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nFarm

ISAGRO PHERO LINE

CATALOGUE 2023

FOR THE WORLD OF PROFESSIONAL AGRICULTURE

in Farm – Isanro Phero Lin





## **CATALOGUE 2023**



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## A STORY WORTH TELLING:

Gea was established back in 1986 in Milan, based on Giuseppe Braghieri vision. Our company, which today employs more than 50 people, immediately distinguished itself for its desire to grow in the world of manufacturing low environmental impact solutions for pest control.

A long process of growth and investment led to the acquisition of the Isagro brand, from which we took over the range of traps and pheromones for monitoring and mass trapping, together the Ecodian® range of sexual distraction products.

2022 turned out to be a transition year full of challenges: The severe drought that prevailed throughout the year, together with inflationary pressures, certainly have had a significant impact on professional agriculture. Despite these external variables, and despite the fact that the acquisition process was completed late in the season, GEA nevertheless managed to give continuity to the approach it inherited from Isagro, placing customer relations at the centre of its strategy and laying the foundations for its future growth.

Its strong commitment to the development of the <code>inFarm</code> - <code>Isagro Phero Line®</code> is evidenced by its keen focus on the introduction of new references. Within a few months of the acquisition, GEA was in fact able to introduce four new references into the catalogue, as well as having initiated several projects for the continuous improvement of existing products.

I am convinced that our team, together with our customers, will benefit sustainable agriculture in Italy and Europe, in a context where low environmental impact solutions will increasingly play a key role.

Adriano Braghieri General Manager

## **MISSION**

We help the agricultural, civil and industrial world to manage pest problems, intercepting their periodic evolution, through the research, development and production of Green products with the lowest possible environmental impact, firmly believing in the need for user training for safe and effective use.

## **VISION**

**inFarm - Isagro Phero Line**® aims to be the brand of reference for low-impact pest control and monitoring in professional agriculture.

## **OUR VALUES**

Made in Italy
Research & Development
Minimal environmental impact
Training
Innovation
Workplace safety
Internal talent development

## **OUR CERTIFICATIONS**



#### **UNI EN ISO 9001:2015**

Quality management systems

#### UNI ISO 21001:2018

Management Systems for Organisations education and training organisations

#### ISO 45001:2018

Occupational Safety & Health Management System

#### UNI EN ISO 14001:2015

Environmental management systems



## PHEROMONES AND THEIR TECHNOLOGIES OF USE



# TRAPS FOR MONITORING AND MASS TRAPPING

**inFarm**® - Isagro Phero Line®offers a wide range of traps which, combined with more than 100 different pheromone essences, can be used to control the main pests of agricultural crops. The traps are divided into traps for population monitoring and traps for mass trapping.

#### TRAPS FOR MONITORING:

These traps are used to monitor the flight curves of the insect and to identify the right moment for insecticide treatment. They are also a valuable tool in combination with the 'Ecodian®' sexual disorientation system to ensure that the orchard remains 'protected'.

### TRAPS FOR MASS TRAPPING:

The aim is to directly control a harmful species by using special traps capable of capturing large numbers of insects.

This method cannot eliminate all individuals, but acts as a factor in containing the population.



## **PHEROMONES**

Pheromones are natural chemicals used as messages in the social lives of many animals, particularly insects. Isagro has pioneered the study of insect sex pheromones, using them to serve various technologies such as disorientation defence, trap monitoring and mass trapping.

The use of compostable bio-plastic in dispensers that do not require disposal at the end of the season and the design of highly effective traps are examples of the innovative capacity that **inFarm - Isagro Phero Line**® provides for ecofriendly agriculture.

## TRAPS LINE MONITORING MASS TRAPPING



**BACTROCERA DORSALIS** CARPO AND CARPO+ CYMATRAP® GARDEN CYMATRAP® PRO MASS® MASS<sup>®</sup> LARGE MASS® LARGE for Popillia japonica COMING SOON OLIVE ROOF TRAPTEST<sup>®</sup> WING **BLUTRAP**<sup>®</sup> GOLDENTRAP<sup>®</sup> BLUTRAP<sup>®</sup> ROLL GOLDENTRAP® ROLL YATLORF LYGUSTRAP NEW RHYNCHO TRAP by Syngenta® NEW DROSATRAP COMING SOON

HYDROTRAP COMING SOON



## **BACTROCERA DORSALIS**

McPhail-type trap, particularly suitable for monitoring and mass trapping of dipterans.

**BACTROCERA DORSALIS** is a trap for trapping adults of various species of Diptera Tephritidae.

It can be used in combination with pheromones and attractants.

**BACTROCERA DORSALIS** is a trap for trapping adults of the Oriental fruit fly, a polyphagous insect with an incredible biotic potential due to its numerous annual cycles and high oviposition.

The attractiveness of the methyleugenol-based dispenser contained in a protective capsule and the plastic structure allow effective trapping and precise monitoring of the species.

The duration of dispensing is about 40 days.

#### RECOMMENDATIONS FOR USE

Suspend the trap 1.5-2 metres above the ground, preferably in shaded areas.

To improve the effectiveness of the trap, it is recommended to add a soap and water or oil solution.

PACKAGING	CODE	CONTENT
BACTROCERA DORSALIS	P-25010INFDACUDO	<ol> <li>trap modified Mc Phail type with interlocking elements.</li> <li>dispensers of Methyleugenol attractant.</li> </ol>
PACKAGING	CODE	CONTENT
BACTROCERA DORSALIS WITHOUT PHEROMONE	P-25010INF	1 trap modified Mc Phail type with interlocking elements.





Pheromone traps specifically designed for monitoring Cydia pomonella

**CARPO** is a case-shaped trap with a removable inner glued bottom, specifically designed to enhance attractiveness.

The pheromone should be replaced every 4-5 weeks.

**CARPO+** is an open pagoda shaped trap, extremely selective and protected.

The removable glued bottom is not subject to getting dirty.

CARPO+ enhances the attractiveness of the long lasting pheromone dispenser with up to 180 days dispensing time.

### RECOMMENDATIONS FOR USE

Install CARPO and CARPO+ traps prior to the start of the wintering generation flights, 3 per hectare.

For plots larger than one hectare, calculate 3 traps for the first hectare and one trap for each additional hectare.

Check traps weekly or in shorter shifts if necessary.

	PACKAGING	CODE	CONTENT
	CARPO	P-25005INFCARPPO	<ul><li>1 trapp:</li><li>3 pheromone dispensers</li><li>3 glued bottoms</li></ul>
4	PACKAGING	CODE	CONTENT
	CARPO+	P-25006INFCARPPO	<ul><li>1 trapp:</li><li>1 long lasting pheromone attractant dispense</li><li>3 glued bottoms</li></ul>
	PACKAGING	CODE	CONTENT
	GLUED BOTTOMS	P-25006INFREF	20 glued bottoms



## CYMATRAP® GARDEN

Pheromone trap for the control of Asian bugs (*Halyomorpha halys*) recommended for hobby use

**CYMATRAP® GARDEN by AgBio** is the recommended trap **for domestic/hobby use** for vegetable gardens, small orchards and gardens.

The unique pyramid shape, designed by the US company "AgBio", is specially designed to effectively catch adult and nest bugs.

The dimensions are 45 cm in height and 16 cm on the side of the base.

#### RECOMMENDATIONS FOR USE

**CYMATRAP® GARDEN** is a valuable tool for controlling Asian bedbug populations in three ways:

- **1.** It signals overwintering adults leaving their winter sites and monitors their return to the field.
- 2. Its pyramid shape helps trap juvenile stages which, unable to fly, climb up the vertical panels and into the jar.

Signalling the presence of newborns is a fundamental piece of information that allows timely action to limit the spread of the species. Neanids are more sensitive to insecticide treatments than adults.

3. At the end of the season **CYMATRAP® GARDEN** intercepts and stops adults that tend to take refuge in crevices for winter diapause.

