



 Dirk Hanken - family farm



Dirk Hanken **175 hectares** **animal management**

AGRIVOLTAICS – GRAZING UNDER SOLAR PANELS

The Hanken farm is a grass-based dairy farm with 220 dairy cows and young stock located in northern Germany. Dirk manages 160 ha permanent grassland on peat soil. In 2023, he installed two solar panels from the company Sun Farming as agrivoltaics on his pasture. The agrivoltaics are part of a scientific study about the interaction of the solar panels with animals and grazing management. The solar panels offer an added value to the farmers income and can be used as shelter for the animal. Solar panels are usually installed on extensively managed grassland and have often an impact on the sward. In the first year of the experiment, only the behaviour of the animals has been recorded so far. The farmer could not imagine installing a large-scale solar park on his farmland. He would prefer to install individual panels in each paddock, as they can also serve as shelter from heat and rainfall. Some observations on the Hanken farm, after one year of agrivoltaic panels on grassland:

Animals' behaviour:

- The cows do not pay attention to the panels.
- The module was only used as a shelter and weather protection when it was very warm and sunny.
- On rainy days it was sometimes used as shelter.

Management under the panel:

- The sward density and quality under the panel has not changed significantly.
- No mowing under the panel was needed.
- No fertilisers were needed.

Installation tips for solar panels on peat soil:

- When installing the panels, it is important to ensure distances to ditches and drainages to be able to mow, mulch or clean.
- The panel construction is anchored for 1.40 meters in the ground.

Farmer Interview

<https://www.youtube.com/watch?v=Ybru07GHeM4>



Photo credit: photos generated from farmer interview - Grünlandzentrum Niedersachsen/Bremen