

Appendix V - Neat Slurry Arising from Livestock in Co Kildare

Estimated Quantities of Excreta Produced.

The quantities of neat slurry produced by the different classes of livestock (average weight animals) are set out below. (Ref: - Department of Agriculture, Food and Forestry, Revised quantities of farm waste and storage requirements, September 1994)

Description of Animal	-	Volume Litres/Week	-
Dairy cow - 560 kg live weight		315	
Suckler cow - 500 kg live weight		280	
Beef cattle - 450 Kg live weight	-	250	-
Young cattle - 250 kg live weight		140	
Calf - 140 kg live weight		80	
<u>Finishing pig - average live weight 58 kg</u>	2.0 to 1	20	These figures are based on a daily intake of 1.95 kg of meal/pig
water/solids ratio in feed	2.5 to 1	27	
	3.0 to 1	34	
	3.5 to 1	41	
	4.0 to 1	48	
<u>Lactating sow and litter</u>	3.0 to 1	97	These figures are based on a daily intake of 5.5 kg of meal/pig
water/solids ratio in feed	3.5 to 1	115	
	4.0 to 1	135	
<u>Dry sow/boar</u>	3.5 to 1	53	These figures are based on a daily intake of 2.5 kg of meal/pig
water/solids ratio in feed	4.0 to 1	62	
	4.5 to 1	70	
<u>Gilt*</u>	3.0 to 1	44	These figures are based on a daily intake of 2.5 kg of meal/pig
<u>Weaner</u>	3.0 to 1	15	These figures are based on a daily intake of 0.85 kg of meal/pig
Lambs - finishing	25 - 40 kg live weight	13	-
Mountain ewes	40 - 50 kg live weight	17	
Lowland ewes	60 - 80 kg live weight	28	
Laying hens (100 places)	-	106	This is the average figure per crop (5 per year)
Broilers (100 places)	-	23	
Turkeys	-	67	This is the average figure per crop (2 to 3 per year)
Duck	-	38	This is the average figure per crop (5 to 6 per year)
Horse	-	193	-

<u>Red Deer</u> Mature Hind (96 - 120 kg) Calf housed for feeding (40 - 60 kg)	-	42 16	-
<u>Fallow Deer</u> Doe (50 kg) Calf housed for feeding (20 - 30 kg)	-	16 8	-
<u>Japanese Sika</u> Mature Hind (55 - 60 kg)	-	17	-
<u>Goat</u>	-	20	-
<u>Rabbit (Commercial)</u>	-	1.6	-
<u>Rabbit (Angora)</u>	-	2.1	-
<u>Greyhounds</u>	-	15	-

* The water source can be either drinking water, whey, skim milk, silage effluent etc., or a combination of these.

Table 3 Detailed Quantities of Neat Slurry Produced in Co Kildare and the Assumptions Made

Livestock Type	No of Farms	No of animals	Neat Slurry L/week	Total m3/annum	Assumptions
<u>Total Cattle</u>	2,350	140,021	-	-	Housed indoors an averaged of 20 weeks per annum
<u>Cattle kept for breeding purposes</u>					
Bulls	340	452	315	2848	
Cows :- Dairy	470	18,893	315	119026	
Cows :- Other	1,100	12,488	280	69933	
Heifers in calf:- Dairy	270	2,500	250	12500	
Heifers in calf:- Other	210	1,158	250	5790	
			Total	210096	
<u>Other Cattle</u>					Housed indoors an average of 20 weeks per annum.
3 years old and upwards	280	91,191	315	57903	
2 years old and under 3 years	1,230	38,535	315	242771	
1 year old and under 2 years	1,530	32,745	250	163725	
Under 1 year	1,440	24,059	140	67365	
			Total	531764	

Total Sheep	1,100	310,346			
Sheep kept for breeding purposes					Kept outdoors all year round
Rams	960	4,585	28		
Ewes (2 years and over)	1,040	137,057	28		Housed indoors for 6 wks
Ewes (Under 2 years)	390	18,953	17	23026	Kept outdoors all year round
Other Sheep					
1 year and over	140	3,206	28		
Under 1 year	1,030	146,545	17		Kept outdoors all year round
					Kept outdoors all year round
-			Total	23026	-
Total Goats	140	373	20	-	-
Total Pigs	50	26,297			
Pigs kept for breeding purposes					Housed indoors all year round
Boars	10	215	62	693	
Female breeding pigs ⁴	30	3,727	115	2287	Housed indoors all year round
Other pigs classified by liveweight					
20 kg and over	20	14,911	34	26363	
Under 20 kg	20	7,444	15	5806	Housed indoors all year round
Total	30	22,355	-		Housed indoors all year round
-			Total	55150	-
Farmed Deer	10	44	21	-	-
Total Horses and Ponies	520	5,904			
Thoroughbred horses and ponies	210	1,699	193	8526	Housed indoors at night (ie. 26 weeks of the year)
Brood mares	200	2,328	193	11682	
Other					
Other horses and ponies	170	541	193	-	
Brood mares	340	1,336	193	-	Kept outdoors all year round
Other					
Mules, jennets and asses	80	114	-	-	Kept outdoors all year round
-			Total	20207	-

<u>Total Poultry</u>	490	94,819	106/100 hens		
Ordinary Fowl					
Laying Stock	440	72,589	23/100 hens	4001	
Table birds	10	990		12	
Breeding birds	30	19023	106/100 hens	1049	Housed indoors all year round.
Other Poultry	140	2,217	50/100 turkeys	58	
-	-	-	Total	5119	-

Other Assumptions

1. Cattle and cows may be housed on slatted units or straw litter. The above neat slurry quantities assumes that all cattle and cows are housed in slatted units. Straws will absorb a lot of the urine. However, no provision has been made concerning any quantity of extraneous water entering the storage tanks. Assume that the amount of urine absorbed by the straw is offset by the collection of the extraneous water and that no straw is used.
2. The Department of Agriculture, Food and Forestry have produced storage requirements for slurry (cattle) over periods of 16, 20, 24 and 26 weeks. FTW have assumed a 20 week storage period taking into account the rainfall quantities in Co. Kildare.
3. The Department of Agriculture, Food and Forestry have produced storage requirements for slurry (sheep) over periods of 10, 40, 70 and 100 days. FTW have assumed that only ewes over 2 years old will be kept indoors for a period of 6 weeks. This assumes that they are brought indoors for the lambing period.
4. Straw is probably used in most sheep housing, however as stated in assumption 1 above this will be cancelled out by the quantity of extraneous water.
5. Pigs are assumed to be kept on concrete floors with no straw used for bedding.

