Cereals

Recommended Varieties for Northern Ireland 2010

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.

Acknowledgements

The cereal team at the Plant Testing Station thank those cereal growers who allowed us to site cereal variety trials on their farms.

Recommended Cereal Varieties 2010

Lisa Black BSc, PhD and Ethel White BSc, PhD
Applied Plant Science and Biometrics Division,
AFBI Crossnacreevy, Plant Testing Station, Crossnacreevy

Contents

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.

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 there were additional winter wheat and winter barley trials, with two further winter barley trials at Hillsborough and Limavady. Additional spring barley trials are conducted at 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 2005 to 2009.

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 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 **Quench** 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 one spring barley and one winter barley trial each year. The relative straw yields from fungicide treated plots are now presented in the Recommended List tables. For spring barley they are expressed as low (less than 3.0 t/ha), intermediate (3.0 – 3.3 t/ha), high (3.3 – 3.7 t/ha) or very high (more than 3.7 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 4.0 t/ha), intermediate (4.0 and 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. Yellow rust and *Fusarium* ear blight scores in winter wheat are taken from the HGCA Recommended List 2010 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 crop to crop than in Great Britain. There can also be a high degree of variability between trial sites. Below is a summary of cereal disease incidences in the Northern Ireland trials in 2009.

Spring barley

Mildew was not as widespread as in 2008, with only Coleraine and Strabane having substantial levels of this disease. At Coleraine, **Optic**, **Cocktail** and **Oxbridge** had greater than 10% infection by late June. **Forensic** was worst affected with 40%. These same varieties had significant infections at Strabane with **Forensic** again being the worst affected at 31%. At Crossnacreevy, mildew infections were less severe with only one variety, **Forensic**, having greater than 5% infection.

Rhynchosporium was recorded at higher levels in 2009 compared with 2008 and Coleraine had the highest levels. **Optic**, **Waggon** and **NFC Tipple** had 21, 15 and 13% infection, respectively, with an average of 6% across all 24 varieties in trial. The high resistance in varieties **Westminster** and **Publican** meant that infection was only 1%, and candidate variety **Garner**, and old favourite **Dandy** had only 0.3% infection.

Ramularia was a big problem at Coleraine in 2009. Typically with this disease, levels were low until post-flowering. By mid-July (GS 77), all varieties in trial were severely affected and the levels recorded ranged from 47 – 80%. At Crossnacreevy too, all varieties were affected with an average infection of 5%. **Mirage** and **Cocktail** were both over 10%, but **Westminster** was the least affected with only 0.4%. At Strabane, *Ramularia* was on average much lower (0.7%) with a maximum of 5% in **Forensic**.

Net blotch was only recorded in trace amounts at both Coleraine and Strabane, with none observed at Crossnacreevy.

Spring oats

Mildew was the only disease recorded at significant levels in 2009. By mid-June, the most severely infected variety was **Atego** with 42%. By

the beginning of August, **Ascot** had increased to 27% infection, with the new recommendation **Rozmar** being 12%. **Firth** and **Husky** were both below 5% with **Canyon**, the other new provisional recommendation, having no mildew at all.

Winter barley

Rhynchosporium and *Ramularia* were the two main diseases in the winter barley trials in 2009. Average *Rhynchosporium* infections of 6, 8 and 21 % were recorded at Limavady, Downpatrick and Crossnacreevy, respectively, with susceptible variety **Wintmalt** having over 70% infection at Downpatrick. Other varieties showing significant *Rhynchosporium* infections were **Camion**, **Saffron**, **KWS Cassia**, **Pearl** and **Retriever**. At Hillsborough there were only trace amounts of *Rhynchosporium* with a maximum of 2% in **Camion**.

Ramularia was found in all four trials. In early June at Hillsborough, only one variety, **Retriever**, had significant levels of *Ramularia* (20%). As with the spring barley, the disease really took off post-flowering and the disease was most severe from late June on. In Downpatrick an average infection of 59% was recorded across all the varieties in trial with **Retriever** again being the most severely affected at 73%. All but one variety, **Wintmalt**, which was heavily infected with *Rhynchosporium*, had *Ramularia* levels over 40%. At Crossnacreevy, the infections were less severe but still significant and ranged from 5 – 30% with an average of 16%. Most severely affected were **Suzuka**, **Colibri** and **Retriever**. At Limavady, only one variety, **Flagon**, had infection greater than 5%.

