

# Grazing to reduce carbon

Agricultural sector  
Low Carbon Case Study  
Woodland Valley Farm

This case study demonstrates the business benefits of **improved energy efficiency** and **carbon abatement** to a local organic farming business



**Chris and Janet Jones began putting the environment and sustainability at the core of their business model for Woodland Valley Farm back in 1985 when a waterlogged field was converted into woodland and a pond.**

Since that time over 20 acres of farmland have been devoted to woodland, streams, ponds and wetland which teem with wildlife and attract several red listed birds species.

In 2006 this commitment was taken a step further when Woodland Valley Farm entered conversations with Independent Energy, a local company offering renewable energy solutions. This led to a 12 panel solar thermal system being installed at the farm and began a commitment to making the business carbon neutral in the future with potential for this to be achieved by end 2010.

Since that time a number of energy efficiency measures have been implemented on the farm, including energy efficient lighting and fitting an A rated boiler to supply the heating

and hot water in one barn. There are also plans for outside composting toilets, to install a log boiler and for a larger community wind turbine.

**'Live as if we'll die tomorrow, but farm as if we'll live forever.'**

Environmental management has been placed at the heart of the business with an environment management system tailored to meet the farms needs.

**'At Woodland valley we recognise that everything we do has an effect on the local, regional and global environment. As a result we are committed to continuous improvements in environmental performance and pollution prevention.'**

Due to the intensive inputs required (fuel, fertiliser and drying), growing cereals imposes a strain on the natural system. At Woodland Valley arable farming (field crops) has been replaced with grass for grazing, adopting perennial leys with deep rooting herbs. Not only does this have a greater capacity for storing carbon

in the soil but it is also the cheapest way of feeding cattle and sheep. Crop diversity has also been increased through planting over 6 acres of nut orchard which act to sequestrate approximately 20 tonnes of carbon per annum.

The financial benefits of the sustainability measures taken are already being realised with an estimated annual **energy saving of £1770.**

**This saving can in part be broken down through the various measures taken:**

- Solar thermal technology – Cost: £14,000 / Saving: £900-£1000 per annum.
- Low energy lighting – Cost: £450 / Saving: £80 annually.
- Installation of a log burning range providing hot water and cooking – Cost: £3000 / Saving: £320 per annum (1500 to 2000 litres heating oil per annum).

Woodland Valley Farm is active in the local community both through the Transition Town movement and a number of other initiatives. An allotment scheme was launched in 2009 offering local people the opportunity to grow their own food and reduce their food miles. In addition the Farm has been central to Low Carbon Living Ladock, a community funded programme through Community Energy Plus which aims to show how sustainable living can be achieved at the community level. The farm provided a site for a small community wind turbine and planted 510 fruit and nut trees, showcasing edible woodland as a method of carbon sequestration and novel perennial food production.

### Resource efficiency projects and initiatives

- Minimising consumption of resources and energy, for example by using low energy light bulbs, solar thermal for heating water, using the farm's own water supply (UV treated). Recycled furniture is used where appropriate, and the bunks are made from sustainable timber resources.
- Reducing waste by buying goods locally with a minimum of packaging, reusing shopping bags and cardboard boxes, and recycling as much material as possible.
- Minimising food miles by using the farm's meat products, by buying vegetables locally and in season and by buying Cornish cheeses for guests (mainly from Trudgian Farm shop, Probus).
- Ensuring that waste and effluent is disposed of in a responsible manner - food waste is composted, effluent processed through a septic tank and reed bed before going to soakaway, and rainwater taken to separate soakaway.
- Farm organically using crop rotations which help reduce weeds and pests without using harmful chemicals and fertilisers, composting farmyard manure for maximum benefit to the soil and minimum risk to the environment. This helps to maximise biodiversity and maintain the varied habitats which can be found on the farm.
- Continuous monitoring using the Climate Friendly Foods carbon footprint calculator.

### Comments from Woodland Valley Farm:

We all need to manage our land in terms of the eco-system services it can provide, but we must not forget that these things may cost money and farmers need to be compensated either by direct payment or higher food prices. I would appeal to farmers to become thoroughly engaged with their local communities. Landowners are the only people who can provide sites for things like renewable energy and allotments on any great scale and we need to aware of what our villages and towns will need from us in future.

### Sustainability awards

#### Gold Award

Green Tourism Business Scheme

#### 2008 Cornwall Sustainability Award

Best Managed Small Business Award

### Background

Woodland Valley is a 170 acre mixed farm, providing organic beef and pork for direct local sales through the farm shop. The farm also offers 4 star group accommodation, with 46 beds in the form of barn accommodation, and meeting and conference facilities. In addition, outdoor classroom education is offered teaching mainstream subjects such as Geography and Science as well as traditional farming and countryside management skills. This education facility was supported through £45,000 of Objective One funding.

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