



# Agronomy Handbook

2024





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# Welcome and Forward

Welcome to the Drummonds 2024 Agronomy Handbook. This resource has been compiled to assist you in making informed decisions for the upcoming growing season. Reflecting on the challenges of the past year, including a significant decrease in average tillage farm income and the impacts of adverse weather and fluctuating yields and prices, we understand the importance of learning and adapting for future resilience.

## Crop Season 2024

The cropping season for 2024 harvest has already had a difficult start. There is a significant reduction in winter cereal acreage due to weather conditions, leading to a likely increase in spring crop plantings, with some areas decreased by up to 40%. This handbook is filled with valuable insights on variety selection, soil health, and crop nutrition which will help guide you to make the right decisions for your farm.

## Do the Numbers

As the new season unfolds, we encourage you to collaborate with our Drummonds Agronomy team to put some important numbers together for your farm before the work all begins again. The winter sown crops have a variance of well-established later sowings to patchy earlier sown crops. This will be an invaluable tool during the bustling spring season, helping you make well-informed agronomy decisions.

## The Tillage Sector Outlook

Despite recent setbacks, the forecast for 2024 shows promising improvements in tillage margins, thanks to

anticipated reductions in input costs. A return to 5 year trend yields in 2024 will mean a yield increase for most cereal crops.

Our national tillage sector, known for its efficiency and best-in-class compliance with EU regulations, continues to show resilience despite the reduction in tillage area and challenges such as nitrate banding. The demand for land and competition from other sectors has been relentless, yet still the tillage industry is resilient and will emerge as an important customer for organic manures and part of the solution to both carbon sequestration and energy production with the advance of AD plants now emerging.

## Appreciation

We extend our heartfelt thanks to all our arable customers. Drummonds has a longstanding commitment to supporting tillage farmers and we look forward to continuing this partnership. Here's to a productive and prosperous year ahead in tillage farming.

*Paul Ward*

Paul Ward  
Commercial Manager



# Soil Health - The Foundation for Success

In today's high-cost environment, maintaining soil health has become more crucial than ever for producing high-yielding crops.

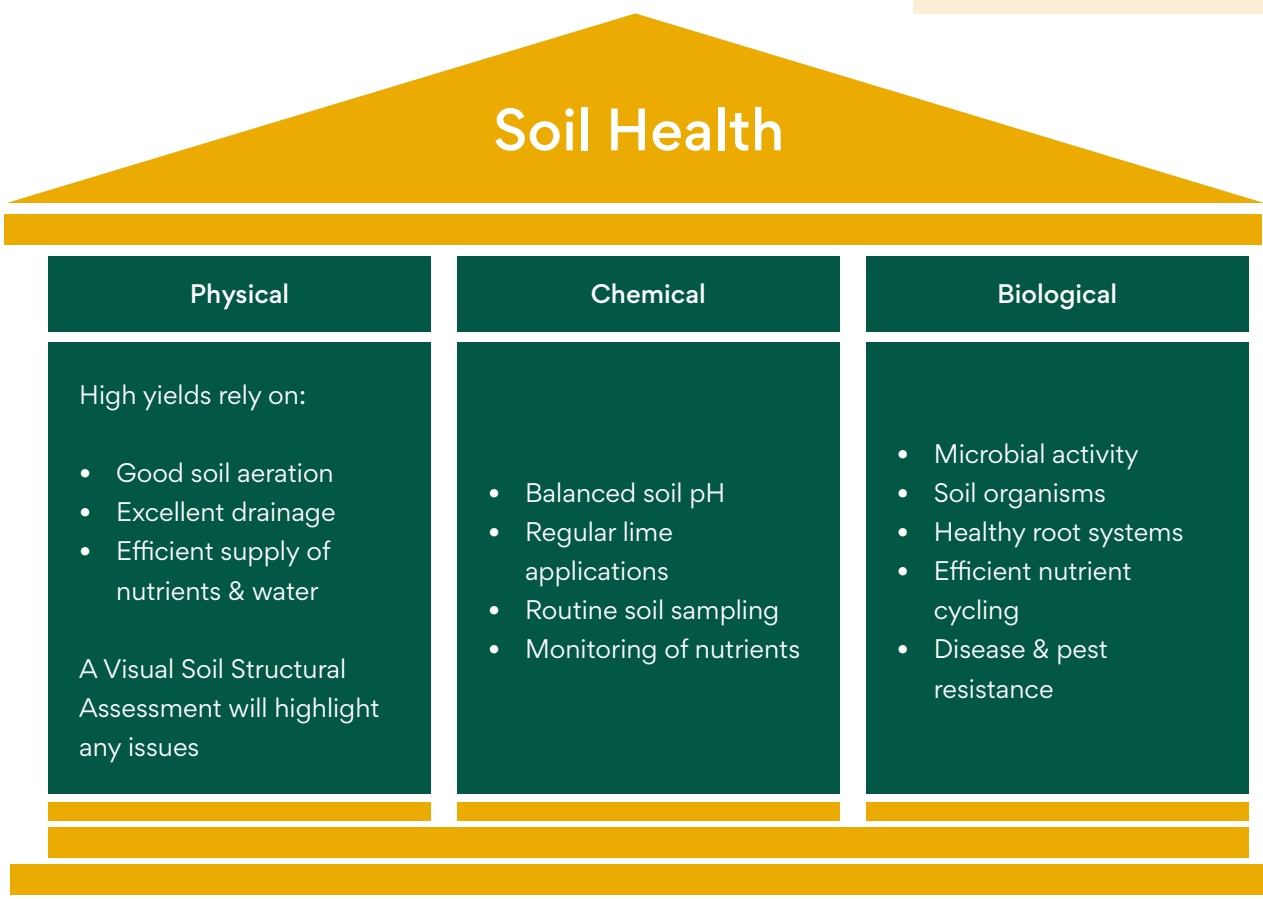
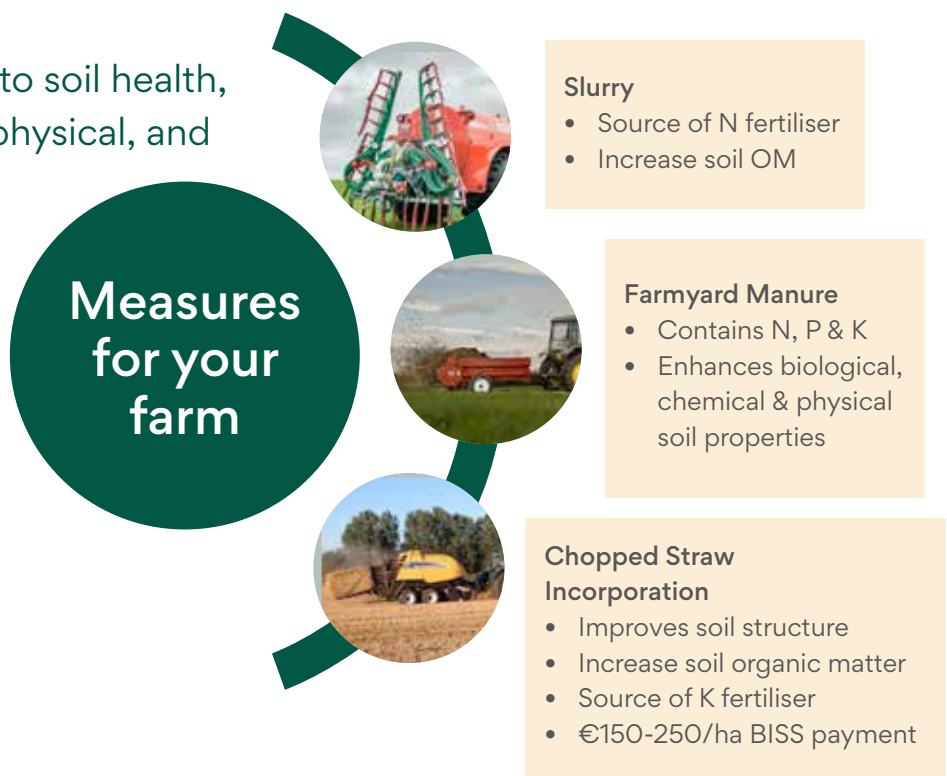
Healthy soil is the foundation of productive farming, vital for maximising crop yields and profitability. Effective soil management, therefore, not only boosts crop productivity but also plays a pivotal role in cost-efficiency, ensuring farmers can achieve the best possible outcomes from their land while navigating economic challenges.





# The Pillars of Soil Health

Drummonds focuses on a comprehensive approach to soil health, encompassing chemical, physical, and biological analyses.



# Soil Conditioners

**Ground Limestone** plays a vital role in managing soil pH on Irish farms and is often considered the most cost-effective fertiliser available. An incorrect soil pH can lead to fertiliser value losses of up to 20%, so incorporating liming into your nutrient plan is crucial. It is estimated that 1.5-2 million tonnes of lime needs to be spread annually on Irish farms to maintain soil nutrient fertility. Research suggests that lime applications yield results in grain yield responses of >1.5t/ha.

**Granulated Lime** contains finely ground limestone (< 0.1mm). It is a fast-acting product presenting the opportunity for rapid adjustments of soil pH and a more immediate release of nutrients. Granulated lime can be applied with conventional fertiliser spreading equipment and is a suitable option for conacre or high value crops that require an immediate response.

**AgriPhos**, is a low-carbon fertiliser and soil conditioner, offering a unique blend of Phosphorus, Potassium and trace elements. It enhances soil structure and promotes microbial activity, leading to improved plant growth and sustainable soil health.

**Physiolith** is a fast-acting soil conditioner that offers multiple benefits beyond traditional lime. Its unique composition of marine calcium, minerals and trace elements improves soil structure, boosts microbial activity, and provides essential trace elements for plant growth.