Mildew was found in trace amounts at Hillsborough, with none recorded for the Limavady trial. At Downpatrick mildew was recorded in early May and continued to increase throughout the growing season. **Saffron** was most severely infected with 28% by late June. **Purdey**, **Cassata** and **KWS Cassia** all had greater than 18%. **Pelican** was the only variety with no mildew in this trial. At Crossnacreevy, infections ranged from none, including **Pelican**, **Sequel** and **Colibri**, to a maximum of 15% for **Saffron**.

There were trace amounts of net blotch at Downpatrick and Limavady, but no rusts were recorded at any of the four sites across Northern Ireland.

Winter wheat

Septoria tritici was the most dominant disease in winter wheat in 2009. By the end of June at Downpatrick, the average infection across all 34 varieties in trial was 11%, ranging from 4% in **Warrior** to 22% in **Cordiale**. **Oakley** had 20% infection whilst **Alchemy** had the lowest level of 4%. At Crossnacreevy, infections ranged from 5 to 12%. Trace amounts of yellow rust were recorded at Crossnacreevy, affecting only four varieties: **Qplus** and **Robigus** (0.3%), **Solstice** (1.7%) and **Oakley** (3.3%).

Mildew was recorded at Downpatrick in 2009 and ranged from none in a handful of varieties to 20% infection in **Qplus**.

Winter oats

Mildew ranged from none in **Tardis**, to 12% in **SW Dalguise**. *Septoria avenae* was recorded in three varieties in early-July with **Fusion** being the highest (12%).

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

Quench retains its position as the highest yielding fully recommended variety. **Doyen** and **Westminster** remain fully recommended also, but **Westminster** is now third on the list in terms of treated yields. **Waggon**'s treated yield is equal to that of **Quench** but is recommended for special use because it has very poor resistance to *Rhynchosporium*. **Concerto**, **Publican** and **Sweeney** remain provisionally recommended for another year. **Concerto** has the highest treated yield of all the varieties on the 2010 Recommended List, although it can potentially loose 25% of its yield if untreated. **Appaloosa** and **Cocktail** have been removed from the list whilst **Riviera** remains outclassed due to declining yields.

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.

Concerto
(Provisionally recommended)

First listed in 2009; Nickerson; malting variety;

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

Doyen
(Recommended for general use)

First listed in 2004; Syngenta; feed variety;

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

Publican
(Provisionally recommended)

First listed 2009; Syngenta; feed variety;

- very high treated and untreated yields;
- large grain with average specific weight;
- short straw with very high straw yields;
- quite 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 but quite poor resistance to *Ramularia*;
- late to ripen.

Quench
(Recommended for general use)

First listed in 2007; Syngenta; feed variety;

- very high treated and untreated yields;
- small grain with low specific weight;
- short straw with high 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 and *Ramularia*;
- intermediate to ripen.

Riviera
(Becoming outclassed)

First listed in 1995; Syngenta; feed variety;

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

Sweeney
(Provisionally recommended)

First listed in 2008; Syngenta; feed variety;

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

Waggon
(Recommended for special use)

First listed in 2008; Syngenta; feed variety;

- very high treated and high untreated yields;
- very large grain with low specific weight;
- short straw with intermediate straw yields;
- good standing power with quite good resistance to brackling and quite poor resistance to necking;
- very good resistance to mildew, quite good resistance to *Ramularia*, 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; malting variety;

- high treated and very high 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 *Rhynchosporium* resistance and quite good resistance to both *Ramularia* and 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. UK agent's names are in italics.

