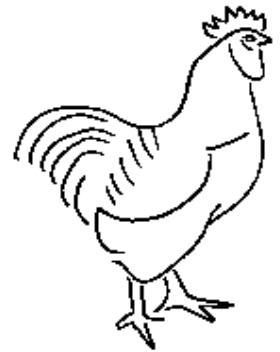


Free Range Practice Guide No. 6:

Use Your Loaf – Bake Your Own!

FRPG-06/1, by Paul Mobbs and the Free Range Network, September 2004
<http://www.fraw.org.uk/rangers/>



Can you trust the bread you buy to be wholesome and not to cause you health problems? As with so many other of the industrialised foods we buy today – like eggs, beef and chicken – it now appears that the development of *industrial bread* might be storing up health problems for the future. The simplest solution... bake your own!

Even if industrial bread were not as gruesome as it now appears (see Free Range Briefing 04/01¹) there are good reasons to bake your own bread. It's cheaper (see the box on the right), it's better for you, and once you really get into it you will be able to make a wide range of healthy and flavourful breads and snacks. Also, as industrial bread production becomes a more energy- and transport-intensive process, baking your own is in global terms more energy efficient.

Apart from the purely practical issues, bread-making allows us as individuals to develop our creativity and autonomy. Once you know how to make the basic loaf, a whole range of creative opportunities opens out in front of you – for example adding nuts and seeds, dried fruit, or herbs and spices (it only adds a minute or so to the preparation time!). Looking at the wider meaning of bread-making, if you are able to bake bread, what else can you do? Home brewing is not so different a process. And what about jams and preserves? If you can make bread, you can begin to explore other simple activities that can improve the nutritional, social and spiritual aspects of your diet, and your life.

How do I start?

For many baking bread might seem an extreme amount of hassle – and the fact that you have to do it every few days just amplifies the hassle. But in reality baking bread is very simple, and although the process takes three to six hours the actual time you need to be working on the bread is only thirty or forty minutes (including the washing-up time).

According to John Seymour², *if you can boil an egg, you can bake bread*. That's perhaps a little simplistic. It takes a few tries to get your boiled

The Economics of Bake-Your-Own

There are various recipes for bread, but we'll use wholemeal bread as an example. A large (2lb/800g) loaf takes around 650g of flour. A 1.5kg bag of organic stoneground flour costs around £1.40 in supermarkets, and roller-ground wholemeal costs around £1.00 (note, if buying in bulk via a food co-operative you can often save 15% to 20% on these prices). So the flour for one loaf (at an average £1.20/bag) would cost 52p.

You'll also need yeast. For a large loaf you need about 7g of dried yeast and two teaspoons of sugar. 7g sachets of yeast cost around 20p, but perhaps half this price if you buy in larger volumes – so let's estimate the price at 15p. The cost of the optional salt and oil (you don't actually need either to make good bread) would be another 4p.

The cost of baking the bread will depend upon whether you use gas or electric. Baking a loaf in an average oven uses around 1.5kWh of energy, which (adding a little to cover the standing charge) would cost around 3p for gas or 10.5p for electric. Of course if you bake two loaves you halve the cost per loaf (three loaves would be a third, etc.).

So putting this range of figures together, and assuming you bake two loaves at once and add salt and oil, we can put the cost of own-baked bread at around 72½p if using gas and 76¼p if using electric. However, if you bought the flour, yeast and oil in bulk the price might be as low as 51½p (for gas) or 55¼p (for electric).

If we compare the cost of a large industrial wholemeal loaf (around 80p to 90p), to own-bake bread (at 51p to 76p), own-bake is cheaper. However, irrespective of the price the quality of the bread is higher – and how would you assess that as a monetary saving?

eggs just right. Likewise, when baking bread your first half-dozen attempts allow you to learn the intuitively how much flour or water to use, how long to let the dough prove, and how much you need to knead the bread.

Before you do anything you must to find a place to make your bread and some tools to make it with. You'll need –

- ◆ somewhere warm to prove the dough (possibly the most crucial requirement),
- ◆ a sturdy work surface or large bowl where you can knead the bread,
- ◆ a large bowl to mix the dough in, and
- ◆ some bread tins or baking trays.

A large bowl is essential. When you initially prove the dough it will easily double or triple in volume. If your bowl isn't big enough this results in a nasty mess. A 9-inch hemispherical bowl will only prove enough dough for 3lbs worth of bread (that's a

Different Types of Bread Flour

There are various types of flour available that can make a variety of bread:

- ◆ *Strong flour* – a generic term for flour with a high protein content that is used for bread-making.
- ◆ *Wholemeal* – theoretically contains 100% of the milled grains with nothing added or taken away.
- ◆ *Brown* – contains about 80% of the original milled grain as some of the bran has been removed to make the flour slightly finer.
- ◆ *White* – contains about 70% of the original milled grain, having had the bran and wheat germ removed, but it is also bleached using one of a number of chemical processes.
- ◆ *Barley flour* – flour milled from barley (until about a century ago most bread was a mixture of wheat and barley flour, but on its own it makes interesting bread).
- ◆ *Stoneground* – wholemeal flour ground in a traditional way between two stones instead of metal rollers, and this preserves more of the nutrients within the grain.
- ◆ *Organic* – flour from grain grown to organic standards, but organic bread flour still has artificial vitamins and minerals added to it because it's required by law.

