Cereals

Recommended Cereal Varieties for Northern Ireland 2009

Department of Agriculture and Rural Development
www.dardni.gov.uk

HGCA

afbi Agri-Food and Biosciences Institute

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 2009

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Contents

Introduction

This booklet is a comprehensive guide to cereal v arieties 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 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.

Several UK listed varieties are excluded from the tables because they are less suitable for use in Northern Ireland. A brief description of these varieties is given in the text.

Varieties are classified as follows:

G Varieties **fully recommended for general use**
S Varieties **fully recommended for special use**; clarification of which is given in the notes
P Varieties **provisionally recommended** and of which seed may be in short supply
PS Varieties which are **provisionally recommended for special 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 are additional winter wheat and winter barley trials, with a further winter barley trial at Hillsborough. Additional spring barley sites include Strabane, Coleraine and Newtownards and an additional spring oat trial is located at Loughgall. In 2008, the following trials were not harvested due to poor weather conditions: the spring barley trials at Strabane and Coleraine, the spring oat trial at Loughgall and the winter wheat trial at Crossnacreevy.

Characteristics

Yield
Yields of all varieties are expressed as percentages of the control in the tables. 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 2004 to 2008.

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 was 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 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 particularly prone to producing free kernels and some also produce empty husks. 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 **Doyen** for spring barley, **Firth** for spring oats, **Saffron** for winter barley, **Robigus** for winter wheat and **SW Dalguise** for winter oats. Straw yields are determined from spring barley trials at Crossnacreevy and are reported in the descriptions of varieties as low, intermediate, high or very high. There is no straw yield data for 2008 and the over-years means are for 2004 -2007 inclusive. Spring barley straw yields are from the fungicide-treated plots where yields of 3.2 t/ha or more were classed as very high, yields of 2.8–3.2 t/ha were classed as high, yields of 2.4-2.8 t/ha were classed as intermediate and yields less than 2.4 t/ha were classed as low. Winter barley straw yields (2004 - 2008) are from the fungicide-treated plots in trials that also received a plant growth regulator. Yields greater than 4.0 t/ha are described as high, those of less than 3.5 t/ha as low and those between 3.5 and 4.0 t/ha as intermediate.

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), necking (in barley only) and ear loss, 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 mildew, *Rhynchosporium* (leaf blotch) and *Septoria* 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. Net blotch scores in winter barley and mildew and yellow rust scores in winter wheat are taken from the HGCA Recommended List 2008 due to insufficient disease in Northern Ireland trials.

Disease incidences on cereal crops in Northern Ireland are much more variable from year to year and crop to crop than in Great Britain. There can also be a high degree of variability between trial sites. The 2008 growing season was quite extraordinary. Northern Ireland had the lowest rainfall in the UK this spring, with only 71 and 26% of the 1961-90 Met. Office average in April and May, respectively. This suppressed disease development until mid to late summer when wetter weather occurred during July and August. August 2008 was the wettest since 1914 with 213% of the 1961-1990 Met. Office average for the month. It was also the dullest August since 1929, with only 70 sunshine hours for the month, 51% of the 1961-1990 Met. Office average. See below for a summary of cereal disease incidences in the Northern Ireland trials in 2008.

Spring barley – Mildew was the most prevalent disease in the four spring barley trials in 2008. At Crossnacreevy, it reached over 20% infection in **Forensic**, with **Cocktail**, **Optic** and **Rebecca** also having significant infections. Mildew affected these same varieties at Newtownards and Coleraine. BYDV was recorded at Newtownards and Crossnacreevy. At Newtownards, the worst affected varieties were **Appaloosa** (12%) and **Quench** (10%). At Crossnacreevy, half of the varieties in trial had greater than 10% infection, with **Rebecca** and **Doyen** having 20%. At Coleraine, trace amounts of net blotch were recorded and *Ramularia* was present in a few varieties but all were less than 5%. Towards the end of the growing season, disease

was recorded on the ears of most varieties at all four sites. *Fusarium* and *Rhynchosporium* developed on the ears as a consequence of the wet August and delayed harvest. At Coleraine *Rhynchosporium* was recorded on the foliage only and at low levels of infection, ranging from zero to 5%.

