



PERSH FARM

CHAMBERLAYNE FARMS, MAISEMORE,
GLOUCESTERSHIRE
GREG CHAMBERLAYNE

KEY FACTS

- Overall farm business is mixed and consists of 550ha land, 400 of which are arable
- Livestock on the farm includes 60 traditional Herefordshire cattle and 100 sheep. The cattle are grazed on wetland fields and cover crop forage where appropriate
- Around 150ha of the farm is situated on a floodplain, including Persh
- Spring and winter rotations on arable land
- Hay produced from meadows is kept on-farm

SPRING ROTATION

- Spring wheat
- Spring barley
- Linseed
- Canary grass
- Peas



Grown on the remaining arable areas of the floodplain

Management: Winter stubble and volunteers (i.e., plants that have established naturally) are left over winter to provide food and cover. Direct drilling is used to enhance soil structure and infiltration.

Weed burden(s): Wild oats, largely due to Spring planting every year and direct drilling
Planned changes: Moving away from 'risky' crops on floodplain land (e.g., winter wheat) and growing shorter rotations instead, e.g., barley, forage maize and peas

WINTER ROTATION

- Winter wheat
- Winter oilseed rape
- Winter wheat
- Spring barley
- Winter barley

Chamberlayne Farms is situated in Maisemore, which is around 2 miles north of Gloucester. The business includes land in three distinct floodplain areas, including on Persh Farm, which is fed by the rivers Severn and Leaden and is the focus of this factsheet. The farm contains both arable land (70%) and grassland (30%). A key challenge faced on the floodplain land is balancing management to account for flooding, soil type, weed burdens, and profitability.

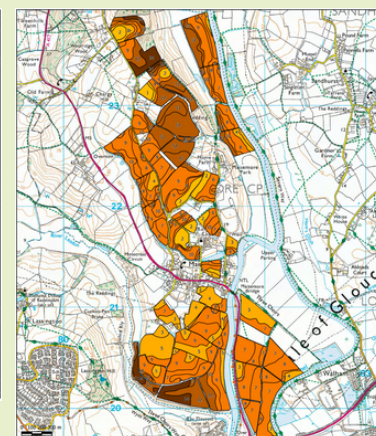
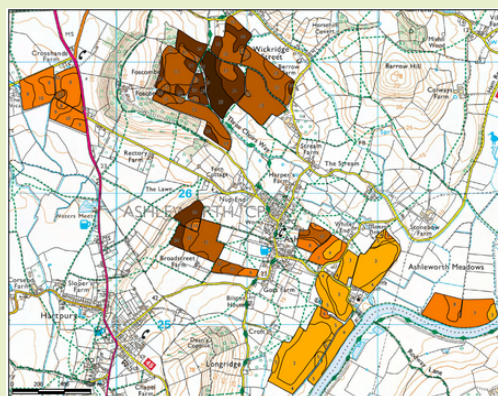


Farm location. Map credit: Apple Maps (2022)

Each of the floodplain areas across Chamberlayne Farms have different needs and are managed accordingly. Direct drilling has replaced ploughing to improve soil structure and infiltration rates across most floodplain fields. All three floodplain fields at Persh have been reverted away from arable farming and into grassland, with a focus on providing habitat for overwintering and breeding wildfowl and waders. This has also resulted in benefits for soil and water quality and flood mitigation. In addition, one field is allowed to regenerate naturally rather than being sown with a grass mix, thus providing further habitat for wildlife.

SOIL TYPES

- Mixed soil across the farm, ranging from silty to heavy clays
- The most fertile soils are adjacent to the river, likely due to deposits made during long-term historic floods
- Soil organic matter levels are high across the entire Persh floodplain according to both Dumas and loss on ignition tests (6.3% and 8%, respectively)
- Soil testing has been useful for allowing Greg to produce variable seed rate maps. These maps are useful for determining optimum seed rates, resulting in improved crop management, health and profitability.



Clay content across Chamberlayne farms. Left: Maisemore Court Farm (North); Right: Maisemore Court Farm (South). Map from: SOYL (2020)

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JOURNEY TOWARDS NATURE-FRIENDLY FARMING

- Joined **Higher Tier Countryside Stewardship (HT)** in 2022, with measures including 10-year grassland creation on previously arable land (GS11) and 5ha of herbal leys (GS4). Some of the measures included in the scheme are displayed in Table 1
- An increasing amount of floodplain land is going back to grass to promote breeding waders such as lapwing and curlew
- **Culverts have been installed to control flow and provide nesting and foraging habitat for birds.** These culverts are kept closed all summer from around February onwards to keep water on the fields
- **Benchmarking has helped to identify areas with poor gross margins** and where farming less intensively with support from agri-environment schemes are more likely to be profitable
- The floodplain land on the farm has gradually **transitioned away from arable** over the last 15 years - whilst 98% used to be arable, around 70% is now, representing a 28% increase in grassland
- **Livestock represent an integrated part of the farm**, both in the floodplain areas and on the arable land. Some hay is made on this land, and cattle are grazed on the floodplain grassland during drier months. In addition, there is some grazing on arable cover crop forage during the Winter. This saves money as it prevents Greg from having to buy forage, whilst allowing him to keep his livestock outside for longer. Straw for bedding is also produced on some of the cropped land, again providing a cost saving.

