

Making the most of organic manure

Name: **Bob Maxwell**

Region: **Wooler, Northumberland**

Farm: **Mixed dairy and arable**

Size: **380 hectares**



Background

North Doddington Farm is a mixed dairy and arable farm occupying 380 hectares near Wooler in Northumberland. The farm has an average annual rainfall of 625 mm. The Maxwell family farm has 560 cattle (320 dairy cows, 220 heifers and 20 young bulls) and 600 sheep. The cattle are housed from November to May. Land use is split fairly evenly between grassland and arable. The grassland includes 12 hectares of lucerne and 26 hectares of permanent pasture. The arable crops include winter wheat, winter barley, triticale, maize and salad potatoes. Around 20 hectares of milling wheat and 20 hectares of rye (ahead of maize) are grown. Soils are mainly light (sandy loam and loamy sand Newport 1 and Alun series), though a few fields include heavier clay loam soils.

North Doddington Farm is in its fifth year of a Countryside Stewardship Scheme with arable reversion, no input pasture management, lapwing cover and arable rotation (including conservation headlands and overwintered stubbles). In March 2007 the farm entered into an Entry Level Stewardship (ELS) Scheme agreement



What does your nutrient management plan consist of?

The farm's policy is to make use of the manure from its cattle. Slurry from the herd is spread using a tractor and bowser. Nutrient availabilities are 50 per cent N, 50 per cent P and 90 per cent K. The overall value of the slurry is £14,300/year based on December 2007 fertiliser prices. No manures are imported. Records are kept of how much slurry is spread and its dry matter (DM) content is measured before application with a hydrometer so that the nitrogen content can be estimated. The farm can only store about six weeks' worth of slurry. This limits when and where slurry can be spread. At present slurry tends to be spread every six weeks on the fields nearest the farmstead.

What other factors affect your nutrient decisions?

The Maxwell's do not farm in a Nitrate Vulnerable Zone (NVZ) but the farm's rolling annual application limits to comply with the Code of Good Agricultural Practice (COGAP) are 166 m³/hectares dairy slurry (2 per cent DM) and 42.5 tonnes/hectares cattle farmyard manure (FYM).

What are the benefits?

Nutrient Management Planning at North Doddington Farm means it achieves considerable cost savings by applying the organic manure produced by its stock, however it can significantly reduce its spending on artificial fertilisers by making use of the nitrogen available in its organic manures. These contribute £14,300/year in fertiliser value (December 2007 prices). The PLANET nutrient plan also takes account of the need to build soil potassium reserves and to correct soil pH in some fields. To get the best value from the organic manures, the Maxwell's should try to move the slurry around the farm to maintain P status in some fields and to allow it to run down in others. Increased storage would allow more slurry to be applied to crops when the nutrients are most needed (e.g. winter cereals in the spring).