# Unlock Your Soil's Potential

The application of lime to agricultural land is crucial for soil nutrient management. It corrects soil pH levels, fundamental for optimising nutrient availability and ensuring the overall health and productivity of crops.

## Why spread lime?

1. Increase yields
2. Enhance soil nutrient availability
3. Reduce fertiliser use
4. Boost plant nutrition

## Ready to transform your soil and boost your yields?

Reach out for our professional lime spreading service and take the next steps towards healthier and more fertile soil.

## Drummonds provide:

1. Precision GPS controlled Lime Spreading Service
2. Variable rate spreading option
3. Dedicated Drummonds equipment
4. Experienced team of advisors
5. Available from all Drummonds branches





# Using Precision Agriculture to Drive Farm Efficiency

Precision Agriculture offers an opportunity to integrate all technological advances to improve farm profitability by reducing input costs and increasing output. It applies 4 R's of Nutrient Efficiency:

- R**ight product
- R**ight rate
- R**ight place
- R**ight time

This is made possible by the following services offered by Drummonds:

## Precision Soil Sampling

- Key to ensuring accurate placement of fertiliser & lime applications.
- Drummonds use automated GPS soil samplers for accurate soil sampling.
- Soil nutrient recommendations are provided to ensure all crop nutrition requirements are met.
- Variable rate technology allows growers to tailor input applications within fields based on specific soil needs.

Drummonds soil sampling packages

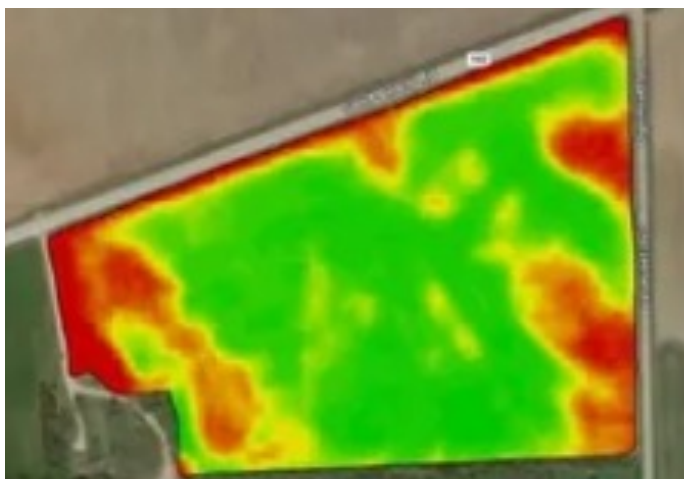
	Package type		
	Bronze	Silver	Gold
4ha "W"	✓	✓	
Grid/Zone sampling			✓
pH	✓	✓	✓
Lime requirement	✓	✓	✓
Phosphorus	✓	✓	✓
Potassium	✓	✓	✓
Magnesium	✓	✓	✓
Calcium		✓	✓
Sulphur		✓	✓
Manganese		✓	✓
Copper		✓	✓
Boron		✓	✓
Zinc		✓	✓
Molybdenum		✓	✓
Iron		✓	✓
Sodium		✓	✓
C.E.C		✓	✓
Organic matter		✓	✓





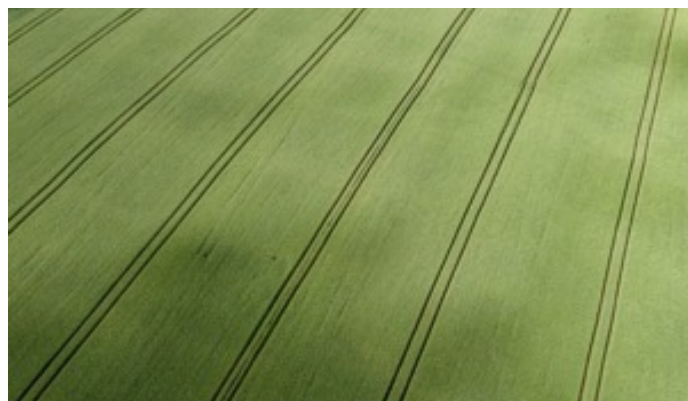
## Variable-Rate Seeding Programme

- Enables further savings by altering seeding rates within fields determined by historical crop performance.
- Drummonds offer variable-rate seeding prescription maps based on:
  - Precision soil sample results
  - Historical satellite imagery
  - Yield data (if available)



## Field route planning service

- Optimised fieldwork patterns can play an important role in streamlining headland maneuvers and unproductive time in fields.
- The Drummonds service communicates with all leading brands of navigations systems.
- This can enable up to 50% reduction to non-working distance travelled.



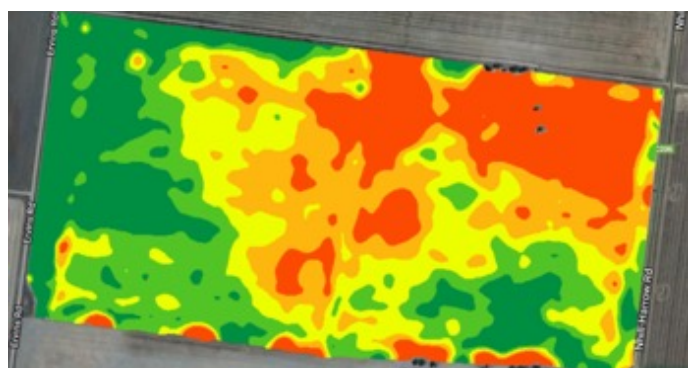
## Leaf Sap Analysis

- Key to maintaining plant health by identifying nutrient deficiencies/toxicities before any visible signs.
- The Drummonds Sap Analysis Service allows you to:
  - Understand nutrient availability in plant
  - Increase fertiliser use efficiency
  - Enable targeted nutrient applications
  - Early detection of nutrient deficiencies/excesses
  - Enhance crop quality



## Yield Data Management Service

- Yield maps enable growers to identify field areas with underlying issues to address in the following season.
- The Drummonds Data Management Service creates accurate yield maps of growers' fields for crop management.





# Fertiliser

Drummonds offers a comprehensive fertiliser advisory service tailored to the needs of tillage, grassland, and horticultural producers. Our team of agronomists, proficient in plant nutrition, deliver expert guidance based on soil test reports, soil types, and crop rotation histories. This approach ensures the development of bespoke fertiliser blends that precisely meet your farm's requirements.

By choosing Drummonds for your fertiliser needs, you benefit from a service that combines technical expertise, customisation, and a commitment to sustainable agriculture. Whether you require traditional or liquid fertilisers, or specialised products like Agriphos, Drummonds ensures your crops receive the right nutrients for optimal growth and yield.

### Flexible Fertiliser Options:

- Fertilisers are available in various formats, including bulk, 50kg, or 500kg bags, catering to different scale needs and application preferences.
- A precision fertiliser spreading service is offered from all Drummonds branches, ensuring accurate and efficient nutrient distribution.







# Maximise Yield Potential with AgriPhos

AgriPhos, an innovative PK fertiliser is a game changer in sustainable agriculture. Derived from renewable sources, it contains essential nutrients including Phosphorus (P), Potassium (K), Sulphur, Magnesium, Calcium, and Sodium, plus vital trace elements. This unique blend ensures your crops receive balanced nutrition, promoting vigorous growth for maximum yields.

- Contains S, Mg, Ca, Na and trace elements
- Slow release, ensuring efficient nutrient supply
- Low carbon fertiliser
- Improves soil structure and enhances soil health
- Cost effective
- Proven performance
- Carbon neutral fertiliser
- Available nationwide
- Spreading service available from all Drummonds branches

Balanced PK fertiliser

0-4.5-10

Ideal for cereals, vegetables  
and grassland

## Ready to boost your farm's productivity with AgriPhos?

Contact your local Drummonds Agronomist for more information and make the smart choice for your soil and crops.

“We have been using AgriPhos for several years now on our ware potatoes. We find that tuber yield and quality has increased using AgriPhos, with more marketable grades and less waste. We have recently started to use AgriPhos on our cereal crops and have found improved establishment and more resilient crops in drought situations”.

**Seamus Spillane, Gibbstown Farm**



# Liquid Nitrogen Fertiliser

Liquid Nitrogen fertiliser comprises:

- 50% urea N
- 25% ammonium N
- 25% nitrate N
- +/- sulphur

It's a blend of Nitrogen (N) and Sulphur (S), is a Complex Compound Fertiliser (CCF) offering a homogeneous solution for crop nutrition.

Unlike foliar fertilisers, liquid fertiliser is soil-acting and absorbed through plant roots. The objective is to create large droplets that run off leaves into the soil, ensuring efficient nutrient delivery to the root system. Studies have shown its performance is comparable to granular CAN, with options to include urease inhibitors or nitrogen stabilisers for environmental protection.

While liquid fertiliser is comparably priced to granular fertiliser, the product format and greater application accuracy enables greater Nutrient Use Efficiency (NUE). This equates to lower application rates and savings in fertiliser purchases.

Drummonds offers a precise and efficient liquid nitrogen spreading service from all our branches.



### Drummonds Liquid Fertiliser

Drummonds have invested in a unique blending facility in which we can formulate bespoke blends of Nitrogen, sulphur, trace elements and nitrogen stabilisers for your crop requirements.

## N-Rich

Get more from less

Drummonds' premium liquid fertiliser, contains nitrogen (24 N) and sulphur (3 S) with the option to include nitrogen stabilisers. This advanced formulation offers a range of benefits, ensuring that your crops get the right nutrients at the right time, efficiently and sustainably.

