Scottish Farming Innovation Network | **Soil Association Scotland**

Supported by the Duchy Originals Future Farming Programme

FIELD LAB REPORT:

Farm-Scale Anaerobic Digestate in an Organic Dairy System
Meeting 1 – Thursday 7th November 2013

The AD field lab will run until the end of 2014, and will look at the practical, environmental and economic implications of using anaerobic digestate as an integral part of an organic dairy system.

The first field lab to be run by The Scottish Farming Innovation Network has now had its inaugural meeting at award-winning organic dairy Cream o' Galloway, near Gatehouse of Fleet. The field lab, which will run until the end of 2014, will look at the practical, environmental and economic implications of using anaerobic digestate as an integral part of an organic dairy system. Over the next year a group of farmers and industry professionals will meet several times to look at different aspects of farm-scale digestate production and use, including a comparison of digestate spreading equipment by measuring cost, practicality and nitrate loss.

The first meeting was attended by 12 people and comprised farmers, renewable and agricultural industry professionals, students, and Cream o' Galloway staff. The group was hosted by farmer David Finlay and supported by Soil Association facilitator Colleen McCulloch and researcher Audrey Litterick who represents Earthcare Technical and the UK-wide DC-Agri project.

After introductions David Finlay led the group to look at the 25kw digester, which is fed with slurry and silage and provides the farm with hot water. The group discussed the

practicalities of running a farm-scale digester and some of the factors influencing production of quality digestate.

After a delicious home-made lunch (which included Cream o' Galloway ice cream!) Audrey Litterick shared her knowledge on the environmental properties of digestates and how to get the best from them, especially realising optimum fertiliser potential whilst minimising nitrate losses through volatilisation, denitrification and leaching.

One of the strongest messages to come through this discussion was the importance of timing and method of application. As with all fertilisers, digestate is most effectively utilised by plants while they are actively growing – plant uptake of digestate applied at the wrong time of year could be as low as 10%.

The group decided that the most important thing to look at first was a comparison of application method – previously David Finlay has used a conventional surface broadcast system for spreading slurry on silage, but this incurs significant N losses through ammonia volatilisation especially. In spring 2014 David will compare the existing system with a modern bandspread system, and the group will meet soon after to discuss cost, practicality and nitrate losses (which will be measured on-site by Glasgow Caledonian University). In addition to discussing the equipment comparison, the next meeting will also look at the on-going management of the digester, feedstock mixes and grassland management.

The second meeting of this field lab will take place on Wednesday 21st May 2014, and is open to all who are interested. You can find further details on our website.

For more information please contact Colleen McCulloch at cmcculloch@soilassociation.org or call 0131-666-2474.

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With support from SRDP's Skills Development Scheme, Duchy Originals Future Farming Programme, Forestry Commission Scotland and Zero Waste Scotland.