

There is a consistent market for UK grown quality wheat if the quality specifications are met. **nabim** member companies mill more than 5 million tonnes of wheat each year so we represent a well-established market, not dependent on political whim. Farmers have the choice of a broad range of varieties from across the Groups. Many considerations will affect the choice, but the preferences of local millers should always be a significant factor.

## New varieties

Although no new breadmaking varieties have been added to the RL, farmers still have the choice of six competitive Group 1 winter varieties and three Group 2 winter varieties.

Crusoe and Gallant remain reliable milling varieties although their yields are comparatively low. In contrast the four newer varieties (RGT Illustrious, Skyfall, KWS Trinity and KWS Zyatt) all have higher yields, robust disease resistance packages, and reliable baking performances. However, their higher yielding potential means that greater attention to nitrogen inputs is required than with the 'older' varieties. Where this is not done farmers are unlikely to achieve acceptable protein quantity and may not gain access to the highest possible wheat prices.

## Group 3 biscuit wheat

The UK biscuit (Group 3) wheat area has become worryingly low in recent years. This has resulted in reduced supplies to both the domestic and export markets. Generally lower bread milling premia have created a competitive opportunity for Group 3 varieties in the market.

The Group 3 variety, Elicit is new to the 2018/19 Recommended List and will undoubtedly help fill this market segment. Elicit appears to have a combination of high yields and disease resistance. Of particular note is Elicit's Septoria tritici rating, which is the highest of all the Group 3 varieties. Additionally, Elicit has good resistance to other diseases and as a result it also has the highest untreated yield of this group.

Millers are looking forward to experiencing the performance of commercial quantities of this promising new variety from harvest 2018.

## Spring wheats

Several years ago, it was anticipated that the advent of the 'three crop rule' would result in the growing of more spring wheat. However, the effect was minimal with many farmers favouring spring barley or a range of other spring crops. There is a suggestion that this may now change and this will prompt consideration of end markets by many farmers.

Farmers may select from one Group 1 variety (Mulika) and five Group 2 varieties (Granary, KWS Chilham, KWS Cochise, KWS Willow and Tybalt). Not all of these perform equally and some may not find ready markets. Mulika remains in demand because of its excellent bread making qualities.

## Wheat quality from the 2017 harvest

Harvest 2017 was a challenge for many UK wheat growers. Although it began earlier than normal in most areas it became protracted by spells of rainfall with no time for the crop to dry between these periods.

Despite dry weather in April in most localities, yields were close to the five-year average. Protein levels were slightly higher for Group 1 wheats compared to 2016 although this depended on location and variety. The AHDB annual survey revealed that 69% of bread making crops met the 13% protein specification and gluten strength was also significantly increased in many Group 1/2 wheat crops. Conversely, lower specific weights in some crops led to rejections at intake. The protracted and wet harvest also resulted in higher moisture levels with many farmers having to dry harvested wheat, with the usual risks of over-heating. Hagberg Falling Number levels in western areas, and parts of the southeast, were also low.

Although a greater proportion of the crop was planted to Group 1 and 2 bread making varieties, the inconsistent harvest meant that only 24% of Group 1 and 29% of Group 2 met the normal full specification for high or medium quality bread wheat.

A notable feature of the 2017 UK harvest was significantly lower water absorptions which are similar to those experienced in 2015. This is a worrying feature of harvests in the last decade and there needs to be a greater understanding of the environmental factors which cause this to happen.

Water absorption measurements are made so that

the baker or processor knows how much water can be added when the dough is being prepared. Relatively high water absorption levels are required for bread making wheat. It is reassuring that AHDB has recently commissioned a study by Rothamsted Research and the University of Reading to investigate the factors that determine low water absorptions.

## Mycotoxins

Several important mycotoxins can be found commonly in the UK. For deoxynivalenol (DON) and zearalenone (ZON) their levels in wheat depend on the weather conditions during the growing season – rainfall during the flowering period for DON and rainfall before and during harvest for ZON. The presence of ochratoxin A is not determined by growing conditions but is very much dependent on conditions within grain stores.

