

Importance of Gluten in FLOUR

Wheat is unique in being the only grain that contains gluten. Gluten is elastic and can hold bubbles of air, when you make bread you are trapping bubbles of air.



To do this we need a flour that has a high content of gluten. Gluten is made when protein is mixed with water. To see what gluten looks like take about 20 grams of dough and wash it under a slow running tap.



Wash it by squeezing it and the starch will wash away from the dough.

After a minute or so you will have a small ball of gluten left which looks like chewing gum.



The difference between chewing gum and gluten is that the gluten will try to regain its shape when stretched. This ability means that it can hold bubbles of air.

To make air to fill the bubbles in bread we use the starch in the flour. In the fermentation process the starch breaks down into sugar and the yeast feeds on it to create gas.

If you grind the flour too lightly, you don't break enough starch granules to give food for the yeast to create gas. You can go too far and over grind the flour which then gives too much starch damage. This then lets the dough ferment too quickly and the dough collapses or goes very slack.

To make consistent quality flour we need to grind the flour to break open the starch granules, and use wheats with a high gluten content. Stone grinding flour doesn't break open enough starch, so loaves are small and have a dense texture. Most stoneground flour is firstly stoneground and then rollerground afterwards.

The Roller Milling Process

Firstly we clean the wheat, taking out the straw, small seeds like cockle and vetch as well as oats and barley.

Then we add water to soften the bran skins. This stops the bran from going to powder when we grind giving better bran flakes.

Wheat has an odd shape, it has a crease down the side of it. This means that we can not just polish off the bran, as we would be left with bran in the crease.

