nabim

UK Flour Milling Industry 2009

The National Association of British and Irish Millers

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The flour milling industry is a vibrant sector that combines traditional skills with high technology to produce a wide range of flours. It is compact and highly efficient with a total annual turnover from all sources at a little under £1billion. The UK is self-sufficient in flour with a small positive trade balance. Flour is used as the main ingredient in bread as well as in batters, biscuits, cakes, coatings, pies, soups and a range of processed foods.

Nearly all millers in the UK and Republic of Ireland are members of nabim, which is the trade association for the sector.

The Industry

Flour milling in the UK today is an automated and efficient industry, having evolved a long way from the days of water-driven and wind-driven mills. Modern flour mills rely on the art of the miller and high technology to function as continuous-flow operations throughout the year.

In recent years the industry has continued to consolidate. There are now 30 companies operating 59 mills. The two largest companies account for approximately 40% of UK production with a further 20 companies producing significant quantities of flour. Many of the smaller millers have developed niches ranging from pre-packed flours to those for specific uses such as flours for speciality breads.

30
Milling companies

59
Mills

5.7 m tonnes
Wheat milled each year

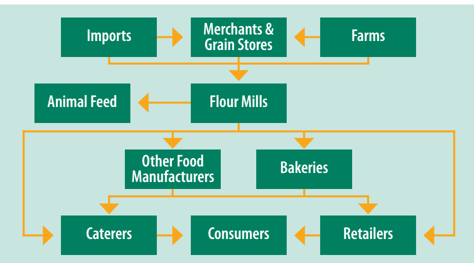
4.5 m tonnes
Flour produced each year

76,000 tonnes
Average flour production per mill

The UK flour milling industry remains the largest single user of domestic wheat. The industry has worked hard to promote the benefits of increased availability of UK breadmaking wheats. The result is that usage of home-grown wheat is now double the level of thirty years ago.

The Supply Chain

The flour milling industry is the third link in the supply chain that links farmers to consumers. In 2009, it is estimated that approximately 1.9 million hectares of wheat will be grown in the UK. Approximately 45% of this area grows varieties with bread or biscuit making potential (**nabim** groups 1 – 3). Wheat is bought from grain merchants, farmers and central stores in the UK to be processed at flour mills. In 2008/9, it is estimated that UK wheat will account for 80% of usage by millers; the remaining 20% will be imported mainly because it has different qualities used to produce stronger flours that are required by our customers. The industry works closely with plant breeders, agronomists, farmers and bakers to ensure that wheat breeding and agronomy continue to produce crops that are suitable for milling and baking.



Millers blend or 'grist' different varieties of wheat which are then milled to produce flour. Much of the flour is sold in bulk to the larger bakers and food processors. A smaller proportion goes to craft bakeries, or is pre-packed and retailed direct to consumers.

The quality and safety of both raw materials and end product is paramount to the industry. **nabim** is a strong supporter of initiatives, like the Assured Combinable Crops Scheme (ACCS) and Scottish Quality Crops (SQC), to retain and enhance consumer confidence in the food supply chain. UK millers only purchase wheat that has been 'assured'. Assured sources guarantee good standards of crop production and food safety, backed up by independent annual inspections. Although there are different procedures for guaranteeing similar standards in imported grain, millers ensure that equally robust food safety standards are maintained. **nabim** also operates a scheme (the intake proficiency scheme) to ensure common standards of wheat testing at flourmills.

The UK milling industry continues to work closely with departments of the UK government, the devolved administrations in Northern Ireland, Scotland and Wales, and other stakeholders including the Food Standards Agency.

Wheat Usage and Flour Production

Most of the wheat that is used by UK millers is grown in the UK. For breadmaking, group 1 varieties are preferred. Other varieties are grown for specific breadmaking uses and the production of biscuits, cakes, batters and coatings. Canada, the USA, France and Germany provide the majority of UK imported wheat.

As a result of advances in technology and the skill of the miller, the industry produces over 400 different types of flour to meet increasingly specific consumer demands. Organic flours have grown in popularity but still only represent 1-2% of the retail market. The other main products are bran for human consumption and 'wheat feed', for livestock.

