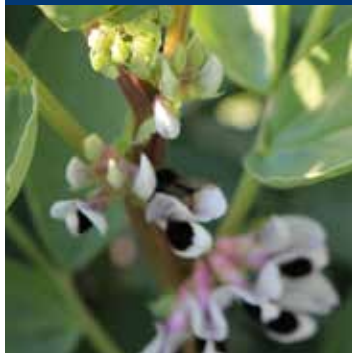


VARIETY GUIDE 2022 / 2023



**SHAPING THE
FUTURE OF SEED**



Setting the scene for Harvest 2023

There is no doubt that tillage farming worldwide is going through a defining period at present, and the Irish tillage industry is being asked to produce the highest quality crops in a highly volatile market with tightening rules.

While the realisation that importing four million tonnes of animal feed annually may not be such a good idea, we are seeing the Irish government support the production of native feedstuffs.

The Irish tillage sector has shown its ability to embrace change and adopt new practices to respond to the changing landscape, and this mindset will undoubtedly open new opportunities.

So, where to next?

Seedtech has proven its long-term commitment to finding the most suitable varieties and traits that supports a sustainable future for growers. Through our investment in research and work with breeders, agronomists and growers, we can help advise you how to get the maximum return from our varieties.



Sowing for Success

We have identified three crucial attributes that should form part of the decision-making process. These, along with detailed agronomic characteristics, will give you reassurance in your recommendations of our varieties.



YIELD SECURE

YIELD SECURE is the gold standard for a Seedtech variety and is awarded to varieties that are proven to consistently deliver profitable yields and reduce risk to the grower in independent trials and on farms over the years.

It is easy to see how varieties like **BELFRY**, **HUSKY**, **LYNX**, and **GRAHAM** are the No.1 choice for growers.

Varieties like **LG CASTING**, **KWS JOYAU**, **SY AMITY**, and **KWS TAYO** also **SECURE YIELD** and are equally reliable when used in the right situation as shown here in the booklet and on our website. This is especially important for candidate varieties. It is also important to look beyond Relative Yield, so lodging resistance, the ability to drill early, early season disease resistance and other important traits are all part of SECURING YIELD and reducing risk on farm.



N+ ADVANTAGE

These are varieties (or crops) that reduce the nitrogen fertiliser bill on farm and can reduce N-leeching to the environment e.g. WOSR can utilise up to 100 kg/ha N over its winter growth. Immediately, **LYNX** Beans spring to mind with their nitrogen creating nodules that help grow the bean crop and leave a nitrogen residue for the following cereal crop.

AURELIA WOSR can also significantly reduce nitrogen on farm. **AURELIA** (and all WOSR) can utilise residual nitrogen left over from the previous crop and, when combined with Autumn sunshine is 'stored' in the rape plant over the Winter, to be released the following Spring, thus saving on nitrogen.

KWS TAYO and **KWS SERAFINO** hybrid rye are varieties that can produce a huge volume of grain and straw relative to their nitrogen requirement. This is due to the vigorous roots of hybrid rye which can eke out fertility where other crops may not grow as well. It is also because hybrid rye may not be affected as much by take-all, which improves its rooting mass.



SUSTAINABLE CROPS

Sustainability is a buzzword amongst media, corporates, and policymakers. Still, the primary producer is the one that will make it all happen and lacks clarity as to what it means. Seedtech has signed up to the United Nations Sustainability Development Goals (SDG goals), and we believe many good farming practices are essentially sustainable.

For tillage farmers, planning is fundamental to delivering a sustainable solution. Care should be taken to optimise soil health and rotation planning incorporating appropriate break crops, all of which are the foundation of our trialling system on our farm in Faithlegg.



Choosing a variety with proven and robust disease or pest resistance is sustainable and can significantly save on inputs. We are collaborating closely with our breeding partners on new value-add seed genetics and traits such as:

- I.** **BYDV** tolerance in **KWS JOYAU** reduces the risk of **BYDV** in situations where aphid sprays are not effective or sufficient
- II.** Mildew resistance in **LG CASTING** reduces the need for early fungicides to maintain tiller numbers
- III.** Drilling **BELFRY** Hybrid Barley as a second barley as the stubble will have Rhynchosporium carry-over, and hybrid vigour helps to overcome the challenge and deliver a profitable crop
- IV.** Growing **LYNX** Spring beans and other break crops, **HUSKY** Oats and **AURELIA WOSR**. This will allow first wheats to yield higher and use less inputs per tonne of grain, contributing to sustainability by producing more from less
- V.** Growing **KWS TAYO** or **KWS SERAFINO** Hybrid rye or **BELFRY** hybrid barley instead of a second wheat reduces inputs required for take-all and again produces more from less
- VI.** **LAUREATE** Spring malting barley is an exceptionally clean barley to grow and offers growers savings on fungicides
- VII.** Drilling early and spreading the workload are sustainable measures as they help carve out valuable time with family and friends

A vital pillar of sustainability is the profitability of the entire system. To that end, Seedtech is actively involved in developing new markets for the crops we grow, such as distilling wheat, hybrid rye and specialist ingredients for bread-making.

We have created three icons to denote the varieties that have achieved this important ranking to support your decision making, and you will see these throughout the booklet and in our trial grounds.

So, using this guide and the rating system of **YIELD SECURE**, **N+ ADVANTAGE**, and **SUSTAINABLE CROPS** will help you make informed decisions on whatever aspect of tillage farming you are deciding on.

Wishing you all the best for harvest 2022 and in the future.

Nigel Whyte
General Manager

Tim O'Donovan
Technical Director

WINTER BARLEY

Winter barley is an essential part of the winter crop rotation on Irish tillage farms. Winter barley has been the most reliable crop to perform on Irish farms, especially taking extreme weather events such as the wet summer of 2012 and the dry summer of 2018.

Winter barley is really important to spread workload during harvest time, into autumn drilling, and again in early spring. Growers also value the straw from winter barley and its ability to produce a profitable yield in take-all situations. Seedtech continues to bring new varieties to market with advances in genetics, such as KWS Joyau - a new conventional 6 row with BYDV tolerance and LG Casting 2-row barley is the most consistent 2 row on DAFM Winter Barley recommended list 2022.

WINTER BARLEY

DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED							PROVISIONALLY RECOMMENDED		
	BAZOOKA	BELFRY	KWS CASSIA	KWS INFINITY	KWS KOSMOS	LG CASTING	PIXEL	KWS JOYAU	KWS TARDIS	VALERIE
Relative Yield ♦	107	107	96	97	106	100	104	103	105	98
Varietal Type	6R(H)	6R(H)	2R	2R	6R	2R	6R	6R	2R	2R
Straw Height (cm)	110.9	103.9	89.3	87.5	103.9	85.0	92.9	93.1	86.7	86.1
Resistance to Lodging	6	7	7	7	6	5	7	(7)	(7)	6
Straw breakdown	5	6	6	6	4	5	4	(7)	(6)	6
Earliness of ripening	7	7	6	6	7	7	8	(8)	(6)	8
Resistance to:										
Mildew	6	6	5	5	8	8	7	(5)	(6)	7
Rhynchosporium	8	8	4	7	7	5	4	(6)	(7)	7
Brown rust	6	7	7	6	7	7	7	(7)	(6)	7
Net blotch	7	7	7	7	7	7	6	(7)	(7)	7
Grain Quality:										
Screenings % (<2.2 mm)	3.0	3.9	2.0	2.3	2.3	2.4	2.5	2.4	2.2	1.2
1000 grain weight (g)	47.6	46.4	53.6	54.0	49.1	52.7	46.1	49.3	55.4	58.0
Hectolitre weight (kg/hl)	68.2	67.3	70.2	67.4	66.3	68.4	66.1	68.5	68.5	69.2
Year first listed	2019	2019	2011	2016	2018	2020	2019	2022	2022	2020

SEED AVAILABILITY	
LG Casting	19%
Belmira	<1%
KWS Joyau	8%
Belfry	13%
Bazooka	2%
SY Armadillo	2%
SY Craft	1%
Electrum	1%
KWS Tardis	29%
Bordeaux	5%
KWS Cassia	13%
KWS Infinity	3%
KWS Patriot	3%
Valerie	3%

* Based on trial results from 2019, 2020 and 2021.

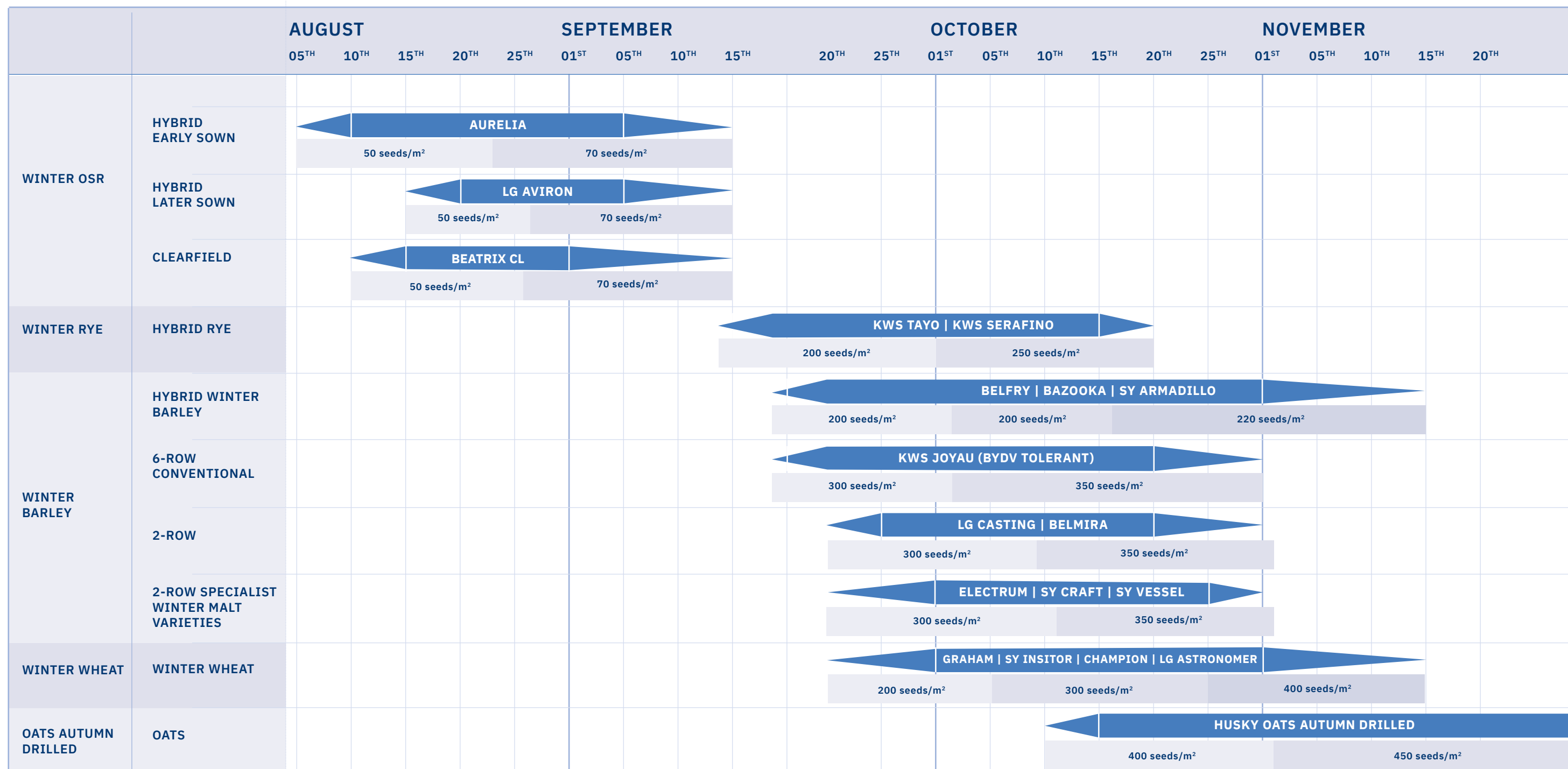
♦ Yields are expressed as a percentage of the mean of KWS Cassia, KWS Infinity and Belfry (100 = 10.08t/ha @ 15% moisture content).