Spring oats - Mildew was recorded at both spring oat trials in 2008. At Loughgall, all varieties were affected by the disease, with a maximum level of infection of 6% on **Atego**. At Crossnacreevy, mildew infections were more serious and by mid-July had reached over 20% in three varieties, **Atego** being most susceptible with 28% infection. BYDV was also recorded in all varieties at Crossnacreevy, with **Drummer**, **Leven** and **SW Argyle** having greater than15%.

Winter barley – At Crossnacreevy, there was little disease until mid-June when mildew was present at significant levels in many varieties, **Spectrum** and **Retriever** having the highest at 50%. Levels of brown rust were also recorded at 50% infection in **Cassata** and **Daybreak**, with a few varieties, **Colibri** and **Volume**, having none. Levels of yellow rust and *Rhynchosporium* were under 1% in all varieties at Crossnacreevy. At Downpatrick, levels of *Rhynchosporium* were much higher. By June, the most severely infected varieties were **Wintmalt** with 30%, **Camion** 9% and **Saffron** 5%. Mildew reached maximum levels of 25% in **Accrue** and **Volume**, with brown rust at 50% in **Boost** and 33% in **Bronx** and **Volume**. Disease at Limavady was much less severe than at Downpatrick or Crossnacreevy. By the end of June, brown rust was present at low levels in **Boost** (3%) and the highest level of *Rhynchosporium* was recorded in **Saffron** at 6%. At Hillsborough, no disease was recorded at significant levels (>5%).

Winter wheat - At Crossnacreevy, *Septoria tritici* and mildew infections did not exceed 10% at any stage during the growing season. Yellow rust was present on one variety only, **Robigus**, at 20% infection. At Limavady, the only disease recorded was *Septoria tritici* which reached 10% on **Glasgow** by early-July. Disease at Downpatrick was more widespread with *Septoria tritici* infections over 20% on five varieties, including **Mascot**, **Oakley** and **Einstein**. Yellow rust was again found

on **Robigus**, at 18%, with traces also observed in **Glasgow**, **Oakley** and **Gallant**. Traces of brown rust were also found at Downpatrick in **Hereford**. *Fusarium* on the ear was widespread in 2008. At Crossnacreevy, only one variety out of the 34 in trial, **Timber**, had no visible signs of *Fusarium* on the harvested grain.

Winter oats – Mildew was more severe in 2008 than in previous years, appearing as early as May in a number of varieties. By the end of June, only **Tardis** had no mildew with significant infections in all other varieties with a maximum of 50% in **Corrib**. Crown rust was under 1% in all but two varieties in by mid-July. **Balado** had the highest level of infection, but was still only 3.4%

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. Sprouting was a major problem in 2008 and occurred in all winter wheat varieties at all three locations, ranging from 3% for **Solstice** to 31% for **Hereford** on average across all three trials.

Spring Barley

Quench has been promoted to join **Westminster** and **Doyen** as fully recommended for general use. **Waggon** has been promoted to full recommendation for special use – this variety has very poor resistance to *Rhynchosporium*. **Sweeney** enters its second year as a provisional recommendation and is joined by **Concerto** and **Publican** in their first year as provisionally recommended. **Appaloosa**, **Cocktail** and **Riviera** have become outclassed. There were 24 varieties in trial in 2008 including six candidates. 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.

Appaloosa
(Becoming outclassed)

First listed in 2006; Nickerson;

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

Cocktail
(Becoming Outclassed)

First listed in 2003; New Farm Crops;

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

Concerto
(Provisionally recommended)

First listed in 2009; Nickerson;

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

Doyen
(Recommended for general use)

First listed in 2004; New Farm Crops;

- high treated and untreated yields;
- large grain with average specific weight;
- short straw with intermediate straw yield;
- quite good standing power with average resistance to brackling and good resistance to necking;
- quite good resistance to mildew and *Rhynchosporium* and average resistance to net blotch;
- intermediate to ripen.

Publican
(Provisionally recommended)

First listed 2009; New Farm Crops;

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

Quench
(Recommended for general use)

First listed in 2007; New Farm Crops;

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

Riviera
(Becoming outclassed)

First listed in 1995; RAGT Seeds Ltd;

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

Sweeney
(Provisionally recommended)

First listed in 2008; New Farm Crops;

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

Waggon
(Recommended for special use)

First listed in 2008; New Farm Crops;

- very high treated and high untreated yields;
- very large grain with low specific weight;
- short straw with intermediate straw yields;
- good standing power with average resistance to necking and brackling;
- very good resistance to mildew, average 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; Nickerson;

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

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.

