

# PHEROMONES 2024 AND TRAPS

**witasek** – Care for your forest and vines – Increase the value!

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## INSECT TRAPS AND PHEROMONES – INTERESTING FACTS

**Catching pests with pheromone traps is a highly efficient biotechnological measure (without poison) to monitor beetle activity and to mass trap beetles.**



The most dangerous bark beetle, the European spruce bark beetle (*Ips typographus*), is approx. 4.2 to 5.5 mm long.

Several insect species may become pests. They can cause disease and bring death to their host plants. These insects use their scenting ability to find suitable host plants and members of the same species that release certain odorous substances (kairomones, pheromones, for further information see page 58). Trapping systems use these abilities of insects to locate host plants or members of the same species and feature synthetically manufactured odorous substances to attract them and to, eventually, catch them. Besides, the simple use of colours is also very effective to attract certain pests (see colour panels, page 164).

**Why use insect traps and pheromones?**

**Monitor beetle activity to:**

- allow a more targeted and timely use of control measures
- obtain information on beetle occurrence and population density
- allow more accurate predictions on population development (generation succession)

**Mass-trap pest insects to (possible with suitable traps, e.g. MultiWit®):**

- reduce the number of pest insects
- reduce damage

**Mass trapping measures do always have to be accompanied by other precautions: Check standing trees for infestations, remove fallen timber (bark beetle habitat) immediately!**



Spruce bark beetles caught in the trap-tub of our WitaTrap® Bark Beetle Slit Trap (dry trapping method) – these beetles cannot cause damage anymore.



MultiWit® Bark Beetle Slit Trap is suitable for mass trapping various bark beetle species (e.g. European and six-toothed spruce bark beetle & many others) – both trapping methods (dry and wet) possible.



**We offer leading and state-of-the-art trapping systems for many insect pests!**

## PHEROMONES (ATTRACTANTS) – INTERESTING FACTS

**Pheromones (attractants) consist of odorous substances characteristic of certain insects and are designed to attract members of the same species:**

### Sex pheromones:

These pheromones are released by females and do only attract the males (e.g. most moth attractants).

### Aggregation pheromones:

These pheromones are released by insects to indicate, e.g., the location of a tree suitable for breeding. Therefore, males and females are attracted (e.g. bark beetle attractants).

Besides, **kairomones** are commonly used. These substances are characteristic of trees and **attract insects looking for host plants**.



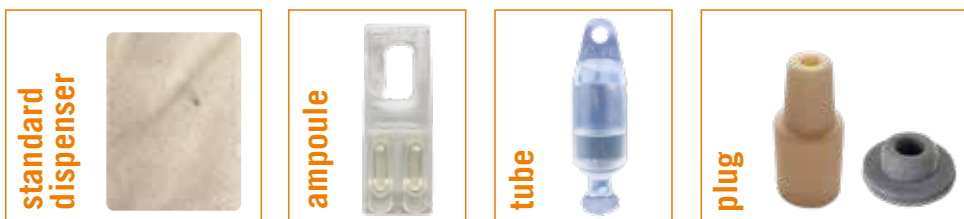
Depending on the pest species, Witasek uses a mixture of highly pure pheromones and kairomones that ensure excellent catch results!

## Pheromone traps & pheromone types:

Various pheromone trap types are available (see page 76). The most commonly used one is the "slit trap". Our MultiWit® Bark Beetle Slit Trap is a state-of-the-art product innovation for mass trapping pests and suitable for use as a dry and a wet trap (see page 63).

### Different pheromone types:

- standard dispenser
- ampoule
- tube
- plug



## Propagation potential of bark beetles

Bark beetle species	Start of flight	Flight temperature	Generations/year
European spruce bark beetle ( <i>Ips typographus</i> )	Mid-April	from 16.5° C	2 (3)
six-toothed spruce bark beetle ( <i>Pityogenes chalcographus</i> )	April	from 15° C	2
striped ambrosia beetle ( <i>Trypodendron lineatum</i> )	beginning of March	from 12° C	1

\*Tagesdurchschnittstemperatur

**1 ♀ = 8,000 ♀-beetle at the end of the flying season! The catch of one ♀-beetle means 16,000 fewer beetles at the end of the year!**

**Generation in September/October**  
8,000 ♀ (8,000 ♂)  
- depending on the weather -

**Generation in August**  
400 ♀ (400 ♂)

**One ♀-beetle colonized the tree**  
(lays 40 eggs)

**Generation in June**  
20 ♀ (20 ♂)



**x10<sup>n</sup>**

**Up to 10,000 beetles can settle a tree.**

**Every captured bark beetle can no longer reproduce!**

Attention: The sibling broods are not yet taken into account!  
(i.e. the female beetles flies out again after laying eggs and creates a second brood)

**100,000 females caught can prevent a population increase of up to 1.6 billion bark beetles.**

## PHEROMONES FOR SPRUCE BARK BEETLES – INTERESTING FACTS

The most common and most dangerous spruce bark beetle species are the **European spruce bark beetle** (*Ips typographus*) and the **six-toothed spruce bark beetle** (*Pityogenes chalcographus*).

In particular, the European spruce bark beetle is **the** most significant forest pest in many areas. Bark beetles bore into the bark to construct galleries for their brood between bark and wood. Except for the striped ambrosia beetle (*Trypodendron lineatum*) that bores into the wood and produces white boring dust. The sap can no longer circulate in the tree, the tree begins to dry out and eventually dies. European spruce bark beetles usually infest strong spruces and are mainly responsible for pockets of infestation in mid- or late summer (groups of trees are successfully attacked and killed, foliage of infested trees turns reddish throughout the crown and bark begins to flake off). In strong spruces the European spruce bark beetle and the six-toothed spruce bark beetle often occur together, the six-toothed spruce bark beetle predominantly attacking the sections with thin bark (crown, branches). Besides, *Pityogenes chalcographus* rather attacks younger trees. The company witasek has a year-long experience of developing and improving bark beetle pheromones.



### How to control European and six-toothed spruce bark beetles

- mass trapping with **MultiWit® Bark Beetle Slit Trap**
- **trap wood piles** (= wood used as traps)
- trap trees (additionally apply pheromone to enhance attracting effect)

### Why monitor beetle flight activity with bark beetle traps?

- to determine start of flight period and flight curve
- to assess **population pressure**  
(high catch numbers = greater attention on infestation of standing trees)
- to **allow forecasts** on development of beetle generations  
(How many generations will occur?)

### Tips for the installation and use of bark beetle traps:

- **trap distances:** keep safety distance of at least 10 to 12 metres from trap to non-infested spruces, install traps 25 to 30 metres apart (see pages 60 to 61)
- **installation time:** install late March or in April, in any case before start of flight period in April/May

**European spruce bark beetle**  
(*Ips typographus*)



size: 4.2 to 5.5 mm

© U. Schmidt 2006

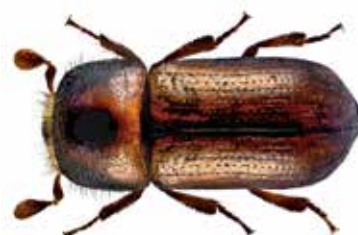
**six-toothed spruce bark beetle**  
(*Pityogenes chalcographus*)



size: 1.6 to 2.9 mm

© U. Schmidt 2006

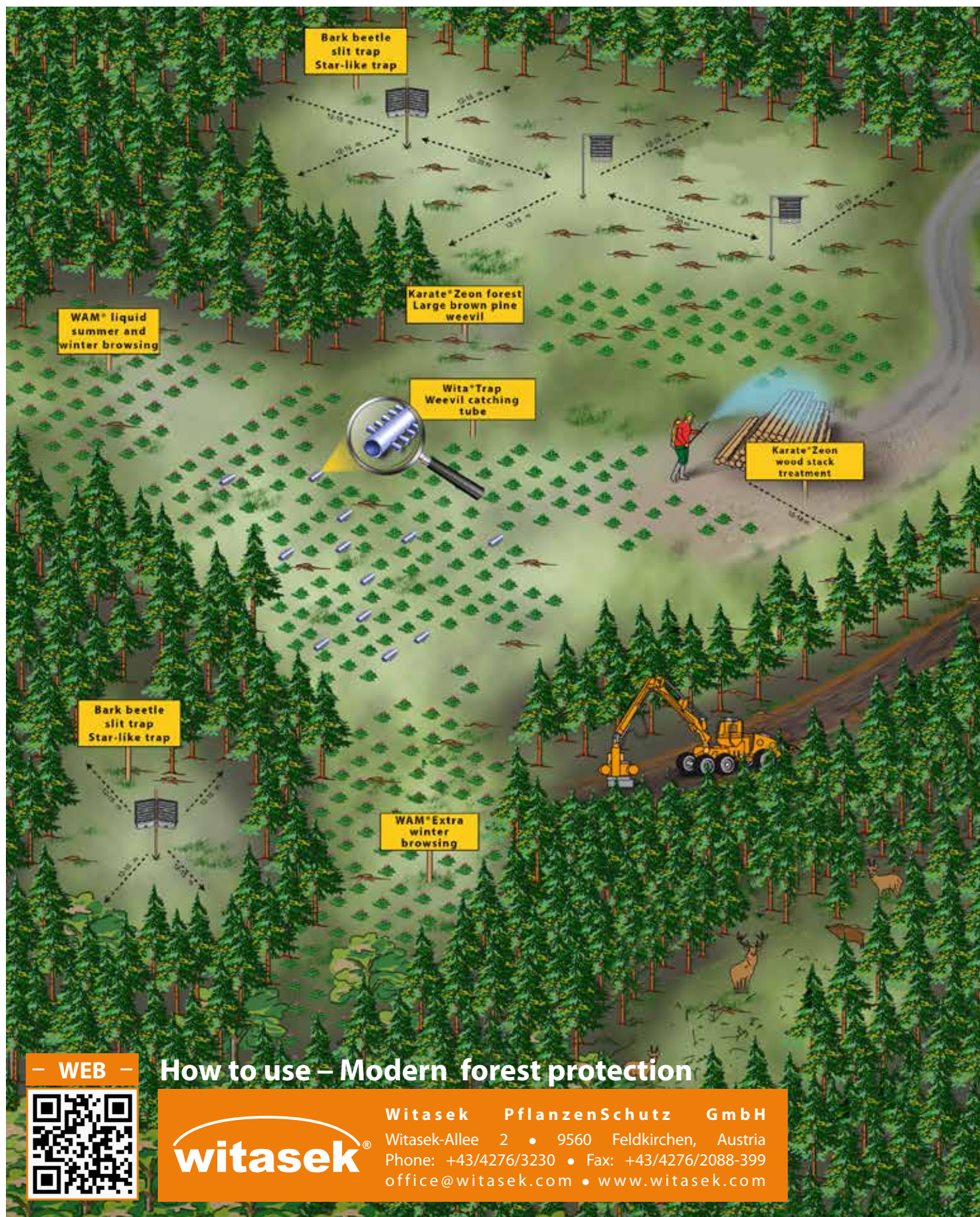
**striped ambrosia beetle**  
(*Trypodendron lineatum*)



