

Business Analysis and Budgeting of Yaris Farm Herefordshire, on behalf of Ms Powell

Summary of report:

Propose to increase the number of milking cows by around 30 meaning the beef enterprise would have to be reduced to accommodate the extra animals and labour needed. As seen in the partial budget selling new-born calves as this will significantly reduce production costs in the beef enterprise as there will be less cattle to rear as stores or to finish meaning fodder allocated to these beasts can be utilised in the dairy enterprise. Proposal is to sell 60 new-born calves this will mean more shed space is accessible for the new dairy heifers being introduced; details of spacing allocation and recommendation of erection of a new shed have also been included in this plan. In addition to this it is advised that the operation of the other farming enterprises are remained constant which can be seen in the gross margins in the report.

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Source and Application of Funds Statement

Source and Application of Funds Statement

Period End	2022	2023	2024
	£	£	£
Profit (loss) per accounts	£ 186,137.00	£ 158,653.00	£ 146,930.00
Adjustment for items not involving the movement of funds: Depreciation	£ 100,750.00	£ 88,806.00	£ 86,590.00
	£ 286,887.00	£ 247,459.00	£ 223,520.00
Adjustment for movements in working capital:			
Plus opening stocks (dead and live)	£ 463,942.00	£ 475,805.00	£ 457,570.00
Less closing stocks (dead and live)	£ 463,100.00	£ 463,942.00	£ 475,805.00
Plus opening debtors	£ 31,753.00	£ 48,516.00	£ 86,590.00
Less closing debtors	£ 52,291.00	£ 31,753.00	£ 48,516.00
Plus closing creditors	£ 4,560.00	£ 5,419.00	£ 17,851.00
Less opening creditors	£ 5,419.00	£ 17,851.00	£ 12,542.00
	<u>-£ 20,555.00</u>	<u>£ 16,464.00</u>	<u>-£ 23,893.00</u>
Cash generated from trading operations	£ 226,332.00	£ 263,923.00	£ 209,627.00
PLUS: capital introduced			
New loans advanced			
Cash available to meet commitments	£ 226,332.00	£ 263,923.00	£ 209,627.00
Commitments:			
Private drawings	£ 34,445.00	£ 162,080.00	£ 234,584.00
Taxation	£ -	£ -	£ -
Loan repayments	£ 52,809.00	£ 50,294.00	£ 47,899.00
	£ 87,254.00	£ 212,374.00	£ 282,483.00
PLUS: proceeds from asset sales	£ 10,000.00	£ 4,500.00	£ 12,500.00
Cash available for re-investment	£ 97,254.00	£ 216,874.00	£ 294,983.00
Less capital expenditure	£ 240,000.00	£ 75,000.00	£ 145,000.00
	<u>-£ 142,746.00</u>	<u>£ 141,874.00</u>	<u>£ 149,983.00</u>
TOTAL CASH SURPLUS / (DEFICIT)	-£ 142,746.00	£ 141,874.00	£ 149,983.00

Business Analysis based off accounts received from Ms Powell

Current business performance and key areas of issue using accounts from April 2019 to year ending 31st March 2022

Yaris Farm has a whole range of enterprises: dairy, beef, sheep and arable. This report will provide insight into how the enterprises are currently performing against industry standards and areas of vulnerability within the business.

Analysis of Balance Sheet, Trading Profit and Loss and Reconciliation

Trading profit and loss account shows that there has been a decrease in the trading valuations on farm if compare this to the individual enterprises been a reduction in flock size of the sheep and a reduction in the number of beef cattle. Focus seems to have shifted slightly more to the dairy enterprise but notably this a very fortunate family having the next generation interested in the business.

Balance sheet illustrates the businesses potential to current operating needs and see the resistance it has to long term debt. Yaris Farm has been increasing the value of fixed assets throughout the 4 years, notably this a very proactive farm with maintenance and upkeep of buildings as seen through the 4 years of the balance sheet value of this fixed asset gets maintained. Similarly, machinery value on a whole gets maintained, trading profit and loss sheet shows that they have high capital expenditure annually between 2020 and 2022 averaging £153,333 a year. Current assets at the end of the financial year very variable more susceptible to change such as value of crops in ground and store susceptible to weather, finishing time of the cattle and timing of peak milk production can all influence this.

Overdraft is the businesses most substantial short-term loan; however, in the greater picture the overdraft could be by tomorrow if the landowner decided to sell part of the farm. But as you are well aware this is not an option as would cause a loss of livelihood as well as capacity for the farming enterprises. Notably the average current liabilities have been increasing across the UK for large farms average is £2440/ha, Yaris Farm has liabilities of £3770/ha, shows that there needs to be a suitable plan put in place to reduce short-term liabilities. The overdraft needs to be prevented from increasing any further and in this report and budget I aim to produce realistic solutions to do so.

