

Cromarty SERIES

A. SOIL MAP UNIT DESCRIPTION

SOIL CLASSIFICATION

SCOT: Humus-iron
podzols (Podzols on
early maps)

SSEW: Humo-ferric
podzols, or
stagnogleyic brown
podzolic soils where
cultivated

SOIL ASSOCIATION CROMARTY

PARENT MATERIAL

Compact, reddish brown
sandy loam till,
occasionally sandy clay
loam, derived from
Middle Old Red
Sandstone sediments
around Cromarty, and
Middle and Upper Old
Red Sandstone sediments
between Balintore and
Tarbat.

DRAINAGE CLASS

Imperfect

PERMEABILITY CLASS

Moderate in topsoil and
slow in indurated or
massive subsoil

REFERENCES

soil maps —
1:63 360 sheets
83/84/93/94 (Black Isle)
94 (Cromarty and
Invergordon)

memoirs —
Soils of the Black Isle

Compiled by A.D. Walker
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LOCATION AND EXTENT

Easter Ross: around Cromarty and between Balintore and
Tarbat. *About 60 sq km.*

LANDFORM

Undulating lowlands with gentle and moderate slopes.

VEGETATION

Arable and permanent pastures; some coniferous
plantations.

CLIMATE

| | |
|--|---------------------------|
| <i>av. ann. rainfall, mm</i> | 600-800 |
| <i>accum. temperature</i> <i>(day °C above 0°C Jan-Jun)</i> | 1190-1350 |
| <i>maximum PSMD, mm</i> | 120-155 |
| <i>growing season, days</i> | 220 |
| <i>field capacity</i> | early Nov to early Mar |

SOIL DESCRIPTION

| | <i>topsoil</i> | <i>subsoil</i> |
|--------------------------------|--|---|
| <i>colour</i> | dark brown | brown becoming reddish brown with depth |
| <i>texture</i> | sandy loam | sandy loam, occasionally sandy clay loam |
| <i>structure</i> | weak or moderate medium subangular blocky | massive or coarse platy becoming massive with depth |
| <i>stone content</i> | slightly stony, occasionally moderately stony | slightly stony, occasionally moderately stony |
| <i>potential rooting depth</i> | variable 30-50 cm, dependent on depth to compact till or induration | |

COMMENT Subsoils are compact or indurated. Roots in the
subsoils are restricted mainly to tapering cracks infilled with loose
sandy loam or loamy sand. Slow permeability of the subsoil may lead
to localised but temporary saturation in the topsoil.

SOIL CHEMISTRY

Under natural conditions soils are moderately acid.
Exchangeable bases usually low or medium, values normally
reach a minimum in the subsoil and rise slightly in the basal till.
Total phosphorus usually medium in topsoil, otherwise low.
Very low total cobalt; low total copper.

MAP UNIT VARIATION

Occasional veneer of coarser-textured material especially in the
higher and western area of the Black Isle; small area near
Minlochy Bay with higher silt and very fine sand contents.
Some areas with deep topsoils, particularly near Cromarty.