

MANURE MANAGEMENT

Prepared 9-1-17

ALKANA CORPORATION
Trostre Court
Bettws Newydd
Usk
Gwent
NP15 1HT

Holding No: 60/137/0114

CRN A0009532

ORGANIC MANURES 2017

CALCULATING THE AREA NOT AVAILABLE FOR SPREADING

Field Name	Ha's	Area Ha's	Ditches and Watercourses Length (m)	metres/1000 = ha	Other Red Areas (ha)	White Areas (ha)
Around Church	1.54	0.11	0	0	0	1.43
Big Redgates	13.05	11.85	0	0	0	1.2
Bottom Pond	9.53	9.53	0	0	0	0
Church Field	11.38	11.17	0	0	0	0.21
Coed Ringwood	9.29	8.88	0	0	0	0.41
Coed Shenkin	7.31	7.31	0	0	0	0
L Shape	8.13	7.90	0	0	0	0.23
LMR Banks	18.10	16.79	0	0	0	1.31
Little Redgates	4.27	4.27	0	0	0	0
Mile	7.89	7.87	0	0	0	0.02
Ox Pasture	8.56	8.48	0	0	0	0.08
Pond	10.92	10.64	0	0	0.2	0.08
Sale	13.46	13.46	0	0	0	0
Under Church	15.37	15.20	0	0	0	0.17
Llanerth 1	2.15	2.15	0	0	0	0
Llanerth 2	2.54	2.54	0	0	0	0
Llanerth 3	2.29	2.29	0	0	0	0
River 1	4.05	3.80	0	0	0	0.25
River 2	7.19	7.19	0	0	0	0
River 3	6.84	6.84	0	0	0	0
River 4	7.98	7.98	0	0	0	0
River 5	2.07	2.02	0	0	0	0.05
Show 1	3.60	3.60	0	0	0	0
Show 2	13.25	13.25	0	0	0	0
Show 3	6.02	5.99	0	0	0	0.03
Windmill 1	4.81	4.74	0	0	0	0.07
Windmill 2	3.80	3.80	0	0	0	0
Windmill 3	3.21	3.05	0	0	0	0.16
Windmill 4	2.63	2.25	0	0	0	0.38
Golf Course	70.82	70.57	0	0	0	0.25
TOTAL Farm Area	282.05			0	0.2	5.14
Organic Farm Area Ha's		275.52				
Areas not available for spreading		5.34				

AREA AVAILABLE FOR SPREADING:

275.52

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2009

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Calculating Minimum Area of Land Needed

	5A No: of stock	5B Ha per stock unit for 170 kg/ha	5C Ha per stock unit for 250 kg/ha	5D Min area needed (ha)
1 Dairy Cow (550) kg	220	0	0.38	83.6
1 Grower/Fattener over 12 to 24 months (400 kg)	70	0	0.19	13.3
1 Follower/Young stock 6 to 12 months	50	0	0.05	2.5
1 Bull beef cattle 6 to 14 months	0	0	0.09	0
1 Calf (to 6 months)	30	0	0.03	0.9
1000 broiler places	130	0	1.98	257.4
TOTAL Ha's Required				357.7
Total (ha)				357.7

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Calculating the volume of slurry and dirty water produced

Type of Livestock	Body weight (kg)	Moisture Content (%)	2A Typical Volume (litres/day)	2B No: of stock	2C (litres/day)
1 dairy cow	(450-650)	90	53	220	11660
1beef bullock	400	90	32	0	0
1 beef bullock	200	90	16	0	0
1 beef bullock	180	90	13	0	0
1 calf (to 6 months)	100	90	7	0	0
1 mature sheep	65	85	4.1	0	0
1 lamb	35	85	1.1	0	0
Total daily production (litres)					11660
Yearly Production					365 4255900
M3					1590
L / day * 365 /1000					4255.9
Parlour Washings per 12 months					1425.6
No: Cows *6.48					

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ORGANIC MANURES 2017

Calculating the amount of excreta produced by livestock

Type of Livestock	Body weight (kg)	Moisture Content (%)	2A Typical Volume (litres/day)	2B No: of stock	2C (litres/day)
1000 broilers + litter	2500	40	30	130	3900
Total daily production (litres)					3900
Monthly Production					120900
YEARLY PRODUCTION					12
TOTAL PRODUCTION PER YEAR					1450.8

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ORGANIC MANURES 2010

**ASSESSING WHETHER EXTRA STORAGE IS NEEDED FOR
SLURRY AND DIRTY WATER**

Calculate the volume of available storage and enter into relevant boxes below.

Available slurry storage capacity = 3A m3

Available dirty water storage capacity = 3B m3

Available capacity for slurry and dirty water combined = 3C 1388 m3

Calculations

Square or rectangular stores

Length (m) x Width (m) x Depth (m) = Volume in cubic metres (m3)

Circular above ground stores

$3.142 \times \text{Radius (m)} \times \text{radius (m)} \times \text{Height (m)} = \text{Volume in cubic metres (m3)}$