Total UK Wheat Usage (000 tonnes)

	1988/9	1998/9	2003/4	2007/8	2008/9 (estimated)
Total UK harvest	11,714	15,018	14,288	13,137	17,458
Total wheat usage	**5,121**	**5,660**	**5,564**	**5,966**	**6,272**
Home grown usage	3,796	4,632	4,730	4,768	5,060
EU usage	835	452	347	561	589
Third country usage	490	576	457	637	623

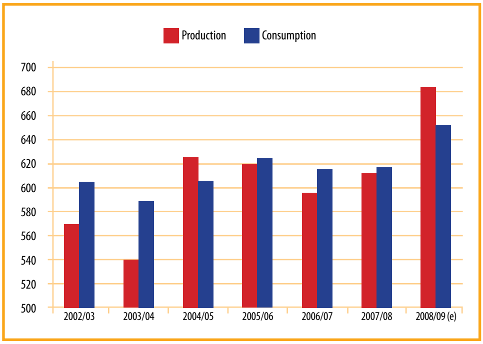
Total UK Flour Production (000 tonnes)

	1988/9	1998/9	2003/4	2007/8	2008/9 (estimated)
Total flour production	**3,974**	**4,478**	**4,412**	**4,702**	**4,989**
Flour Type (%)					
White breadmaking	53.5	53.6	54.1	51.2	49.0
Brown breadmaking	3.5	3.2	3.0	2.7	2.4
Wholemeal breadmaking	6.3	4.3	4.8	6.2	5.0
Biscuit	14.6	12.7	12.4	11.4	12.3
Cake	1.9	1.7	1.3	2.0	1.8
Pre-packed household	3.5	2.4	2.1	2.7	2.6
Self raising	2.3	1.6	N/A	N/A	N/A
Food ingredients	N/A	N/A	4.6	4.1	3.8
Starch manufacture	3.1	3.4	11.0	14.8	17.1
Other	11.4	17.1	6.7	4.9	5.1

Economics

2007/8 saw an unprecedented rise in the price of wheat and other grains across the world, which also affected the UK. This was accompanied by massive volatility in markets due to a combination of poor harvests, low carry-over stocks, increased demand (especially in developing countries), political intervention and speculator activity.

World Wheat Production and Consumption

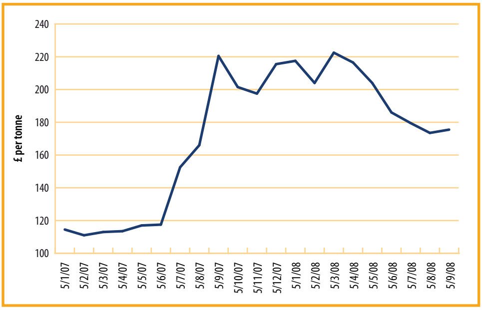


Towards the end of 2008 wheat prices retreated from their peak levels. However, the UK harvest was problematic and quality wheat from the 2008 crop remained limited. This led to the maintenance of a relatively high breadmaking wheat price whilst the premium over feed wheat rose to about £50 per tonne. Organic wheat costs remained more than double the levels of conventional wheat.

Although there was a record world wheat crop in 2008, plantings are lower for 2009. World-wide wheat stocks are higher than in 2007/8, but remain finely balanced meaning that economic, social or climatic problems in even a relatively few countries can have international impacts. Although the volatility of markets has decreased in the past year, the world situation is such that higher prices and febrile markets can return rapidly, especially when governments use political intervention to secure food supplies.

The main input cost for flour milling is that of wheat, which is the raw material. The energy required to mill it into flour and transport are the next largest costs. Rising energy and transport costs have presented the industry with additional problems that are likely to continue, despite the decline in oil prices in the second half of 2008.

UK Bread Wheat Price (delivered Liverpool)



Research

The milling industry continues to invest significant resources in a range of research studies, from collaboration in large long-term LINK-funded studies to shorter-term specific scientific studies. **nabim** and individual companies are associates of Campden BRI and fund specific studies in addition to the 'member-funded' programmes. Member companies also fund near-market research to assist their own competitiveness.

