Supporting guidance for Use of Seaweed as a Fertiliser on Cropped Machair

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Kelp washed ashore by winter storms has traditionally been used as a fertiliser on cropped machair. It provides:

- organic matter
- soil nutrients
- promotes the growth of bacteria which binds the friable sandy soil

What needs to be done?

Seaweed should be gathered from the beaches in late winter or early spring and piled on the machair where it will begin to rot. The rotting process reduces the amount to spread as the pile becomes more concentrated. It also softens the stems of the kelp so that it can be spread evenly and incorporated by shallow ploughing or rotovating. Ideally the amount gathered should supply an application of at least 15 tonnes per hectares (six tonnes per acre) of rotten seaweed.

The addition of seaweed helps to stabilise the soil and improve its structure. The increased organic matter, and the glue like alginates produced by bacteria, help to bind the sand particles together. This forms a soil which can sustain agricultural use and resist erosion (which is a constant threat to the machair).

Improving the soil in this way enhances its cropping potential and increases its potential to hold moisture and grow diverse swards of wild flowers during the fallow periods which follow cropping. The increased organic matter content also improves the potential of the soil to support a wide range of insect life (earthworms, flies, spiders, ground beetles). These insects provide food for ground nesting birds, corncrakes and corn buntings.

Which fields to choose?

Spread rotten seaweed during late winter or early spring on areas that are due to be sown to an arable crop as part of the rotation under the Cropped Machair option.

How to increase the success of the option

Seaweed applied at 15 tonnes per hectare could meet the nitrogen (N) and potassium (K) requirements of an average machair cereal crop with a small shortfall in phosphate (P). This shortfall could be made up with either the addition of farmyard manure or triple super phosphate as an inorganic alternative. A heavier application of seaweed may not leave any shortfall.

Carting and spreading seaweed requires tractors and machinery. There is an opportunity to collaborate with neighbours to share resources and make the most efficient use of contractors, as has historically been the case.

Complementary options

You are required to combine this option with the Cropped Machair option.

Further information

Machair Life Seaweed Advice Leaflet