

App23 Irrigation information

There are two types of irrigation.

- a/ from a reservoir which is filled during the winter during periods of high rainfall
- b/ Borehole abstraction from the aquifer

Chippenham Park Farmer A, RJ and JR Waters farmer C and Moulton Manor Farms Farmer D all have winter filled reservoirs and should therefore be assessed differently when analysing farming productivity. They are in the very highest echelon of productive farms.

DB's reporting of the abstraction licences is inconsistent:

- 1/ Volumes are stated in different units
- 2/ Volumes are mentioned for some farmers and not for others
- 3/ Failure to mention all licences that are available on some farms
- 4/ In some cases volumes in the text of the DB report do not correspond with appendix 15 totals also supplied in the DB report.

As you will see from the schedule in appendix 15 and attached aerial photos three of the landowners with land in the Sunnica scheme have winter fill reservoirs on their farms.

Chippenham Park Farm – photo appendix 24

Moulton Manor Farm (Holdings) Ltd – photo appendix 25

TR & RJ Waters- appendix 26

We have estimated the capacities of the reservoirs to be as follows:

Chippenham Farm – 227,272 m³ (as per DB)

Moulton Manor Farm – 113,652 m³ (as per DB)

TR&RJ Waters – 311,321 (as DB gives no volume figures we have estimated one third of the overall licence is winter stored)

Total 651,593m³

Irrigation is measured in hectare inches – one hectare inch is the equivalent of 250m³ therefore the number of hectare inches available is 2,606.

A potato crop will require up to 8 hectare inches per hectare – this will enable 326 hectares of potatoes to be grown

The winter filled reservoirs on the three farms would therefore enable the growing of up to 326 hectares of potatoes (allowing 10% to be left in the reservoir)

Chippenham Farm - 387ha – could grow 113has of potatoes per annum – restricted by rotation to one year in six giving 64has

Moulton Manor Farm – 113ha – could grow 57has of potatoes per annum – restricted by rotation to one year in six giving 19has

TR&RJ Waters – 261ha – could grow 166has of potatoes per annum - restricted rotation to one year in six giving 44has

127 hectares at 60t per acre would produce 7,620 tonnes of potatoes at £250 per tonne = £1,905,000 per annum of revenue.

With the farming climate becoming more difficult the ability to store winter water is vital. Only 0.5% of arable land in the UK has irrigation.