Benefits include:

- **Increased NUE:** Ensures nutrients are readily available to plants, leading to better absorption and utilisation.
- **Fast-Acting:** Provides essential nutrients to crops, supporting rapid growth and development.
- **Field Edge Accuracy:** Provides a level of precision not achievable with granular fertilisers. Trials indicate up to an 8% increase in crop yield on field headlands.
- **Suitable for All Conditions:** Can be applied in both wet and dry conditions, making it versatile.
- **Ease of Storage and Application:** Liquid fertiliser is easy to store and apply, offering convenience and time savings.
- **Bulk Supply:** Supplied in bulk, it eliminates the need for expensive packaging and handling, reducing costs.
- **Immediate Availability:** The nutrients become available to crops quickly, usually within four days in dry conditions, compared to granular fertilisers that may take longer and require rain for activation.
- **Sustainability:** By improving nutrient use efficiency and precision, N-Rich supports sustainable farming practices, contributing to environmental stewardship.

“Switching our nitrogen applications from granular to liquid form have been instrumental in achieving higher yields from our crops. Nitrogen applications end at the field boundary, meaning invasive weed species like cleavers are not fed. The fact that 25% of the N is immediately plant available ensures the crop receives it at the right time”.

Thomas Murphy, **Farm Manager, Country Crest**



## Reduced N for Grassland

Liquid nitrogen fertiliser represents a major step forward for grassland farmers, allowing them to use less nitrogen while maintaining grass yields. This method not only improves grass yields and quality, but also promotes sustainable farming and enhances overall nutrient use efficiency. Hence, liquid nitrogen fertiliser is an invaluable tool for farmers looking to maximise grass growth with less N. Other benefits:

- Enhanced grass dry matter (DM) production.
- Increased grass protein and energy content.
- Faster grass regrowth, particularly noticeable in dry weather conditions.
- More efficient nutrient uptake, ideal for short rotation grazing systems.
- Suitable for applications directly after mowing and pre/post slurry.

## Switching to Liquid Nitrogen: What You Need to Know

- **Appropriate Nozzles:** Use Liquid N rated nozzles, available from Drummonds, for efficient application.
- **Availability:** Liquid nitrogen is available from all Drummonds branches.
- **Storage Requirements:** On-farm storage tanks should have a concrete base and be bunded. Tanks can be provided, or customers may collect from their local Drummonds branch.
- **Contractor Services:** Consider hiring a contractor if you prefer not to manage it yourself.



### Do's

- Maintain a boom height 0.7 - 1.0m above the canopy.
- Allow a 2-day gap between applications of liquid fertiliser and other crop protection products.
- Wash out sprayer pumps, nozzles, and lines after use.

### Don't's

- Do not exceed 2-bar pressure during application.
- Avoid spraying in very windy conditions and/or when temperatures may exceed 20°C, especially on damp plants to prevent scorching.
- Do not spray when frost is present on leaves.
- Avoid overlapping and do not mix liquid fertiliser with any other substances.
- Try to avoid spraying directly on the flag leaf if possible.





# The Drummonds Hub for Agricultural Research & Innovation

Drummonds stands out as the only retail merchant in Ireland with a dedicated arable research site. This site is in Co. Louth and focuses on two main research programmes:

1. The Cereal Variety Evaluation Programme.
2. The Agronomic Trials Programme.

In the Cereal Variety Evaluation Programme, Drummonds collaborates with the Department of Agriculture, Food and the Marine (DAFM) on variety trials for the Recommended (RL) and National (NL) lists, and European plant breeders to develop cereal and oilseed rape varieties that are suited to Irish conditions. Cereal and oilseed rape varieties undergo rigorous screening and testing. They are evaluated for optimal performance under Irish conditions.

Annually, over 200 varieties are tested in replicated treated and untreated plots, to assess natural strengths and weaknesses. This enables Drummonds to compile valuable data and insights on varieties, which are used to provide advice for the best on-farm performance. Traits such as the following are assessed:

- Plant vigour
- Straw strength
- Lodging resistance
- Disease resistance
- Grain yields
- Grain quality

**The Agronomic Trials Programme** plays a key role in supporting the Drummonds Agronomy Services. This programme thoroughly tests a wide range of agricultural products and practices before recommending them to farmers.

The results and data derived from the Agronomic Trials Programme are instrumental in shaping Drummonds' Agronomy Services. By testing products

and practices on our trial site, we can make results-based recommendations to farmers, enhancing crop management and overall agricultural productivity. This commitment to testing and research underlines Drummonds' dedication to advancing agricultural practices and supporting farmers with proven, effective solutions.

### Key Focus Areas

- **Seed Treatments:** Testing the effectiveness of various seed treatment options to enhance germination, early growth, disease resistance and grain yields.
- **Fungicides, Herbicides, Plant Growth Regulators (PGRs) & Foliar Nutrition:** Rigorous testing of these products is conducted to ascertain their effectiveness in disease control, weed management, growth regulation and plant nutrition. The programme specifically looks at different timings and application rates to identify the most effective and efficient use strategies.
- **Biological Amendments:** Assessing the efficacy of biological soil amendments in improving soil health and crop productivity.
- **Multi-season Testing:** Every product and practice is tested for at least three seasons. This rigorous testing ensures that the recommendations made to growers are based on robust, multi-year data, ensuring reliability and effectiveness.
- **Collaboration:** Drummonds work closely with research institutes on projects such as monitoring aphid populations for targeted applications, grass weed and fungicide trials, and with plant breeders for suitable varieties for the Irish climate.

The trial site at Drummonds serves as an invaluable resource for the **Continuous Professional Development** of our agronomists. Through observing and analysing the performance of various programmes, our agronomists are equipped to provide tailored and local data-based advice to tillage growers.

# Future Farming

The future of Irish agriculture is at an exciting crossroads, with advancements in sustainable practices shaping how we operate.

Results from the Drummonds trials on biological seed and crop foliar treatments, particularly nitrogen-fixing bacteria, are paving the way for reduced nitrogen input requirements. Similarly, the use of phosphorus and potassium mobilising bacteria is revolutionising how we approach soil and crop nutrition. These natural solutions not only ensure healthy plant growth, but also present a clear path towards achieving our sustainability targets. As we look to the future, biological inputs are set to become key drivers in sustainably maintaining high yields.

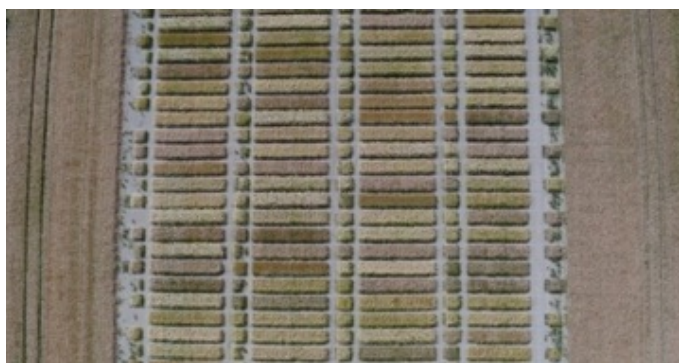
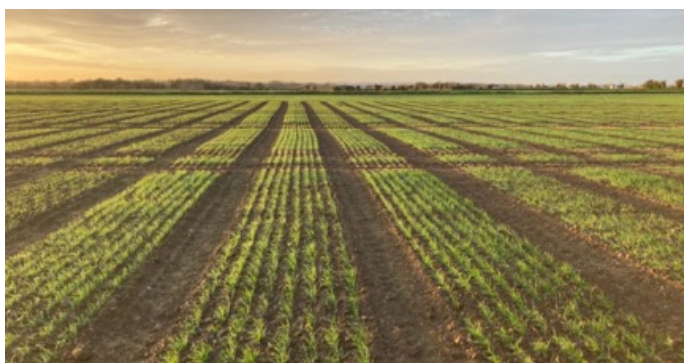
The most important factor regarding trace elements or foliar nutrition in crop production is that it is key to apply them before deficiencies appear. When symptoms appear – such as the yellowing or spotting of leaves – the damage is already done.



Spraying the T3 fungicide on wheat varieties



Fungicide trials



Winter wheat varieties beginning to ripen.



Harvesting Winter barley variety trials

# Agronomy Services

Drummonds provides a complete agronomy service, catering to the specific needs of individual crops and growers. This service is focused on optimising yields and profits for our growers, ensuring that each farming operation is as efficient and productive as possible.

### Key Aspects

- **Tailored Agronomic Advice:** Drummonds provides personalised agronomic advice, considering specific farm circumstances for bespoke crop management strategies.
- **Exclusive Variety Distribution:** With exclusive distributorship for a range of crop varieties, Drummonds provides access to high-performing and specially selected varieties that are suited to Irish conditions.
- **In-House Trials:** Our trial site enables the gathering of valuable data and insights, which enables a proactive approach by our agronomists.
- **Soil & Nutrient Management:** Drummonds provides expert advice on soil and nutrient management strategies, helping growers to use fertilisers and soil amendments more effectively. This ensures optimal plant growth while also considering environmental sustainability.
- **Sap Testing Service:** An innovative sap testing service is available to verify plant health. This service allows for targeted nutrient applications, ensuring maximum nutrient use efficiency. By accurately identifying plant needs, this service helps save time and money for growers.
- **Pest & Disease Management:** The service includes guidance on managing pests and diseases, which is crucial for maintaining crop health and achieving high yields.
- **Precision Agriculture Services:** Drummonds offers a precision soil sampling service, enabling variable rate fertiliser and lime applications, tailored to specific field requirements.
- **Technical Support:** Drummonds team of agronomists is available for technical support. We keep growers informed about the latest agricultural practices and technologies.

The Drummonds agronomy service is a complete package, assisting growers on maximising their yields and farm performance. Through regular newsletters, crop walks and open days, we keep growers informed of the latest advances in agronomic practices.







# Seed Processing

Drummonds have been ‘growing for generations’ and are a key player in the assembly and distribution of certified seed in Ireland. Our commitment to excellence is verified by the Department of Agriculture, Food and the Marine (DAFM) and the Irish Seed Trade Association (ISTA), assuring customers of the highest quality seed.

