

## **Building a sourdough starter using freshly milled rye grain ©riotrye**

“Sourdough starter” is the name we give to the mix of flour and water which contains an ecosystem of primarily beneficial lactobacillus bacteria and wild yeasts living in a symbiotic relationship to each other.

Flour naturally contains a variety of yeasts and bacteria. When flour comes into contact with water, the naturally occurring enzyme amylase breaks down the starch into the sugars, the naturally occurring yeast in the sourdough can then metabolize these sugars. The bacteria ferment starches that the yeast cannot metabolise and the by-products are metabolised by the yeast, which subsequently produces carbon dioxide gas. It is this carbon dioxide which will make the bread rise.

The acidic conditions in the sourdough along with the bacteria break down the proteins in the flour. Gluten is made from a combination of the proteins and so lacto-fermentation makes the bread easier for us to digest, but if unregulated can also lead to a denser loaf. This long lacto-fermentation not only makes the grain easier to digest, it also makes the nutrients within the flour bioavailable to us.

### **Building your starter**

To build a sourdough starter the flour should be finely milled, this will allow the breaking down of the starches to begin and through regular refreshment with flour and water the eco-system to build. As organic wholemeal rye is particularly high in the enzyme amylase, it is one of the easiest flours to ferment, along with wholemeal spelt or wholemeal wheat.

The freshly milled flour will absorb a large amount of water, so while we are building the starter, we will firstly refresh it 1 part rye flour to 1.5 part water, then 1 to 1.25 and finally when there is plenty of fermentation we can maintain it with regular refreshments of 1 part rye flour to 1 part water.

### **Day 1**

In a small container mix together 20g organic wholemeal rye flour and 30g of tepid water, bring the mix all together into one lump in the container, cover (to prevent it drying out and things falling or flying in) and leave in a warm place, preferably 22 deg C to 27 deg C so that fermentation can begin.

### **Day 2**

Leave



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### **Day 3**

You may begin to see some bubbles in the mix and it may begin to have a sour flavour. Compost 20g of the mix and add 20g of rye flour and 25g of water. Cover and leave in a warm place to ferment.

### **Day 4**

Lacto-fermentation should kick in by around this point. The starter should begin to get a vinegary smell and an acidic flavour. Compost 40g of the mix and add a further 20g of rye flour and 25g of water. Cover and leave in a warm place to ferment.

### **Day 5**

Continue to compost 40g of the mix and add a further 20g of rye flour and 25g of water. Cover and leave in a warm place to ferment.

### **Day 6**

Compost 40g of the mix and add a further 20g of rye flour and 25g of water. Cover and leave in a warm place to ferment.

### **Day 7**

There should be plenty of bubbles and activity in our starter by now. It may be strong enough for us to bake with, but to be sure we are going to continue caring and building a strong eco-system within the flour, so once again, compost 40g of the mix and add a further 20g of rye flour and 25g of water. Cover and leave in a warm place to ferment.



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