



Slurry Wizard ~ Slurry Data Entry

Stores, yard and roof rainfall, parlour washings and wash water entry

Baseline farm data

Farm name / reference	Lower Fawnog
Total farmable area (hectares)	142 Ha
Slurry store 10 figure grid reference (e.g. SE3548629596)	SJ2172615299
Cattle in herd/ pig herd size (includes calves, heifers, bulls, sows, finishers etc)	180 dairy cows
Cows in milk	170
Milk yield/cow	7000 litres
Depreciation buildings (%)	5 %
Interest rate (%)	6.75 %
Water cost (£m3)	1.8 £m3
Slurry spreading cost (£/cubic metre)	3.0 £m3
Water storage cost (£/cubic metre)	85.0 £m3
Divert water cost (£/square metre)	5.0 £m2
Roofing cost (£/square metre)	120.0 £m2
Slurry store cost (£/cubic metre)	75.0 £m3

Slurry storage capacity for earth bank stores

	Total Depth Do NOT deduct freeboard from the total depth	Slurry store bank slope*	Top length	Bottom length	Top width	Bottom width	Total volume	750mm freeboard	Working volume	Surface area	Tick if Covered Store	Surface area to store (m2)
	(m)											
Store 1		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 2		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 3		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 4		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 5		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 6		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 7		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 8		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 9		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
Store 10		Bank slope of 1:1 (45 degrees)		0		0	0	0	0	0	<input type="checkbox"/>	0
							Totals	0	0	0		0
							Total area	0				

*Slope factor: click on cell for options

Earth bank lagoons must have 750mm of freeboard to protect banks

Slurry storage capacity for rectangular & circular tower stores

	Length (m)	Width (m)	Circumference of circular store (m)	Diameter of circular store (m)	Depth (m) (less 0.3m freeboard)	Capacity (m3)	Surface area (m2)	Surface area to store (m2)	Tick if Covered Store
Store 1	34.78	14.02			2.6	1268	488	488	<input type="checkbox"/>
Store 2	40.13	18.05			2.7	1956	724	724	<input type="checkbox"/>
Store 3	30	18.2			4.8	2621	546		<input type="checkbox"/>
Store 4					0	0	0	0	<input type="checkbox"/>
Store 5					0	0	0	0	<input type="checkbox"/>
Store 6					0	0	0	0	<input type="checkbox"/>
Store 7					0	0	0	0	<input type="checkbox"/>
Store 8					0	0	0	0	<input type="checkbox"/>
Store 9					0	0	0	0	<input type="checkbox"/>
Store 10					0	0	0	0	<input type="checkbox"/>
Store 11 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 12 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 13 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 14 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 15 - circular				0.0		0	0	0	<input type="checkbox"/>
Total existing capacity						5845	1758	1212	

Freeboard : reduce the depth to allow for freeboard (0.3 metres for a steel or concrete store)

Slurry storage capacity for slurry bags

	Volume (m3)
Store 1	
Store 2	

Store 3	
Store 4	
Store 5	
Store 6	
Store 7	
Store 8	
Store 9	
Store 10	
Total bag volume	0

Slurry separator

Do you operate a separator for the slurry entering the store(s)	No
% reduction in slurry	

Adjust the % to reflect the average reduction in slurry volume (refer to manufacturers guidance)

Parlour washings to slurry store

Parlour washings to slurry store	Yes
Parlour washing litres per cow per day (l/hd/d)	20

Note: Suggested 5 to 15 l/hd/d robotic milkers (check with manufacturer). 20 l/hd/d low pressure system. 30 l/hd/d high pressure system.

Pig wash water to slurry store

Pig wash water to slurry store	
Do you want to use preset NVZ wash water values?	