The trap can be used for both monitoring and mass trapping of

the insect. For areas of a few thousand m<sup>2</sup>, such as gardens and kitchen gardens, monitoring of the bedbug population can be carried out with 1 or 2 traps. If the trap is used as an active tool to limit the development of the Asian bedbug (mass trapping), it should be installed covering the whole area, with a maximum distance between traps of 20 metres and a distance between building entrances of 6 metres.

For proper monitoring, install three traps per hectare from March until September/October. Check catches weekly. Overwintering insects initially respond little to pheromones because they are more interested in finding food. After this initial phase, which lasts a few weeks, their physiology changes and pheromones begin to exert a greater effect, which becomes maximum on juveniles (neanids). The number of catches can vary according to many factors; The best results are usually seen from mid-July onwards.

Neanids do not fly, they only walk, so it is important to place the base of the trap on the ground or on fences or other structures directly connected to the ground to allow the neanids to climb over the trap and enter the jar containing the pheromones.

It is recommended that **CYMATRAP® GARDEN** be placed in areas of the farm most favourable to the development of *Halyomorpha halys*, particularly around the perimeter of the crop near hedges and buildings.

Provide additional traps on any sides or points at risk. Replace dispensers every 8-9 weeks.

Warning: Use traps outdoors only.



PACKAGING

CYMATRAP® GARDEN

P-25012INFHALYHA

CODE

2 yellow hard plastic triangles

1 yellow entrance cone

1 collection iar

CONTENT

1 elastic cord for fixing the trap

2 anchor pegs

**2** aggregation pheromone dispensers, enclosed in sealed envelope

**2** dispensers of attractant, enclosed in a sealed bag



## CYMATRAP® PRO



Pheromone trap for monitoring for Asian bugs (*Halyomorpha halys*) for professional use

**CYMATRAP® PRO by AgBio** is the recommended trap for professional use.

The unique pyramid shape, designed by the US company "AgBio", is specially designed to effectively catch adult and nest bugs. The dimensions are 120 cm in height and 36 cm on the side of the base.

#### RECOMMENDATIONS FOR USE

 $\mbox{\bf CYMATRAP}^{\mbox{\it IB}}$  PRO helps the farmer to monitor the insect in three ways:

**1.**It signals overwintering adults leaving their winter sites and monitors their return to the field.

2. Through the particular pyramid shape, it favours the capture of the neanids that climb the vertical panels until they reach the inside of the jar. Signalling the presence of newborns is a fundamental piece of information that allows timely action to limit the spread of the species. Neanids are more sensitive to insecticide treatments than adults.

3. At the end of the season CYMATRAP® PRO intercepts and stops adults that tend to take refuge in crevices for winter diapause.

Place the trap outside, on the ground or other surface, at least 6 metres away from gardens, fruit trees and building entrances. For proper monitoring, install three traps per hectare from March until September/October.

Check catches weekly. In the case of plots of several merged hectares, set three traps for the first hectare and one for each additional merged hectare. Keep a minimum distance of 20 metres between two traps.

Overwintering insects initially respond little to pheromones because they are more interested in finding food. After this initial phase, which lasts a few weeks, their physiology changes and pheromones begin to exert a greater effect, which becomes maximum on juveniles (neanids). The number of catches can vary according to many factors; The best results are usually seen from mid-July onwards.

Neanids do not fly, they only walk, so it is important to position the base of the trap on the ground, using pegs and fixing them to the holes in the lower part of the pyramid.

It is recommended that **CYMATRAP® PRO** be placed in those areas of the farm most favourable to the development of *Halyomorpha halys*, particularly around the perimeter of the crop near hedges and buildings.

Provide additional traps on any sides or points at risk. Replace dispensers every 8-9 weeks.

Warning: Use traps outdoors only.

#### The CYMATRAP® PRO kit includes 2 packages



PACKAGING	CODE	CONTENT
CYMATRAP® PRO LARGE BOX	P-25013INFHALYHA	black polymer plastic triangles     black poly-cardboard plastic square base
	CONTENT	

#### SMALL BOX

#### 1 black entry cone | 1 collecting jar

1 elastic cord to secure the trap | 4 anchor pegs

1 dispenser of aggregation pheromone, enclosed in a sealed bag

1 dispenser of attractant, enclosed in sealed envelope







Pheromone trap for the mass trapping of food moths and Lepidoptera Noctuidae

**Mass®** is a funnel trap with collection bag, particularly suitable for the mass trapping of food and meal moths in mills, warehouses and the food industry.

It is also suitable for trapping different species of Noctuid Lepidoptera pesting horticultural crops.

### RECOMMENDATIONS FOR USE

Hang one trap every 200 m<sup>3</sup> approximately, in a medium-high position away from walls.

For greenhouse use use 1 trap per 1000 m<sup>2</sup>.



PACKAGING	CODE	CONTENT
MASS <sup>®</sup> WITH PHEROMONES	P-25003INFX	<ul><li>1 trap</li><li>3 pheromone dispensers</li><li>3 bags</li></ul>
PACKAGING	CODE	CONTENT
MASS <sup>®</sup> WITHOUT PHEROMONE	P-25003INF	<ul><li>1 trap</li><li>3 bags without dispensers</li></ul>



## MASS® LARGE



Pheromone trap for the mass trapping pheromone traps for mass trapping of Rhododendron and Processionary moths

Mass® Large is the trap for mass trapping of Redwood, Yellowwood and Pine processionary moth. The trap is available in two versions with vertical fins, recommended for the mass trapping of the Red Bunting (Cossus cossus) and Pine processionary moth (Traumatocampa pityocampa); without fins for catching the Yellow Wormwood (Zeuzera pyrina).

**MASS® LARGE**, in the version with vertical fins, is also suitable for capturing various species of Noctuid Lepidoptera infesting horticultural crops.

#### **RECOMMENDATIONS FOR USE**

Set traps by 1st half of May for *Zeuzera pyrina* or *Cossus cossus*, in numbers of 8-10 per hectare.

For pine processionary moths (*Traumatocampa pityocampa*) install traps **MASS®LARGE** in the first half of June and hang them in a medium-high position on the southwest side of the plants.

In parks and gardens, 6-8 traps are recommended **MASS® LARGE** per hectare, spaced 40-50m apart.

In large areas of woodland, place traps MASS® LARGE one every 100 metres along the perimeter and access roads, placing them mainly in the sunniest areas and where infestation is usually greatest.

#### **DISPENSERS:**







	PACKAGING	CODE	CONTENT
	MASS® LARGE FOR GOAT MOTH AND OWLET MOTHS, CUTWORMS OR ARMYWORMS - WITH FINS	P-25004INFACCOSSCO P-25004INFACX	2 traps 6 pheromones
1	MASS® LARGE FOR GOAT MOTH YELLOW - WITHOUT FINS	P-25004INFAAZEUZPY	2 traps 6 pheromones
	MASS <sup>®</sup> LARGE FOR PINE PROCESSIONARY MOTH	P-25004INFACTHAUPI	2 traps 4 pheromones
	MASS <sup>®</sup> LARGE WITHOUT PHEROMONES WITHOUT FINS	P-25004INF	2 traps WITHOUT pheromones
	MASS <sup>®</sup> LARGE COLLECTING TUBES	P-25004INFREF	10 tubes



## MASS® LARGE for Popillia japonica

Pheromone trap for the mass trapping of *Popillia japonica* 

**MASS® LARGE** is a trap modified specifically for the mass capture of the Japanese beetle (*Popillia japonica*).

The combination of pheromone-based sexual attractant and floral scent attractant enables the capture of both male and female specimens. The trap is specially designed to be selective and prevent the capture of beneficial insects.

The large collection bag allows the capture of numerous individuals.

#### **RECOMMENDATIONS FOR USE**

It is recommended to place the trap at least 1 metre high, maintaining a distance of at least 10 m from crops. For mass trapping, place 15-20 traps per hectare. For monitoring, 1-3 traps per hectare are recommended. Empty or replace the bag once 2/3 full, cleaning the funnel to avoid clogging the trap. Replace dispensers every 8-10 weeks.



