



Anwendungsbericht/User Application Report

Produkt/Product:

penergetic b WV
Art. Nr. 3152

Fachberater/Consultant:

Leu & Gyga
Switzerland

Anwender/User:

Leu & Gyga
Switzerland

Leibstadt, canton Aargau, Switzerland

Datum/Date:

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Summary of a trial on wildlife deterrence in 5325 Leibstadt, AG

A large-area field trial was set up in order to clarify if penergetic b WV can deter game from entering crop fields without putting in place a physical infrastructure (electric fences etc.).

Another objective was to gain experience with spray application of the product (blocked jets, mixing with crop protectants, phytotoxicity on crop plants).

Trial venue

The trial area was sought out by our field staff, who are in regular contact with farmers through their daily work and thus were in the position to identify an area that is at a high risk from game populations, in particular wild boar. They also knew which farmer would be prepared to make their fields available for this test and prepared to carry out some extra work involved in the trial. The trial venue was found near Leibstadt, in the canton of Aargau, or, more precisely in Leibstadt-Möösli / Chrüzacher / Schanz, with Möösli in the west, Ryacher in the east, Obere Schanz in the north and Holzschwerzi in the south. The trial area is flat and is divided by a railway line running through it from east to west, which is, however, not protected by a fence, runs at ground level and thus does not pose an obstacle for game. The highest point is in the

western part of the trial field and around 1 meter higher than the lowest point of the area. The farmers knew from experience that the wild boar always move in a north-south direction, crossing the railway line.

Test layout

The entire trial area is 17,22 ha (1 are = 100 m²) in size. It was sub-divided into 8 units (cultivation fields), which equates to the usual field size for that farm. At the time of the trial, wheat, rapeseed, sugar beet, barley and corn were grown on the fields. Details on fields and crops can be found in the trial documents.

Application of trial agent

The trial agent *penergetic b WV* was mixed with the usual crop protectant for the last-possible application.

- Plots **(1)** wheat, **(5)** sugar beet, **(6)** barley, **(7)** rapeseed, **(8)** corn were used as control plots. Plots **(2)** wheat, **(3)** rapeseed, **(4)** corn were application plots.
- Plot **(2)** wheat, with 17937.17 m², was treated on May 24th, 2019 with 1.25 l/ha of ***Absolut*** and 0.6 kg/ha of ***penergetic b WV*** (2nd fungicide application).
- Plot **(3)** rapeseed, with 22705.23 m², was treated on April 6th, 2019 with 0.5 kg/ha of ***Cantus*** and 0.6 kg/ha of ***penergetic b WV*** (prebloom application).
- Plot **(4)** corn 24494.08 m² was treated on May 31st, 2019 with 1.4 l/ha of ***Frontier X2***, 0.75 l/ha of ***Dasul Extra***, 0.07 kg/ha of ***Biathlon***, and 0.6 kg/ha of ***penergetic b WV*** (herbicide application).

Analysis of results

a visual inspection was carried out, the entire area was walked along and observed to identify possible changes in the soil.



Results

June 25th, 2019: minor damage from wild boar in the sugar beet. A trail (10) was visible, starting in the corn plot (8), leading to the sugar beet plot (5). Approximately 5 m² were damaged by rummaging wild boar (11). From this point the trail (10) leads in a sweeping wave form approximately 30 m into the corn field (4) and then back into the sugar beet plot (5).

On July 31st, 2019, the threshed rapeseed field (3) was checked for potential wild boar damage that had not been visible initially due to the crop size. During the inspection a few running meters of the rapeseed rows were destroyed by the wild boar on the east side of the plot (9), which would not have led to any yield losses whatsoever.

The trial was concluded on July 31st, 2019.

Conclusion

The following conclusions can be drawn from the trial, taking into account the findings by the farmer who was involved in the trial and is familiar with the wild boar plague in the area: An effect could be attributed to the product penergetic b WV. The wild boar moving from the sugar beet plot to the corn plot immediately turned back towards the sugar beet. However, at the time of the trial, very few wild boar were in the general area.

The results for the individual plots would be better if it was possible to carry out a second or further application and there was little precipitation.

One application is clearly not sufficient for corn, although applying the product a second time when the crop plants have reached a height of 2 m would present some problems. A gun and field sprayer are not suitable since they reach only around 10 m into the field, at a height of 1 m above ground, and driving around a complete corn plot is rarely an option either. This only leaves application from above, by drone, as an option.