Balance sheet shows the net worth as £2946772 for the final financial year making net worth at £12176.75 per hectare, under the national average for a mixed farm £14340/ha. However, this is a result of the high liabilities business has created. From a different perspective the average gearing ratio for UK farms is 12%, in English this means that the farm business is more likely to be able to meet its investment needs from earnings if it has a lower percentage, the higher the percentage the less the farm has to borrow against but this does not determine if a business is successful or not. Shown below that the gearing percentage has already been decreasing for this business which means if liabilities are reduced the gearing percentage should decrease in line.

Year	Gearing (%)
2022	23.64
2021	24.5
2020	25.2

Need to calculate a realistic target for paying off the overdraft especially in the recent financial climate where interest rates are increasing. Realistic payback time is... however many banks do offer the option to refinance a loan to extend the borrowing rate time meaning you pay less back monthly but payments are for a long period of time allowing higher availability of cash for the business in current time. In addition, still gives you flexibility to pay more off the overdraft in more profitable years.

As seen in the reconciliation the business has a negative cash flow this is due to three main factors: high private drawings, high capital expenditure, consistent mortgage and loan repayments. These reasons for a negative cash flow are a result of investment into the future of the business, arguably in the short-term private drawings and capital expenditure are the easier elements to manage opposed to loan repayments. Notable that private drawing are likely to increase in following years due to succession and retirement.

Dairy

As a business has been increasing the dairy enterprise to 230 above the UK average of 180 cows per farm; out of all the enterprises on the farm this has the highest gross margin profit at £388926 a figure which has been increasing annually as seen in the dairy gross margin. GM profit per dairy cow is 1713.33 for most recent year excluding labour costs. Makes it a positive candidate for expansion compared to the other enterprises as this is the highest GM per head or hectare out of all of the enterprises. Enterprise has the highest variable costs and as seen through the 3 years of accounts, prices of feed and homegrown concentrates prove very fluctuating due to nature of inputs in producing them such as fertiliser and sprays being costly. Difficult to budget for changes with these commodities due to the volatile market currently. Feed costs are particularly high as all year-round calving system has higher reliance on preserved forages and Have 75 dairy heifer calves transferred out (2022) which gives scope to increase the enterprise within a closed herd as seen in other years dairy heifer transfers out have been in the range of mid-50s. Benefits of this to your business is that can use your own genetics to increase the enterprise without the risk of buying in diseases from another holding. Value of the cattle being sold out of the enterprise has been variable in particular in 2022 has decreased to £593 with more cull cows being sold; this impacts the closing valuation as even with replacements transferred in there are fewer dairy cows in the herd. However, counter-acting this the milk price has increased by 15.5% from 30.49 ppl in 2021 to 35.2ppl in 2022 a trend which has been increasing according to DEFRA average milk price in UK in January 2023 was 49.2 ppl. Calving all year round has good benefits to the business as provides a regular cash flow all year round meaning if there are a few months with variable milk prices it doesn't mean the farmer 'has all his eggs in one basket'. Average milk yield per dairy cow on this farm is 6300 litres per cow a year, this is below the UK average of 7900 per cow each year depends on longevity of cow because if she survives in the herd for a longer period of time, she could be worth more in the long run compared to high yielding cows that only last a few seasons. In addition, a farm such as this with so many enterprises difficult to maintain above average production levels for all of them.

Beef

As an overview the beef enterprise is needed for the whole business as the dairy enterprise only breed pure Holstein out of the best cows to pass on the best genetics to improve the herd; with the rest being sired to beef bull. Beef enterprise has considerable increase in value from sales between 2020 and 2022 (£121581 to £183792), as a result of more cattle being kept to finishing.

GM per head has been increasing over the last three years even though total gross margin has decreased as seen in Table below excluding labour.

	2022	2021	2020
Gross Margin (per head)	£470.52	£412.46	£303.86
Variable costs (per head)	£644.78	£375.70	£243.74

Can see from the beef gross margin that cattle have been kept longer for finishing, fine line between finishing cattle for increased value and the flip side of meaning higher costs production as concentrate consumption is high. In particular the home-grown concentrates have increased for 2022 compared to the other years despite the number of finishing and store cattle being the same as the previous year as an internal comparison. Would expect increased costs for upcoming year due to bought in feed expected to be expensive due to winter sown cereal crops expenses as many farmers in the east of the country pre-bought fertiliser before the prices increased and they will want to pass this cost on.

Mortality in the last couple years has increased from 4 unaccounted in the gross margin in 2020 15 (2021), 10 (2022), presumably the majority of these are young calves that have been transferred in from the dairy enterprise. For the past two years this means that the enterprise has been fractionally above the UK average of 3.8% mortality rate. Cattle being finished or kept to stores in the enterprise are either Friesian cross or pure Friesian, typically longer finishing time for dairy based bulls meaning higher costs.