size: 2.6 to 4.0 mm

© U. Schmidt 2006

## THE RIGHT USE OF FOREST PROTECTION MEASURES



All forest protection measures require their proper use. The image below gives you an impression on the practical use of our forest protection products with a focus on bark beetle control. The image below is designed to serve as a recommendation only. Please read label and product information before use.



## WitaTrap® Bark Beetle Slit Trap

### Our "proven" standard trap with the IMPROVED Capture Container for dry trapping methods

Complete with standard Capture Container (standard trap-tub).



WitaTrap® Bark Beetle Slit Trap  
(see page 66 for accessories)

- **Especially smooth surface** – bark beetles **cannot grab hold**, they immediately slide down and fall through the entry slits into the capture container (trap-tub).
- additional screw connections for **greater stability**
- enhanced arrangement of entry slits
- **WitaTrap® Trap-Tub features:**  
All plastic strainers were replaced by welded-in steel strainers. Furthermore, cambered strainers and the characteristics of the material they are made of facilitate a faster drainage of rain water.
- **top quality material – durable for several years**
- trap body dimensions: 50 cm high, 49 cm wide, 6.5 cm deep (excl. entry slits)
- colour: dark brown/black
- **Don't forget to order the right pheromone!**  
(for pheromones for bark beetles see p. 72, 73, 75; for other pheromones see p. 76)



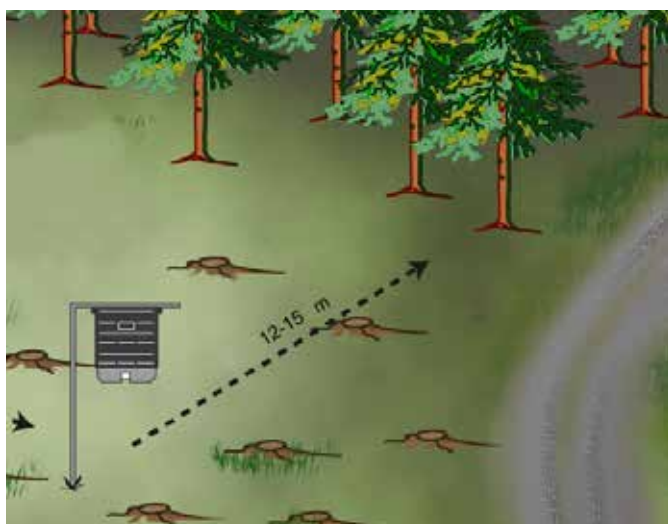
WitaTrap® Trap-Tub  
features new steel strainers



item no.	item	price (in €)	
		excl. VAT	incl. VAT
314031	<b>WitaTrap® Bark Beetle Slit Trap</b> (without stayer) (6 pieces/box)	per piece	
	from 72 pcs. (pallet)		
	36 to 71 pcs.		
	1 to 35 pcs.		

### Safety distance between bark beetle slit traps and forest – Traps can be installed on stands individually or in an arrangement of three.

Keep a distance of 12 to max. 15 metres between bark beetle slit traps and healthy trees. Traps can be installed individually (1 trap per stand) or in a star-like arrangement (3 traps per stand) (*see below*).



Bark beetle slit trap installed on stand for individual traps (see page 67)



Three bark beetle slit traps installed on trap stand (see page 67)

## MultiWit® Bark Beetle Slit Trap



MultiWit® Bark Beetle Slit Trap, complete incl. MultiWit® Trap-Tub and Funnel.  
(see page 66 for spares)

**Probably the best bark beetle slit trap for mass trapping bark beetles, with the tried and tested MultiWit® Trap-Tub suitable for wet trapping and dry trapping methods**

Slit traps are outstanding biotechnological monitoring and control systems for bark beetles (European spruce bark beetle, six-toothed spruce bark beetle, striped ambrosia beetle, pine shoot beetle, lesser pine shoot beetle, larch bark beetle etc.).

- **Especially smooth surface** – bark beetles cannot grab hold, they immediately slide down and fall through the entry slits into the trap-tub.
- additional screw connections for **greater stability**
- enhanced arrangement of entry slits
- **top quality material** – durable for several years
- **features the tried and tested trap-tub and rain gutter**  
All plastic strainers were replaced by welded-in steel strainers. Furthermore, cambered strainers and the characteristics of the material they are made of facilitate a faster drainage of rain water.
- trap comes with a pack of AntiSmell Trap Salt (page 64) that we recommend for the wet trapping method
- trap body dimensions:  
50 cm high, 49 cm wide, 6.5 cm deep (excl. entry slits)
- colour: dark brown/black
- **Don't forget to order the right pheromone!**  
For pheromones for bark beetles see pages 72, 73, 75; for other pheromones see page 76.



MultiWit® Rain Gutter featuring steel strainer in our MultiWit® Trap-Tub.



– VIDEO –



item no.	item	price (in €)	
		excl. VAT	incl. VAT
314051	<b>MultiWit® Bark Beetle Slit Trap</b> – incl. 1 pack of AntiSmell Trap Salt (without stayer) (6 pieces/box)	per piece	
	from 72 pcs. (pallet)		
	36 to 71 pcs.		
	1 to 35 pcs.		

## AntiSmell Trap Salt



For the wet trapping of bark beetles with the MultiWit® Trap-Tub (see p. 65) and the MultiWit® Bark Beetle Slit Trap (see p. 63)

## Trap Salt for wet trapping bark beetles with the MultiWit® Trap-Tub and Wita® Universal Capture Container

AntiSmell Trap Salt is a natural, inorganic product that, when used in trapping systems with catch liquids, prevents the release of pheromones (messenger substances) deterring other bark beetles and deodorises the smell of decaying beetles caught in traps.

**With one 150 g package you can obtain 700 ml of the salt-water-solution = one trap-tub filling.**

- One filling can suppress the smell of approx. 15,000 to 20,000 bark beetles. Thus, traps only need to be checked every 4 to 8 weeks, depending on flight intensity and flight duration (saves time and money).

**Disposal:** AntiSmell Trap Salt has food quality – therefore the salt or salt-water-solution can be disposed of with no problem in the household trash.

item no.	item	price (in €)	
		excl. VAT	incl. VAT
391411	<b>AntiSmell Trap Salt</b> (shipping unit: 1 pack = 2 x 150 g)	per pack	
	1 pack		

- **Filling instructions:** The salt bag can also be used as a funnel for filling the water-salt solution.



This is how it's done: First, cut off the upper corner. Then pour the salt next to the rain gutter into the collecting container or into a container with 700 ml of water and mix. Then cut off the bottom of the bag and use the bag as a funnel.

## Bark Beetle Measuring Cup



## To easily count the beetles caught

SERVICE  
PRODUCT

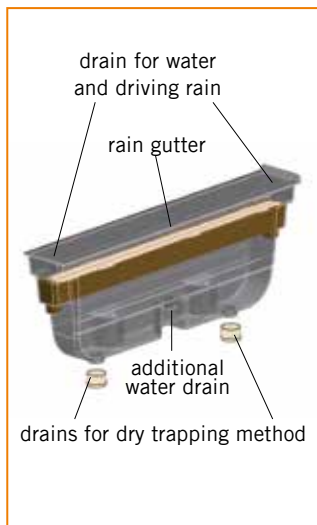
Bark Beetle Measuring Cup is available in 2 sizes (100 ml and 250 ml).

catch number conversion:

- 1 ml of European spruce bark beetles equals approx. 40 beetles
- 1 ml of ambrosia beetles equals approx. 130 beetles
- 1 ml of six-toothed spruce bark beetles equals approx. 600 beetles

item no.	item	price (in €)	
		excl. VAT	incl. VAT
315851	<b>Bark Beetle Measuring Cup – 100 ml</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		
315861	<b>Bark Beetle Measuring Cup – 250 ml</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		

## MultiWit® Trap-Tub for Bark Beetle Slit Traps



All plastic strainers were replaced by steel strainers.