Belgravia is a malting variety and gives high treated yields and very high untreated yields (**101, 92**). It has small grain with average specific weight. Its straw is medium in length, with quite good standing power and high straw yields. It has quite good resistance to *Rhynchosporium* and *Ramularia*, but poor resistance to net blotch. It is late to ripen. (*Nickersons*)

Cocktail is a feed variety and has high treated and moderate untreated yields (**101, 83**). It has short straw with quite good standing power. It has good resistance to necking. It has average grain quality and average resistance to *Rhynchosporium*, mildew and net blotch with poor resistance to *Ramularia*. (*Syngenta*)

Cropton is a feed variety that gives very high treated and untreated yields (**106, 93**). It has large grain with low specific weight. It has medium length straw with good standing power, good resistance to brackling and very good resistance to necking, but low straw yields. It has very good mildew resistance, average resistance to *Rhynchosporium* and *Ramularia* and poor resistance to net blotch. It is late to ripen. (*Syngenta*)

Forensic is a malting variety and gives very high treated and low untreated yields (**104, 79**). It has very large grain with low specific weight. Its short straw has average standing power and low straw yields. It has very poor resistance to both mildew and *Rhynchosporium*, quite poor resistance to *Ramularia* and is late to ripen. (*Syngenta*)

Garner is a feed variety that has very high yields (**107, 98**). It has very large grain with low specific weight. It has good resistance to *Rhychosporium* and very good resistance to mildew. It has medium length straw with quite poor standing power and quite poor resistance to necking but gives very high straw yields. (*Syngenta*)

NFC Tipple is a malting variety with high yields (**102, 87**). It has large grain with average specific weight. It has good standing power and good resistance to necking and low straw yields. It has poor resistance to *Rhynchosporium* and is late to ripen. (*Syngenta*)

Optic is a malting variety that gives moderate treated and low untreated yields (**98, 80**). It has average sized grain with average specific weight. It has quite good standing power but very poor resistance to brackling. It has poor disease resistance and is late to ripen. (*Syngenta*)

Oxbridge is a malting variety that has moderate treated and low untreated yields (**95, 81**). 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/high straw yields. Resistance to *Rhynchosporium* and mildew is quite good. (*Nickerson*)

Propino is a malting variety giving very high yields (**105, 95**). It has very large grain with low specific weight. It has medium length straw with quite good standing power, quite good resistance to brackling but quite poor resistance to necking. It gives high straw yields. It has good resistance to *Rhynchosporium* and very good resistance to mildew. (*Syngenta*)

Decanter, Jolika 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

Husky has been promoted and joins **Ascot** and **Firth** as fully recommended for general use. There are two new provisional recommendations for 2010 - **Canyon** and **Rozmar**.

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; 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 good 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.

Canyon
(Provisionally recommended)

First listed in 2010; Saaten Union;

- very high treated and untreated yields;
- very large grain with high specific weight and average kernel content;
- very low screenings;
- very long straw with very good standing power and average resistance to brackling;
- good resistance to mildew and crown rust;
- 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; KWS;

- moderate treated and high untreated yields;
- large 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
(Recommended for general use)

First listed 2008; Saaten Union;

- high treated and untreated yields;
- medium sized grain with high specific weight and high kernel content;
- very low screenings;
- long straw with good standing power but 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.

Rozmar
(Provisionally recommended)

First listed 2010; Trevor Cope Seeds;

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

Spring Barley Recommended List 2010

		Yield*		Grain quality		Straw characteristics			Disease resistance				Ripening
		T	U	Specific wt (kg/hl)	1000 grain wt (g)	Length (cm)**	Standing power	Straw Yield	*Rhyncho-sporium*	Mildew	*Ramularia*	Net blotch	
G	**Quench**	107	92	62.3	41.6	0	7	H	7	9	6	6	I
G	**Doyen**	103	88	64.2	46.0	-1	7	I	7	7	5	6	I
G	**Westminster**	102	96	64.5	45.8	10	7	VH	8	9	7	7	L
S	**Waggon**[1]	107	89	62.2	46.8	1	8	I	3	9	7	6	I
P	**Concerto**	113	88	64.1	46.2	4	6	L	4	9	7	5	E
P	**Publican**	106	94	63.5	45.4	2	8	VH	8	9	5	7	L
P	**Sweeney**	104	91	62.6	47.1	1	7	I	5	9	6	5	I
O	**Riviera**	98	83	65.1	45.0	5	7	I	5	9	6	7	I

