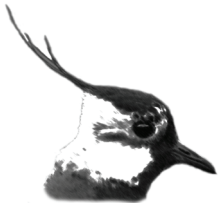

Teacher Resource Sheet Factors Affecting Farming

This aim of this fieldwork session is to look at how the physical factors vary on Carrs Farm. The physical factors will be recorded in the 'allotment', a pasture field and a hay meadow. More recordings can be made in each of the 3 field types if time allows. This information is used to calculate the land use capability class for each field. The table below provides the information required for each fieldwork activity.

Resources required

Teacher Resource Sheet
Student Resource Sheet
Ordnance Survey map 1:25 000 Explorer OL31 North Pennines Teesdale and Weardale
6x tape measures
6 x gun clinometers
6 x canes
6 x trowels

Location - Farm Buildings

Fieldwork Information

Introduce the fieldwork.

The aim of the fieldwork is to look at how physical factors vary on Carrs Farm. Look at the 'Farm system' table from the walk – physical factors are one set of factors, which influence what type of farming takes place.

Measurements will be made in the 'Allotment' (field 1 on the inset map), a pasture (field 2 on the inset map) and a hay meadow (field 3 on the inset map). The data will be used to determine the land use capability class for the fields.

Location - Field 1, 'Allotments'

Fieldwork Information

Undertaking the fieldwork.

Record the following physical factors:

- **Altitude** – Use the O.S. map to find the altitude of the field. Generally the lower the land the warmer it is and the better it is for growing.
- **Annual rainfall** – Use the information on the Student Resource Sheet to record the annual rainfall.
- **Drainage** – Look around the field to see if the field has wet areas with poor drainage. Rushes are an indicator of poorly drained land.
- **Vegetation description** – Look around the field and produce a general description of the vegetation.

(Continued on next sheet)

Location - Field 1, 'Allotments'(continued)

- **Slope angle** – Measure the slope angle in degrees using a gun clinometer. Measure out 20m down slope using a tape measure. Get 2 people of the same height to stand at the top and bottom of the measured slope. The person at the top of the slope looks along the top of the gun clinometer and holds it level with the person's eyes at the bottom of the slope. Allow the dial to swing and once it has stopped swinging release the trigger. The angle of slope can be measured from the arrow. The gentler the slope the better it is for growing as steep slopes have thin soils. However, also think about the drainage as in some cases flatter land may become waterlogged and this is not good for growing.
- **Soil depth –** Push a cane into the soil until it will not go in any further. Mark the height of the surface of the soil on the cane. Pull the cane out and measure how deep the spoil is with the tape measure.
- **Soil pH** - Use the information on the Student Resource Sheet to record the pH for the field.
- **Soil texture** - Use a trowel to take a sample of soil (this is probably easiest from a molehill if available). Find the texture of the soil using the 'Feel Test' described on the Student Resource Sheet. Grass for grazing animals or growing hay or silage needs a soil with some sand, some silt and some clay in. The best soil for grazing on this farm will have some sand, some silt and the highest percentage of clay.

Location - Field 2, Pasture

Fieldwork Information

Undertaking the fieldwork.

Repeat the measurements carried out in the 'allotment'.

Location - Field 3 Hay meadow

Fieldwork Information

Undertaking the fieldwork.

Repeat the measurements carried out in the 'allotment'.

Location 5 - Farm buildings or school

Fieldwork Information

Follow-up work.

Land use capability classification

Use the Student Resource Sheet to introduce the idea of land use capability. Use the table to calculate the scores for each of the fields sampled and add the results to the table of results.