Sheep

The sheep flock has been reduced from 800 to 400 over the period where investment into infrastructure on the farm was high; for the past 3 years the gross margin of the enterprise has increased as a result of increasing price for lamb and cull ewe sales. Value of finished lambs has increased by 42.5% from the year ending March 2020 to March 2022. The variable costs for the enterprise have remained similar as a whole however per ewe have increased from £17.54 in 2020 to £21.59 in 2022; same reason as the other enterprises with price of feed increasing. In addition, value of wool has been decreasing this has been a popular topic in the sheep farming industry as it is costing more to shear sheep than the farmer gains in revenue from the wool. Average price to shear a sheep is £1.10 The idea of expanding the sheep enterprise is obviously not favourable to the family as they have been decreasing numbers the last few years anyway as there are tighter gross margins. However, there are individuals in the next generation which are interested in the enterprise so the numbers should be maintained for upcoming years. Closed flock with the only purchases in being tups, beneficial less chance of bringing disease onto farm helping keep vet and med costs low; does make the performance of the system dependent on the quality of the offspring bred and kept for replacements. Additionally, market price has increased lamb is becoming less affordable for the everyday household in the UK with high export rates in time of surplus. UK is 106% self-sufficient in lamb, still imports in times where supply isn't around, however industries such as the beef aren't sufficient meaning there is more of a gap in the market compared to the sheep enterprise. Notably the sheep enterprise is at the national average with the average number of lambs reared per ewe 1.5 lambed reared to weaning per ewe, lamb sales are above average in their value compared to national average of £97/lamb.

Forage

As expected for this enterprise has a negative gross margin profit as there are no sales with the silage being distributed to the different enterprises for feed. Highest enterprise consuming forage is dairy as mentioned as require high inputs. Highest cost is fertiliser an extremely unpredictable and volatile market as seen by the drop of ammonium nitrate (34.5% N) from £700/t in January 2023 to £465/t in March 2023; these figures show how difficult to budget for forage and arable enterprises. Spray also expensive and could be an area of interest in the future with new regulations to decrease.

Arable

Arable enterprise reduces the amount of purchased feeds and concentrates onto the farm, still comes at a cost which has been allocated in all of the GM for the livestock enterprises as grain and straw. Current grain market is extremely volatile due to the current war in Ukraine as it is impacting the agriculture productivity and the region is not called the bread basket of Europe for no reason; however, this could be favourable to the sales of grain both wheat and oats as there will be a high market demand externally. But extreme unsteadiness with inputs required for this enterprise with fluctuating fertiliser prices it is a gamble whether to forward buy the product or sit tight and see if price decreases.

Section 2 – Area of Expansion

Propose to increase the number of milking cows by around 30 meaning the beef enterprise would have to be reduced to accommodate the extra animals and labour needed. As seen in the partial budget below propose to sell new-born calves as this will significantly reduce production costs in the beef enterprise as there will be less cattle to rear as stores or to finish meaning fodder allocated to these beasts can be used in the dairy enterprise. Proposal is to sell 60 new-born calves this will mean more shed space is accessible for the new dairy heifers being introduced – details of space can be seen in the capital investment plan below under assumptions.

Variable costs will increase in particular feed as dairy cow has a higher need for feed intake for

Partial Budget: Reducing beef enterprise by selling 60 to have capacity to increase the dairy enterprise by 30

Loss of revenue	hd	£ per hd	Total	Extra revenue	qty	£	Total
Beef heifer calves	28	125	£ 3,500.00	Milk	189048	0.4806	£ 90,856.47
Beef bull calves	32	175	£ 5,600.00				
TOTAL			£ 9,100.00	TOTAL			£ 90,856.47

New costs incurred	no.	£ per/hd	Total	Costs no longer incurred	no	£ per hd	Total
Feed	30	353.64	£ 10,609.20	Feed	60	106.07	£ 6,364.20
Vet & Med	30	49.99	£ 1,499.70	Vet & Med	60	11.53	£ 691.80
Home grown concentrates	30	44.66	£ 1,339.80	Home grown concentrates	60	9.88	£ 592.80
Home grown straw	30	7.62	£ 228.60	Home grown straw	60	29.14	£ 1,748.40
Other dairy costs	30	131.37	£ 3,941.10	Other beef sundry costs	60	22.02	£ 1,321.20
Labour			£ 1,825.00	TOTAL			£ 10,718.40
Extra electricity			£ 1,861.50	Total credits			£ 101,574.87
TOTAL			£ 17,618.40				
TOTAL Debits			£ 26,718.40				

Profit or loss (credits - debits)	£ 74,856.47
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Assumptions

Milking time daily 2 hours
 223 cows / 2 hours = 111.5 cows an hour
 111.5 / 4 (quarter of an hour) = 27.87 cows in a quarter of an hour
 Will take an extra 15 minutes a milking
 Extra half an hour a day
 Labour price @ £10/hr
 £10 x 0.5 = £5 x 365 days = £1825

Electricity
 One cow uses 1kwh / day
 Price = 17p/kwh
 Extra per day= £5.10
 Extra annually - 365 days x £5.10 = 1861.50

production compared to beef animals, this is shown in the partial budget; in addition, they have higher usage for the home grown straw and grain – this is still a high cost but reduces the susceptibility of the livestock enterprise to external market increases. Overall, the partial budget predicts that the farm income will increase as a result of this change proposed.