PACKAGING

MASS® LARGE for Popillia japonica CODE

P-25023INFPOPIJA

CONTENT

1 trap

2 pheromone dispensers

2 attractant dispensers

**3** bags



## **OLIVE**



Specially designed pheromone trap for monitoring the Olive Fly

**OLIVE** is an extremely effective trap for monitoring olive fly (Bactrocera oleae), consisting of a specially designed double-pitch canopy, glued on the inside, with the composite pheromone dispenser positioned at a distance from the canopy to maximise attraction and capture.

The combination of **OLIVE** and the specific pheromone provides a system with high selectivity and effectiveness.

#### **RECOMMENDATIONS FOR USE**

It is advisable to install the traps **OLIVE** at the end of June in a number of 2-3 per hectare of olive grove. For plots larger than one hectare, calculate 3 traps for the first hectare and one trap for each additional hectare. Replace dispenser every 4-5 weeks.

Insert the composite dispenser Insert the composite dispenser into the holder (see figure).





PACKAGING

OLIVE

CODE

CONTENT

P-25007INFDACUOL

9 traps

**9** pheromone dispensers





## A JOSON ARUTOS

Pheromone trap specially designed for monitoring scale insects

The **ROOF** model has been designed for monitoring scale insects.

**ROOF** is a trap consisting of a glued canopy where the nozzle is positioned at a distance from the canopy to maximise attraction and capture capability.

### RECOMMENDATIONS FOR USE

It is recommended that **ROOF** traps be installed in spring in numbers of 2-3 traps per hectare in open field, 1-2 traps per plot in greenhouse.

Insert rubber capsule
Insert the composite dispenser
into the holder (see figure).





PACKAGING	CODE	CONTENT
ROOF	P-25008INFX	<b>3</b> traps
		9 collared caps
		9 pheromone dispensers

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## **TRAPTEST®**



## Pheromone trap for monitoring Lepidoptera

**TRAPTEST®** is a glue trap, recommended for monitoring small and medium sized Lepidoptera.

**TRAPTEST®** is the most popular and effective tool for monitoring Lepidoptera flights in orchards and vineyards, an essential accessory for guided pest management, allowing the farmer to know when the actual level of infestation exceeds certain thresholds.

**TRAPTEST®** consists of a canopy and a glued bottom, joined together at cross-axes; The pheromone dispenser is placed in the centre of the glued bottom, where the male individuals of the species concerned, attracted by the sex pheromone, will be captured.

#### RECOMMENDATIONS FOR USE

#### Calculation of trap requirements

It is recommended to install 3 traps **TRAPTEST®** per hectare.

For plots larger than one hectare, calculate 3 traps for the first hectare and one trap for each additional hectare.

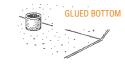
When monitoring more than one species at the same time, place the **TRAPTEST®** traps for each species at a distance of no less than 30 metres.

Never place more than one dispenser within the same **TRAPTEST®**.

Insert the dispensers as shown in the figure.

Check traps weekly or in shorter shifts if necessary.

The use of **TRAPTEST®** poses no toxicity risk to humans, animals or the environment. No special precautions are required.



Place the rubber capsule in the middle of the adhesive base with the concave part facing upwards.



Place the dispenser on the adhesive base or hang the dispenser under the canopy by opening and closing the lid of the vial in such a way that the supporting wire of the trap remains in the eyelet of the lid.

	PACKAGING	CODE	CONTENT
3x <u>/</u>	TRAPTEST® with PHEROMONES	P-25001INFX	<ul><li>3 traps</li><li>9 glued bottoms</li><li>9 pheromone dispensers</li></ul>
	TRAPTEST® WITHOUT PHEROMON	NES P-25001INF	3 traps 9 glued bottoms without pheromone dispense
$\stackrel{\checkmark}{\Leftrightarrow}$	TRAPTEST <sup>®</sup> ONE WITH PHEROMONES	P-25001INFONEX	<ul><li>1 trap</li><li>3 glued bottoms</li><li>3 pheromone dispensers</li></ul>
	TRAPTEST® ONE WITHOUT FEROMONS	P-25001INFONE	<ul><li>1 trap</li><li>3 glued bottoms</li><li>3 pheromone dispensers</li></ul>
	TRAPTEST <sup>®</sup> GLUED BOTTOMS	P-25001INFRE	<b>9</b> glued bottoms



₹nFarm®

PHERO LINE



## **WING**



## Chromotropic trap for monitoring and mass trapping Tripetid Diptera

**WING** is an chromotropic glue trap, the yellow colour of which attracts the target insect and is particularly active against Diptera tripetidae. It is valued for both monitoring and mass trapping.

Is characterised by a star-shaped section that always allows optimum exposure to light and facilitates handling without smearing the glue.

Is used on different insect species depending on the system of attraction with which it is triggered:

- Parapheromone activation (trimedlure):

Mediterranean fruit fly;

- activation with pheromone and food (or ammonia) attractant: Olive fly;

- activation with food (or ammonia) attractant:

Cherry fly, Nut fly, Capers fly.

#### Calculation of trap requirements

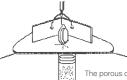
For plots larger than one hectare, calculate 3 traps for the first hectare and one trap for each additional hectare. Check traps weekly or in shorter shifts if necessary.

#### Advice on use for mass trapping

**WING** to catch Bactrocera oleae should be primed with pheromone for the male and ammonia attractant for the female. The caps on the end of the pheromone dispenser should not be opened and should be inserted into one of the two openings on the triangular top of the trap. The vials of ammonia attractant are opened and the cap is inserted into one of the two openings on the triangular roof. Do not remove the discs in the vial. The vial will remain hanging under the trap roof.

Pheromone dispenser: lasting 4 weeks.

**Ammonia attractant:** Lasts 4 weeks but may decrease with rain or high humidity (can be seen when running out of product). For mass trapping install no less than 15-20 traps per hectare.



The porous discs in the vials must remain in their positions to avoid loss of active substance.

#### RECOMMENDATIONS FOR USE

Traps should be set in June, within the flicker period of each species, with 2-3 traps per hectare.

Package contains: 3 yellow chromotropic traps with pheromone dispensers and/or attractant depending on the target insect.

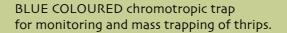


depending on the target insect.		
PACKAGING	CODE	CONTENT
WING WITHOUT FEROMONS	P-25009INF	<b>3</b> traps without dispenser
WING for Olive Fly (Bactrocera oleae)	P-25009INFDACUOL	<ul><li>3 traps</li><li>9 pheromone dispensers</li><li>9 vials of ammonia attractant</li></ul>
WING for Mediterranean Fruit Fly (Ceratitis capitata)	P-25009INFCERTCA	3 traps 9 platelets of "trimedlure" attractant
WING for Cherry Flies (Rhagoletis cerasi)	P-25009INFRHAGCE	<b>3</b> traps <b>9</b> vials of ammonia attractant
WING for Walnut Flies (Rhagoletis completa)	P-25009INFRHAGCO	<b>3</b> traps <b>9</b> vials of ammonia attractant

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PHERO LINE





**BLUTRAP®** 

**BluTrap®** is the blue chromotropic trap for monitoring and mass trapping thrips.

A pack of **BluTrap**® contains 10 double-sided glued chromotropic panels made of high quality biodegradable paper and 20 ties for quick installation.

Each panel is 25.5 cm high and 16 cm wide for a total area of 408 cm<sup>2</sup> per side and is enclosed in 2 protective films.

The highly saturated blue colour is particularly suitable to enhance its attractiveness to thrips. In particular, it attracts the *Frankliniella occidentalis* (Western greenhouse thrips), an insect vector of the tomato virus that causes spotted wilt (TSWV, Tomato Spotted Wilt Virus).

Water-repellent, resistant to rain and to foliar applications of the most common agropharmaceuticals.

The high-quality entomological glue is non-toxic and is present on both sides. It is UV-resistant, does not dry out and remains active for at least 4-5 weeks.

