Cereals



Recommended Varieties for Northern Ireland 2012







This booklet provides information on cereal varieties currently recommended by the Department of Agriculture and Rural Development (DARD) for use in Northern Ireland.

The Agri-Food and Biosciences Institute at the Plant Testing Station, AFBI Crossnacreevy, conducts trials on behalf of DARD and the HGCA. The recommendations in this booklet are partly based on data collected within the Home Grown Cereal Authority (HGCA) Recommended List trialling system. Full data collected from HGCA trials and the HGCA Recommended Lists are available at www.hgca.com. Information on recommended varieties and other varieties currently in trial in Northern Ireland is also available at www.afbini.gov.uk.

The recommendations are reviewed and published annually.

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Recommended Cereal Varieties 2012

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Introduction

This booklet is a comprehensive guide to cereal varieties best suited for use within Northern Ireland. It is based on trials carried out by DARD and AFBI over the last five years as part of the HGCA Recommended List trialling system. The booklet complements information provided on varieties included in the HGCA Recommended Lists. The DARD Recommended List is available at www.afbini.gov.uk.

Spring barley and spring oat varieties are considered for provisional recommendation after two years of National List testing and one year of Recommended List testing. They generally remain provisionally recommended for two years before being eligible for recommendation for general use. Thus, every spring variety is tested for at least five years before considering it for full general recommendation.

Winter barley, winter wheat and winter oat varieties are in Recommended List trials for two years prior to being provisionally recommended. They too remain provisionally recommended for two years before being eligible for full recommendation. Thus, every winter variety is tested for at least four years before considering it for full general recommendation.

Provisionally recommended varieties are reviewed each year. If after their first year of provisional recommendation they are considered unsuitable, they are removed from the list. If they remain provisionally recommended for two or more years before being found unsuitable, they are usually placed in the outclassed category for a year before removing them from the list. If seed of any variety, regardless of category, becomes unavailable it is removed directly from the list.

This booklet is a local publication and directs growers towards varieties of greatest value to Northern Ireland, including only those HGCA

recommended varieties most suitable for use in Northern Ireland. Spring barley and oat trials conducted in Northern Ireland also include some varieties from the Republic of Ireland that may be suited to Northern Ireland. The same consideration is given to these varieties, for local use, as those that pass through the UK system.

Varieties that are of interest locally that are not recommended are described after the recommended varieties. These are followed by descriptions of UK listed varieties that are excluded from the tables because they are less suitable for use in Northern Ireland.

Varieties are classified as follows:

- G Varieties fully recommended for general use
- S Varieties **fully recommended for <u>special</u> use**; clarification of which is given in the notes
- P Varieties <u>provisionally</u> recommended and of which seed may be in short supply
- **PS** Varieties which are <u>provisionally</u> recommended for <u>special</u> use; clarification of which is given in the notes. Seed of these varieties may be in short supply
- O Varieties becoming outclassed

Trial Sites

Trials are conducted on varieties of all crops at AFBI Crossnacreevy with further trials of the major crops in the main cereal growing regions of Northern Ireland. At Downpatrick and Limavady there were additional winter wheat and winter barley trials, with a further winter barley trial at Hillsborough. Additional spring barley trials are conducted at Ballywalter, Strabane and Coleraine.

Characteristics

Yield

Yields of all varieties are expressed in the tables as percentages of the control. For all crops the control is calculated as the mean (average) fungicide-treated yield of the control varieties that are selected on a UK basis. Untreated yields are expressed as a percentage of the mean of the fungicide-treated controls also. Both fungicide-treated and untreated yields represent the mean performance of the varieties in trials during the five-year period 2007 to 2011.

Treated yields

Fungicide programmes are applied to treated trials to keep disease incidences below 5% infection of the leaf area. Treated yields indicate the potential yield of the varieties in the absence of disease. Plant growth regulators are also applied to treated trials of winter wheat, winter barley and winter oats where the risk of lodging is high.

Untreated yields

In untreated trials, where no fungicide treatment is applied, natural infections by a number of diseases may occur at various stages during the growing season. Varieties have differing levels of infection because they carry different types and levels of resistance to each of the diseases. Infection by disease reduces grain yield potential. Differences in yield between varieties in untreated trials are normally greater than in treated trials. Comments on untreated yields in variety descriptions refer to their performance relative to other varieties when untreated.

Use of information on yields from treated and untreated trials

Growers have different approaches to the use of fungicides. Some prefer a programme that protects completely against all disease infection. Yields in the treated trials indicate which varieties are likely to give the best performances with this approach. Others prefer to

use chemicals as and when disease occurs. Yields in the untreated trials indicate which varieties are likely to need fewer applications of fungicide in order to produce high yields and, conversely, where risks are greater if less-than-complete control of disease is achieved.

Grain quality

Information presented in the tables on specific weight and 1000 grain weight of spring barley, winter barley, winter wheat, spring oat and winter oat varieties and on kernel content of spring and winter oat varieties, is from the fungicide treated trials in Northern Ireland. Specific weight, measured in kilograms per hectolitre (kg/hl), is an important quality indicator when selling grain. If the specific weight of a crop is low, it may not reach trading contract requirements. For winter and spring oats, specific weight is determined on pre-cleaned grain. Although individual crops will vary, the information on specific weight, grain weight and kernel content, presented in this booklet, shows accurate relative values for the varieties.

Oat screenings can be important when selling grain to the quality market. Oat varieties are screened over a 2mm sieve for 15 seconds and the proportion passing through is recorded as a percentage. These fluctuate greatly from season to season. Empty husks (that is grains that fail to develop kernels) and free kernels may be present in harvested oats and are unwanted in milling. All current spring oat varieties produce few empty husks but vary in their tendency to produce free kernels. Some of the winter oat varieties are prone to producing free kernels. Details are provided in the variety descriptions of tendency to produce free kernels and/or empty husks.

Straw characteristics

Straw length is based on data from untreated Northern Ireland trials (except for winter oats where data from the fungicide-treated, but without plant growth regulator, trials are used). Straw length is expressed in centimetres relative to **Quench** for spring barley, **Firth** for spring oats, **Saffron** for winter barley, **Robigus** for winter wheat and **Dalquise** for winter oats.

Straw yields are determined from one spring barley and one winter barley trial each year. For spring barley, straw yields are expressed as low (less than 3.3 t/ha), intermediate (3.3 to 3.6 t/ha), high (3.7 to 4.0 t/ha) or very high (greater than 4.0 t/ha). For winter barley, straw yields are from the fungicide-treated plots in trials that also received a plant growth regulator and are described as low (less than 3.75 t/ha), intermediate (3.75 to 4.5 t/ha) or high (greater than 4.5 t/ha).

Standing power is calculated using both lodging and leaning data and expressed on a 1 to 9 scale, where a high figure indicates good standing power. Straw characteristics, such as brackling (in oats and barley) and necking (in barley only) are referred to in the variety descriptions. Brackling is buckling in the lower part of the stem and necking occurs directly below the ear. Brackling need not be damaging unless the ears lie on the soil surface. Necking can be more serious if a clean break occurs leading to ear loss in bad weather. These straw characteristics are determined from untreated trial data.

