



[Eco-friendly total solutions with pest management]

Insect Monitoring Lure Trap

Semiochemical Synthesis

Bumblebee Pollination Service

THE GROUP OF BEST PEOPLE
WHO HAVE TO PURSUE A COMPANY IN
DREAM AND HOPE CONSISTING OF
CONFIDENCE AND TRUTH

GREENAGROTECH

www.sptrap.co.kr

A corporation that creates
environment-friendly
natural environment and
cutting-edge
technology together

GREENAGROTECH



Company Profile

Nothing ventured, Nothing gained!

Green Agro Tech Co., Ltd.(GAT) is well known for harmonizing Integrated Pest Management tools with a localization and globalization strategy. We are now introducing new, environmentally friendly products that employ biological

controls such as pheromone lure and trap application based on Pheromone compound synthesis technology, Mating disruption and a wide range of insect traps. we are especially focusing on developing insect monitoring and mass trapping system that use insect pheromone. The innovative technology is used to help create a map of pest type and their numbers, so as to better target pest controls. This greatly contributes to crop protection and allows a more efficient use of resources.

Another product we offer is a Bumblebee Pollination Service. We have commercialized bumblebees as a result of collaboration with the University of Gyeongbuk Research Center for Crop Pollination. Our local sales offices are working closely with our customers and they are receiving extremely positive feedback about this service.

As a company we have succeeded and grown because of our hard work our research facilities, and our customer belief that our products provide cost effective, efficient and environmentally friendly pest control. As consumer demand grows for healthy food, Green Agro Tech is well positioned to support the farming community.

President **Man Woong, Park**



Greenagrotech
그린아그로텍
Natural Environment
Technology



Certification



History

- 2002 01 Establish Green Agro Tech Co., Ltd.
- 08 Signed a Pheromone Co-development Business Agreement with Seoul National University, Agricultural and Life Sciences

- 2003 12 Signed a Horticultural Pollination Service (Bumblebee) Proliferation Developing Cooperative System with Gyeongbuk National University Agricultural Science and Technology Research Institute

- 2004 02 3 Kind of Stink Bug Aggregation Pheromone Synthesis, Applied Chemistry with Cooperative System with Andong National University Cooperative System Center

- 2005 12 Selected INNO-BIZ and Reconfirmed Venture Enterprise

- 2006 08 ISO 9001/14001 Integrated Certification
- 12 Award of Distinction from the Best Small & Medium sized Enterprise 2006 by Province of Gyeongsangbuk-do
Relocated New Office and Factory (Bumblebee Breeding)

- 2007 01 Relocated New Office and Factory (Bumblebee Breeding)
- 06 Designation of Pesticide Item Regist[†]ation Experiment & Research Institution By RDA(Rural Development Association)

- 2008 06 IT pheromone trap development by ARPC project / production & commercialization of IT pheromone trap by RDA project
- 12 Designated as a Promising Export Firm by the Daegu

- 2009 01 Development and commercialization of Main hemiptera pheromone synthesis process by RDA project