large and a small loaf). Bought new these cost around £8 to £10 – but you might find a cheaper one in a second hand or charity shop. If you want to make two or three large loaves or more in one bake you'll need to get hold of something like a traditional ceramic mixing bowl with a diameter of around 16 to 18 inches. These are becoming harder to find, and often cost in excess of £30. If you want traditional steel bread tins that don't have a non-stick coating (see Free Range Bulletin 03/03³ to find out why you don't want to use non-stick coatings) these are also getting harder to find. They cost around £2 for a small (1lb) loaf tin and around £2.50 for a large (2lb) loaf tin.

The most crucial factor is having somewhere to prove the bread, preferably close to where you are going to bake it. Yeast has a narrow temperature tolerance. To ferment the sugars in the dough it needs a temperature of around 27°C to 30°C. However, below 18°C the yeast will often refuse to work, and if you warm the dough above 37°C you kill it. Traditionally people have left their dough to prove in a box by a fire, on top of the Aga/Rayburn, or next to the hot water tank. But in most modern gas-fired homes none of these options are practical and you'll have to sort out some other option.

If you have a cooker with a small grill-oven compartment above the main oven a possible work-around is to turn on the main oven to heat the cooker up and then place your dough in the grill-oven to prove it. However, this requires regular checking and re-heating so isn't that efficient. Another, simpler work-around is to get yourself a double-walled cardboard box. In the bottom of the box you put a hot water bottle or sealed container full of boiling water (it has to be sealed to prevent the water vapour forming condensation). You then stand your mixing bowl/bread tins on top of the hot water bottle and close the lid of the box. Ideally the box should just be big enough to stand the water container and the bowl in – if you have too big a box the extra surface area will lose heat more quickly.

The temperature of proving also has an effect on the quality of the bread. The longer you prove the better the flavour (however some special flours, like spelt flour, can't be proved for too long because the dough will collapse). If you prove at a cooler temperature (say 20°C) it might take

A Simple Recipe for Wholemeal Bread

There are many books available on bread-making, so rather than re-invent the wheel the purpose of this description is to give you a general idea of how you can make a basic loaf of bread.

Wheat-flour wholemeal is the simple, easy recipe that you should begin with. Once you master this you can branch out by varying the type of flour you use, what you add to the mix, or how you shape and bake it. As noted in the text earlier, you first need to organise your ingredients, bowls and tins, but most importantly somewhere to prove the bread. When this is organised you can start.

To make two small (1lb) loaves/one large (2lb) loaf you need at least 700 grams (g) of strong flour, 7 grams of dried yeast, two teaspoons of sugar, 400 millilitres (ml) of warm water (about 25°C), *and optionally*, 1 to 2 teaspoons of salt and 10g to 20g (or 10ml to 20ml) of fat or oil.

Bread-making is a rather forgiving process, and providing you don't make any major mistakes you'll still produce edible bread. For this reason, once you get used to it, you needn't measure out the ingredients – you'll know by sight how much to put in (which of course speeds up the whole process).

First take the warm water and whisk the yeast and sugar into it. The volume of water is important because it determines how much bread you will make. Different flours will take up different amounts of water to form the same consistency of dough. Therefore, with a little experience, you will know how much water you need to start with in order to produce the required volume of bread. At this point you can also add the salt, if you are using salt. It's not absolutely necessary to add salt to bread. Often it's just a matter of taste.

Cover the bowl with a damp cloth or plastic bag (to prevent the loss of water vapour) and put stand it in the warm for about 20 or 30 minutes. When it's got a 1cm to 2cm (half-inch) head of froth on the top it's ready to use. If it doesn't froth too much, check the temperature is not too hot or cold, or give it a quick whisk to re-invigorate it.

When the yeast is ready slowly mix in enough flour to produce a sticky dough, about the consistency of porridge. At this stage you can also add the oil (it's optional – the effect of oil and fats is to give the crust and crumb of the bread a slightly softer texture). You then cover the bowl again and put the dough mixture into a warm area for between one or three hours to prove the dough. Leaving it

longer than this isn't a problem, and it will improve the flavour, provided the temperature doesn't become hot or cold enough to kill the yeast.

Note that until it is baked the dough mixture is 'biologically active'. So don't suck your fingers or eat the raw dough as it will give you a belly ache.

When you return the bubbly mixture should have increased in volume by two or three times (it depends how thickly you mixed the original dough). Flour the worktop with a deep (1cm or half-inch) layer of flour. Pour the contents of the bowl onto the flour and start mixing with your hands. At this point you can also add nuts, seeds, dried fruit, or herbs and spices if you wish. As the dough gets firmer you start to knead – pummelling the dough with your fingers and fists to produce a stiffer, elastic dough (after a few tries you'll get to know the feeling of the dough when it's ready). This should take five to ten minutes.