* Yield as a % of the treated control varieties Westminster, NFC Tipple, Cocktail, Optic and Oxbridge (average = 6.08 t/ha).
T = fungicide treated; U = no fungicide
** Straw length compared to Quench (72cm)
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

Winter Barley Recommended List 2010

	Yield*		Grain quality		Straw characteristics			Disease resistance			Ripening
	T	U	Specific wt (kg/hl)	1000 grain wt (g)	Length (cm)**	Standing power	Straw Yield	*Rhyncho-sporium*	Mildew	*Ramularia*	
2-row											
G Saffron	105	88	67.1	50.4	0	7	I	5	3	7	I
G Suzuka	102	89	66.2	50.1	2	8	H	8	5	7	I
G Camion	100	85	67.8	47.5	0	8	I	4	7	7	I
S Retriever[1]	109	81	64.2	49.9	-2	5	L	6	4	5	I
O Pearl	97	82	67.2	48.3	9	7	H	6	6	6	I
6-row											
S Pelican[2]	111	91	60.0	47.2	13	6	I	8	8	7	I
O Colibri	105	89	62.4	44.8	10	5	L	8	8	6	I

* Yield as a % of the treated control varieties Flagon, Pearl, Saffron and Sequel (average = 8.44 t/ha).
T = fungicide treated; U = no fungicide
** Straw yield: H = high, I = Intermediate and L = low.
Straw yield: VH = very high, H = high, I = Intermediate and L = low
Ripening: E = early, I = intermediate and L = late
[1] = Retriever recommended for special use because of its below average standing power
[2] = Pelican recommended for special use because it is a 6-row variety

Winter Wheat Recommended List 2010

		Yield*		Grain quality		Straw characteristics		Disease resistance				Ripening
		T	U	Specific wt (kg/hl)	1000 grain wt (g)	Length (cm)**	Standing power	*Septoria*	Mildew	*Yellow rust (HGCA)*	Fusarium ear blight *(HGCA)*	
G	**Alchemy**	103	83	75.6	46.7	5	7	8	7	9	6	+1
G	**Robigus**	103	73	75.3	41.7	0	7	7	6	2	6	+1
P	**Ketchum (2nd W)**	106	77	75.9	51.4	5	5	7	8	4	[8]	-1
P	**Panorama**	103	79	74.5	47.4	2	9	7	8	9	[7]	0
P	**JB Diego**	102	80	75.0	48.8	1	8	6	5	6	[6]	0
O	**Claire**	98	69	74.9	44.8	0	7	7	4	9	7	0
O	**Zebedee**	98	68	73.4	47.3	-4	8	6	6	9	[6]	0
O	**Einstein (2nd W)**	95	73	75.5	48.9	-1	7	5	6	5	6	0

* Yield as a % of the treated control varieties Solstice, Einstein, Robigus, Alchemy and Oakley (average =10.60 t/ha)
T = fungicide treated; U = no fungicide
** Straw length compared to Robigus (90 cm)
(HGCA) = HGCA UK data
[ ] = limited data
Ripening compared to Claire (-ve = early)
2nd W = Ketchum and Einstein are suitable as 2nd wheats. Yield of second wheat or more is >3% higher than first wheat (HGCA UK data)

Spring Oat Recommended List 2010

	Yield*		Grain quality			Straw characteristics		Disease resistance		Ripening	Sieve fraction (%<2mm)
	T	U	Specific wt (kg/hl)	1000 grain wt (g)	Kernel content (%)	Length (cm)**	Standing power	Mildew	Crown rust		
G **Ascot**	103	83	50.7	33.8	78.4	9	7	6	6	I	0.3
G **Husky**	100	84	52.9	33.5	78.2	5	8	1	5	E	0.3
G **Firth**	97	86	51.9	34.6	78.8	0	7	7	7	I	0.3
P **Canyon**	110	90	52.4	41.9	77.4	14	9	8	7	I	0.1
P **Rozmar**	107	86	50.9	34.4	76.7	3	7	5	8	I	0.4