() Limited Data

2022 AUTUMN DRILLING GUIDE

A quick reference guide to rotation planning and optimum drilling dates

WWW.SEEDTECH.IE



Drilling dates and seeding rates are advisory only
– consult your IASIS registered agronomist for specific drilling advice for your situation.



SEEDTECH
WINTER BARLEY

LG CASTING



2 ROW WINTER BARLEY



MOST CONSISTENT 2-ROW WINTER
BARLEY IN DAFM TRIALS AND ON-FARM

AGRONOMIC & QUALITY CHARACTERISTICS

	LG CASTING	KWS CASSIA	KWS TARDIS
Relative Yield	100	96	105
Resistance to Lodging	5	7	(7)
Straw Breakdown	5	6	(6)
Earliness of Ripening	7	6	(6)
Mildew	8	5	(6)
Rhynchosporium	5	4	(7)
Net Blotch	7	7	(7)
1000 grain weight (g)	52.7	53.6	55.4
Hectolitre weight (kg/hl)	68.4	70.2	68.5

Source: DAFM Recommended List 2022

Agronomic Characteristics

- ✓ Exceptional early spring disease resistance for a 2 row, especially mildew (8)
- ✓ Big, bold grain with good KPH
- ✓ Reliable yield stability across 4 very different years, 2018-2021
- ✓ Good over-winter ability
- ✓ LG Casting is very forgiving for the timing of early-season fertiliser, growth reg and fungicide because of its disease profile (especially mildew) which helps keep tillers viable compared to more disease-prone varieties



LG Casting is very forgiving for early season timing of fungicide because of its disease profile



SEEDTECH
WINTER BARLEY

BELMIRA



ONE TO
WATCH
NEW FOR
2022

2 ROW WINTER BARLEY



CANDIDATE VARIETY FOR
MULTIPLICATION IN AUTUMN 2022



AGRONOMIC CHARACTERISTICS

- ✓ 2nd highest yielding 2 row on DAFM trials 2021 with an impressive 104 and good agronomics
- ✓ Very limited seed available in Autumn 2022

DAFM NATIONAL LIST/ RL TRIALS 2020/21

	BELMIRA	BORDEAUX	KWS CASSIA	KWS INFINITY
Relative Yield 2020	105	102	99	98
Relative Yield 2021	104	103	99	99

SEEDTECH TRIALS DATA 2021

	BELMIRA	BORDEAUX	KWS CASSIA	KWS INFINITY
Straw height (cm)	75	80	85	85
Straw Breakdown	6	6	7	6
Rhynchosporium	7	7	4	7
Brown Rust	7	7	7	7

SEED PRODUCTION CONTRACTS AVAILABLE

Seedtech has opportunities for contract growers with suitable, clean land who are committed to delivering the highest quality seed.



Growers and agronomists interested in finding out more about seed production contracts can call Seedtech's **Dan Norris, Production Manager**, on **087 7915920** to discuss further.

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**SHAPING THE
FUTURE OF SEED**

BYDV CONTROL 2022 ONWARDS

Key Facts:

- Aphids are the most serious pests of cereal crops in Ireland. They transmit virus disease (BYDV) to and within crops
- BYDV infection has been seen this year across Winter and Spring barley crops, reflecting the mild winter temperatures
- Loss of Neonicotinoid seed treatment and sulfoxafos increases importance of cultural control options (i.e. planting date), however planting date as a control option is based on a cooler Winter and a warmer Spring.

BYDV and cereal aphid management is becoming increasingly difficult due to loss of plant protection products, insecticide resistance (kdr; knock down resistance), registration challenges and changing climate (mild winters).

Reliance on a single chemistry (pyrethroids for BYDV control in Winter and Spring barley will place a greater reliance on this group with consequentially higher resistance risk.

Multiple applications of pyrethroid insecticides are likely to exacerbate existing instances of kdr resistance. Moving forward, the control of BYDV and aphids will require careful integration of monitoring, cultural and chemical control methods.

Planting date is an important cultural control tool, with later planting in Autumn and earlier planting in Spring helping to reduce BYDV pressure.

IPM OPTIONS FOR BYDV CONTROL

Pre planting IPM:	Drilling date
	Cultivation type
	Minimise "green bridge"
In season IPM:	Variety selection (e.g., tolerant/resistant varieties)
	Improved monitoring/forecasting
	Targeted application of insecticides
	Anti-resistance strategies: monitoring for control failure, alternative insecticides
	Biocontrol: encouraging natural enemies



Author

Dr. Louise Mc Namara,
Teagasc Oak Park

Where does BYDV tolerance fit?*

- Suitable for high BYDV sites
- Suitable where aphicide sprays are not applied or difficult to apply
- Suitable where late (Nov-Feb) BYDV infection is common such as coastal areas
- Suitable where pyrethroid resistance is suspected.

* Consult an IASIS approved agronomist on managing BYDV tolerant varieties



Aphid 'tray traps' to help determine aphid risk in Seedtech trial site. Seedtech will host a Teagasc aphid suction tower from 2023 onwards as part of the aphid monitoring network.



BYDV patch in KWS JOYAU in 2021. Crop height or yield was not affected by BYDV

SEEDTECH
WINTER BARLEY

KWS JOYAU

(BYDV TOLERANT)

6 ROW WINTER BARLEY





REDUCES BYDV RISK FOR GROWERS

AGRONOMIC CHARACTERISTICS

- ✓ KWS JOYAU is a unique 6-row conventional winter barley with BYDV tolerance genes
- ✓ Tolerates BYDV infection. UK research shows KWS JOYAU performance is not affected by BYDV virus
- ✓ An early maturing variety which helps to spread out the harvest workload
- ✓ Exceptional grain quality (68.5 kg/hl) and straw strength (7)



AGRONOMIC & QUALITY CHARACTERISTICS

	JOYAU  (BYDV TOLERANT)	BELFRY  [®]	KWS TARDIS
Relative Yield	103	107	105
Straw Height	93.1	103.9	86.7
Resistance to Lodging	(7)	7	(7)
Straw Breakdown	(7)	6	(6)
Earliness of Ripening	(8)	7	(6)
Mildew	(5)	6	(6)
Rhynchosporium	(6)	8	(7)
Net Blotch	(7)	7	(7)
Hectolitre weight (kg/hl)	68.5	67.3	68.5

Source: DAFM Recommended List 2022



Winter barley without
BYDV tolerance



Winter barley with
BYDV tolerance

Compared to the standards, Joyau delivers high yields, excellent grain quality and an excellent agronomy package with the reassurance of BYDV tolerance.



SEEDTECH
WINTER BARLEY

BELFRY

HYBRID WINTER BARLEY



DON'T GET CAUGHT OUT
BY THE UNEXPECTED

AGRONOMIC & QUALITY CHARACTERISTICS

	BELFRY	KWS TARDIS	KWS CASSIA
Relative Yield	107	105	96
Straw Height	103.9	86.7	89.3
Resistance to Lodging	7	(7)	7
Straw Breakdown	6	(6)	6
Earliness of Ripening	7	(6)	6
Mildew	6	(6)	5
Rhynchosporium	8	(7)	4
Brown Rust	7	(6)	7
Net Blotch	7	(7)	7
1000 grain weight (g)	46.4	55.4	53.6
Hectolitre weight (kg/hl)	67.3	68.5	70.2

Source: DAFM Recommended List 2022



AGRONOMIC CHARACTERISTICS

PROTECTION & RESILIENCE THROUGH HYBRID VIGOUR

VIGOUR

- ✓ Strong straw, providing brackling and lodging resistance
- ✓ Proven to suppress sterile brome numbers by 70%, reducing dependency on sprays as a management tool
- ✓ Suitable for all rotations

SUPERIOR DISEASE RESISTANCE

- ✓ Very low disease risk
- ✓ It offers a wide drilling window taking the risk out of weather variations
- ✓ Helps with rotation planning, managing workload and disease management

CONSISTENCY IN YIELD

- ✓ No other crop has a data set that proves beyond doubt it delivers on consistency and profitability
- ✓ Belfry is the only winter barley to beat control yields in 26 out of 30 DAFM winter barley trials (2016-2021).
- ✓ Excellent specific weight

BELFRY is Ireland's most consistent winter barley on DAFM RL, making it more profitable and the No.1 choice in any rotation



SEEDTECH
WINTER BARLEY

BAZOOKA

HYBRID WINTER BARLEY

HIGH YIELDING WINTER BARLEY
WITH LOW DISEASE RISK



AGRONOMIC CHARACTERISTICS

- ✓ Very suitable hybrid for lighter soils
- ✓ Proven to suppress sterile brome in trials and on-farm due to vigorous rooting capacity
- ✓ Excellent grain quality
- ✓ High-yielding feed barley with low disease risk
- ✓ High straw yields*

*Syngenta UK Trials, 2019/2020



Hybrid barley (BAZOOKA) has been proven to reduce sterile brome numbers by 70% in NIAB trials

SEEDTECH
WINTER BARLEY

SY ARMADILLO

HYBRID WINTER BARLEY

ONE TO
WATCH
NEW FOR
2022

NEXT GENERATION HYBRID BARLEY
WITH HIGHER YIELD POTENTIAL



AGRONOMIC CHARACTERISTICS

- ✓ A higher yielding hybrid with the same agronomic characteristics of Bazooka
- ✓ Suitable for experienced hybrid barley growers
- ✓ Greater volume of straw

DAFM NATIONAL LIST/ RL TRIALS 2020/21

	SY ARMADILLO	BELFRY	BAZOOKA
Relative Yield 2020	105	103	N/A
Relative Yield 2021	107	102	105

SEEDTECH TRIALS DATA 2021

	SY ARMADILLO	BELFRY	BAZOOKA
Straw Height (cm)	115	105	112
Straw Breakdown	7	7	6
Earliness of Ripening	7	7	7
Mildew	7	7	7
Rhynchosporium	8	8	8
Brown Rust	6	6	6
Net Blotch	7	7	7



GETTING THE MOST FROM HYBRID BARLEY

For detailed information on hybrid barley agronomy, visit www.seedtech.ie

- Hybrid barley offers a wide drilling window from the early slot and on into mid-November.
- Drill in the continuous barley slot to overcome stubble borne diseases like rhyncho and net blotch.
- Get more from hybrid barley by drilling it:
 - in the take-all slot as hybrid roots grow more vigorously
 - in highly fertile sites to achieve exceptional yields
 - where grass weeds are a challenge to reduce grass weed seed return
- Drill 200 seeds/m² (100 kg/ha)
- To maximise brome suppression, e.g., headlands etc., drill hybrid barley at 250 seeds/m² (125 kg/ha)
- Early fertiliser application is key in Spring (gs 25)
- Apply plant growth regulator early in Spring (gs 30)

Hybrid Barley receives similar inputs as conventional barley, taking into account higher yield potential and greater disease resistance.