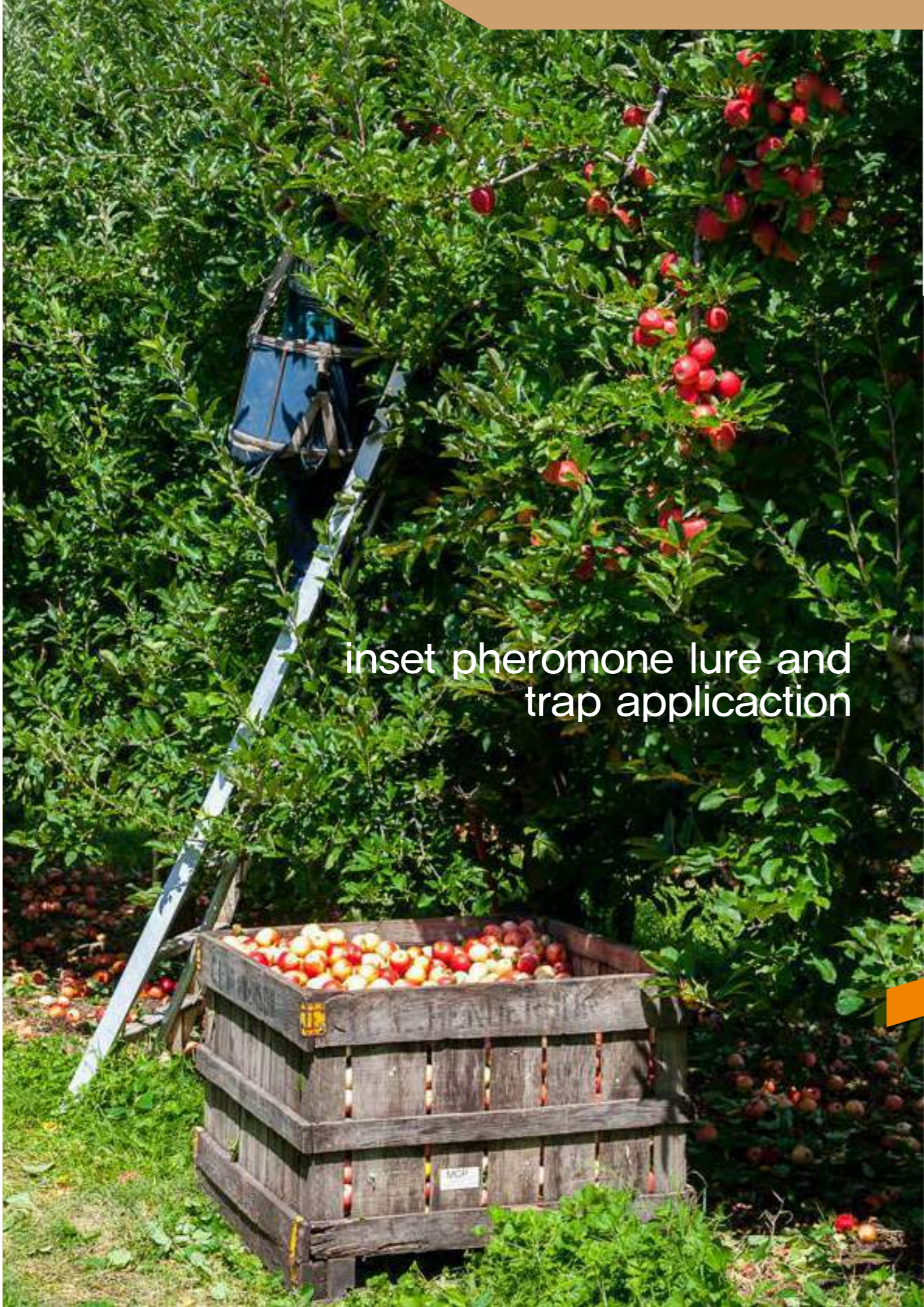
- 2010 09 Certificated of Green Technology (IT Pheromone Trap)

- 2012 01 Remodel R&D Center into Head Office

- 2013 01 The 9th Trade Day award certificate

- 2016 12 Won the Agriculture Food and Rural Affairs Minister Award

- 2019 12 Received the certificate of commendation from the Director of Gyeongbuk Headquarters, Korea SMEs and Startups Agency



inset pheromone lure and trap application



Scientific name	English name	Korean name	Compound
<i>Aderis rhombana</i>	Fruit tree tortrix		E11-14:AC Z11-14:AC
<i>Acrobasis nuxvorella</i>	Pecan nut case Bearer		E9Z11-16:Ald
<i>Acrolepiopsis assedella</i>	leek moth		Z11-16:Ald Z11-16:AC
<i>Acrolepiopsis sapporensis</i>	Allium leaf miner	파종나방	Z11-16:AC Z11-16:Ald Z11-16:OH
<i>Adoxophyes orana</i>		애모무늬잎말이나방	Z9-14:AC Z11-14:AC Z9-14:OH Z11-14:OH
<i>Adoxophyes spp</i>		사과애모무늬잎말이나방	Z9-14:AC Z11-14:AC
<i>Adoxophyes honmai</i>		차애모무늬잎말이나방	Z9-14:AC Z11-14:AC E11-14:AC 10ME-12:AC
<i>Agrotis exclamatoris</i>	Heart and dart moth		Z5-14:AC Z9-14:AC
<i>Agrotis ipsilon</i>	Black cutworm	검거세미밤나방	Z7-12:AC Z9-14:AC Z11-16:AC
<i>Agrotis segetum</i>	Turnip moth	거세미나방	Z5-10:AC Z7-12:AC Z9-14:AC
<i>Anarsia lineatella</i>	Peach twig borer	복숭아뽕나방	E5-10AC E5-10OH
<i>Anomala rufocuprea</i>	Soybean beetle	애풍뎡이	Me-Z5-tetradecenoate
<i>Archips argyrospila</i>	Fruit tree leafroller		E11-14:AC Z11-14:AC Z9-14:AC 12:AC Z11-14:OH
<i>Archippus breviplicanus</i>	Asiatic leafroller	사과무늬잎말이나방	Z11-14:AC E11-14:AC
<i>Archips cerasivorana</i>	Ugly nest caterpillar		Z11-14:AC E11-14:AC
<i>Archips crataegana</i>	hawthorn leafroller		Z11-14:AC Z9-14:AC Z11-14:OH
<i>Archips podana</i>	Fruit tree tortrix Rose tortrix moth European leafroller		Z11-14:AC E11-14:AC Z11-14:AC
<i>Archips rosana</i>			E11-14:AC Z11-14:OH
<i>Archips xylosteana</i>	Brown oak tortrix		Z11-14:AC E11-14:AC
<i>Argyroresthia conjugella</i>	Apple fruit moth		Z11-16:AC
<i>Argyroresthia pruniella</i>	Cherry blossom tineid		Z11-16:Ald
<i>Argyroresthia thuiella</i>	Arborvitae leafminer		Z11-16:Ald
<i>Argyrotaenia ditrana</i>	Orange tortrix		Z11-14:AC Z11-14:Ald
<i>Argyrotaenia pulchellana</i>			Z11-14:AC E11-14:AC
<i>Argyrotaenia velutinana</i>	Redbanded leafroller		Z11-14:AC E11-14:AC
<i>Autographa californica</i>	alfalfa looper		Z7-12:AC Z7-12:OH
<i>Autographa gamma</i>	Silver Y moth		Z7-12:AC Z7-12:OH