Seed is produced by selected growers, who work in close collaboration with the Drummonds Agronomy team to produce top-quality certified seed. The fields are continuously inspected and rogued throughout the growing season by the growers, Drummonds agronomy team and DAFM officials.

Selecting Drummonds seed means you are choosing a proven variety, that is fully traceable and produced to the highest standards.



## Quality Control

The seed processing at Drummonds involves a meticulous quality control process. Upon harvest, seed grain is thoroughly inspected for quality and screened for contaminants. The pre-cleaning and drying process ensures moisture levels are adjusted to an optimal 14%. Further screening and processing eliminates small grains, hulls, stones, and other contaminants. Each batch is independently assessed by DAFM, and upon meeting quality standards, seeds are dressed, packed, and ready for delivery with the Certified Blue Label, signifying their premium status.

## The Importance of Certified Seed

In today’s agricultural landscape, where invasive grassweeds such as Blackgrass, Wild Oats, and Bromes pose an increasing challenge, using Irish Certified Blue Label seed is crucial. ISTA and DAFM’s zero-tolerance policy for Blackgrass, Wild Oats, and Brome contamination underscores the importance of certified seed.

Certified Seed is a cost-effective investment accounting for approximately 7% of variable input costs. It sets the foundations for productive, profitable crops and helps growers manage weed issues more effectively.

## Summary

Farmers choosing Drummonds seed can trust in the quality and performance of our product, ensuring a robust foundation for successful crop growth, agronomic performance, and yield. The Drummonds’ approach, from careful variety selection and rigorous testing to close collaboration with growers, DAFM and ISTA exemplifies our dedication to providing the best in seed technology and agricultural practices.



# Spring Drilling Guide

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

	January					February					March					April				
	15 <sup>th</sup>	20 <sup>th</sup>	25 <sup>th</sup>	1 <sup>st</sup>	10 <sup>th</sup>	15 <sup>th</sup>	20 <sup>th</sup>	25 <sup>th</sup>	1 <sup>st</sup>	5 <sup>th</sup>	10 <sup>th</sup>	15 <sup>th</sup>	20 <sup>th</sup>	25 <sup>th</sup>	1 <sup>st</sup>	5 <sup>th</sup>	10 <sup>th</sup>	15 <sup>th</sup>	20 <sup>th</sup>	
Beans																				
Spring Oats																				
Spring Wheat																				
Spring Barley																				

## Seeding Rates

When calculating seeding rates, the critical first step is to determine the Thousand Grain Weight (TGW) of your seed, as this value can vary between varieties and batches. We provide this information on the front of all Drummonds bags of seed. The desired plant population is the next crucial factor, influenced by local weather patterns, soil conditions, and the time of year.

Using the following formula will allow you to calculate the optimal seed rate for your crop:

$$\frac{\text{Thousand Grain Weight (TGW)} \times \text{Target Plant Population}}{\text{m}^2} \times \text{\% Establishment}$$





# Wheat

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Winter wheat, a key crop in Ireland is grown across approximately 60,000 ha annually. This range is often heavily influenced by sowing windows and grain markets. While yields depend on the growing season, Winter Wheat has the potential to be one of the most profitable crops grown.

Conversely, Spring Wheat is grown on 6,000-8,000 ha annually. The crop's performance in DAFM trials has established its adaptability and resilience, particularly in terms of disease tolerance and management. These traits are crucial for ensuring healthy growth and high yields. Drummonds independent trials underscores the crop's significance in Irish cereal production. The trials aim to validate breeder data to optimise agronomy programmes, ensuring the best performance on growers' fields. By focusing on variety selection, disease management, and tailored agronomic practices, these trials are instrumental in helping farmers maximise their crop's potential.

Recent challenges in wheat breeding programs have led to a notable shift in the variety landscape. This upheaval stems primarily from the reliance on a common parent variety, Cougar, known for its genetic resistance to Septoria. However, the Septoria pathogen has undergone significant genetic changes through mutation, undermining this resistance. Consequently, there's been a marked reduction in the number of new wheat varieties being introduced to the market. Currently, the DAFM Recommended List features five wheat varieties – Torp, Spearhead, Graham, KWS Dawsum, and JB Diego. This situation underscores the urgent need for the development and introduction of new wheat varieties to meet market demands and challenges.

For wheat crops to attain high yields, ideal growing conditions are necessary throughout the season, supporting robust vegetative growth, ear development, and grain filling. Research suggests that both grain number per square metre and grain size contribute equally to the overall yield. While ear number significantly impacts grain number, the crop can compensate for lower ear numbers by augmenting both the number of grains per ear and the size of the grains. This adaptability is key to maximising yield potential under varying growing conditions.



# Spearhead

The Versatile Variety

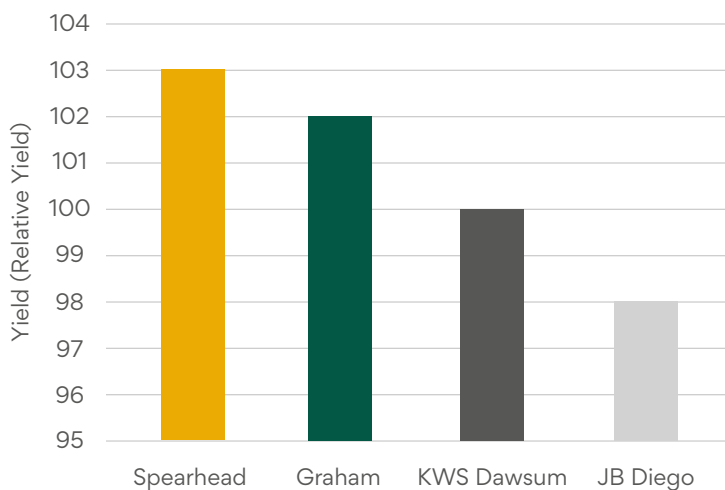
Breeder: **Elsoms**  
The Seed Specialists



“Spearheads combination of strong disease resistance and high yield potential makes it a suitable choice for farmers seeking a reliable winter wheat variety.”

Brian Reilly, Drummonds

## DAFM Yield (Relative Yields)



Source: DAFM recommended list

	Spearhead	KWS Dawsum	JB Diego
Yield (Relative yield)	103	100	98
<b>Resistance to:</b>			
Mildew	8	8	6
Septoria sp.	5	5	5
Yellow Rust	7	8	4

Source: DAFM recommended list

## Key Points

- ✓ Highest yielding winter wheat variety in Drummonds trials for 3 consecutive years.
- ✓ Excellent resistance to mildew and yellow rust.
- ✓ Suitable for early drilling, with a slower maturation rate that allows for earlier sowing.
- ✓ Strong tillering capacity which contributes to its high yield potential.
- ✓ Outstanding performance in DAFM first & second-year winter wheat trials.





## Torp

### The Barn Buster

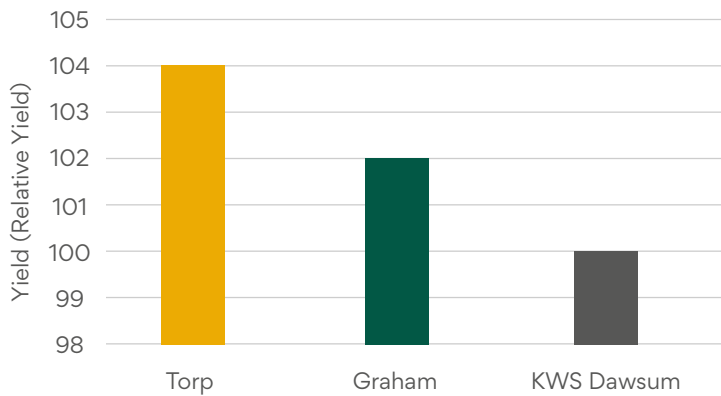
Breeder: **Nordic Seed**



“Torp was the highest yielding variety winter wheat on our farm in 2023. Sowing this variety for the first wheat slot allows me to take full advantage of its high yield potential. It also allows me to sow early and spread the workload in the autumn”

David Murtagh, Skerries

### DAFM Yield (Relative Yields)



Source: DAFM recommended list

	Torp	KWS Dawsum	Graham
Yield (Relative yield)	104	100	102
<b>Resistance to:</b>			
Septoria sp.	6	5	5
Lodging	7	7	6

Source: DAFM recommended list

### Key Points

- ✓ Highest-yielding wheat variety on the 2024 DAFM recommended list.
- ✓ Suitable for September sowing as its slower to mature.
- ✓ Excellent choice for a first wheat.
- ✓ Strong resistance to Septoria tritici.
- ✓ Excellent straw strength.







# Graham

Winter Wheat

## Key Points

- ✓ High-yielding variety.
- ✓ Early maturing and good agronomic profile.
- ✓ Moderately susceptible to *Septoria tritici* and good resistance to yellow rust.

# KWS Dawsum

Winter Wheat

## Key Points

- ✓ Exhibits good resistance to lodging and straw breakdown.
- ✓ Shows strong resistance to mildew and yellow rust, but moderately susceptible to *Septoria tritici*.
- ✓ Produces good quality grain.



# KWS Helium

## Spring Wheat

### Key Points

- ✓ A high yielding moderately early maturing wheat.
- ✓ Good resistance to mildew and sprouting.
- ✓ Good grain quality and excellent straw strength.

# WPB Duncan

## Spring Wheat

### Key Points

- ✓ Moderately later maturing variety.
- ✓ Good agronomic package.
- ✓ Produces very good grain quality.

# WPB Escape

## Spring Wheat

### Key Points

- ✓ A high yielding, moderately later maturing variety.
- ✓ Good resistance to lodging.
- ✓ Excellent grain quality.