In many areas the wet harvest in 2017 provided optimum conditions for the development on ZON. The annual post-harvest monitoring of the new crop arriving at processor sites indicated that the risk from ZON was similar to that seen in the 'bad' year of 2012 when there were significant challenges to the supply chain. As a result of this, UK flour millers decided that, in order to minimise the risks to food safety, a ZON count would be required with every load of wheat arriving at a mill. This situation parallels that currently used for DON and has provided the required reassurance to our customers.

**nabim** member companies, other cereal processors and members of AIC will continue to monitor the levels of the key mycotoxins at the start of every new harvest and the processors will determine what information will be required from their suppliers.

## The YEN Quality Competition

**nabim** sponsored the 2017 YEN quality wheat competition and the results will be announced in March 2018 at the Milling Wheat Conference. Although the quality of the entries reflected the challenges faced by farmers last year, the yields of the 'shortlisted' entries were above 10.0 t/ha with an average protein level of 13.9%. The three top entries were of three different Group 1 varieties and demonstrated that high yields can be achieved whilst meeting the quality requirements of flour millers. It is anticipated that this competition will be repeated in 2018. Further details can be found at <http://www.yen.adas.co.uk/>.

The **nabim** Wheat Guide provides the UK flour milling industry's views on wheat varieties and their relative values in the UK market. It complements other information provided in the 'AHDB Recommended Lists 2018/19 for cereals and oilseeds'.

Seasonal variations in climate and growing conditions mean that not only will varieties vary in their agronomic performance, but this will also be reflected in their 'end-use' performance.

UK flour millers produce consistently high-quality products where the reliability and safety of the wheat is of paramount importance. They only purchase wheat varieties in this Guide that have been grown to assured standards such as those contained in the Red Tractor Combinable Crops Assurance Scheme or the Scottish Quality Crops Scheme.

Harvested wheat should be properly stored using a HACCP approach (see the AHDB Grain storage guide for cereals & oilseeds –third edition). 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 brought out in the comments below.

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

<b>Group 1:</b>	These are the varieties that produce consistent milling and baking performance. Providing they achieve the specified quality requirements including 13% protein, 250s Hagberg Falling Number (HFN) and a specific weight of 76kg/hl, millers will offer a premium above base prices. Lower protein Group 1 wheat may 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.
<b>Crusoe</b>	Crusoe has consistently demonstrated good protein content and quality. The bread crumb structure is notably white and of good quality. Large volumes of this variety continue to be seen and its baking performance remains good.
<b>RGT Illustrious</b>	This variety joined the Recommended List for 2016 as another high yielding variety. It has a higher level of water absorption (a good feature) and demonstrates good breadmaking potential, even at lower protein levels. Because it is relatively high yielding it is clear that nitrogen applications have to be adjusted to achieve protein specifications.
<b>Skyfall</b>	This variety (after KWS Zyatt) is the second highest yielding Group 1 variety and is very popular with both farmers and millers because it has shown good milling and baking qualities. Because it is high yielding it is clear that nitrogen applications have to be adjusted to achieve protein specifications.
<b>KWS Trinity</b>	This high yielding variety exhibits good gluten quality even at lower protein levels and has shown good baking performance. Nitrogen applications may have to be adjusted to achieve protein specifications.
<b>KWS Zyatt</b>	This variety joined the Recommended List for 2017 and is the highest yielding Group 1 variety. In the three years of testing, this variety had slightly lower protein and water absorptions than the control varieties, but the other performance characteristics were similar. The breadmaking qualities are good. Because it is high yielding, nitrogen applications may have to be adjusted to achieve protein specifications.
<b>Spring wheat</b>	
<b>Mulika</b>	This variety is the most popular spring variety. It has resistance to orange wheat blossom midge. The rheology and baking qualities are good.

