Horticulture

Roadmap to Net Zero

FARM NET ZERO

Soil 101:

- Soil Testing
- Measuring and Assessing Soil Carbon
- Earthworms
- The importance of managing soil pH
- Soil Compaction
- Joel Williams at Prideaux

Hedges:

- Hedgerows for carbon capture
- Hedges, a win-win

Compost:

- Optimised compost management for productivity and soil health: initial trial results
- Why Compost?
- Can composting kill weeds and save carbon?
- How to make a microbial brew for your compost
- The only compost recipe you need
- How composting can help nature and save you money

Cover Cropping:

- Cover crops
- Outwintering on forage/cover crops
- Grazed winter cover crops
- Trial: Overwinter grazing at Ennis Barton, Blable and Tregooden Farms

Minimising risk at field scale:

- Field Vegetables in Rotation – Best Practices for Soil Health

Illustrations by Alex Bebbington

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Horticultural emissions come mainly from fuel and inputs (artificial fertiliser and sprays). Over five years, the Farm Net Zero (FNZ) project has produced a range of resources to help understand methods to reduce emissions and increase sequestration. These resources are listed below and include factsheets from trials and reports from on-farm events, collated into practical on-farm actions.

Start with the soil:

- Soil Testing identifies the distribution of nutrients across a farm, allowing for targeted applications of fertilisers.
- Measuring and Assessing Soil Carbon creates an understanding of existing carbon stocks on farm. Increasing soil carbon content can offset emissions.
- Earthworms are an important part of a healthy farm ecosystem, cycling nutrients and aerating soil.
- The importance of managing soil pH is a vital part of reducing emissions from artificial fertiliser. Incorrect soil pH disrupts fertiliser efficiency, creating a waste of resources, money and emissions.
- Soil Compaction affects crop productivity and can require the use of excess fuel to remediate issues and fertiliser to boost productivity.
- Joel Williams at Prideaux provided a valuable insight into the process of soil carbon cycling and storage.

Grow hedges taller and thicker:

- Hedgerows for carbon capture are an important feature of the farmed landscape, as well as having major biodiversity benefits.
- "Hedges, a win-win" reports on an event held on a FNZ farm where they manage their hedgerows to increase biodiversity and carbon capture.

Make compost to feed the soil and store carbon:

- "Optimised compost management for productivity and soil health: initial trial results" covers the trial and results of the FNZ Compost Field Lab.
- "Why Compost?" describes how to get started in compost production.
- "Can composting kill weeds and save carbon?" is a useful video summarising the FNZ Field Lab on compost to control weeds.
- "How to make a microbial brew for your compost" details the creation of a liquid feed. With one of the FNZ monitor farmers.
- "The only compost recipe you need" covers the composting practices developed on two FNZ monitor farms through the Compost Field Lab.
- "How composting can help nature and save you money" allows the FNZ Field Lab triallists to explain the benefits of compost for their gardens.

Use cover crops to protect the soil:

- Cover crops protect soil from erosion and compaction between cash crops. The living roots can also help to maintain carbon inputs into the soil.
- Outwintering on forage/cover crops integrates livestock into arable. With appropriate management, this can boost soil nutrient cycling.
- Grazed winter cover crops can include a range of plant species. This factsheet details which species grew best on Cornish farms.
- "Trial: Overwinter grazing at Ennis Barton, Blable and Tregooden Farms" details the results of trialling cover crops for outwintering cattle and the effect on soil health on three FNZ farms.

Minimise erosion risk when growing at field scale:

- "Field Vegetables in Rotation – Best Practices for Soil Health" covers a FNZ event on how to avoid soil erosion and damage when growing field-scale vegetables. It also includes a summary of the integration of livestock into field vegetable production, as part of a circular approach to waste.