# Fixum

## Spring Wheat

### Key Points

- ✓ High yield potential.
- ✓ Good overall disease resistance, particularly for yellow rust and mildew.
- ✓ Excellent grain quality with good resistance to sprouting.





# Winter & Spring Wheat Seeding Rates

Sowing Date		Winter Wheat				Spring Wheat	
		End-Sept	Mid-Oct	End-Oct	Mid-Nov	Early-March	Early-April
Target Plants/m <sup>2</sup>		280	300	320	350	350	375
% Establishment		85%	85%	80%	70%	80%	85%
Check individual labels for TGW	<b>TGW</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>
	44	145	155	176	220	193	194
	46	152	162	184	230	201	203
	48	158	169	192	240	210	212
	50	165	176	200	250	219	221
	52	171	184	208	260	228	229
	54	178	191	216	270	236	238
	56	184	198	224	280	245	247
	<b>TGW</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>
	44	9.2	9.9	11.2	14.0	12.3	12.4
	46	9.7	10.3	11.7	14.7	12.8	12.9
	48	10.1	10.8	12.2	15.3	13.4	13.5
	50	10.5	11.2	12.7	15.9	13.9	14.1
	52	10.9	11.7	13.3	16.6	14.5	14.6
54	11.3	12.1	13.8	17.2	15.1	15.2	
56	11.8	12.6	14.3	17.8	15.6	15.7	





# Winter Barley

---

Winter barley, grown across 55,000-70,000 ha annually is a key crop for Irish cereal rotations. The early winter barley harvest offers numerous advantages, including convenience, which aids in spreading the workload during the busy harvest period. This often provides an opportunity to establish subsequent crops in the rotation in a timelier manner. The reliable market for barley straw in Ireland further contributes to the popularity of the crop, offering farmers an additional revenue stream and increasing the overall profitability of the crop.

Disease management, particularly for Barley Yellow Dwarf Virus (BYDV) and other common diseases, is crucial for maintaining healthy crops and achieving optimal yields. This includes vigilant monitoring and appropriate control measures. In response to these challenges, the Drummonds independent trials underscores the crop's significance in Irish cereal production. This focus on variety selection and disease management, ensures the provision of winter barley varieties that are best suited to the Irish climate and disease pressures. These trials aim to identify varieties with superior disease tolerance and adaptability to local conditions. In recent years, varieties are coming onto the market containing both resistant and tolerant genetic characteristics to act against the yield reductions caused by BYDV. Notably, 'Molly' from the Drummonds range is currently the only 2-row BYDV Resistant variety available on the market.

Overall, winter barley represents an integral part of Irish cereal production, offering farmers a profitable and manageable crop that fits well within the broader context of sustainable agricultural practices.



## Molly

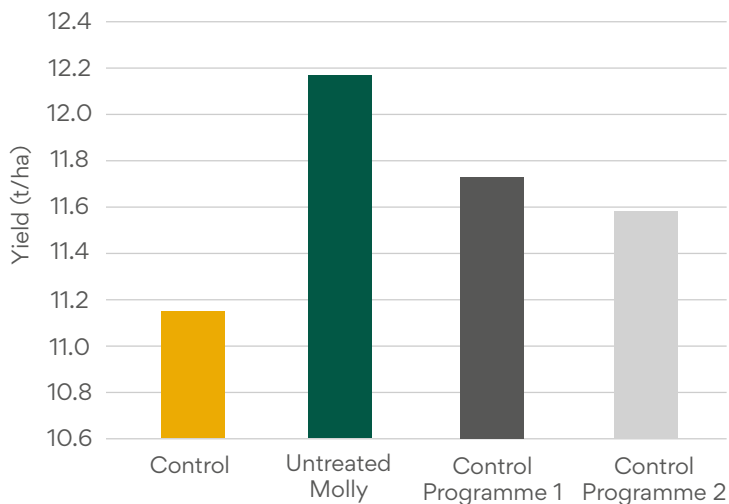
Ireland's only 2-row BYDV-resistant variety

Breeder: **Nordic Seed**

### Key Points

- ✓ One of the highest yielding two-row varieties on the DAFM RL for 2024.
- ✓ Strong tillering capacity allows for rapid ground cover in the spring.
- ✓ Excellent disease resistance, particularly against Rhynchosporium, Brown rust and Net blotch.
- ✓ Early maturing allows for an earlier harvest.
- ✓ Good quality grain with low screenings.

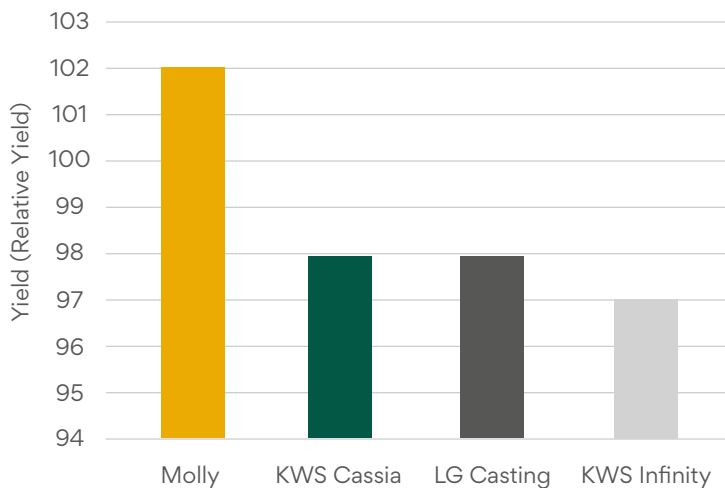
### Drummonds BYDV Trials 2023



Control = no aphicide  
 Control Programme 1 = standard aphicide at 2 leaf stage  
 Control Programme 2 = standard aphicide at 2 & 4 leaf stages

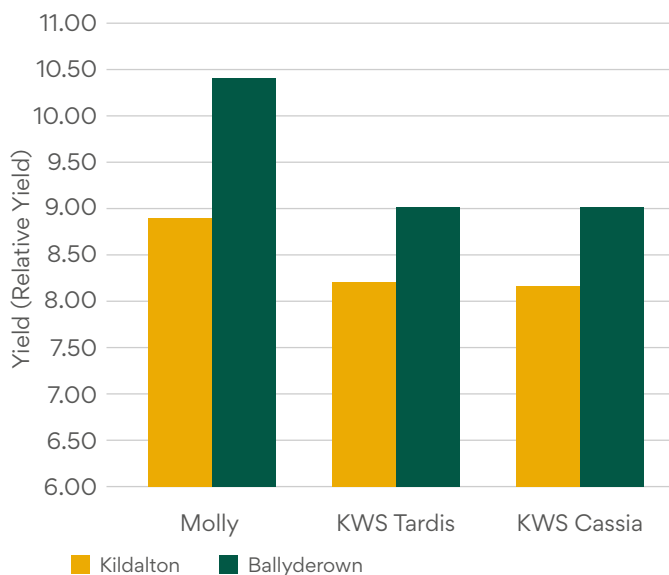
Source: Drummonds BYDV trials 2023

### DAFM Yield (Relative Yields)



Source: DAFM recommended list

### DAFM BYDV Trials 2022



Source: DAFM BYDV trials 2022

Variety	Yield (Relative Yield)	Mildew	Rhynchosporium	Brown Rust
Molly	102	8	7	7
KWS Cassia	98	6	4	7
LG Casting	98	8	5	7

Source: DAFM recommended list

“Having BYDV resistance in a variety has been a game changer for our farm. It reduces my pesticide bill and allows us to sow earlier in better conditions which helps maximise yield potential”

McDowell Farms, Dunany

## Bordeaux

A two-row feed barley with six-row yields

Breeder: **Nordic Seed**

### Key Points

- ✓ A consistent two-row variety in terms of yield and agronomic package.
- ✓ Maintained yield consistently across 3 very different growing seasons of 2021 – 2023.
- ✓ Possesses Barley Yellow Mosaic Virus resistance.
- ✓ Excellent grain quality with low screenings.
- ✓ Early maturing variety.

“Bordeaux is a high yielding winter barley variety with superb grain quality. It has been a popular variety choice for growers in the North East since its release. It also presents an excellent slot for an entry into Oilseed Rape due to its early ripening characteristics.”

Diarmuid Santry, **Drummonds**

### Drummonds BYDV Trials 2023



Source: Drummonds BYDV trials 2023

Variety	Brown Rust	Straw Height (cm)	Screenings % (<2.2mm)
Bordeaux	7	90	1.4
KWS Tardis	6	91.7	1.9
KWS Cassia	7	93.2	1.7

Source: DAFM recommended list







## Orcade

Winter Barley

### Key Points

- ✓ Good straw strength.
- ✓ Breeder claiming BYDV tolerance.
- ✓ High yield potential and grain quality.

## Organa

Winter Barley

### Key Points

- ✓ Highest yielding 2-row variety in Drummonds trials (2022 & 2023).
- ✓ Excellent disease package.
- ✓ Good grain quality.
- ✓ Strong tiller capacity.

## KWS Tardis

Winter Barley

### Key Points

- ✓ High yielding two row variety
- ✓ Short straw with good resistance to lodging.
- ✓ Good grain quality with low screenings.

## KWS Joyau

Winter Barley

### Key Points

- ✓ Early maturing conventional six row variety.
- ✓ Moderately short straw with good resistance to lodging.
- ✓ Tolerant to Barley Yellow Dwarf Virus.

## Belfry

Winter Barley

### Key Points

- ✓ Early maturing 6 row hybrid with high yield potential.
- ✓ Very good against Rhynchosporium, with moderate resistance to mildew
- ✓ Good resistance to Brown Rust and Net Blotch.

