

BIOSECURITY MEASURES IN BEEKEEPING | INVASIVE VESPID MANAGEMENT

Innovations on *Vespa velutina*

Innovative technologies to manage hornet predation pressure

Electric harps reduce hornet predation pressure significantly. Also Koldo-Belasko traps could have a positive impact on lowering hornet predation pressure.



step 1

The only innovative technology for which a reduction in predation pressure from hornets has been scientifically proven is, for the time being, the electric harp.

One harp for every two or three hives is sufficient.

You can position them perpendicular to the entrance of two adjacent hives.

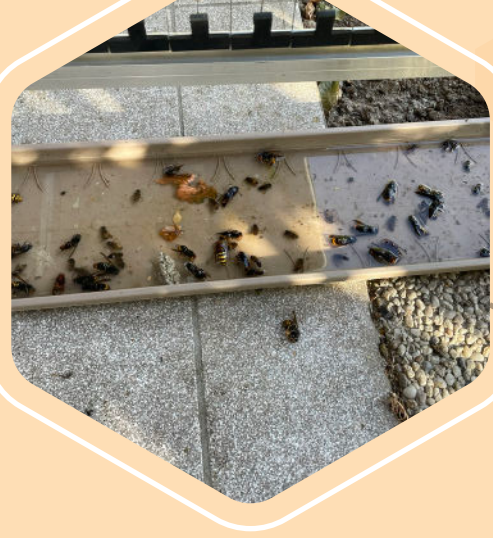
Note that these harps require a power supply.



step 2

An electric harp consists of a frame with vertical parallel metal wires that are alternately positively and negatively charged.

The wires are spaced at such a distance ($18 \text{ mm} \pm 1.5 \text{ mm}$) that hornets would normally be unable to fly through without touching two wires.



step 3

As the electrocuted insects are often only temporarily paralysed without dying, a small basin of water is usually placed beneath the harp to drown them.



step 4

As bees can also drown in this, a better method is to attach a cage to the underside of the harp into which electrocuted insects fall, but from which smaller insects can still escape through a mesh size of 6 to 8 mm.



step 5

Another innovative way of reducing the predation pressure from Asian hornets is to set up so-called Koldo-Belasko traps.

However, no studies have yet been published in the international literature to prove that they significantly reduce predation pressure.



step 6

The idea is to install a large metal mesh tube with 8mm mesh size in front of the hive entrances.

The hornets can fly in through slits at the bottom of the front side of those tubes but cannot get out again, as they usually try to escape via the top.



step 7

On either side of the tube there is a chimney with 6mm mesh size.

At the top there are funnels through which the hornets fly and end up in a collection compartment.

They cannot escape from there.



Our Consortium