Table 1. Some of the key HT options used across Persh Farm

Non-rotational HT options	Rotational HT options
Creation of wet grassland for breeding waders (GS11)	Winter bird food (AB9)
Management of wet grassland for breeding waders (GS9)	Basic overwinter stubble (AB2)
Native breeds at risk/threatened species supplements (SP8/SP9)	Autumn sown bumblebird mix (AB16)
Permenant grassland with very low inputs (GS2)	
In-field grass strips (SW3)	
Management of hedgerows (one side per 100m) (BE3)	

ECONOMICS ON THE FARM

- **Benchmarking** is a key part of ensuring the economics work across Chamberlayne Farms, as this allows Greg to identify which fields are working for the business before adapting accordingly
- **Member of an AHDB arable benchmarking group** which has been helpful for sharing experiences with other farmers alongside helping him to understand his gross margins
- Beef produced on the farm remains in a **local supply chain** as it is used to supply their own pubs.



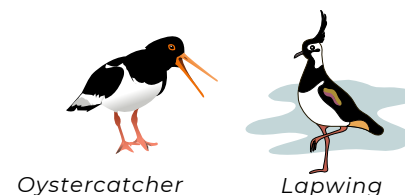
Floodplain fields around Persh. Photo credit: Charlotte Chivers

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WILDLIFE

- Several species of wading birds have been spotted at Persh floodplain, including **oystercatchers and lapwings**. This indicates great potential for providing enhanced habitat for **breeding waders**
- There are also several species of birds that overwinter on the floodplain, including Shelduck. This indicates that Persh Farm could also become an important site for **overwintering migratory birds**



Oystercatcher

Lapwing

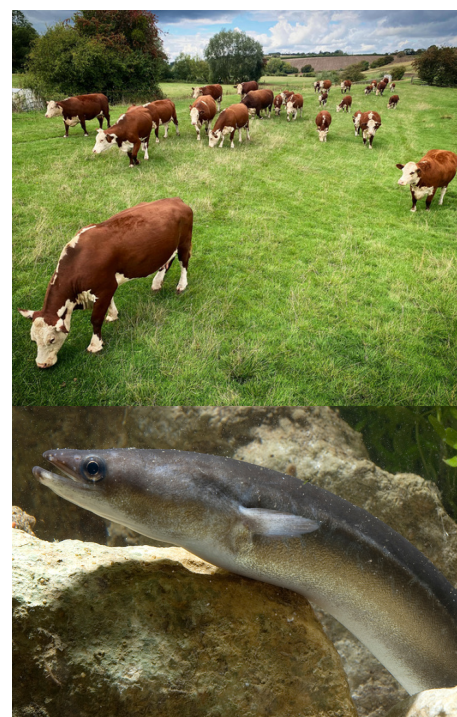


SOURCES OF INFORMATION

Greg relies on two main sources of advice and information: the Farming and Wildlife Advisory Group South West (FWAG SW) for advice around stewardship and management practices, and his grandad for advice directly relating to the farm. Family members from the farm business often become important sources of advice for new generations of farmers due to their many years of experience working on the land.

FUTURE PLANS

- Chamberlayne farms have joined the 'EelScapes' Landscape Recovery Scheme pilot, which is part of ongoing ELM development. This project could result in more grass and natural landscapes on suitable fields across the Maisemore floodplain area. In addition, this project will identify the levels and potential sources of funding required to achieve landscape recovery in these areas
- Greg plans to start doing some **carbon auditing** across the farm alongside **ecological baseline surveys such as bird surveys**. The resulting data may be important for identifying biodiversity net gain opportunities
- **Continued arable reversion to grassland on floodplain land**
- More benchmarking to assess ways to make the 10 'worst' fields more efficient so that they can better contribute to the farm business
- Greg plans to explore ways of **making the livestock side of the business profitable**. This is important as the business will be less able to manage the floodplains with extensive grazing and haymaking if it isn't profitable. Whilst the livestock business already has minimal external feed inputs, with most hay and straw (bedding) produced on-farm, it appears that there may be options for reducing labour costs, for example through a shared farm agreement.



Top: Hereford cattle grazing at Maisemore Farm

Bottom: European eel

INTERESTED IN LEARNING MORE?

Watch the full case study video:

<https://www.youtube.com/watch?v=VuUeBA2mW3Y>

