

Case Study – Bokashi manure treatment at Mains of Fincastle

Andrew Barbour has been trialling Bokashi manure preparation for 4 years now at Mains of Fincastle in Highland Perthshire.

The Farm: A 540 ha organic hill farm, sitting at over 300 m, with 50 suckler cows and 400 sheep. Much of the hill grazing is species-rich (and sits in a designated SSSI) and there are over 100 ha of woodland pasture. The cattle are housed in winter.

The Bokashi system

Andrew started back in 2022, by buying inoculant (Actiferm®) and spraying it on to woodchip and straw bedding in the animal housing monthly at 1 part in 20 parts water (at ~ 0.4 l/m³) from autumn onwards. He uses a standard pesticide sprayer with a low-pressure nozzle. He cleared the sheds the following May, stacked the manures and bedding 1 m high and covered it in black plastic for 1 year before spreading. He has now invested in a brewer in order to save time and money. He makes active inoculum himself by mixing purchased EM-R® with molasses and water. He then sprays it onto the bedding monthly over a 6-month period (at ~ 0.4 l/m³) at the start of the season and again at the end, prior to clearing the sheds and storing the covered manure for a year.



Sampling bokashi manures for lab testing

The verdict:

Andrew is committed to continuing with the Bokashi system, and feels that the benefits are there, but he is keen to know more in terms of potential for reduced nutrient losses and improvements in manure quality.

What's lacking?

Andrew is keen to better understand the extent to which nutrient and carbon losses are prevented, ammonia and greenhouse gas emissions are reduced. He is also keen to learn whether there are any benefits to soils from making Bokashi manures rather than traditional stacked, uncovered strawy cattle manures.



Species-rich grassland at Mains of Fincastle

Benefits Bokashi brings to the farm

Andrew is convinced that the Bokashi system is bringing benefits:

- The atmosphere in the housing is more pleasant. There is less odour, and especially less ammonium smell;
- The manure smells completely different, again there is less odour, and especially less ammonium smell. It has a sweet, almost pickled smell;
- The manure is crumblier, more uniform and easier to spread

Challenges?

Andrew feels that the costs and time required (which were high during the first 2 years) are now acceptable, given his new system, where the Bokashi sprays are made on the farm and where the inoculum is applied only twice during the season.

Given the exposed nature of the fields, it can be a challenge to keep the manure heaps well-sealed in windy spells. Regular checking of the covers is needed to make sure that air does not get in.

Other than the above, preparing Bokashi manures for spreading is no more difficult than simply removing them from the shed and stacking them uncovered, outdoors.