Scientific name	English name	Korean name	Compound	
Bembedia ichneumoniformis			E3Z13-18:AC	
Blitopertha orientalis	Oriental beetle	등열록풍뎡이	Z7-14-2Kt	
Bonagota cranaodes	Brazilian apple leafroller		E3Z5-12:AC	
Bonagota cranaodes			Z5-12:AC	
			E3Z5-14:AC	
			Z9-16:AC	
Busseola fusca	Maize stem borer		Z11-14:AC	
			E11-14:AC	
			Z9-14:AC	
Cacoedimorpha pronubana	Carnation tortrix		Z11-14:AC	
			E11-14:AC	
			Z11-14:OH	
			Z9-14:AC	
Cactoblastis cactorum			Z9-14:Ac	
		줄알락명나방	Z9-14:Ac	
Carposina niponensis	Peach fruit moth	복숭아심식나방	Z7-20-11Kt	
Caloptilia theivora	Tea leafroller	동백가는나방	E11-16:Ald	
Cameraria ohridella	Horse chestnut leaf-miner		E8Z10-14:Ald	
Campylomma verbasci	Mullein bug		Butyl butyrate	
			E-crotyl butyrate	
Chilo infuscatellus	Sugercane shoot borer		Z11-16:OH	
Chilo partellus	Spotted stalk borer		Z11-16:Ald	
			Z11-16:OH	
Chilo sacchariphagus indicus	Sugercane stem borer		Z13-18:Ac	
			Z13-18:OH	
Chilo suppressalis	Asiatic rice borer	이화명나방	Z11-16:Ald	
			Z9-16:Ald	
			Z13-18:Ald	
Choristoneura fumiferana	Eastern spruce budworm		E11-14:Ald	
Choristoneura hebenstreitella			Z11-14:Ald	
			Z11-14:OH	
Choristoneura rosaceana	Obliquebanded leafroller		Z11-14:Ac	
			Z11-14:OH	
			Z11-14:Ald	
Chrysodeixis chalcites	Tomato looper		Z7-12:AC	
			Z9-14:AC	
			Z9-12:AC	
			12AC	
			14AC	
Chrysoteuchia topiaria	Cranberry girdler		Z11-16:Ald	
			Z9-16:Ald	
Clepsissoptrana	Cabbage leafroller		Z9-14:AC	
			Z11-14:AC	
Cnaphalocrocis medinalis	Rice leaf folder moth	흑명나방	Z11-18:Ald	
			Z13-18:Ald	
Conogethes punctiferalis	Peach pyralid moth	복숭아명나방	E10-16:Ald	
			Z10-16:Ald	
Copitarsia pumicana			Z9-14:AC	
			Z9-14:OH	
Cossus cossus	European goat moth		Z3-10:AC	
			Z5-12:AC	
Cryptophlebia leucotreta	False codling moth		E8-12:AC	
			Z8-12:AC	
			Z8-12:AC	
	Macadamia nut borer			E8-12:AC
				Z8-12:OH
				Z7-12:AC