Have 50 heifer cubicles presuming that the business wants to maintain a closed herd by introducing more of their own bred heifers on an all-year-round calving system it is unlikely for all of these cubicles to be occupied all the time. Dairy cows over two years old are worth the equivalent of 24.0 livestock units which is what they are going to budgeted as because the plan is to have more dairy cattle as the end goal – only dairy heifers for a temporary space of time. The equivalent to 24.0 livestock units is 60 calves under the age of one year old so annually to be able to justify the expansion for forage 60 extra calves will have to be sold annually instead of keeping them to store or finishing condition. Also, means that there will be reduced changes to other enterprises such as forage.

Replacement heifers are home reared as seen by 75 being transferred to the heifer enterprise in 2022 expansion can be achieved by keeping a closed herd gradually over a few years; by having a gradual change will allow the business to adapt to the changes proposed instead of being a shock to the system.

Additional factors to consider are the milk tank capacity already have one 6000l and one 5000l increasing the herd size will still mean that there is sufficient room if the milk is collected every two to three days based off a yearly average yield of 6356.89 l/day/cow for this herd. Slurry tank capacity is also sufficient for the increase in the herd and due to no NVZs in the area no further infrastructure is needed for slurry management at this time.

Grandparents and Ms Powell’s partner focus on the sheep and beef sector, with grandparents approaching retiring age (if such thing exists in farming!) sensible option to decrease this sector to fall in line with the natural progression the business seems to have been taking, by investing into the dairy by recent instalment of new parlour in 2013. It is very difficult to manage succession on farms but with such an open business even with the changes proposed the workload will still provide provision for all employees and meets everyone’s interests. Importantly it benefits the income of the farm business and in time from the predictions above should help reduce the overdraft and loans.

Capital Investment Plan – Buildings and Machinery

As part of the enterprise expansion, I propose to erect a shed with the measurements below in 2023. Below states the assumptions based on the excess shed space available by reducing the number of calves by 60 meaning only an extension is required onto the

Assumptions			
Calves sold	60	Shed size needed (m ²)	195
Shed space per calf (m ²)	1.125	Shed space available (m ²)	67.5
Shed space now free for new heifers (m ²)	67.5	Shed size to be built (m ²)	127.5
Shed space needed per heifer (m ²)	6.5	£ per m ² for dairy housing	375
Number of heifers	30	New shed cost	£47,812.50
Space needed	195		

shed to be able to house all of the new dairy heifers.

Figures for the shed space needed were obtained from Red Tractor and CAFRE so fall under the animal welfare

£47812.50 borrowed at 6% interest over 5 years			
Total interest	£ 47,812.50	6.00%	£ 2,868.75
Number of repayments (years x months)	5	12	60
Interest per month (months/ total interest)	60	2868.75	47.8125
Total repayment of loan per month	£ 47,812.50	60	£ 796.88
Total loan and interest repayment monthly (Monthly repayment + interest)	£ 796.88	47.8125	£ 844.69

rights and costings are based off the John Nix Farm Business Book (2021). In the depreciation schedule below can see that building loses value at 5% annually; payment of the shed will take place in the form of a loan under flat rate interest of 6% annually

being paid off over 5 years as seen in the workings below generates monthly repayments of £844.69.

Reinvestment into machinery- most important being the tractor as sale of the MF5455 needs a replacement due to age – would have been useful to see tractors working hours to have been able to strongly see this as a need this purchase helps increase productivity. Purchasing a baler to help reduce contracting costs at harvest as noticed that it was one of the only machinery items not listed. On the sales side propose to sell the old plough that has been kicking about behind the workshop for couple years and in the last year budgeted for the JCB Loadall as this has high workload on the farm and by that time will have worked up high working hours. All

Machinery Purchases	2023	2024	2025
2nd hand Tractor	£	39,174	
Baler		£	15,500.00
Machinery Sales	2023	2024	£ 2,025.00
MF 5455 tractor	£ 17,500		
Old plough	£	1,500	
JCB Loadall		£	24,500.00

valuation figures have been obtained from Farmers Weekly Marketplace and John Nix – depreciation schedule.

There is scope for increased capital investment towards the end of the 3-year period due to increased profits and available cash this report includes the necessity implements and buildings

required; advised that Ms Powell reviews this plan and inputs further areas where she perceives investment would benefit the trading business.