Belgravia has high treated yields and very high untreated yields (**100, 94**). It has average specific weight and grain size. Its straw is medium in length, with quite good standing power and high straw yields. It has quite good *Rhynchosporium* resistance and is late to ripen.

Cropton gives very high treated and untreated yields (**107, 93**). It has large grain with average specific weight. It has medium length straw with good standing power, good resistance to brackling and very good resistance to necking It has very good mildew resistance, average resistance to *Rhynchosporium* and very poor resistance to net blotch. It is late to ripen.

Forensic gives very high treated and moderate untreated yields (**105, 83**). It has very large grain with low specific weight. Its short straw has average standing power, average resistance to brackling and very good resistance to necking. It has very poor resistance to both mildew and *Rhychosporium* and is late to ripen.

Jolika gives very high treated and high untreated yields (**104, 89**). It has large grain with low specific weight. Its straw is short with quite good standing power and very high straw yields. It has very good resistance to mildew, quite poor resistance to *Rhynchosporium* and poor resistance to net blotch. It is late to ripen.

NFC Tipple is a malting variety with high treated and moderate untreated yields (**103, 86**). It has large grain with average specific weight. It has good standing power and good resistance to necking. It gives low straw yields, has poor resistance to *Rhynchosporium* and is late to ripen.

Optic gives moderate treated and very low untreated yields (**97, 77**). It has average sized grain with average specific weight. It has quite good standing power with poor resistance to brackling. It has very poor resistance to *Rhynchosporium*, average resistance to mildew and poor resistance to net blotch.
It is late to ripen.

Oxbridge has moderate treated and low untreated yields (**96, 80**). It has average sized grain and average specific weight. Its short straw has good standing power, good resistance to necking, average resistance to brackling and intermediate straw yields. Resistance to *Rhynchosporium* and mildew is quite good.

Rebecca gives moderate treated and untreated yields (**98, 85**). It has large grain with low specific weight. It has medium length straw with quite good standing power and high straw yields. It has quite good resistance to *Rhynchosporium*, poor resistance to mildew and is intermediate to ripen.

Decanter, Cellar and **Scout** are on the HGCA UK List but are not described here as they have not been in the most recent DARD Recommended List trials.

Spring oats

Ascot is promoted to full recommendation for general use this year, joining **Firth**. **Husky** enters its second year as a provisional recommendation. **Atego** has been removed from the list due to its very poor resistance to mildew and its very low untreated yields. Eleven varieties were in trial in 2008, including one candidate. 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.

Ascot
(Recommended for general use)

First listed in 2007; Nickerson;

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

Firth
(Recommended for general use)

First listed in 2000; CPB Twyford Ltd;

- moderate treated and high untreated yields;
- medium sized grain with average specific weight
- and high kernel content;
- very low screenings;
- straw medium in length with quite good
- standing power and good resistance to brackling;
- quite good resistance to mildew and good resistance to *Septoria avenae* and to crown rust;
- intermediate to ripen.

Husky
(Provisionally recommended)

First listed 2008; Saaten Union;

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

Spring Barley Recommended List 2009

		Yield - % of Treated controls		Specific weight (kg/hl)	1000 grain weight (g)	Straw length cf. **Doyen** (cm)	Standing power	Resistance to leaf blotch (*Rhynchosporium*)	Resistance to mildew	Ripening
		T	U							
G	**Quench**	107	92	62.0	41.6	0	7	7	9	I
G	**Westminster**	104	93	63.9	44.6	+11	7	8	9	L
G	**Doyen**	103	88	63.7	45.9	0	7	7	7	I
S	**Waggon**	108	90	61.7	46.8	+2	8	3	9	I
P	**Concerto**	115	92	63.4	46.2	+5	6	5	9	E
P	**Publican**	105	94	63.1	45.6	+3	8	8	9	L
P	**Sweeney**	105	93	61.7	46.4	0	7	5	9	I
O	**Appaloosa**	101	84	62.3	40.1	+1	8	4	9	L
O	**Cocktail**	101	83	63.8	43.4	-1	7	6	6	I
O	**Riviera**	97	85	64.8	44.6	+6	7	5	9	I

Control varieties are **Optic, Cocktail, Westminster, Oxbridge and NFC Tipple.**
Mean yield of controls (100%) = **6.15** t/ha at 15% moisture content.

