Slurry Production

	Volume of slurry produced per animal per month (m^3)
Dairy Cow 6000 – 9000 litres	**1.59** (350 galls.)
Dairy Cow 9000 litres +	**1.92** (422 galls)
Heifer 2 – 12 months	**0.6** (132 galls)
Heifer 12 months - Calving	**1.2** (265 galls)

So, In a 5 month housing period = 8m^3 per cow or 19m^3 per cow per year

In addition:

Parlour washings: 20 – 30 litres per cow per day

= **11m^3** per cow per year

Rainwater: 100 cow shed produces 1200m^3 per year

= **12m^3** per cow per year

Nitrogen content
from RB209

	DM%	Total N (Kg/M^3)	% readily available
Cattle Slurry	**6.0**	**2.6**	**50**
Dirty Water	0.5	0.5	60
Strainer Box Slurry	1.5	1.5	50
Weeping Wall Slurry	3.0	2.0	50
Mechanically Separated Slurry	4.0	3.0	50
Fibre Element	20	4.0	25
FYM	25	6.0	10

Nitrogen Produced in slurry
from a 200 cow herd, each year.

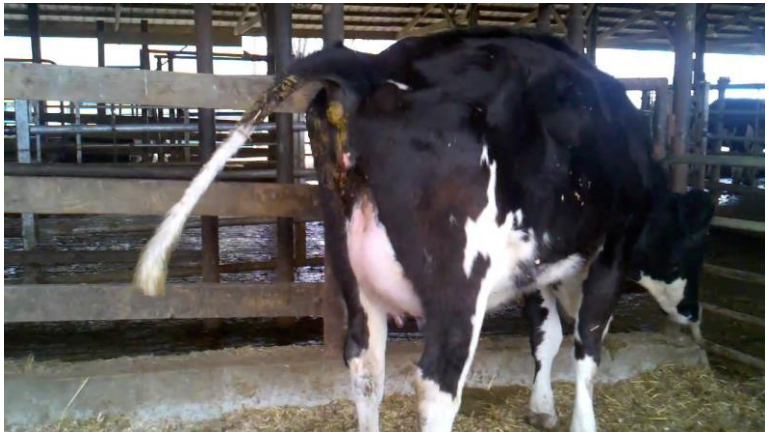
20.2 T Nitrogen

= 58.5 Tonnes Ammonium Nitrate

@ £292/T

= **£17,083 Per annum!**

£85 per cow per year



Nutrient Values - P & K

	Total Phosphate (kg P_2O_5/T)	% available	Total Potash (kg K_2O/T)	% available	Total Sulphur (kg SO_3/T)
6% Slurry	**1.2**	**50**	**2.5**	**90**	**0.7**
Dirty water	0.1	50	1.0	100	0.1
Strainer Box slurry	0.3	50	1.5	90	N/A
Weeping Wall slurry	0.5	50	2.3	90	N/A
Mechanically separated slurry	1.2	50	2.8	90	N/A
Fibre Fraction	2.0	50	3.3	90	N/A

Sampling organic materials

ahdb.org.uk/rb209

Sample results

nrm laboratories

DAVID BALL

SLURRY AS SPREAD.

G333

Please quote above code for all enquiries

SLURRY/SLUDGE ANALYSIS RESULTS (Metric Units)

Sample Reference : LIQUID DIGESTATE

Sample Matrix : SLURRY/SLUDGE

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

Laboratory References
Report Number 96942
Sample Number 9812

Date Received 15-MAR-2010
Date Reported 17-MAR-2010

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand on a fresh weight basis	Units	Result	Amount per fresh tonne or m3	Amount applied at an equivalent total Nitrogen application of... 170 kg N/ha	250 kg N/ha	Units
pH		8.03				
Total Solids	%	3.62	36.20	2137	3143	kg DM
Total Nitrogen	% w/w	0.288	2.88	170	250	kg N
Ammonium Nitrogen	mg/kg	1427	1.43	84.24	123.88	kg NH4-N
Nitrate Nitrogen	mg/kg	<0.1	< 0.01			kg NO3-N
Total Phosphorus (P)	% w/w	0.027	0.62	36.50	53.67	kg P2O5
Total Potassium (K)	% w/w	0.182	2.18	128.92	189.59	kg K2O
Total Magnesium (Mg)	% w/w	0.025	0.42	24.50	36.03	kg MgO
Total Sulphur (S)	% w/w	0.013	0.33	19.18	28.21	kg SO3
Total Copper (Cu)	mg/kg	2.83	< 0.01			kg Cu
Total Zinc (Zn)	mg/kg	6.71	0.01	0.40	0.58	kg Zn
Total Sodium (Na)	% w/w	0.061	0.82	48.54	71.38	kg Na2O
Total Calcium (Ca)	mg/kg	761	0.76	44.92	66.06	kg Ca
Equivalent field application rate		—	1.00	59.03	86.81	tonnes or m3 / ha

The above application details are for guidance. Application of organic manures should be in accordance with the Defra Code of Good Agricultural Practice and if applicable the NVZ rules. To get the most benefit from your organic manures it is recommended that you follow the principles as set out in the organics manure section of Defra's RB209 or as directed by a FACTS qualified adviser.

Released by Andrew Chase Date 17/03/10

Nutrient Value – Typical 6%DM Cattle Slurry

Element	Typical Nutrient Content Kg/M^3	Fertiliser cost in Bags £/T	Slurry Value £/M^3
Nitrogen	2.6	292	2.20
Phosphate	1.2	272	0.71
Potash	3.2	246	1.03
Sulphur	0.7	30	0.04
Total			**3.98** £18.09/1000galls

So: An application of 30m^3/Ha (2650 gall/ac.) is worth **£119.10 / Ha. (£48.20/ac.)**

Nutrient Value – Typical 25%DM Cattle FYM

Element	Typical Nutrient Content Kg/T	Fertiliser cost in Bags £/T	Slurry Value £/T
Nitrogen	6	292	5.08
Phosphate	3.2	272	1.89
Potash	9.4	246	3.85
Sulphur	2.4	30	0.12
Total			**10.94**

So: An application of 20T/Ha (8 T/ac.) is worth

£219.89 / Ha. (£88.58/ac.)

Slurry storage

Slurry store covers

Up to 60% reduction in N losses

Up to 80% reduction in N losses

Surface applications

- Splash plate applications can lose up to 80% of the slurry N content to the environment
- Equivalent to **£50/ha (£20/acre) for a 30 m^3/ha application**