## SY Armadillo

Winter Barley

### Key Points

- ✓ Early maturing 6 row hybrid with high yield potential.
- ✓ Long straw with moderate resistance to lodging.
- ✓ Excellent activity against Rhynchosporium, and good activity against Powdery Mildew and Net Blotch.

# Winter Barley Seeding Rates

Sowing Date		Winter Barley		
		End-Sept	Mid-Oct	End-Oct
Target Plants/m <sup>2</sup>		300	330	350
% Establishment		85%	80%	75%
<b>TGW</b>		<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>
44		155	182	205
46		162	190	215
48		169	198	224
50		176	206	233
52		184	215	243
54		191	223	252
56		198	231	261
58		205	239	271
60		212	248	280
<b>TGW</b>		<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>
44		9.9	11.6	13.1
46		10.3	12.1	13.7
48		10.8	12.6	14.3
50		11.2	13.1	14.9
52		11.7	13.7	15.5
54		12.1	14.2	16.1
56		12.6	14.7	16.7
58		13.0	15.2	17.2
60		13.5	15.8	17.8

Check individual labels for TGW



A close-up photograph of several golden-yellow spring barley ears, showing the individual grains and awns. The background is softly blurred, creating a shallow depth of field.

# Spring Barley

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Spring barley, a cornerstone of Irish agriculture primarily due to its suitability for Ireland's climate and soil types, is grown on approximately 120,000 ha annually.

This crop is critical in crop rotation systems, offering benefits in terms of soil health and pest control. It serves various markets, including feed, malting, and distilling, contributing significantly to the agricultural economy. The straw from spring barley is also in high demand, providing an additional income source for growers. With a range of recommended varieties available for the 2024 season, each offering unique characteristics in yield, disease resistance, and grain quality, there are options to suit all farming needs.

The key to high yielding crops of spring barley is ear numbers. Unlike wheat/winter barley, spring barley does not yield more from early planting. The best yields come from the crop being sown into warm soil where it germinates and emerges within two weeks. Prompt germination and rapid canopy closure reduces soil moisture evaporation, keeping the crop as competitive as it can be on grass and broad-leaved weeds. Effective agronomy focuses on maintaining standing crops until harvest and avoiding high seed rates that may hinder this.



## Skyway

The SKY is the limit

“Skyway is the Drummonds Spring Barley variety of choice. It is an excellent yielder, good disease package and good grain quality makes it a simple choice when selecting a tried and tested variety.”

Leslie Beattie, **Meath Grower**

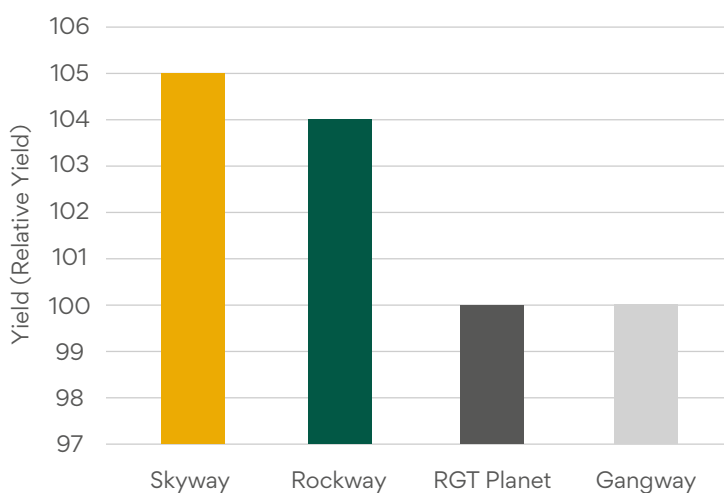
Breeder: **Nordic Seed**



### Key Points

- ✓ One of the highest performing varieties on the 2024 DAFM RL.
- ✓ A reliable choice due to its impressive agronomic package.
- ✓ Vigorous variety, an excellent option for early and late sowing.
- ✓ A dual-purpose spring barley, suitable for the feed and malting markets.
- ✓ Excellent grain quality with low screenings.
- ✓ Proven and consistent performer.
- ✓ A pan-European variety means that it yields exceptionally well no matter what the climate.

### DAFM Spring Barley Recommended List 2024



Source: DAFM recommended list

Variety	Yield (Relative Yield)	Rhynchosporium	Brown Rust
Skyway	105	7	6
SY Amity	104	6	6
RGT Planet	100	5	5
Gangway	100	5	6

Source: DAFM recommended list





## Rockway

Rock solid yields

“Rockway is a reliable and robust variety, making it an attractive option for spring barley production. We like to use this variety on very fertile sites where lodging risk is high. Standing power is one of its greatest characteristics”

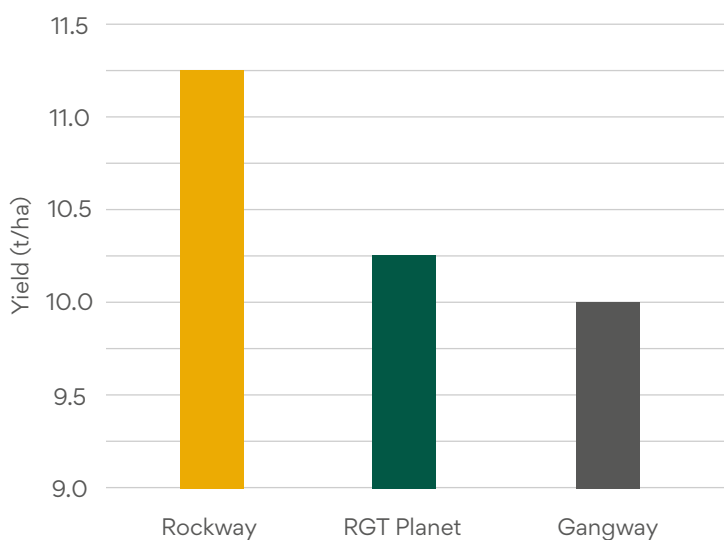
Mark Houlihan, Kildare

Breeder: **Nordic Seed**

### Key Points

- ✓ One of the highest yielding spring barley varieties on the DAFM RL.
- ✓ Fast tillering and high vigour create a dense canopy to smother weeds.
- ✓ Excellent disease profile and agronomic qualities, especially against wet weather diseases.
- ✓ Slightly later maturing variety, useful in spreading the workload at harvest.
- ✓ Very good straw strength and good resistance to lodging.
- ✓ One of the top performers listed for grain quality characteristics such as hectolitre weight and protein.

### Drummonds BYDV Trials 2022



Source: Drummonds BYDV trials 2022

Variety	Rhynchosporium	Brown Rust	Net Blotch
Rockway	7	6	7
RGT Planet	5	5	4
Gangway	5	6	8

Source: DAFM recommended list



## Lollipop

Hits the Sweetspot for yield

Breeder: **Nordic Seed**

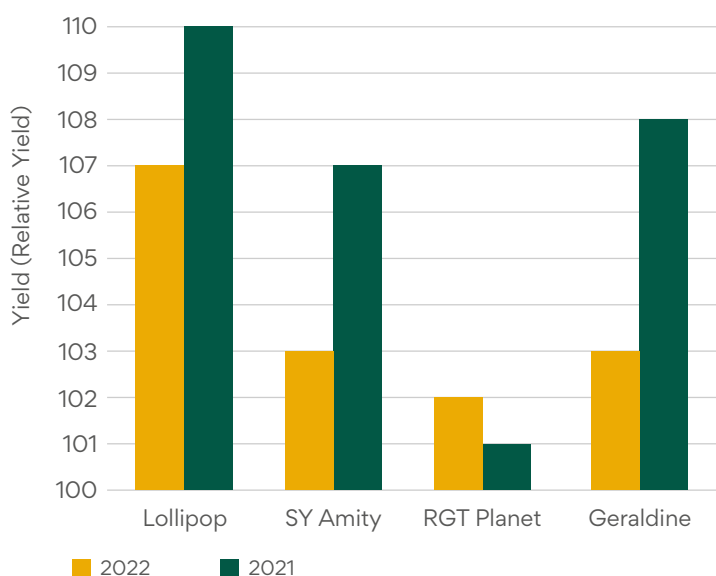
### Key Points

- ✓ Highest yielding spring barley in DAFM trials (2022 & 2023).
- ✓ Extremely vigorous variety that gets up and away quickly, maximising plant numbers early.
- ✓ Good agronomic disease package.
- ✓ Excellent standing potential
- ✓ Impressive grain quality traits.
- ✓ Available in 2025 for growers.

“This variety is performing extremely well in both DAFM and Drummonds trials over the last few years. Its combination of disease resistance, excellent standing power and high bushel weights create a very high yielding variety”

Michael Howard, Drummonds

DAFM Spring Barley Recommended List Trials



Source: DAFM recommended list

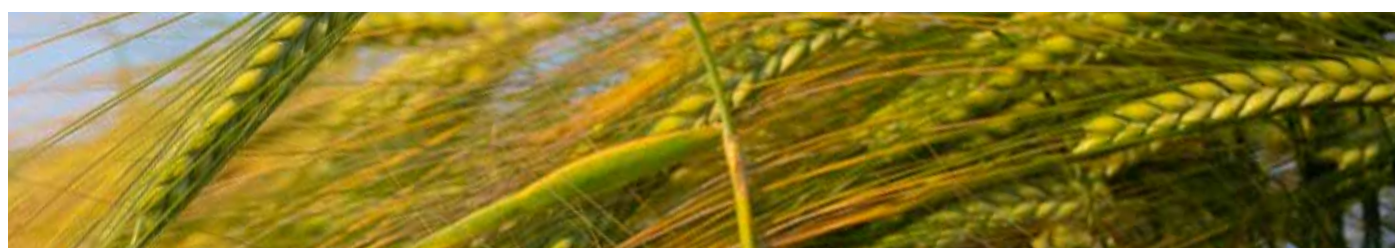






# Spring Barley Seeding Rates

Sowing Date		Spring Barley		
		Mid-March	Late-March	Mid-April
Target Plants/m <sup>2</sup>		325	350	350
% Establishment		85%	85%	85%
		<b>TGW</b>	<b>kg/ha</b>	<b>kg/ha</b>
		44	168	181
		46	176	189
		48	184	198
		50	191	206
		52	199	214
		54	206	222
		56	214	231
Check individual labels for TGW		58	222	239
		60	229	247
		<b>TGW</b>	<b>st/ac</b>	<b>st/ac</b>
		44	10.7	11.5
		46	11.2	12.1
		48	11.7	12.6
		50	12.2	13.1
		52	12.7	13.6
		54	13.2	14.2
		56	13.6	14.7
		58	14.1	15.2
		60	14.6	15.7





# Oats

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Once Ireland's most widely grown crop, oats now rank as the third largest cereal produced, with approximately 25,000 ha grown annually. The crop favours the Irish climate, producing excellent grain quality and high yields. The weed suppressing ability of oats makes it the preferred choice for organic producers.