### The best trap-tub for mass trapping bark beetles (wet trapping) – complete, without funnel

- designed for **MultiWit® Bark Beetle Slit Trap** – can also be used with all other slit trap types (e.g. Theysohn, Ridex, etc.) and funnels.
- **Trap-tub can be used for catching all bark beetle species** – e.g. European spruce bark beetle (*Ips typographus*), six-toothed spruce bark beetle (*Pityogenes chalcographus*)
- **top quality material – durable for several years**
- **welded-in steel strainers prevent the caught beetles from escape.**  
(see page 63 for further information)

item no.	item	price (in €)	
		excl. VAT	incl. VAT
313111	<b>MultiWit® Trap-Tub complete without funnel</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		

### Our Trap-Tub gives you the choice between several trapping methods!

#### Wet trapping:

Trapping systems with catch liquids have proven to be most effective for the control of massive amounts of bark beetles. These methods require the trap-tub to be filled with water and AntiSmell Trap Salt to achieve constantly high catch results.

The following tips will allow you to increase catch numbers and save time and labour:

- **No messenger substances:** Bark beetles caught die very quickly in the water-salt-solution (AntiSmell Trap Salt, see page 64) in the trap and therefore are no longer able to release messenger substances which could deter other beetles from approaching the trap. This ensures constantly high catch numbers and reduces the danger of an infestation of standing trees considerably.
- **No smell of decaying beetles:** Conventional trapping systems do not suppress the smell of decaying beetles and thus the pheromones cannot have the desired attracting effect. This is why it is essential to check and empty dry trapping systems on a weekly basis. When trapping systems with liquids are used (wet trapping) the water-salt-solution neutralises the smell of decaying beetles and the attracting effect of pheromones remains unaffected. As a consequence, catch rates constantly remain at a high level and traps only need to be checked every 4 to 8 weeks, depending on flight intensity and flight duration.
- **Catch liquid concentration:** A specially designed gutter featured in the MultiWit® Trap-Tub leads rainwater out of the trap so that the concentration of the catch liquid remains effective. When too much water enters the trap, an additional water drain in the middle of the tub draws off the excess water.
- **colour:** transparent, allows easy trap checks to determine your catch success

#### Dry trapping:

Trapping systems without catch liquids are ideally suitable for monitoring bark beetle populations in their main flight periods. The transparent trap-tub facilitates weekly checks of traps and catch success, and the beetles caught can be easily counted. When the trap-tub is used for dry trapping, plug caps are removed from the drains of the MultiWit® Trap-Tub so that water can run off (i.e. conventional system).

**Depending on your needs, you can switch between monitoring (dry trapping) and mass trapping (wet trapping) during the flight period.**



#### Wet trapping:

Beetles are killed immediately in the water-salt-solution: no release of pheromones that would deter other bark beetles, no smell of decaying beetles.



#### For wet trapping:

Plug caps are installed.



#### For dry trapping:

Plug caps are removed, water can escape through cambered steel strainers (rain gutter remains installed).

## Bark Beetle Slit Traps: Retrofitting, components and spares



### Trap Body for Bark Beetle Slit Trap, without funnel

- improved trap body – greater stability, enhanced arrangement of entry slits
- new colour for greater catch rates
- colour: dark brown

item no.	item	price (in €)	
		excl. VAT	incl. VAT
391551	<b>Trap Body for Bark Beetle Slit Trap dark brown</b> (MultiWit®/WitaTrap®) without Trap-Tub	per piece	
	from 10 pcs.		
	1 to 9 pcs.		



### Rain Gutter with Steel Strainer for MultiWit® Trap-Tub

- leads "excess water" (e.g. entering through driving rain) out of trap
- comes preassembled
- welded-in steel strainers prevent the caught beetles from escape

391521	<b>Rain Gutter for MultiWit® Trap-Tub</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		



### Plug Cap for MultiWit® Trap-Tub

391541	<b>Plug Cap for MultiWit® Trap-Tub</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		



### Funnel for MultiWit® Trap-Tub and WitaTrap® Capture Container standard

The funnel prevents the trapped bark beetles from escape out of the capture container.

- to be installed between trap body and trap-tub
- colour: dark brown

391511	<b>Funnel for MultiWit® Trap-Tub and WitaTrap® Capture Container</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		



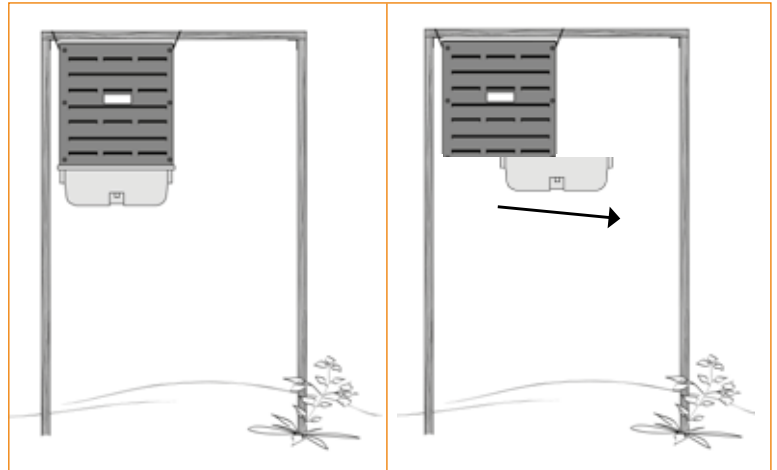
### WitaTrap® Capture Container (Trap-Tub standard), without Funnel

- standard trap-tub (excl. funnel) for dry trapping methods
- welded-in steel strainers prevent the caught beetles from escape.

313011	<b>WitaTrap® Capture Container standard without Funnel</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		

## Example of the assembly of a bark beetle slit trap

- ideal for hanging on a hardwood frame
- secure to the frame using cable ties (see p. 40) or wire
- hang the trap so that there is sufficient space to draw out the trap tray
- secure the trap so that it cannot be moved by the wind
- lower edge of the trap approx. 1.30



## Trap Stand for Three Bark Beetle Slit Traps

### The easiest way to install three bark beetle slit traps in a star-like arrangement

SERVICE  
PRODUCT

Catch numbers with star-like trap arrangements consisting of three traps are much higher than those of individually installed traps

Star-like arrangement facilitates catches from all directions: Bark beetles attracted can **perceive trap walls from all directions**. This ensures high catch numbers, irrespective of wind directions.

- complete with connectors and anchoring cable
- dip treated for rust prevention
- Although three traps are used, only **one pheromone dispenser** is required.
- attracting effect of 360°
- The height is adjustable.

– VIDEO –



Three traps installed on trap stand: see pages 62 and 63 for suitable traps

item no.	item	price (in €)	
		excl. VAT	incl. VAT
313211	WitaTrap® Bark Beetle Trap Stand for Three Traps (without Traps)	per piece	
	1 pc.		

### ● How to install a star-like trap arrangement consisting of three traps:



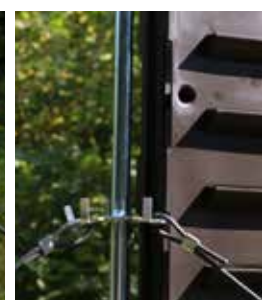
Drive anchor into ground ....



... place trap stand on it. Tighten the three guy ropes and use the pegs provided to secure stand to ground ...



... mount the three bark beetle slit traps on the stand.  
**Tip:** Use pliers to bend and, thereby, slightly open hooks to facilitate installation.



## WitaTrap® Multi Funnel Trap



With Wita® Universal Capture Container.



## Trap for wet and dry trapping of bark beetles, also suitable for metallic wood-boring beetles and long-horned beetles

- very low priced
- easy to assemble and install
- easy to clean, room-saving storage
- with Wita® Universal Capture Container!  
(more informations to the new universal capture container page 70)
- transparent capture container facilitates trap checks
- suitable for wet and dry trapping method
- **Don't forget to order the right pheromone!**  
(Pheromones see pages 72 and following)
- for wet trapping use AntiSmell Trap Salt (p. 64)
- **NEW 2024:** smoother material surface and reinforced roof construction



The bayonet lock of the new Wita® Universal Capture Container ensures an optimal hold on the end segment of the WitaTrap® Multi Funnel Trap.



WitaTrap® Multi Funnel Trap 11 + 1

item no.	item	price (in €)	
		excl. VAT	incl. VAT
310641	<b>WitaTrap® Multi Funnel Trap – 5 segemnts + 1</b> incl. Wita® Universal Capture Container (5 pieces/box)	per piece	
	180 pcs./palette		
	6 to 175 pcs.		
	1 to 5 pcs.		
310651	<b>WitaTrap® Multi Funnel Trap – 11 segemnts + 1</b> incl. Wita® Universal Capture Container (4 pieces/box)	per piece	
	144 pcs./palette		
	5 to 140 pcs.		
	1 to 4 pcs.		