* Yield as a % of the treated control varieties Ascot, Husky and Firth (average = 6.82 t/ha)
T = fungicide treated; U = no fungicide
** Straw length compared to Firth (109 cm)
Ripening: E = early and I = intermediate

Winter Oat Recommended List 2010

	Yield*		Grain quality			Straw characteristics		Disease resistance		Ripening	Sieve fraction (%<2mm)
	T	U	Specific wt (kg/hl)	1000 grain wt (g)	Kernel content (%)	Length (cm)**	Standing power	Mildew	Crown rust		
G **Tardis (N-M)**	101	94	49.5	35.6	75.2	-8	7	9	8	L	0.7
G **Gerald**	101	77	51.9	33.5	76.3	2	7	5	4	I	0.7
G **SW Dalguise**	101	71	53.2	35.2	76.9	0	7	4	3	L	0.3

* Yield as a % of the treated control varieties Gerald, SW Kinross and SW Dalguise (average = 7.93 t/ha)
T = fungicide treated; U = no fungicide
** Straw length compared to SW Dalguise (132 cm) Ripening: I = intermediate and L = late
N-M (Non-milling) = Tardis has a specific weight below 50 kg/hl and could fail to meet miller's quality requirements

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 agent's names are in italics.

Atego gives moderate treated and very low untreated yields (**98, 72**). It has good standing power but poor resistance to brackling. It has large grain with low specific weight and average kernel content. **It is very susceptible to mildew**. (*Trevor Cope Seeds*)

Drummer is moderate yielding (**95, 80**). It has very large grain with high specific weight and low kernel content. It has very long straw with average standing power and poor resistance to brackling. (*Nickersons*)

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. It has good disease resistance and is early to ripen. (*KWS*)

SW Argyle gives moderate treated and high untreated yields (**97, 84**). It has very large grain with average specific weight and average kernel content. It has long straw with good standing power and average resistance to brackling. (*Senova*)

Winter Barley

The 2-row varieties **Saffron** and **Camion** remain fully recommended for general use and are joined by **Suzuka** which has been promoted in 2010. **Retriever** has also been promoted to full recommendation but is for special use because of its weaker straw. **Pearl** remains on the list but is becoming outclassed by newer varieties with higher yields. All six-row varieties are given **'S'** (Special) classifications. **Pelican** has been promoted to fully recommended for special use. **Colibri** remains on the list but is becoming outclassed.

There are no 6-row hybrid varieties recommended for 2010. **Bronx** has been removed from the list and there are insufficient data this year to recommend an alternative 6-row hybrid.

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.

Two-Row Types

Camion
(Recommended for general use)

First listed in 2004; KWS; feed variety;

- 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;
- poor resistance to *Rhynchosporium* and quite good resistance to mildew and *Ramularia*;
- intermediate to ripen.

Pearl
(Becoming outclassed)

First listed in 1999; Nickerson; malting variety;

- 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 poor resistance to necking;
- average resistance to *Rhynchosporium,* mildew and *Ramularia*;
- intermediate to ripen.

Retriever
(Recommended for special use)

First listed in 2008; Nickerson; feed variety;

- 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;
- 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;

- very high treated and high untreated yields;
- very large grain with high 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,* very poor resistance to mildew and quite good resistance to *Ramularia*;
- intermediate to ripen.

Suzuka
(Recommended for general use)

First listed in 2008; Syngenga; feed variety;

- high treated yields and very 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 necking;
- good resistance to *Rhynchosporium*, quite poor resistance to mildew and quite good resistance to *Ramularia*;
- intermediate to ripen.

Six-Row Types

Colibri
(Becoming outclassed)

First listed in 2006; Daltons Seeds; feed variety;

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

Pelican
(Recommended for special use)

First listed in 2008; Saaten Union; feed variety;

- very high treated and untreated yields;
- large grain with very low specific weight;
- long straw giving intermediate straw yields;
- average standing power with average resistance to brackling and poor resistance to necking;
- good resistance to *Rhynchosporium* and mildew and quite good resistance to *Ramularia*;
- 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. UK agent's names are in italics.