The vigorous spring growth of Hybrid Barley means it reaches key growth stages earlier, so it needs to be managed accordingly.





WINTER MALTING BARLEY

Winter malting barley is a relatively new crop in Ireland, and Seedtech has been developing suitable varieties and agronomy advice in conjunction with Boortmalt and Teagasc. As a result, malting barley is increasing in area and value. Having some of your malting contract area drilled in autumn and harvested in July is a huge bonus for spreading work and risk for growers and maltsters, making it more sustainable for the whole industry.



SEEDTECH SPECIALIST
WINTER MALTING BARLEY

SY CRAFT 
2 ROW WINTER MALTING BARLEY

CONTACT SEEDTECH FOR
MORE INFORMATION



SEEDTECH SPECIALIST
WINTER MALTING BARLEY

SY VESSEL 
2 ROW WINTER MALTING BARLEY

CONTACT SEEDTECH FOR
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ONE TO
WATCH
NEW FOR
2022

SEEDTECH SPECIALIST
WINTER MALTING BARLEY

ELECTRUM 
2 ROW WINTER MALTING BARLEY

CONTACT SEEDTECH FOR
MORE INFORMATION



AGRONOMIC CHARACTERISTICS

- ✓ SY Craft has delivered excellent quality malt in 2020 and 2021
- ✓ SY Craft has good disease resistance and straw strength and benefits from early nitrogen and PGR to optimise tiller numbers

AGRONOMIC CHARACTERISTICS

- ✓ The only non-GN winter malt in the world!
- ✓ SY VESSEL benefits from a well-timed fungicide and PGR program

AGRONOMIC CHARACTERISTICS

- ✓ A new winter malting barley for 2022 with excellent test results
- ✓ Clean from disease and good straw in Seedtech trials with yields similar to feed barley

BELFRY



HYBRID WINTER BARLEY

IRELAND'S MOST CONSISTENT WINTER BARLEY

PROTECTION & RESILIENCE
THROUGH HYBRID VIGOUR



Belfry is the most consistent winter barley on DAFM RL beating control yields in 26 out of 30 DAFM winter barley trials (2016-2021)

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SHAPING THE
FUTURE OF SEED

SEEDTECH WINTER WHEAT

Winter wheat is often the most profitable combinable crop grown on Irish tillage farms (source: Teagasc €PM 2016-2018), but it is also the highest input crop. High yields (resulting from Ireland's long, cool grain filling period) drive this profitability, but the risk: reward ratio needs to be managed by growers and agronomists.

Modern wheat varieties have exceptionally high yield potential in Ireland's climate – the trick is to select a 'stable' of varieties to reduce your risk and maximise your reward.

Reliable disease resistance, straw strength and grain quality are key characteristics when producing high yielding wheat crops in Ireland, and Seedtech selects varieties based on these traits to find a robust variety for our challenging but favourable climate.

Varieties such as GRAHAM (6 for Septoria resistance, 7 for yellow rust resistance, 7 for straw strength, 6 for sprouting resistance) is a reliable 'anchor' variety for wheat growers.

We can then add varieties such as SY INSITOR (greater biomass than GRAHAM, so more suitable for lighter soils/ take-all situations), LG ASTRONOMER (exceptional distilling characteristics, 8 for straw strength, 8 for sprouting resistance, 8 for yellow rust resistance) and CHAMPION (highest yield in UK & Seedtech trials 2021, 8 for Septoria, aggressive autumn vigour).

Using the agronomic tables in this guide will help you choose the most suitable stable of varieties for your situation.

WINTER WHEAT

DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED						PROVISIONALLY RECOMMENDED
	COSTELLO	GRAHAM	JB DIEGO	KWS CONROS	SY INSITOR	TORP	SPEARHEAD
Relative Yield ♦	95	103	97	96	103	101	104
Straw Height (cm)	71.4	79.2	79.3	78.3	78.9	80.5	78.3
Resistance to lodging	8	7	6	8	6	7	(6)
Straw breakdown	7	5	7	8	6	6	(6)
Earliness of ripening	6	7	6	5	6	5	(6)
Resistance to:							
Mildew	8	8	6	8	7	5	(8)
Septoria spp.	4	6	4	4	5	6	(5)
Yellow rust	8	7	4	8	7	4	(7)
Fusarium ear blight	7	5	6	4	6	4	–
Sprouting	8	6	7	7	4	6	(4)
Quality:							
Grain Protein % (15%MC)	10.4	10.1	10.2	10.2	9.6	9.8	9.8
Hagberg Falling No. ❖	319	237	271	296	195	209	141
1000 grain weight (g)	48.0	52.0	49.2	44.6	47.4	48.5	50.6
Hectolitre weight (kg/hl)	79.3	76.4	76.5	77.4	76.4	73.6	74.6
Market +	F	F	F	F	F	F	F
Year first listed	2017	2020	2010	2019	2021	2018	2022

*Based on results from 2019, 2020 and 2021.

- ♦ Yields are expressed as a percentage of the mean JB Diego and Graham (100 = 11.34t/ha @ 15% moisture content).
- No data
- ❖ Based on results from harvests 2019 and 2020.
- + F - Feed quality.
- () Limited Data

SEED AVAILABILITY	
Graham	49%
SY Insistor	2%
Champion	<1%
JB Diego	<1%
KWS Dawsum	30%
Costello	7%
LG Skyscraper	<1%
Mayflower	1%
Spearhead	6%
Torp	2%



WINTER WHEAT GUIDE-SELECTION BASED ON DRILLING DATES

EARLY DRILLING WINDOW (SEPT/EARLY OCT) – variety should have a disease rating for Septoria of 6 or greater and slow to develop with good straw strength. GRAHAM suits this slot, but early drilling increases take-all, lodging pressure etc which can be managed agronomically. Suggested seed rate: 200-250 seeds/m².

MAIN DRILLING WINDOW (OCT) - variety should have robust disease package with respect to local disease challenge expected. Having a variety with a good Septoria rating (such as GRAHAM) is the starting point for disease management and is additive to a well-timed fungicide program. Suggested seed rate: 300-350 seeds/m²

LATE DRILLING WINDOW (LATE OCT/NOV) - variety should have good tillering capacity and big biomass in spring (E.g., SY INSITOR). Disease risk is reduced with later drilling but not eliminated and specialist end market varieties such as LG ASTRONOMER can be successfully grown. Suggested seed rate: 350-400 seeds/m².

*Consult an IASIS qualified agronomist for specific advice on variety suitability and seed rate for your situation.



A good disease control program begins with correct timing and leaf identification.



See **Seedtech YouTube channel** for timely tips on this and other specific advice on getting the most from our varieties.



SEEDTECH
WINTER WHEAT

GRAHAM

WINTER WHEAT



THE MOST RELIABLE WINTER
WHEAT TO DRILL IN 2022

AGRONOMIC & QUALITY CHARACTERISTICS

	GRAHAM	COSTELLO
Relative Yield	103	95
Straw Height (cm)	79.2	71.4
Resistance to Lodging	7	8
Straw breakdown	5	7
Earliness of ripening	7	6
Mildew	8	8
Septoria spp.	6	4
Yellow Rust	7	8
Fusarium ear blight	5	7
Sprouting	6	8
Hectolitre weight (kg/hl)	76.4	79.3

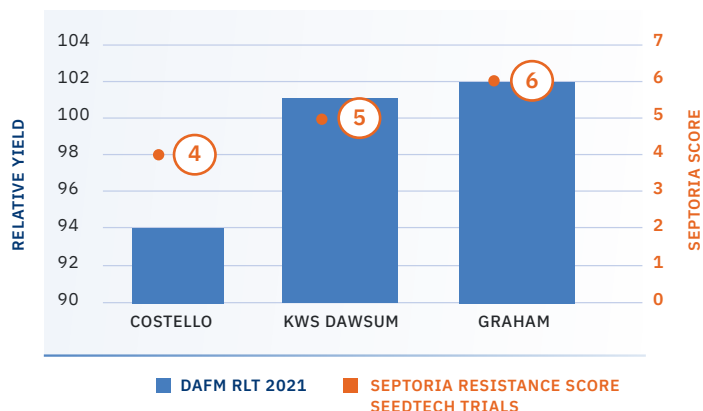
SOURCE: DAFM RECOMMENDED LIST 2022

AGRONOMIC CHARACTERISTICS

- ✓ Suitable for early* drilling
- ✓ Reliable disease resistance for Septoria, rust and mildew
- ✓ Low take-all build-up – reduces the risk of infection in the following crop
- ✓ Bright, clean head delivering well-filled grains
- ✓ Stiff to stand & early to ripen
- ✓ Drill 300-350 seeds/m² up to mid-October to maximise tiller capacity
- ✓ Grows rapidly after gs 30 to help yield forming leaves move away from Septoria
- ✓ Early to harvest helps spread the workload

* Consult an IASIS agronomist regarding early drilling of Graham

WINTER WHEAT DAFM TRIALS 2021



SOURCE: DAFM TRIALS 2021

SEEDTECH
WINTER WHEAT

SY INSITOR

WINTER WHEAT

BARN BUSTING GRAIN

AGRONOMIC CHARACTERISTICS

- ✓ Solid disease, straw, and grain package
- ✓ Very high yield potential, especially on lighter soils
- ✓ Out-performs in second and continuous wheat slots
- ✓ Big biomass variety suits later drilling

SEEDTECH
WINTER WHEAT

CHAMPION

WINTER WHEAT

ONE TO
WATCH
NEW FOR
2022

AGRONOMIC CHARACTERISTICS

- ✓ First year in DAFM trials in 2022
- ✓ The highest yielding wheat in the UK 2022/23 AHDB Rec List
- ✓ Excellent disease resistance, especially Septoria

SEEDTECH TRIALS DATA 2021 AGRONOMIC & QUALITY CHARACTERISTICS

	CHAMPION	GRAHAM	JB DIEGO
Relative Yield	110	103	97
Straw Height (cm)	75	75	85
Resistance to Lodging	7	7	7
Septoria spp.	8	6	5
Hectolitre weight (kg/hl)	72	75	75

SEEDTECH
WINTER WHEAT

LG ASTRONOMER

SPECIALIST DISTILLING WINTER WHEAT

BEST PERFORMING DISTILLING WHEAT IN TEAGASC/CARLOW
INSTITUTE OF TECHNOLOGY TRIALS 2020 AND 2021

AGRONOMIC CHARACTERISTICS

- ✓ LG Astronomer, while not on the RL, has excellent straw strength, sprouting and grain quality and good yield potential



HIGHEST YIELDING WINTER AND SPRING OAT ON DAFM RL

Phenomenal consistency & reliability for farmers

HUSKY[®]

WINTER OAT

HUSKY IS THE MOST CONSISTENT OAT IN DAFM TRIALS*

**Husky out yielded the controls
in 28 out of 30 DAFM trials*

SEEDTECH
AN ARVUM GROUP COMPANY

T: +353 51 832814
www.seedtech.ie

SHAPING THE
FUTURE OF SEED

SEEDTECH OATS

Uniquely, Ireland drills spring oat varieties in the Autumn, as this has been proven to give the highest yields and superior grain quality (kernel yield) than true winter oat types.

