

The **nabim** wheat grouping system has been in operation for the last sixteen years. In 2008 **nabim** members held a review of the present system to examine whether it is still 'fit for purpose'. Having taken views from all parts of the wheat chain it was decided to retain the current groupings but to change the style and layout. As part of this it was decided to include the **nabim** wheat guide within the HGCA Recommended List.

Millers remain committed to using home-grown wheat that conforms to ACCS or similar standards, with approximately 80% of wheat used being UK produced. Because of this we devote much time, energy and finances to assisting breeders and the HGCA to identify baking potential of new varieties at the earliest possible stage. In the last couple of years we have seen a great breakthrough in the

way in which end-use traits can be identified. As millers, we welcome these. A LINK project investigating end-use traits was completed this year and was judged to be a 'once in a lifetime' piece of work that has greatly advanced our understanding of wheat genetics. A second LINK project which is examining the genetic basis of the Hagberg Falling Number looks set to generate similar advances. A joint research project being conducted by NIAB and the John Innes Centre is examining the genetic basis of starch structure and is focusing on novel starch types.

The past two years have seen unprecedented volatility in wheat prices, not just in the UK but world-wide. There are many factors behind this volatility, not just greater world demand but also increased competition, and extremely variable harvests. This led to a high basic price in 2007/8 and a substantial rise to premiums being paid for milling quality. Although world demand is still increasing basic prices for feed wheat have fallen in 2008/9 towards levels last seen in 2006. However the premiums for breadmaking quality remain at historically high levels.

Looking to the future, it appears likely that markets will remain extremely volatile. This emphasises the need for growers to stay focused on the needs of their end-market and to take all possible steps to match input costs with the quality required.

New varieties

This year sees an impressive eight wheat varieties join the RL. New Group 1 milling varieties have been

scarce in recent years. It is therefore a very promising development, welcomed by all UK millers, that in Gallant we have a new Group 1 breadmaking wheat. It has the highest yield in Group 1 and is similar to Solstice in terms of maturity, disease ratings and protein levels. With milling and baking qualities that have been consistent over the three years of trials, this variety shows promise for good commercial performance.

Three new Group 2 wheats have joined the list (Ketchum, Panorama and Qplus). As with many Group 2 varieties, the milling and baking performances can be somewhat variable. Experience during the next couple of years will show how these varieties can be used in different milling grists.

Another promising development this year is the new biscuit wheat, Scout, which has joined the Recommended list in Group 3 as a high-yielding variety with similar attributes to Claire. It has been consistently good in its processing qualities over three years of trials. Two varieties, Cassius and Viscount, showed some potential as biscuit wheats but total data from three years of trials showed unacceptable variability in performance. **nabim** members will again review the performance of these two varieties after the 2009 harvest.

Mycotoxins

The past two crops have seen major challenges from levels of deoxynivalenol (DON) mycotoxins. Growing conditions and the exceptionally wet harvest period combined to make 2008 difficult

for many farmers and DON levels challenged all parts of the grain chain. Unfortunately none of the current wheat varieties has a significant level of resistance to fusarium ear blight and growers have to rely on cultural and chemical control methods. 2008/9 was the first time that the DON mycotoxin risk assessment has formed an auditable part of the ACCS scheme. The revised HGCA 'Sellers Risk Assessment' process is an important plank providing the assurance required by the food processing sector but experience in 2008 indicates that farmers will in future need to exercise a greater degree of care when completing the risk assessment if it is to retain its value.

For millers, the presence of DON (and other) mycotoxins in deliveries at levels close to, or above, the legal limits for DON constitute a potential food safety issue. Since harvest 2008, many millers have experienced periods of difficulty where a significant proportion of the wheat arriving at intake is close to the limit. A small proportion of these loads has been above the legal limit. Delays can occur at intake and disruptions to the milling process can have massive continuity and financial implications. This year has reinforced many of the lessons faced for the first time in 2007/8. All wheat growers will now be aware that mycotoxins are a food safety issue for which they have a legal responsibility. Milling wheat should only be marketed when a reliable risk assessment has been made and where the levels of mycotoxins present have been quantitatively determined prior to delivery. Millers now require a test result that is representative of the bulk parcel of wheat to accompany each load at intake.



The **nabim** Wheat Guide lists the flour milling industry's views on wheat varieties and gives marketing guidance on their likely relative values in the UK market. It complements other information on wheat varieties provided in the HGCA Recommended List 2008/09. It should be noted that just as a variety can vary in agronomic performance from year to year, end-use performance might also vary due to climatic conditions throughout the growing season.