Two-Row Types

Cassata is a malting variety that has moderate yields (**98, 81**). 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* and *Ramularia* but quite poor resistance to mildew. (*Nickersons*)

Flagon is a malting variety that gives high yields (**100, 86**) and has large grain with average specific weight. It has quite poor standing power with poor resistance to both brackling and necking. It has good resistance to *Rhynchosporium* and *Ramularia*. (*Syngenta*)

KWS-Cassia is a feed variety and is a new candidate that gives very high treated and high untreated yields (**107, 88**). It has very good standing power, gives intermediate straw yields has good resistance to necking but very poor resistance to brackling. It has poor resistance to *Rhynchosporium* and quite poor resistance to mildew. It has very large grain and high specific weight and is intermediate to ripen. (*KWS*)

Purdey is a malting variety and is a new candidate that yields moderately (**97, 82**). It has average sized grain with high specific weight and is late to ripen. It has very poor resistance to mildew but very good resistance to *Rhynchosporium*. It has short straw with good standing power but very poor resistance to brackling. (*Syngenta*)

Winsome is a malting variety and is a new candidate that gives moderate treated yields and high untreated yields (**99, 84**). It has average sized grain with high specific weight and is intermediate to ripen. It has average standing power, very poor resistance to brackling and gives low straw yields. It has very good resistance to *Rhychosporium* but its resistance to mildew is below average. (*Syngenta*)

Six-Row Types

Sequel is a feed variety that gives moderate yields (**98, 83**). 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*)

Hybrid Six-Row Types

Boost is a feed variety and gives high yields (**102, 86**). 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* and quite good resistance to mildew. (*Syngenta*)

Volume is a feed variety and gives very high yields (**116, 96**). It has small grain with average specific weight. Its straw is long with quite good standing power but poor resistance to brackling and necking. It has quite good resistance to *Rhynchosporium*, average resistance to mildew and very good resistance to *Ramularia*. After further testing in Northern Ireland, it will be considered for recommendation. (*Syngenta*)

The two-row variety **Carat** 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 **Robigus** remain as full recommendations for general use. **JB Diego** continues into its second year as a provisional recommendation. There are two new provisional recommendations – **Ketchum** and **Panorama**. **Claire**, **Zebedee** and **Einstein** remain on the list but are becoming outclassed. **Oakley** has been removed from the list.

Einstein, **JB-Diego** and **Zebedee** should be sown before the end of January to meet vernalisation requirements, **Alchemy** before mid-February and **Robigus**, **Panorama**, **Ketchum** and **Claire** 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. **Ketchum**, **Panorama**, **Einstein** and **JB Diego** 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. **Ketchum** and **Einstein** perform well as second wheats whereas **Robigus** does not.

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; Nickerson; nabim soft Group 4;
- high treated and very high 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,* very good resistance to yellow rust and average resistance to *Fusarium*;
- tends to ripen late.

Claire
(Becoming outclassed)

First listed in 1999; Nickerson; nabim Group 3,
- moderate treated and low untreated yields;
- average sized grain and average specific weight;
- medium length straw with quite good standing power;
- quite good resistance to *Septoria tritici* and *Fusarium*, poor resistance to mildew and very good resistance to yellow rust;
- intermediate to ripen.

Einstein
(Becoming outclassed)

First listed in 2003; Nickerson; nabim Group 2;
- moderate yields;
- large grain with average specific weight;
- medium length straw with quite good standing power;
- quite poor resistance to *Septoria tritici* and yellow rust and average resistance to mildew and *Fusarium*;
- tends to ripen early.

JB Diego
(Provisionally recommended)

First listed in 2009; Senova; nabim hard Group 4;
- high treated and very high untreated yields;
- large grain with average specific weight;
- medium length straw with good standing power;
- average resistance to *Septoria tritici*, yellow rust and *Fusarium* and quite poor resistance to mildew;
- early to ripen.

Ketchum
(Provisionally recommended)

First listed in 2010; Syngenta; nabim Group 2;

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

Panorama
(Provisionally recommended)

First listed in 2010; Syngenta; nabim Group 2;

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

Robigus
(Recommended for general use)

First listed in 2005; KWS; nabim Group 3;

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

Zebedee
(Becoming outclassed)

First listed in 2007; Nickerson; nabim Group 3;

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

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 agent's names and nabim Group are in italics.

