

Degradation of Cornish calcified seaweed (maerl) in soil, and effects on soil fertility

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Calcified seaweed (maerl) occurs extensively around the westernmost coasts of Europe, predominantly in the low intertidal zones offshore Spain, North West France, South West England and Western Ireland (Hall-Spencer et al., 2003). This material has been used extensively in agriculture, both as a general soil conditioner and also specifically as a liming agent and to supply trace elements (Tye et al., 2000)

The research reported here will discuss the degradation of calcified seaweed in soil, and consequent soil fertility benefits, notably soil respiration rates, associated with the use of Cornish Maerl (calcified seaweed) as an agricultural liming agent. Specifically, the following will be discussed:

1. Current extraction and utilisation of Cornish calcified seaweed
2. Scanning electron photomicrograph analysis of calcified seaweed microstructure following degradation in soil
3. The effects of maerl on soil aggregate stability, soil respiration rates and soil pH/extractable calcium concentrations.
4. Ryegrass response to calcified seaweed additions.

References

Hall-Spencer, J. M. Grall, J. Moore, P. G. & Atkinson, R. J. A. 2003. Bivalve fishing and maerl-bed conservation in France and the UK - retrospective and prospect. *Aquatic Conservation: Marine and Freshwater Ecosystems* 13, S33-S41.

Tye, A., Fullen, M. & Hocking, T. 2000. Response of Grass Leys to Applications of Calcified Seaweed. *Communications in Soil Science and Plant Analysis* 31, (3 & 4), 529-542.