



Chagfood

Chagford, Devon



CFF Carbon Calculator

Chagfood is a Community Supported Agriculture (CSA) growing project in Chagford on the eastern edge of Dartmoor. Growing on about 2 acres of sandy loam soil in a sheltered valley, the project features community engagement and a working horse as integral parts of its working.

Chinnie Kingsbury and Ed Hamer are the growers and managers of the organisation, responsible for the day to day operations. Both are highly committed to the principles of affordable local food for the local community and are highly aware of the need for low carbon food and a high level of local food security. To be able to engage more with their customers on carbon footprints they were keen to calculate the carbon footprint of the business.

About the project

Chagfood is a new Community Supported Agriculture (CSA) scheme, based on the beautiful eastern edge of Dartmoor. The project is supported by households, who pay for a year's worth of vegetables in advance. This makes the financial security and planning much more resilient for the growers, Chinnie and Ed. Some members also attend work parties to help with jobs on the land.



All the produce is grown using organic principles on a 2 acre site near Chagford which is sheltered and fertile, though something of a frost pocket. Chagfood supplied around 25 families a week with vegetables in 2010 but is moving up to around 50 families a week in 2011 and developing other markets. This has been possible by taking on more land adjacent to the existing site and intensifying production.

Carbon emissions

Chagfood is unusual in not having a tractor and virtually no powered machinery. Samson the horse is employed in cultivations, weeding and deliveries, making a significant contribution to the low fossil fuel use of the project. Whilst Samson does contribute to emissions to the order of 9% of total emissions through methane and nitrous oxide, he also saves a lot of fuel, therefore massively increasing resilience and lowering carbon dioxide emissions.

Interestingly, the highest amount of fuel is used by Chinnie and Ed driving to get to and from work and for business use. Contractors have also been used occasionally and small machinery such as a water pump also consumes a small amount of fuel. Total fossil fuel use accounts for 25% of overall emissions.

The 2010-11 calculation shows a large proportion of emissions coming from bought in materials. Post and wire for fences, timber, pipe for water systems, machinery (for Samson) and polytunnels made up well over 50% of emissions. However these are largely capital items that won't be bought every year (unless the project expands every year), so the 2011-12 calculation should show a significant drop in emissions from this sector.



Emissions from more consumable items, such as crop covers, packaging and office supplies were responsible for less than 5% of total emissions. Other emissions, totalling less than 5%, came from nitrous oxide emissions from crop residues and compost.

Sequestration

The most significant asset Chagfood currently has for absorbing carbon are the hedgerows surrounding the field, which have been laid and have many fast growing species such as hazel. Permanent grass field margins around the field also absorb carbon and, in years to come, the young fruit trees will be important carbon sinks too.

As yet Chagfood have not analysed soil organic matter samples from the field, but plan to do so this year and again next year. With part of the rotation dedicated to green manures, and all crop wastes returned to the land, they hope to see a gradual increase in the organic matter levels – and therefore an increase in carbon being absorbed in the soil.

A model of the future?

Undoubtedly, Chagfood is a project that is very different from most farming and growing businesses in the UK. The level of carbon emissions and overall fossil fuel use are extremely low. Other inputs, such as steel, concrete and plastics are also very low – this demonstrates both a low carbon and resilient approach.

Affordable rural housing issues are reflected clearly at Chagfood by the fuel used by the growers to get to and from work, as well as other business trips. Being able to live on or very close to the land is a very challenging issue for so many farmers and growers, and has big knock-on effects in terms of carbon emissions and resilience.

With the support of the community and a steady programme of expansion, Chagfood is showing that a small growing enterprise can be low carbon, financially sustainable, contribute to the local economy and increase the resilience of the community significantly, as well as providing quality food, enhancing the landscape and providing habitat for biodiversity.

www.chagfood.org.uk

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