Don't worry about getting your fingers messy – just enjoy it. As the flour takes up more of the moisture and the dough gets stiffer the gunk on your fingers will slowly peel off. When you have a mass of stiff dough you can divide it, as required, to fit inside your bread tins. Make sure you push the dough into the corners. Also, try to get a lot of loose flour stuck to the side and bottom of your lump of dough as this will help the loaf fall easily out of the tin after baking. As the dough will double its volume again don't fill the tin more than half-full or the head of the loaf will spill down over the sides. Put the filled tins back into the warm to prove the dough for another two or three hours.

When the dough has proved in the tins the head of the loaf should be bulging out of the top of the tin. Take the tins and put them in an oven pre-heated to gas mark 8, or 230°C, and leave them there for 40 to 45 minutes. When you take the tins out of the oven you should immediately turn-out the loaf (if it doesn't fall out gently lever it with a wide knife or spatula). If you tap the loaf on the bottom and it sounds hollow, then it's done. Finally, stand the loaf on top of the top of its tin to cool for about an hour (to prevent condensation forming inside the tin or under the loaf, making the crust soggy).

When this process is complete you should have some aromatic bread, and a bowl, some tins, a whisk or fork, spoons and a work surface to clean. Usually the cleaning-up part is fairly pleasant because if you do it straight away your kitchen should still smell of freshly baked bread.

eight or ten hours for the yeast to do its work, and your bread might be a little more solid. If you prove for two or three hours in a warmer (say 28°C) place then it will prove faster, and the bread will be a little more spongy.

When you have all these elements in place, then you can begin to make bread.

Bread-making machines

Recently bread-making machines have come onto the market. These provide, in one automated kitchen appliance, a bowl, a warm environment for proving the dough, a baking tin and an oven.

Whilst they make good bread, the principle drawback is that the loaf will always have a big hole in the bottom – created when the mixing hook pulls out of the bread when you remove the loaf from the machine. Another restriction is that it can only make loaves of bread, and you are restricted to one size of loaf. When you really get into bread-making the ability to use the basic dough recipe and adapt it is what makes the process creative. From making standard loaves you can progress easily to baguettes, to traditional cobs, or to hot cross buns and other sweet and spiced breads. For this reason learning the traditional skill of bread-making is far more useful than learning to make bread in a machine.

More fundamentally, bread-making machines are machines powered by electricity. If the machine goes wrong, or the electricity goes off, then you can't make bread. Using electricity is also more expensive than using gas (provided that gas, or other options like a solid-fuel oven, are available).

In the end, the question of whether or not to use a bread-making machine is a matter of personal choice, based upon your circumstances, and whether you would have the time available to make bread traditionally.

Why bother to make bread?

People bake their own bread for a whole variety of reasons. Some, like vegans, bake bread because they like know what's in it. Others make their own bread because, out of choice or because of dietary problems, they wish to avoid the many synthetic compounds that are being added to bread today. But there is another reason to make your own bread – *it's more sustainable*.

The UK bread industry is, through its use of automation and biotechnology, an inseparable part of the agribusiness and food retailing sector that is damaging traditional craft food production and the environment. The increased centralisation of production, and the use of highly intensive processing methods, is creating ever-larger demands for road freight and energy. In the long-term these systems are not sustainable.

Unlike other aspects of our modern society, opting out of the industrial bread system doesn't entail a loss of material wealth. In fact, many people who make their own bread will argue that the lives are enriched by the better quality of the bread, and the development of the creative skills required to produce it. Given the uncertainties about the health impacts of industrial bread, and the clear impacts that the large scale use of energy and transport are having on the world as a whole, baking your own bread is not something that need be a chore. It's a means by which we as individuals can mark our objection to the industrial bread system, and all that it represents.

References:

1. *Use Your Loaf! – The Problems With Industrial Bread*, Free Range Briefing 04/01, Free Range Network 2004. http://www.fraw.org.uk/pubs/frb/frb-04_01.html
2. *The New Complete Book of Self-Sufficiency*, John Seymour, 2003.
3. *Toxic shock! – my non-stick frying pan killed my budgie!!*, Free Range Bulletin 03/03, November 2003. http://www.fraw.org.uk/pubs/frb/frb-03_03.html

The Free Range Network is a 'disorganisation' of activists and specialists that organises workshops and develops information resources for community and grass roots campaigning organisations. Free Range Practice Guides are produced on an occasional basis, and are intended to develop the level of practical skill within community organisations.

© Copyright 2004, Paul Mobbs/Free Range Network. Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.2 or any later version published by the Free Software Foundation; with Invariant Sections being the document title and author identification, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is provided at: http://www.fraw.org.uk/_admin/rights.shtml This document has been wholly produced using the Gnu/Linux operating system and free software.