Depreciation of Buildings and Machinery

Workings	2023		2024		2025
Building Depreciation					
Dairy Cattle Shed					
Original net cost	47813				
Depreciation rate	5.00%				
Annual Depreciation	2391		2391		2391
Opening Written Down Valuation	47813		45422		43031
Closing written Down Valuation	45422		43031		40641
Machinery Depreciation					
Opening written down valuation	508500		441900		431617
Purchases	0		39174		15500
Sales	17500		1500		24500
Sub total	491000		479574		422617
Depreciation rate	10.00%		10.00%		10.00%
Depreciation	49100		47957		42262
Closing written down valuation	441900		431617		380355
TOTAL Depreciation	51491		50348		44652

*Depreciation for the current buildings for the balance sheet and reconciliation has been worked out based on 5% of the closing value from 2022 as there was no original figure for building value, so use 5% to calculate straight line depreciation. Evident from the balance sheet of this farm that maintenance and investment is common into the buildings as value in fixed assets remains similar year on year.

Dairy – Gross Margin

Dairy Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Sales									
Milk	1399360	0.41	573738	1507263	0.4806	724391	1605683	0.4806	771691
Milk consumed	11981	0.41	4912	13363	0.4806	6422	14861	0.4806	7142
Cows sales	45	574	25830	46	702	32292	51	702	35802
Bull sales	1	750	750	1	800	800	1	800	800
			605230			763905			815435
Opening valuation									
Dairy cows	223	800	178400	229	800	183200	258	800	206400
Bulls	2	3600	7200	2	3600	7200	2	3600	7200
			185600			190400			213600
Transfers in									
In calve heifers	51	955	48705	75	955	71625	54	955	51570
			48705			71625			51570
Transfers out									
Heifer calves	65	250	16250	65	250	16250	65	250	16250
Beef bull calves	118	175	20650	125	175	21875	134	175	23450
Beef heifer calves	25	125	3125	42	125	5250	59	125	7375
			40025			43375			47075
Purchases									
Bull	1	3500	3500	1	4000	4000	1	4000	4000
			3500			4000			4000
Closing Valuation									
Dairy cows	229	800	183200	258	800	206400	261	800	208800
Bulls	2	3600	7200	2	3600	7200	2	3600	7200
			190400			213600			216000
ENTERPRISE OUTPUT			597850			754855			809340
Variable Costs									
Feed			78862			78862			78862
Vet & Med			9810			9810			9810
Home grown concentrates			10372			10268			12527
Home grown straw			1700			1700			1700
Dairy consumables and other dairy cost			29296			29296			29296
			130040			129936			132195
GROSS MARGIN			467810			624919			677145
GROSS MARGIN/ head £			2070			2566			2609

Notes:

- Milk sales based off the average milk yield for the years previous of approximately 6250/l/cow/year.
- Milk price in 2023 based off current inflation of agriculture produce, 2024 & 2025 values based of increased average market price from AHDB
- Milk consumed by calves = TOTAL MILK CONSUMED (2022) / TOTAL NUMBER OF CALVES = Used this value to calculate milk consumed across the following years
- Cow sale and bull sale valuations are from Farmers Weekly Market Report statistics
- Increasing the heifers into the enterprise by thirty is done gradually over the 3 years.
- Variable costs have been increased in line with 2022 inflation (9.1%) and projected 2023 inflation (1.6T%)

Heifer – Gross Margin

Heifer Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Heifer sales							11	1800	19800
									19800
Opening valuation									
1 - 2 year old	51	750	38250	75	750	56250	65	750	48750
0-1 year old	75	550	41250	65	550	35750	65	550	35750
			79500			92000			84500
Transfers in									
Heifer calves	65	250	16250	65	250	16250	65	250	16250
			16250			16250			16250
Transfers out									
In calve heifers	51	955	48705	75	955	71625	54	955	51570
			48705			71625			51570
Purchases									
Closing Valuation									
1-2 year old	75	750	56250	65	750	48750	65	750	48750
0-1 year old	65	550	35750	65	550	35750	65	550	35750
			92000			84500			84500
ENTERPRISE OUTPUT			44955			47875			55120
Variable Costs									
Feed			11920			11920			11920
Vet & Med			3215			3215			3215
Home grown concentrates			2656			2656			2656
Home grown straw			5100			5100			5100
			22891			22891			22891
GROSS MARGIN			22064			24984			32229
GROSS MARGIN per/head			166			185			253

Notes –

- Transfers into the system are based on approximately 50% of all calves from dairy herd being male and a proportion of heifer calves being Friesian cross beef
- Variable costs have been increased in line with 2022 inflation (9.1%) and projected 2023 inflation (1.6T%).
- In final year of budget 2025, 11 of the heifers sold externally as there is not enough shed capacity for them to be accommodated within the dairy herd.