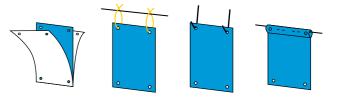
Once applied, the board stays firmly in place, does not roll up and does not bend. Can be used in any type of greenhouse and in open field conditions. Safe and non-toxic

foliage. Modulate the quantity of panels to be used according to the pressure and quantity of the insect and the crop to be protected.

Replace the panels when there is about 70% of the surface covered by insects or when the glue loses its adhesive activity. Intensifying the number of traps around the perimeter of the field can promote the "barrier" effect, limiting the entry of new pests into the field.

Use the ties available to tie the panels to the support structures.

Holes are provided in the four corners of the panels to facilitate this. Attach the **BluTrap®** panels correctly so that they do not wobble and are more effective at catching insects.



#### **RECOMMENDATIONS FOR USE**

Use **BluTrap®** panels for monitoring or mass trapping thrips. Install approximately 10 **BluTrap®** panels per 100  $\text{m}^2$  from pre-flowering.

Place traps at the height of the flower stages or the top of the

PACKAGING
CODE
CONTENT
BLUTRAP®
P-25017INFB
10 glued panels
20 straps per installation

1 CARTON BOX CONTAINS 50 PACKS OF 10 PANELS



36

Confezione da 10

biodegradabile



## **GOLDENTRAP®**



## YELLOW COLOURED chromotropic trap for monitoring and mass trapping insects

**GoldenTrap**® is the yellow chromotropic trap for monitoring and mass trapping of insects.

A pack of **GoldenTrap®** contains 10 double-sided glued chromotropic panels made of high quality biodegradable paper and 20 ties for quick installation. Each panel is 25.5 cm high and 16 cm wide for a total area of 408 cm<sup>2</sup> per side and is enclosed in 2 protective films.

The fluorescent yellow colour is particularly suitable for enhancing the attractiveness of the panels to dipters (e.g. flies) and rhinos, such as leafhoppers and aleurodes, or other insects attracted by the yellow colour.

Water-repellent, resistant to rain and to foliar applications of the most common agropharmaceuticals.

The high-quality entomological glue is non-toxic and is present on both sides. It is UV-resistant, does not dry out and remains active for at least 4-5 weeks in open field conditions. Once applied, the board stays firmly in place, does not roll up and does not bend. It can be used in any type of greenhouse, under open field conditions and also in indoor environments such as food storage or livestock farms.

**GoldenTrap®** is harmless to beneficial insects such as bees, as the yellow colour is not sufficient to attract them, but the presence of pollen or nectar is necessary. Safe and non-toxic.

#### **RECOMMENDATIONS FOR USE**

Install panels **GoldenTrap®** for monitoring or mass trapping of targeted insect pests.

Modulate the quantity of panels to be used according to the pressure and quantity of the insect and the crop to be protected.

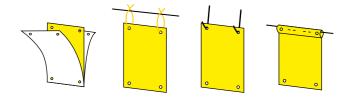
Replace the panels when there is about 70% of the surface covered by insects or when the glue loses its adhesive activity. Intensifying the number of traps around the perimeter of the field can promote the "barrier" effect, limiting the entry of new pests into the field.

Use the ties available to tie the panels to the support structures.

Holes are provided in the four corners of the panels to facilitate this. Properly secure **GoldenTrap®** panels so they do not wobble and are more effective at capturing insects.

For more selective trapping, **GoldenTrap®** panels can be combined with pheromone dispensers **Dispenser** for those insects for which the attractiveness of chromotropic traps and sex or aggregation pheromones can be applied simultaneously. In this case, the number of panels installed can be significantly reduced as required.

Apply the dispensers directly onto the entomological glue.





PACKAGING
GOLDENTRAP®

CODE

P-25017INFG

CONTENT

10 glued panels20 straps per installation



## **BLUTRAP® ROLL**



BLUE COLOURED chromotropic roller for mass trapping thrips.

**BluTrap® Roll** is the blue colour chromotropic roll for mass trapping thrips.

The roller is 15 cm wide and 100 metres long. It is made entirely of biodegradable paper, resistant to traction, but can be easily torn crosswise for easier and quicker application.

High quality entomological glue is present on both sides of the roll. It is UV-resistant, does not dry out and remains active for at least 4-5 weeks. The edge of the roller is not glued, for easier handling by the operator.

The highly saturated blue colour is particularly suitable to enhance the attractiveness to thrips. In particular, it attracts the *Frankliniella occidentalis* (Western greenhouse thrips), an insect vector of the tomato virus that causes spotted wilt (TSWV, Tomato Spotted Wilt Virus).

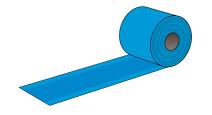
Water-repellent, resistant to rain and to foliar applications of the most common agropharmaceuticals. It can be used in any type of greenhouse.

Due to the large adhesive surface area, use in open fields is not recommended because of the risk of catching other nontarget animals such as birds or small mammals. Safe and non-toxic.

#### RECOMMENDATIONS FOR USE

Spread the **BluTrap® Roll** in the pre-flowering phase of the crop for mass trapping of thrips. Modulate the quantity to be used according to the pressure and quantity of the insect and the crop to be protected. For example, the roll can be spread along the row of the crop across all the rows, or it can be applied alternately. The installation height must correspond with the flower stages and vegetative apexes of the crop or where the leaf apparatus is well developed.

Replace the product when there is about 70% of the surface covered by insects or when the glue loses its adhesive activity. Wherever possible, use greenhouse poles as support for rollers and intensify installation near greenhouse entrances to better intercept incoming thrips.





PACKAGING

BLUTRAP® ROLL

CODE

P-25017INFBR

CONTENT 100 metres

1 CARTON BOX CONTAINS 12 ROLL



## **GOLDENTRAP® ROLL**



YELLOW COLOUR chromotropic roller for mass trapping insects.

**GoldenTrap® Roll** is a double-sided yellow adhesive chromotropic roll for mass insect trapping.

It is particularly suitable for the capture of flies, e.g. olive fly (*D. oleae*), cherry fly (*R. cerasi*), whitefly (aleurodidae) and common fly. In addition, it can be used for the capture and monitoring of leafhoppers.

The roller is 15 cm wide and 100 metres long. It is made entirely of biodegradable paper, resistant to traction, but can be easily torn crosswise for easier and quicker application. The high-quality entomological glue is non-toxic and is present on both sides of the roller.

It is UV-resistant, does not dry out and remains active for at least 4-5 weeks. The edge of the roller is not glued for easier handling by the operator.

The yellow colour is particularly suitable to enhance its attractiveness to diptera (e.g. flies) and rhinocytes, such as leafhoppers and aleurodes, or other insects attracted by the yellow colour (e.g. corn rootworm, some corn rootworms, some insects). Corn rootworm, some aphids).

Water-repellent, resistant to rain and to foliar applications of the most common agropharmaceuticals.

Can be used in all types of greenhouses and indoor environments such as food storage facilities or livestock farms.

**GoldenTrap® Roll** is harmless to beneficial insects such as bees, as the yellow colour is not sufficient to attract them, but the presence of pollen or nectar is necessary. Due to the large adhesive surface area, use in open fields is not recommended because of the risk of catching other non-target animals such as birds or small mammals.

Safe and non-toxic.

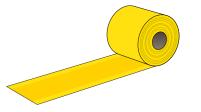
#### RECOMMENDATIONS FOR USE

Spread the **GoldenTrap®** Roll for mass trapping of targeted pest. Modulate the quantity to be used according to the pressure and quantity of the insect and the crop to be protected. For example, the roll can be spread along the row of the crop across all the rows, or it can be applied alternately. The installation height should correspond with the vegetative apexes of the crop or slightly below where the foliage is well developed.

Replace the product when there is about 70% of the surface covered by insects or when the glue loses its adhesive activity. It is advisable, where possible, to use the poles present in the greenhouses as support for the rollers and to intensify the installation near the entrances of the greenhouses, in order to better intercept incoming phytophagous insects.