Scientific name	English name	Korean name	Compound
Cydia caryana	Hickory shuckworm		E8E10-12:AC
Cydia tagiglandana			E8E10-12:AC
			E8E10-12:OH
Cydia funebrana (Grapholita)	Plum fruit moth	자두애기잎말이나방	Z8-12:AC
			E8-12:AC
	Hawthorn berry moth		Z8-12:AC
Cydia lobarzewski (Grapholita)	Appleseed moth		E8-12:AC
			Z8-12:AC
Cydia nigricana(2 mg)	Pea moth		E8E10-12:AC
Cydia pomonella	Codling moth		E8E10-12:OH
Cydia pyrivora	Pear tortrix		E8E10-12:OH
Cydia splendana	Chestnut moth		E8E10-12:AC
			Z8E10-12:AC
Cylasformicarius	Sweet Potato weevil		Z3-dodecenyl E2-butenoate
Dendrolimus pini	Pine moth		Z5E7-12:Ald
Diatraea grandiosella	Southwestern corn borer		Z9-16:Ald
			Z11-16:Ald
			Z13-18:Ald
Diatraea saccharalis	Sugarcane borer		Z9E11-16:Ald
			Z11-16:Ald
Ditula angustiorana	Red-barred tortrix		Z11-14:AC
			E11-14:AC
Drosophila melanogaster		노랑초파리	Z11-18:AC
Earias insulana			Z11-16:Ald
Earias vittella			Z11-16:Ald
			Z11-18:Ald
Elasmopalpus lignosellus	Lesser cornstalk borer		Z9-16:AC
			Z11-16:AC
Enarmonia formosana	Cherry bark tortrix moth		E9-12:AC
			Z9-12:AC
	Grape berry moth		Z9-12:AC
			E9-12:AC
Epiphyas postvittana	Light brown apple moth		E11-14:AC
Eulia ministrana		민무늬잎말이나방	Z11-14:AC
			Z9-14:AC
Eupoedilia ambiguella /Clysia	European grape berry moth		Z9-12:AC
Evergestis forficalis	Garden pebble moth		E11-14:AC
Fumibotys fumalis	Mint root borer		E10E12-14:AC
			Z11-14:AC
			Z9-14:AC
Gortyna xanthenes	Artichoke moth		Z11-16:Ald
			Z9-16:Ald
			16:Ald
			Z11-16:OH
			Z8-12:AC
Grapholita dimorpha		복숭아순나방붙이	E8-12:AC
Grapholita molesta	Oriental fruit moth	복숭아순나방	Z8-12:AC
			E8-12:AC
Grapholita prunivora	Lesser apple worm	미국사과애기잎말이나방	Z8-12:OH
Gypsonoma aceriana	Poplar shoot borer		Z8-12:AC
			E10-12:AC
Hedya nubiferana	Green budmoth		E10-12:OH
			E8E10-12:AC
			Z8-12:AC
			E8-12:AC
			12:AC
Helicoverpa armigera	cotton bollworm	왕담배나방	Z11-16:Ald
			Z9-16:Ald



Scientific name	English name	Korean name	Compound
Helicoverpa assulta	Oriental tobacco budworm	담배나방	Z9-16:Ald
			Z11-16:Ald
Helicoverpa punctigera	Native budworm		Z9-16:AC
			Z11-16:Ald
			Z11-16:OH
Heliothis virescens	Tobacco budworm		Z11-16:AC
			Z11-16:Ald
Heliothis zea	Corn earworm		Z9-14:Ald
			Z11-16:Ald
hellula undalis	Cabbage webworm	배추순나방	Z9-16:Ald
			E11E13-16:Ald
Homona magnanima	Oriental tea tortrix	차잎말이나방	Z11-14:AC
			Z9-12:AC
keiferia lycopersicella	Tomato pinworm		E4-13:AC
			E11-16:AC
Leucinodes orbonalis	Brinjal fruit and shoot borer		E11-16:OH
			E7Z9-12:AC
Lobesia botrana	Grapevine moth		Z5-12:AC
			Z7-12:AC
			11-12:AC
Mamestra brassicae	Cabbage moth	도둑나방	Z11-16:AC
			Z9-14:AC
Mamestra configurata			Z9-14:AC
			Z11-16:AC
Mamestra oleracea	Bright-line brown-eye moth		Z11-16:AC
			Z11-16:OH
Melissopus latiferreanus			E8Z10-12:AC
			E8E10-12:AC
Melolontha melolontha			Z3-6:OH
Musca domestica	house fly	집파리	Z9-23:Hy
			Z11-16:AC
Mnythimna unipuncta	True armyworm		Z11-16:OH
			Z11-16:Ald
			E11-16:OH
Neoleucinodes elegantalis	Tomato fruit borer		Z11-16:Ald
			Z6-21-11:Kt
Orgyia pseudotugata	Douglas-fir tussock moth		Z11-16:Ald
			Z9-14:Ald
Orthosia cerasi (O. stabilis)	Powered quaker moth		Z9-14:AC
			Z11-14:AC
Orthosia gothica	Hebrew character		Z9-14:Ald
			Z11-14:Ald
Orthosia hibisci	Speckled green fruitworm		Z9-14:Ald
			Z11-14:Ald
Orthosia incerta	Clouded drab moth		Z9-14:Ald
			Z11-16:Ald
Ostrinia furnacalis	Asian corn borer		Z12-14:AC
			E12-14:AC
Ostrinia nubilalis	European corn borer		Z11-14:AC
			E11-14:AC
Palpita indica		목화바둑명나방	E11-16:Ald
Pammene argyrana	Early fruit moth		Z8-12:AC
			Z8-12:AC
Pammene fasciana	Chestnut leafroller		Z8-12:OH
			Z8-12:OH
Pammene rhediella	Fruitlet mining tortrix		Z8-12:OH
			E11-14:AC
Pandemis cerasana	Barred fruit tree tortrix		Z11-14:AC
			Z11-14:AC
Pandemis heparana	Dark oblique-barred twist		Z11-14:AC
			Z9-14:AC
Pandemismilitata	Threelined leafroller		Z11-14:AC
			Z9-14:AC