Beef – Gross Margin

Beef Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Sales									
Calf sales	60	375	22500	90	375	33750	105	375	39375
Store sales	14	1050	14700	37	1050	38850	39	1050	40950
Finished cattle sales	64	1328	84992	44	1328	58432	47	1328	62416
			122192			131032			142741
Opening valuation									
1-2 years	47	800	37600	45	800	36000	47	800	37600
0-1 years	75	600	45000	83	600	49800	77	600	46200
			82600			85800			83800
Transfers in									
Beef bull calves	118	175	20650	125	175	21875	134	175	23450
Beef heifer calves	25	125	3125	42	125	5250	59	125	7375
			23775			27125			30825
Transfers out									
Purchases									
Closing Valuation									
1-2 years	45	800	36000	47	800	37600	38	800	30400
0-1 years	83	600	49800	77	600	46200	88	600	52800
			85800			83800			83200
ENTERPRISE OUTPUT			101617			101907			111316
Variable Costs									
Feed			30874			30874			30874
Vet & Med			2609			2609			2609
Home grown concentrates			19253			19253			19523
Home grown straw			3375			3375			3375
Other beef sundry costs			22552			22552			22552
			78663			78663			78933
GROSS MARGIN			22954			23244			32383
GROSS MARGIN per/head			184			184			259

Notes –

- Calf sales increase further than the 60 vital for the shed space as a result of more dairy cows means greater number of calves in the system.
- Variable costs have been increased in line with 2022 inflation (9.1%) and projected 2023 inflation (1.6T%), however due to reduction of calves from the enterprise costs have still remained similar as inflation has bridged the savings gap.
- Increasing the number of store sales allows more forage to be available to the dairy enterprise as well as home grown concentrates.
- Mortality has been run at 0% to allow assumptions of maximum efficiency in the business however in reality as seen in the 2020-2022 accounts there will be some losses.
- For future analysis of the enterprise would be useful to have break-down of 'other beef sundry costs' as it is the highest attributer to variable costs for the beef enterprise.

Sheep – Gross Margin

Sheep Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Sales									
Finished lambs	501	114	57114	507	116	58812	508	120	60960
Cull ewes	85	95	8075	89	98	8722	87	102	8874
Rams	1	120	125	1	130	130	1	135	135
Wool			328			328			328
			65642			67992			70297
Opening valuation									
Ewes	393	70	27510	398	70	27860	399	70	27930
Rams	7	150	1050	7	150	1050	7	150	1050
Ewe lambs	90	140	12600	90	140	12600	92	140	12880
			41160			41510			41860
Transfers in									
Transfers out									
Purchases									
Rams	1	500	500	1	550	550	1	600	600
			500			550			600
Closing Valuation									
Ewes	398	70	27860	399	70	27930	404	70	28280
Rams	7	150	1050	7	150	1050	7	150	1050
Ewe lambs	90	140	12600	92	140	12880	90	140	12600
			41510			41860			41930
ENTERPRISE OUTPUT			65492			67792			69767
Variable Costs									
Feed			1475			1475			1475
Vet & Med			1759			1759			1759
Home grown concentrates			1328			1328			1328
Home grown straw			1125			1125			1125
Other			4894			4894			4894
			10581			10581			10581
GROSS MARGIN			54911			57211			59186
GROSS MARGIN per/head			112			115			118

Notes -

- Rearing percentage was calculated using number of total lambs in year 2022/ number of ewes, this was 150% - value has been used to calculate an approximate lamb crop for all three years in the budget.
- Replacement ratio of rams 1:1 each year, as ewe flock size is being kept the same assume no need for extra rams to cover the flock than present number.
- Ewe culling rate for all three years is between 20-25% of opening flock valuation – same as the AHDB recommendations.

Wheat – Gross Margin

Wheat Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Sales									
Grain	16	175	2800	16	190	3040	16	205	3280
			2800			3040			3280
Opening valuation									
Crop (ha) in ground	20	207	4140	20	221.5	4430	20	221.5	4430
Grain for feed	25	175	4375	25	192.25	4806	25	192.25	4806
			8515			9236			9236
Transfers in									
Transfers out									
Grain	116	195.25	22649	116	191.25	22185	116	213.05	24714
Straw	80	60	4800	80	60	4800	80	60	4800
Closing Valuation			27449			26985			29514
Crop (ha) in ground	20	221.5	4430	20	221.5	4430	20	221.5	4430
Grain for feed	25	192.25	4806	25	192.25	4806	25	192.25	4806
			9236			9236			9236
ENTERPRISE OUTPUT			30970			30025			32794
Variable Costs									
Fertiliser			2750			2750			2750
Seed			2306			2306			2306
Sprays			4697			4697			4697
Harvest contractor			958			958			958
Other crop costs			317			317			317
			11028			11028			11028
GROSS MARGIN			19942			18997			21766
GROSS MARGIN per hectare			997			950			1088