In stables **GoldenTrap® Roll** can be applied on vaults, between beams or on support poles to intercept insects that proliferate in livestock environments.

For more selective trapping, the **GoldenTrap® Roll** can be combined with pheromone dispensers Dispenser specifically for those types of insects for which the attractiveness of the chromotropic trap can be applied simultaneously with that of sex or aggregation pheromones. In this case apply about one dispenser per 50 metres directly on the entomological glue. If a clear gradient of higher catches forms in the vicinity of the pheromone, shorten the distance between the dispensers.





PACKAGING

GOLDENTRAP® ROLL

P-25017INFGR

CODE

CONTENT

100 metres

1 CARTON BOX CONTAINS 12 ROLL



## **YATLORF**



Pheromone trap for monitoring Coleotteri Elateridi.

**YATLORF** is a trap designed to monitor Elateridae, Coleoptera with a multi-year cycle whose larvae, known as "ferrets", feed on roots and underground organs causing seedling failure and wilting of adult plants. In our environments the most common species belong to the genus Agriotes and among them *A. litigiosus*, *A. brevis* and *A. sordidus*.

#### **RECOMMENDATIONS FOR USE**

**YATLORF** traps, depending on the season and the insect to be monitored, should be triggered with one or more specific pheromones;

At the beginning of spring (end of March), the trap should be placed primed with *A. brevis* pheromone, placing the dispenser below the fins of the trap body.

At the **beginning of April**, the trap for *A. sordidus* should be installed; this trap should be renewed after one month.

In **mid-June**, replace the pheromone for *A. litigiosus* to be renewed after about a month.

Traps should be placed in numbers of 3 per 10 ha of land, placing them in a stable position on the ground, burying the lower edge with 1-2 cm of soil.

The dispensers have a lifetime of 4-5 weeks.

## RECOMMENDED CALENDAR FOR THE INSTALLATION OF THE PHEROMONES

PERIOD	PHEROMONE
End of March / Early April	Insert Brevis
Early April	Add Sordidus
Beginning of May	Renew Sordidus
Late May	Replace Brevis with Litigiosus
Mid-June	Renew Litigiosus
Early August	End of Monitoring

To cover the whole season we recommend a package consisting of one trap and 5 dispensers (1 Brevis, 2 Sordidus, 2 Litigiosus).



PACKAGING	CODE	CONTENT
YATLORF TYPE A	P-25011INF	1 trap with components to assemble The pheromones are not included in the packag
DISPENSERGRIOTES BREVIS	P-25011INFEAGRBRE	
DISPENSERAGRIOTES LITIGIOSUS	P-25011INFEAGRLIT	
DISPENSERAGRIOTES SORDIDUS	P-25011INFEAGRSOR	

## **LYGUSTRAP**

Pheromone trap for monitoring of Lygus rugulipennis.

LYGUSTRAP is a pheromone trap for monitoring Lygus rugulipennis, recommended for horticultural crops.

The trap can be used for both monitoring and mass trapping on a wide variety of horticultural crops.

#### RECOMMENDATIONS FOR USE

The useful period for monitoring is between April and October. Place 2-5 traps per hectare for field crops.

For protected crops, place the traps outside the greenhouse. Traps should be placed between the rows of crops at a height of 20-50 cm or possibly buried up to the collecting jar.

In the case of high pest densities, provide additional traps on any sides or points at risk.

To facilitate the capture of the insect, add a liquid (e.g. soap and water).

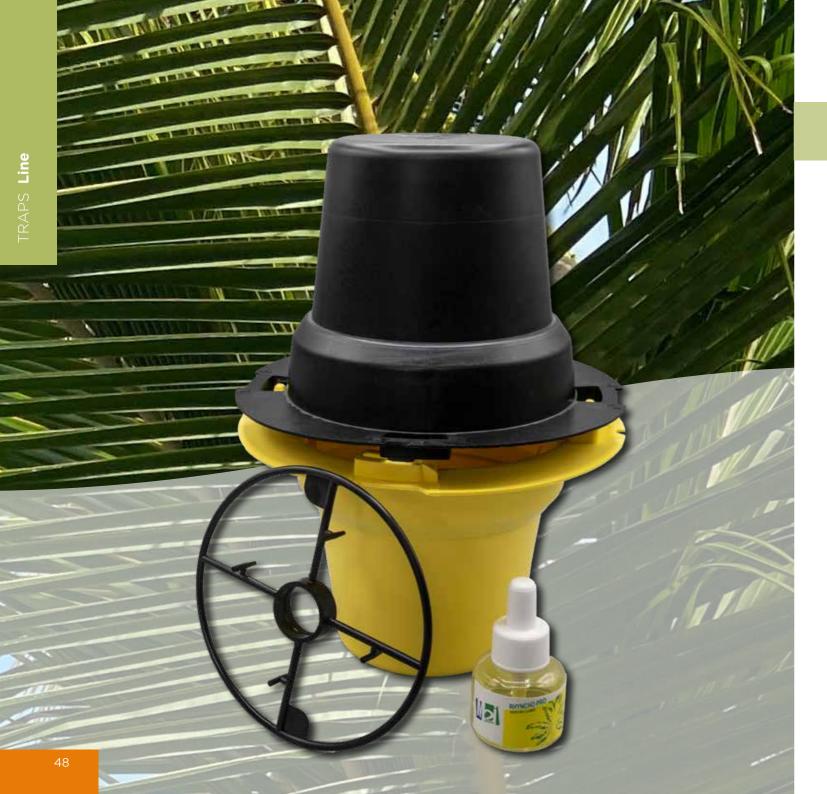
The green colour increases the attractiveness of the trap to the insect.

The dispensers have a lifetime of 4-5 weeks.

CODE	CONTENT
OODL	CONTLINE
P-25019INF	2 traps
	<b>4</b> pheromone dispensers
	CODE P-25019INF

₹nFarm

LYGUSTRAP è la trappola a feromoni per il monitorago del Lygus ruguispennis, consigliata per colture orticole.



## RHYNCHO TRAP by Syngenta®

Trap for monitoring and mass trapping of Rhynchophorus ferrugineus.

RHYNCHO TRAP by Syngenta® is a trap for monitoring and mass trapping the Red Palm weevil comprising an innovative diffuser (RHYNCHO Pro Classic®) which allows the simultaneous release of an aggregation pheromone and an attractant kairomone capable of effectively attracting red palm weevil (also known as Asian palm weevil or sago palm weevil) adults into a pitfall-type trap.

When the trap is activated, the aggregation pheromone and kairomone are released into the air, activating the receptors of both male and female Red Weevils and attracting them to the trap.

#### **RECOMMENDATIONS FOR USE**

Use the trap when Red Weevil adults are active.

Place the trap at least 10 metres from the palm trees, ideally in a shaded area. Bury the lower (yellow) part and fill it halfway with water and a small amount of soap or vegetable oil.

Open the diffuser bottle, screw it into the centre of the holder and place it in the buried part of the trap. Insert the upper part.

For monitoring, place 1-2 traps per hectare, taking care to monitor the trap at regular intervals. For mass trapping, place 7-14 traps per hectare.

Replace the diffuser every 3 months.

PACKAGING CODE CONTENT

RHYNCHO TRAP P-25021INFRHYFE 1 trap
3 pheromone dispensers

## **DROSATRAP**

Trap for monitoring and mass trapping of Drosophila suzukii.

DROSATRAPis a trap used to monitor the small fruit fly (Drosophila suzukii), a key pest in strawberry, raspberry, grape, cherry, plum, peach, fig, blackberry, blueberry, persimmon and kiwi.

**DROSATRAP** is a selective trap designed so as to prevent the capture of other insects, including beneficial insects such as bees.

#### RECOMMENDATIONS FOR USE

**DROSATRAP** is the trap to use in combination with Drosaliquid.

We recommend placing 10-20 traps per hectare filled with 200 ml of attractant liquid, making sure to position them at a height of 1 - 1.5 m.