Key to abbreviations and symbols used in all tables: T = fungicide-treated; U = no fungicide; E = early; I = intermediate; L = late
The tables include some data abstracted from the HGCA Recommended Lists.
Full data collected from HGCA trials and the HGCA Recommended Lists are available on the HGCA website (www.hgca.com)

Winter Barley Recommended List 2009

		Yield - % of Treated controls T	U	Specific weight (kg/hl)	1000 grain weight (g)	Straw length cf. **Saffron** (cm)	Standing power	Resistance to leaf blotch (*Rhynchosporium*)	Resistance to mildew	Ripening
2-row										
G	**Saffron**	103	88	66.3	49.1	0	7	5	5	I
G	**Camion**	100	86	67.5	46.5	0	8	5	6	I
G	**Pearl**	97	83	67.1	47.7	+10	7	6	7	I
PS	**Retriever**	111	83	63.6	47.5	-2	5	7	4	I
P	**Suzuka**	103	92	65.8	48.8	+2	8	8	5	I
6-row										
S	**Colibri**	106	89	62.3	43.8	+10	6	8	8	I
PS	**Pelican**	113	94	59.8	46.3	+12	7	8	8	I
Hybrid 6-row										
PS	**Bronx**	113	91	64.4	43.1	+16	6	9	7	I

Control varieties are **Pearl, Flagon, Saffron and Sequel.**
Mean yield of controls (100%) = **8.48** t/ha at 15% moisture content.

Winter Wheat Recommended List 2009

		Yield - % of Treated controls		Specific weight (kg/hl)	1000 grain weight (g)	Straw length cf. **Robigus** (cm)	Standing power	Resistance to *Septoria*	Resistance to mildew	Ripening
		T	U							
G	**Alchemy**	105	89	74.7	48.4	+4	7	8	7	L
G	**Robigus**	104	81	74.3	43.9	0	8	7	6	L
G	**Zebedee**	101	74	72.3	48.8	-4	8	6	6	E
G	**Claire**	99	75	74.0	46.3	0	7	7	4	I
G	**Einstein**	97	77	74.4	50.1	-2	7	5	6	E
P	**JB Diego**	105	84	74.0	50.6	+1	8	6	5	E
P	**Oakley**	105	78	72.8	47.8	-3	8	6	5	L

Control varieties are **Claire, Solstice, Robigus, Einstein and Alchemy.**
Mean yield of controls (100%) = **10.59** t/ha at 15% moisture content.

Spring Oat Recommended List 2009

		Yield - % of Treated controls T	U	Specific weight (kg/hl)	1000 grain weight (g)	Kernel content (%)	Straw length cf. **Firth** (cm)	Standing Power	Resistance to mildew	Ripening	Sieve fraction (% <2.0 mm)
G	**Ascot**	103	83	50.6	33.6	78.6	+9	7	6	I	0.4
G	**Firth**	98	85	51.9	33.7	79.0	0	7	7	I	0.3
P	**Husky**	101	84	52.9	33.4	78.4	+4	8	7	E	0.3

Control varieties are **Firth, SW Argyle and Ascot.**
Mean yield of controls (100%) = **6.74** t/ha at 15% moisture content.

Winter Oat Recommended List 2009

		Yield - % of Treated controls T	U	Specific weight (kg/hl)	1000 grain weight (g)	Kernel content (%)	Straw length cf. **SW Dalgiuse** (cm)	Standing power	Resistance to mildew	Ripening	Sieve fraction (% <2.0 mm)
G	**Tardis**	104	94	49.8	35.3	75.6	-10	6	9	I	0.5
G	**Gerald**	100	74	52.3	34.2	75.9	-1	7	5	I	0.7
G	**SW Dalguise**	100	71	53.4	35.2	77.7	0	7	4	L	0.4

Control varieties are **Gerald, SW Kinross and SW Dalguise.**
Mean yield of controls (100%) = **7.93** t/ha at 15% moisture content.

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.

