Milling Flour: A Modern Miller's Tale

A Modern Miller's Tale. By Andrew Wilkinson, Gilchesters Organics, Northumberland, England. 2021

A lot has been asked of plant breeders over the last 70 years for cereals to match the demands of modern agricultural practices and yields with the functionality of those grains within the modern processing systems of industrial roller milling.

During this time the main consumer of flour has been principally the industrial bakery. However, over the last 10 years there has been a quiet change in demand from local home bakers and small artisan bakers, who have cometogether with regional growers and farmers to create a local grain economy. This has required these farmers to re-evaluate the grains they grow and invest in milling systems that can deliver consistently good flour in terms of performance but on the understanding that it's quality is bound directly to the grains suitability and the farmer's ability to acquire a new skill – that of traditional stone milling.

We at Gilchesters, in the North East England county of Northumberland, have had to make one such journey. Looking back the decision to grow heritage and diverse cereals was always going to lead us to milling our own, simply because they were such niche grains at the time. Building the

mill to process these grains seems the easy part now. The acquisition of the art of milling has taken nearly 20years of patient learning.

Grinding grains between two heavy circular stones, the surfaces of which are dressed with grooved channels, to produce wholemeal flours seems a simple enough task. The wholemeal flours are nutritionally the best you can use, as they contain all of the bran and wheat germ along with the white flour contained in the endosperm (centre) of the grain.

Just how they are transformed into flours with baking functionality is the skill of the miller, for those flours need to be as fine as possible. Course flours contain a higher percentage of semolina, which in the end is unground white flour, reducing the baking performance. So the grains themselves need a milling resistance. They need to be hard grains and the quality of that hardness is both a function of the breeding and the growing environment. We grow tall straw, hard, red winter wheats for our baking flours, against the conventional wisdom of modern short straw, white springvarieties. This natural resistance to pressure under the stones allows me to cut the grains so that they fracture along clean lines as they pass from the centre to the outside of the mill stones. Loading the gap between the stones with just the right amount of grain to continually feed that process is the real art. Each grain is different and each year they are different. The stone miller, as with the artisan baker requires all the senses of sight, sound and touch to gauge how those cereals are performing inside the closed casing of the mill stones.

Geoffrey Chaucer, our greatest English poet of the Middle Ages, described in his Miller's Tale of the miller's thumb. This age old habit of testing the flour by rubbing it between thumb and index finger. This is still something I practice every day to ensure the mill stones are set correctly to mill as fine a flour as possible. It's a profession with a very specific set of skills that are hard to come by but once acquired are definitely an art.