However, frost risk must be managed (e.g. 2008, 2010, 2021) so follow winter hardiness scores in DAFM Winter Oat Rec List, reduce frost risk by drilling after mid October and avoid applying plant protection products when plants are stressed.

HUSKY has the highest winter hardiness score on DAFM list 2022 (5) and has shown itself to be RELATIVELY more frost tolerant in Seedtech Trials (2021) and on farm.

SEED AVAILABILITY

Variety	Spring Area %	Winter Area %
Husky	59%	65%
WPB Isabel	36%	35%
Keely	5%	0%



Organic certified HUSKY oat seed will be available in Autumn 2022/Spring 2023, subject to harvest.

Contact Seedtech for more information

WINTER OATS DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED		
	BARRA	HUSKY	WPB ISABEL
Relative Yield ♦	96	104	103
Straw Height (cm)	119.5	113.6	116.1
Resistance to Lodging	4	7	7
Straw breakdown	4	5	7
Earliness of ripening	5	8	5
Winter hardiness**	3	5	–
Resistance to:			
Mildew	3	5	5
Crown rust	4	4	5
Quality:			
Kernel content (%)	74.8	75.4	75.9
1000 grain weight (g)	38.5	39.3	41.9
Hectolitre weight (kg/hl)	57.8	57.0	58.3
Year first listed	1986	2010	2020

* Based on trial results from 2019, 2020 and 2021.

♦ Yields are expressed as a percentage of the mean of Barra and Husky. (100 = 8.80t/ha @ 15% moisture)

– No data

() Limited Data.

W True winter variety.

** Winter hardiness scores for Barra and Husky are based on robust data from Spring 2011

All varieties are spring type varieties sown in winter. Prolonged severe frost or harsh winds can seriously damage spring varieties sown in winter and may cause drastic reduction in yield or even crop failure.

SPRING OATS DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED		
	BARRA	HUSKY	WPB ISABEL
Relative Yield ♦	94	106	106
Straw Height (cm)	100.9	99.0	104.3
Resistance to Lodging	3	6	7
Straw breakdown	4	5	8
Earliness of ripening	6	8	6
Resistance to:			
Mildew	3	5	5
Crown rust	4	4	5
Quality:			
1000 grain weight (g)	37.8	39.5	42.0
Kernel content (%)	73.4	73.1	73.0
Hectolitre weight (kg/hl)	57.3	56.8	58.6
Year first listed	1985	2009	2019

* Based on trial results from 2019, 2020 and 2021.

♦ Yields are expressed as a percentage of the mean of Barra and Husky (100 = 7.40t/ha @ 15% moisture content).



SEEDTECH
WINTER OAT

HUSKY

WINTER & SPRING
DUAL-PURPOSE OAT



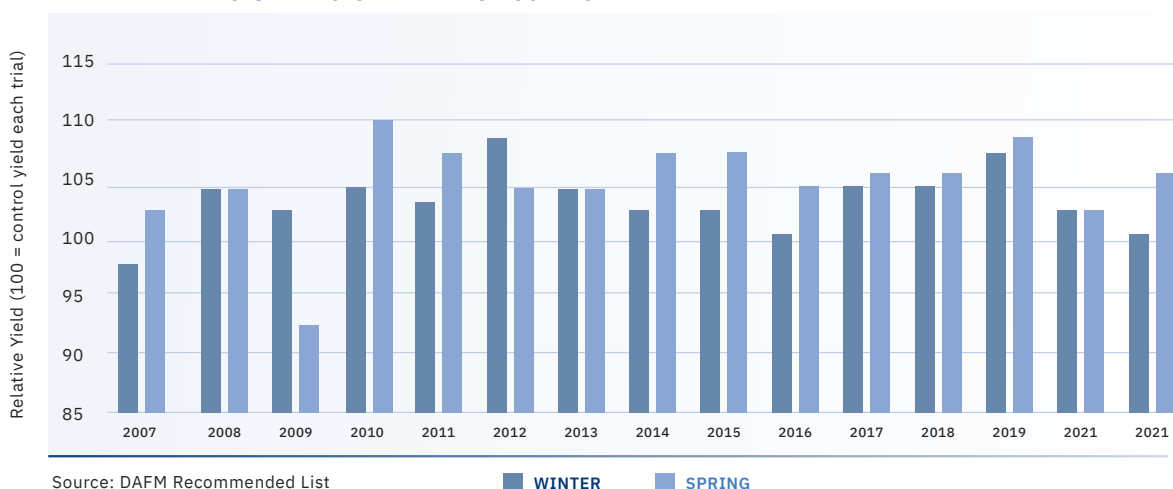
HIGHEST YIELDING WINTER
AND SPRING OAT ON DAFM RL

AGRONOMIC CHARACTERISTICS

- ✓ Extraordinary consistency on-farm and in the DAFM trials
- ✓ With weather patterns changing, choose the only oat variety to deliver extremely reliable and consistent performance.
- ✓ Can be drilled from mid-October* to mid-April, ultra-flexibility
- ✓ Proven winter hardiness in trials and on-farm
- ✓ High yielding variety with moderate resistance to lodging
- ✓ Short, stiff oat to stand
- ✓ Very good grain quality
- ✓ Early to mature

* consult an IASIS agronomist for advice on drilling HUSKY in Autumn

DAFM WINTER & SPRING OAT TRIALS 2007-2021



Source: DAFM Recommended List
Bars represent HUSKY yield in each trial

■ WINTER ■ SPRING

*Husky out yielded the controls in 28 out of 30
DAFM trials - unrivalled consistency and reliability
for the grower, agronomist and merchant*

Tim O Donovan, Seedtech

WINTER OILSEED RAPE

Winter oilseed rape is the most suitable combinable break crop for a Winter crop rotation. Ireland has a very favourable climate to grow WOSR and grows extremely high yielding crops.

The **three key varietal attributes** needed for a reliable and profitable WOSR crop on-farm are:

1. **Disease resistance** (Aurelia: score 8; highest LLS resistance on DAFM RL 2022)
2. **Excellent Lodging Resistance** (Aurelia: score 8 on DAFM RL 2022)
3. **Pod shatter resistance traits** (Aurelia: score 8; Seedtech Trials 2021)

4 REASONS TO GROW WOSR

WOSR the only crop...

- ✓ you can drill in August,
- ✓ that can use autumn applied organic manure
- ✓ to absorb and use the 25% of yearly sunshine that falls in August, September and October
- ✓ that is scientifically proven to efficiently use autumn-winter nitrogen that could be otherwise lost and offers huge nitrogen savings in spring using GAI and canopy management

CONSISTENCY & PROFITABILITY OF WOSR CROP

- ✓ Winter oilseed rape is sometimes not drilled as its margin looks low compared to a good wheat or barley crop. This appears correct on the face of it, but how many 4.5 tonne/ac crops of wheat follow wheat or barley?
- ✓ The true benefit of rape needs to be valued correctly, but we recommend that each grower adjust to their own situation
- ✓ Standard rape yields will compare very favourably against feed barley (at current green forward prices)

WINTER OILSEED RAPE CAN CAPTURE AND USE N TO REDUCE FERTILISER N IN SPRING 2023

WOSR is the only Autumn-sown crop that can take up nitrogen over the Autumn and Winter, adding it to sunshine and storing it (as green leaf and stem) to reduce fertiliser N in Spring 2023

Understanding N requirements using Canopy Management and GAI score

The system of canopy assessment works on the principle that a dense crop of rape contains more nitrogen (taken up over winter) than a thin crop.



The measurement is called the Green Area Index (GAI), and each score of GAI score = 50 kg N/ha (40 units per ac) is very valuable at current fertiliser prices.

The crop can be assessed (by eye, smartphone app or by weighing it) in springtime, and based on the GAI score, it is possible to save €100 per acre on the average crop of WOSR in spring.

Most WOSR crops reach a Green Area Index (GAI) of 2 which can save 100 kg N/ha) using the Teagasc canopy management research



WINTER OILSEED RAPE NITROGEN SAVING IN CROP WOSR

	SMALL CROP (LATER DRILLED, SMALL CANOPY ETC)	BIG CROP (EARLIER DRILLED, GOOD AUTUMN GROWTH)
Crop GAI in Feb 2022	0.5	2
Nitrogen in crop (based on GAI) (kg/ha)	25	100 (2 X 50)
Soil N (estimate) (kg/ha)	45	30
Required Fertiliser (4.5 t/ha crop yield)	235	135
Fertiliser saving (kg/ha)	0	135
Fertiliser saving (€)	0	250



Learn more about WOSR fertiliser requirements using GAI canopy management research by Teagasc. See Seedtech website for details.

Download OSR GAI app from your app store



SEEDTECH PRIORITISE SELECTION OF WOSR HYBRID VARIETIES WITH EXCELLENT STEM STIFFNESS, DISEASE RESISTANCE AND POD SHATTER RESISTANCE TRAITS.