## Wita®Prall Cross-vane panel trap



With Wita® Universal  
Capture Container.

**Trap for wet and dry trapping of bark beetles, also suitable for metallic wood-boring beetles and long-horned beetles like e.g. pine sawyer beetle (*Monochamus galloprovincialis*)**

- easy to assemble and install
- with Wita® Universal Capture Container!  
(more informations to the new universal capture container page 70)
- suitable for wet and dry trapping method
- hollow chamber material (PP), UV stable
- **Don't forget to order the right pheromone!**  
Pheromones see pages 72 and following.
- For wet trapping use AntiSmell Trap Salt (p.64).



item no.	item	price (in €)	
		excl. VAT	incl. VAT
315631	<b>Wita®Prall Cross-vane panel trap</b> (5 pieces/box)	per piece	
	from 30 pcs.		
	1 to 29 pcs.		
	Spare parts available upon request!		

## • Assembly - Wita®Prall Cross-vane panel trap



- Assemble the main section from the two impact surfaces. To do this, press the individual surfaces into each other at a right angle, slotted side first, and secure to the holes using cable ties.
- Open out the main section into a cross and attach the cover section using the four slots.
- Bend the wire suspension outward at the loose ends to form a roof shape. Place this on the cover section at the intersection of the wire and the mounting hole (main and cover sections), bend the wire 90°, pass it through the hole and once again bend it 90° to secure it to the top of the cover section. **(A practical tip:** the two remaining holes can be secured with a piece of wood.)
- Place the base section with the four slits on the bottom of the main section.
- Hook the adapter with the groove into the four plastic hangers on the base section and secure this so that everything interlocks using the fixing balls.
- Now attach the universal collection container with the bayonet mount to the adapter; ensure this clicks into place.
- When the trap has been put in place, the pheromone can be inserted through the provided hole in the main section with the help of a wire or tape.
- If you are using the wet trapping method, fill the collection container with water and add AntiSmell trap salt if you wish.
- Optional protection in strong winds: the trap provides a point of attack for the wind. Use wire or twine to secure the lower part of the trap by tying it crosswise so that it is not blown around by the wind. In windy areas, the collection container can also be secured to the bayonet ring of the adapter using a piece of wire (such as a paperclip).

## Wita® Universal Capture Container



designed for the  
WitaTrap® Multi  
Funnel Trap  
and Wita®Prall Cross-vane panel Trap



Retrofit accessories: Adapter for  
Wita®Prall Cross-vane panel Trap



Hooks for Adapter Wita®Prall  
Cross-vane panel Trap

## The Wita® Universal Capture Container for the WitaTrap® Multi Funnel Trap and Wita®Prall Cross-vane panel Trap.

The Wita® Universal Capture Container is universally applicable and designed for the WitaTrap® Multi Funnel Trap and Wita®Prall Cross-vane panel Trap.

### Technical data:

- capacity: 1,000 ml before overflow
- material: PP (polypropylene)
- UV-stabilised

### Dimensions:

- height: 27 cm
- diameter with bayonet ring: 102 mm
- weight incl. lid: 170 g



### Bayonet lock with safety lock

The bayonet lock facilitates maintenance work and provides for an optimal hold of the Capture Container even in windy locations.



### Wet and dry trapping method

Cambered stainless steel sieves on the outflow (at the bottom) and on both side overflows enable excess water to run off properly. The finely woven net structure prevents insects from escaping. The stainless-steel sieves are very durable and dimensionally stable.

With the wet trapping method, overflow sieves provide for good drainage of excess rainwater. In addition, the AntiS-mell Trap Salt (page 64) can be used to suppress the smell of the decomposing beetles in the trap.

The outflow sieve at the bottom guarantees drainage of rainwater with the dry trapping method.



### Base

Three stable legs enable the bottle to be placed on the ground for maintenance work without tipping over. This facilitates maintenance work on the trap.



### Lid for wet trapping

With the wet trapping method, the lid is placed on the outflow on the bottom to seal it. The lid is additionally attached with a cord to the trap to prevent it from getting lost.

item no.	item	price (in €)	
		excl. VAT	incl. VAT
310711	<b>Wita® Universal Capture Container</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		
<b>Retrofit accessories for Multi Funnel Trap and Cross-vane Panel Trap – Service-Products</b>			
315681	<b>Adapter for Wita®Prall Cross-vane panel Trap incl. hooks</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		
<b>Spares – Service-Products</b>			
310721	<b>Lid for Wita® Universal Capture Container</b>	per piece	
	from 10 pcs.		
	1 to 9 pcs.		
315661	<b>Hook for Adapter for Wita®Prall Cross-vane panel Trap</b>	per package	
	from 10 packs		
	1 to 9 packs		

## Universal Trap Stand



Scope of delivery without trap

## Universal trap stand for traps (e.g. multi funnel traps, cross-vane panel traps)

SERVICE  
PRODUCT

The innovative trap stand enables easy installation of trap systems such as WitaTrap® multi funnel trap, Wita®Prall cross-vane panel trap, and much more and ensures their secure hold. No additional, bulky construction materials have to be taken along or searched for at the installation site.

- overall height approx. 2.80 m
- 3-part telescopic feet, continuously adjustable in height
- light weight
- easy to assemble - according to instructions
- high quality aluminum construction - height adjustable
- Uneven floors are easily compensated for by the telescopic rods.
- The pressed-in tips ensure the best grip in the ground.
- includes pegs for attachment to the surface
- note other fastening options as described (drive in acacias on the feet)
- Traps attached to the universal trap upright can be tied to the feet with a cord/thread. So the trap doesn't move in the wind.
- shipping unit:
  - 1 trap stand (high quality aluminium)
  - incl. pegs for an easy installation on the ground



item no.	item	price (in €)	
		excl. VAT	incl. VAT
315951	<b>Universal Trap Stand</b> shipping unit: 1 Universal Trap Stand incl. pegs	per piece	
	ab 10 pcs.		
	5–9 pcs.		
	1–4 pcs.		

## WitaTrap® Pine Weevil catching tube



## The optimal trap for monitoring and catching the large pine weevil (*Hylobius abietis*)

The WitaTrap® Weevil Catching Tube is for determining the existence of and for combating the large pine weevil. The beetle is targeted and attracted by the pheromone rod. Using the entry lips, which are tapered inwards, it reaches the catching tube and can't get back out again.

- The trap has an opening at each end for maintenance.
- The lids are easy to open and close.
- There are two small openings on the bottom to ensure water can drain properly.
- application: 6–10 catching tubes per hectare
- catching tube length: 61 cm
- number of entry openings: 12
- material: polyethylene
- colour: grey



item no.	item	price (in €)	
		excl. VAT	incl. VAT
312821	<b>WitaTrap® Weevil Catching Tube complete set – Catching Tube</b> incl. pheromone	per set	
	from 30 sets		
	1 to 29 sets		
322811	<b>Hyloxit®</b> (shipping unit: 1 pc.)	per piece	
	from 100 pcs.		
	1 to 99 pcs.		

## PHEROMONES TO ATTRACT EUROPEAN SPRUCE BARK BEETLE (*Ips typographus*)



### Ipsowit® Standard

### Pheromone to attract European spruce bark beetle (*Ips typographus*), in proven dispenser foil packing



#### IPSOWIT® FJ (spring)

IPSOWIT® FJ (spring) is for the generation of beetles first swarming in the spring, at temperatures of 16 to 18 °C, usually from mid-April to the start of May. IPSOWIT® FJ is characterised as being more attractive for the European spruce bark beetle in the spring. Increased catch rates can be achieved thanks to the newly-developed composition.

#### IPSOWIT® STANDARD

IPSOWIT® Standard is for all the periods during bark beetles are in flight. If IPSOWIT® FJ was used for catching the first swarm flight, IPSOWIT® Standard can be seamlessly deployed afterwards. That means that consistent catching rates can be guaranteed, even over the summer months. The composition of this bait provides the usual high level of attraction for the European spruce bark beetles.

- effective: 6 to 8 weeks (depending on weather conditions)



item no.	item	price (in €)	
		excl. VAT	incl. VAT
323211	<b>Ipsowit® FJ (spring)</b> (pack of 5 pcs.)	per piece	
	from 100 pcs.		
	5 to 95 pcs.		
323411	<b>Ipsowit® Standard</b> (pack of 5 pcs.)	per piece	
	from 100 pcs.		
	5 to 95 pcs.		

### Pheroprax® Ampoule

### Pheromone to attract European spruce bark beetle (*Ips typographus*)



Liquid pheromone is filled in **double-chamber ampoule** – fill level of ampoule is easily visible and a new ampoule can be hung next to the old one when necessary.

- effective: 6 to 8 weeks (depending on weather conditions)

item no.	item	price (in €)	
		excl. VAT	incl. VAT
324411	<b>Pheroprax® Ampoule</b>	per piece	
	from 50 pcs.		
	1 to 49 pcs.		