Atego gives high treated but very low untreated yields (**100, 72**). It has good standing power but very poor resistance to brackling. It has large grain with low specific weight and average kernel content. It is very susceptible to mildew.

Carron gives high treated and untreated yields (**101, 84**). It has very large grain with low specific weight and average kernel content. It has short straw with very good standing power and average resistance to brackling. It has quite good resistance to mildew and is early to ripen.

Drummer is moderate yielding (**97, 80**). It has very large grain with high specific weight and very low kernel content. It has very long straw with average standing power and poor resistance to brackling.

Leven gives moderate yields (**95, 83**). It has medium sized grain with average specific weight and very high kernel content. It has long straw with good standing power but has poor resistance to brackling.

SW Argyle gives moderate treated and high untreated yields (**98, 85**). Its large grain has average specific weight and low kernel content. It has long straw with good standing power but poor resistance to brackling.

Winston 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 Barley

There is very little change in the winter barley Recommended list for 2009. On the two-row list, **Saffron**, **Camion** and **Pearl** remain fully recommended for general use. **Retriever** and **Suzuka** both enter their second year as provisional recommendations. All six-rows and six-row hybrid varieties are given **'S' (Special)** classifications. **Colibri** is fully recommended for special use and **Pelican** is in its second year as a provisional recommendation for special use. **Sequel** has been removed from the list. The six-row hybrid **Bronx** continues as a provisional recommendation for special use. There were 24 winter barley varieties in trial in 2008, including four new candidates. 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.

Two-Row Types

Camion
(Recommended for general use)

First listed in 2004; CPB Twyford Ltd;

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

Pearl
(Recommended for general use)

First listed in 1999; Nickerson;

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

Retriever
(Provisionally recommended for special use)

First listed in 2008; Nickerson;

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

Saffron
(Recommended for general use)

First listed in 2007; CPB Twyford Ltd;

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

Suzuka
(Provisionally recommended)

First listed in 2008; New Farm Crops;

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

Six-Row Types

Colibri
(Recommended for special use)

First listed in 2006; Daltons Seeds;

- very high treated and untreated yields;
- average sized grain with very low specific weight;
- medium length straw giving intermediate straw yields;
- average standing power with average resistance to necking and poor resistance to brackling;
- good resistance to *Rhynchosporium* and mildew;
- intermediate to ripen.

Pelican
(Provisionally recommended for special use)

First listed in 2008; Nordstaat, Germany;

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

Hybrid Six-Row Types

Bronx *(Provisionally recommended special use)*

First listed in 2008; New Farm Crops;

- very high treated and untreated yields;
- average sized grain with low specific
- weight; long straw with intermediate straw yields;
- average standing power with poor resistance to both brackling and necking;
- very good resistance to *Rhynchosporium* and quite good resistance to mildew;
- intermediate to ripen.

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.

Two-Row Types

Accrue gives high yields (**102, 87**). It has average sized grain with average specific weight. It has short straw with good standing power and moderate straw yields. It has quite good resistance to *Rhynchosporium* but poor resistance to mildew. It is late to ripen.

Carat has moderate yields (**96, 83**). It has large grain with high specific weight. Its straw is short with good standing power but is very susceptible to necking. It has poor resistance to *Rhynchosporium*.

Cassata has moderate yields (**98, 82**). It has medium length straw that has good standing power, good resistance to brackling, poor resistance to necking, and gives high straw yields. It has quite good resistance to *Rhynchosporium* but quite poor resistance to mildew.

Flagon gives high yields (100, 87). It has large grain with average specific weight. It has quite poor standing power with poor resistance to both brackling and necking.

Wintmalt gives low treated and very low untreated yields (92, 72). It has large grain with low specific weight. Its straw has quite good standing power and good resistance to brackling and necking. It has very poor resistance to *Rhynchosporium* and quite poor resistance to mildew.

Six-Row Types

Sequel gives high yields **(99, 85)**. It has small grain with average specific weight. It has long straw with quite poor standing power. It has good resistance to Rhynchosporium and quite good resistance to mildew.

Hybrid Six-Row Types

Boost gives high yields **(103, 87)**. It has average sized grain with low specific weight. It has quite good standing power but has poor resistance to necking. It has good resistance to *Rhynchosporium*.

