

Weevil management

Strategies against the large pine weevil beetle for the success of your reforestation





HyloPro[®] **Pine Weevil Protection Collar**



Mechanical protection to prevent feeding damage by large brown pine weevil



(Hylobius abietis)

- purely mechanical effect
- easy to use and install to the plant
- stable closure
- Weevils can not climb up smooth surface.
- Bent collar keeps weevils off the plant.
- does NOT affect the plant growth
- Material: polyethylene or bioplastic (certified)
- Remove or dispose (or re-use) protection collar after 3-4 years.
- protection collar made of bioplastic can remain on plant - fully degrades leaving no residues.
- Colour: white/beige colour of the protection collar makes it easy to spot the plant when performing mowing work.



• Installation: Place HyloPro[®] Pine Weevil Protection Collar around the trunk of the plant before (pot plants) or after (bare-root plants) planting. Apply slight pressure to close the protection collar. Remove larger branches that prevent collar installation. Finally, push protection collar approx. 2 cm into the ground.









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. Only correctly designed traps guarantee the desired success in catching the weevil. The beetle is targeted and attracted by the tube pheromone. Using the entry lips, which are tapered inwards, it reaches the catching tube and can't get back out again.

- biological control of the large pine weevil (Hylobius abietis)
- 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

• Installation – 6–10 catching tubes per hectare: Dig a hole of 20 cm depth at your desired location.

Place the tube pheromone Hylowit[®] in the catching tube.

Place the trap with the openings facing downward so that the entries touch the soil.

Cover the edges of the trap with soil and smooth the ground.

item no.	product
312821	WitaTran® Weevil Catching Tube complete set - Catching Tube inclusteromone





Hylowit[®]



Attractant (pheromone) to attract pine weevil beetle (Hylobius abietis)

- Pheromone type: tube pheromone
- Duration of action: approx. 6–8 weeks* *(depending on weather conditions)



item no.		product
322811	HyloWit [®] – Duration of action: 6-8 weeks	

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.



Karate[®] Zeon Forest





Fast acting insecticide, effective at very low wash concentrations, against pine weevils and bark beetles *(except: Xylosandrus)*, free feeding moth caterpillars, plant lice and beetles feeding on leaves and needles (except cockchafer)

- use: to control insect pests in forestry, also suitable for use with trap wood piles
- active substance: lambda-cyhalothrin (pyrethroid)
- formulation: **encapsuled suspenion** When the water in the emulsion has evaporated, the micro-capsules burst and release the active substance.
- UV stable
- rain-proof one hour after becoming touch-dry
- treat infested plants thoroughly
- dipping treatment: do only dip shoot and root collar into wash, do not apply to roots
- Karate[®] Zeon is an immediately and strongly acting insecticide with a combined effect of contact and ingestion for the control of all mobile stages of the pest insect.

NEW: 500 ml bottle

Karate Zeon[®] Forest 1 I, Pfl. Reg. Nr.: 3061 Karate[®] Zeon Forest 500ml, Pfl. Reg. Nr.: 3061-901

item no.	product
512321	Karate Zeon [®] Forest (shipping unit: 1 bottle with 1 I)
512331	Karate [®] Zeon Forest (shipping unit: 1 bottle with 500 ml)

Application and concentration – Karate[®] Zeon

e u schmidt 2006	Pine weevil protection Concentration of wasch 0,5 % (= 5 ml Karate for 1 l wash)		
	Spray treatment	Dipping treatment	
wash per 1,000 plants	25 - 40 I	20 - 30 I	
Productivity of 1 Karate® Zeon	5,000 - 8,000 plants	6,700 - 10,000 plants	
Calculation for application rate for Karate® Zeon	Amount Karate [®] Zeon in litre = <u>Number of trees</u> 5,000 bzw. 8,000	Amount Karate [®] Zeon in litre = <u>Number of trees</u> 6,700 bzw. 10,000	

Use pesticides carefully. Before use read the label and product information. This description is designed to give you an overview on various products. Always read the label and product information before using any product. Please comply with the instructions they contain.