**TIP:** See page 75 for our combined pheromone "KombiWit® Tube" with long term effect to attract the European spruce bark beetle (*Ips typographus*) and the six-toothed spruce bark beetle (*Pityogenes chalcographus*)

## PHEROMONES TO ATTRACT SIX-TOOTHED SPRUCE BARK BEETLE (*Pityogenes chalcographus*)



### Chalcowit®

#### Pheromone to attract six-toothed spruce bark beetle (*Pityogenes chalcographus*) in proven dispenser foil packing



Standard pheromone with constant catch rates during all flight periods

- effective: 6 to 8 weeks (depending on weather conditions)

item no.	item	price (in €)	
		excl. VAT	incl. VAT
321411	<b>Chalcowit® – Dispenser Technology</b> (pack of 5 pcs.)	per piece	
	from 100 pcs.		
	5 to 95 pcs.		

### Chalcoprax® Ampoule

#### Pheromone to attract six-toothed spruce bark beetle (*Pityogenes chalcographus*)



Liquid pheromone is filled in **double-chamber ampoule** – fill level of ampoule is easily visible and a new ampoule can be hung next to the old one when necessary.

- effective: 6 to 8 weeks (depending on weather conditions)

item no.	item	price (in €)	
		excl. VAT	incl. VAT
321211	<b>Chalcoprax® Ampoule</b>	per piece	
	from 50 pcs.		
	1 to 49 pcs.		

**TIP:** See page 75 for our combined pheromone "KombiWit® Tube" with long term effect to attract the European spruce bark beetle (*Ips typographus*) and the six-toothed spruce bark beetle (*Pityogenes chalcographus*)



## COMBINED PHEROMONE FOR EUROPEAN SPRUCE BARK BEETLE (*Ips typographus*) AND SIX-TOOTHED SPRUCE BARK BEETLE (*Pityogenes chalcographus*)

### KombiWit® Tube with long term effect



**Long-term pheromone to attract European spruce bark beetle (*Ips typographus*) and six-toothed spruce bark beetle (*Pityogenes chalcographus*), filled in a special tube ampoule that allows you to check the fill level**

The fact that the European spruce bark beetle and the six-toothed spruce bark beetle often occur together suggests to use a combined pheromone to attract both of them to a trap. KombiWit® Tube offers you this opportunity.

- Effective: up to 20 weeks – One ampoule usually lasts up to one complete vegetation period. The duration of action is considerably reduced at very high temperatures.
- Alternatively, separate pheromones for European spruce bark beetle and six-toothed spruce bark beetle can be used in trap.
- the filling level of the tube can be seen



**One tube dispenser for two bark beetle species.**

item no.	item	price (in €)	
		excl. VAT	incl. VAT
323711	<b>KombiWit® Tube – with long term effect</b>	per piece	
	from 100 pcs.		
	1 to 99 pcs.		

## UNIVERSAL ATTRACTANTS

### HostoWit® Plus



### Universal attractants for pest insects and boosters of other pheromones

These universal attractants include odorous substances that simulate host plants. This is why they attract conifer pests (HostoWit® Plus) or pests attacking deciduous woods (GLV Plus).

**HostoWit® Plus** can also be used alone (without another pheromone) and has very good attracting effects on **conifer pests** like spruce weevils and many others.

(Attention: can only be stored for 6 months)

**GLV Plus** can also be used alone (without another pheromone) and has very good attracting effects on **pests attacking deciduous woods** like Asian long-horned beetles (*Anoplophora glabripennis*), cock chafers (*Melolontha sp.*) and many others.

**Your advantages by using these products:**

- **Additional catch of second and third pests** that occur in addition to the main pest.
- **To attract pest insects for which (as yet) species specific pheromones are not available.**
- to boost the attracting effect of other pheromones (HostoWit® Plus e.g., HyloWit®; GLV Plus e.g. MeloWit®)
- the filling level of the tube can be seen

### GLV Plus (green leaf volatiles)



item no.	item	price (in €)	
		excl. VAT	incl. VAT
322911	<b>HostoWit® Plus</b> (shipping unit: pack of 5 pcs.)	per piece	
	from 100 pcs.		
	5 to 95 pcs.		
322921	<b>GLV Plus</b> (shipping unit: pack of 5 pcs.)	per piece	
	from 100 pcs.		
	5 to 95 pcs.		

**ThanasiWit®**

## Pheromone to attract ant beetles (*Thanasimus* sp.): Pheromone to attract useful insects and to prevent them from being caught in pheromone traps!

Useful insects are important natural enemies of bark beetle species (e.g. European spruce bark beetle and six-toothed spruce bark beetle). The ThanasiWit® pheromone was specifically developed to attract useful insects in spruce forests. The messenger substance in ThanasiWit® attracts various ant beetle species (*Thanasimus formicarius*, *T. femoralis*) that have long been known as natural enemies of bark beetles. A series of tests has been carried out over several years and ThanasiWit® has proven to be very effective.

### Use and application recommendations for ThanasiWit® in spruce forests:

- **To attract ant beetles to (cleared) pockets of infestation and to log stacks to reduce bark beetle population**

Place ThanasiWit® dispenser sheltered from weather conditions freely in target location, e.g. close to beetle nests or log stacks (e.g. with ThanasiWit®-Protect, see below). The useful insects attracted can help prevent bark beetles from infesting healthy trees and reduce the development of a next beetle generation in log stacks.

- **To prevent useful insects from being caught in pheromone traps**

Pheromone traps may also attract and catch *Thanasimus* species. ThanasiWit® can specifically be used to direct these natural enemies of bark beetles to a different location and, thus, prevent them from being caught in traps so that they still can act as useful insect in your forest. Freely place ThanasiWit® sheltered from weather conditions in target location (recommended installation: 2 to 7 metres into the stand, i.e. installation in the forest – measured from the edge of the forest).

- effective: approx. 8 to 10 weeks (depending on weather conditions)
- use from the start of bark beetle flight period
- Its use near traps, Trinet® P and log stacks has shown best results.
- **Not for use in pine forests!**



Ant beetle with preyed bark beetle

item no.	item	price (in €)	
		excl. VAT	incl. VAT
326911	<b>ThanasiWit®</b>	per piece	
	from 50 pcs.		
	1 to 49 pcs.		

## ThanasiWit®-Protect



## Protect the ThanasiWit® pheromone with ThanasiWit®-Protect



Install **ThanasiWit®** sheltered from weather conditions with **ThanasiWit®-Protect!**

- size: 20 cm x 8 cm x 8 cm

item no.	item	price (in €)	
		excl. VAT	incl. VAT
319151	<b>ThanasiWit®-Protect</b>	per piece	
	1 pc.		

## TRAP TYPES:

At the top left corner of the pictures below you will find abbreviations. These **abbreviations** are used in the table on the following pages **for the respective traps** (e.g. MW stands for MultiWit® Slit Trap).



**MultiWit®**  
**Bark Beetle Slit Trap**  
see page 63



**WitaTrap®**  
**Bark Beetle Slit Trap**  
see page 62



**WitaTrap®**  
**Multi Funnel Trap**  
see page 68



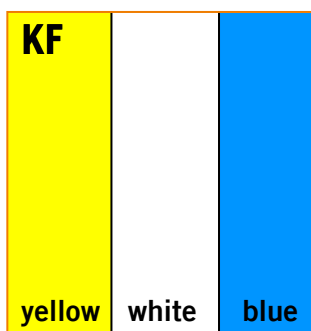
**Wita®Prall**  
**Cross-vane panel Trap**  
see page 69



**WitaTrap®** **Funnel Trap**  
see pages 138, 165




**WitaTrap®** **Delta super**  
see pages 138, 165





**Colour panels (glue traps)**  
see page 164

## USEFUL INSECTS






insect	name	pheromone				trap
	ant beetle ( <i>Thanasimus sp.</i> )	item no.	item	price (in €)		ThanasiWit® Protect (p. 75)
		326911	ThanasiWit®	excl. VAT	incl. VAT	
			from 50 pcs.	per piece		
			1 to 49 pcs.			

## SPRUCE INSECTS


insect	name	pheromone			trap	
 © U.Schmidt 2006	eight-toothed spruce bark beetle <i>(Ips amitinus)</i>	item no.	item	price (in €)		MW WT WS
				excl. VAT	incl. VAT	
		320611	Amitinuswit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
			5 to 95 pcs.			

 © BFW,Forstschutz	northern bark beetle <i>(Ips duplicatus)</i>	item no.	item	price (in €)		MW WT WS
				excl. VAT	incl. VAT	
		322211	Dupliwit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
			5 to 95 pcs.			