Please select from drop-down list

Please select from drop-down list

Pigs	NVZ Preset Values Wash water l/place/day	User Entry Values Wash water l/place/day	User Entry Values Wash water total l/day
1 sow place inc. litters - Litter up to 7kg - With syn amino acid	1.43		
1 sow place inc. litters - Litter up to 7kg - No syn amino acid	1.43		
Dry sow - Above 150kg	0.08		
Weaner place - 7 to 13kg	0.28		
Weaner place - 13 to 31kg	0.37		
Grower place - 31 to 66kg - Dry fed	0.27		
Grower place - 31 to 66kg - Liquid fed	0.27		
Finisher place - Over 66kg - Dry fed	0.23		
Finisher place - Over 66kg - Liquid fed	0.23		
Maiden gilt place - Over 66kg	0.08		
Boar - 66kg to 150kg	0.08		
Boar - Over 150kg	0.08		

Uncovered areas of dirty yards, silage silos and earth bank surrounds to slurry store

	Length (m)	Width (m)	Area (m2)
Yard 1			692
Yard 2			1228
Yard 3			2312
Yard 4			0
Yard 5			0
Yard 6			0
Yard 7			0
Yard 8			0
Yard 9			0
Yard 10			0
Yard 11			0
Yard 12			0
Yard 13			0
Yard 14			0
Yard 15			0
Yard 16			0
Yard 17			0
Yard 18			0
Yard 19			0
Yard 20			0
Total yard area			4232

Note: For each yard please either enter yard dimensions and the tool will calculate the yard area, or if yard area known please enter the yard area in m2.

Roof water area to slurry store

	Length (m)	Width (m)	Area (m2)
Roof 1			0

Roof 2			0
Roof 3			0
Roof 4			0
Roof 5			0
Roof 6			0
Roof 7			0
Roof 8			0
Roof 9			0
Roof 10			0
Roof 11			0
Roof 12			0
Roof 13			0
Roof 14			0
Roof 15			0
Total roof area			0



Slurry Wizard ~ Livestock Data Entry

Livestock	Age	Liveweight/milk yield (litres)	Number of livestock	% collected as slurry	Annual N output kg/year	Daily excreta (l/day)	Total collected as slurry (l/day)	Total N (kg/year)
Cattle								
Dairy Cow	After first calf	High (> 9000)		100%	115.0	64.00	0	0
Dairy Cow	After first calf	Medium (6000-9000)	180	100%	101.0	53.00	9540	18180
Dairy Cow	After first calf	Low (< 6000)		100%	77.0	42.00	0	0
Dairy heifer replacement	From 12 months to calving	-		100%	61.0	40.00	0	0
Dairy heifer replacement	2 to 12 months	-		100%	29.0	20.00	0	0
Beef Suckler	Over 24 months	Large (> 500)		100%	83.0	45.00	0	0
Beef Suckler	Over 24 months	Small (< 500)		100%	61.0	32.00	0	0
Grower	Over 24 months	-		100%	50.0	32.00	0	0
Grower	12 to 24 months	-		100%	50.0	26.00	0	0
Grower	2 to 12 months	-		100%	28.0	20.00	0	0
Bulls Beef	Over 2 months	-		100%	54.0	26.00	0	0
Bulls for breeding	Over 24 months	-		100%	48.0	26.00	0	0
Bulls for breeding	2 to 24 months	-		100%	50.0	26.00	0	0
Calf	Under 2 months	-		100%	1.4	7.00	0	0
Total number of cattle			180		Totals for cattle		9540	18180
Pigs								
1 sow place inc. litters	Litter up to 7kg	With syn amino acid		100%	16.0	11.00	0	0
1 sow place inc. litters	Litter up to 7kg	No syn amino acid		100%	18.0	11.00	0	0
Dry sow	Above 150kg	-		100%	17.5	8.67	0	0
Weaner place	7 to 13kg	-		100%	1.0	1.00	0	0
Weaner place	13 to 31kg	-		100%	4.2	1.67	0	0
Grower place	31 to 66kg	Dry fed		100%	7.7	3.33	0	0
Grower place	31 to 66kg	Liquid fed		100%	7.7	6.00	0	0
Finisher place	Over 66kg	Dry fed		100%	10.6	4.33	0	0
Finisher place	Over 66kg	Liquid fed		100%	10.6	8.67	0	0
Maiden gilt place	Over 66kg	-		100%	11.1	4.33	0	0
Boar	66kg to 150kg	-		100%	12.0	5.00	0	0
Boar	Over 150kg	-		100%	17.5	8.67	0	0
Total number of pigs			0		Totals for pigs		0	0
Sheep								
Ewe	Lamb under 6 months	<60kg		100%	7.60	3.33	0	0
Ewe	Lamb under 6 months	>60kg		100%	11.90	5.00	0	0
Lamb	6 to 9 months	-		100%	0.50	1.67	0	0
Lamb	Over 9 months	-		100%	0.70	1.67	0	0
Goats								
Goat	-	-		100%	15.00	3.67	0	0
Deer								
Breeding hinds	-	-		100%	15.20	5.00	0	0
Other deer	-	-		100%	12.00	3.67	0	0
Horses								
Horse	-	-		100%	21.00	24.67	0	0
Layers								
Replacement layer pullets	Under 17 weeks	-		100%	0.21	0.04	0	0
Laying hens - cages	Over 17 weeks	-		100%	0.40	0.12	0	0
Laying hens - free range	Over 17 weeks	-		100%	0.46	0.10	0	0
Broilers								
Broiler places	-	-		100%	0.33	0.05	0	0
Broiler breeder pullets	Under 25 weeks	-		100%	0.29	0.04	0	0
Broiler breeders	Over 25 weeks	-		100%	0.70	0.11	0	0
Turkeys								
Male	-	-		100%	1.23	0.14	0	0
Female	-	-		100%	0.91	0.11	0	0
Other								
Ducks	-	-		100%	0.75	0.08	0	0
Ostriches	-	-		100%	1.40	0.00	0	0
Totals for all animal types							9540	18180



