

Mill Stones versus Roller Mills

Richard Ellis

For centuries corn was ground using mill stones driven by wind or water, such as at Headley Mill. It was ground to meal to feed animals and to flour for bakers. The only differences would be perhaps the variety of wheat used and most bakers would want flour to be a bit finer than meal. The invention of roller mills in the 1880s (in Hungary I believe) brought in a new way of producing flour, and by the early 1900s this was affecting the business of local corn mills.

Roller mills had several commercial advantages over mill stones. They could produce more tons per hour and were usually electrically driven. This enabled them to be sited at docks to grind the shiploads of hard milling wheat coming in from North America. Roller mills consist of a series of stages each of which 'nicks' the grain, splitting it into smaller pieces for the next stage. Furthermore, screens can be placed between stages to remove bran and wheat germ, leaving just the white carbohydrate part of the grain. Thus roller mills produce white flour, with all the fibre, essential oils, vitamins and minerals and proteins removed. This 'pure' white flour is so infertile that it has an almost infinite shelf life, which is a huge advantage to the trade.

So this white flour was promoted as being 'pure' and much better for you than the 'dirty' brown flour coming from 'unhygienic' old water mills. Of course it is exactly the reverse. White flour has had all the goodness taken out, and is just pure starch. Nevertheless, big money won out, and the public developed a taste for white flour. Faced with this, stone mills had to respond.

My great-grandfather had been apprenticed at the Cross-in-Hand windmill in Sussex, but moved to water mills to avoid getting up at 3am just because the wind was blowing. He founded the family business at Greatham Mill in 1889 and moved to Sheet Bridge Mill a year or two later. My grandfather bought Headley Mill in 1914.

Traditionally millers were paid with 'mulch', usually 7% of the meal milled. To turn this into money, they kept pigs and baked bread, which was sold to the village. There is a bread oven at Headley Mill, but as far as I know it was never used, because my grandfather had decided to focus on provender milling, so as to avoid direct competition with roller mills. So he needed a pig farmer and his son Peter took on this role.

By focussing on grinding meal for animal feeds, the family business of J Ellis and Sons also became agricultural merchants, buying and selling from farmers, as well as milling. For example, we supplied seeds, feeds, fertilisers (later on), hay and straw, and many other things farmers and small-holders needed. The business continued like this through World War 2 (run by my Aunty Joan whilst her brothers were away fighting), when it played an important (local) role in food production. After the war, huge efforts were made to build up agriculture, and the business flourished in the 1950s, with 6 lorries on the road and 12 employees.

By the 1960s farms were getting bigger and more mechanised, and the trade was changing. My father John Ellis made a big effort to produce a brand of animal feeds he called "Conquest" at Headley Mill. Conquest feeds were compounded feeds with additional nutrients added. However, changes in the law introduced stiff penalties if these did not correspond to the amounts stated on the bag. Errors can occur and my father decided to

stop this, as it was too risky. At the same time BOCM, Dalgetty, and other companies had built modern mills which produced compounded animal feeds, and Headley Mill could not have competed with them for long.

Another change was that farmers were able to buy electric hammer mills to produce animal feeds directly from their grain. As a result, my father said that the last time he milled corn for farmers was Poland's in Bramshott in the later 1960s.

In an attempt to expand the business, my father took on Denyer's at Neatham Mill near Alton. There were two staff, Pam in the office, and the miller Mr Self. I remember Mr Self. He was white all over. He had white hair, white eyebrows, a light dusting of white flour on his skin, and white clothes, because he was the flour miller. In response to roller mills, Denyer's had installed a turbine and their own roller mill, and it seems they managed to hold onto the flour trade in the Alton area into the 1950s. By the 1960s, this started to fade, and my father came in at the end. Running two premises was a struggle and so he closed Neatham down in about 1970, and absorbed their farming customers into ours.

So my father, in a complete change of strategy, tried to market stoneground wholemeal flour in the 1970s. In addition to containing all the vitamins, minerals, and proteins in the original grain, stoneground flour also contains minute traces of silica (found in sand and quartz) from the mill stones. Note, the bran also contains silica. Silica is a trace element. It is important for the formation of collagen and building strong bones. Cement contains silica and calcium. If you leave out the silica, it becomes brittle – the same happens with your bones. Healthy bones require silica, yet to this day, most people think that calcium is the solution to osteoporosis. However, our diets are rich in dairy and poor in silica, especially since modern food is washed so much that there is no grit left in it. I don't wish to suggest that stone ground flour is the answer to osteoporosis, by itself it is almost certainly not (colloidal silica might be better). The point is that stoneground wholemeal flour is healthier than wheat flour, and is part of the old way of life, which was more in harmony with nature – water mills do not produce greenhouse gases!

However, all this was lost on most of the public in the 1970s, and the wholemeal flour project was not a success. The timing was wrong. There were further changes in agriculture which weakened the agricultural merchanting business. But the business struggled on until 2008 when it was forced to close. Whilst we did not beat modern roller mills in the end, we outmanoeuvred them for three generations.



In the early 1990s, members of HMG replaced a large timber beam at Headley Mill. John Ellis is seen here in the green jumper to the left of the fork lift truck.

Keith Andrews