

## Woodchip pad for out-wintering cattle at Porthamel Farm, Talgarth. Brecon

Report by Sarah Byford, BGS Immediate Past President.

On Wednesday 3<sup>rd</sup> February farmers from as far a field as Wiltshire visited Lower Porthamel Farm Talgarth, by kind permission of Joel Durrell for an HCC Open Day on Woodchip Pads..

The woodchip pad at Lower Porthamel Farm was installed in November 2008 and is used for out wintering 40+ organic beef finishing cattle. With dimensions of 33m x 35m this pad has the capacity for double this number. This winter Joel put 44 cattle on to the pad on 20<sup>th</sup> October and has removed two per week for slaughter – the average on the pad on any one day is 30.

The animals appeared reasonably clean, contented, and happy to lie for long periods. When the surface froze during the recent cold spell, the cattle showed no evidence of discomfort, although the recommendation is to remove cattle from the pad during freezing conditions, this did not prove necessary.

A concrete wall along the length of the top side of the pad provides shelter, the downside to this was evidence of the cattle favouring the area beneath the wall for loafing and lying - there was evidence of poaching here. Even distribution of the cattle over the whole of the pad is desirable if the lying surface is to stay clean. (A south facing site without shade would be ideal, as winds will promote surface drying.) A separate feed area is essential.



Joel uses the largest woodchip – (7.5 cm), 50 cm depth above plastic lining. If the pad surface becomes dirty (after a period of very dry or cold weather) a few cm of chip is scraped away and more chip added.

Rotovating the surface would prevent capping in dry weather – the disadvantage of this is sending the muck down and creating a slurry problem in the effluent, which should be more akin to dirty water.



The current research project on Joel's pad is collecting data on

- Effluent volume and quality
- Ammonia emissions

The effluent from the pad drains to a below ground slurry tank – the quality with animals on the pad is similar to that of dirty water. Samples of effluent collected and analysed for dry matter content, total-N , ammonium – N, total P and chemical oxygen demand. (COD)

#### Effluent quality from woodchip pad

Date	Dry matter%	Total N (mg/l)	Ammonium-N (mg/l)	COD (mg/l)
27/01/09	0.3	224	148	4401
04/02/09	0.4	222	115	3586
10/07/09	0.6	35	2	1406
21/07/09	0.1	50	12	1860
28/08/09	0.2	59	0.3	1843
19/10/09	0.2	25	1.2	1700
16/11/09	0.4	108	19	3700
27/11/09	0.3	77	16	2900
Typical dirty water	0.5	500	300	5000
Typical slurry	6.0	3000	1500	15000

Effluent volume – flow proportional sampling carried out using an overshot waterwheel, flow monitoring device. Effluent flow occurred soon after rainfall. Effluent volume was an average of c.35% of rainfall volume, indicating significant absorption of water within the woodchip

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