Increasingly, contracts specify single varieties of wheat, since the variety is the most important element in determining end-use performance. Wherever possible, different varieties should be separated within stores in order to maintain their full value. Even where varieties are of apparently similar value, mixing can reduce their marketability; a factor that is brought out in some of the comments below.

UK flour millers produce consistently high-quality products where the reliability and safety of the wheat is of paramount importance. All millers purchase wheat that has been grown to assured standards such as the Assured Combinable Crops Scheme, the Scottish Quality Crops Scheme or other schemes providing similar assurance standards.

Varieties are listed in alphabetical order within each of the **nabim** groups.

Group 1: These are the varieties that produce consistent milling and baking performance. Providing they achieve the specified quality requirements including 13% protein and a 250s Hagberg Falling Number (HFN) millers will offer a premium above base prices. Lower protein Group 1 wheat will also be of value, but will attract a lower premium. Group 1 varieties are not interchangeable and some are better suited to specific uses than others. Therefore, it is important to understand the end-use requirements of your customer.

Gallant (NEW)	This new variety is significantly higher yielding than other Group 1 varieties. Its milling and baking qualities have been consistent over three years of trials and are as good, if not better, than other current varieties.
Hereward	Now outclassed in terms of yield, Hereward can still perform well although now has a higher degree of variability. The variety remains popular with millers, and because of its decline in acreage, they may offer contract growing schemes some of which offer further premiums for higher protein content to compensate for lower yields.
Malacca	Malacca is now outclassed in terms of yield and is restricted to a limited acreage. It continues to show good breadmaking performance and is liked by all millers despite the endosperm colour being slightly more yellow than desirable. It has a tendency to lower specific weights.
Mascot	Although achieving Group 1 status in 2007, only low volumes were available commercially last year. Its baking performance is generally good although it is not suited to all processes. As a result, it is possible that not all businesses will value the variety equally. Although its yield is lower than Solstice it can produce higher proteins levels.
Solstice	This is the most widely used Group 1 variety with both farmers and millers. It may have yields comparable with Xi 19 but generally produces higher proteins. It is favoured by millers because it has a good balance of protein content, milling characteristics, gluten properties and baking performance.
Xi 19	This variety continues to be high yielding but tends to produce lower protein at these high yields. Correct agronomic management is therefore important. It has performed consistently in breadmaking tests. Low protein consignments are unlikely to be accepted by all millers.
Spring wheats	
Paragon	A spring variety whose performance in breadmaking has been excellent. It remains the choice of most millers when buying spring wheat.

Group 2: This group comprises varieties that exhibit breadmaking potential, but are not suited to all grists. Some are consistent, but not as good as those in Group 1; some perform inconsistently whilst others are suited to specialist flours. Therefore these varieties are likely to attract varying market prices

Battalion	A high yielding variety that performs well as a second wheat. So far, it has not been widely available commercially, so it is unlikely to be a preferred variety amongst those in Group 2 until millers have more experience of it. One of the key quality concerns that leads to it being graded as Group 2 is that sometimes loaves made from this variety have a weak crumb structure.
Cordiale	An early maturing variety that also performs well as a second wheat. It has higher than average HFNs, good protein levels and specific weights. High yields are common, and comparable to Xi19. It has given consistent milling and baking performance since entering the list and as such is the Group 2 variety of choice for most millers.
Einstein	Einstein is a high yielding variety that is used by most millers as a constituent part of some bread-making grists. However, at high yields it has a tendency to produce lower protein levels with lower water absorption. For this reason, the variety requires careful agronomic management. Most millers will only be able to use restricted proportions of this variety in bread-making grists.
Ketchum (NEW)	This new variety has a high yield but with a tendency to produce a lower level of protein. Sometimes it has a tendency to produce bread that is less resilient and with a greater variability in crumb structure than some other varieties.
Marksman	This variety achieved RL status in 2008 with a specific recommendation for the east and west. Although only limited volumes have been seen by millers it is clear that its hard milling characteristics, high protein and strong gluten combine to make it more suitable for use in either blends or in specialist flours. Flour colour tends to be creamy rather than white.
Panorama (NEW)	This variety, new for 2009, is the highest yielding Group 2 variety which shows good grain and milling characteristics. However baking quality has been variable and overall it produces bread of moderate quality. This will probably make it more suitable for use in blends.
Qplus (NEW)	New for 2009, this is the first bread-making wheat with resistance to orange wheat blossom midge attack. From three years of trials results there is variability in baking quality between seasons. Most millers will only be able to use restricted proportions of this variety in bread-making grists.
Soissons	This is an early maturing variety but in yield terms it has been overtaken by more recently developed varieties. It continues to offer unique quality characteristics which are liked by millers for use in specialised bread grists. This unique quality offering, which cannot be found in other recommended wheats, means that it can command a price equivalent to Group 1 varieties.
Spring wheats	
Ashby	This is a spring variety, which is seldom seen by millers.
Granary (NEW)	New for 2009, this spring wheat has only been seen in a very limited number of trials since 2005. It shows good breadmaking quality and is a promising Group 2 variety. Because of the limited data nabim will review its classification once it becomes commercially available.
Tybalt	A spring variety, which has a tendency to low protein content and softer grain. It shows fair baking performance and will be used at low grist inclusion levels by most millers.