Oats is primarily produced in Ireland for horse and other animal feeds, with a portion also being processed for human consumption. There is an increasing demand for food-grade oats, both domestically and internationally, reflecting the growing market interest.

Winter oats is a robust crop capable of producing high yields in low soil fertility scenarios due to its Nitrogen scavenging ability. Drummonds trials to date indicate that sowing rates of up to 400 seeds/m<sup>2</sup> produces yields greater than that from 250 seeds/m<sup>2</sup>. Key factors influencing oat yields and quality include seeding rate, nitrogen application rates, and timings. The primary objective in oat cultivation is to maximise the number of grains per square metre, which is a crucial determinant of yield.



# Husky

Winter and Spring Oat

	Husky	WPB Isabel
Yield (Relative yield)	102	98
Straw height (cm)	116.5	119.2
Resistance to lodging	7	7
Straw breakdown	5	7
Earliness of ripening	8	5
Resistance to Mildew	5	5
Resistance to Crown Rust	4	5

Source: DAFM recommended list

## Key Points

- ✓ High yield potential and early maturing variety.
- ✓ Ideal for Irish climatic conditions and diverse soil types.
- ✓ A white-oat with high KPH and kernel content.
- ✓ Excellent grain quality, suitable for milling and animal feed.
- ✓ Short, stiff straw structure reduces lodging risk.

# Winter & Spring Oats Seeding Rates

Sowing Date		Winter Oats			Spring Oats		
		Early-Oct	Mid-Oct	Early-Nov	Mid-March	Late-March	Mid-April
Target Plants/m <sup>2</sup>		300	320	340	325	350	350
% Establishment		85%	80%	75%	85%	85%	85%
<b>TGW</b>		<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>
29		102	116	131	111	119	119
31		109	124	141	119	128	128
33		116	132	150	126	136	136
35		124	140	159	134	144	144
<b>TGW</b>		<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>
29		6.5	7.4	8.4	7.1	7.6	7.6
31		7.0	7.9	9.0	7.6	8.1	8.1
33		7.4	8.4	9.5	8.0	8.7	8.7
35		7.9	8.9	10.1	8.5	9.2	9.2

Check individual labels for TGW







# Winter Oilseed Rape

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Oilseed rape is an important crop in Irish agriculture, playing a vital role in crop rotations, with approximately 8,500 ha grown annually.

As a break crop, oilseed rape offers high gross margins and solid agronomic benefits. It improves soil structure and health, reduces pest and disease pressure in subsequent cereal crops, and contributes to the overall biodiversity of the farm. It also presents the opportunity for greater control of difficult to control grass weeds on the farm such as Blackgrass by using alternative herbicide options (propyzamide).

These benefits make oilseed rape an integral part of sustainable crop rotation strategies.

Recent developments in genetics and crop management have brought significant improvements to yields.

In varieties today, we have pod shatter resistance, turnip yellow virus resistance, sclerotinia tolerance and clubroot resistant varieties available. Clearfield varieties was a major steppingstone in plant breeding allowing for control of weeds such as Charlock and Runch. Clearfield technology presents the opportunity to grow oilseed rape in situations where historically brassica weeds are a challenge.

These advancements are crucial in maintaining high yields and quality, under challenging environmental conditions. The success of oilseed rape in the DAFM and Drummonds trials indicate strong adaptability and potential for high yields under Irish conditions.



# Winter Oilseed Rape Varieties 2024

Traits & Characteristics		Trial Information	Lodging resistance	Stem stiffness	Autumn vigour	Height (cm)	Light leaf spot resistance	Stem canker resistance	Verticillium stem stripe	Earliness of flowering	Earliness of maturity
<b>PT303</b>	Protector Sclerotinia, Verticillium Stem Stripe, TuYV, Rlm7	AHDB UK Recommended 2023	8	8	6.0	159	7	6	Partial resistance	5	5
<b>PT279 CL</b>	Clearfield variety	AHDB UK Recommended 2022	8	8	6.5	152	5	5	(-)	6	6
<b>PT284</b>	Protector Clubroot	NEW, UK National Listed 2022	9	8	6.4	150	6	7	(-)	5	5
<b>PT315</b>	Pod shatter resistance, TuYV, Rlm7	UK National List Trials 2020-2022	9	8	7	169	6	6	(-)	6	7
<b>PT312</b>	Protector Sclerotinia, pod shatter tolerance, TuYV	UK National List Trials 2020-2022	9	8	6	165	5	7	(-)	4	7



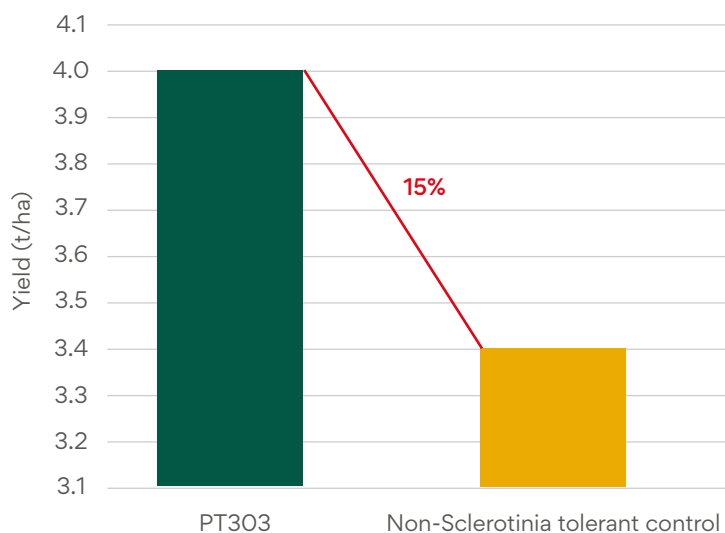
## PT303

Providing growers with consistently high yields over the last 3 seasons

“We use PT303 for several reasons. Its sclerotinia tolerance allows us to cut back on a fungicide saving up to 25 euro/acre. Its ability to grow quickly and form a dense canopy in the autumn reduces pigeon grazing and gives the crop a higher GAI in spring, reducing nitrogen applications. Both of these features save machinery passes, time and money.”

Ollie Whyte, **Whyte Bros. Dublin**

### PT303 Sclerotinia Tolerance Yields



At €400/t ex farm price with a 0.6t/ha yield advantage can increase profits by €240/ha over a non-sclerotinia tolerant variety.

PT303 agronomic details	
Gross output (3 years):	111%
	116%
	105%
High Oil Content	46.20%
Lodging Resistance	9%
Stem Stiffness	8%
Plant Height	155cm
Protector Sclerotinia Tolerance	Yes
TuYV Resistance	Yes
Phoma Resistance	7
Light leaf spot Resistance	6
Earliness of flowering	4
Earliness of maturity	6

Breeder:   
**PIONEER**



Figure 1 & 2: Sclerotinia in Oilseed Rape. Choose PT303 to avoid this.

### Key Points

- ✓ Consistently boasts top yields across multiple trial programmes.
- ✓ Particularly suited to Irish climate due to its Sclerotinia tolerance.
- ✓ Resistance to Turnip Yellows Virus (TuYV).
- ✓ Contains multigenic Phoma resistance.
- ✓ Exhibits strong autumn vigour and robust spring regrowth.
- ✓ Outstanding lodging resistance with high stem stiffness scores.
- ✓ Sclerotinia tolerance has the potential to give a 15% yield advantage over non-Sclerotinia tolerant varieties.

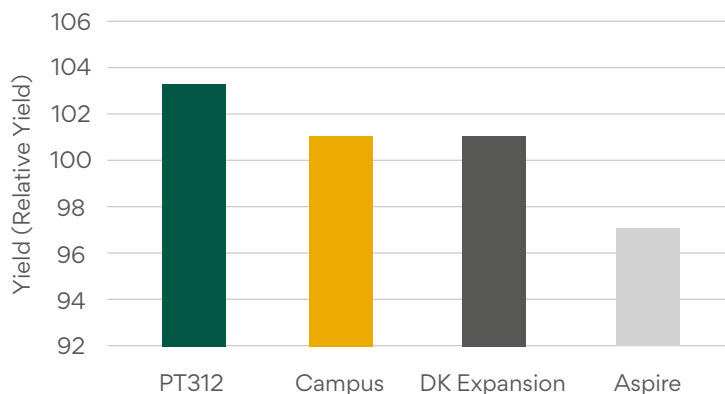




## PT312

Everything you need in an Oilseed Rape variety

PT312 Performance in UK NL Trials



Source: Corteva

Breeder:  PIONEER

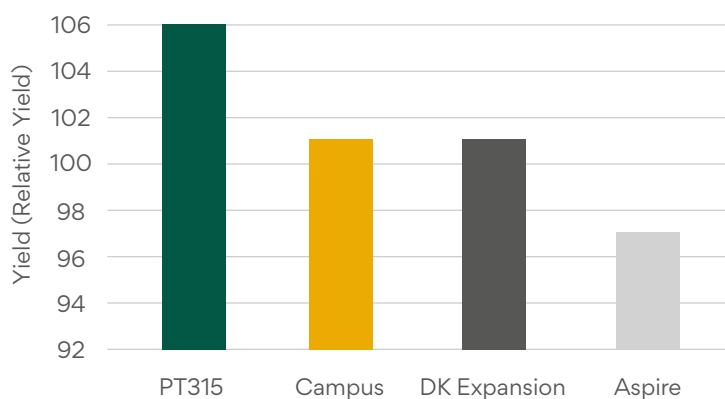
### Key Points

- ✓ A new hybrid variety for 2024 containing all of the key traits for maximum yield potential in Oilseed rape.
- ✓ Strong vigour in autumn and rapid growth in spring.
- ✓ Contains pod-shatter resistance, sclerotinia tolerance and Turnip Yellows Virus Resistance.
- ✓ Strong resistance to phoma.