Battalion gives low treated and high untreated yields (**92, 76**). It has average sized grain with low specific weight. It has medium length straw and quite good standing power. (*RAGT; nabim Group 2*)

Cassius gives low treated and very low untreated yields (**94, 64**). It has large grain with low specific weight. It has quite good standing power. (*Nickerson; nabim soft Group 4*)

Conqueror gives high treated and moderate untreated yields (**101, 71**). It has average size grain with average specific weight and average disease resistance. (*KWS; nabim hard Group 4*)

Cordiale gives low yields (**93, 66**). It has high specific weight and its short straw has good standing power. It has average disease resistance. (*KWS; nabim Group 2*)

Duxford gives moderate treated yields and very low untreated yields (**96, 63**) with average specific weight. It has very good standing power and average disease resistance. (*Syngenta; nabim hard Group 4*)

Gallant gives high treated and very low untreated yields (**104, 63**). It has very large grain with high specific weight. It has good standing power, average resistance to *Septoria* and mildew and poor resistance to yellow rust. (*Syngenta; nabim Group 1*)

Grafton gives moderate yields (**96, 73**) and has large grain with average specific weight. Its short straw has very good standing power. It has average disease resistance. (*KWS; nabim hard Group 4*)

Gladiator gives low yields (**94, 67**). It has average grain quality, quite good standing power and ripens early. (*RAGT; nabim hard Group 4*)

Glasgow has high treated and moderate untreated yields (**101, 73**). It has average grain quality and quite good standing power. It has average resistance to mildew but quite poor resistance to *Septoria tritici* and to yellow rust. It is intermediate to ripen. (*Saaten Union; nabim soft Group 4*)

Humber gives moderate treated and low untreated yields (**95, 66**) and has average grain quality. It has short, strong straw and average resistance to *Septoria tritici*. It is intermediate to ripen. (*KWS; nabim hard Group 4*)

Invicta is a new variety that has very high treated and high untreated yields (**108, 78**). It has small grain with average specific weight, medium length straw that has good standing power and quite good resistance to *Septoria*. (*Nickerson; nabim Group 3*)

KWS Sterling is a new variety that gives high treated but very low untreated yields (**100, 59**). It has large grain with average specific weight and short, strong straw. It has quite poor resistance to *Septoria* and quite good resistance to mildew. (*KWS; nabim Group 2*)

Marksman gives low treated and high untreated yields (**91, 76**). It has large grain with average specific weight. It has good standing power and good resistance to mildew and average resistance to *Septoria*. (*RAGT; nabim Group 2*)

Oakley gives high treated and moderate untreated yields (**103, 70**). It has large grain with average specific weight and medium length straw with good standing power. It has very, very poor resistance to yellow rust. (*KWS; nabim hard Group 4*)

Scout gives high treated and high untreated yields (**100, 77**). It has average grain quality, good standing power and quite good resistance to *Septoria*. (*Senova; nabim Group 3*)

Solstice has moderate treated and low untreated yields (**95, 67**). It has large grain with average specific weight and its long straw has good standing power. It has average resistance to *Septoria tritici* and poor resistance to mildew. (*Nickerson; nabim Group 1*)

Qplus gives very low treated and low untreated yields (**88, 69**). It has large grain with average specific weight. It has very good standing power and quite good resistance to *Septoria*. (*Nickerson; nabim Group 2*)

Viscount gives low treated and moderate untreated yields (**92, 70**). It has large grain with average specific weight. Its has quite good standing power, average resistance to *Septoria* and poor resistance to yellow rust. Very poor resistance to sprouting. (*KWS; nabim soft Group 4*)

Warrior is a new variety that gives moderate treated and very high untreated yields (**95, 86**). It has average sized grain with low specific weight and good disease resistance. It has short straw with average standing power. (*RAGT; nabim Group 3*)

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: **Hereward**, **Istabraq**, and **Xi19**. **Kingdom** was in trial in 2010 but there are insufficient data from Northern Ireland to describe it with confidence.

Winter Oats

Conventional Husked Oats

Tardis, SW Dalguise and **Gerald** remain fully recommended for general use.