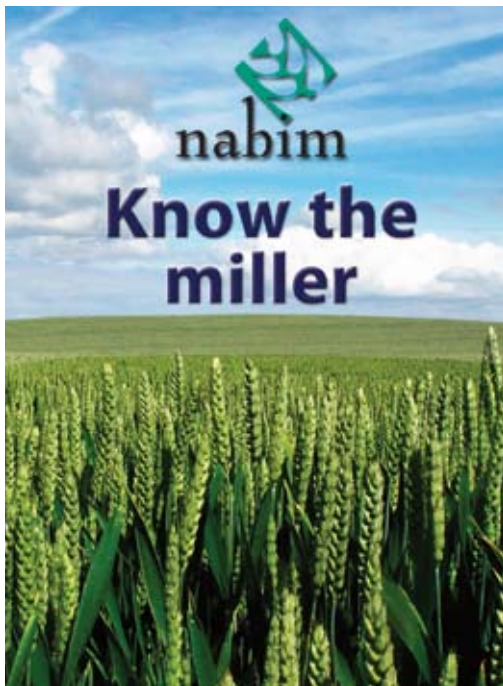
Group 3: This Group contains soft varieties for biscuit, cake and other flours where the main requirement is for soft milling characteristics, low protein, good extraction rates, and an extensible but not elastic gluten.

Claire	An early-sowing biscuit wheat that continues to be the benchmark for Group 3. It is preferred by millers because of its milling qualities, bright white flour colour and gluten characteristics which result in high dough extensibility.
Consort	A variety that is especially recommended for the north but now agronomically outclassed by newer varieties. However, it remains a good biscuit wheat, which is still popular with millers for its high dough extensibility.
Deben	This variety does not compare favourably with either Claire or Consort. It tends to low specific weights and the dough has been found to be of poor structure with low extensibility. As such it has limited flour application and is not a preferred variety. Deben should not be combined with more preferred varieties during storage.
Robigus	This variety is well-liked and widely used by the milling industry. It is well-suited for biscuit production but not as versatile as Claire due to the yellowish flour colour.
Scout (NEW)	New for 2009, this variety has yields similar to those of Robigus and shows quality attributes similar to Claire. From three years of trials results it has been consistently good in its processing qualities.
Zebedee	The highest yielding Group 3 variety, it meets the criteria for biscuit performance but with a tendency to lower specific weights when compared to other Group 3 varieties.

Group 4: These varieties are grown mainly for animal feed. However some (such as the examples listed below) may be used by millers in certain 'general purpose' grists if they achieve the contractual standards but are unlikely to attract a premium. Growers should take care and avoid mixing hard and soft varieties.

Hard:	Belvoir (spring), Duxford, Gladiator, Humber, JB Diego, Oakley, Timber. Of these varieties, Timber and Duxford have a stronger gluten quality and are worthy of keeping separate. With the other varieties, Gladiator, Humber and the spring variety Belvoir generally have higher protein contents, Hagberg Falling Numbers and specific weights, whereas Oakley is a low protein, low Hagberg Falling Number variety.
Soft:	Although soft, these varieties are not generally suitable for biscuit flour. However, specific demand for niche markets may be available. Alchemy, Cassius (NEW), Ambrosia, Gatsby, Glasgow, Istabraq and Viscount (NEW). Alchemy is the most popular variety sown and may be used by some millers, but not where they require good gluten extensibility characteristics, which differentiates the soft Group 3 from the soft Group 4 varieties.

Other wheat types	
Zircon	A hard white wheat that has specialist markets and is not classified by nabim .