Slurry Wizard ~ Slurry Report

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Farm Nitrogen Loading

128 Kg Nitrogen per Ha

NB This is the nitrogen loading BEFORE the import or export of manure

Action points	
Number of months of storage	6
Maximum likely 2 day rainfall	71
Recommended reception pit size (m3)	325
Farming Rules for Water recommendations	You comply with the guidance for minimum storage of 6 months
Roof water collection recommendations	
Slurry store cover recommendations	

		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Days		30	31	30	31	31	28	31	30	31	30	31	31	365 days
Total cattle excreta as slurry (m3)		286	296	286	296	296	267	296	286	296	286	296	296	3482 m3
% Cattle excreta to slurry store (100% for housed dairy, 20 to 50% if housed overnight, 10% for grazed dairy)		100	100	100	100	100	100	100	100	100	100	100	100	
Total pig excreta as slurry (m3)		-	-	-	-	-	-	-	-	-	-	-	-	
% Pig excreta to slurry store		100	100	100	100	100	100	100	100	100	100	100	100	
Total other livestock excreta as slurry (m3)		-	-	-	-	-	-	-	-	-	-	-	-	
% Other excreta to slurry store		100	100	100	100	100	100	100	100	100	100	100	100	
Excreta to slurry store (m3)		286	296	286	296	296	267	296	286	296	286	296	296	3,482 m3
Slurry separated (m3)	No	-	-	-	-	-	-	-	-	-	-	-	-	- m3
Parlour washings (m3)	Yes	102	105	102	105	105	95	105	102	105	102	105	105	1,241 m3
Pig wash water (m3)	0.0	-	-	-	-	-	-	-	-	-	-	-	-	- m3

		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Grid reference average rainfall (mm)		75	88	88	108	96	67	63	59	54	55	39	54	848 mm
Own average rainfall (mm)														mm
Adjusted likely rainfall, (mm)		86	102	101	124	111	78	73	68	62	64	45	63	975 mm

		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Storage required		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	
Yard run off area to slurry store (m3)	4232 m2	364	430	426	525	468	328	309	288	264	269	190	265	4,126 m3
Slurry store rainfall to store (m3)	1212 m2	104	123	122	150	134	94	88	83	76	77	54	76	1,182 m3
Roof water area to store (m3)	0 m2	-	-	-	-	-	-	-	-	-	-	-	-	- m3
Total cubic metres (m3)		857	955	936	1,076	1,003	785	798	-	-	-	-	-	6,410 m3
Cumulative production (m3)		857	1,811	2,748	3,824	4,827	5,611	6,410	6,410	6,410	6,410	6,410	6,410	6,410 m3
Total storage capacity (m3)	5845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845	5,845 m3
Capacity less production (m3)		4,988	4,034	3,097	2,021	1,018	234	-565	-565	-565	-565	-565	-565	-565 m3

0

Cost/Benefits	Net Benefit £/year
Divert roof water	0.0
Divert roof water & harvest	0.0
Roof dirty yard	-28103.4
Roof dirty yard & harvest water	-62092.4

The cost/benefit is based on a slurry storage cost of £75/cubic metre