETI (effector-triggered immunity), thereby enhancing crop resistance to stresses and diseases.





Abiotic Tolerance

Helps plants to remain vigorous in hostile growth conditions. Allows a better yield in terms of quantity and quality.

Case study

Cold stress on canola

Designed to naturally mitigate abiotic stress and reduce phytotoxic effects in crops, enhancing plant resilience and overall productivity. Through its unique formulation, VDAL helps plants adapt to challenging environmental conditions without relying on synthetic chemicals.

Abiotic Stress Reduction: VDAL strengthens plant tolerance to adverse environmental factors such as heat, cold, drought, salinity, UV radiation, and poor soil conditions by modulating stress-related signaling pathways.

Phytotoxicity Mitigation: Minimizes crop damage caused by chemical treatments, herbicide drift, or nutrient excess, helping plants recover faster and maintain healthy metabolic function.



Drought



Flooding



Cold



Drought & Salinity





Disease Resistance

Modulates multiple hormone signaling pathways and activates plant immune systems (PTI/ETI) to enhance resistance against various diseases.

Case study

Inducing disease resistance on rice

VDAL is designed to naturally enhance plant resilience by triggering a controlled induced resistance response. Unlike conventional pesticides that directly target pathogens, VDAL works by stimulating the plant's own immune system, promoting a proactive defense mechanism against fungal and bacterial diseases.

Natural Mode of Action: VDAL activates plant defense pathways (such as systemic acquired resistance or SAR, and induced systemic resistance or ISR), leading to the production of defensive enzymes, antimicrobial compounds, and structural barriers.

Dual Protection: Effective against a broad spectrum of fungal (e.g., powdery mildew, Fusarium, Botrytis), bacterial (e.g., Pseudomonas, Xanthomonas) pathogens by priming plant immunity.

Crop Versatility: Can be used across multiple crop types including vegetables, fruits, cereals, and ornamentals.

Resistance Management: As it doesn't directly kill pathogens, VDAL reduces the risk of resistance development, making it ideal for integrated pest management (IPM) programs.



Rhizopus stolonifer suppression by VDAL







Yield & Quality Increase

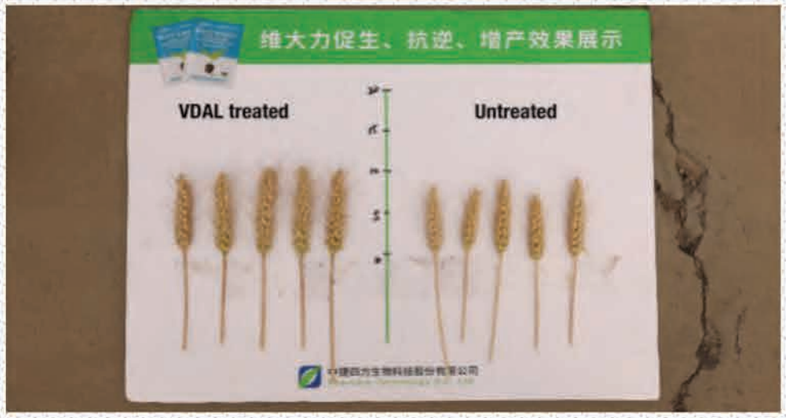
VDAL-driven yield gains arise from extended photosynthetic activity, improved light utilization, and regulates sugar metabolism to enhance sugar accumulation to promote coloration and improves flavor.

Case study

Yield increase on wheat

VDAL is developed to naturally increase crop yield and improve produce quality by optimizing plant metabolic activity and nutrient efficiency. It supports the plant throughout its growth cycle, enhancing both productivity and market value.

Yield Enhancement: Promotes efficient photosynthesis, nutrient assimilation, and energy allocation, leading to larger harvests with improved consistency and uniformity.
Quality Improvement: Increases the concentration of key quality markers such as sugar content (Brix), color, firmness, size, and shelf life in fruits, vegetables, and grains.
Improved Flowering & Fruit Set: Stimulates hormonal activity (especially auxins and cytokinins) that enhance flower fertility and fruit retention, boosting both quantity and quality.





Better Seed & Root

Seed treatment promotes germination and uniform seedling emergence, while enhancing productive tillering. Develops stress-adaptive seedlings with superior root systems and fortified shoot structures, ensuring rapid field establishment.

Case study

Improving germination on corn

VDAL is specifically formulated to enhance seed germination and promote strong root development through natural, non-toxic mechanisms. Designed for use across a variety of crops, VDAL improves early-stage plant vigor, leading to better establishment and long-term yield potential.

Germination Booster: VDAL accelerates the germination process by activating enzymatic pathways and improving cellular energy metabolism, resulting in faster and more uniform sprouting.
Root System Enhancer: Encourages deeper, denser, and more fibrous root development, increasing the plant's ability to absorb water and nutrients efficiently.
Compatible with Standard Practices: Can be applied as a seed treatment, root dip, or early stage foliar spray, and is safe to integrate with existing fertilization programs.

