Overview Of Cereal Growing In Orkney

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Historical

- Cereals grown in Orkney since Neolithic times (c. 4,000 BC):
  - Mostly barley (often naked); small quantities of wheat, mainly Emmer

- Oats introduced in the Iron Age

- Norse period (800-1468):
  - Barley (6-row, hulled; probably Bere) and oats dominate; Bere and black oats suited to sandy coastal soils (Mn-deficient)
  - Trading links with other Norse areas – grain, malt or beremeal an important Orkney export (Norway, Shetland and later Leith)

- 1800s – major agricultural improvements:
  - Soil improvement by draining and liming
  - Enclosure of stock
  - Post 1830’s, steamer service allowed the development of a strong livestock industry

- By 1912, (13,500 ha oats and c. 1,600 ha of Bere)

- Through 20th C, shift to growing modern feed barley, virtual loss of oats and Bere
Current Agricultural Land-Use In Orkney

- Ca. 93,000 ha of agricultural land
- Dominated by livestock:
  - High quality meat and dairy industry (83,000 cattle & 116,000 sheep)
  - 93% is grassland and rough grazing
- Only 4,500 ha of crops; c. 4,360 ha is barley
- Cereals grown for feed and straw. Often, but not always within a rotation:
  - 6-8 yrs grass
  - 2-3 yrs barley
  - Barley often undersown with grass in 3rd year
- High fertility soils resulting from applications of slurry/manure to grass and cereal fields
Main Uses Of Orkney Cereals

- **On-Farm Animal Feed & Bedding**
  - Most barley harvested as moist grain (23-25% mc) and treated with preservative
  - Smaller amounts harvested at higher moisture for crimping, as whole crop silage or dry grain
  - Straw is very important

- **Other On-Farm Uses**
  - Some dried grain retained on-farm as farm-saved seed.

- **Off-Farm Uses**
  - A few growers produce certified seed
  - Bere for malting and local milling (ca. 50 ha)
  - Malting barley for Highland Park Distillery (ca. 12 ha)
  - Small areas of oats and wheat for local milling
  - About 1 ha of oats for straw for weaving
  - In good years, some export of straw and grain to Shetland
Challenges & Strengths Of Cereal Cultivation In Orkney

- **Challenges & constraints – mainly weather related**
  - Strong winds and soil waterlogging over winter prevent the use of winter cereal varieties.
  - Late planting (usually April). Probably latest planting of Spring barley in UK – depends on soil drying out.
  - Short, cool growing seasons.
  - Strong winds near harvest can cause crop lodging or grain / ear shedding.
  - Wet weather at harvest:
    - Difficult harvesting conditions
    - High grain moisture
  - Few readily accessible early maturing varieties for malting and milling.

- **Strengths**
  - Hundreds of years of soil and farm improvements
  - Fertile soils and farm manures
  - Fields mostly suitable for modern machinery (size, slope, drainage)
  - A high level of mechanisation. Several large contractors. High machinery outputs helps farmers cope with narrow windows of opportunities for planting, spraying and harvesting.
Opportunities For Cereal Food and Drink Markets

- **Malting Barley**
  - 2 Distilleries and 2 breweries
  - Highland Park and Swannay Brewery both have experience of using local barley.
  - Highland Park has its own malting facilities.
  - Bere - a traditional Scottish crop already being exported to Bruichladdich Distillery and Valhalla Brewery for niche products.

- **Cereals For Milling**
  - Barony Mill produces stoneground Beremeal (barley), oatmeal and wheat flour
  - Used by local bakeries
  - Some export of beremeal

- **Aim:** to increase the range and quantity of genuinely “local” food and drink products for:
  - High-value exports
  - Tourists and visitors (c 140,000 visitors pa (excluding cruise ship passengers))