FARMING FUTURES

CASE STUDY 7

Climate change series

Focus on water conservation

Name: **Julian Hasler**

Region: **Gloucestershire**

Grows: **Wheat, OSR, spring barley** Raises: **Outdoor pigs**

Size: **900ha** Number of farm/office staff: **Julian plus one part-timer**

Background

Our farm is typical of the Cotswolds – a brash landscape with shallow soil, fairly flat with steep valleys.

Why did you decide to install a new water management system?

As part of a project to convert redundant historic farm buildings it became necessary to move our grain storage to a completely new site. This became an opportunity to look at the whole area and see if there were any additional things we could do to reduce our 'environmental footprint'. As a result we installed a new water management system.

How do you see the water management system reducing your 'environmental footprint'?

Water shortage and water usage will become an increasing problem as climate change progresses and as the world's population increases. In our area, all water comes from underground aquifers and needs to be pumped out, requiring an energy input, so our new system reduces our energy needs and costs.

How does the system work?

Collecting and re-using rainwater from the roof of the building was one option that we explored for the

converted farm buildings in the old farmyards. Although underground storage was less of a visual obtrusive solution, it was much more expensive than either a purpose-built concrete lined tank or by burying an existing iron tank. Consequently, we installed a second-hand tank on a small mound at the rear of the building. Rainwater is collected in an underground sump made from a buried IBC 200 litre bulk container, and pumped into the metal tank.

How do you use the collected rainwater?

The tank water is then used for filling the sprayer and for cleaning it after use. Excess rainwater is directed to an open ditch that supplies a wildlife pond 100 metres away. The water is also used for washing the other farm machinery. We are also looking at how it could be used to provide drinking water for the outdoor pigs.

What have been your biggest challenges in installing the water collection system?

The biggest challenge was to decide the most economical and innovative way (in engineering terms) to move water to where it is needed. There are still some unknowns such as whether we need frost protection for the storage tank, which need to be overcome in time.

Where do you see yourself going from here?

When the Environment Agency water policy on the groundwater regulations is clarified we are planning to install a lined bio-bed into the system. This would collect the drainage water from the concrete filling area for the sprayer and pass the potentially contaminated washing through a biologically active filter. The resulting water would then be returned to the main tank to be reused in filling the sprayer.

We're also considering installing small wind generators at each end of the grain store and selling the surplus electricity back to the grid. Finally, we're aware that bio-beds produce some heat as they work and are investigating how we can make use of this.

FARMING FUTURES

For news, events, and links to stories about how other farmers are managing climate change on their farms, please visit: www.farmingfutures.org.uk

With thanks to: ARF, BBRO, BPC, BPEX, Carbon Trust, CLA, Defra, EBLEX, Forum for the Future, HDC, HGCA, MDC, NFU, PGRO and UKCIP