



How to bake with our flour

Scotland The Bread organic flour comes from diverse grain varieties that have more important minerals in them than ordinary flour.

To enjoy the flavour and quality of a real local loaf, all you need are a little knowledge and a few craft skills – the kind that Scots bakers were renowned for before chemical additives and imported grain made them redundant.

Scotland The Bread **wheat flour** is special. Apart from its above-average mineral content it has a full, satisfying flavour and a gluten that is naturally softer, less elastic and more extensible (and arguably more digestible) than in common breadmaking flours.

Our **rye flour** is the finest wholemeal (sometimes called 'dark') rye you will find, with a malty quality that responds best to baking with sourdough.

Top tips

- Knead the dough gently and for **less time** than you have to when using a 'strong' flour.
- Be patient and ferment your bread **slowly** (ideally using sourdough) to develop flavour and digestibility.
- Keep the dough on the **cool** side (25°C or less) and go easy on the yeast to prevent too crumbly a result.
- Put the dough in the oven just *before* it is fully risen to encourage 'oven spring' (slightly 'under-prove', as bakers would say).
- If you're struggling to get a longed-for lightness, sieve the flour to remove some of the bran or add a portion (up to 25%) of a 'strong' flour. We recommend Mungoswells organic flour from East Lothian.
- An acid sourdough is best for rye bread (see p.3).

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Golden rules for baking with Scotland The Bread wholemeal flour

- **Mix or knead gently** and for less time than usual. It doesn't take much energy to form the gluten network, and this network is more fragile than in a 'strong' flour, meaning that it may not hold the fermentation gases so securely.
- **Ferment the dough slowly.** Use cooler temperatures and less yeast than normal so that the carbon dioxide pressure from the yeast doesn't blow the gluten bubbles apart.
- **Sourdough is best.** The by-products of lactic acid bacterial fermentation in sourdough actually *strengthen* the gluten at first, before eventually breaking the proteins down (which is good for human digestive systems). Since this gluten-degrading effect is negligible below 10°C, proving dough in a fridge overnight may be a useful strategy, especially since the cold firms the dough a bit, reducing the 'pancaking' effect at the start of baking (and making 'slashing' or marking the dough easier).
- If not sourdough, best use some form of **pre-ferment**, either a sponge (flour and yeast fermented for 12-18 hours), or **old dough** (a small piece of actual dough of similar type kept back from a previous batch for up to a week in the fridge). Both of these methods provide a little acidity (good for flavour and control of natural enzymes) and a measure of lactic acid bacteria, but not as much as a true sourdough.
- Remember it's **wholemeal**. There is not much point growing grain with more good things in only to strip them all out at the mill. Our cyclone milling process creates a fine flour with all the bran still there. Bran, though both tasty and very nutritious when well fermented, tends to disrupt the gluten network, reducing bubble size and allowing gas to escape, leading to a closer texture. If that's an issue, see 'Problems?' below.
- Celebrate **versatility**. These diverse wheats haven't been aggressively bred to harbour super-elastic gluten proteins. This means that they are, by nature, '**all-purpose**', doing an equally good job for bread, scones, cakes and biscuits. Most of the latter, as well as such things as short-crust pastry and shortbread, are best made with flours containing lower levels of gluten. Your deft handling plus the natural softness of Scotland The Bread flours can produce 'melt-in-the-mouth' results.

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A note about our rye flour

Harvest conditions at Balcaskie in recent years have produced rye with a relatively high natural content of maltose sugars, produced by some very active amylase enzymes in the grain. A nicely acidic sourdough will prevent this natural amylase turning too much starch to sugar during baking. This variation of the bread recipe on our flour bag may do the trick:

Production Sourdough

Sourdough starter	80 g
Wholemeal rye flour	250 g
Water (40°C)	420 g

Ferment in a warm place for 24 hours.

Final Dough

Production sourdough	650 g
Wholemeal rye flour	320 g
Sea Salt	7 g

Mix and shape with a little water on your hands and the worktop. This should produce a consistency that is firm enough to control the final rise and allow acidity to develop. Prove at room temperature (not too warm) for 3-5 hours. Bake at 210°C for about 40 minutes.

Problems?

If you find that the bread dough made with Scotland The Bread flour is hard to handle or the result is a little too dense, here are some suggestions:

- **Sift out** some of the bran, using an ordinary kitchen sieve. You'll leave enough small particles in to retain some flavour and quite a few nutrients, but if you don't want to waste the bran (the bit with most of the key minerals like zinc and magnesium in), you can make a smooth dough with the sifted flour and then add in the bran at the end of mixing, or even use it to dust the outside of the loaf (for instance to stop it sticking as it rises in a proving basket). Bran fully releases its many nutrients and bioactive elements when it is fermented with lactic acid bacteria, i.e. sourdough. Check out our recipe for Fermented Bran Sourdough Bread here: <https://scotlandthebread.org/2019/08/27/fermented-bran-sourdough-bread/>

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- **Add** some 'strong' organic flour. Up to 25% of the total is probably sufficient to give some extra lift and tenacity without sacrificing too much flavour and nutrient density.
- Think about **water content**. Poor volume, crumbly texture and a dry crumb are often caused by using too little water in the dough. It's tempting to keep the dough firm because it seems easier to handle and shape like that. But think of it from the yeast's point of view. A dry tight dough is like a straightjacket that prevents the gas produced by the yeast from inflating the little balloons formed by the gluten network in the dough. Add a little more water – and the dough relaxes and can expand. Of course, a loose, lithe dough may not hold its shape so well during proving and baking. But who really wants a perfect shape that's dense inside when the alternative is an open, chewy crumb that's bursting with honest flavour?
- **Enrich** your dough with something that helps it hold together. It may seem counter-intuitive, but some natural ingredients (especially things like pumpkin or sunflower seeds) that are a lot bigger than bran particles can actually help to *bind* the dough structure rather than break it up as one might expect. Linseeds are a good example. Soak them overnight and not only will their many nutritional benefits be more accessible to human digestion, but they will exude a sticky gel that can transform a crumbly dough. The binding effect is noticeable even before baking so you may need to extend rising ('proving') time significantly.



Scotland The Bread wheat growing in Fife, August 2020

For further information and recipes, please visit:

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