Disease

Resistance of varieties to disease is expressed on a 1 to 9 scale in the tables. A high figure means that the variety is very resistant. The resistance of varieties to other diseases is referred to in individual variety descriptions where necessary. Resistance ratings to disease are drawn from naturally occurring field infections in trial plots in Northern Ireland to which no fungicides were applied. Mildew, yellow rust and Fusarium ear blight scores in winter wheat are taken from the HGCA Recommended List 2012 due to insufficient disease in Northern Ireland trials.

Disease incidences on cereal crops in Northern Ireland tend to be more variable from year to year and from crop to crop than in Great Britain. There can also be a high degree of variability between trial sites. In Northern Ireland, crops emerged surprisingly well out of the very severe winter in 2010-11. March and April proved challenging though, with only 50% of rain falling compared to the 1971-2000 average. In April, the monthly mean temperature was 3.5°C higher than the long-term average. This dry, warm weather led to slow development of the wet weather diseases. A summary of cereal disease incidences in the Northern Ireland trials in 2011 follows.

Spring barley

May and June were largely disease-free for the spring barley trials in 2011 and *Rhynchosporium* levels were lower than in 2010. Traces started to appear in all trials by the end of June with Strabane being worst affected, all varieties being infected, with a maximum of 20% in Optic and Doyen. At Coleraine, maximum infections of 6% were recorded in Garner and again all varieties were infected. At Ballywalter and Crossnacreevy, infections were much lower, many varieties having none.

Ramularia was once again the most severe disease in terms of severity and the number of varieties infected. It is a late-season disease and symptoms generally appear post-flowering. By the end of July, all varieties in all trials were infected. At Ballywalter, all varieties had at least 20% infection, with a maximum of 42% in Summit and Odyssey. At Strabane and Coleraine, infections ranged from 10% in Doyen to 30% in Moonshine and from 35% in Propino to 7% in Westminster, respectively. At Crossnacreevy, levels of Ramularia were lower with Waggon, Armada and Dandy having 4% and Propino and Quench having more than 15%.

Mildew and net blotch were less widespread in 2011. There were traces of mildew at the end of June at Crossnacreevy and Ballywalter in Doyen, Optic and Propino. By the end of July mildew had increased to 17% in Optic at Crossnacreevy. There was no mildew recorded at Coleraine and at Strabane there were traces in just one variety, Panther. Traces of net blotch were recorded in a few varieties in Crossnacreevy. At Strabane, there were traces of this disease in most varieties with up to 4% in Summit and Propino.

Spring oats

Mildew was not observed in the spring oat trial until the end of June. Significant levels of infection were recorded in Atego (67%), Rozmar (20%) and Ascot (18%). Canyon, Husky and Firth had no mildew. There was no crown rust or *Septoria avenae* recorded in 2011 and scores for these two diseases are based on data from 2007-2010.

Winter barley

Ramularia was the most severe and widespread disease in winter barley in 2011. At Limavady significant levels were recorded in susceptible varieties (Retriever 25%, Pearl 15% and Florentine 9%). At Hillsborough all varieties were affected, with the highest infection recorded in Pelican (17%) and the lowest in Matros (2%). At Downpatrick Ramularia was also the dominant disease reaching 18% in Sequel, although many varieties, (e.g. KWS Cassia, Saffron, California and Matros) had negligible levels of infection.

Rhynchosporium was slow to establish in 2011 but by mid-June there were significant levels in susceptible varieties such as Retriever, Camion, Saffron and KWS Cassia. Levels were highest at Limavady (with a maximum of 17% in Retriever in mid-June) and lowest in Downpatrick (maximum of 11% in Camion by the end of June) with many varieties, for example Volume, Florentine and Matros, having none.

There were significant levels of mildew recorded in Saffron and KWS Cassia at Hillsborough and by the end of June traces were beginning to develop in Saffron at Downpatrick. No mildew was recorded at Limavady or Crossnacreevy. Incidences of net blotch and brown rust were even lower. Net blotch was recorded at Downpatrick only – with traces of this disease being recorded in Pearl, Flagon and Retriever. Traces of brown rust were recorded in just one variety, the 6-row Escadre, at Limavady.

Winter wheat

Septoria tritici, the main disease in winter wheat in 2011, was slow to develop due to the very dry spring. By mid-June, however, infections at Crossnacreevy were as high as 20% in Chilton. Conqueror, Denman, KWS Santiago, Beluga and Gallant all had infections over 10% with most varieties having at least 5%. Stigg was the only variety that had low levels of infection (<2%). There was some late Septoria development in the treated trial (which had received a comprehensive fungicide regime) with many varieties, including JB Diego, Kingdom, Beluga and Ketchum, having >10% infection. Stigg was the least affected with only 2%. At Limavady in the untreated trial, Ketchum, Duxford, Gallant, Cocoon, KWS Santiago and KWS Solo all had Septoria infections of more

than 10% by mid-June. Only Stigg had levels of less than 1%. In the treated trial at Limavady, Kingdom, Cocoon, Gallant, Oakley, Duxford and KWS Santiago all had infections over 7%, with Stigg having none and Alchemy only 0.4%. Disease levels at Downpatrick were much lower than at Limavady or Crossnacreevy, with the highest infection of *Septoria* being 10% in Cocoon in the untreated trial. Several varieties, including Robigus, Grafton, Relay, Stigg and Monterey, had less than 1% *Septoria*. In the treated trial, only Chilton and Cocoon had more than 5% *Septoria*.

Yellow rust was recorded in three varieties at Crossnacreevy. Worst affected was Oakley with levels of infection of 25%. Robigus and KWS Santiago had 8 and 7%, respectively. Traces of yellow rust were also found in Oakley at Downpatrick with none being recorded at Limavady.

There were no other diseases recorded at significant levels on winter wheat in Northern Ireland in 2011 and scores for mildew, yellow rust and *Fusarium* ear blight are based on HGCA UK-wide data.

Winter oats

No disease was recorded in the winter oat trial in 2011 and disease scores are based on data from 2007-2010.

Maturity

Spring barley varieties differ in maturity by approximately two weeks from earliest to very latest. There are only minor differences in maturity amongst spring oat, winter barley, winter wheat and winter oat varieties. Maturity of varieties is included in the tables for all crops as early (E), intermediate (I) or late (L) to ripen.

Sprouting

Germination of grain in the standing crop is extremely detrimental to the quality of the harvested grain. Whilst it can occur in all crops, it is most commonly a problem of wheat. Growers in the wetter areas of Northern Ireland have always taken account of this problem when selecting varieties. The tendency to sprout is indicated in individual variety descriptions if it is a particular strength or weakness of that variety.