## **IDEAL WITH DROSALIQUID**



PACKAGING	CODE	CONTENT
DROSATRAP	P-25020INFKIT	2 traps
		1 can of Drosaliquid

## **IDROTRAP**

Pheromone trap for monitoring and mass trapping Tuta absoluta.

**IDROTRAP** is a water trap for monitoring and mass trapping of Tuta absoluta, a major tomato pest.

**IDROTRAP** consists of a red tray with an integrated overflow system that controls the water level.

Male insects are attracted by the sex pheromone dispensed from the top of the trap and fall into the water.

#### RECOMMENDATIONS FOR USE

Position the trap at ground level, keeping a distance of 15-20 metres between them.

Fill the trap with water to the indicated level, taking care to add a small amount of liquid soap or vegetable oil.

IDROTRAP can be connected to a dripper for automatic refilling or alternatively refilling must be done manually. It is advisable to check the traps regularly in order to eliminate any insects present.

Replace dispenser every 4-6 weeks.

PACKAGING	CODE	CONTENT
IDROTRAP	P-25022INFTUTAB	3 traps
		<b>3</b> pheromone dispensers

# PHEROMONES AND DISPENSERES LINE

INSECT-SPECIFIC DISPENSERS

₹nFarm

ISAGRO PHERO LINE DISPENSER
CYMATRAP® DISPENSER
DROSALIQUID NEW
AVAILABLE PHEROMONES



## **DISPENSER**



Insect-specific Pheromone dispensers specific

**DISPENSER** contains additional dispensers for all types of traps.

### RECOMMENDATIONS FOR USE

Place the dispenser in the centre of the traps according to directions.



PACKAGING

CODE

CONTENT

DISPENSER

P-25002INFX

18 pheromone dispensers or 9 vials of ammonia attractant. or 9 pairs of dispensers

for Popillia japonica



## CYMATRAP® DISPENSER



Specific pheromone dispensers for Asian bugs (Halyomorpha halys)

**CYMATRAP®** dispenser contains additional pairs of dispensers, to be combined with **CYMATRAP® GARDEN** and **CYMATRAP® PRO** traps.

#### RECOMMENDATIONS FOR USE

Place 1 silicone dispenser and 1 vial-shaped dispenser inside the jar and at the base of the cone. Keep vial closed. Replace after 8-9 weeks.

Insert into **CYMATRAP® GARDEN** or **CYMATRAP® PRO** trap jars the aggregate diffuser (vial) and the attractant diffuser (silicone dispenser).

The vial-shaped diffuser must be kept closed.

The product poses no risk of toxicity to humans or pets and no special precautions are required.

To ensure greater effectiveness, we recommend handling with gloves.

Store in a cool place. The activity of the dispensers lasts 8-9 weeks from the day of their exposure in the field depending on the environmental conditions.

PACKAGING	CODE	CONTENT
DISPENSER 3+3	P-25014INFHALYHA	<ul><li>3 aggregation pheromone dispensers (vial)</li><li>3 dispensers of attractant (silicone dispenser) specifically for Halyomorpha halys</li></ul>
DISPENSER 9+9	P-25015INFHALYHA	<ul> <li>9 aggregation pheromone dispensers (vial)</li> <li>9 dispensers of attractant (silicone dispenser) specifically for Halyomorpha halys</li> </ul>

## **DROSALIQUID**

Liquid attractant for mass trapping dipterans.

**DROSALIQUID** is a mixture of natural food substances recommended for *Drosophila suzukii*, *Ceratitis capitata* and *Bactrocera dorsalis*.

#### RECOMMENDATIONS FOR USE

Liquid food additive for use within **Drosatrap.** 

Effective 3 to 6 weeks, depending on environmental conditions. It is recommended to top up the liquid every 14 days or when necessary.

In order to prolong how long the liquid remain active in the field, it is recommended to check the traps regularly and remove any insects present in the liquid itself.

For a more attractive effect, the product can be used in combination with specific pheromones. specific pheromones.

## DROSATRAP



PACKAGING	CODE	CONTENT
DROSALIQUID	P-25020INF	1 L CAN

# AVAILABLE PHEROMONES



## STORED FOODS

SCIENTIFIC NAME	COMMON NAME	TRAP
Cadra cautella	Almond and Fig Moth	Traptest <sup>®</sup> , Mass <sup>®</sup>
Cadra figulilella	Dried Fruit Moth	Traptest <sup>®</sup> , Mass <sup>®</sup>
Ephestia elutella	Cocoa and Tobacco Moth	Traptest <sup>®</sup> , Mass <sup>®</sup>
Ephestia kuehniella	Flour Moth	Traptest <sup>®</sup> , Mass <sup>®</sup>
Plodia interpunctella	Banded Moth	Traptest <sup>®</sup> , Mass <sup>®</sup>
Sitotroga cerealella	True corn rootworm	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins

## HERBACEOUS, INDUSTRIAL, ORNAMENTAL

SCIENTIFIC NAME	COMMON NAME	TRAP
Acrolepiopsis assectella	Leek Moth	Traptest <sup>®</sup>
Agriotes brevis	Elaterid, ferret	Yatlorf
Agriotes litigiosus	Elaterid, ferret	Yatlorf
Agriotes sordidus	Elaterid, ferret	Yatlorf
Agrotis exclamationis	Agrotida	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Agrotis ipsilon	Seedling Noctule	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Agrotis segetum	Crop midge	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Autographa gamma	Plusia gamma	Traptest <sup>®</sup>
Cacoecimorpha pronubana	Carnation fly	Traptest®
Capparimya savastanoi	Caper fly	Wing
Choristoneura lafauryana	Strawberry and soybean fruit fly	Traptest <sup>®</sup>
Chrysodeixis chalcites	Tomato plague	Traptest <sup>®</sup>
Cydalima perspectalis	Boxwood borer	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Cydia nigricana	Pea borer	Traptest <sup>®</sup>
Discestra trifolii	Clover Noctule	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Duponchelia fovealis	Southern European marsh pyralid	Traptest <sup>®</sup>
Epichoristodes acerbella	South African carnation bark beetle	Traptest <sup>®</sup>
Gortyna xanthenes	Artichoke moth	Traptest®
Halyomorpha halys	Asian bug	Cymatrap®
Helicoverpa armigera	Yellow Tomato Noctule	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Loxostege sticticalis	Alfalfa and Swiss chard borer	Traptest <sup>®</sup>
Mamestra brassicae	Cabbage Moth	Traptest®, Mass®, Mass® Large with fins
Mamestra oleracea	Kitchen Garden Noctule	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins

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5

## FRUIT AND WINE GROWING

SCIENTIFIC NAME	COMMON NAME	TRAP
Adoxophyes orana	Capua	Traptest <sup>®</sup>
Anarsia lineatella	Peach tree moth	Traptest®
Antispila oinophilla	Vine antispila	Traptest <sup>®</sup>
Aonidiella aurantii	Strong red citrus mealybug	Roof
Archips podanus	Cacecia	Traptest <sup>®</sup>
Archips rosanus	Greenish budworm	Traptest <sup>®</sup>
Argyrotaenia pulchellana	Eulia	Traptest <sup>®</sup>
Bactrocera dorsalis	Oriental fruit fly	Bactrocera dorsalis
Bactrocera (Dacus) oleae	Olive fly	Traptest <sup>®</sup> , Wing, Olive
Bactrocera zonata	Peach fly	Bactrocera dorsalis
Ceratitis capitata	Mediterranean fruit fly	Traptest <sup>®</sup> , Wing
Clepsis spectrana	Vine and orchard rootworm	Traptest <sup>®</sup>
Comstockaspis perniciiosa	San Jose cochineal	Roof
Cossus cossus	Red rhododendron	Mass <sup>®</sup> Large with fins

