



NORTON COURT FARM, GLOUCESTERSHIRE

DEBBIE WILKINS

FARMING ON A FLOODPLAIN

Debbie manages Norton Court Farm, nestled in the Severn Vale of Gloucestershire. Much of the floodplain land here is adjacent to a nature reserve, making it an important spillover habitat for visiting wildfowl and wading birds during flood periods. The floodplain land is an integral part of the farm as the permanent pastures and hay meadows provide an important source of livestock feed alongside promoting wildlife.

KEY FACTS

- Mixed 350ha family farm in Gloucestershire, with enterprises including dairy, beef and arable
- Around 140ha of the farm is floodplain land, which represents an important part of the farm business both for production and wildlife
- Low-input management is used across the floodplains, with many receiving no inputs (fertilisers/pesticides).

SOURCES OF ADVICE

Debbie uses several sources of advice, noting the importance of on-farm experimentation and remembering that all farms are different.

Key sources of advice include:

- Farming and Wildlife Advisory Group (FWAG), in particular when completing applications for agri-environment schemes;
- Informal discussions with peers;
- Severn Vale guardians, a facilitated farmer group;
- Dairy discussion group;
- Arla dairy regenerative farming pilot group



Photo credits: Debbie Wilkins

Farming the floodplain land itself rather than leaving it unmanaged is key; without hay cuts and a grazing regime, the land would likely revert to scrub and trees, no longer providing vital habitat for breeding waders, overwintering birds, and a range of botanical species. The non-floodplain arable and permanent pasture land on the farm is farmed slightly more intensively, allowing Debbie to prioritise extensive farming on the floodplains.

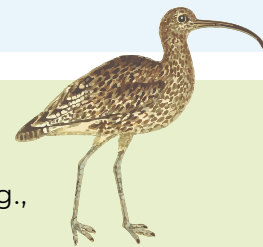
NATURE-FRIENDLY FARMING

- The farm has always been managed with wildlife in mind and has been in agri-environment schemes for over 30 years; Debbie's father kept the farm in Countryside Stewardship for 20 years prior to Debbie taking over
- Some of the floodplain land is now in High Level Stewardship (HLS) and has been for over 10 years. This agreement has recently been extended for a further 5 years, with a focus on species-rich grassland and overwintering waders
- Land that isn't in HLS or any other scheme is still managed as low-input permanent pasture
- Debbie has experimented with planting wetland herbal mixes, which consist of grasses which are both drought resilient and able to withstand flooding.
- She has also trialled mob grazing, finding that the only cattle that didn't need supplementary feeding were those managed under this regime, including during severe droughts (e.g., in 2022)
- On other floodplain land not under species-rich grassland, Debbie has undertaken two trials: 1) Rotational grazing, with cattle moved daily; and 2) Set stocking, with cattle grazing entire fields. She found similar growth rates for both approaches, but the rotational grazing used half the area compared to set stocking.



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KEY CHALLENGES ON THE FLOODPLAIN

- Reed canary grass is the main problem weed on the floodplains, which is particularly prone to spreading when hay cuts are made later in the year (e.g., due to weather)
- Lungworm is another concern, though Debbie has found that vaccinating with Huskvac avoids the need to worm livestock
- The timing of hay cuts is difficult to manage, particularly under HLS as the scheme restricts timings. For example, early June often offers the best weather for cutting, but the agreement doesn't allow cutting until late June
- Public access is a concern on the farm; Debbie is happy to welcome walkers using footpaths across the land, but is often frustrated by those who don't keep dogs on leads, especially in areas prioritised for wildlife (e.g., for ground-nesting birds such as curlews).