<b>Group 2:</b>	This group comprises varieties that exhibit bread-making 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. Lower protein Group 2 wheats are also widely used by millers, but will attract variable premiums.
<b>Cordiale</b>	This variety continues to be popular with both millers and growers. It has higher than average HFNs, with good protein levels and specific weights as key features. Consistent milling and baking performance continue to be seen by millers.
<b>KWS Lili</b>	This high yielding variety joined the RL for 2015. Its protein content and specific weights are lower than that of Cordiale. There are some concerns with the breadcrumb structure of loaves made solely with this variety but it will usually be used in grists.
<b>KWS Siskin</b>	This variety joined the RL for 2016 and is the highest yielding variety in both Groups 1 & 2. Its protein content and specific weights are slightly higher than that of KWS Lili and it has shown a degree of variability in its baking performance so may be more suited to use in blends. Some yellowness may be seen in the flour colour.
<b>Spring wheats</b>	
<b>KWS Chilham</b>	This variety joined the RL for 2017. Over the three years of the testing it was observed to have lower protein levels than the Mulika control, but with a stronger gluten quality. The baking quality would not necessarily suit all end users.
<b>KWS Cochise</b>	This variety joined the RL for 2017. There was a degree of variability in performance over the three years of testing.
<b>Granary</b>	This variety, since joining the list in 2009, has gained a relatively small market share. It has a tendency to produce low HFNs.
<b>KWS Willow</b>	This variety has a tendency to produce low HFNs and, overall, it has shown some variability especially with baking performance. As a result, it is more likely to be suited to uses in blends.

<b>Group 3:</b>	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 extensible but not elastic gluten.
<b>KWS Barrel</b>	This variety joined the RL for 2016 but so far relatively small quantities have been seen by millers. Over the three years of testing this variety fully met the Group 3 criteria.
<b>KWS Basset</b>	This variety joined the RL for 2016. Although there was some variation in dough extensibility during the three years of testing, it fully meets the criteria for a Group 3 variety.
<b>Elicit (NEW)</b>	This variety has joined the RL for 2018. Over the three years of testing this variety showed slightly weaker gluten than other Group 3 varieties and a lower HFN than that of Zulu, but it meets the criteria for the group.
<b>Spyder</b>	This variety joined the RL for 2016 (for the East & West) but so far relatively small quantities have been seen by millers. Over the three years of testing this variety showed slightly higher water absorption levels than other Group 3 varieties, but it meets the Group 3 criteria.
<b>Zulu</b>	This variety joined the RL list in 2014 and has consistently met the requirements of a Group 3 wheat.

<b>Group 4:</b>	These varieties are grown mainly as feed wheats. 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.
<b>Hard:</b>	<b>Costello, Dickens, Dunston, Evolution, Freiston, Gleam, Grafton, Graham, JB Diego, KWS Alderon (spring), KWS Crispin, KWS Kerrin, KWS Kilburn (spring), KWS Santiago, KWS Silverstone, Reflection, RGT Gravity and Shabras.</b> The two spring varieties <b>KWS Alderon</b> and <b>KWS Kilburn</b> generally have higher protein contents.
<b>Soft:</b>	<b>Bennington, Elation, Hardwicke, KWS Jackal, Leeds, LG Motown, LG Sundance, Myriad, Revelation, Savello, and Viscount.</b> Although soft, these varieties are not generally suitable for biscuit flour. Some 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.

# Know the miller



Although most wheat is marketed through grain merchants, producers should fully understand the specific requirements of the likely flour miller customers. There are currently 31 **nabim** member companies operating 51 flour mills located throughout England, Wales, Scotland 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 to 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.

## ADM Milling Ltd

Hyatt Place, 50-60 Broomfield Road,  
Chelmsford, Essex  
CM1 1SW  
01277 262525  
www.adm.com/adm-worldwide/  
europe/united-kingdom

## Allied Mills

Central Office, Port of Tilbury,  
Tilbury, Essex RM18 7JR  
01375 363100  
www.allied-mills.co.uk

## Andrews Flour

Belfast Mills, Percy Street,  
Belfast BT13 2HW  
028 9032 2451  
www.andrewsflour.com

## Bacheldre Watermill

Churchstoke, Montgomery,  
Powys, SY15 6TE  
01588 620489  
www.bacheldremill.co.uk

## E B Bradshaw & Sons Ltd

Bell Mills, Skerne Road, Driffield,  
East Yorkshire YO25 6XL  
01377 253163  
No website