The best way to optimise the milling wheat offering is to understand the specific requirements of local millers. There are currently 30 companies operating 60 flour mills located throughout Great Britain and Ireland. Many smaller millers have developed niches ranging from retail flour mixes to flours for specific uses such as in speciality breads. During the milling process millers blend different wheats into a range of 'grists' that are then milled to produce up 400 different types of flour. The result is that individual millers may require wheat varieties for specific purposes and are prepared to offer specific contracts for these. Millers are keen to explain their requirements to farmers, merchants and farmer-controlled businesses. Most millers welcome and regularly host visits from farmers groups, co-operatives and merchants.

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Andrews Flour

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Carr's Flour Mills Ltd

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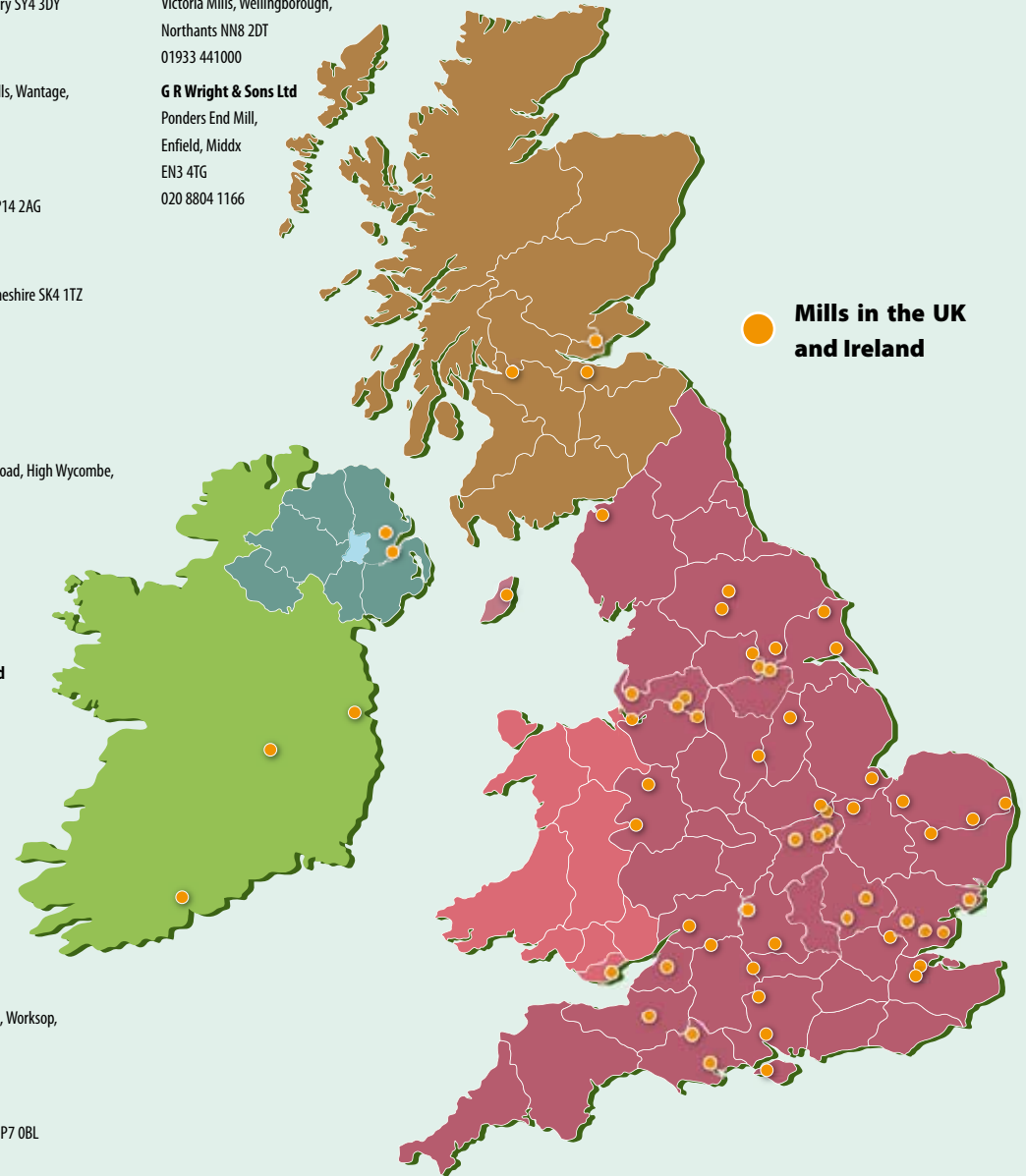
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