GREENER FOOTPRINTS Herefordshire
caring for our climate and nature forever

A CARBON WORKOUT GUIDE FOR FARMERS

FIVE STEPS TOWARDS GREENER FARMING:

SAVE CARBON & SAVE COSTS

WITH RISING ENERGY COSTS, CHANGES TO TRADE AGREEMENTS, THE IMMINENT CLOSURE OF THE BPS, AND THE WAR IN UKRAINE, THE FARMING COMMUNITY IS UNDER PRESSURE LIKE NEVER BEFORE.

In this context, changing to more sustainable and productive farming practices could help to reduce farm costs, increase productivity and open up access to new markets.

Although regenerative farming may not produce the highest yields, observations of farms using regenerative methods found they were substantially more profitable – profit was directly related to soil health, rather than yield.

As well as improving the bottom line, moving to more sustainable farming practices is better for the planet. As one of the few industries that can sequester carbon, agriculture is in a unique position to make a significant contribution to tackling climate change.

Could your farm benefit from reducing its carbon footprint? Here are a few simple tips for getting started.

1. GET TO KNOW YOUR NUMBERS

The first step is to have a carbon footprint audit done to provide a baseline for measuring improvements. This is not the easiest task and it's worth considering investing in a professional audit, which should include soil organic matter analysis. Although there is an upfront cost, the audit will pay for itself in the longer term through improved efficiency.

Alternatively, you could try using a free carbon footprint calculator online. Find the one that suits your business best, but don't worry if it's not perfect – the key thing is to get started. Once you've picked an online tool, it's important to stick with the same one in future as each software package uses different methods and will produce slightly different results.

The Farm Carbon Toolkit is a good place to start, both for a professional audit or trying their free online tool.

2. GET CONNECTED

Talk to other local farmers about what steps they're taking and what's working for them. Join local networks to learn more about sustainable farming and make the most of the free help and advice on offer.

Farm Herefordshire can provide free and confidential advice on farm infrastructure, soil health, soil testing and environmental stewardship – see their website for contact details.

Herefordshire Rural Hub – Join the Hub mailing list to keep up to date on funding opportunities and events that could help you. It's free to become a member and the best way to stay informed about grants or training that might become available. Check out the Faster Farmers section of the website for a free introductory presentation to the farm carbon toolkit.

Talking sustainability: (L-R) John Joseph, James Marsden, Phil Gorringe, Rachel Price-Greenow

3. PLAN AHEAD

Reducing your carbon footprint is a long-term project so it makes sense to try to align it with your business plan. Look at how tackling environmental issues could help meet your future objectives – for example, reducing emissions could save money, while strengthening your green credentials could act as a selling point for produce.

"IT'S A BIG DECISION TO TURN THE FARM AROUND AND IT DOESN'T HAPPEN OVERNIGHT" SAYS PHILIP GORRINGE OF LOWER BLAKEMERE FARM. "YOU HAVE TO BE REALISTIC THAT IT'S GOING TO TAKE TIME, BUT IT'S WORTH TO EFFORT."

Plan for making gradual changes over at least 2-3 years. The free AHDB benchmarking tool is a great place to start.

4. CONSIDER THE CHANGING CLIMATE

Climate change is already happening and for Herefordshire it is likely to bring rising temperatures with drier summers, wetter winters and an increased risk of flooding.

It's worth taking changing weather patterns into account in your long-term planning and considering how best to make your farm resilient. For example, introducing a greater diversity of plant species into pasture land can improve resilience to extremes of weather, improve soil structure and help with extending the grazing period: better for the environment and your bottom line.

5. TAKE ACTION

Every farm is different, which is why it's so important to make sure you start by calculating your carbon footprint and identifying your priorities.

However, there are some actions that can benefit almost all farms.

INCREASE SOIL ORGANIC MATTER

Soil health is a major contributing factor in reducing overall carbon emissions.

On Lower Blakemere Farm (see below), the Farm Carbon Toolkit calculated that improving soil organic matter by just 0.2% across all land would make the business carbon neutral.

How to do it:

» Reduce soil disturbance to a minimum
» Encourage deeper rooting
» Use cover crops
» Return all residues and manures to soil
» Prevent losses from erosion and run-off

The drill only cuts a slot so does not disturb the soil

INCREASE CARBON SEQUESTRATION

In addition to increasing soil organic matter, there are several other steps you can take to increase carbon capture across your farm and offset emissions:

» Increase the width and height of hedgerows
» Plant new hedgerows
» Plant small patches of woodland

REDUCE FUEL USAGE

Using less red diesel will cut emissions and costs. Of course, it's much easier said than done but it's definitely worth looking for ways to improve fuel efficiency.

» Switch to minimum tillage
» Make sure cultivations are carried out in appropriate weather conditions
» Ensure machinery is turned off when not in use

If you're inspired to take action, why not commit to making a change by signing a Greener Footprints pledge. It only takes a couple of minutes and by putting your intentions into writing, you'll increase the chance of making it happen. **Do it now at www.greenerfootprints.co.uk**

CASE STUDY: LOWER BLAKEMERE FARM

Farmer Philip Gorringe runs a mixed farm on the Duchy of Cornwall Estate. He was supported by the estate who had undertaken Natural Capital surveys on his and several others of their tenanted farms. The surveys were carried out as part of the estate's long-term objective of protecting its Natural Capital. Subsequently the tenants were given advice from a regenerative agronomist, based on the findings of the on-farm carbon audit.

WHAT THEY DID

Phil was advised to switch to minimum (non-inversion) tillage and to add nutrients to the soil to improve fertility. He took on a regenerative agriculture advisor who did extensive soil analysis, enabling them to tailor nutrient applications to suit the farm.

They found they needed organic matter, phosphate, potash, and of course nitrate. Biosolids (sewage sludge that has been through a biodigester) provided the appropriate phosphate/nitrate mix with organic matter. The magnesium-dominated soils also required calcium to correct, in the form of gypsum and calcium lime where needed. Farmyard manure and poultry litter are used to provide potash and nitrate, and to boost the soil organic matter.

Phil continued to farm the same crops but with less machinery, meaning he saved on fuel and could sell the equipment he no longer needed to fund the purchase of a new min-till drill. He also purchased a low disturbance sub-soiler to go with the drill during the initial transition period. Gradually this will improve soil structure thus reducing the requirement for tillage further.

The farm also put in almost a kilometre of new hedgerow – thanks to donations from customers of the farm's Wiggly Wigglers worm business – while the Duchy planted 250 new trees on the property.

RESULTS

After two years, Phil could see an improvement in having reduced his inputs and improved his sequestration. The audit by the Farm Carbon Toolkit found that he had made a net saving of 25 tonnes of carbon – the equivalent of 11 homes' energy use for one year.

In the short term, the changes are cost-neutral but the farm will make savings in the long term. Overall, the new regime has improved natural capital, increased carbon sequestration, reduced the farm's carbon footprint, is better for farming and better for the bottom line.

"DON'T KNOCK IT UNTIL YOU'VE TRIED IT," SAYS PHIL.
"EVERYTHING WE DO ON THE FARM THAT COSTS CARBON, COSTS MONEY.
SO ULTIMATELY, CARBON IS DIRECTLY LINKED TO PROFIT."