Notes –

- Assumed crop area has remained the same as previous years at 35ha
- Calculated costs in line with inflation – fertiliser cost is most uncertain due to recent drop in prices at start of 2023
- Value of crop in ground and grain been taken from the UK future market predictions as at this current time most accurate figure for predicting foreseeable value
- Transfers out remained the same as the same livestock units are on the holding due to reduction in beef and increase of dairy heifers

Oats – Gross Margin

Oats Gross Margin	2023			2024			2025		
	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Sales									
Grain	12	175	2100	12	175	2100	12	185	2220
			2100			2100			2220
Opening valuation									
Crop in ground (ha)	15	155	2325	15	160	2400	15	165	2475
Grain for feed	48	175	8400	48	180	8640	48	180	8640
			10725			11040			11115
Transfers in									
Transfers out									
Grain	77	180	13860	77	180	13860	77	180	13860
Straw	60	60	3600	66	60	3960	66	60	3960
			17460			17820			17820
Closing Valuation									
Crop in ground (ha)	15	160	2400	15	165	2475	15	170	2550
Grain for feed	48	180	8640	48	180	8640	48	180	8640
			11040			11115			11190
ENTERPRISE OUTPUT			19875			19995			20115
Variable Costs									
Fertiliser			3457			3457			3457
Seed			715			715			715
Sprays			1321			1321			1321
Harvest contractor			688			688			688
Other crop costs			123			123			123
			6304			6304			6304
GROSS MARGIN			13571			13691			13811
GROSS MARGIN per hectare			905			913			921

Notes

- Assume same reasons as given in the wheat gross margin above

Forage – Gross Margin

Forage	2023			2024			2025			
	Sales	QTY	£	TOTAL	QTY	£	TOTAL	QTY	£	TOTAL
Opening valuation										
Silage in store	2200	25	55000	2000	25	50000	2100	25	52500	
			55000			50000			52500	
Transfers in										
Transfers out										
Closing Valuation										
Silage in store	2000	25	50000	2100	25	52500	1950	25	48750	
			50000			52500			48750	
ENTERPRISE OUTPUT			-5000			2500			-3750	
Variable Costs										
Fertiliser			47584			47584			47584	
Seed			1375			1375			1375	
Sprays			785			785			785	
Contractor			7891			7891			7891	
			57635			57635			57635	
GROSS MARGIN			-62635			-55135			-61385	
GROSS MARGIN per tonne			-30			-27			-30	

Notes –

- Same amount of forage needed as the same livestock units remain on the farm throughout the 3 years
- Variable costs kept the same as currently very high so hopefully this reflects the *highest* costs the enterprise could face, if these costs decrease gross margin profit of the enterprise has ability to increase
- No sales of forage as it is all utilised on the farm by livestock

Gross Margin Profit

Enterprise	2022	2023	2024	2025
Dairy	£ 388,926	£ 467,810	£ 624,919	£ 677,145
Heifer	£ 18,279	£ 22,064	£ 24,984	£ 32,229
Beef	£ 57,404	£ 22,954	£ 23,244	£ 32,383
Sheep	£ 54,354	£ 54,911	£ 57,211	£ 59,186
Wheat	£ 19,316	£ 19,942	£ 18,997	£ 21,766
Oats	£ 15,555	£ 13,571	£ 13,691	£ 13,811
Forage	-£ 46,385	-£ 62,635	-£ 55,135	-£ 61,385
TOTAL GROSS MARGIN	£ 507,449	£ 538,617	£ 707,911	£ 775,135
Overheads	£ 372,846	£ 340,349	£ 339,207	£ 333,511
BPS	£ 38,497	£ 38,497	£ 38,497	£ 38,497
Other income	£ 4,319	£ 2,612	£ 2,612	£ 2,612
Income from energy generation	£ 8,718	£ 8,718	£ 8,718	£ 8,718
Profit/loss	£ 186,137	£ 248,095	£ 418,531	£ 491,451