SCIENTIFIC NAME	COMMON NAME	TRAP
Cryptoblabes gnidiella	Grapevine and citrus fruit moth	Traptest <sup>®</sup>
Cydia fagiglandana	Intermediate chestnut moth	Traptest <sup>®</sup>
Cydia funebrana	Plum worm	Traptest <sup>®</sup>
Cydia lobarzewskii	Small fruit tortrix	Traptest <sup>®</sup>
Cydia molesta	Eastern peach tree moth	Traptest <sup>®</sup>
Cydia pomonella	Carpocapsa or apple worm	Traptest <sup>®,</sup> Carpo, Carpo+
Cydia splendana	Late chestnut weevil	Traptest <sup>®</sup>
Duponchelia fovealis	Southern European marsh pyralid	Traptest <sup>®</sup>
Enarmonia formosana	Stone fruit rootworm	Traptest <sup>®</sup>
Eupoecilia ambiguella	Grape moth	Traptest <sup>®</sup>
Ephestia spp.	Grapevine / food moths	Traptest <sup>®</sup>
Euzophera bigella	Fruit borer	Traptest <sup>®</sup>
Euzophera pinguis	Olive tree moth	Traptest <sup>®</sup>
Halyomorpha halys	Asian bug	Cymatrap®
Hedya nubiferana	Green shoot moth	Traptest <sup>®</sup>
Leucoptera malifoliella	Cemiostoma	Traptest <sup>®</sup>
Lobesia botrana	Vine Moth	Traptest <sup>®</sup>
Orgyia antiqua	Orgyia	Traptest <sup>®</sup> , Mass <sup>®</sup> , Mass <sup>®</sup> Large with fins
Palpita unionalis	Margaronia or olive borer	Traptest <sup>®</sup>
Pammene fasciana	Chestnut borer	Traptest <sup>®</sup>
Pandemis cerasana	Yellow-green pome fruit borer	Traptest <sup>®</sup>
Pandemis heparana	Green pome fruit tortrix	Traptest <sup>®</sup>
Phyllocnistis citrella	Citrus serpentine miner	Traptest <sup>®</sup>
Phyllonorycter corylifoliella	Upper apple tree litocollete	Traptest <sup>®</sup>
Phyllonorycter spp.	Lower lithocollete of pome fruit	Traptest <sup>®</sup>
Planococcus citri	Citrus mealybug or citrus cottonmouth	Roof
Planococcus ficus	Grapevine mealybug	Roof
Popillia japonica	Japanese beetle	Mass <sup>®</sup> for Popilia
Prays citri	Citrus fruit moth	Traptest <sup>®</sup>
Prays oleae	Olive tree moth	Traptest <sup>®</sup>
B 1 1 1 1	Peach tree white scale moth	Roof
Pseudaulacaspis pentagona		
Pseudococcus comstocki	Peach Mealy Bug	Roof
	Peach Mealy Bug Pticoloma	Roof Traptest <sup>®</sup>
Pseudococcus comstocki		
Pseudococcus comstocki Ptycholoma lecheana	Pticoloma	Traptest <sup>®</sup>

PHEROMONES & DISPENSERS line

64  $\sim$  65

SCIENTIFIC NAME	COMMON NAME	TRAP
Sparaganothis pilleriana	Grapevine twister	Traptest <sup>®</sup>
Spilonota ocellana	Reddish budworm	Traptest <sup>®</sup>
Synanthedon myopaeformis	Apple tree fern	Traptest <sup>®</sup>
Synanthedon tipuliformis	Currant fern	Traptest <sup>®</sup>
Synanthedon typhiaeformis	Apple tree fern	Traptest <sup>®</sup>
Thaumatotibia leucotreta	False Cydia	Traptest <sup>®</sup>
Zeuzera pyrina	Yellow rhododendron	Mass <sup>®</sup> Large without fins

## POPLAR CULTIVATION AND FORESTRY

SCIENTIFIC NAME	COMMON NAME	TRAP
Gypsonoma aceriana	Poplar budworm	Traptest®
Lymantria dispar	Lymantria dispar	Traptest <sup>®</sup>
Lymantria monacha	Monaca	Traptest <sup>®</sup>
Paranthrene tabaniformis	Poplar hornworm	Traptest <sup>®</sup>
Rhyacionia buoliana	Pine budworm	Traptest <sup>®</sup>
Tortrix viridana	Green oak tortrix	Traptest <sup>®</sup>
Traumatocampa pityocampa	Pine processionary moth	Mass® Large with fins
Zeiraphera diniana	Grey larch tortrix	Traptest <sup>®</sup>



# **ECODIAN® LINE**Pheromone diffusers for

sexual disorientation

₹nFarm ISAGRO PHERO LINE

ECODIAN® CARPOCAPSA
ECODIAN® CIDIA
ECODIAN® COMBI
ECODIAN® CT

ECODIAN® STAR



## **ECODIAN®**

## THE DISORIENTATION TECHNIQUE

Sexual distraction is a technique for the integrated control of populations of phytophagous insects harmful to agricultural crops.

It uses specific pheromones that prevent the opposite sex from meeting, thus interrupting the generation cycle of the target insect.

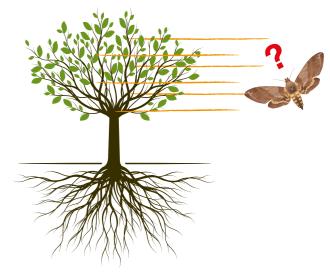
This method is an alternative to chemical pest control and can be used in all integrated production systems with a low environmental impact and in all organic farming systems. Moreover, by using pheromones selected for a particular species, it does not disturb other useful insects such as pollinators and natural predators.

**ECODIAN®** technology is based on the use of 'sexual disorientation' as a means of sexual distraction.

This technique, compared to other methods, uses a very low amount of pheromone and consists of creating 'false trails' that the male insect follows in a vain attempt to find the female.

The 'disorientation' does not saturate the environment, is more adaptable to smaller plots and does not risk resistance from the insect which might otherwise adapt, making the system less effective.

## **ECODIAN®**



There are 2 types of **Ecodian®** products:

- **Ecodian®** hook: these are hook-shaped pheromone dispensers to be hung on the branches and branches of plants in the orchard.
- **Ecodian**® wire: is a pheromone-soaked wire that is 'spread' along the rows of the crop to be protected or hung from tall trees.

All **Ecodian®** products are made of biodegradable plastic. They do not require removal from the field at the end of the season and are fully compostable.



## **ECODIAN® CARPOCAPSA**



Pheromone diffuser for sexual disorientation of Cydia pomonella

ECODIAN® CARPOCAPSA consists of pheromone dispensers made from biodegradable and compostable plastic that does not require removal and disposal at the end of the season.

**ECODIAN®** CARPOCAPSA eliminates and/or minimises mating by Cydia pomonella, the apple carpocapsa, using the sexual disorientation technique.

#### RECOMMENDATIONS FOR USE

**ECODIAN®** CARPOCAPSA should be applied before the beginning of the flight of the first generation of Carpocapsa (overwintering generation), following the indications of the forecast models provided by the Phytosanitary Services and/ or coinciding with the very first catches in the Carpocapsa pheromone traps. The application of the dispensers from the second generation of Carpocapsa (beginning of the second flight) can only be carried out if there is no damage to the fruit (oviposition and/or larval penetration) from the chemically controlled first generation.

Apply the diffusers **ECODIAN®** CARPOCAPSA on branches in the upper third of the tree, in shaded areas if possible, taking care to distribute the product evenly, and also protecting uncovered areas such as fallows, corridors and breeding plants.

In order to be effective, the number of spreaders should be sufficient to compete with the females in the orchard and minimise the likelihood of males detecting their calls.

The minimum number of ECODIAN® CARPOCAPSA diffusers required for each application is 2000 per hectare; This number should be increased to 2500-3000 per hectare with high populations, tall and vigorous plants.

In orchards with **ECODIAN®** CARPOCAPSA should be monitored with CARPO or CARPO+ for Cydia pomonella.

This allows you to monitor the progress of the system by installing the monitoring traps before the start of the wintering generation flights. The control of the traps is very important and must be carried out meticulously.

The absence of catches indicates that disorientation conditions have occurred and persist.

The activity of **ECODIAN®** CARPOCAPSA spreaders is influenced by climatic parameters, under normal climatic conditions it lasts about 60/75 days.