Volume is a new candidate and gives very high yields **(116, 97)**. It has small grain with average specific weight. Its straw is long with quite good standing power but poor resistance to brackling. It has quite good resistance to both *Rhynchosporium* and mildew.

The six-row variety **Amarena** 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

Alchemy and **Zebedee** have been promoted and join **Robigus**, **Claire** and **Einstein** as full recommendations for general use. There is one new provisional recommendation this year – **JB Diego**. **Oakley** continues into its second year as a provisional recommendation.

Einstein, **JB-Diego** and **Zebedee** should be sown before the end of January to meet vernalisation requirements, **Alchemy** and **Oakley** before mid-February and **Claire** and **Robigus** 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. **Einstein** appears to perform well as a second wheat whereas **Robigus** does not. **Einstein**, **JB Diego** and **Oakley** have hard endosperm textures while the other four varieties on the DARD Recommended List 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.

There were 34 varieties in trial in 2008 including 16 new candidates. Those that are high yielding will continue for a second year in trials before they are considered for provisional recommendation. Three varieties were candidates in trial for a second year in 2008 and of these, **JB Diego** has become provisionally recommended. 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.

Alchemy
(Recommended for general use)

First listed in 2007; Nickerson;

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

Claire
(Recommended for general use)

First listed in 1999; Nickerson;

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

Einstein
(Recommended for general use)

First listed in 2003; Nickerson;

- moderate treated yields and high untreated yields;
- large grain with average specific weight;
- medium length straw with quite good standing power;
- quite poor resistance to *Septoria tritici*, average resistance to mildew and quite good resistance to yellow rust;
- early to ripen.

JB Diego
(Provisionally recommended)

First listed in 2009; Senova Ltd;

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

Oakley
(Provisionally recommended)

First listed in 2008; CPB Twyford;

- very high treated yields and high untreated yields;
- large grain with average specific weight;
- medium length straw with good standing power;
- quite poor resistance to mildew and average resistance to *Septoria tritici* and yellow rust;
- tends to ripen late.

Robigus
(Recommended for general use)

First listed in 2005; CPB Twyford;

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

Zebedee
(Recommended for general use)

First listed in 2007; Nickerson;

- high treated yields and moderate untreated yields;
- large grain with average specific weight;
- medium length straw with good standing power;
- average resistance to *Septoria tritici* and mildew and very good resistance to yellow rust;
- ripens early.

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.

Battalion gives low treated and moderate untreated yields (**93, 75**). It has average sized grain with low specific weight. It has medium length straw and good standing power.

Cassius is a new candidate that gives low treated and moderate untreated yields (**93, 72**). It has large grain with low specific weight. It has quite good standing power.

Cordiale gives moderate yields (**99, 73**). It has high specific weight and its short straw has good standing power. It has quite poor resistance to *Septoria tritici* and ripens early.

Duxford gives moderate treated yields and low untreated yields (**96, 70**). It has large grain with average specific weight. Its straw tends to be long with very good standing power. It has average resistance to *Septoria tritici*.

Gallant is a new candidate that gives very high treated and moderate untreated yields (**105, 72**). It has very large grain with average specific weight. It has quite good standing power. It has average resistance to *Septoria* and yellow rust and quite poor resistance to mildew.

Grafton is a new candidate that gives moderate treated and high untreated yields (**98, 76**). It has large grain with average specific weight. Its short straw has very good standing power.

Gladiator gives moderate yields (**97, 73**). It has average grain quality, quite good standing power and average resistance to *Septoria tritici*. It ripens early.

Glasgow has high treated and untreated yields (**102, 78**). It has average grain quality and quite good standing power. It has average resistance to *Septoria tritici* but poor resistance to yellow rust. It is intermediate to ripen.

Humber is low yielding (**94, 70**) and has average grain quality. It has short, strong straw and average resistance to *Septoria tritici*. It is intermediate to ripen.

Istabraq gives high yields (**101, 77**). It has large grain with high specific weight. Its straw is long with average standing power. It has average resistance to *Septoria tritici* and is late to ripen.

Ketchum is a new candidate that gives high yields (**104, 80**). It has very large grain with average specific weight. Its straw is long with quite poor standing power.