## SPRUCE INSECTS (continued)

insect	name	pheromone			trap
		item no.	item	price (in €)	
				excl. VAT	incl. VAT
 <small>© U.Schmidt 2006</small>	<b>European spruce bark beetle</b> <i>(Ips typographus)</i>	323211	<b>Ipsowit® FJ (spring)</b> (pack of 5 pcs.) (see p. 72)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
		323411	<b>Ipsowit® Standard</b> (pack of 5 pcs.) (see p. 72)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
		324411	<b>Pheroprax® Ampoule</b> (see p. 72)	per piece	
			from 50 pcs.		
			1 to 49 pcs.		
 <small>© U.Schmidt 2006</small>	<b>six-toothed spruce bark beetle</b> <i>(Pityogenes chalcographus)</i>	321411	<b>Chalcowit®</b> (pack of 5 pcs.) (see p. 73)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
		321211	<b>Chalcoprax® Ampoule</b> (see p. 73)	per piece	
			from 50 pcs.		
			1 to 49 pcs.		
 <small>© U.Schmidt 2006</small>	<b>combined pheromone</b> <b>European spruce bark beetle</b> <i>(Ips typographus)</i> <b>+</b> <b>six-toothed spruce bark beetle</b> <i>(Pityogenes chalcographus)</i>	323711	<b>KombiWit® Tube – with long term effect</b> effective: up to 20 weeks (see p. 74)	per piece	
			from 100 pcs.		
			1 to 99 pcs.		
 <small>© U.Schmidt 2006</small>	<b>striped ambrosia beetle</b> <i>(Trypodendron lineatum)</i>  <b>combined pheromone for Trypodendron species</b>	325611	<b>Trypowit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
		323821	<b>Lineatin Kombi</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
 <small>© BFW-Forstschutz</small>	<b>nun moth</b> <i>(Lymantria monacha)</i>	324011	<b>Lymowit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		


## FIR INSECTS

insect	name	pheromone			trap
		item no.	item	price (in €)	
				excl. VAT	incl. VAT
 <small>© BFW-Forstschutz</small>	<b>silver fir bark beetle</b> <i>(Pityokteines curvidens)</i>	321811	<b>Curviwit®</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		



## PINE INSECTS

insect	name	pheromone		trap	
 © U.Schmidt 2006	<b>engraver beetle</b> ( <i>Ips acuminatus</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	
 © BFW-Forstschutz	<b>six-spined engraver beetle</b> ( <i>Ips sexdentatus</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	
 © BFW-Forstschutz	<b>Mediterranean pine engraver beetle</b> ( <i>Orthotomicus erosus</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	
 © BFW-Forstschutz	<b>(common and lesser) pine shoot beetle</b> ( <i>Tomicus piniperda</i> , <i>T. minor</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	


### NEW FORMULATION:

 © U.Schmidt 2006	long-horned beetle ( <i>Monochamus galloprovincialis</i> )	item no.	item	price (in €)		WS
				excl. VAT	incl. VAT	
		322621	Gallopro Pinowit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
			5 to 95 pcs.			
six-spined engraver beetle ( <i>Ips sexdentatus</i> )		Field tests in Portual and Spain have shown that catch rates for <i>Monochamus galloprovincialis</i> were extremely high and, in addition, catch rates for <i>Ips sexdentatus</i> , <i>Orthotomicus erosus</i> und <i>Hylurgus ligniperda</i> were very high. <b>This is why the Gallopro Pinowit pheromone is excellently suited for forest protection.</b>				
Mediterranean pine engraver beetle ( <i>Orthotomicus erosus</i> )						
red-haired pine bark beetle ( <i>Hylurgus ligniperda</i> )						


## LARCH INSECTS

insect	name	pheromone		trap	
 © U.Schmidt 2006	<b>larch bark beetle</b> ( <i>Ips cembrae</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	
 © BFW-Forstschutz	<b>larch casebearer</b> ( <i>Coleophora laricella</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
				per piece	
				from 100 pcs.	
				5 to 95 pcs.	


## INSECTS ON SPRUCE, LARCH, PINE, DOUGLAS FIR AND FIR

insect	name	pheromone				trap
 <small>© U.Schmidt 2006</small>	large pine weevil ( <i>Hylobius abietis</i> )	item no.	item	price (in €)		Pine Weevil catching tubet (see p. 66)
		322811	HyloWit® – Duration of action: 6-8 weeks	excl. VAT	incl. VAT	
				per piece		
		from 100 pcs.				
		5 to 95 pcs.				





## ORNAMENTAL PLANT (BOXWOOD, RED CEDAR, ETC.) INSECTS

insect	name	pheromone				trap
 © unpict - Fotolia.com	<b>box tree moth</b> <i>(Cydalima perspectalis)</i>	item no.	item	price (in €)		<b>DS</b>  <b>Complete set</b> <i>(see p. 159)</i>
		362051	<b>Cydawit</b> (pack of 5 pcs.)	excl. VAT	incl. VAT	
			from 100 pcs.			
			5 to 95 pcs.			



## BEECH INSECTS

insect	name	pheromone				trap
 © U.Schmidt 2006	<b>European hardwood ambrosia beetle</b> <i>(Trypodendron domesticum)</i>  <b>combined pheromone for Trypodendron species</b>	item no.	item	price (in €)		<b>MW WT WS</b>
		323821	<b>Lineatin Kombi</b> (pack of 5 pcs.) from 100 pcs. 5 to 95 pcs.	excl. VAT	incl. VAT	
				per piece		
<b>"species specific pheromone Domowit-Trypovit D upon request"</b>						



## OAK INSECTS

insect	name	pheromone			trap	
 © U.Schmidt 2006	oak pinhole borer ( <i>Platypus cylindrus</i> )	item no.	item	price (in €)		MW WT WS
				excl. VAT	incl. VAT	
		326611	Cilindriwit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
		5 to 95 pcs.				
 © U.Schmidt 2006	ambrosia beetle ( <i>Trypodendron signatum</i> )  combined pheromone for Trypodendron species	item no.	item	price (in €)		MW WT WS
				excl. VAT	incl. VAT	
		323821	Lineatin Kombi (pack of 5 pcs.)	per piece		
			from 100 pcs.			
			5 to 95 pcs.			
"species specific pheromone Domowit-Trypovit D upon request"						
 © BFW-Forstschutz	gipsy moth ( <i>Lymantria dispar</i> )	item no.	item	price (in €)		FL
				excl. VAT	incl. VAT	
		324011	Lymowit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
5 to 95 pcs.						
 © BFW-Forstschutz	winter moth ( <i>Operophtera brumata</i> )	item no.	item	price (in €)		FL DS KF
				excl. VAT	incl. VAT	
		361411	Operowit (pack of 5 pcs.)	per piece		
			from 100 pcs.			
5 to 95 pcs.						




## OAK INSECTS (continued)

insect	name	pheromone		trap	
		item no.	item	price (in €)	
				excl. VAT	incl. VAT
 © BFW-Forstschutz	<b>oak processionary moth</b> ( <i>Thaumetopoea processionea</i> )	325011	<b>Thaumato wit</b> (pack of 2 pcs.)	per piece	
			from 100 pcs.		
			2 to 98 pcs.		
 © BFW-Forstschutz	<b>green oak tortrix</b> ( <i>Tortrix viridana</i> )	325411	<b>Tortowit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		









## CHESTNUT INSECTS

insect	name	pheromone		trap	
		item no.	item	price (in €)	
				excl. VAT	incl. VAT
 © BFW-Forstschutz	<b>chestnut leaf miner moth</b> ( <i>Cameraria ohridella</i> )	360811	<b>CamerariaWit®</b> (see p. 168)	per piece	
			from 50 pcs.		
			1 to 49 pcs.		
		361211	<b>WitaTrap® Chestnut Leaf Miner Moth Complete Set</b> (see p. 166)	per set	
			from 10 sets		
			1 to 9 sets		
	<b>Chestnut Leaf Miner Moth Trap Sheet Set</b> Complete set package includes: 6 trap sheets, 6 pheromones (Camerariawit), 1 can Soveurode Spray Glue 1 stapler incl. brackets	315141	<b>Chestnut Leaf Miner Moth Trap Sheet Set</b> (see p. 167)	per set	
			from 10 sets		
			1 to 9 sets		



## VINE INSECTS

insect	name	pheromone		trap	
		item no.	item	price (in €)	
				excl. VAT	incl. VAT
 <b>BEST PRICE PRODUCT</b>	<b>European grape berry moth</b> ( <i>Eupoecilia ambiguella</i> )	330411	<b>Eupoewit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
 <b>BEST PRICE PRODUCT</b>	<b>European grapevine moth</b> ( <i>Lobesia botrana</i> )	331011	<b>Lobewit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
 © hlasek	<b>cork moth</b> ( <i>Nemapogon cloacella</i> )	331211	<b>Nemapowit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		


# ORCHARD INSECTS

insect	name	pheromone		trap	
	<div><div>BEST PRICE PRODUCT</div><div><b>codling moth</b> <i>(Cydia pomonella, Laspeyresia)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS  Complete Set <i>(see p. 163)</i>
		342211	Pomowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
	<div><div>BEST PRICE PRODUCT</div><div><b>peach twig borer</b> <i>(Anarsia lineatella)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS
		340611	Anarowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
	<div><div>BEST PRICE PRODUCT</div><div><b>cherry bark tortrix</b> <i>(Enarmonia formosana)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS
		341011	Enarowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
	<div><div>BEST PRICE PRODUCT</div><div><b>plum fruit moth</b> <i>(Grapholita funebrana)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS  Complete Set <i>(see p. 163)</i>
		341211	Grapowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
	<div><div>BEST PRICE PRODUCT</div><div><b>oriental fruit moth</b> <i>(Grapholita molesta)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS
		341411	Molestawit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
 © BFW-Fortschutz	<div><div>BEST PRICE PRODUCT</div><div><b>winter moth</b> <i>(Operophtera brumata)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	FL DS KF
		361411	Operowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
 © entomart	<div><div>BEST PRICE PRODUCT</div><div><b>cherry fruit fly</b> <i>(Rhagoletis cerasi)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS  complete Set <i>(see p. 163)</i>
		340761	Cerasiowit pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
	<div><div>BEST PRICE PRODUCT</div><div><b>walnut husk fly</b> <i>(Rhagoletis completa)</i></div></div>	item no.	item	<div>price (in €)</div> <div>excl. VATincl. VAT</div>	KF DS  Complete Set <i>(see p. 163)</i>
		340711	Completaowit (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		


## CORN INSECTS

insect	name	pheromone		trap	
	<b>Western corn root worm</b> ( <i>Diabrotica virgifera</i> ) 	item no.	item	price (in €)	
				excl. VAT	incl. VAT
		350811	<b>Virgiwit – attracts only the males</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		
		351011	<b>Virgiwit Plus – attracts males and females</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		

## FOOD INSECTS

insect	name	pheromone		trap	
 <small>© unpict - Fotolia.com</small>	<b>combined pheromone</b>  <b>food moths – flour moth</b> ( <i>Ephestia kuehniella</i> ) <b>Indianmeal moth</b> ( <i>Plodia interpunctella</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
		370811	<b>Ephestowit</b> (pack of 5 pcs.)	per piece	
			from 100 pcs.		
			5 to 95 pcs.		


