

## **Conditions of use in relation to the use of Recycle Manure Solids (RMS) as bedding for dairy cattle in Wales**

### **Introduction**

Article 36 of the Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 ("the ABP Regulations") enables the use of Recycled Manure Solids ("RMS") as animal bedding to the extent that you (as the operator) ensure the control of risks to public and animal health.

The Welsh Government is of the view that if RMS is used for cattle bedding in accordance with the conditions set out below, there will be no unacceptable risks to public and animal health. These conditions are based on research into RMS use on farms in England.

The use of RMS in a manner which results in unacceptable risks to public or animal health will result in the commission of an offence (pursuant to Regulation 17 of the Animal By-Products (Enforcement) (Wales) Regulations 2014 (S.I. 2014/517 (W.60)).

### **Conditions**

1. **RMS must only be produced using raw cattle manure/slurry from housing and/or yards**

Manure from other livestock species must not be included for the production of RMS, to avoid introducing external pathogens which may affect cattle health.

2. **Material that has been composted or digested must not be used**

The spores of certain bacteria, particularly those that are heat-resistant may be encouraged by composting. Too high a concentration of spores in milk can lead to losses during the manufacture of cheese and reduce the shelf life of pasteurised milk.

Putting manure through a digester will also increase temperatures, which can affect pathogen load. Until further information is available (so that the risks can be properly assessed), the Welsh Government considers that RMS produced from the output of a digester must not be used. Additionally, use of digestate which contains feedstock from non-farm sources could cause an additional unacceptable risk, and must not be used.

3. **RMS must only be used as bedding for cattle which are in the same epidemiological group as those cattle from which it is generated**

To minimise the risk of transfer of disease, RMS must originate from the unit on which it is used. Slurry or manure must not be moved between units either before or after processing.

An epidemiological group comprises animals which come into contact with each other directly or indirectly.

4. **RMS must not be moved between holdings**

Similarly, to reduce the risk of transferring pathogens, slurry or manure to be used to produce bedding must not be moved between holdings, either before or after processing.

5. **RMS must not be produced from manure/slurry of herds which are subject to official restriction for notifiable diseases.**

A list of notifiable diseases is given on Defra's website (<http://www.defra.gov.uk/animal-diseases/notifiable/>). The main notifiable disease of concern is Foot and Mouth disease, as the infective agent can occur in faeces and urine up to four days before clinical signs appear.

6. **RMS may only be made and used in herds that are Officially Tuberculosis Free (OTF) for Bovine TB**

RMS made from manure/slurry originating during a period of non-OTF status is potentially contaminated and must not be used after OTF status is regained.

7. **Manure from aborted cattle under brucellosis investigation must not be used as RMS**

On farms where RMS are being used for bedding, rigorous biosecurity is even more important in relation to suspected brucellosis cases.

8. **Other materials, such as birthing fluids and placental material, all manure from calving areas and waste milk must not be disposed of by adding these to manure/slurry going for RMS**

Afterbirth and birth fluids are a potential risk for disease transmission and should therefore not be disposed of in slurry at any time. Waste milk, subject to withdrawal period, must not be added to the slurry pool, as there is an increased risk of developing antibiotic resistance.

9. **There must be no shared equipment for the handling and processing of feed and RMS. If any equipment is shared (loaders etc.) it must be thoroughly cleaned between uses.**

This condition is to prevent cross contamination of feed or forage.

10. **Should any separation equipment be moved between different epidemiological units, it must be thoroughly cleaned and disinfected before moving and subsequent re-use.**

In mainland Europe, movement of contaminated equipment has been linked to transfer of pathogens from one farm to another.

11. **RMS must only be used as bedding for housed cattle over twelve months old**

Young stock are both more susceptible to infection and are more likely to shed pathogens in their faeces. Risks of disease transmission will be minimised by preventing calves less than twelve months old from having contact with manure/slurry from adult cattle. Any calves that are inadvertently born in areas bedded using RMS must be removed as soon as possible from that area and to a location where suitable alternative bedding is provided.

12. **Milk and Milk Products from herds using RMS must be pasteurised.**

All bedding materials are potential sources of contamination for milk. Micro-organisms and their spores can get on to the teat from the bedding and through the milking process end up in the milk bulk tank. As a precautionary measure, RMS must not be used on farms selling unpasteurised milk or milk products.