Scientific name	English name	Korean name	Compound
Panolis flammea	Pine beauty moth		Z9-14:AC
			Z11-14:AC
Parapediasia teterrella	Blue glass webworm		Z11-16:Ald
			Z9-16:Ald
			Z11-16:OH
Paranthrene tabaniformis			E3Z13-18:OH
Paranthrene regalis		포도유리나방	E3Z13-18:OH
Pennisetia hylaeiformis	Raspberry clearwing moth		E3Z13-18:OH
Peridroma saucia			Z11-16:AC
			E4Z7-13:AC
Phtorimaea operculella	Potato tubeworm moth		E4Z7Z10-13:AC
			E10-12:AC
Phyllonorycter blancardella	Spotted tentiform leafminer		E4-12:AC
Phyllonorycter corylifoliella	Upper leaf surface mining moth		Z10-14:AC
Phyllonorycter ringoniella	Apple leaf miner	사과굴나방	Z3-6:OH
Phyllopertha horticola	Garden chafer		E11-14:OH
Platynota flavedana	Variegated leafroller		Z11-14:OH
			E11-14:OH
Platynota idaeusalis	Tufted apple budmoth		Z11-14:AC
			E11-14:AC
Platynota stultana	Omnivorous leafroller		Z11-14:AC
			E11-14:OH
			Z11-14:OH
Platyptilia carduidactyla	Artichoke plume moth		Z11-16:Ald
Plusia chaldites			Z7-12:AC
			Z9-12:AC
			Z9-14:AC
Plutella xylostella	Diamond back moth	배추좀나방	Z11-16:AC
			Z11-16:OH
			Z11-16:Ald
Podosesia syringae	Lilac borer		Z3Z13-18:AC
Prays ditri	Citrus flower moth		Z7-14:Ald
Prays soleae	Olive moth		Z7-14:Ald
Pseudaletia unipuncta			Z11-16:AC
			Z11-16:Ald
Pseudaletia separata		멸강나방	Z11-16:AC
			Z11-16:OH
			Z11-14:OH
Ptycholoma lecheana	Leche's twist moth		Z11-14:AC
			Z11-14:AC
Riptortus clavatus	Bean bug	툼다리개미허리노린재	E2-hexenyl Z3-hexenoate
			E2-hexenyl E2-hexenoate
			Myristyl isobutyrate
			Octadecyl isobutyrate
Rhagoletis cerasi	European cherry fruit fly		6-2:Kt
			7-3:Kt
			9:Ald
Rhopobota naevana	Blackheaded fireworm		Z11-14:AC
			Z11-14:OH
Scirpophaga nivella	Sugarcane top borer		E11-16:Ald
			Z11-16:Ald
Scrobipalpa ocellatella	Sugarbeet moth		E3-12:AC
			Z11-16:AC
Sesamia calamistis	Pink maize borer		Z9-14:AC
			Z11-16:AC
Sesamia inferens	Purple stem borer		Z11-16:OH
			Z11-16:AC
Sesamia nonagrioides	Pink stalk borer		Z11-16:OH
			Z11-16:OH
Setora nitens	Coconut nettle caterpillar		Z9-12:Ald
			Z9, 11-12:Ald

