

**Event title: Farm Net Zero Sheep Conference**

**Date of event: 20<sup>th</sup> August 2024**

**Host: Matt and Pip Smith ([Farm Net Zero Monitor Farmers](#))**

Sheep are commonplace on many Cornish farms, and it is important to consider methods of how sheep farms can improve their carbon footprints. To discuss these methods, Farm Net Zero held a sheep-specific meeting hosted by monitor farmers, Matt and Pip Smith, at Trefranck, St Clether. Matt and Pip run a 1000-ewe flock of NZ Romneys, breeding for resilience to parasitic worms as well as other sheep challenges. This event was made possible with thanks to the [National Lottery Community Fund](#) who fund the [Farm Net Zero project](#).

The meeting started with an overview of methods that sheep farmers can adopt to improve their carbon footprint. These range from allowing hedges to grow up (sequestering carbon in their biomass), to adopting rotational grazing (to improve grass quality and therefore reduce emissions-heavy fertiliser/bought-in feed) and improving livestock health (as healthier livestock are more productive and therefore lower a farm's emissions per kilo of product).

The group then split in two to hear talks on sheep health, particularly on parasitic worms as a major challenge to sheep farming. Tim Bebbington of Castle Veterinary Group introduced an overview of parasites and parasite management in sheep. This focused on prevention over cure, as parasitic worms are developing resistance to many of the anthelmintic medicines available to treat them. Sheep farmers should follow the Sustainable Control of Parasites in Sheep (SCOPS) principles and also use genetics (breeding from sheep that are resilient to parasites), avoidance (avoiding contaminated pastures through rotational grazing and integrating different livestock such as cattle, or growing different crops such as herbal leys), monitoring (through Faecal Egg Counts to see what type of parasite challenge the flock has) and effective treatment (ensuring that sheep are dosed appropriately and using egg counts to check the efficacy of the treatment). These measures can help to improve flock health, protect the effectiveness of anthelmintics and also improve the farm environment by increasing plant diversity and protecting dung beetle populations.

Matt Smith spoke about the Trefranck breeding principles, where they aim to raise sheep that are resilient to parasitic worms. Matt explained the difference between resistance and resilience as resistant animals using an immune response to kill off worms in their guts, whereas resilient animals can have a worm burden but also have an acceptable growth rate. Sheep at Trefranck are exposed to worms, with faecal egg counts combined with growth rate assessment to identify animals that are growing well with a worm burden. Any sheep that requires worming will leave the breeding programme. This approach aims to develop a sheep that requires less worming than others, therefore improving the health of the flock and avoiding economically and environmentally costly treatments.





After lunch, the meeting travelled out to fields that are part of the [Farm Net Zero Innovative Farmers Field Lab](#) on weaning lambs onto different crops. This trial is investigating the potential of different leys to improve lamb health and the ability to overcome parasitic worm burdens. There is some evidence to suggest that diet can influence worm burdens, either through providing a natural anthelmintic effect or by boosting lamb fitness and ability to cope with parasitic worms. Four seed mixes have been grown – forage rape, chicory/plantain/crimson clover, ryegrass/white clover and a herbal ley. Weaned lambs were weighed, faecal egg counted and put onto the trial mixes, which they graze rotationally. At the end of the trial grazing period, the lambs are weighed and faecal egg counted again. Growth rates and worm egg counts will be compared across the different seed mixes on each of the participating farms, as well as soil health assessments and a carbon footprint of each option. These results will be shared in due course. The aim of this trial is to discover if growing different leys can help to improve the environmental impact of sheep farming.

While in the field, the group discussed the use of herbal leys in sheep farming. Herbal leys are becoming popular due to their productive benefits for growing livestock, as well as their environmental benefits due to their diversity. There is more interest in these leys through the Sustainable Farming Incentive, therefore it is important to consider how best to utilise them. As ever with herbal leys, grazing management is vital – particularly with sheep, that nibble plants close to the growing point. Repeated overgrazing of the growing point will lead to some species dying out and the herbal ley losing diversity over time. To avoid this, it is best to graze them rotationally and often this can be achieved through subdivision with electric fencing. Appropriately managed herbal leys can help to reduce a farm's carbon footprint by reducing artificial fertiliser use, reducing bought-in feed and by improving soil health that can enhance soil carbon sequestration.

Overall, the Farm Net Zero Sheep Conference covered a variety of topics that can assist sheep farming in reaching net zero.

### Key takeaways:

- Managing sheep to reduce the need for parasite treatment is an environmentally sensible approach.
- Herbal leys can be a good option for growing lambs, provided they are managed appropriately
- Many of the practices that can help to reduce farm carbon footprints also improve business resilience