Spring Barley

Concerto, Publican, Quench, Doyen and Westminster remain fully recommended for general use. Waggon remains fully recommended for special use because it has very poor resistance to *Rhynchosporium*. SY Taberna remains provisionally recommended for a second year and, along with Westminster, has very high straw yields. There are three new provisional recommendations for 2011 - Overture, Odyssey and Chronicle. Summit has been removed from the list due to lack of seed.

Variety descriptions are in alphabetical order. Information is also provided on the year each variety was first listed in Northern Ireland, the name of its UK agent and its end-use group.

Chronicle

(Provisionally recommended)

First listed in 2012; Limagrain; malting variety;

- very high treated and high untreated yields;
- · short straw with intermediate straw yields;
- quite good standing power with average resistance to necking and brackling;
- average resistance to Rhynchosporium and net blotch, good resistance to mildew and quite good resistance to Ramularia;
- intermediate to ripen.

Concerto

(Recommended for general use)

First listed in 2009; Limagrain; malting variety;

- very high treated and moderate untreated yields;
- large grain with average specific weight;
- medium length straw with high straw yields;
- average standing power, quite poor resistance to brackling but good resistance to necking;
- poor resistance to Rhynchosporium, good resistance to mildew and quite good resistance to Ramularia and net blotch;
- intermediate to ripen.

Doyen

(Recommended for general use)

First listed in 2004; Syngenta; feed variety;

- · high treated and low untreated yields;
- very large grain with average specific weight;
- short straw with intermediate straw yields;
- quite good standing power, average resistance to brackling and quite good resistance to necking;
- average resistance to Rhynchosporium and Ramularia and quite good resistance to mildew and net blotch:
- intermediate to ripen.

Odyssey

(Provisionally recommended)

First listed in 2012; Limagrain; malting variety;

- · very high treated and high untreated yields;
- average sized grain with low specific weight;
- · short straw with intermediate straw yields;
- average standing power with quite poor resistance to brackling and quite good resistance to necking;
- good resistance to Rhynchosporium, very good resistance to mildew, quite good resistance to net blotch and average resistance to Ramularia;
- intermediate to ripen.

Overture

(Provisionally recommended)

First listed in 2012; Limagrain; malting variety;

- very high treated and untreated yields;
- large grain with low specific weight;
- · medium length straw with high straw yields;
- quite good standing power with quite good resistance to necking and average resistance to brackling;
- good resistance to Rhynchosporium and mildew and quite good resistance to Ramularia and net blotch;
- intermediate to ripen.

Publican

(Recommended for general use)

First listed in 2009; Syngenta; feed variety;

- · very high treated and high untreated yields;
- · large grain with average specific weight;
- · medium length straw with high straw yields;
- quite good standing power with average resistance to necking and brackling;
- very good resistance to mildew, good resistance to Rhynchosporium, quite good resistance to net blotch and average resistance to Ramularia;
- late to ripen.

Quench

(Recommended for general use)

First listed in 2007; Syngenta; malting variety;

- · high treated and untreated yields;
- small grain with low specific weight;
- short straw with high straw yields;
- quite good standing power with quite good resistance to brackling and necking;
- very good resistance to mildew, quite good resistance to Rhynchosporium, average resistance to Ramularia and quite poor resistance to net blotch;
- intermediate to ripen.

SY Taberna

(Provisionally recommended)

First listed in 2011; Syngenta; malting variety;

- very high treated and untreated yields;
- large grain with average specific weight;
- · medium length straw with very high straw yields;
- quite good standing power with quite good resistance to necking and average resistance to brackling;
- quite good resistance to Rhynchosporium, and Ramularia, good resistance to mildew and average resistance to net blotch;
- early to ripen.

Waggon

(Recommended for special use)

First listed in 2008; Syngenta; feed variety;

- high treated and moderate untreated yields;
- · very large grain with low specific weight;
- short straw with intermediate straw yields;
- quite good standing power with quite good resistance to brackling and average resistance to necking;
- very good resistance to mildew, quite good resistance to Ramularia, quite poor resistance to net blotch but very poor resistance to Rhynchosporium and requires careful management with regard to Rhynchosporium control;
- intermediate to ripen.

Westminster

(Recommended for general use)

First listed in 2005; Limagrain; feed variety;

- high treated and untreated yields;
- large grain with average specific weight;
- long straw giving very high straw yields;
- quite good standing power, quite poor resistance to brackling and poor resistance to necking;
- very good mildew resistance, good resistance to Rhynchosporium and net blotch and quite good resistance to Ramularia;
- tends to ripen late.

Varieties that are not recommended but are of local interest and are entered into the Northern Ireland Seed Certification Scheme are listed below. Figures in brackets are treated and untreated yields, respectively. UK agents' names are in italics.

Dandy

gives low treated and untreated yields (91, 80). It has very large grain with high specific weight. It has very good resistance to mildew, good resistance to *Rhynchosporium* and average resistance to *Ramularia*. It has long straw with intermediate straw yields, quite good standing power and quite good resistance to necking, but poor resistance to necking. It is intermediate to ripen.

Propino

gives high treated and untreated yields (101, 89). It has very large grain with low specific weight. It has good standing power, average resistance to necking and brackling and gives high straw yields. It has quite good resistance to *Rhynchosporium*, good resistance to mildew, average resistance to net blotch and quite poor resistance to *Ramularia*. It is late to ripen. Propino is recommended by the HGCA as a malting variety. (*Syngenta*)

Riviera

gives moderate treated and low untreated yields (96, 80). It has large grain with high specific weight. It has average standing power with quite poor resistance to brackling and very poor resistance to necking. It gives high straw yields. It has quite poor resistance to *Rhynchosporium*, very good resistance to mildew and average resistance to *Ramularia*. It is intermediate to ripen. (*RAGT*)

Varieties on the HGCA UK List that have performed less well in Northern Ireland are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields, respectively. UK agents' names are in italics.

Garner

is a feed variety that has very high yields (104, 94). It has very large grain with low specific weight. It has quite good resistance to *Rhynchosporium*, average resistance to *Ramularia* and very good resistance to mildew. It has medium length straw with quite good standing power, average resistance to necking and quite poor resistance to brackling. It gives very high straw yields and is intermediate to ripen. (*Syngenta*)

Moonshine

is a malting variety that has moderate treated and untreated yields (95, 87). It has average sized grain with low specific weight. It has good standing power with quite poor resistance to necking, average resistance to brackling and gives low straw yields. It has poor resistance to *Rhynchosporium* and net blotch. It is intermediate to ripen. (*RAGT*)

NFC Tipple

is a malting variety that has moderate treated and low untreated yields (98, 83). It has large grain with average specific weight. It has very short straw with quite good standing power, average resistance to brackling and quite good resistance to necking and low straw yields. It has poor resistance to *Rhynchosporium* and is intermediate to ripen. (Syngenta)

Optic

is a malting variety that gives moderate treated and very low untreated yields (94, 75). It has average sized grain with average specific weight. It has quite good standing power but poor resistance to brackling with intermediate straw yields. It has poor disease resistance. (Syngenta)

Shuffle

is a malting variety that gives very high yields (103, 89). It has very large grain with low specific weight. It has good standing power and gives very high straw yields. It has average resistance to *Rhynchosporium*, quite good resistance to *Ramularia* and is late to ripen. (Syngenta)

Summit

is a feed variety that gives very high yields (108, 91). It has small grain with low specific weight. It has short straw with quite good standing power and quite good resistance to brackling and necking. It has average resistance to *Rhynchosporium* and quite good resistance to *Ramularia*. It gives intermediate straw yields and is intermediate to ripen. (*Syngenta*)

Forensic, Panther, Publican and **Scout** have been removed from the HGCA list for 2012. **Belgravia** and **Oxbridge** are recommended by the HGCA but have not been in the most recent DARD Recommended List trials.