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 moderate untreated yields;
- average sized grain with high specific weight and average kernel content;
- low screenings;
- 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;
- 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;

- high treated yields and low untreated yields;
- large grain with high specific weight and high kernel content;
- low screenings;
- medium length straw with average standing power and 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; Senova;

- high treated and very high untreated yields;
- large grain with average specific weight and average kernel content - **this variety has a specific weight below 50kg/hl and could fail to meet miller's quality requirement**s;
- low screenings;
- short straw with quite poor standing power and good resistance to brackling;
- very good resistance to mildew and good resistance to both *Septoria avenae* and crown rust;
- late to ripen;
- little tendency to produce free kernels or empty husks.

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 agent's names are in italics.

Balado gives very high treated and high untreated yields (**112, 86**). It has very large grain with **low specific weight** and low kernel content. It is a dwarf variety with very good standing power and very good resistance to brackling. It has poor resistance to crown rust and quite good resistance to mildew. (*Senova*)

Brochan gives high yields (**102, 86**). It has large grain with average specific weight and high kernel content. It has short straw with excellent standing power and good resistance to brackling. It is late to ripen. (*Senova*)

Kinross gives high yields (**98, 84**) and has small grain with high kernel content and average specific weight. It has long straw with average standing power and good resistance to brackling. It has quite good resistance to mildew and average resistance to both crown rust and *Septoria*. (*Senova*)

Mascani has high treated and very high untreated yields (**101, 95**). 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 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. (*Senova*)

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 provisionally recommended for the UK and is also a dwarf naked oat variety.

Fusion gave very low treated and untreated yields (**76, 61**). 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* and average resistance to crown rust. It is very late to ripen. (*Senova*)

Grafton gave very low treated and untreated yields (**76, 61**). It has relatively small grain with very high specific weight when compared to conventional husked winter oat varieties. It has medium length straw with quite good standing power and average resistance to brackling. It has average resistance to mildew, *Septoria* and crown rust. It is late to ripen. (*Senova*)

Hendon gave very low treated and untreated yields (**78, 59**). 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
Dalton Seeds, Dalmark House,
Eye, Peterborough, PE 7UD

www.dalmark.co.uk
Tel: (01733) 222931

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

www.kws-uk.com
Tel: (01763) 207300

Nickersons
Nickerson, Limagrain UK Ltd.,
Rothwell, Market Rasen,
Lincolnshire, LN7 6DT

www.nickersonseeds.co.uk
Tel: (01472) 371471

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

www.ragt.co.uk
Tel : (0845) 0525245

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

www.saaten-union.co.uk
Tel : (01440) 783440

Senova
Senova Ltd, 49 North Road,
Great Abington, Cambridge CB21 6AS.

www.senova.uk.com
Tel: (01223) 890777

Syngenta
Syngenta Seeds Ltd, CPC4, Capital Park,
Fulbourn, Cambridge CB21 5XE

www.newfarmcrops.co.uk
Tel: (01223) 883400

Trevor Cope Seeds
Trevor Cope Seeds Limited,
2 Cuthbert Close, Quarrington,
Sleaford, Lincs NG34 8WS

www.trevorcopeseeds.co.uk
Tel: (01529) 309091

Enquiries

For help with variety selection and management contact:

Crops Development Advisors:
Robin Bolton - (028) 7776 2521 / 077 4896 7013
or robin.bolton@dardni.gov.uk;

David Crawford - (028) 4461 8075 / 078 9986 4358
or david.s.crawford@dardni.gov.uk;

James Knox - (028) 9442 6786 / 0779661 4984
or james.knox@dardni.gov.uk

Or:
Crops Technologist:
Malachy Mason - (028) 9442 6742
Or malachy.mason@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
50 Houston Road
Crossnacreevy
Castlereagh
BELFAST BT6 9SH

Tel: 028 9054 8000
Fax: 028 9054 8001

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.

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

AN ROINN
Talmhaíochta agus
Forbartha Tuaithe

MÄNNYSTRIE O
Fairms an
Kintra Fordèrin

ISBN 978-1-84807-146-9