

Ultrasound deterrents devices test for Ungulates in Umbria

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Introduction

As a result of repeated reports of damage to high-income crops, OFR provided to purchase and install some ultrasound deterrents made by Natech at two farms of the Alto Tevere Umbro. These devices are battery operated, with continuous output within 24 hours and require periodic battery replacement and recharging.

This report presents the indications emerging after the first months of such devices use for the protection of cultivated fields from wild boar and above all roe deer.

Methods

These devices were used on crops already in the field, during ripening and harvesting, in areas with a high density of roe deer and wild boar.

In order to verify the frequentation of the crops by the wildlife, interviews to the farmers were carried out and the indicators of presence in the field and in a photo-trapping case were detected.

The damage trend was monitored through periodic inspections and calculations also in a test area.

Results

The first devices installation was carried out on 29 December 2017 and involved three different plots at the same time, two of which cultivated with "radicchio" (*Cichorium intybus*, 3 Orti 1 e 3 Orti 2) and one with "fave" (*Vicia faba*, Nimbi).

The devices have been active: in 3 Orti 2 for a month, ensuring the whole plot harvest without registering any damage caused by roe deer; in 3 Orti 1 at least until March 3, when an intense phase of bad weather closed the harvest in advance. In the last month an increase in the damage of only 7 plants out of 245 in the area test has been noticed (the plants consumed were lined up along a single roe deer that had crossed the whole plot). The survey of the presence indicators and the interviews to the farm owners led to confirm the disappearance of roe deer and wild boar.

At Nimbi's a series of early nibblings concentrated in a restricted area has been detected, however almost all the ungulates tracks are found only around the plot.

Discussion

Where the maintenance and control of the equipment was daily, there were no interruptions of the protection, ensuring a complete harvest.

At Nimbi's there have been some interruptions during the batteries replacement, but to evaluate the real damages level it is necessary to wait for the harvest (by the middle of May).

At the moment Natech is producing new generation devices with a solar panel for power supply and passive

infrared sensors (PIR) for activation that make them much more versatile and practical in the field.

Their development and diffusion, if supported by economic measures such as "Piano di Sviluppo Rurale" and adequate Ungulates removal plans will allow a new phase of relationship between farmers, hunters and conservationists.