The Peedie Guide to Bere and Beremeal
Beremeal was once a staple of the Scottish diet, but disappeared as more productive and easily processed grains were brought in.

It continued, however, to be grown in Orkney, enabling the islands’ last operating water-mill to meet the steady local demand.

Today there is increasing interest in ancient grain such as bere as a new generation discovers their taste and nutritional value.

Bere is grown on a number of Orkney farms, by an agricultural contractor employed by the Birsay Heritage Trust who run the Barony Mills. Local bakers are incorporating beremeal into nutritious new breads and biscuits, brewers are using it for ales, and distillers for whisky.

People outside Orkney too are beginning to learn of the qualities of beremeal and ask for information but sources are scattered.

The aim of this guide is to bring material from many sources into an easily accessible pocket form, which can be the starting-point for investigating more deeply, in the library or in the kitchen.

Its aim is to provide information on how an ancient traditional grain full of nutritional goodness can be brought to the modern table, for enjoyment and health.

Liz Ashworth
Bere is an ancient six-rowed native barley which has remained in production in Orkney for more than 4,000 years.

Evidence for its age includes an imprint of a grain of bere found on pottery from Unston Cairn in Stenness.

Grains of bere have also been found in excavations at Iron Age brochs.

Wild barley has grains in two rows, as had early domesticated barley. Around 7,000 years ago a six-rowed barley developed in the near East and was gradually taken across Europe.

Bere is well adapted to growing conditions in Orkney through its rapid spring growth, short growing season, and tolerance to acid soils. Known as 90-day barley, it was sown later and harvested earlier than other crops.

In the past it was an important multi-use crop for milling and malting, with the straw used for animal bedding and thatching, and the grain for food and ale – praised by a 16th-century writer as giving Orcadians good health and long lives.

Bere was also at one time used for making whisky but, with less starch than modern barleys, it produced less alcohol.

It was the arrival of the modern higher-yielding barleys in the 19th century that led to its decline. It is also difficult to mill, and harvesting can sometimes be a challenge as the crop can lodge (break and flatten) in the field.

A key factor in its survival on Orkney has been the Barony Mills in Birsay, working with the Agronomy Institute at Orkney College UHI. The Mills have continued growing the crop, milling, selling the meal, and developing diverse markets.

Bere is a cream-coloured flour with a distinctive, earthy, nutty flavour and wholesome appearance, traditionally used to make bere bannocks – round flat scones forming an unleavened flat bread.

They were originally made on a hot flat stone at the side of a fire, then on an iron plate (a girdle) suspended on a metal hook above the fire.

Analysis of beremeal’s nutritional properties was carried out by researchers from the British Nutrition Foundation in association with the Agronomy Institute of Orkney College UHI. They showed that beremeal is a source of magnesium, zinc, iron and iodine. Bere flours can contain six times as much iodine as white wheat flour, five times as much magnesium, and three times as much iron.

The study also showed significant amounts of folate (vitamin B12), thiamine (vitamin B1) and pantothetic acid (vitamin B5). The authors concluded that food derived from bere flours could have a beneficial impact on the overall quality of the UK diet.

Researchers at the University of Aberdeen have been looking at the levels in bere of a soluble fibre called beta-glucan which helps lower cholesterol levels. Beta-glucans are not found in wheat but are present in oats and barley, and notably so in bere.

The Aberdeen researchers are also investigating whether the colder northern temperatures may the nutritional benefits of crops like bere. The clean sea air of the islands has also been suggested as a possible factor to be studied.
How is it ground?

Originally bere was ground in a stone quern, using a rubbing-stone like a pestle and mortar. It was a daily task to produce meal to bake bannocks.

Later came the invention of the rotary quern or hand-mill. This consisted of two circular stones, with a handle on the upper one to rotate it over the (fixed) lower one. Grain was fed in through a central hole in the upper stone.

Water-wheels gradually spread from the Eastern Mediterranean. horizontal wheels were more common in Shetland than Orkney, but an example of a ‘click mill’, built in the 1820s, can be seen near Dounby, Orkney.

The vertical waterwheel could be ‘undershot’ – with the water turning it from below – but for more demanding work it was ‘overshot’, with the stream channelled to the top of the wheel, bringing the full weight of the water to bear.

This is the system that can be seen at Orkney’s last operating mill, at Boardhouse in Birsay.

The operation of the mill has changed little since it was built in 1873. Bere is milled to meal through three millstones selected for their hardness to suit the density of the grain.

It takes 2½ days to process one tonne of bere – a slow, laborious, dusty job. There are four stages to the process:

1. Grain at 14% moisture is further dried in the mill’s traditional kiln for up to 4 hours to reduce the moisture to 9-10%.
2. Twelve hours later the cooled grain is passed through corundum-coated old millstones, known as the ‘shelling stones’. They are set just lower than the size of grain in order to crack the outer husk and free the kernel. The coom (dust) is removed by an eight-feet-long sieve. The mix of kernels and husks then goes through two ‘fanners’ which blow away the husks, known as ‘scrubs’ and used to feed the kiln fire.
3. The cleaned grain is then passed through a pair of French burr stones to be ground into a course meal, known as ‘grap’.
4. The third stage of the milling originally used stones from the former millstone quarry on the cliffs of Yesnaby. Today’s stones come from Derbyshire. The height of the stones is adjusted to produce fine, medium or coarse meal. The grain is passed through sieves and bagged.

Sharpening and dressing the grooves in the stones is still done by hand using a mill pick, a form of large chisel with a heavy wooden handle.

Will it survive?

The Barony Mills are operated by the Birsay Heritage Trust, established in 1998 by the people of Birsay to look after local sites of historical interest.

