



Sophie Alexander
Hemsworth Farm
Owner

Hemsworth Farm

Case study

Background

Hemsworth Farm, run by Sophie Alexander, is a 500-hectare organic farm in Dorset, combining arable and dairy farming with a strong focus on sustainability. Certified organic since 2014, the farm prioritises soil health, biodiversity, and regenerative practices. In 2020, Sophie introduced a herd of 300 Viking Red heifers as part of a broader effort to enhance ecological balance, improve soil fertility, and support the long-term resilience of the farming system.

Innovation story

Recognising the critical role of biodiversity in sustainable agriculture, Hemsworth Farm collaborated on Biodiversity Monitoring 24/7 Project funded by Innovate UK and Defra's Farming Innovation Programme in an early-stage investigation into how technology can be used to monitor biodiversity in agriculture. This project aimed to test and demonstrate the effectiveness of digital technology for remote wildlife monitoring in a farming context. Three separate remote sensing digital technologies were deployed to detect, identify, and quantify varieties of invertebrates and birds, correlating their presence to the flowering plants they rely on.

The project provided valuable insights into pollinator activity across different areas of the farm. The highest levels of pollinator activity were recorded in a flowering forage crop, which attracted 21.6% of the total insect activity. This was likely due to the crop's rich nectar supply, making it more attractive to pollinators than other areas such as permanent pastures and herbal grass mixes. The use of sensors allowed for continuous, real-time data collection, helping to build a clearer picture of where and when pollinators are most active. These findings highlight how digital monitoring technology can support biodiversity assessments and help farmers make informed decisions about land management to benefit both wildlife and food production.

“Collaboration is key to making this technology as useful as possible. By combining multiple monitoring techniques, we can make data-driven decisions that support biodiversity, improve farm resilience, and ensure a sustainable future for the next generation.”

Quote from Sophie Alexander



Collaboration and support

The project brought together several key partners:

- **AgriSound: Insect monitoring**
Specialising in remote insect technology and environmental sensors, AgriSound installed unique in-field sensor devices for automated insect monitoring.
- **Dorset Wildlife Trust: Baseline and validation**
Provided professional ecologists to conduct traditional biodiversity surveys, ensuring the validation and accuracy of the digital monitoring data.
- **Pollenize: Floral and insect surveys**
Used their app iNaturalist to photograph and geolocate plant species, contributing to a comprehensive understanding of the farm's flora and its relationship with fauna.
- **Chirrup AI: Birdsong analysis**
Monitored bird species thriving on the farm with remote acoustic sensors, offering insights into the diversity of insects and seeds, and the overall soil health.