Authorization Ministry of Health n° 12936 of 07.11.2005.



PACKAGING

ECODIAN® CARPOCAPSA

CODE

P-25016INFCP

CONTENT

1 CASE:

light-blue hook diffusers, in biodegradable material



## **ECODIAN® CIDIA**



Pheromone diffuser for sexual disorientation of Cydia (Grapholita) molesta

**ECODIAN®** CIDIA consists of pheromone dispensers made of biodegradable and compostable plastic that does not require removal and disposal at the end of the season.

**ECODIAN®** CIDIA eliminates and/or minimises mating by Cydia (Grapholita) molesta, Eastern Peach Moth, using the technique of sexual disorientation.

#### **RECOMMENDATIONS FOR USE**

**ECODIAN®** CIDIA should always be applied before the beginning of the flights, following the indications of the forecast models provided by the Phytosanitary Services and/ or coincide with the very first catches in the pheromone traps.

Apply diffusers **ECODIAN**<sup>®</sup> **CIDIA** on branches in the upper third of the tree, in shaded areas if possible, taking care to distribute evenly, also protecting uncovered areas such as fallows, corridors and breeding plants.

In order to be effective, the number of spreaders should be sufficient to compete with the females in the orchard and minimise the likelihood of males detecting their calls.

The minimum number of **ECODIAN®** CIDIA required for each application is 2000 per hectare; This number should be increased to 2500-3000 per hectare with high populations, tall and vigorous plants.

In orchards with **ECODIAN®** CIDIA should be monitored with TRAPTEST® for Cydia (Grapholita) molesta. This will allow the system to be monitored by installing monitoring traps prior to the start of flights. The control of the traps is

very important and must be carried out meticulously. The absence of catches indicates that disorientation conditions have occurred and persist.

The activity of **ECODIAN® CIDIA** is influenced by climatic parameters, under normal climatic conditions it lasts for approximately 50 to 60 days.

Authorization Ministry of Health n° 11554 of 20.01.2003



PACKAGING

ECODIAN® CIDIA

P-25016INFCM

CODE

CONTENT

1 CASE:

hook in biodegradable material



## **ECODIAN®** COMBI



Pheromone diffuser for sexual disorientation of Cydia (Grapholita) molesta and Anarsia lineatella

**ECODIAN®** COMBI consists of pheromone dispensers made from biodegradable and compostable plastic that does not require removal and disposal at the end of the season.

**ECODIAN®** COMBI eliminates and/or minimises mating by Cydia (Grapholita) molesta, Eastern Peach Moth and Anarsia lineatella, Peach Moth, using the sexual disorientation technique.

#### **RECOMMENDATIONS FOR USE**

**ECODIAN®** COMBI should always be applied before the start of the flights, following the indications of the forecast models provided by the Phytosanitary Services and/or coincide with the very first catches in the pheromone traps. Considering that the first flight of Cydia is earlier than that of Anarsia, it is recommended to apply **ECODIAN®** COMBI at the beginning of the flight of the first generation of Anarsia, ensuring that the first generation of Cydia has been controlled.

Apply the **ECODIAN®** COMBI diffusers on the upper third of the branches in shaded areas if possible, taking care to distribute them evenly, also protecting uncovered areas such as fallows, corridors and breeding plants.

In order to be effective, the number of spreaders should be sufficient to compete with the females in the orchard and minimise the likelihood of males detecting their calls.

The minimum number of **ECODIAN® COMBI** diffusers required per application is 2000 per hectare; This number should be increased to 2500-3000 per hectare with high populations, tall and vigorous plants.

In orchards with **ECODIAN® COMBI** TRAPTEST monitoring should be carried out for Cydia (Grapholita) molesta and Anarsia lineatella. This will allow the system to be monitored by installing monitoring traps prior to the start of flights. The control of the traps is very important and must be carried out meticulously. The absence of catches indicates that disorientation conditions have occurred and persist.

The activity of **ECODIAN® COMBI** is influenced by climatic parameters, under normal climatic conditions it lasts for approximately 50 to 60 days.

Authorization Ministry of Health nº 13085 on 12.03.2009.



PACKAGING

ECODIAN® COMBI

CODE P-25016INFCO

CONTENT

1 CASE:

hook in biodegradable material







Pheromone wire diffuser for disorientation sexual disorientation of Chestnut Tree Nits

**ECODIAN®** CT is a pheromone diffusing wire made from biodegradable bio-plastic for the sexual disorientation of Cydia splendana and Cydia fagiglandana (Chestnut lice).

The **ECODIAN® CT** diffusing wire is made from biodegradable material impregnated with specific pheromones. The wire releases the synthetic analogue of the specific pheromones for these insects into the environment.

In the case of newly planted, intensive chestnut groves with regular rows and spacing, the wire can be placed horizontally along the rows at an approximate height of 3-3.5 metres (first branch), maintaining the recommended dosage of 900 m/ha. It is also advisable to install pieces of wire along the outer perimeter of the chestnut grove.

#### **RECOMMENDATIONS FOR USE**

**ECODIAN** ® CT should be installed before the start of the flights of the two species, i.e. from mid-June to early July. It is advisable to install traps model Traptest® in the plot subjected to disorientation to monitor the consistency of phytophagous flights.

The device (wire) appropriately cut into segments of approximately 6 metres in length, should be attached to the branches as high as possible, (recommended using The segments should be installed as evenly as possible across the plot.

The amount of wire to be installed per hectare is approximately 900 metres, depending on the type of chestnut grove.

The life of the diffuser is influenced by climatic parameters, in particular temperature, wind and level of exposure to sunlight. Under normal climatic conditions it lasts 70-80 days.

pending registration



**PACKAGING ECODIAN®** CT CODE

P-25016INFCT



## **ECODIAN® STAR**



Pheromone diffuser for the sexual disorientation of Cydia pomonella and Cydia (Grapholita) molesta

**ECODIAN® STAR** consists of pheromone dispensers made from biodegradable and compostable plastic that does not require removal and disposal at the end of the season.

**ECODIAN®** STAR eliminates and/or minimises mating by Cydia pomonella, the Apple Tree Moth, and Cydia (Grapholita) molesta, the Peach Tree Moth, using the sexual disorientation technique.

#### **RECOMMENDATIONS FOR USE**

**ECODIAN®** STAR should be applied before the beginning of the flight of the first generation of Carpocapsa (overwintering generation), following the indications of the forecast models provided by the Phytosanitary Services and/or coincide with the very first catches in Carpocapsa pheromone traps.

The application of the dispensers from the second generation of Carpocapsa (beginning of the second flight) can only be carried out if there is no damage to the fruit (oviposition and/or larval penetration) from the chemically controlled first generation.

Apply the **ECODIAN® STAR** dispensers to the upper third of branches in shaded areas if possible, taking care to distribute evenly, also protecting uncovered areas such as fallows, corridors and breeding plants.

In order to be effective, the number of spreaders should be sufficient to compete with the females in the orchard and minimise the likelihood of males detecting their calls.

The minimum number of diffusers **ECODIAN® STAR** required for each application is 2000 per hectare; This number should be increased to 2500-3000 per hectare with high populations, tall and vigorous plants.

In orchards with **ECODIAN® STAR**, **CARPO** or **CARPO+** monitoring should be carried out for *Cydia pomonella* and **TRAPTEST** ® for *Cydia (Grapholita) molesta*. This allows you to monitor the progress of the system by installing the monitoring traps before the start of the wintering generation flights.

The control of the traps is very important and must be carried out meticulously. The absence of catches indicates that disorientation conditions have occurred and persist.

The activity of **ECODIAN® STAR** diffusers is influenced by climatic parameters, under normal climatic conditions it lasts for approximately 60/75 days.

Authorization Italian Ministry of Health n° 12839 on 28.11.2006.



PACKAGING

ECODIAN® STAR

CODE P-25016INFST

CONTENT

1 CASE: 1000 red hook diffusers, in biodegradable material



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## **NOTES**

## **NOTES**

