

How to optimise your compost management

Overview

Composting is a foundational practice in nature-friendly farming, crucial for growers of all types and scales. Yet, it can often feel overwhelming with its array of techniques, ingredients, and maintenance needs.

Emma Restorick is a grower at Prideaux Walled Garden and trialist in the Farm Net Zero field lab optimising compost management. One of her main focuses in the trial has been controlling bindweed, a challenge for horticulturists in perennial borders and no-dig systems.

Here, Emma shares her expert insights on improving compost quality through effective moisture management, the use of microbial supplements, and the importance of regular turning.

Controlling bindweed with compost

Bindweed is thought to thrive in compacted soils with low organic matter. Emma's Farm Net Zero trial investigated whether compost application could be a solution.

- Two types of soil strips were tested: one aerated with a broad fork, one not. The goal was to see if soil aeration combined with compost could improve soil health and control bindweed.
- Different microbial supplements were also tested to see their impact on bindweed, but they had little impact on bindweed presence.
- Early results suggest that compost and reducing compaction with broad forking can effectively control bindweed. High-quality compost and soil aeration significantly reduced bindweed infestation in just four months.
- Anthelmintic cover crops and land sheeting further reduced bindweed growth.

- Scan the QR code to find out more about Emma's trial



Emma's top tips for making great compost

1. Choosing compost ingredients: Emma believes in using a wide variety of materials for nutrient-rich compost. Her mix includes wood chips, leaves, coffee grounds (high in nitrogen), and leaf mould which creates a loamy texture. She's also exploring biochar from meat bones to boost soil carbon and water-holding capacity.



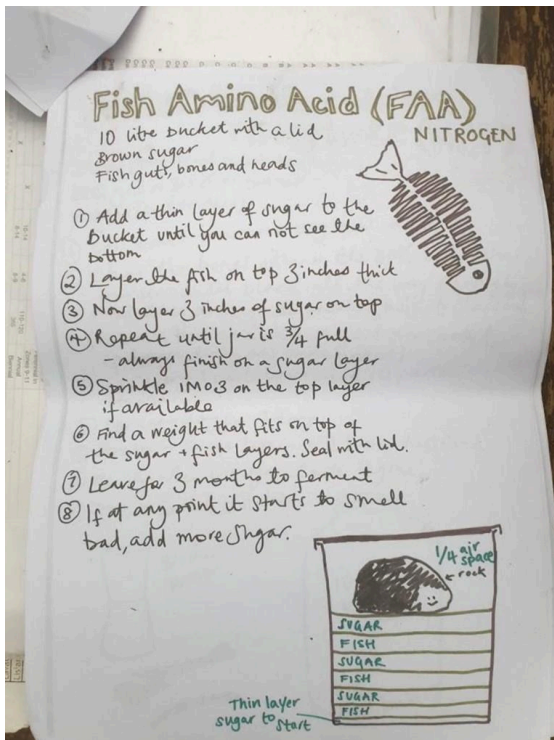
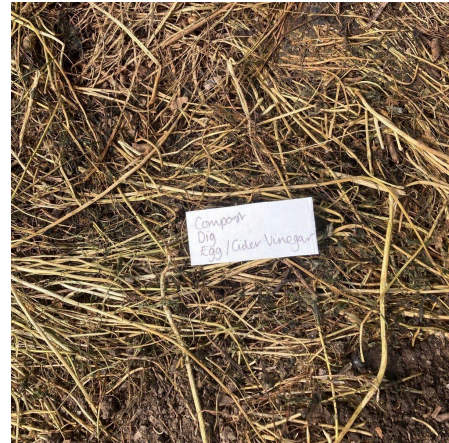
2. Maintaining the right moisture levels: To check the ideal moisture level in compost, squeeze it - if you get one drop of water, it's just right. Maintaining this moisture helps bacteria thrive. Dry composts like wood chips need more water, while nitrogen-rich composts (e.g., manure, food scraps, green leaves) need less. Aim for a

carbon-to-nitrogen ratio of 25-30 parts carbon to 1 part nitrogen.

3. How to turn your compost for the best results: Turning the compost heap is essential for maintaining aerobic conditions. Frequent turning helps regulate the temperature and ensures even decomposition. You can tell the compost heap needs turning when it starts to smell sulphuric, which is an indication that it's starting to go anaerobic.

4. Dealing with weed seeds and diseased material: Emma advises turning the heap regularly to ensure weed seeds are exposed to the high temperatures in the centre of the pile. The ideal temperature in the compost is about 60°C, which is ideal for killing weed seeds without harming beneficial bacteria.

5. The benefits of adding microbial supplements to your compost: Bokashi - a Japanese fermentation mix - speeds up decomposition, so Emma uses it on tougher materials like ivy before adding them to the main pile. She's also experimented with other microbial brews, including a Korean recipe of fish amino acids (recipe in photo), and calcium-rich solutions made from eggshells soaked in apple cider vinegar. She noted that an application of the eggshell brew increased numbers of worms in the soil.



Interested in learning more about cutting-edge composting techniques?

The Farm Net Zero composting field lab is where Emma and four other growers in Cornwall are trialling new approaches to compost turning, microbial supplements, and managing weed seeds and pathogens. Find the field lab page by searching 'optimised compost management' on the [Innovative Farmers](https://www.innovativefarmers.co.uk/) website to explore the latest updates and findings.

This factsheet was produced by the Farm Carbon Toolkit on behalf of Farm Net Zero, a project led by farmers in Cornwall, exploring the contribution that agriculture can make to achieving Net Zero. This project is funded by the National Lottery Community Fund.