Scientific name	English name	Korean name	Compound
<i>Setothosea asigna</i>	Nettle caterpillar		Z9-12:Ald
<i>Sparganot hispilleriana</i>	Grape-berry moth		E9-12:AC
			E9-12:OH
<i>Sparganot his sulfureana</i>	Sparganot his fruitworm		E11-14:AC
			E9-12:AC
			Z9-12:AC
			Z9-14:AC
			Z11-14:AC
			E11-14:OH
<i>Spilonota ocellana</i>	Eye-spotted budmoth		Z8-14:AC
			Z8-14:OH
<i>Spodoptera eridania</i>	Southern armyworm / Nutgrass armyworm		Z9-14:AC
			Z9-14:AC
			Z11-16:AC
<i>Spodoptera exigua</i>		파밤나방	Z9-14:OH
<i>Spodoptera frugiperda</i>	Fall armyworm		Z7-12:AC
			Z9-14:AC
<i>Spodoptera praefica</i>	Western yellow striped armyworm		Z7-12:AC
			Z9-14:AC
			Z11-16:AC
<i>Stathmopoda masinissa</i>		감꼭지나방	E4Z6-16:AC
<i>Symmetrischema tangolias</i>	Potato tuber moth		E3Z7-14:AC
			E3-14:AC
<i>Synant hedon bibionipennis</i>	Strawberry crown moth		E3Z13-18:AC
			E3Z13-18:OH
<i>Synant hedon exitiosa</i>			E3Z13-18:AC
<i>Synant hedon formicaeformis</i>			E3Z13-18:AC
<i>Synant hedon Hector</i>			E3Z13-18:AC
<i>Synant hedon pidipes</i>	Lesser peachtree borer		E3Z13-18:AC
<i>Synant hedon tipuliformis</i>			E3Z13-18:AC
<i>Synant hedon vespiformis</i>			E3Z13-18:AC
<i>Syndemismusculana</i>	Autumn leafroller		E11-14:AC
			Z11-14:AC
<i>Tecia solanivora</i>	Potato moth		E3-12:AC
			Z3-12:AC
<i>Thaumetopoea pityocampa</i>	Pine procession moth		E11Z13-16:AC
<i>Tortrix viridana</i>	European oak leafroller		Z11-14:AC
			Z11-14:OH
<i>Trichoplusia ni</i>	Cabbage looper		Z7-12:AC
			Z7-14:AC
<i>Trigonotylus caelestialium</i>	Rice leaf bug		hexyl hexanoate
			E2-hexenyl hexanoate
			octyl butyrate
<i>Tuta absoluta</i>	Tomato leafminer		E3Z8Z11-14:AC
			E3Z8-14:AC
<i>Yponomeuta evonymellus</i>	Bird-cherry ermine moth		Z11-14:AC
			E11-14:AC
<i>Yponomeuta malinellus</i>	Apple ermine moth		Z9-12:AC
			Z11-14:OH
<i>Zeuzera pyrina</i>			E3Z13-18:AC



Greenagrotech
그린아그로텍
Natural Environment
Technology

If you couldn't find the pheromone you need on the list, please contact with us



Monitoring and Mass Trapping System

Advantages of monitoring help early detection for emergency trend, population pattern and better decision about when to apply insecticide or other control measures. This information piled up from year to year and allows farmer to forecast right timing of spray. We recommend selective insecticides at the moment for protecting natural enemies. In case of mass trapping, it will help you to decrease the population level because of massively capture regardless of male and female. But the effectiveness is depends on many factors that the most important thing is the infestation level and treated point. Our stink bug (*Riptortus clavatos*) aggregation pheromone trap gives a good example at this point. Possibly sex pheromone is available to apply mass trapping system.



Delta Trap

Delta trap baited with synthetic female sex pheromone of various moth species is available for monitoring insect populations to identify the most suitable control determination. They can only be used to monitor in vegetable and orchard.

Application

- Dosage for monitoring in greenhouse: 1 EA/1,000m² Dosage for monitoring in open field: At least 2EA/1 ha
- Complete instruction sheets for assembly and use are provided.



Funnel Trap

This trap designed to be available for monitoring to measure insect population and mass trapping is also possible to reduce population of vegetable insect. The Funnel trap is effectively designed that insects attracted by incorporated pheromone lure containing synthetic pheromone. With its special type of funnel, Insects can not escape out of the trap until the identification performed.