Spring oats

Ascot, **Firth** and **Husky** remain fully recommended and **Rozmar** and **Canyon** are promoted to full recommendation for general use.

Variety descriptions are in alphabetical order. Information is also provided on the year each variety was first listed in Northern Ireland and the name of its UK agent.

Ascot

(Recommended for general use)

First listed in 2007; Limagrain;

- high treated yields and untreated yields;
- medium sized grain with low specific weight and high kernel content;
- low screenings and little tendency to produce free kernels;
- very long straw with quite good standing power and good resistance to brackling;
- quite poor resistance to mildew and average resistance to crown rust;
- intermediate to ripen.

Canvon

(Recommended for general use)

First listed in 2010; Saaten Union;

- very high yields;
- very large grain with average specific weight and average kernel content;
- very low screenings and little tendency to produce free kernels;
- very long straw with good standing power and poor resistance to brackling;
- good resistance to mildew and quite good resistance to crown rust;
- intermediate to ripen;
- potential for the quality market yet to be established.

Firth

(Recommended for general use)

First listed in 2000; KWS;

- · high treated and very high untreated yields;
- large grain with average specific weight and very high kernel content;
- very low screenings and some tendency to produce free kernels;
- straw medium in length with quite good standing power and good resistance to brackling;
- quite good resistance to mildew and crown rust;
- intermediate to ripen.

Husky

(Recommended for general use)

First listed in 2008; Saaten Union;

- · high treated and untreated yields;
- medium sized grain with high specific weight and high kernel content;
- low screenings and little tendency to produce free kernels;
- long straw with good standing power but poor resistance to brackling;
- quite good resistance to mildew but quite poor resistance to crown rust;
- early to ripen.

Rozmar

(Recommended for general use)

First listed in 2010; Cope Seeds;

- high yields;
- medium sized grain with low specific weight and low kernel content;
- very low screenings and little tendency to produce free kernels;
- long straw with average standing power and poor resistance to brackling;
- very good resistance to crown rust but quite poor resistance to mildew;
- · intermediate to ripen;
- potential for the quality market yet to be established.

Spring Barley Recommended List 2012

		Yie	Yield*	Grain c	Grain quality	Straw	Straw characteristics	istics		Disease	Disease resistance		
		⊢	D	Specific weight (kg/hl)	1000 grain wt (g)	Length (cm)**	Standing power	Straw Yield	Rhyncho- sporium	Mildew	Rhyncho- sporium Mildew Ramularia blotch [#]	Net blotch#	Ripening
ט	G Concerto	107	98	62.8	43.9	+5	9	I	2	∞	7	7	_
Ū	Publican	105	91	62.3	42.9	4	7	I	8	6	9	7	_
Ū	Quench	102	89	8.09	40.1	0	7	I	7	6	9	2	_
ט	Doyen	101	82	63.1	44.4	7	7	_	9	7	9	7	_
ט	Westminster	66	89	63.8	43.4	+	7	H>	∞	6	7	œ	_
S	Waggon¹	101	85	61.1	44.1	7	7	_	m	6	7	2	_
۵	Overture	112	94	8.09	43.4	+3	7	I	∞	∞	7	7	_
۵	Odyssey	108	91	60.3	41.9	7	9	_	∞	6	9	7	_
۵	SY Taberna	105	94	62.5	43.0	+7	7	H/	7	œ	7	9	ш
۵	Chronicle	105	88	60.3	42.4	+5	7	_	9	∞	7	9	_

^{*}Yield as a % of the treated control varieties Quench, Concerto, NFC Tipple, Optic and Westminster (average = 6.40 tha)

T = fungicide treated; U = no fungicide ** Straw length compared to Quench (73 cm)

Straw yield: VH = very high, H = high, I = Intermediate and L = low

Ripening: E = early, I = intermediate and L = late

^{1 =} Waggon is recommended for special use because of its very poor resistance to Rhynchosporium

^{# =} net blotch scores are based on limited data due to low disease incidence in recent years

Winter Barley Recommended List 2012

	Ripening		_	ш	_	_	_		_
tance	Rhyncho- sporium Mildew Ramularia		7	7	2	7	7		8
Disease resistance	Mildew		m	2	4	2	9		9
Dis			72	7	9	4	∞		8
ristics	Straw Yield		-	-	_	-	-		_
Straw characteristics	Standing power		7	œ	9	œ	6		9
Stra	Length (cm)**		0	+3	7	+2	+5		+16
Grain quality	1000 grain wt (g)		51.4	51.1	52.3	51.5	51.8		44.0
Grain	Specific weight (kg/hl)		66.3	65.4	63.7	8.99	64.5		64.1
Yield*	ס		85	82	79	88	88		94
Ä	⊢		104	100	107	107	105		112
		2-row	G Saffron	G Suzuka	Retriever¹	KWS Cassia	Florentine	6-row hybrid	PS Volume ²
		2-11	ט	G	S	۵	۵	9-1-9	PS

^{*} Yield as a % of the treated control varieties Pearl, Sequel, Saffron and Flagon (average = 9.10 tha)

T = fungicide treated; U = no fungicide

^{**} Straw length compared to Saffron (96 cm)

Straw yield: H = high, I = Intermediate and L = low

Ripening: E = early, I = intermediate and L = late

¹ = Retriever recommended for special use because it is at risk of lodging

² = Volume is recommended for special use because it is a 6-row hybrid variety

Winter Wheat Recommended List 2012

		Yie	Yield*	Grain	Grain quality	St	Straw characteristics		Disease resistance	esistance		
		⊢	Þ	Specific weight (kg/hl)	1000 grain wt (g)	Length (cm)**	Standing power	Septoria	Septoria Mildew ^{\$}	Yellow rust ^s	Fusarium ear blight ^{\$}	Ripening
G JB Diego	iego	104	9/	75.0	47.2	7	7	9	9	8	9	E/I
G Panc	Panorama	103	74	75.1	46.2	+5	∞	7	7	6	7	_
G Alchemy	emy	102	77	75.9	44.9	+4	9	7	7	8	9	_
P Denman	man	105	78	74.0	41.7	4-	9	7	2	7	9	_
P Beluga	ga	104	73	73.9	52.3	-7	6	9	4	6	9	ш
PS Stigg ¹	J_	102	85	71.9	47.8	-5	6	8	œ	6	9	ш
PS Grafton ^{#2}	ton ^{#2}	101	74	75.0	46.6	-10	6	9	7	œ	2	E
O Robigus	snb	103	69	75.1	40.6	0	7	9	9	7	9	_
O Einstein#	tein#	100	71	74.9	47.5	-5	2	2	9	9	9	ш