Mascot gives low yields (**90, 69**). It has large grain with average specific weight. Its straw is long with quite good standing power. It has quite poor resistance to *Septoria tritici* and ripens early.

Panorama is a new candidate. It gives high treated and very high untreated yields (**102, 83**). It has large grain with average specific weight. It has very good standing power with quite good resistance to *Septoria* and mildew.

Scout is a new candidate that gives moderate treated and high untreated yields (**96, 79**). It has average grain quality, very good standing power and quite good resistance to *Septoria*.

Solstice has moderate treated and low untreated yields (**96, 71**). It has large grain with average specific weight and its long straw has good standing power. It has quite good resistance to *Septoria tritici*.

Timber gives moderate treated and very high untreated yields (**96, 84**). It has good disease resistance, good standing power and ripens early.

Viscount is a new candidate that gives low treated and moderate untreated yields (**93, 73**). It has large grain with low specific weight. Its straw is short with quite good standing power.

Qplus is a new candidate that gives very low treated and moderate untreated yields (**88, 72**). It has large grain with low specific weight. It has very good standing power and quite good resistance to mildew.

The following varieties are on the HGCA UK List but are not described here as they have not been in the most recent DARD Recommended List trials: **Ambrosia, Deben, Consort, Gatsby, Hereward, Malacca, Marksman, Soissons** and **Xi19**

Winter Oats

Husked oats

Tardis has been promoted to full recommendation for general use, joining **SW Dalguise** and **Gerald**. The performance of the autumn-sown spring variety **Barra** is described. Eleven winter oat varieties were in trial in 2008, including three candidates. 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; IGER;

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

SW Dalguise
(Recommended for general use)

First listed in 2004; Senova Ltd;

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

Tardis
(Recommended for general use)

First listed in 2008; IGER;

- very high treated and untreated yields;
- large grain with average specific weight and average kernel content;
- low screenings;
- short straw with average standing power and very good resistance to brackling;
- very good resistance to mildew and good resistance to both *Septoria avenae* and crown rust;
- intermediate to ripen;
- little tendency to produce free kernels or empty husks.

Varieties on the HGCA UK List that have performed less well, or for which there are limited data from trials in Northern Ireland are listed below. Newer varieties will continue in trials in Northern Ireland. Figures in brackets are treated and untreated yields respectively.

Brochan gives high yields (**101, 84**). It has large grain with average specific weight and high kernel content. It has short straw with excellent standing power and very good resistance to brackling. It is late to ripen.

Mascani has high treated and very high untreated yields (**100, 92**). It has very large grain with high specific weight and high kernel content. It has a very high tendency to produce free kernels but little tendency to produce empty husks. It has quite good standing power and very good resistance to brackling. It has good resistance to crown rust and Septoria avenae and quite good resistance to mildew. It may be an option for low input systems.

Autumn Sown Spring Oats

Barra When sown alongside winter varieties this spring oat produces very good grain quality. Its average sized grain has very high specific weight and high kernel content and similar screenings to winter oat varieties. Growing this variety, however, is risky because of its **very poor winter hardiness**. Crop losses of over 50% were recorded in trials during the 1995/96 winter period. Also its yields were lower than those of the winter varieties. Because of its very poor mildew resistance, it needs to be managed well to achieve good grain quality.

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** and **Hendon**, a dwarf variety, are recommended for general use in the UK. **Fusion** is a new dwarf naked oat variety.

Fusion gave very low treated and untreated yields (**75, 59**). It has relatively small grain with very high specific weight when compared to other 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 average resistance to crown rust.

Grafton gave very low treated and untreated yields (**77, 62**). It has relatively small grain with very high specific weight when compared to other winter oat varieties. It has medium length straw with quite good standing power and good resistance to brackling. It has average resistance to mildew and crown rust. It is intermediate to ripen.

Hendon gave very low treated and untreated yields (**83, 61**). It has very small grain with very high specific weight It has very short straw with very good standing power and quite good resistance to brackling. It has quite good resistance to mildew and good resistance to crown rust. It is intermediate to ripen.

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.

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The DARD Recommended List is available at www.afbini.gov.uk. The UK Recommended List 2009, 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.

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Agriculture and
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AN ROINN
Talmhaíochta agus
Forbartha Tuaithe

MÄNNYSTRIE O
Fairms an
Kintra Fordèrin

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