The Trust has from its outset worked to encourage the growing of bere. It started by acquiring one tonne of bere from the few local farmers growing the crop, milling three-quarters of the grain and keeping the rest for sowing the following year.

In 2016, 35 acres are now under cultivation. The yield is from 1¼ to 1½ tonnes per acre, up to 1½ tonnes in a good year. Demand for bere meal is growing and it is clear that the growing and milling of bere in Orkney is steadily reviving.
Cooking with beremeal

- Use it to season and coat meat, fish and vegetables. Its earthy flavour helps reduce the amount of salt required and gives a crisp result.
- Shake onto steaming new potatoes with a knob of butter: it’s delicious.
- Stir into mince and gravies to thicken. The bere adds a lovely sweetness to the flavour and lessens the amount of salt needed to season.
- Add to seasoned flour as part of a casserole. This reduces the need for salt, thickens the gravy, and adds nutritional value.
- Add a dessertspoonful to the dry ingredients in baking savoury scones, pancakes, breads, savoury biscuits and oatcakes.

Baking with beremeal

In Orkney bere bannocks (unleavened flat scones/bread) are made with two-thirds beremeal to one-third wheat flour. This gives an open crumbly texture.

Beremeal can be added to wheat breads and we have found that the maximum amount is one-third beremeal, two-thirds strong wheat flour.

Bere has a nutty flavour and adds nutritional value to any baked product.

Bere bannocks make a meal

Bake a basic bere bannock mix of your choice.

Mine is:
2 tablespoons beremeal sifted with 1 tablespoon wheat flour and 1 heaped teaspoon baking powder.
Pinch of sea salt.
Mix to a stiff soft dough with water or milk.

Drop onto a medium-hot girdle, sprinkle with beremeal and pat out with the palm of your hand to make a round scone shape about 5cm (2in) thick. Bake on medium heat till firm on the base, lift and turn to bake again till firm. Don’t be in a hurry because bere burns easily. Knock with your knuckles on the surface of the bannock – if it sounds hollow the bread is baked. Cool on a wire tray and enjoy warm and freshly baked.

Further options

Before mixing the dry ingredients, try adding some more interesting ingredients to create a Meal in a Bannock.

We tried:
- Smoked Sausage, chopped spring onions and tomato
- Smoked Orkney cheddar and ham
- Sweet corn, sunflower seeds and baked beans

I made a speciality bannock mixed with Swannay Brewery Porter Ale and mixed in chunks of Jolly’s Peppered Smoked Mackerel.

Bere-izza

Created by the ladies of the Peedie Kirk in Kirkwall.
Take a fresh bere bannock, spread with tomato topping of your choice. I like to use smoked tomato chutney from Orkney Island Preserves in Shapinsay. Top with slices of Veira Russell’s Orkney farmhouse cheese and slices of Orkney tomatoes, and then further top with grated Orkney cheddar.
Bake at 180C, 350F, Gas 4 for 15 minutes till bubbling and enjoy with a huge salad.
Try some more new recipes

Cooking and baking using bere meal adds nutritional value, flavour and goodness.

Blinis

The easy way to make a savoury pancake.
Mix 1 tablespoon bere meal with 1 of plain flour. Add 1 egg, 1 teaspoon baking powder, and enough water or milk to make a thick batter. Season with a pinch of sea salt and ground black pepper.
Bake dessert spoons of the batter on a hot oiled girdle, turning once when bubbles appear on the uncooked surface. Cool in a clean tea towel on a wire rack.
Serve with pâtés, smoked salmon, cheese or other savouries.

Scones

Replace 1 tablespoon of wheat flour with that of bere meal when making cheese or oven scones.

Medieval bere, parsnip, carrot and apple fritters

Cook till soft 1 medium parsnip and carrot – peeled and chopped along with a dessert apple which has been peeled, cored and chopped in a little salted water.
Drain and mash.
Beat in 1 egg, 2 tablespoons bere meal, and enough ale to make a stiff batter.
Heat a little oil in a frying pan and cook spoons of the batter till crisp on both sides.

Pastry

Replace 1 tablespoon of wheat flour with the same of bere meal when making pastry for savoury dishes like quiche and pies.

Fish Fingers and dips

Choose a meaty fish like cod, tusk, coley, pollock.
Cut into fingers or strips and toss in bere meal seasoned with ground black pepper.
Shallow fry till crisp and enjoy hot with chutneys and dips.

For further recipes and cooking tips

See my website: www.lizashworth.co.uk and the Food Journeys in the online Frontiers magazine: www.frontiersmagazine.org

I will be posting up a variety of recipes including Beremeal Coffee and Walnut Cake, Beremeal Oven Scone, Beremeal and Spelt Shortbread, Rhubarb and Ginger Swiss Roll, and Beremeal Chocolate Cake.

Where to buy bere meal

Contact the Barony Mills to order direct or find your nearest stockist.
Web: www.birsay.org.uk/baronymill.htm
Tel: 01856 721439 or 721309
Email: miller@birsay.org.uk
The Mills have also produced a bere meal cookery book.
The Barony Mills also distribute through two Scottish wholesalers:
Highland Wholefoods
www.highlandwholefoods.co.uk
Greencity Wholefoods
www.greencity.coop

For information about the various bere meal products from Orkney companies, see the Orkney Food and Drink website or contact Edgar Balfour:
www.orkneyfoodanddrink.com
Email: orkneyfood@outlook.com
Phone: 01856 761430

a Taste of ORKNEY Community foodfund

Orkney Science and Food festival

The Contribution of Beremeal to Orkney Cuisine