WINTER OILSEED RAPE VARIETIES DAFM RECOMMENDED LIST 2022

Variety	RECOMMENDED	PROVISIONALLY RECOMMENDED	
	DK EXPANSION	AMBASSADOR	AURELIA
Relative Seed Yield	109	106	108
Hybrid/Conventional	Hybrid	Hybrid	Hybrid
Oil Content	102	100	101
Glucosinolate content (μmol/g seed)	15.5	17.1	15.6
Early Vigour (1 – 9, 9 = most vigorous)	6	6	6
Full Plant Height (cm)	145	135	138
Lodging resistance (1 – 9, 9 = best)	8	8	8
Stem Stiffness (1 – 9, 9 = upright)	7	7	7
Earliness of flowering (1-9, 9 = earliest)	(4)	(5)	(5)
Earliness of Maturity (1-9, 9 = earliest)	(7)	(7)	(7)
Shedding Resistance (1-9, 9 = most resistant)	(8)	–	–
Light Leaf Spot Resistance (1-9, 9 = most resistant)	(7)	(6)	(8)
Year First Recommended	2021	2022	2022

Data based on results of fungicide treated trials with the exception of Light Leaf Spot data. Yield and quality data based on trials harvested from 2019 to 2021. Light Leaf Spot resistance scoring based on a scale of 1 to 9 with scores over 8 indicating varieties are very resistant and scores under 4 indicating varieties that are susceptible. Figures shown in brackets () are based on limited data and should be treated with caution. Missing values present with a – indicate no available data.

The control varieties used were Alizze, Anastasia and SY Harnas in both 2019 & 2020 and Anastasia, Aquila and DK Expansion in 2021. Yield and oil content are expressed relative to the mean of the control varieties (100 = mean of control varieties). The mean yield and mean oil content of the control varieties was 5.4t/ha and 45.1% respectively when adjusted to 9% moisture content.

Hybrid WOSR varieties, such as Aurelia, have really made growing this crop most reliable and profitable on farm.



SEEDTECH
WINTER OSR

AURELIA



WINTER OILSEED RAPE



**AURELIA IS THE ONE
TO GROW IN 2022**



AURELIA – EXCELLENT ON LIGHT LEAF SPOT (LLS)

LLS is the most yield robbing disease in Ireland as our wet winters rapidly spread the spores through the canopy. The current advice is spray at first sign of disease (previously this advice was spray when 25% of plants were infected at beginning of stem extension).



Fungicides are best applied before infection, which is almost impossible to achieve practically, as infection often occurs from autumn right throughout winter and into spring.

Having a variety with good LLS resistance (such as AURELIA; 8 on DAFM 2022 list) helps reduce and slow down infection cycles, buying you time from Autumn fungicides until fungicides can be applied again in the Spring.

AGRONOMIC CHARACTERISTICS

- ✓ Extremely high yielding in DAFM trials 2019, 2020 & 2021
- ✓ Best Light Leaf Spot (LLS) resistance on DAFM Rec List 2022 (8)
- ✓ Has super pod shatter resistance
- ✓ Excellent stem stiffness and harvest security
- ✓ Rapid autumn growth and hybrid vigor
- ✓ Has Turnip Mosaic Virus (TuYV) resistance

GETTING THE MOST FROM AURELIA WOSR

- Wide drilling window but AURELIA can be drilled up to mid September in good conditions
- Drill 50 seeds/m² (70 seeds/m² in September)
- Hybrid vigor helps plant establish rapidly and recover from Autumn losses/grazing
- Best Light Leaf Spot resistance (8) on DAFM list - helps prevent yield-robbing early Spring infection
- Even canopy in Spring helps canopy management decisions



SEEDTECH
WINTER OSR

LG AVIRON

HYBRID WINTER OILSEED RAPE



HIGHEST YIELDING VARIETY
IN DAFM TRIALS 2021



GETTING THE MOST FROM LG AVIRON

- Can be drilled up to mid-September as very vigorous Autumn growth
- Drill 50 seeds/m² (70 seeds/m² in September) but soil condition most important
- Assess August drilled crops in mid-October and Spring for PGR requirements

AGRONOMIC CHARACTERISTICS

- ✓ Highest yielding variety in DAFM trials 2021
- ✓ Extremely vigorous Autumn growth so especially suited if drilling is delayed into September
- ✓ Excellent stem stiffness and harvest security
- ✓ Best in class for Light Leaf Spot (LLS) resistance – giving added assurance in a wet Spring
- ✓ Has Turnip Mosaic Virus resistance (TuYV)

AGRONOMIC & QUALITY CHARACTERISTICS

	YIELD (DAFM TRIALS 2021)	YIELD (AHDB LIST 2022/2023)	LODGING RESISTANCE	TURNIP MOSAIC VIRUS RESISTANCE*	LIGHT LEAF SPOT*	PLANT HEIGHT (CM)
LG AVIRON	109	105	9	YES	8	136
Ambassador	98	106	8	YES	7	131
DK Expectation	98	101	9	YES	7	128
DK Expansion	106	N/A	9	NO	N/A	142

Source: DAFM trials 2021 & *AHDB List 2022/2023



SEEDTECH
WINTER OSR

BEATRIX CL

CLEARFIELD® HYBRID OILSEED RAPE



PROVIDES FOUR MAJOR TRAITS,
RLM7+ STEM CANCER RESISTANCE,
TUYV PROTECTION, POD SHATTER
RESISTANCE AND CLEARFIELD®
TECHNOLOGY

STRENGTHS

- ✓ BEATRIX CL has four major traits which include RLM7+ stem canker resistance, TuYV Protection, Pod Shatter Resistance and Clearfield® Technology

AGRONOMIC CHARACTERISTICS

- ✓ Next generation Clearfield WOSR variety with quad layer gene stacking
- ✓ High yielding Clearfield variety
- ✓ Has Pod Shatter resistance
- ✓ Has Turnip Yellow resistance (TuYV) and Stem Canker (Phoma) resistance (RLM7+)
- ✓ Very stiff stems (8 in Seedtech 2021 trials) and early to flower



SEEDTECH
WINTER RYE

KWS TAYO
HYBRID WINTER RYE

SEEDTECH
WINTER RYE

KWS SERAFINO
HYBRID WINTER RYE

**A SUSTAINABLE CROP GROWN USING LESS INPUTS
AND GENERATING HIGH YIELDS OF GRAIN AND STRAW**



STRENGTHS

- ✓ Exceptional farm performance 2017 - 2021 (c 4.5t/ac grain yield, 18 round straw bales/ac)
- ✓ Hybrid Rye consumes approximately 25% less water per tonne of grain compared to wheat
- ✓ Hybrid Rye uses less nitrogen fertiliser and less pesticides than wheat

Hybrid Rye will be a mainstream crop driven by its agronomics and animal performance in feed rations.

Hybrid Rye has a bright future as a crop and is entirely suitable to animal feeds.

For more on the research into the benefits of feeding Hybrid Rye in growing-finishing pig diets by Dr Peadar Lawlor, Teagasc, and supported by Seedtech, see the video and research paper on the Seedtech website.

**Hybrid Rye Agronomy Guide
available on our website**

AGRONOMIC CHARACTERISTICS

- ✓ Can be sown from mid-September - tolerates BYDV & Take-all
- ✓ Less fungicides & nitrogen than winter wheat
- ✓ Very secure harvest with very low risk of head losses, sprouting and Fusarium
- ✓ Very suitable for whole-crop and grain markets are developing
- ✓ Extremely drought tolerant. Hybrid Rye outperforms wheat and barley in dry sites and dry seasons
- ✓ Suitable for pig feed – Hybrid Rye has a higher lysine amino acid content than other cereals, and it promotes satiety in pigs and results in fewer digestive upsets

**ERGOT RESISTANCE IS
ASSURED USING KWS
POLLENPLUS® TECHNOLOGY**



**HIGH YIELDING BARLEY
WITH EXCELLENT DISEASE
RESISTANCE AND STRAW**

SY AMITY

SPRING BARLEY

**GIVING GROWERS A STEP
CHANGE IN YIELD AND
STRAW STRENGTH COMPARED
TO CURRENT STANDARDS**



SEEDTECH 
AN ARVUM GROUP COMPANY

T: +353 51 832814
www.seedtech.ie

**SHAPING THE
FUTURE OF SEED**

SPRING BARLEY

Spring barley yields have increased significantly over the past 20 years, with yields of over 9 t/ha common enough on farms in good growing years.

When choosing a Spring Barley variety, characteristics such as straw strength and a good specific weight are important factors to consider to meet malting specifications.

For specific malting markets, traits such as Zero-GN are important, while feed barley markets require large grain sizes for rolling. Seedtech has a very large spring barley selection program focused on malting and feed barley markets.

SEED AVAILABILITY

SY Amity	12%
SY Errigal	<1%
Laureate	5%
SY Tungsten	5%
Florence	<1%
LG Mermaid	<1%
Gretchen	2%
Planet	31%
Geraldine	31%
Rockway	5%
Gangway	5%
Skyway	4%
Prospect	<1%

SPRING BARLEY DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED			PROVISIONALLY RECOMMENDED		
	GANGWAY	RGT PLANET	SY ERRIGAL	GERALDINE	SKYWAY	SY AMITY
Relative Yield ♦	99	101	102	105	104	104
Straw Height (cm)	77.1	74.3	73.8	72.1	76.1	75.8
Resistance to lodging	6	5	7	(7)	(5)	(7)
Straw breakdown	7	4	6	(6)	(5)	(6)
Earliness of ripening	5	5	5	(6)	(5)	(5)
Resistance to:						
Mildew	8	8	8	(8)	(8)	(8)
<i>Rhynchosporium</i>	5	5	5	(7)	(7)	(6)
Brown rust	6	5	7	(7)	(7)	(7)
Net blotch	8	5	8	(8)	(6)	(8)
Quality:						
1000 grain wt (g)	47.5	49.1	48.7	49.2	49.1	52.5
Hectolitre wt (kg/hl)	68.1	65.6	65.4	66.1	66.6	66.5
Screenings % (<2.2 mm)	1.4	1.7	1.4	1.4	1.2	1.0
Grains Protein %	10.7	10.5	10.6	10.6	10.4	10.4
Year first listed	2018	2017	2019	2022	2022	2022

* Based on trial results from 2019, 2020 and 2021.

♦ Yields are expressed as a percentage of the mean of RGT Planet and Gangway. (100= 8.16 t/ha @ 15% moisture content).

SEEDTECH
SPRING BARLEY

SY AMITY



ONE TO
WATCH
NEW FOR
2022

SPRING BARLEY



A TRUE MULTI-PURPOSE SPRING BARLEY DUE
TO ITS GRAIN CHARACTERISTICS (ZERO-GN
AND SIZE) AND AGRONOMIC SCORES

AGRONOMIC & QUALITY CHARACTERISTICS

	SY AMITY	SKYWAY	GERALDINE
Relative Yield	104	104	105
Resistance to Lodging	(7)	(5)	(7)
Straw Breakdown	(6)	(5)	(6)
Rhynchosporium	(6)	(7)	(7)
Net Blotch	(8)	(6)	(8)
1000 grain weight (g)	52.5	49.1	49.2
Hectolitre weight (kg/hl)	66.5	66.6	66.1
Screenings	1.0	1.2	1.4

Source: DAFM Recommended List 2022



STRENGTHS

- ✓ A Spring barley with both feed and malting potential
- ✓ A Zero-GN Malt Barley
- ✓ 1st choice selection by Irish malt committee for pilot malting in 2022

AGRONOMIC CHARACTERISTICS

- ✓ High yielding Spring Barley
- ✓ Excellent straw
- ✓ Excellent disease resistance
- ✓ Low levels of shedding and head disease in 2020 & 2021
- ✓ Largest grain on the market so very suitable for rolling and roasting

SY Amity gives growers a step-change in yield and straw strength compared to current standards. Being pilot distilled in 2022.