Application

- For monitoring : 1pc per 661–991m² placed and maintained 30–50 M interval per each trap.
- For mass trapping : 1pc per 150m² placed and maintained 5 M interval per each trap
- Distance of attractant : within 10–50M

Stink Bug Capture Trap

This trap designed to provide eco-friendly pest management tool used with aggregation pheromone lure of bean bug (Riptortus clavatus) for successful monitoring and mass trapping program.



Application

- Dosage : 330–495m² per Set, 20EA/ha
- Complete instruction sheets for assembly and use are provided.

Diamond trap



Wing Trap

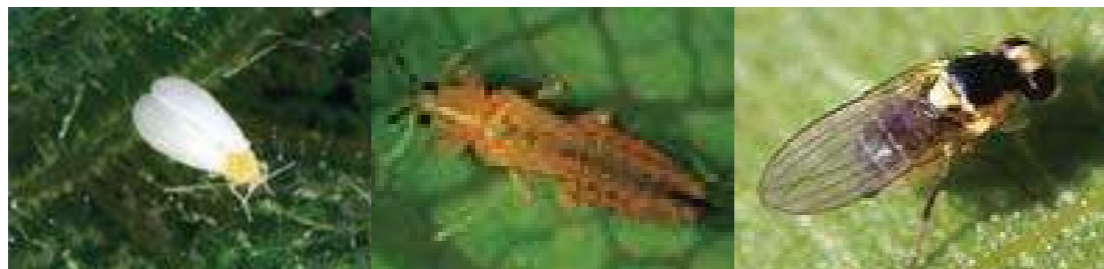


BMSB trap



CATCHALL Sticky trap

Visually attracted insect into sticky trap to monitor their presence and it also cuts down large densities of pest such as Whitefly, Thrips, Leafminers, Winged aphid, fruit fly and other winged pes



CATCHALL

Yellow and Blue Sticky Card

Available with both Paper based and Plastic based

Title of patent : Flat trap for capturing harmful insects and apparatus for manufacturing the same

Registered number : 10-0478513

Application

- Monitoring : 5pcs per 10a(991m²)
- Reduction of population and crop protection : 100pcs per 10a(991m²)



CATCHALL Roll Trap



Roll Trap

Yellow and blue sticky roll

flexible plastic vinyl material

Can be used in various places and in any way you want

Application

Usually 1 house / 5 rolls need

Size : 20cm x 100M

30cm x 100M



CATCHALL

GA - Glue can

Available 1kg, 2.5kg, 3.5kg, 15kg, etc.



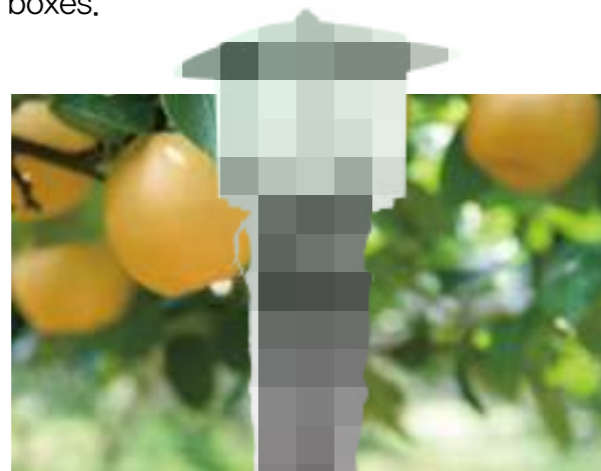
Other Product Series

SOECTRA Light trap

Lures harmful insects by using black light(UV lamp) which attract and capture them into lower part of the capture net through a fan or into high voltage insect killing device. Automatic stop and start iperation system by an optical sensor and timer, which are placed inside the control boxes.

For Greenhouse

Application : 1EA/500 m²
 Power : Single phase 220V 60Hz,
 Power consumption : 29W
 Warranty : within 1 year



For Orchard

Application : 1EA/1,653 m²
 Power : Single phase 220V 60Hz,
 Power consumption : 115W
 Warranty : within 1 year



SMART trap

For Paddy, chestnut field & Non-electric wire field (Solar insect killer)
 Application : 1EA/1653m²
 Lamp : 360~425nm UV BL
 After service : Warranty within 1 yer



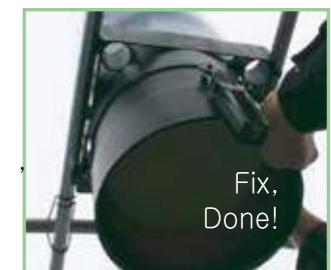
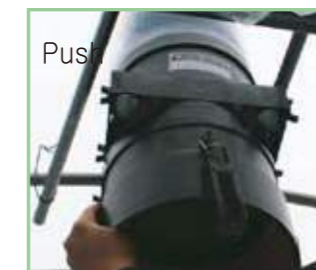
Non Power Ventilator

