



Inspiring change through innovative soil management and holistic grazing



Malcolm and Catherine Barrett,
Tregooden Farm, St Tudy, Cornwall

Date	January 2025
Location	St Tudy, Cornwall
Enterprise	Livestock and Arable
Size	121 hectares
Actions Taken	Holistic grazing, cover crops, minimum tillage, natural capital projects
Impact on Business	Better soils, simpler system, healthier livestock, more wildlife, excited about the future
Impact on Carbon Footprint	Reduction in emissions and significant amounts of carbon being sequestered in soils

Tags: maize, soil organic matter, sequestration, education, inspiring change, Farm Net Zero



Introduction to the farm

Tregooden Farm at St Tudy is one of the Duchy of Cornwall's Focus Farms and is managed by farmers Malcolm and Catherine Barrett, who took over the farm four years ago. The 300 acre farm has 43 acres set aside for Natural Capital projects. It also has a beef herd of 150, that includes buying in dairy cross calves, taking them through to be sold as stores.

The farm grows all its own forage; the only feed bought in is a blend for young stock (up to 10 months old). Older livestock are all outside all year, where they feed on pastures, cover crops and forage or fodder beet. This is an example of holistic grazing.

Malcolm and Catherine moved from an intensive dairy farm, so this was a big change but has been very positive for them. They have felt encouraged and helped by both Innovative Farmers and the [Farm Net Zero project](#) (of which Farm Carbon Toolkit is a major partner).

[Watch this video of Catherine](#) explaining about the farm and the changes they've made recently.

Actions

Grazing

The way the farm is grazed has changed substantially. They moved from more extensive grazing to putting all the animals together in one field for 2-4 days. The livestock would then move on to the next section, with about a 3 week break until the cattle are back to the same patch. Grass grows back strongly (usually) and there's no mess in the fields due to strong growth. The system works well for this farm.





The introduction of cover crops has also had a positive impact. The farm has 80 acres of a green manure that includes Westerwolds, rape, stubble turnips, black oats, crimson clover, winter vetch, beans. Designed by FCT's [Hannah Jones](#), it seems to be doing a good job of feeding both the soil and the cattle. She inspired the Barretts to go down this road.

Soil

Previously, a power harrow and plough were used for soil cultivations. Now, using discs and direct drill, they are working just the top two inches of the soil profile. As a result, the soil is getting easier to work every year. Malcolm recognised that *"We used to beat the living daylight out the soil - there's no need to do that now"*

Fertility management means less and less artificial fertiliser is being used and a shift towards foliar products is reducing the use of chemicals. Improving soil biology is how Malcolm wants to 'move on to the next rung of the ladder'.

Bought in green waste compost is applied at 4-5 tonnes/acre, used as an inoculant. The Barretts are also brewing compost teas too, helping to improve the soil biology of the fields. They plan to start making their own compost in the future.

Manure (from the young stock indoors) and other organic matter is applied fairly lightly, as a top dressing and not incorporated. In the first year they realised that all the organic matter had disappeared in 3-4 months, with the worms doing the work. You learn from insights!

Farming at Tregooden is now a diversified range of creatures! *"We're farming livestock both above ground and below"* says Malcolm.

Wildlife

The Natural Capital changes introduced with the Duchy include the creation of ponds and scrapes, 21 acres of flower-rich meadows, and scrub/woodland (a mix of species). The aim is to link one end of the farm to the other as wildlife corridors. Tree planting is on-going.





Impacts

Fertiliser

Use of artificial fertiliser has reduced by 60% across the farm over the last two to three years with Malcolm trying to apply only what the plant needs. He comments:

"We went quicker than we might have done, but it seems to have worked. No yield deficits are showing yet! I want to move to a point where we're not applying artificial fertiliser, relying on biological foliar feeds."

He is trying to apply only what the plant needs.



Carbon

Diesel use has fallen to just nine litres per acre to establish crops, which has generated a substantial carbon saving.

Fertilisers are a significant source of farm emissions. Their reduction in fertilisers has cut about 20 tonnes of CO₂e from their carbon footprint.

Soil Organic Matter (SOM) samples are taken every year for Duchy. Results show that SOM levels are increasing year on year, representing a substantial offset to the emissions from other farming operations. Pending results from more fields being tested, this offers the farm a clear pathway to net zero carbon and beyond.



Soil

The less the soil is disturbed, the better the soil – and we have seen that there has been an increase in worms and soil carbon. Furthermore it has made life so much easier with cultivations now.

Malcom said *“Our son is 20 and works for a local contractor. Last spring he asked – ‘why do they work the fields so much?’ It was a lightbulb moment!”*

Wildlife

There are lots of dung beetles and cow pats disappearing within 10 days!

Six species of butterfly have been identified on the farm, which is inspiring.

Bird surveys have taken place and shown an improvement in birdlife across the farm. They now have 10 yellowhammers (a red list species), which is an increase over recent years.





Social impacts



Because the farming system has changed it means Malcolm has more time to go contracting and earn money off the farm.

"A neighbour said 'we're all watching what you're doing!' People don't always ask, but they do look, and that means change will come over time."

They really enjoy showing people around and host lots of farm walks. Duchy of Cornwall, Farm Net Zero and Innovative Farmers all

hold events on the farm regularly. The passion they display for their farm and the changes they've made in farm management inspires others, and it gives them a real sense of achievement.

Malcolm said *"I'm excited about the future, we're working with soil and nature again."*

Looking to the future they have lots of ideas - an education centre, growing vegetables, engaging the community, looking more deeply at human health.

They want to inspire change in others - farmers, agronomists, community, researchers and more.

Tregooden is now an [agroecology demo farm](#), helping to train other farmers in the region to reduce their environmental impacts. *"Everything we do we adapt to what works for us; it's not a one size fits all"* reflects Malcolm.

Resources

Maize field lab:

<https://farmcarbontoolkit.org.uk/wp-content/uploads/2023/10/FNZ-FactSheet-maize-barley-at-Tregooden.pdf>

Video of the farm:

<https://www.youtube.com/watch?v=CR-2mdhngZE>



DUCHY of CORNWALL



Farm Net Zero news, featuring Tregooden Farm

<https://farmcarbontoolkit.org.uk/2022/11/03/farm-net-zero-autumn-update/>

Photo credits: Catherine and Malcolm Barrett