SEEDTECH
SPRING BARLEY

SY ERRIGAL

SPRING BARLEY



A CONSISTENTLY HIGH YIELDING BARLEY
ACROSS MULTIPLE YEARS AND SITES.

STRENGTHS

- ✓ Sow SY Errigal if you are pushing for Spring Barley yields, due to its reliable straw strength

AGRONOMIC CHARACTERISTICS

- ✓ Consistently high yielding feed barley across variable years and sites
- ✓ Excellent straw characteristics
- ✓ Good disease resistance and good grain quality



AGRONOMIC & QUALITY CHARACTERISTICS

	SY ERRIGAL	GANGWAY	RGT PLANET
Relative Yield	102	99	101
Straw height (cm)	73.8	77.1	74.3
Resistance to Lodging	7	6	5
Straw Breakdown	6	7	4
Rhynchosporium	5	5	5
Brown Rust	7	6	5
Net Blotch	8	8	5
1000 grain weight (g)	48.7	47.5	49.1
Hectolitre weight (kg/hl)	65.4	68.1	65.6
Screenings	1.4	1.4	1.7
Grain Protein	10.6	10.7	10.5

Source: DAFM Recommended List 2022



A NEW ERA IN SPRING BARLEY

ONE TO
WATCH
NEW FOR
2022

SEEDTECH
SPRING BARLEY

LG MERMAID

DUAL-PURPOSE MALTING
& FEED VARIETIES

2ND HIGHEST YIELDING BARLEY
IN DAFM TRIALS 2021

AGRONOMIC CHARACTERISTICS

- ✓ Highest KPH in DAFM NL trials 2021 and Seedtech trials 2020 & 2021
- ✓ Zero-GN barley so very adaptable for the malt industry
- ✓ Very stiff straw and good disease resistance
- ✓ Slightly early to mature than current standards
- ✓ Being grown for pilot malt in 2023
- ✓ Seed in multiplication stage (<1% available in spring 2023)
- ✓ Bred by Limagrain (UK)



SEEDTECH
SPRING BARLEY

FLORENCE

DUAL-PURPOSE MALTING
& FEED VARIETIES

HIGHEST YIELDING SPRING BARLEY
IN DAFM TRIALS 2021 AND 2020.

AGRONOMIC CHARACTERISTICS

- ✓ Excellent straw, disease resistance and grain quality
- ✓ Progressing in UK, France, Germany and many other countries as a malt/feed barley
- ✓ Highly adaptable barley based on trials results across the EU (e.g., 2nd highest yielding barley in AHDB trials 2020/2021)
- ✓ Seed in multiplication stage (<1% available in spring 2023)
- ✓ Bred by Breun (Germany)

LG MERMAID & FLORENCE – SUMMARY DATA 2020/2021

	LG MERMAID	FLORENCE	PLANET	GANGWAY
DAFM TRIALS 2021 & 2020 YIELD				
Yield 2021	109	110	101	99
Yield 2020	N/A	104	101	99
KPH 2021 (NL Trials)	69.4	67.4	67.1	69.2
SEEDTECH TRIALS 2020 & 2021				
Straw Strength	(7)	(7)	5	6
Rhyncho	(7)	(7)	5	5
Net Blotch	(7)	(8)	5	8
Mildew	(8)	(8)	8	8

SPECIALIST SPRING MALTING BARLEY

Malting barley now accounts for almost 40% of the spring barley grown in Ireland. This percentage has increased significantly, with the tonnage of barley required for malting increasing to almost 250,000 tonnes. In contrast, the overall spring barley area declined from 160,000 ha in 2012 to 120,000 ha in 2022 (est.).

The Irish drinks industry (especially whiskey) has achieved year-on-year sales growth over the past ten years and is set to continue growing. Specialist malting varieties such as LAUREATE and TUNGSTEN are bred to meet end-user requirements with such traits as Zero-GN now standard in a widely used malting variety.

In the future, malting barley varieties will include traits to help improve malting plant efficiency and adaptability to end markets, thus improving overall sustainability in the malting industry.

**SPRING MALTING BARLEY
VARIETY INFORMATION LIST 2022**

AGRONOMIC & QUALITY CHARACTERISTICS*	MALTING BARLEY VARIETIES				
	GANGWAY	LAUREATE	RGT PLANET	SY SPLENDOR	SY TUNGSTEN
Relative Yield ♦	99	103	101	102	100
Straw Height (cm)	75.0	70.0	75.2	73.4	73.2
Resistance to Lodging	6	4	5	(5)	(6)
Straw breakdown	7	4	4	(6)	(5)
Earliness of ripening	5	5	5	(5)	(5)
Resistance to:					
Mildew	8	8	8	8	8
Rhynchosporium	5	7	5	(5)	(5)
Brown Rust	6	7	5	(5)	(5)
Net blotch	8	8	5	(7)	(7)
Quality:					
1000 grain wt (g)	47.6	50.0	50.6	48.7	50.1
Hectolitre wt (kg/hl)	68.1	65.3	66.0	66.8	65.5
Screenings % (<2.2 mm)	1.7	1.5	1.6	1.7	2.2
Protein %	10.9	10.7	10.4	10.5	10.4

♦ Based on specific Malting Barley trial results from 2019, 2020 and 2021. Yields are expressed as a percentage of the mean of RGT Planet and Gangway (100 = 8.16 t/ha @ 15% moisture content).






SEEDTECH SPECIALIST SPRING MALTING BARLEY



LAUREATE 
SPRING MALTING BARLEY

**HIGH YIELDING MALT BARLEY
ON DAFM LIST 2022**

AGRONOMIC CHARACTERISTICS

- ✓ Exceptional yields in lower nitrogen situations
- ✓ Excellent disease resistance - our cleanest barley
- ✓ Zero-GN variety so flexible for end use markets
- ✓ Requires straw management to achieve top yields



SY SPLENDOR 
SPRING MALTING BARLEY

**A HIGH QUALITY ZERO-GN MALT
BARLEY - DISTIL AND BREW**

AGRONOMIC CHARACTERISTICS

- ✓ Huge yields at lower nitrogen - suited to distilling/brewing nitrogen rates
- ✓ Very good straw & disease resistance
- ✓ Lowest levels of skinning in trials 2020



SY TUNGSTEN 
SPRING MALTING BARLEY

**A HIGH QUALITY ZERO-GN MALT
BARLEY - DISTIL AND BREW**

AGRONOMIC CHARACTERISTICS

- ✓ High yields at lower nitrogen - suited to distilling/brewing nitrogen rates
- ✓ Excellent disease response
- ✓ Good straw strength or better straw strength as control varieties

SEEDTECH
SPRING WHEAT

KWS HELIUM

SPRING WHEAT



KWS HELIUM IS A HIGH
KPH SPRING WHEAT

SPRING WHEAT DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED		PROVISIONALLY RECOMMENDED	
	HEXHAM	KWS TALISKER	KWS HELIUM	WPB DUNCAN
Relative Yield ♦	101	100	100	101
Straw Height (cm)	69.3	73.1	73.4	67.2
Resistance to Lodging	7	5	(6)	(5)
Earliness of ripening	5	5	(5)	(5)
Resistance to:				
Mildew	5	6	(7)	(7)
Septoria spp.	5	6	(6)	(6)
Yellow rust	8	8	(5)	(8)
Sprouting	7	7	(7)	(7)
Quality:				
Grain protein content (%)	11.5	11.5	12.0	11.2
Hagberg falling number ♦	280	253	236	315
1000 grain weight (g)	48.2	48.0	49.3	44.3
Hectolitre weight (kg/hl)	77.3	77.8	79.9	78.2
Hardness index	Hard	Hard	Hard	Hard
Year first listed	2021	2020	2022	2022

STRENGTHS

- ✓ Excellent grain quality and straw strength

AGRONOMY CHARACTERISTICS

- ✓ Very high KPH spring wheat in DAFM trials 2019, 2020, and 2021 producing very reliable quality grain
- ✓ Good disease resistance of the key spring wheat diseases
- ✓ Stiff straw with low lodging & sprouting risk
- ✓ Suitable for a wide range of soils



* Based on trial results from 2019, 2020 and 2021.

Yields are expressed as a percentage of the yield of KWS Talisker.
(100 = 8.25t/ha @ 15% moisture content).

♦ Based on results from 2018, 2019 and 2020.

SEED AVAILABILITY

KWS Helium	13%
WPB Duncan	46%
WPB Escape	33%
KWS Fixum	8%



**DON'T LET
DISEASE
SNEAK UP
ON YOUR
YIELDS**

LYNX
SPRING BEANS



SEEDTECH
AN ARVUM GROUP COMPANY

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www.seedtech.ie

**SHAPING THE
FUTURE OF SEED**



SEEDTECH SPRING BEANS

The area of beans is supported by DAFM funding of €7.5 million per year. This encourages home-produced protein crops and crops that can fix their own nitrogen, which is very beneficial to Irish Agriculture.

Also, there is a growing awareness of EU consumers to support products that are produced with EU grown protein crops, not from protein crops grown in an unsustainable manner.

Seedtech supports protein crop development through variety selections trials, agronomy trials, and end-user trials.

There are specialised bean varieties available (such as VICTUS) with altered fatty acid profiles that enhance animal performance and have human health benefits.

REASONS TO SOW SPRING BEANS

Research has shown that this break crop can add 0.5t/ac to a following cereal crop, as well as helping to control weeds which prove difficult in continuous cereals such as grass weeds.

- ✓ **Fixed Price Contracts** available before drilling
 - o Highly palatable feed ingredient that is in demand with our feed industry.
- ✓ **Protein Payments & Greening Rules**
 - o All beans are eligible for protein payments and meet SFP greening requirements including EFA's.
- ✓ **Profitability**
 - o The value of starch in beans ensures a premium over cereals which is important when
- ✓ **Excellent Break Crop Option**
 - o Beans root deeply, fix nitrogen, and can add a 0.5 t/ac to the following cereal crop with the possibility of a seed contract.
- ✓ **Wide Harvesting Window**
 - o Weather-proof at harvest. Even when ripe, beans will withstand weeks of poor weather without significant losses.



SEEDTECH SPRING BEANS

LYNX

SPRING BEANS



HIGHEST YIELDING BEAN ON DAFM REC LIST 2022



STRENGTHS

- ✓ Beans can be very valuable in a rotation.