^{*} Yield as a % of the treated control varieties Solstice, Einstein, Alchemy, Oakley and Scout (average = 10.41 t/ha)

T = fungicide treated; U = no fungicide

^{**} Straw length compared to Robigus (89 cm); \$ = HGCA UK data; Ripening: E = early, E/I = early intermediate, I = intermediate and L = late

^{* =} Grafton and Einstein performed well in HGCA second wheat trials in GB

² = Grafton is provisionally recommended for special use because it has outstanding standing power 1 = Stigg is provisionally recommended for special use because it has outstanding disease resistance

Spring Oat Recommended List 2012

											-	
		Yield*	*p		Grain	Grain quality		St	Straw characteristics	Disease resistance		
		⊢	n	Specific weight (kg/hl)	1000 grain wt (g)	Kernel content (%)	Sieve fraction (%<2mm)	Length (cm)**	Length Standing (cm)** power	Mildew	Crown	Ripening
פ	Canyon	106	92	51.5	42.6	77.0	۸۲	+11	8	80	7	_
Ū	Rozmar	102	87	50.1	36.7	76.5	۸۲	+2	9	5	∞	_
Ū	Husky	101	87	52.1	35.2	78.2	_	+5	80	7	2	ш
Ū	Ascot	100	98	50.0	36.5	78.6	_	8+	7	5	9	_
U	Firth	66	06	51.3	37.5	79.0	۸۲	0	7	7	7	_

^{*} Yield as a % of the treated control varieties Ascot, Firth and Husky (average = 7.08 tha).

Winter Oat Recommended List 2012

				נים כמו ב	WILLIE DAL NECOLLINELIAEU LIST 2012	מפת בופני	4014				
	Yield*	*0		Grain	Grain quality		Str	Straw characteristics	Disease resistance	4	
	⊢	n	Specific weight (kg/hl)	1000 grain wt (g)	Kernel content (%)	Sieve fraction (%<2mm)	Length (cm)**	Length Standing (cm)** power	Crown Mildew rust	_	Ripening
G Dalguise 100 84	100	84	53.1	38.3	77.8	7	0	2	4 3		_
G Gerald	100	98	52.3	35.5	76.5	_	+5	9	5 4		_
P Mascani	66	94	52.9	42.5	78.8	۸۲	+5	7	7 8		_
PS Balado¹	111 91	91	48.2	38.8	74.8	T	-33	6	7 4		Е

^{*} Yield as a % of the treated control varieties Dalguise, Gerald and Mascani (average = 8.48 t/ha). T = fungicide treated; U = no fungicide ** Straw length compared to Dalguise (125 cm)

Ripening: I = intermediate and E = early Sieve fraction: VL = very low and L = low

! = Balado has a specific weight significantly below 50 kg/hl and is only suitable as a feed oat

T = fungicide treated; U = no fungicide ** Straw length compared to Firth (113 cm) Sieve fraction: VL = very low and L = low Ripening: E = early and I = intermediate

Varieties on the HGCA UK List that have performed less well in Northern Ireland are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields, respectively. UK agents' names are in italics.

Atego

gives moderate treated and very low untreated yields (96, 73). It has very large grain with very low specific weight and average kernel content. It is very susceptible to mildew. It ripens early. (*Trevor Cope Seeds*)

SW Argyle

gives moderate treated and high untreated yields (95, 87). It has very large grain with low specific weight and average kernel content. It has long straw with good standing power and good resistance to brackling. It is intermediate to ripen. (Senova)

Drummer and Leven are no longer on the HGCA UK List.

Winter Barley

The 2-rows Saffron and Suzuka remain fully recommended for general use. Retriever remains fully recommended for special use because it is at risk of lodging. KWS Cassia remains provisionally recommended for a second year. Florentine is a new provisional recommendation for 2012 and had good yields, excellent straw strength and good disease resistance. There are no 6-row recommendations this year and only one 6-row hybrid, Volume, remains provisionally recommended for special use. The 2-row Camion was out-classed last year and has been removed from the list. Pelican has been removed from the list due to lack of seed.

Variety descriptions are in alphabetical order. Information is also provided on the year each variety was first listed in Northern Ireland and the name of its UK agent.

Two-Row Types

Florentine

(Provisionally recommended)

First listed in 2012; Senova; feed variety;

- · high treated and very high untreated yields;
- · very large grain with average specific weight;
- medium length straw giving intermediate straw yields;
- very good standing power with average resistance to brackling necking;
- good resistance to Rhynchosporium, quite good resistance to Ramularia and average resistance to mildew;
- intermediate to ripen.

KWS Cassia

(Provisionally recommended)

First listed in 2011; KWS; feed variety;

- · very high treated and high untreated yields;
- · very large grain with high specific weight;
- medium length straw giving intermediate straw yields;
- good standing power with average resistance to necking and brackling;
- poor resistance to Rhynchosporium, quite poor resistance to mildew and quite good resistance to Ramularia;
- intermediate to ripen.

Retriever

(Recommended for special use)

First listed in 2008; Limagrain; feed variety;

- · very high treated yields and low untreated yields;
- · very large grain with low specific weight;
- short straw with low straw yields;
- average standing power and has the potential for significant lodging, poor resistance to brackling but very good resistance to necking;
- average resistance to Rhynchosporium, quite poor resistance to Ramularia and poor resistance to mildew;
- intermediate to ripen.

Saffron

(Recommended for general use)

First listed in 2007; KWS; feed variety;

- high treated and untreated yields;
- · very large grain with high specific weight;
- · short straw with intermediate straw yields;
- quite good standing power with good resistance to brackling and necking;
- quite poor resistance to Rhynchosporium, very poor resistance to mildew and quite good resistance to Ramularia;
- intermediate to ripen.

Suzuka

(Recommended for general use)

First listed in 2008; Syngenta; feed variety;

- · moderate treated yields and high untreated yields;
- · very large grain with average specific weight;
- medium length straw with intermediate straw yields;
- good standing power with average resistance to brackling and good resistence to necking;
- quite good resistance to Rhynchosporium and Ramularia and quite poor resistance to mildew;
- early to ripen.

Six-Row Hybrid Types

Volume

(Provisionally recommended for special use)

First listed in 2011; Syngenta; feed variety;

- · very high treated and untreated yields;
- · small grain with average specific weight;
- long straw with intermediate straw yields;
- average standing power with poor resistance to brackling and good resistance to necking;
- good resistance to Rhynchosporium and Ramularia and average resistance to mildew;
- intermediate to ripen.

Varieties that are not recommended but are of local interest and are entered into the Northern Ireland Seed Certification Scheme are listed below. Figures in brackets are treated and untreated yields, respectively.