## WOOD INSECTS

insect	name	pheromone		trap	
 <small>© U.Schmidt 2006</small>	<b>old house borer</b> ( <i>Hylotrupes bajulus</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
		380411	<b>Bajuluwit – attracts the females</b>	per piece	
			from 100 pcs.		
			1 to 99 pcs.		

You can find a detailed description of Bajuluwit on page 169 or on our website.



## QUARANTINE PESTS

insect	name	pheromone		trap	
	<b>Asian long-horned beetle</b> ( <i>Anoplophora glabripennis</i> )	item no.	item	price (in €)	
				excl. VAT	incl. VAT
		361511	<b>Glabriwit Pro</b> – effective: 60 days (shipping unit: 1 pack = 2 units à 3 ampoules)	per pack	
			from 1 pack		

**This is only a selection of our pheromone products.**  
**Please contact us if you need other pheromones than the ones listed in our catalogue.**

**PESTS LISTED IN ALPHABETICAL ORDER ACCORDING TO ENGLISH COMMON NAME**

English common name	scientific name	plant	pheromone	page
ambrosia beetle	Trypodendron signatum	oak	Lineatin Kombi	79
apple clearwing moth	Synanthedon myopaeformis	apple	Myopaewit	on order
asian long-horned beetle	Anoplophora glabripennis	broadleaf	Glabriwit Pro	82
barred fruit tree tortrix moth	Pandemis cerasana, P. ribeana	apple	Ribowit	on order
box tree moth	Cydalima perspectalis	boxwod	Cydawit	79
brown marmorated stink bug	Halyomorpha halys	polyphage type	Halyowit Dispenser	on order
cherry bark tortrix	Enarmonia formosana	cherry	Enarowit	81
cherry fruit fly	Rhagoletis cerasi	cherry	Cerasiowit	81
chestnut leaf miner moth	Cameraria ohridella	chestnut	Camerariawit	80
codling moth	Cydia pomonella (Laspeyresia)	apple	Pomowit	81
cork moth	Nemapogon cloacella	vine	Nemapowit	80
cotton moth, cotton bollworm	Heliothis armigera	vegetable and fruit	Heliowit	on order
currant clearwing moth	Synanthedon tipuliformis	fruit	Tipuliwit	on order
cypress bark beetle (juniper bark beetle)	Phloeosinus aubei	red cedar, juniper	Aubeiowit Plus	on order
eight-toothed spruce bark beetle	Ips amitinus	spruce	Amitinuswit	76
engraver beetle	Ips acuminatus	pine	Acuwit®	78
European grape berry moth	Eupoecilia ambiguella	vine	Eupoewit	80
European grapevine moth	Lobesia botrana	vine	Lobewit	80
European hardwood ambrosia beetle	Trypodendron domesticum	beech	Lineatin Kombi	79
European spruce bark beetle (eigh-spined engraver beetle)	Ips typographus	spruce	Ipsowit® Standard, Ipsowit FJ Pheroprax®, KombiWit® Tube	72, 75, 77
eye-spotted bud moth	Spilonota ocellana	apple	Spilowit	on order
food moths (flour moth & Indianmeal moth)	Ephestia kuehniella (Anagasta k.) and Plodia interpunctella	food	Ephestowit	82
forest cockchafer, common cockchafer	Melolontha hippocastani, M. melolontha	oak	Melowit	on order
gipsy moth (and nun moth)	Lymantria dispar	oak	Lymowit	79
goat moth	Cossus cossus	willow	Cossuwit	on order
green oak tortrix	Tortrix viridana	oak	Tortowit	80
larch bark beetle	Ips cembrae	larch	Cembräwit	78
larch bud moth (and pine shoot moth)	Zeiraphera diniana	larch	Rhyowit	on order
larch casebearer	Coleophora laricella	larch	Colowit	78
leopard moth	Zeuzera pyrina	fruit	Zeuzerowit	on order
long-horned beetle (and others)	Monochamus galloprovincialis (and others)	pine	Gallopro Pinowit	78
Mediterranean pine engraver beetle	Orthotomicus erosus	pine	Erosowit® Tube, Gallopro Pinowit	78
northern bark beetle	Ips duplicatus	spruce	Dupliwit	76
nun moth (and gipsy moth)	Lymantria monacha (L. dispar)	spruce	Lymowit	77
oak pinhole borer	Platypus cylindrus	oak	Cilindriwit	79
oak processionary moth	Thaumetopea prozessionea	oak	Thaumato wit	80
old house borer	Hylotrupes bajulus	wood	Bajuluwit	82
oriental fruit moth	Grapholita molesta	peach	Molestawit	81
pea moth	Cydia nigricana	pea	Nigriwit	on order
peach twig borer	Anarsia lineatella	peach	Anarowit	82
pine beauty moth	Panolis flammea	pine	Panowit	on order
pine sawfly	Diprion pini	pine	Dipowit	on order
(common and lesser) pine shoot beetle	Tomicus piniperda, T. minor	pine	Tomowit	78
pine shoot moth (and larch bud moth)	Rhyacionella buoliana	pine, larch	Rhyowit	on order
plum fruit moth	Grapholita funebrana	plum	Grapowit	81
red palm weevil	Rhynchophorus ferrugineus	palm	Ferrowit	on order
red-haired pine bark beetle	Hylurgus ligniperda	pine	Ligni wit Tube, Gallopro Pinowit	78
silver fir bark beetle	Pityokteines curvidens	fir	Curviwit®	77
six-spined engraver beetle	Ips sexdentatus	pine	Sexowit®, Gallopro Pinowit	78
six-toothed spruce bark beetle	Pityogenes chalcographus	spruce	Chalcowit®, Chalcoprax® Ampoule, KombiWit® Tube	73, 75, 78
striped ambrosia beetle	Trypodendron lineatum	spruce	Trypowit, Lineatin Kombi	77
summer fruit tortrix moth or apple brown tortrix	Adoxophyes orana	apple	Adoxowit	on order
walnut husk fly	Rhagoletis completa	walnut family	Completawit	81
western corn root worm	Diabrotica virgifera	corn	Virgiwit, Virgiwit Plus	82
winter moth	Operophtera brumata	oak	Operowit	81