13. **RMS must be produced from a slurry separator unit, designed for the purpose, which produces manure solids of at least 34% Dry Matter (DM).**

Slurry is mechanically separated into a liquid fraction and a “solid” fraction, typically by using a screw or roller press action. The equipment needs to be capable of extracting sufficient water to make the solid fraction at least 34% DM. If the material is too wet (below 34%) it is unsuitable and must not be used for cattle bedding.

RMS must be used within 12 hours of its creation to avoid composting or digestion of the material and significant change to its nature and microbiological composition.

14. **RMS must only be used on cubicle beds, and not as a deep bed in loose housing pens or yards**

RMS must only be used in cubicles, either as a layer on top of mattresses, or as a cubicle bed up to 15 cm in depth. It must not be used in calving areas, due to the susceptibility of new-born calves to Johne's disease or other pathogens.

15. **RMS must not be prepared from the slurry/manure of cattle that;  
1) are undergoing treatment for disease, including the maximal withdrawal period for medicines that have been administered,  
2) have clinical signs of disease, or  
3) are known to be carriers of enteric pathogens e.g. if they have tested positive for salmonellosis.**
16. **RMS must not be made from the faeces of cattle that have been bought in to the herd from elsewhere, for a period of one month after their introduction.**
17. **RMS must not be made from manure/slurry produced in quarantine pens**

Bought-in cattle are likely to have different faecal flora and also immune status, so they could introduce new pathogens and also be more susceptible to those endemic in the herd.

## **RECOMMENDED BEST PRACTICES**

The recommendations in this section should be followed as current best practice.

- 1 Before considering use of RMS as cattle bedding, consult the latest research findings (see link in Additional Considerations section). You should also ask your vet to help with assessment of whether the system is suitable for your farm and your management system. Research has shown that, if the conditions and best practices set out in this document are followed, on most farms RMS works well as a cubicle bedding for adult cows, and promotes cattle health and welfare. However on some farms, it can result in significant and serious disease consequences and any use which results in unacceptable risks to public or animal health will result in the commission of an offence (pursuant to Regulation 17 of the Animal By-Products (Enforcement) (Wales) Regulations 2014 (S.I. 2014/517 (W.60)).
- 2 Users of RMS should actively monitor cow health and welfare, in particular intramammary health, and also bulk milk quality, as part of their veterinary herd health plan. The herd health plan should be regularly reviewed with your vet and the use of RMS should be modified or discontinued if there are signs that it is risking cattle health and welfare, or milk quality, or both.

3. Farm personnel should be made aware of the importance of personal hygiene during and following the handling of RMS.
4. There should be excellent cow preparation at milking time (e.g. pre-milking teat preparation and pre-dipping), sanitation of milking equipment and cow hygiene.
5. There should be excellent bedding/stall management, including:
  - a. adding RMS to the beds in limited quantities to allow further drying to take place,
  - b. managing beds to minimise 'heating' and therefore bacterial multiplication after application,
  - c. designing and managing beds to minimise contamination with urine and fresh faecal material, and
  - d. frequent removal (at least daily) of freshly soiled material from bedding).
6. Ventilation should be adequate and overstocking avoided, to ensure further drying of RMS once applied to bedding and to minimise the levels of ammonia in the housed atmosphere.
7. Water and/or solutions used in footbath wash should not be disposed of in the slurry/manure to be used as RMS bedding.
8. Herds should have a contingency plan that can quickly be put into operation should the use of RMS need to cease, such as loss of OTF status.

### ***Additional Considerations***

*Consult all relevant farm assurance schemes such as "Red Tractor" before deciding on whether to use RMS. Some farm assurance schemes require completion of a self-assessment checklist. The safe and legal use of RMS may be included in regular audit, with failure of compliance resulting in withdrawal of accredited status*

*The most up-to-date information and guidance on the ABP regulation can be found at: <http://gov.wales/topics/environmentcountryside/ahw/animal-by-products/?lang=en>*

*The results of studies in to the use of recycled manure solids can be found on the AHDB Dairy (formerly Dairy Co) website: [www.ahdb.org.uk](http://www.ahdb.org.uk)*