Camion

is a 2-row feed variety that gives moderate yields (100, 81). It has large grain with high specific weight. It has very poor resistance to *Rhynchosporium* and quite good resistance to mildew and *Ramularia*. It has short straw with quite good standing power, average resistance to brackling and very poor resistance to necking. It has intermediate straw yields and is early to ripen. (*KWS*)

Varieties on the HGCA UK List that have performed less well in Northern Ireland are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields respectively. UK agents' names are in italics.

Two-Row Types

Archer

is a new malting variety that gives moderate yields (100, 83). It has large grain with low specific weight. It has medium length straw with very good standing power but poor resistance to brackling and necking. It has quite good resistance to *Rhynchosporium* and *Ramularia* and is intermediate to ripen. (*Limagrain*)

Cassata

is a malting variety that gives low treated and moderate untreated yields (97, 82). It has medium length straw that has good standing power, good resistance to brackling but poor resistance to necking. It gives high straw yields. It has good resistance to *Rhynchosporium*, quite good resistance to *Ramularia* but poor resistance to mildew. It is intermediate to ripen. (*Limagrain*)

Flagon

is a malting variety that gives moderate yields (99, 80) and has large grain with average specific weight. It has quite poor standing power with poor resistance to necking. It has good resistance to *Rhynchosporium* and mildew and average resistance to *Ramularia*. It has high straw yields and is early to ripen. (*Syngenta*)

Pearl

gives low treated and moderate untreated yields (96, 80). It has large grain with high specific weight. It has medium length straw with quite good standing power but very poor resistance to brackling. It has high straw yields and average disease resistance. (Limagrain)

Purdey

is a malting variety that gives low treated and moderate untreated yields (98, 82). It has poor resistance to mildew but very good resistance to *Rhynchosporium*. It has short straw with good standing power and gives high straw yields. It is late to ripen. (*Syngenta*)

SY Venture

is a new malting variety that gives high treated and moderate untreated yields (103, 84). It has large grain

with average specific weight. It has medium length straw with quite good standing power but poor resistance to brackling and intermediate straw yields. It has quite poor resistance to *Rhynchosporium* and quite good resistance to *Ramularia*. It is intermediate to ripen. (*Syngenta*)

Winsome

is a malting variety that gives low treated and moderate untreated yields (98, 81). It has average grain quality and is early to ripen. It has average standing power, poor resistance to brackling and gives intermediate straw yields. (Syngenta)

Six-Row Types

Escadre

is a high yielding (103, 85) 6-row feed variety that has small grain with average specific weight. It has good resistance to *Rhynchosporium* and quite good resistance to *Ramularia*. It has long straw with quite good standing power and very good resistance to brackling. It has intermediate straw yields and is early to ripen. (KWS)

KWS Meridian

is a new 6-row feed variety that gives very high treated and high untreated yields (109, 87). It has large grain with very low specific weight. It has long straw with average standing power, average resistance to brackling and necking and gives low straw yields. It has good resistance to *Rhynchosporium* and quite good resistance to *Ramularia*. It ripens late. (KWS)

Pelican

has very high treated and high untreated yields (108, 86). It has large grain with very low specific weight. It has good disease resistance but quite poor standing power. It has intermediate straw yields and is intermediate to ripen. (Saaten Union)

Sequel

gives moderate yields (101, 82). It has small grain with average specific weight. It has long straw with quite poor standing power. It has good resistance to *Rhynchosporium* and average resistance to mildew. (*Syngenta*)

The 6-row hybrid variety **Element** is on the HGCA UK List but is not described here as it has not been in the most recent DARD Recommended List trials.

Winter Wheat

Panorama has been promoted and joins **JB Diego** and **Alchemy** as fully recommended for general use. **Denman**, **Beluga** and **Stigg** are all new provisional recommendations and join **Grafton** which is in its second year as a provisional recommendation. **Robigus** and **Einstein** are becoming out-classed. **Ketchum** has been removed from the list due to its poor straw strength.

Alchemy, Beluga, Einstein, Grafton, JB-Diego and Stigg should be sown before the end of January to meet vernalisation requirements, Denman before mid-February and Robigus and Panorama before the end of February. Yields of all varieties, when sown late, are likely to be much lower than when sown at the optimum time in autumn. Panorama, Einstein, Grafton, Stigg and JB Diego have hard endosperm textures and Robigus, Beluga and Alchemy have soft endosperm textures. Variation in endosperm texture of feed wheat influences starch digestibility in poultry and the degree of rumen degradable starch. Wheat with a soft endosperm tends to be of superior nutritive value.

Variety descriptions are in alphabetical order. Information is also provided on the year each variety was first listed in Northern Ireland, the name of its UK agent and its nabim group. 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. The guide can be found in the HGCA Recommended List booklet for cereals and oilseeds.

Alchemy

(Recommended for general use)

First listed in 2007; Limagrain; nabim soft Group 4;

- high treated and untreated yields;
- large grain with average specific weight;
- long straw with average standing power;
- quite good resistance to Septoria tritici and mildew, average resistance to Fusarium ear blight and good resistance to yellow rust;
- tends to ripen late.

Beluga

(Provisionally recommended)

First listed in 2012; Senova; nabim soft Group 4;

- high treated and moderate untreated yields;
- · very large grain with average specific weight;
- short straw with very good standing power;
- average resistance to Septoria tritici and Fusarium ear blight, poor resistance to mildew and very good resistance to yellow rust;
- · early to ripen;
- there are concerns that this variety may be susceptible to sprouting, but there has been no evidence of this to date in trials in Northern Ireland.

Denman

(Provisionally recommended)

First listed in 2012; Syngenta; nabim soft Group 4;

- · very high treated and high untreated yields;
- · average size grain with average specific weight;
- medium length straw with average standing power;
- quite good resistance to Septoria tritici and yellow rust, average resistance to Fusarium and quite poor resistance to mildew;
- intermediate to ripen.

Einstein

(Becoming outclassed)

First listed in 2003; Limagrain; nabim Group 2;

- · high treated and moderate untreated yields;
- large grain with average specific weight;
- medium length straw with quite poor standing power;
- quite poor resistance to Septoria tritici and average resistance to mildew, yellow rust and Fusarium ear blight;
- early top ripening.

Grafton

(Provisionally recommended for special use)

First listed in 2011; KWS; nabim hard Group 4;

- high treated and moderate untreated yields;
- large grain with average specific weight;
- short straw with very good standing power;
- average resistance to Septoria tritici, quite good resistance to mildew, good resistance to yellow rust and quite poor resistance to Fusarium ear blight;
- early to intermediate to ripen.

JB Diego

(Recommended for general use)

First listed in 2009; Senova; nabim hard Group 4;

- · high treated and untreated yields;
- · large grain with average specific weight;
- medium length straw with quite good standing power;
- average resistance to Septoria tritici, mildew, and Fusarium ear blight and good resistance to yellow rust;
- early to intermediate to ripen;
- quite good resistance to sprouting.