In 2007, the industry joined the BBSRC Food and Health research club and has been an active partner in a strategic study of the wheat sector with the international think-tank Chatham House that culminated in the report 'Food Futures: Rethinking UK Strategy'.

Environment, Health & Safety

The milling industry has a very low environmental impact. The milling process produces almost no waste, so the main impacts come from the energy used during transport. However, the industry continues to promote environmental good practice. It has sponsored an independent guide to best practice in energy efficiency, created a model environmental management system and is actively engaged with the Environment Agency. Work has also been undertaken to develop a generic 'carbon footprint' for the sector.

The flour milling industry is a responsible employer and is aided in its approach to health and safety by **nabim**, which commissions research into safety issues, collates and disseminates data on accidents, facilitates discussion, issues guidance on a wide range of safety topics, and maintains a close working relationship with the Health and Safety Executive. These activities are designed to assist the industry maintain a safe working environment, promote safe behaviour, and minimise the risks to which employees, contractors and others are exposed.

Education & Training

Flour milling is a highly automated and capital intensive industry with an employed workforce of less than 3,000. However, it needs both technical and traditional skills to maximise the return from technological advance. Accordingly, high priority is given across the industry to training and development. **nabim** features strongly in this work, and liaises with Improve, the sector skills council for food manufacture, on occupational standards and qualifications.

Companies' own training schemes are supplemented by industry courses at different levels. A seven module distance learning programme, developed and delivered by **nabim**, has for decades been seen as the foundation on which all milling training is built. Providing an overview of the industry and its processes, and recognised as the leading international course, the programme attracted around 600 students in 2008, from seven continents.

In the 1980s, a craft skills certificate was developed to provide a competence-based qualification for practical millers. Recognising the need to maintain a focus on practical skills and competence, the certificate is being reviewed in 2009 as other potential skills initiatives are considered.

Campden BRI and the Buhler Training Centre (Switzerland) support **nabim** in its Advanced Milling Diploma. Following a successful initial programme in 2006, a second entry of up to ten candidates will embark on the diploma in 2009. They will complete their Diploma studies in 2011 and a third programme is likely to commence in 2012.

Twice a year, **nabim** runs 'management development' conferences for members. Training events and seminars are also organised on specific subjects in response to the demands of the sector.

Flour, Bread & Cereal Products

In these challenging economic times bread remains excellent value for money and is a healthy part of the diet. Whether it's white sliced, wholemeal or granary, rolls, pitta or bagels, bread provides a number of important nutrients including carbohydrate, dietary fibre, calcium, iron and vitamin B1.

Growing consumer interest in health and wellbeing is driving innovation in the bread sector, and although bread is intrinsically healthy, breads with additional health benefits such as omega-3 fats and prebiotic fibres are becoming more popular.

Experts believe that we should eat at least three servings of wholegrain each day, which is equivalent to 48g per day. Evidence suggests that a good way to do this is by eating wholemeal bread and wholegrain cereals especially at breakfast time which is believed to be the most important meal of the day. Wholegrain also has the added advantage of helping to reduce the risk of serious illnesses such as heart disease, stroke, type 2 diabetes and certain types of cancer.

The Flour Advisory Bureau (FAB), which provides information on all matters relating to flour and bread in the UK from health and nutrition, to cooking and baking (**www.fabflour.co.uk**) was set up in 1956 and is funded by the industry. FAB's remit in response to the increasing public health nutrition agenda, now focuses primarily on issues led PR campaigns. These are based around healthy eating, allergy and intolerance 'myths' plus sensible weight loss approaches rather than faddy diets. Obesity is very much on the political agenda for both adults and children and FAB will continue to communicate the role that bread and flour has to play in a healthy balanced diet.

FAB works with the Home Grown Cereals Authority (HGCA) and the Federation of Bakers (FoB) to provide the Grain Chain (**www.grainchain.com**), an educational website for students aged 5 to 16 years old. It offers visual, up-to-date materials including activity sheets, games, quizzes, recipes, videos and podcasts, which cover the key topics of arable farming, milling, baking, cooking and nutrition. The resource can be used both in the classroom and at home.

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