1. Reduction of Heating cost
2. Vinyl damage prevention caused by typhoon
3. Efficacy of forcing culture
4. Protection disease caused by fungi
5. High-temperature damage prevention
6. Naturally ventilated automatical system
7. Stale ventilation



Application

43-50m 2/EA





Bumblebee Pollination

Pollination is defined as the transport of pollen by a vector including wind, water, birds, and bats but an important factor is pollinated by insects. And some species require only bees to cross-pollinate because they are self-incompatible. By the way, what makes bumblebees are special for pollinators of crops?

Bumblebees are more reliable pollinators which have lower temperature conditions than honey bees and can pollinate flowers in cooler. And also they have long tongues are especially effective pollinator of flowers with long tubes. Bumblebees are capable of buzz pollination (about 400HZ vibrate the anthers in short bursts to release pollen)

make excellent pollinators of solanaceous flowers such as tomatoes and peppers. With greenhouse crops such as tomato, for which bumblebees are also very effective pollinators growers now not just in greenhouses but in plastic tunnels, structures covered with screen and in open fields; fruit grower like apple persimmon peach etc



Green Agro Tech established production system managed by computerized automation system as well as large production capacity more than 40,000 colonies all year round rearing system. And also, well-educated consultant manager is located in large area greenhouse cluster widely spread in whole country to communicate directly with tanners.

In order to satisfy these markets conditions, our facility had established to have colonies available all year round rearing. Bumblebee requires artificial feeding source (high protein pollen & sugar solution) provided by GAT quality control for

colony development in our facility. For preparation of commercial hive, fully filled sugar solution into plastic container located at the bottom of the hive and supplied to the brood compartment automatically through filter. Quality is controlled by manager who is completing hives recheck and Kotbuni Bumblebee dispatch from safety logistics system. Everytime customer needs bumblebee pollinator, we are close to you.

Kotbuni Bumblebee

What is the Kotbuni Bumblebee?

Bombus terrestris is a member of the European *Bombus* family and the one of the most suitable bees for pollination, of all the kinds of bees in nature. The Kotbuni Bumblebee is the first pollination bee intended for greenhouse crops and developed by the industrial and educational cooperation between Kyungpook National University and Yecheon-gyn Insect Research Center, and supported by the FAO technically and financially (FAO/TCP/ROK 8912). Kotbuni is the commercial name applied trademark for this bumblebee (trademark application 2004-1842).

Traits of Kotbuni Bumblebees

Features	Details
Strong homing instinct	Queen leads social organization like honey bees
Characteristic foraging behavior	Pollinates by vibrating its chest muscle
Long tongue	Able to forage in flowers with long throats
Adaptability in bad conditions	Forage even in low temperature(5-6°C) or in bad weather, such as cloudiness, light snow, windy or rain

Advantages of using Kotbuni Bumblebees

Advantage	Details
Labor saving	Take over pollination work (able to do pollination around 600-900m ² area)
High fruits production	Reduce poor fruits and increase productivity
Competitive quality	Increase weight, size, seed, sweetness, and acidity of fruits
Effective pollination	Able to pollinate flower with long throats, which honey bees can't do
Diversity & Coexistence	Raise crops using beneficial live insects Avoid poisonous agricultural chemicals
Environmentally friendly	Produce high quality and quantity fruits and vegetables, local Brand products



The quantity of bumblebees in one hive : One queen and 70-80 working bees

Working bees can be increased up to 350, if eggs and larvae are well controlled, this is available to pollinate in orchard too.

Crops using Kotbuni bumblebee : Crops for pollination: greenhouse vegetables (tomato, strawberry, eggplant, pepper, melon, zucchini, etc.), orchard (apple, peach etc)
Seed Stock: Seeds of pepper, Chinese Cabbage, Onion, etc.

Pollination Area of one hive (for tomatoes) : Tomato: 900 - 1650 m², Cherry Tomato: 600-900 m²
Orchard: 6hives/ha in Apple

Pollination Period of Kotbuni Bumblebee : Around 45-60 days (it can be different, depending on pollination environments)

Pollination Temperature of Kotbuni Bumblebee : Around 10-30 °C

Kotbuni bumblebee hive in tomato greenhouse : Hive is developed to optimize the condition for pollination activities (Utility Model Registration No 0348723)

The condition of hive : The hive has 70-80 working bees at first, but they can be increased up to 350 depending on the management