**Spring Beans
Agronomy Guide
available on
our website**

AGRONOMIC CHARACTERISTICS

- ✓ Excellent disease resistance
- ✓ Excellent stem stiffness
- ✓ Lynx Spring Beans is Ireland's most widely grown bean 2018 - 2021
- ✓ Highest yielding Spring Beans on DAFM RL 2022
- ✓ Spring Beans Agronomy guide available on our website

SPRING BEANS DAFM RECOMMENDED LIST 2022

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED		PROVISIONALLY RECOMMENDED	
	FANFARE	LYNX	CAPRICE	VICTUS*
Treated Yield (t/ha @ 15% moisture)	99	104	100	100
% Crude Protein	102	99	102	100
Plant Height (cm)	134	136	134	126
Brackling Resistance (1 - 9, 9 = best)	8	8	7	5
Lodging Resistance (1 - 9, 9 = best)	(8)	(8)	(9)	(8)
Earliness of Maturity	(6)	(6)	(7)	(6)
Resistance to:				
Chocolate Spot (1-9, 9 = most resistant)	(6)	(6)	(7)	(7)
Downy Mildew (1-9, 9 = most resistant)	(7)	(7)	(7)	(6)
Rust (1-9, 9 = most resistant)	(6)	(4)	(6)	(4)
Year of first Recommendation	2016	2019	2022	2022

The control varieties used were Boxer, Fanfare and Lynx in 2019 while Fanfare, Lynx and Victus were used in both 2020 & 2021. Yield and Crude Protein content are expressed relative to the mean of the control varieties (100 = mean of control varieties). The mean yield of the control varieties when adjusted to 15% moisture over the period 2019 to 2021 was 6.6t/ha. The mean crude protein content was 24.7% when expressed as a percentage of the dry matter



**Legumes
Translated**

Seedtech supported Teagasc Feed Research of faba beans as part of our participation in the EU funded project Legumes Translated.

The key finding from this trial was that beans could fully replace soya in finished pig diets.

Further details and research papers are available on Seedtech website.



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CROP :	2022	Winter Barley	2022	Winter Wheat	2022	Winter Oat	2022
PREVIOUS CROP:	2021 2020 2019	Winter OSR Spring Barley Spring Barley	2021 2020 2019	Winter OSR Spring Barley Spring Barley	2021 2020	Winter OSR Spring Barley	2021 2020
SOWING DATE:		13/10/2021		13/10/2021		13/10/2021	22/03/2022
FERTILIZER:	03/03/2022 21/03/2022 14/04/2022	4 Bags/Acre 10-8-21 + S 1.5 Bags/Acre ASN 2 Bags CAN	03/03/2022 21/03/2022 14/04/2022	4 Bags/Acre 10-8-21 + S 1.5 Bags/Acre ASN 2.5 Bags CAN	03/03/2022 21/03/2022	4 Bags/Acre 10-8-21 + S 1.5 Bags/Acre ASN	22/03/2022 14/04/2021 14/04/2021
SOIL INDEX	Total N 2 Total P 2 Total K 3 PH 6	166 Kgs/Ha (133 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	SOIL INDEX Total N 2 Total P 2 Total K 3 PH 6	183 Kgs/Ha (146.5 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	SOIL INDEX Total N 2 Total P 2 Total K 3 PH 6	98 Kgs/Ha (79 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	SOIL INDEX Total N 1 Total P 2 Total K 3 PH 5.8
APHICIDE:	18/11/2021	Ninja @ 50ML/Ha	18/11/2021	Ninja @ 50ML/Ha	18/11/2021	Ninja @ 50ML/Ha	05/05/2022
HERBICIDE:	18/11/2021 18/11/2021	Flight @ 4Ltr/Ha Lector @0.75 ML/Ha	18/11/2021 19/11/2021	Flight @ 4Ltr/Ha Lector @0.75 ML/Ha	18/11/2021 18/11/2021	Diflamil @0.25Ltr/Ha Lector @0.125Ltr/Ha	07/05/2022
FUNGICIDE:	09/04/2022 28/04/2022 07/05/2022	Elatus Era @ 0.8 Ltr/Ha Decoy @ 0.4 Ltr/Ha Priaxor @ 0.8 Ltr/Ha Arizona @ 1.5 Ltr/Ha Cebara @ 1.5 Ltr/Ha Arizona @ 1.5 Ltr/Ha	27/04/2022 15/05/2022 02/06/2022	Peacoq @ 2 Ltr/Ha Pontoon @ 1 Ltr/Ha Arizona @ 1.5 Ltr/Ha Revystar @ 1.5 Ltr/Ha Arizona @ 1.5 Ltr/Ha Prosaro 1.0Ltr/Ha* Amistar @ 0.5 Ltr/Ha*	24/03/2022 20/04/2022 24/05/2022	Proline @ 0.5 Ltr/Ha Amistar @ 0.5 Ltr/Ha Decoy @ 0.5 Ltr/Ha Comet @ 0.6 Ltr/Ha Midas @ 0.4 Ltr/Ha Elatus Era @ 0.8 Ltr/Ha Midas @ 0.4 Ltr/Ha	15/05/2022 01/06/2022
PGR:	24/03/2022 09/04/2022 28/04/2022	K2 @ 1.0 Ltr/Ha Moddus @ 0.25 Ltr/Ha Terpal @ 1.5 Ltr/Ha	20/04/2022	Moddus @ 0.25Ltr/Ha	24/03/2022 20/04/2022	CeCeCe @ 1.0 Ltr/Ha Medax Max @ 0.3 Kgs/Ha CeCeCe @ 1 Ltr/Ha Moddus @ 0.2 Ltr/Ha	15/05/2022
TRACE ELEMENTS	09/04/2022 28/04/2022	Amazinc @ 1.0 Ltr/Ha Phygreen @ 1.5Ltr/Ha Epsotop @ 5Kgs/Ha	20/04/2022 02/06/2022	Amazinc @ 1Ltr/Ha Epsotop @ 5Kgs/Ha	23/03/2022 20/04/2022 24/05/2022	Amazinc @ 1 Ltr/Ha Epsotop @ 5 Kgs/Ha Mastercrop K @ 2.5 Ltr/Ha	09/05/2022
SLUG PELLETS	01/11/2021 12/11/2021	Metarex inov @ 5 Kgs/Ha Gusto 3 @ 5 Kgs/Ha	01/11/2021 12/11/2021	Metarex inov @ 5 Kgs/Ha Gusto 3 @ 5 Kgs/Ha	01/11/2021 12/11/2021	Metarex inov @ 5 Kgs/Ha Gusto 3 @ 5 Kgs/Ha	
WILD OAT HERBICIDE:	09/04/2022	Axial Pro @ 0.6 Ltr/Ha	20/04/2022	Axial Pro 0.6Ltr/Ha			

The above table is shown for informational purposes only. It is not meant to act as a guide.
Please consult your agronomist for agronomy recommendations on all crops.
(*) Proposed applications at the time of printing



Spring Barley	2022	Spring Oats	2022	Spring Wheat	2022	Spring Beans
Winter Barley Spring Beans	2021 2020	Winter Wheat Spring Beans	2021 2020	Winter Wheat Spring Beans	2021 2020 2019	WOSR Spring Barley Spring Barley
	23/03/2022		18/02/2022 22/03/2022		18/02/2022 22/03/2022	
4 Bags/Acre 10-8-21 + S 1 Bags/Acre ASN 1.5 Bags/Acre CAN 166 Kgs/Ha (133 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	22/03/2022 14/04/2021 14/04/2021 SOIL INDEX Total N 1 Total P 2 Total K 3 PH 5.8	4 Bags/Acre 10-8-21 + S 1 Bags/Acre ASN 1 Bags/Acre CAN 116 Kgs/Ha (93 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	22/03/2022 14/04/2021 14/04/2021 SOIL INDEX Total N 1 Total P 2 Total K 3 PH 5.7	4 Bags/Acre 10-8-21 + S 1 Bags/Acre ASN 2.3 Bags/Acre CAN 160 Kgs/Ha (128 Units/Acre) 40 Kgs/Ha (32 Units/Acre) 105 Kgs/Ha (84 Units/Acre)	12/04/2021 SOIL INDEX Total N 1 Total P 2 Total K 3 PH 6.1	3.5 Bags 0-10-20 0 Kgs/Ha (0 Units/Acre) 43.75 Kgs/Ha (35 Units/Acre) 87.5 Kgs/Ha (70 Units/Acre)
Ninja @ 50MI/Ha	05/05/2022	Ninja @ 50MI/Ha	05/05/2022	Ninja @ 50MI/Ha	20/04/2022	Ninja @ 50MI/Ha
Cameo @ 45Grm/Ha Galaxy @ 1 Ltr/Ha	07/05/2022	Cameo @ 45Grm/Ha Galaxy @ 1 Ltr/Ha	07/05/2022	Cameo @ 45Grm/Ha Galaxy @ 1 Ltr/Ha	05/04/2022 15/05/2022 24/05/2022	Nirvana @ 4 Ltr/Ha Basagran @ 1.1 Kgs/Ha Falcon @ 1 Ltr/Ha
Decoy @ 0.5 Ltr/Ha Comet @ 0.6 Ltr/Ha Boogie Expo @ 1.25 Ltr/Ha* Arizona @ 1.5 Ltr/Ha*	15/05/2022 24/05/2022	Decoy @ 0.5 Ltr/Ha Comet @ 0.6 Ltr/Ha Midas @ 0.4 Ltr/Ha Talius @ 0.2 Ltr/Ha Elatus Era @ 0.8 Ltr/Ha*	15/05/2022 24/05/2022 01/06/2022	Decoy @ 0.5 Ltr/Ha Comet @ 0.6 Ltr/Ha Midas @ 0.4 Ltr/Ha Talius @ 0.2 Ltr/Ha Elatus Era @ 0.8 Ltr/Ha* Prosaro 1.0Ltr/Ha* Amistar @ 0.5 Ltr/Ha*	24/05/2022	Elatus Era @ 0.66 Ltr/Ha Signum @ 0.5 Kgs/Ha* Signum @ 0.5 Kgs/Ha*
CeCeCe @ 1 Ltr/Ha Moddus @ 0.2 Ltr/Ha	15/05/2022 24/05/2022	CeCeCe @ 1 Ltr/Ha Moddus @ 0.2 Ltr/Ha Moddus @ 0.2 Ltr/Ha	15/05/2022 24/05/2022	CeCeCe @ 1 Ltr/Ha Moddus @ 0.2 Ltr/Ha Moddus @ 0.2 Ltr/Ha		
Amazinc @ 1 Ltr/Ha	09/05/2022 24/05/2022	Cereal Alloy @ 1 Ltr/Ha Epsotop @ 5 Kgs/Ha Mastercrop K @ 2.5 Ltr/Ha*	09/05/2022 24/05/2022	Cereal Alloy @ 1 Ltr/Ha Epsotop @ 5 Kgs/Ha	24/05/2022	Epsotop @ 5Kgs/Ha Incite @ 1.25 Ltr/Ha





SEEDING RATE TABLES

Online Seed Rate Calculator available on www.seedtech.ie

SPRING CROP SEED RATE TABLES

AGRONOMIC & QUALITY CHARACTERISTICS*	SUGGESTED SEEDS/M² OPTIMUM	RANGE	TYPICAL TGW	
			AVERAGE	RANGE
Spring Feeding Barley				
SY Amity (Malt/ Feed Barley)	350	300-400	50g	45-55g
SY Errigal	350	300-400	50g	45-55g
Spring Malting Barley				
SY Tungsten	350	300-400	50g	45-55g
Laureate	350	300-400	50g	45-55g
SY Splendor	350	300-400	50g	45-55g
LG Mermaid (New for Spring 2023)	350	300-400	50g	45-55g
Florence (New for Spring 2023)	350	300-400	50g	45-55g
Spring Oats				
Husky	350	300-400	38g	35-45g
Spring Beans				
Lynx	40	35-45	500g	400-650g
Victus	40	35-45	500g	400-650g
Fanfare	40	35-45	500g	400-650g
Spring Wheat				
KWS Helium	350	300-400	35g	35-45g
Spring Oilseed Rape				
Lumen	70	60-100		
Click CL	70	60-100		
Spring Triticale				
Bienvenu	350	300/400	30g	30-40g

Drilling dates and seeding rates are advisory only - consult your IASIS registered agronomist for specific drilling advice for your situation.