Panorama

(Provisionally recommended)

First listed in 2010; Limagrain; nabim Group 2;

- high treated and moderate untreated yields;
- · large grain with average specific weight;
- · medium length straw with good standing power;
- quite good resistance to mildew, Septoria tritici and Fusarium ear blight and very good resistance to vellow rust;
- intermediate to ripen;
- good resistance to sprouting.

Robigus

(Becoming out-classed)

First listed in 2005; KWS; nabim Group 3;

- high treated and low untreated yields;
- small grain with average specific weight;
- medium length straw with quite good standing power;
- average resistance to Septoria tritici, mildew and Fusarium ear blight, but very poor resistance to yellow rust;
- late to ripen.

Stigg

(Provisionally recommended for special use)

First listed in 2012; Limagrain; nabim hard Group 4;

- high treated and very high untreated yields;
- very large grain with low specific weight;
- · short straw with very good standing power;
- good resistance to Septoria tritici and mildew, very good resistance to yellow rust and average resistance to Fusarium ear blight;
- early to ripen;
- suitable for low input systems or areas of high disease pressure due to its high untreated yields.

Varieties that are not recommended but are of local interest and are entered into the Northern Ireland Seed Certification Scheme are listed below. Figures in brackets are treated and untreated yields, respectively. UK agents' names and nabim Group are in italics.

Duxford

gives moderate treated and very low untreated yields (97, 60). It has large grain with average specific weight, very strong straw but below average disease resistance. It is early to ripen. (Syngenta; nabim hard Group 4)

KWS Santiago

gives moderate treated and very low untreated yields (97, 63). It has average sized grain with low specific weight. It has average standing power and poor resistance to Septoria tritici and yellow rust. (KWS; hard Group 4)

Oakley

gives high treated and very low untreated yields (104, 64). It has large grain with average specific weight, good standing power and is intermediate to ripen. It is very susceptible to yellow rust. (KWS; nabim hard Group 4)

Varieties on the HGCA UK List that have performed less well are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields respectively. UK agents' names and nabim Group are in italics.

Claire

has moderate treated and low untreated yields (98, 68). It has average grain quality and average standing power. (Limagrain; nabim Group 3)

Cocoon

gives high treated yields and very low untreated yields (100, 63). It has large grain with average specific weight and quite good standing power. It has poor resistance to Septoria tritici and develops this disease very early in the growing season. (Masstock Arable; nabim Group 3)

Conqueror

has high treated and low untreated yields (102, 68). It has average grain quality and average standing power. It has quite poor resistance to *Septoria tritici* and very poor resistance to mildew. (KWS; nabim hard Group 4)

Cordiale

gives low treated and very low untreated yields (93, 64). It has average sized grain with high specific weight. It has short straw with good standing power. It has quite poor resistance to Septoria tritici. (KWS; nabim Group 2)

Crusoe

is a new variety that has moderate treated and high untreated yields (96, 75). It has very large grain with average specific weight. It has good standing power and good resistance to Septoria tritici. (Limagrain; nabim Group 1)

Gallant

gives high treated but very low untreated yields (100, 63). It has very large grain with average specific weight and good standing power but poor disease resistance. (Syngenta; nabim Group 1)

Gravitas

gives high treated and moderate untreated yields (103, 73). It has small grain with average specific weight and quite poor standing power. (Limagrain; nabim soft Group 4)

Horatio

is a new variety that gives very high treated and moderate untreated yields (107, 72). It has very large grain with average specific weight. It has average standing power and average resistance to Septoria tritici. (Limagrain; nabim soft Group 4)

Invicta

gives high treated and moderate untreated yields (103, 73). It has average grain quality, good standing power and quite good resistance to *Septoria tritici*. (*Limagrain*; nabim Group 3)

Ketchum

gives high yields (104, 75). It has very large grain with average specific weight. It has long straw with poor standing power and average resistance to Septoria tritici. (Syngenta, nabim Group 2)

KWS Gator

is a new variety that gives very high treated and moderate untreated yields (106, 74). It has very large grain with average specific weight, good standing power and average resistance to Septoria tritici. (KWS; nabim hard Group 4)

KWS Podium

has moderate treated and low untreated yields (97, 66). It has large grain with high specific weight and very good standing power. It has average resistance to Septoria tritici. (KWS; nabim Group 2)

KWS Sterling

gives moderate treated and very low untreated yields (99, 62). It has large grain with average specific weight and has very good standing power. It has average resistance to Septoria tritici but very good resistance to yellow rust. (KWS; nabim Group 2)

KWS Target

gives moderate yields (98, 70). It has small grain with average specific weight. It has good standing power and quite good resistance to *Septoria tritici*. (KWS; nabim Group 3)

Relay

is a new variety that gives very high treated and moderate untreated yields (107, 73). It has average grain quality and good standing power. It has quite good resistance to Septoria tritici and Fusarium ear blight. (RAGT; nabim hard Group 4)

Scout

gives moderate yields (98, 74). It has average grain quality and good standing power with quite good resistance to Septoria tritici. (Senova; nabim Group 3)

Solstice

has moderate treated and very low untreated yields (96, 55). It has large grain with average specific weight and good standing power. It has poor disease resistance. (Limagrain; nabim Group 1)

Torch

is a new variety that gives high treated and moderate untreated yields (100, 74). It has average grain quality and good standing power. It has good resistance to Septoria tritici but poor resistance to mildew and quite poor resistance to Fusarium ear blight. (RAGT; nabim Group 3)

Tuxedo

is moderate yielding (98, 71). It has small grain with average specific weight. It has very good standing power, quite good resistance to *Septoria tritici* and is early to ripen. (RAGT; nabim Group 3)

Viscount

gives high treated and moderate untreated yields (100, 70). It has large grain with average specific weight. It has average standing power and average disease resistance. It has poor resistance to sprouting. (KWS; nabim soft Group 4)

Warrior

gives moderate treated and very high untreated yields (99, 82). It has average grain quality, quite good standing power and good all-round disease resistance. (RAGT; nabim Group 3)

Battalion and **Humber** are on the HGCA UK List but are not described here as they have not been in the most recent DARD Recommended List trials. **Cassius, Gladiator, Glasgow, Istabraq, Kingdom, Oakley** and **Robigus** are no longer on the HGCA UK List.

Winter Oats

Conventional Husked Oats

Dalguise and **Gerald** remain fully recommended for general use. **Balado** and **Mascani** remain provisionally recommended. **Balado** is provisionally recommended for special use because it has very low specific weight and is only suitable as a feed oat. **Mascani** is a high-yielding oat with good grain quality. **Tardis** has been removed from the list due to lack of seed.

Variety descriptions are in alphabetical order. The year each variety was first listed in Northern Ireland and the name of its UK agent are also given.

Gerald

(Recommended for general use)

First listed in 1993; Senova;

- high treated yields and untreated yields;
- large grain with high specific weight and average kernel content;
- low screenings and little tendency to produce free kernels or empty husks
- medium length straw with average standing power and average resistance to brackling;
- quite poor resistance to mildew, good resistance to Septoria avenae and poor resistance to crown rust;
- intermediate to ripen;
- suitable for the quality market because of its specific weight.