SOIL TYPES

Debbie undertakes extensive soil testing on the farm, including magnesium, potassium, phosphate, calcium, and soil organic matter. Whilst many farmers don't measure calcium levels, Debbie argues this is important due to the effects of calcium-magnesium balances on fertility. Most of the soil across the farm is heavy clay, with high magnesium and potassium levels. The floodplain land has high soil organic matter, ranging from 17-23%, alongside good magnesium levels but lower phosphate levels. The latter is likely because this land receives no inputs. Soil pH levels, meanwhile, are relatively neutral, ranging from 7.5-7.8 across the farm.



Photo credit: Debbie Wilkins

MONITORING

- Detailed soil testing is carried out across the farm (described above)
- Dung beetle surveys revealed high beetle counts, though these counts dropped by up to 50% after livestock were treated with an insecticide to control flies. These populations did, however, appear to bounce back quickly
- Faecal egg counts revealed that the cattle grazed on long grass do not need to be wormed. Further research is needed to understand why this is the case
- Botanical surveys found a wide range of species including great burnet (see below), narrow-leaved water-dropwort, and cowslips.

WILDLIFE

- Debbie is actively promoting curlew and lapwing breeding on the farm, including through the creation of scrapes and ponds, which provide forage for these waders as well as supporting other wildlife including invertebrates, amphibians, and birds of prey
- Yellow wagtails and cuckoo are amongst many relatively rare bird species that have been observed on the floodplain land on the farm
- Quail have been heard on certain fields, which were then not cut until September to avoid disturbance
- Several wetland birds from the adjacent nature reserve visit some of the farms' floodplain land, particularly during heavy flooding. This indicates that the farm has become an important habitat for these species, particularly when their usual feeding grounds are underwater and thus less able to provide sufficient forage.



Photo credits:
Debbie Wilkins

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STUDY VIDEO



HAY PRODUCTION

The land used for hay cuts does not receive any inputs throughout the year (i.e., no fertilisers/pesticides). Hay cuts are taken at the end of June/start of July, depending on the weather and agri-environmental scheme requirements. When cutting, Debbie leaves a mower-width strip of grasses down the middle of these fields, providing a sanctuary for wildlife. In addition, this provides additional grass for aftermath grazing, where cattle are brought onto the land after hay cuts, usually until around November.

The hay produced in the meadows is used to feed young stock and cattle on the farm during Winter. Interestingly, the livestock appear to find this species-rich hay more palatable than hay produced in more intensive ryegrass fields. In addition, the hay meadows on the farm are so biodiverse that Debbie has been asked to take part in brush harvesting, whereby seeds are taken from her fields and used to restore botanical diversity on other floodplain meadows.

Some of the floodplain fields have ridge and furrow and so are unsuitable for hay cuts. Instead, these fields are used for Spring grazing. This allows Debbie to ensure that she has some grazing land all year around.



ECONOMICS

- The farm is economically profitable due to both selling produce through the beef, dairy, and arable enterprises and through the adoption of biodiversity measures which result in cost savings through using less inputs and payments through agri-environment schemes
- HLS payments at Norton Court Farm cover the costs of farming the floodplain without inputs. This is key for making Debbie better able to implement measures for supporting wildlife. Without this scheme, Debbie would have to consider farming more intensively to cover the costs.



A recently installed scrape at Norton Court farm (photo credit: Charlotte Chivers)

FUTURE PLANS

- More pond restoration and scrape installation (see right)
- Willow pollarding and hedge coppicing, with resulting woodchip incorporated with slurry from the dairy to produce compost
- Planting some of the arable floodplain land with more herbal wetland mixes. Debbie is keen to plant these mixes as trials on other fields have revealed that these don't require any fertiliser inputs, withstand flooding, and can allow up to three silage cuts per year
- On the arable land, there are also plans to rely on direct drilling, an approach which minimises soil compaction
- Debbie is happy with how her floodplain land is managed, but plans to continue improving her grazing regime and reduce fertiliser use, with a goal of stopping the use of bagged fertiliser altogether across the farm.



Willow pollarding increases the healthy lifespan of willows. (photo credit: Honor Mackley-Ward)