SEEDING RATE TABLES

Online Seed Rate Calculator available on www.seedtech.ie

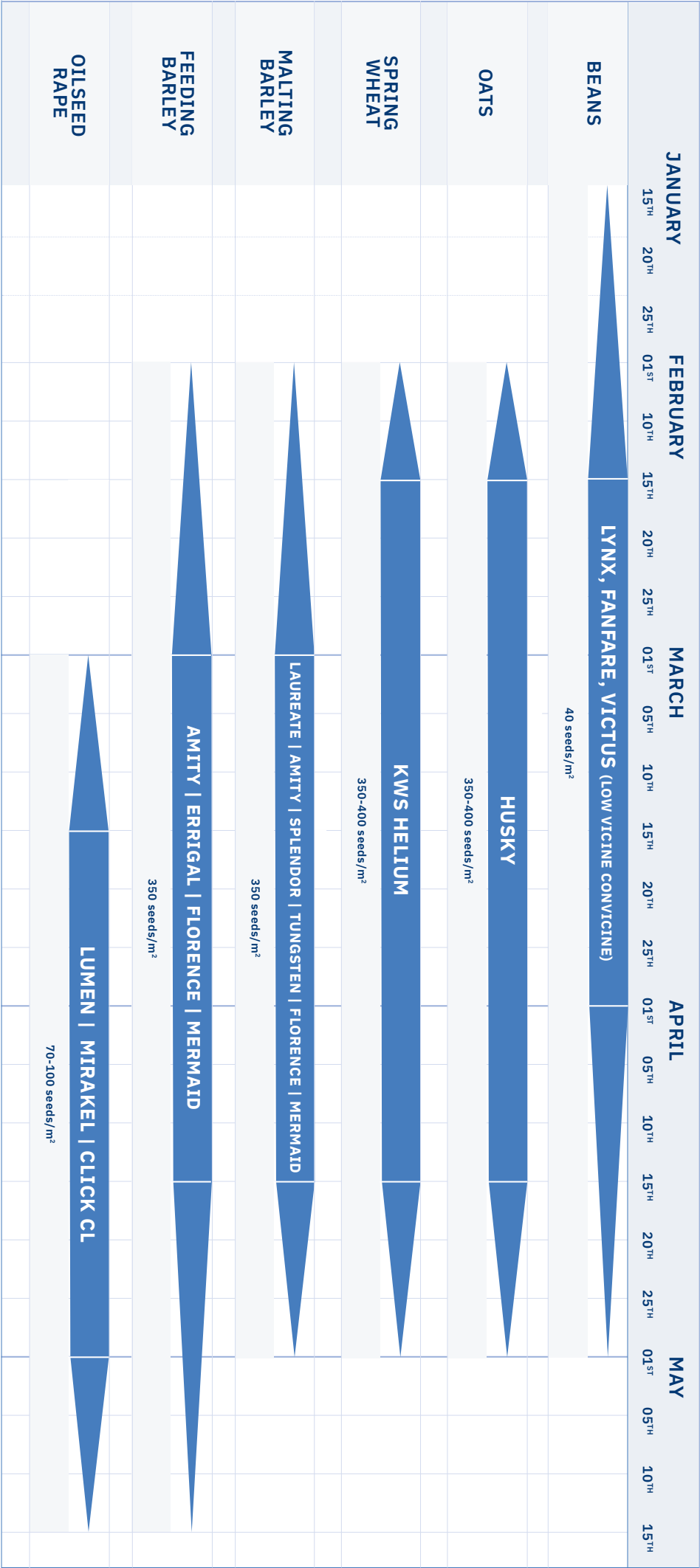
WINTER CROP SEED RATE TABLES

AGRONOMIC & QUALITY CHARACTERISTICS*	SUGGESTED SEEDS/M² OPTIMUM	RANGE	TYPICAL TGW	
			AVERAGE	RANGE
Winter Barley				
LG Casting	300	275-350	55	50-60
SY Armadillo (New for Autumn 2022)	200	180-250	50	48-52
Belfry	200	180-250	50	48-52
Bazooka	200	180-250	50	48-52
KWS Joyau	300	275-350	50	45-55
KWS Kosmos	300	275-350	50	45-55
Belmira (New for Autumn 2022)	300	275-350	55	50-60
Electrum (New for Autumn 2022)	300	275-350	55	50-60
SY Craft	300	275-350	55	50-60
SY Vessel	300	275-350	55	50-60
Winter Oats				
Husky	400	350-450	40	35-45
Winter Wheat				
Graham	350	300-400	55	50-60
SY Insitor	350	300-400	55	50-60
LG Astronomer	350	300-400	55	50-60
Champion (New for Autumn 2022)	350	300-400	55	50-60
Hybrid Rye				
KWS Tayo	200	180-250	40	35-45
KWS Serafino	200	180-250	40	35-45
Winter Oilseed Rape				
Aurelia	50	40-70	5	4 to 6
LG Aviron	50	40-70	5	4 to 6
Beatrix CL	50	40-70	5	4 to 6

Drilling dates and seeding rates are advisory only - consult your IASIS registered agronomist for specific drilling advice for your situation.

2023 SPRING DRILLING GUIDE

A quick reference guide to rotation planning and optimum drilling dates



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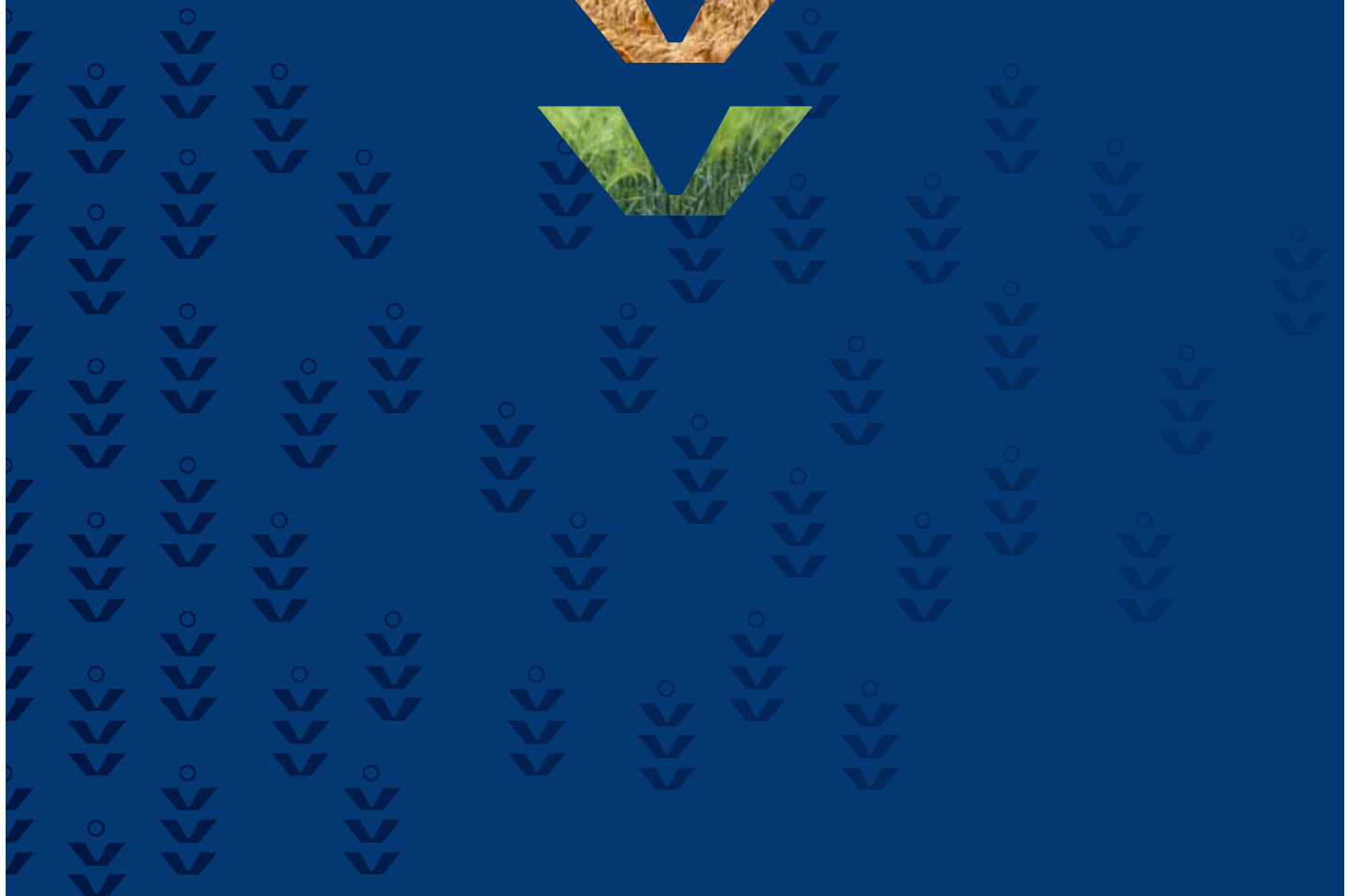
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SHAPING THE FUTURE OF SEED

Seedtech operates one of the largest independent trialling systems in Ireland and is SHAPING THE FUTURE OF SEED through its dedicated research programme, to select new varieties and advancements in seed genetics.

So, when you choose a Seedtech variety, you are investing in a future in tillage farming for the next generation.



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