Dalguise

(Recommended for general use)

First listed in 2004; Senova;

- · high treated yields and untreated yields;
- very large grain with high specific weight and high kernel content;
- low screenings and some tendency to produce free kernels but little tendency to produce empty husks;
- medium length straw with quite poor standing power and poor resistance to brackling;
- poor resistance to mildew, very poor resistance to crown rust and good resistance to Septoria avenae;
- intermediate to ripen;
- suitable for the quality market because of its specific weight.

Balado

(Provisionally recommended for special use)

First listed in 2011; Senova;

- very high treated and untreated yields;
- very large grain with low specific weight and low kernel content - this variety has a specific weight well below 50kg/hl and is likely to fail to meet miller's quality requirements;
- low screenings and little tendency to produce free kernels or empty husks;
- very short straw with excellent standing power and very good resistance to brackling;
- quite good resistance to mildew, good resistance to Septoria but poor resistance to crown rust;
- · early to ripen;
- not suitable for the quality market.

Mascani

(Provisionally recommended)

First listed in 2011: Senova:

- high treated and very high untreated yields;
- very large grain with high specific weight and high kernel content;
- very low screenings and some tendency to produce free kernels but little tendancy to produce empty husks
- medium length straw with quite good standing power and good resistance to brackling;
- quite good resistance to mildew and good resistance to crown rust and Septoria avenae;
- intermediate to ripen;
- suitable for the quality market because of its specific weight.

Varieties on the HGCA UK List that have performed less well are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields respectively. UK agents' names are in italics.

Brochan

gives high treated and very high untreated yields (99, 91). It has very large grain with average specific weight and high kernel content. It has short straw with very good standing power and good resistance to brackling. It has good resistance to crown rust and average resistance to mildew. (Senova)

Tardis

gives high treated and very high untreated yields (99,97). It has very large grain with average specific weight and kernel content. It has short straw with quite good standing power and good resistance to brackling. It has very good disease resistance. (Senova)

Naked Oats

Yields of naked oats are low when compared directly with husked oats because during harvest the grain threshes free from the husk and only the groat is harvested. As a result, naked oats tend to have higher specific weights and smaller grain than husked oats. The naked grain has nutritional benefits, such as higher oil and nutrient content and interest is currently being shown by the poultry industry. **Grafton**, **Hendon** and **Fusion** are recommended for general use in the UK.

Fusion

is a dwarf naked oat that gives very low treated and low untreated yields (83, 68). It has relatively small grain with very high specific weight when compared to conventional husked winter oat varieties. It has very short straw with very good standing power and very good resistance to brackling. It has quite poor resistance to mildew and Septoria avenae and average resistance to crown rust. It is very late to ripen. (Senova)

Grafton

gives very low treated and untreated yields (76, 66). It has relatively small grain with very high specific weight when compared to conventional husked winter oat varieties. It has medium length straw with average standing power and average resistance to brackling. It has average resistance to mildew, Septoria avenae and crown rust. It is intermediate to ripen. (Senova)

Hendon

is a dwarf naked oat that gives very low treated and low untreated yields (82, 70). It has relatively small grain with very high specific weight when compared to conventional husked winter oat varieties. It has very short straw with very good standing power and very good resistance to brackling. It has quite good resistance to mildew and good resistance to crown rust. It is late to ripen. (Senova)

The end market should be established before growing a naked oat.

Choosing and Managing Varieties

- When selecting varieties, consider straw characteristics in relation to soil fertility and exposure of fields. Take care with nitrogen applications on weaker-strawed varieties. They are more susceptible to lodging.
- Varieties differ in resistance to diseases. Yields will be lower if infections are severe. Resistant varieties need less fungicide.
- Resistance to disease can change. Susceptibility to mildew may increase quite rapidly in only a few years. Inspect crops of all varieties regularly for disease infection during the growing season.
- If minimal fungicide usage is planned, consider varieties with high untreated yields. If you plan to use fungicides, consider varieties with a high treated yield. Remember that the disease control measures used in our trials are designed to keep disease to a minimum regardless of cost.
- Do not sow a large area with a new variety until you have gained some experience with it and have found it to be well suited to the conditions of your farm.
- Careful drying is essential for oats grown for the quality or horse feed markets. Poor drying can lead to deterioration of the grain and bitter taste.

UK Agents

Daltons Seeds www.dalmark.co.uk Dalton Seeds, Dalmark House, Eye, Peterborough, PE6 7UD

Tel: (01733) 222931

www.kws-uk.com **KWS**

KWS UK Ltd, 56 Church Street, Thriplow, Nr. Royston, Hertfordshire SG8 7RE

Tel: (01763) 207300

Limagrain www.limagrain.co.uk Limagrain UK Ltd., Rothwell, Market Rasen, Lincolnshire, LN7 6DT

Tel: (01472) 371471

RAGT www.ragt.co.uk

RAGT Seeds, Grange Road, Ickleton, Essex CB10 1TA

Tel: (0845) 0525245

Saaten Union www.saaten-union.co.uk Saaten-Union (UK) Ltd., Rosalie Field Station, Bradley Road, Cowlinge, Newmarket, Suffolk CB8 9HU

Tel: (01440) 783440

Secobra (Agents: Masstock Arable) www.masstockarable.co.uk Masstock Arable (UK) Ltd, Andoversford, Cheltenham, GL54 4LZ

Tel: (01242) 821100

Senova www.senova.uk.com Senova Ltd, 49 North Road, Great Abington, Cambridge CB21 6AS.

Tel: (01223) 890777

Svngenta www.newfarmcrops.co.uk Syngenta Seeds Ltd, 30 Priestley Road, Surrey Research Park, Guildford GU2 7YH

Tel: (01223) 883400

Trevor Cope Seeds www.trevorcopeseeds.co.uk Cope Seeds Limited, Mansfield House, 22 Northgate, Sleaford, Lincs **NG34 7DA**

Tel: (01529) 309091

Enquiries

For help with variety selection and management contact:

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David Crawford - Office (028) 4461 8075

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james.knox@dardni.gov.uk

Plant breeders, merchants and other specialists requiring technical data on trials, testing procedures and variety details should contact:

Applied Plant Science and Biometrics Division

AFBI Crossnacreevy

Plant Testing Station Tel: 028 9054 8000 50 Houston Road Fax: 028 9054 8001

Crossnacreevy
Castlereagh
BFI FAST BT6 9SH

The DARD Recommended List is available at www.afbini.gov.uk. The UK Recommended List 2012, published by the HGCA, is available from the Plant Testing Station and also at www.hgca.com.

Farmers' experience of growing varieties is valuable to us. If, after having grown any of the varieties listed in this booklet, you have any useful comments, please get in touch with us at the Plant Testing Station.

Key DARD Contacts: Farmers, growers and processors requiring CAFRE Development Adviser on 0845 30 44 503.

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information on crops should contact:

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