## Carr's Flour Mills Ltd

Hutchisons Mills, East Bridge,  
Kirkcaldy, Fife KY1 2SR  
01592 267191  
www.carrs-flourmills.co.uk

## Doves Farm Foods Ltd

Salisbury Road, Hungerford,  
Berkshire RG17 0RF  
01488 684880  
www.dovesfarm.co.uk

## Edme Ltd

High Street, Mistley, Manningtree,  
Essex CO11 1HG  
01206 393725  
www.edme.com

## Flourish Flour

3 Seaways, Seaview Road, Cowes,  
Isle of Wight PO31 7US  
01983 292064  
No website

## Heygates Ltd

Bugbrooke Mills, Bugbrooke,  
Northampton NN7 3QH  
01604 830381  
www.heygates.co.uk

## Hovis Ltd

The Lord Rank Centre, Lincoln Road,  
High Wycombe, Bucks HP12 3QS  
08707 281111  
www.rankhovis.co.uk

## Kerry Ingredients & Flavours (UK) Ltd

The Gainsborough Mill, Carr Lane,  
Gainsborough, Lincs DN21 1LG  
01427 613927  
www.kerrygroup.com

## Laxey Glen Mills Ltd

Glen Road, Laxey, Isle of Man IM4 7AU  
01624 861202  
www.laxeyglenmills.com

## W & H Marriage & Sons Ltd

Chelmer Mills, New Street,  
Chelmsford, Essex CM1 1PN  
01245 354455  
www.marriagesmillers.co.uk

## FWP Matthews Ltd

Station Road,  
Shipton-Under-Wychwood,  
Chipping Norton, Oxon OX7 6BH  
01993 830342  
www.fwpmatthews.co.uk

## R Mayall & Daughter

Lea Hall, Harmer Hill,  
Shrewsbury SY4 3DY  
01939 290342  
www.pimhill.com

## McDowall, A&J Ltd

Mungoswells, Drem, North Berwick,  
East Lothian EH39 5AT  
01875 870285  
www.mungoswells.co.uk

## W H Munsey Ltd

Clarks (Wantage) Ltd., Town Mills,  
Wantage, Oxon OX12 9AB  
01235 768991  
www.wessexmill.co.uk

## Muntons

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IP14 2AG  
01449 618300  
www.muntons.com

## Wm Nelstrop & Co Ltd

Albion Flour Mills,  
Stockport, Cheshire SK4 1TZ  
0161 480 3071  
www.nelstrop.co.uk

## Odlum Group

Merrywell Industrial Estate,  
Ballymount, Dublin 12  
00353 1 405 1500  
www.odlums.ie

## Premier Foods Ltd

Junction Mills, Millway Road,  
Andover, Hants  
SP10 3EX  
01727 815850  
www.premierfoods.co.uk

## Richardson Milling (UK) Ltd

Mile Road, Bedford MK42 9TB  
01234 327922  
www.oatmillers.com

## Ripon Select Foods Ltd

Dallamires Way North,  
Ripon, North Yorkshire HG4 1TL  
01765 601711  
www.rsfc.co.uk

## The Jordans & Ryvita Company, a division of ABF Grain Products Ltd

Old Warehouse Road, Poole,  
Dorset BH12 4QW  
01202 743090  
www.ryvita.com

## Sharpham Park

Street, Somerset, BA16 9SA  
01458 844089  
www.sharphampark.com

## Silvery Tweed Cereals

Tweedside Trading Estate,  
Berwick-upon-Tweed  
TD15 2XF  
01289 307419  
www.silverytweedcereals.co.uk

## The Silver Spoon Company

Sugar Way, Peterborough, PE2 9AY  
01733 422696  
www.silverspoon.co.uk

## N R Stoate & Sons

Cann Mills, Shaftsbury, Dorset SP7 0BL  
01747 852475  
www.stoatesflour.co.uk

## Whitworth Bros Ltd

Victoria Mills, Wellingborough,  
Northants NN8 2DT  
01933 441000  
www.whitworthbros.ltd.uk

## G R Wright & Sons Ltd

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020 8344 6900  
www.wrightsbaking.co.uk