Battery-powered backpack sprayer

Battery-powered backpack sprayer 10 I / LI-ION







Spray Screen



Battery LI-ION



Charger LI-ION

Battery-powered backpack sprayer for spreading pesticides, <u>10 litre capacity</u>



The battery-powered backpack sprayer is setting new standards. With a minimum weight of 2,780 grams, it weighs just as much as a manual backpack sprayer! The lithium-ion battery is easy to remove and insert. The ergonomic shape of the tank means it can be worn in a way that is comfortable for your back.

<u>Scope of delivery:</u> the backpack sprayer is fully-equipped with a battery, charger, fibreglass spray lance, aluminium spray lance, set of nozzles and a filter.

- Battery: 12 V 2.5 Ah
- Battery runtime: 3.5 hours
- Spray pressure: consistently 2.5 bar
- Spray length: 78 cm

item no.	product
290671	Battery-Powered Backpack Sprayer – 10 litre capacity
	1 pc.
290691	Spray Screen for Battery-Powered Backpack Sprayer
	1 pc.
290681	Battery LI-ION for Battery-Powered Backpack Sprayer
	1 pc.
290731	Charger LI-ION for Battery-Powered Backpack Sprayer
	1 pc.
298011	Brass Tong-type Nozzle – 415 mm x 215 mm
	1 pc.
297671	Adapter Brass Tong-type Nozzle for battery-powered backpack spayer
	1 pc.



Additional information: There is no battery warranty.

Bark beetle counting system a forestry management 4.0 development

S D TITITO SO SO OT Forestry management 4.0 is even progressing in the sphere of bark beetle monitoring. What is already standard practice in the sector of fully mechanical timber harvesting, was and is still at the cutting edge when it comes to forestry management. The innovative, creative and exciting project that had the aim of creating the bark beetle counting system had its origin in a concept that was first conceived in 2020.

The bark beetle counting system can be used in combination with the WitaPrall® cross-vane panel trap or the WitaTrap® multifunnel trap by Witasek. In the case of the WitaTrap® cross-vane panel trap, the counting system is mounted between the adapter and the universal capture container.

As is customary, a pheromone (from a dispenser or ampoule) within the trap is used to attract the beetles. When they follow the pheromone scent trail they land directly in the trap and then collide against the panels or the segments of the multifunnel, causing them to fall into the capture container. At this point, it would normally be necessary to count the beetles by hand and it would also not be possible to obtain real time information on when beetles were actually captured.

With the new and intelligent counting system, it is possible to automatically obtain data on the numbers of bark beetles caught at any particular point in time. A sensor rod with photoresistors inserted in the capture container is able to detect the volume of beetles present. Using the mobile phone network, the system sends the information to the Cloud, from where it can be downloaded using an app or computer. This means that any necessary measures can be initiated as soon as possible.

The approximate number of beetles can be determined on the basis of the recorded volumes:

- 1 ml spruce bark beetles (lps typographus) is roughly equivalent to 40 beetles
- 1 ml striped ambrosia beetles (Trypodendron lineatum) is roughly equivalent to 130 beetles
- 1 ml six-toothed spruce bark beetles (Pityogenes chalcographus) is roughly equivalent to 600 beetles

The counter system is also equipped with a GPS sensor so that users can always see on a map where their traps are located. There is additionally a temperature sensor so that it can be determined at what mean temperatures the beetles tend to take flight. Sufficient power is provided by the integrated battery to ensure the system operates for a whole year.

The counter system can be used with both wet and dry traps. If a dry trap is used, it will be necessary to empty capture containers every week. If a wet trap is used, this will not be necessary, because the AntiSmell trap salt mixed with the water will prevent release of the hormones and other unwanted scents. However, even in this case containers should be emptied after 8 weeks at the latest or sooner if they are already full. As in the case of the use of a standard trap, such as the WitaTrap® slit trap, traps should be positioned at a suitable distance (12 - 15 m) from the edge of the forest and healthy trees.

Our system is ready to go into production but will first be subjected to a series of tests in 2023 so that we will be ready to market our Witasek bark beetle counting system in 2024, providing forestry managers with an innovative tool for protecting their woodland.







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