

Best Practice Information Sheet

Organic by-products

Sheet 3.0a

Storing Organic by-products

Why change?

Storage is a substantial cost to any farming business. You can save money by making the best use of your storage, minimising the amounts you have to store and making the best use of stored materials.

Managing your storage effectively will:

- reduce costs/increase profits
- improve soil nutrients and structure
- avoid soil damage
- reduce the risk of pollution
- decrease worry



Steps to success

1. **Review your current situation** by checking the quantities, timing and nutrient value of the organic materials that arise on the farm. Take account of your cropping plans, soils and weather patterns to identify where and when these materials can best be used. Decide if you have sufficient storage and flexibility to manage these materials to best advantage. A manure application plan will help with this.
2. **Identify potential opportunities** such as checking whether you can reduce the amount of organic materials, improve the flexibility of storage, sustain the nutrient value and reduce the risk of pollution. These include:
 - identifying the potential to separate clean water, e.g. from roofs, which otherwise takes up valuable storage, adds to application costs and reduces flexibility to apply when the land conditions are suitable
 - composting manures to reduce the volume to transfer to land and risk of pollution.
 - reducing the risk of storage failure by maintaining pumps, valves and alarms and by checking structures.
 - considering your emergency plan and whether a simple earth bund or catch-pit could give more time in the event of storage failure.
3. **Calculate the cost-benefit of these opportunities** by identifying the costs of any improvements and comparing them with the savings that will be gained, such as lower spreading costs from less clean water being added to slurry storage. In this case, the practical step would be to balance the cost of the guttering and diversion against the benefit of reduced application costs over, say, a 5 year period.
4. **Prioritise** by dealing first with opportunities that:
 - have a short payback period
 - are quick and simple to implement
 - are important in reducing the risk of pollution
 - enable you to meet Nitrate Vulnerable Zone (NVZ) requirements
5. **Develop an action plan** that takes account of the priorities you have identified and fit them into your farm operational programme. Make certain that all those involved are aware of the changes you are planning.
6. **Implement the action plan** taking care to maximise the flexibility and safety of your storage.
7. **Routinely check** that your storage meets your requirements and any legal obligations.

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Sheet 3.0b

Storing Organic by-products - Practical examples

Composted manures

Composting 1200 tonnes of FYM from 100 milking cows and followers on a grass-based farm reduces the amount of muck to be spread.

Admittedly, it needs additional labour and some nutrients are lost in the process. However, taking account of additional labour requirements to turn heaps and nutrient changes, composting is a small cost to farmers. If the heaps are turned once it costs 35-45p/tonne of FYM (total £420-£520), and if turned three times £1.40-1.60/tonne of FYM.

The composted material can be spread more uniformly, and incorporates into the sward more quickly than fresh FYM or unturned heaps, which will add value. Additional benefits include a reduction in water pollution risk by reducing runoff that contains nutrients and pathogens.

Payback is likely within about one year for organic farms.



Slurry store.

Summary of legal requirements for silage clamps

- All silage clamp structure and drains must be impermeable
- Storage tank must be 20 litres/m³ of silage storage
- Resistant to liquor
- At least 10m away from watercourse
- 20 year life without maintenance
- Check and empty liquor stores regularly

Summary of legal requirements for slurry storage

- Storage must be impermeable
- Minimum of 4 months' storage capacity (subject to NVZ rules to be in place by Jan 2012)
- 300 mm freeboard
- 20 year safe operational life
- Valves locked
- At least 10m away from watercourse



Composting manure

Remember

- Organic by-products are valuable so aim to make the most of them.
- Making efficient use of organic by-products will minimise the risk of pollution.
- Monitor the effectiveness of your management by checking cost savings and crop yields.
- Remember to check watercourses for signs of pollution on a routine basis.

For further information: Defra (www.defra.gov.uk), Environment Agency (www.environment-agency.gov.uk), ECSFDI (<http://www.defra.gov.uk/foodfarm/landmanage/water/csf/delivery-initiative.htm>), Natural England (www.naturalengland.org.uk), Cross Compliance Helpline 0845 345 1302 (www.crosscompliance.org.uk) and ART (www.associationofrivertrusts.org.uk)



This information sheet is part of a series providing farmers with advice on land management practices to protect water bodies, produced by Association of Rivers Trusts with support from the England Catchment Sensitive Farming Delivery Initiative. The advice will also enable farmers to use farm resources more efficiently and help meet Nitrate Vulnerable Zone and Soil Protection Review requirements under Cross Compliance and environmental regulation.



Based on Information Sheets originally created by the Westcountry Rivers Trust (www.wrt.org.uk) and developed with EAGGF objective one funding and published under permission by DEFRA and ART