Trading Profit and Loss Budget	2022	2023	2024	2025
Revenue				
Milk	494652	573738	724391	771691
Milk consumed	4338	4912	6422	7142
Cows sales	29057	25830	32292	35802
Bull sales	750	750	800	800
Heifer sales	0	0	0	19800
Calf sales	13500	22500	33750	39375
Store sales	18900	14700	38850	40950
Finished cattle sales	151392	84992	58432	62416
Finished lambs	58482	57114	58812	60960
Cull ewes	8370	8075	8722	8874
Rams	130	125	130	135
Wool	328	328	328	328
Grain	4600	4900	5140	5500
BPS	38497	38497	38497	38497
Other income	4319	2612	2612	2612
Income from energy generation	8718	8718	8718	8718
TOTAL REVENUE	836033	847791	1017896	1103600
Opening trading valuations	463942	463100	479986	496611
Closing trading valuations	463100	479986	496611	494806
Movement in valuations	-842	16886	16625	-1805
	835191	864677	1034521	1101795
Variable costs				
Feed	123131	123131	123131	123131
Vet and Med	17393	17393	17393	17393
Livestock enterprise consumables	56742	56742	56742	56742
Fertiliser	53791	53791	53791	53791
Seed	4396	4396	4396	4396
Sprays	6803	6803	6803	6803
Harvest contractor	9537	9537	9537	9537
Other crops costs	440	440	440	440
Livestock purchases	3975	4000	4550	4600
TOTAL	276208	276233	276783	276833
Overheads				
Professional fees	8770	8770	8770	8770
Fuel	20830	20830	20830	20830
Contract and hire	1395	1395	1395	1395
Machinery repairs	12581	12581	12581	12581
Vehicle tax and insurance	3150	3150	3150	3150
Insurance	11339	11339	11339	11339
Labour	127369	127369	127369	127369
Water	4281	4281	4281	4281
Electricity	11337	11337	11337	11337
Telophone	2164	2164	2164	2164
Office & sundry costs	6754	6754	6754	6754
Woodchip	5000	5000	5000	5000
Building repairs	9082	9082	9082	9082
Overdraft interest	9750	9750	9750	9750
Bank charges	957	957	957	957
HP/ Finance Interest	2042	2042	2042	2042
Loan interest	35295	35295	35295	35295
Buildings depreciation	44250	19153	19153	19153
Machinery depreciation	56500	49100	47957	42262
TOTAL	372846	340349	339207	333511
TOTAL EXPENDITURE	649054	616582	615990	610344
Profit/loss	186137	248095	418531	491452

Balance Sheet

Balance Sheet	2022	2023	2024	2025
Fixed Assets				
Land	2500000	2500000	2500000	2500000
Buildings	335250	363909	344756	325603
Machinery	508500	441900	431617	380355
Dairy cows	185600	190400	213600	216000
Ewes	41160	41510	41860	41930
Cash at Bank	0			
	3570510	3537719	3531833	3463888
Current assests				
Crops in ground and store	74240	70276	72851	69176
Beef livestock	82600	85800	83800	83200
Heifers	79500	92000	84500	84500
Debtors	52291	47811	60366	64308
Cash at Bank			210420	579960
	288631	295888	511937	881144
Current Liabilities				
Creditors	4560	6572	6572	6572
HP lease finance	27890	27890	27890	27890
Overdrafts	213872	23178		
	246322	57640	34462	34462
Current assets less current liabilities	42309	238248	477476	846682
	3612819	3775967	4009309	4310570
Long term liabilites				
Loans	666047	590900	515753	440606
Loan - new building	0	47813	35381	22950
	666047	638713	551134	463556
Net Worth	2946772	3137255	3458174	3847014

Notes:

- Land value remains the same as no land is purchased and sold in the 3-year period and unlikely that Ms Powell will have it valued during that time
- Assume debtors are milk from Dairy enterprise
- Due to initial investment of shed and delay in increasing heifers for dairy enterprise it is not until 2025 that the increase of cash at bank is significantly noticeable
- Cash at Bank has ability to be lower if Ms Powell requires higher amounts of capital expenditure to invest in the business further

Reconciliation

Reconciliation of Opening and Closing Net Worth	2022	2023	2024	2025
Opening Net Worth	2799419	2946773	3137256	3458175
Profit	186137	248095	418531	491452
Tax and National Insurance	0	0	0	0
Non Cash Receipts/Personal Use	4338	2612	2612	2612
Private Drawings	34445	55000	95000	100000
Closing Net Worth	2946773	3137256	3458175	3847015
Reconciliation of Profit and Net Cash Flow				
Profit	186137	248095	418531	491452
Opening Trading Valuations	463942	463100	479986	496611
Closing Trading Valuations	463100	479986	496611	494806
Depreciation	100750	68253	67111	61415
Opening Debtors	31753	52291	47811	60366
Opening Creditors	5419	4560	6572	6572
Closing Debtors	52291	47811	60366	64308
Closing Creditors	4560	6572	6572	6572
Non Cash Receipts/Personal Use	4338	2612	2612	2612
Capital Expenditure	240000	47813	39174	15500
Capital Revenue	10000	17500	1500	24500
New Loans		47813		
Mortgage Repayments	52809	75147	87578	87578
Private Drawings & Tax	34445	55000	95000	100000
Tax and National Insurance				
Private Income				
Net Cash Flow	-55260	190694	233598	369539

Notes:

- New building paid for out of the profit for year 2023
- All interest worked out using percentages from previous year
- Non cash receipts value of the 2020-2022 average

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