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Towards a nutrient export risk matrix approach to managing agricultural pollution at source

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Abstract. A generic Nutrient Export Risk Matrix (NERM) approach is presented. This provides advice to farmers and policy makers on good practice for reducing nutrient loss and, hopefully, persuades them to implement such measures. Combined with a range of nutrient transport modelling tools and field experiments, NERMs can play an important role in reducing nutrient export from agricultural land. The Phosphorus Export Risk Matrix (PERM) is presented as an example NERM. The PERM integrates hydrological understanding of runoff with a number of agronomic and policy factors into a clear problem-solving framework. This allows farmers and policy makers to visualise strategies for reducing phosphorus loss through proactive land management. The risk of pollution is assessed by a series of informed questions relating to farming intensity and practice. This information is combined with the concept of runoff management to point towards simple, practical remedial strategies which do not compromise farmers' ability to obtain sound economic returns from their crop and livestock.

Keywords: nutrients, phosphorus, export, risk, decision support, matrix

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