# PESTS LISTED IN ALPHABETICAL ORDER ACCORDING TO SCIENTIFIC NAME

scientific name	English common name	plant	pheromone	page
<i>Adoxophyes orana</i>	summer fruit tortrix moth or apple brown tortrix	apple	Adoxowit	<i>on order</i>
<i>Anarsia lineatella</i>	peach twig borer	peach	Anarowit	81
<i>Anoplophora glabripennis</i>	asian long-horned beetle	broadleaf	Glabriwit Pro	82
<i>Cameraria ohridella</i>	chestnut leaf miner moth	chestnut	Camerariawit	80
<i>Coleophora laricella</i>	larch casebearer	larch	Colowit	78
<i>Cossus cossus</i>	goat moth	willow	Cossuwit	<i>on order</i>
<i>Cydalima perspectalis</i>	box tree moth	boxwod	Cydawit	79
<i>Cydia nigricana</i>	pea moth	pea	Nigriwit	<i>on order</i>
<i>Cydia pomonella</i> (Laspeyresia)	codling moth	apple	Pomowit	81
<i>Diabrotica virgifera</i>	Western corn root worm	corn	Virgiwit, Virgiwit Plus	82
<i>Diprion pini</i>	pine sawfly	pine	Dipowit	<i>on order</i>
<i>Enarmonia formosana</i>	cherry bark tortrix	cherry	Enarowit	81
<i>Ephestia kuehniella</i> (Anagasta k.) and <i>Plodia interpunctella</i>	food moths (flour moth & Indianmeal moth)	food	Ephestowit	82
<i>Eupoecilia ambiguella</i>	European grape berry moth	vine	Eupoewit	80
<i>Grapholita funebrana</i>	plum fruit moth	plum	Grapowit	81
<i>Grapholita molesta</i>	oriental fruit moth	peach	Molestawit	81
<i>Halyomorpha halys</i>	brown marmorated stink bug	polyphage type	Halyowit Dispenser	<i>on order</i>
<i>Heliothis armigera</i>	cotton moth, cotton bollworm	vegetable and fruit	Heliowit	<i>on order</i>
<i>Hylotrupes bajulus</i>	old house borer	wood	Bajuluwit	82
<i>Hylurgus ligniperda</i>	red-haired pine bark beetle	pine	Ligniwit Tube	78
<i>Ips acuminatus</i>	engraver beetle	pine	Acuwit®	78
<i>Ips amitinus</i>	eight-toothed spruce bark beetle	spruce	Amitinuswit	76
<i>Ips cembrae</i>	larch bark beetle	larch	Cembrāwit	78
<i>Ips duplicatus</i>	northern bark beetle	spruce	Dupliwit	76
<i>Ips sexdentatus</i>	six-spined engraver beetle	pine	Sexowit®, Gallopro Pinowit	78
<i>Ips typographus</i>	European spruce bark beetle (eighth-spined engraver beetle)	spruce	Ipsowit® Standard, Pheroprax®, KombiWit® Tube	72, 75, 77
<i>Lobesia botrana</i>	European grapevine moth	vine	Lobewit	80
<i>Lymantria dispar</i>	gipsy moth (and nun moth)	oak	Lymowit	79
<i>Lymantria monacha</i> (L. dispar)	nun moth (and gipsy moth)	spruce	Lymowit	77
<i>Melolontha hippocastani</i> , <i>M. melolontha</i>	forest cockchafer, common cockchafer	oak	Melowit	<i>on order</i>
<i>Monochamus galloprovincialis</i> (and others)	long-horned beetle (and others)	pine	Gallopro Pinowit	78
<i>Nemapogon cloacella</i>	cork moth	vine	Nemapowit	80
<i>Operophtera brumata</i>	winter moth	oak	Operowit	81
<i>Orthotomicus erosus</i>	Mediterranean pine engraver beetle	pine	Erosowit Tube, Gallopro Pinowit	78
<i>Pandemis cerasana</i> , <i>P. ribeana</i>	barred fruit tree tortrix moth	apple	Ribowit	<i>on order</i>
<i>Panolis flammea</i>	pine beauty moth	pine	Panowit	<i>on order</i>
<i>Phloeosinus aubei</i>	cypress bark beetle (juniper bark beetle)	red cedar, juniper	Aubeiowit Plus	<i>on order</i>
<i>Pityogenes chalcographus</i>	six-toothed spruce bark beetle	spruce	Chalcowit®, Chalcoprax® Ampoule, KombiWit® Tube	73, 75, 78
<i>Pityokteines curvidens</i>	silver fir bark beetle	fir	Curviwit®	77
<i>Platypus cylindrus</i>	oak pinhole borer	oak	Cilindriwit	79
<i>Rhagoletis cerasi</i>	cherry fruit fly	cherry	Cerasiowit	81
<i>Rhagoletis completa</i>	walnut husk fly	walnut family	Completawit	81
<i>Rhyacionella buoliana</i>	pine shoot moth (and larch bud moth)	pine, larch	Rhyowit	<i>on order</i>
<i>Rhynchophorus ferrugineus</i>	red palm weevil	palm	Ferrowit	<i>on order</i>
<i>Spilonota ocellana</i>	eye-spotted bud moth	apple	Spilowit	<i>on order</i>
<i>Synanthedon myopaeformis</i>	apple clearwing moth	apple	Myopaewit	<i>on order</i>
<i>Synanthedon tipuliformis</i>	currant clearwing moth	fruit	Tipuliwit	<i>on order</i>
<i>Thaumetopea prozessionea</i>	oak processionary moth	oak	Thaumatawit	80
<i>Tomicus piniperda</i> , <i>T. minor</i>	(common and lesser) pine shoot beetle	pine	Tomowit	78
<i>Tortrix viridana</i>	green oak tortrix	oak	Tortowit	80
<i>Trypodendron domesticum</i>	European hardwood ambrosia beetle	beech	Lineatin Kombi	79
<i>Trypodendron lineatum</i>	striped ambrosia beetle	spruce	Trypowit, Lineatin Kombi	77
<i>Trypodendron signatum</i>	ambrosia beetle	oak	Lineatin Kombi	79
<i>Zeiraphera diniana</i>	larch bud moth (and pine shoot moth)	larch	Rhyowit	<i>on order</i>
<i>Zeuzera pyrina</i>	leopard moth	fruit	Zeuzerowit	<i>on order</i>

# PESTS LISTED IN ALPHABETICAL ORDER ACCORDING TO PLANTS

plant	English common name	scientific name	pheromone	page
apple	apple clearwing moth	Synanthedon myopaeformis	Myopaewit	on order
apple	barred fruit tree tortrix moth	Pandemis cerasana, P. ribeana	Ribowit	on order
apple	codling moth	Cydia pomonella (Laspeyresia)	Pomowit	81
apple	eye-spotted bud moth	Spilonota ocellana	Spilowit	on order
apple	summer fruit tortrix moth or apple brown tortrix	Adoxophyes orana	Adoxowit	on order
beech	European hardwood ambrosia beetle	Trypodendron domesticum	Lineatin Kombi	79
boxwood	box tree moth	Cydalima perspectalis	Cydawit	79
broadleaf	asian long-horned beetle	Anoplophora glabripennis	Glabriwit Pro	82
cherry	cherry bark tortrix	Enarmonia formosana	Enarowit	81
cherry	cherry fruit fly	Rhagoletis cerasi	Cerasiowit	81
chestnut	chestnut leaf miner moth	Cameraria ohridella	Camerariawit	80
corn	Western corn root worm	Diabrotica virgifera	Virgiwit, Virgiwit Plus	82
fir	silver fir bark beetle	Pityokteines curvidens	Curviwit®	77
food	food moths (flour moth & Indianmeal moth)	Ephestia kuehniella (Anagasta k.) and Plodia interpunctella	Ephestowit	82
fruit	currant clearwing moth	Synanthedon tipuliformis	Tipuliwit	on order
fruit	leopard moth	Zeuzera pyrina	Zeuzerowit	on order
larch	larch bark beetle	Ips cembrae	Cembräwit	78
larch	larch bud moth (and pine shoot moth)	Zeiraphera diniana	Rhyowit	on order
larch	larch casebearer	Coleophora laricella	Colowit	78
oak	ambrosia beetle	Trypodendron signatum	Lineatin Kombi	79
oak	forest cockchafer, common cockchafer	Melolontha hippocastani, M. melolontha	Melowit	on order
oak	gipsy moth (and nun moth)	Lymantria dispar (and L. monacha)	Lymowit	79
oak	green oak tortrix	Tortrix viridana	Tortowit	80
oak	oak pinhole borer	Platypus cylindrus	Cilindriwit	79
oak	oak processionary moth	Thaumetopea prozessionea	Thaumatawit	80
oak	winter moth	Operophtera brumata	Operowit	81
palm	red palm weevil	Rhynchophorus ferrugineus	Ferrowit	on order
pea	pea moth	Cydia nigricana	Nigriwit	on order
peach	oriental fruit moth	Grapholita molesta	Molestawit	81
peach	peach twig borer	Anarsia lineatella	Anarowit	81
pine	(common and lesser) pine shoot beetle	Tomicus piniperda, T. minor	Tomowit	78
pine	engraver beetle	Ips acuminatus	Acuwit®	78
pine	long-horned beetle (and others)	Monochamus galloprovincialis (and others)	Gallopro Pinowit	78
pine	Mediterranean pine engraver beetle	Orthotomicus erosus	Erosowit Tube	78
pine	pine beauty moth	Panolis flammea	Panowit	on order
pine	pine sawfly	Diprion pini	Dipowit	on order
pine	red-haired pine bark beetle	Hylurgus ligniperda	Ligniwit Tube®	78
pine	six-spined engraver beetle	Ips sexdentatus	Sexowit®, Gallopro Pinowit	78
pine, larch	pine shoot moth (and larch bud moth)	Rhyacionella buoliana	Rhyowit	on order
plum	plum fruit moth	Grapholita funebrana	Grapowit	81
polyphage type	brown marmorated stink bug	Halyomorpha halys	Halyowit Dispenser	on order
red cedar, juniper	cypress bark beetle (juniper bark beetle)	Phloeosinus aubei	Aubeiowit Plus	on order
spruce	eight-toothed spruce bark beetle	Ips amitinus	Amitinuswit	76
spruce	European spruce bark beetle (eighth-spined engraver beetle)	Ips typographus	Ipsowit® Standard, Ipsowit® FJ, Pheroprax®, KombiWit® Tube	72, 75, 77
spruce	northern bark beetle	Ips duplicatus	Dupliwit	76
spruce	nun moth (and gipsy moth)	Lymantria monacha (L. dispar)	Lymowit	77
spruce	six-toothed spruce bark beetle	Pityogenes chalcographus	Chalcowit®, Chalcoprax® Ampoule, KombiWit® Tube	73, 75, 78
spruce	striped ambrosia beetle	Trypodendron lineatum	Lineatin Kombi	77
vegetable and fruit	cotton moth, cotton bollworm	Heliothis armigera	Heliowit	on order
vine	cork moth	Nemapogon cloacella	Nemapowit	80
vine	European grape berry moth	Eupoecilia ambiguella	Eupoewit	80
vine	European grapevine moth	Lobesia botrana	Lobewit	80
walnut family	walnut husk fly	Rhagoletis completa	Completawit	81
willow	goat moth	Cossus cossus	Cossuwit	on order
wood	old house borer	Hylotrupes bajulus	Bajuluwit	82