## PT315

The first Pioneer pod shatter resistant hybrid to be launched in Ireland

PT315 Performance in UK NL Trials

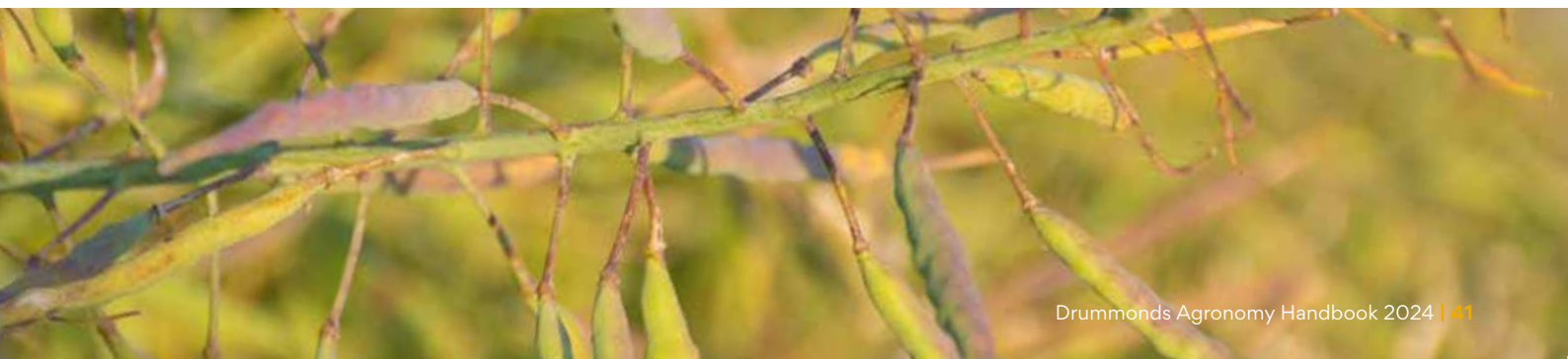


Source: Corteva

Breeder:  PIONEER

### Key Points

- ✓ Maximise seed yield potential for 2025.
- ✓ Ground covers of over 70% achievable in autumn – reducing pigeon grazing.
- ✓ Contains Pod shatter resistance.
- ✓ Turnip Yellows Virus (TuYV) resistance and multigenic phoma resistance genes.
- ✓ Scored 9 for lodging and 8 for stem stiffness in UK trials.



# Winter Oilseed Rape Varieties

## PT279CL

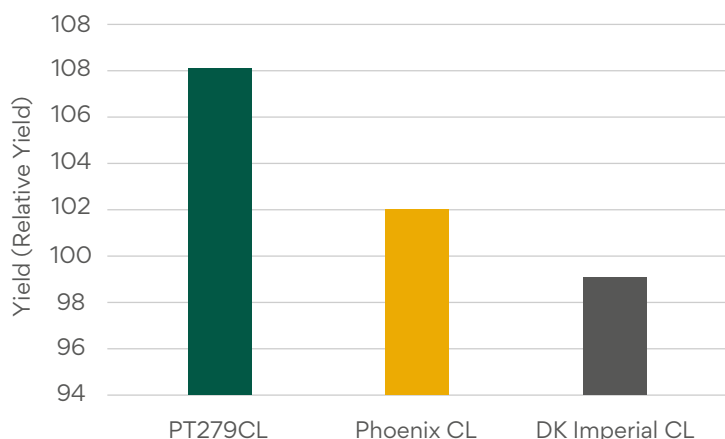
The obvious choice when selecting a Clearfield Oilseed Rape variety



PT279CL is a proven and consistent variety for us here at Coolmore Farms. It suits earlier drilling due to its excellent autumn vigor and performs well against light leaf spot and other wet-weather diseases affecting Oilseed Rape”.

Tony Nugent, Coolmore Farm

### NIAB Clearfield Variety Trials Results



Source: Corteva

### Key Points

- ✓ Has demonstrated the highest gross output over three years in NIAB TAG Clearfield trials.
- ✓ Exhibits high resistance to lodging, ensuring crop stability.
- ✓ Features good stem stiffness at maturity, contributing to its robust structure.
- ✓ Relatively early maturing, offering flexibility in harvesting schedules.

PT279CL agronomic details	
Oil content %	44.5
Light Leaf Spot resistance	5
Stem Canker resistance	5
Resistance to lodging	8
Stem stiffness	8
Plant height (cm)	147
Earliness of flowering	6
Earliness of maturity	6

Source: Pioneer



## PT284

The first clubroot resistant Oilseed rape variety on the Irish market



### Key Points

- ✓ Combines the Pioneer Clubroot Protector trait with leading disease resistance scores for robust infield protection.
- ✓ Known for its superior early vigour.
- ✓ Displays good resistance to lodging, enhancing crop stability.
- ✓ The variety will be a popular choice for its unique resistance features and adaptability to Irish growing conditions.



PT279CL agronomic details	
Oil content %	45.1
Light Leaf Spot resistance	6
Stem Canker resistance	7
Resistance to lodging	9
Plant height (cm)	147
Earliness of maturity	6

Source: Pioneer





## DK Expectation

### Risk Reducer

DK Expectation combines TuYV resistance with all round agronomic strength to minimise commercial production risk. Well-established on the Recommended List, its relatively early flowering and medium maturity makes for one of the longest pod-fill periods available.

DK Expectation agronomic details	
Oil content %	45.2
Resistance to lodging	8
Earliness of maturity	6
Stem Canker resistance	7
Light Leaf Spot resistance	7
TuYV resistance	R
Pod shatter resistance	R

AHDB RL 2023/24 & DEKALB earliness at regrowth data



### Key Points

- ✓ Vigorous establishment and rapid autumn development, offering wide sowing date flexibility and best tolerance of early pest damage.
- ✓ Rapid spring growth and early flowering for strong compensation from winter damage and long pod-fill.
- ✓ Good light leaf spot, stem canker and verticillium resistance with strong standing power for the greatest management flexibility.
- ✓ Original Dekalb pod shatter resistance maximising combining flexibility while minimising losses in the run-up to and at harvest.

## DK Exstar

### The Strongman

Continuing to prove the value of all-round agronomic strength with reliable trial and farm performance at the highest level. The ideal combination of growth habit, foliar disease resistance and standing power for early drilling.

DK Expectation agronomic details	
Oil content %	45.9
Resistance to lodging	9
Earliness of maturity	6
Stem Canker resistance	8
Light Leaf Spot resistance	8
Pod shatter resistance	R

DEKALB replicated trials data 2022



### Key Points

- ✓ Rapid but not over-fast autumn development with fast spring regrowth for the best balanced pre-and post-winter growth habit.
- ✓ Class-leading resistance to light leaf spot as well as phoma stem canker and a standing power second-to-none add to its value as an early driller.
- ✓ Good resistance to verticillium and noticeably higher yields than the most resistant standard in national stem health trials.
- ✓ Original Dekalb pod shatter resistance, maximising combining flexibility and minimising seed losses in the run-up to and at harvest.

# Winter Oil Seed Rape Seeding Rates

Optimal seeding rates are essential to attain the desired plant populations for maximum yields.

It's crucial to consider the Thousand Grain Weight (TGW), as significant variability can exist between different seed batches. The target is to achieve a plant density of 30 to 50 plants per square metre. Germination rates are generally higher when sowing in mid-August compared to the first week of September.

Therefore, for later sowing dates, higher seeding rates are required. Additionally, the seeding rate may need adjustment based on the sowing method used, whether it's direct drilling, minimum tillage, or plough based. For hybrid varieties, seed rates can range from 2 to 3.5 kg/ha, depending on the TGW.







# Beans

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As a native protein source, beans have become a popular crop for Irish agriculture with approximately 8,000 ha grown annually. The increasing demand in the feed industry, coupled with government initiatives like the protein payment scheme, further emphasises their importance.

One of the key benefits of beans is their ability to fix nitrogen. As a legume, beans form a symbiotic relationship with nitrogen fixing soil bacteria, enabling them to convert atmospheric nitrogen into a plant usable form. This natural process reduces the need for nitrogen fertilisers in subsequent crops, further contributing to farm sustainability.

In crop rotations, beans offer numerous advantages. They not only improve soil health by adding organic matter and nitrogen but also help disrupt disease and pest cycles, particularly in cereal crops. This makes them an excellent strategic choice for maintaining long-term soil fertility and reducing overall nitrogen fertiliser requirements in crop production. Thus, beans represent a sustainable, environmentally friendly, and economically viable option for Irish farmers.

Winter beans can be sown from the end of October until the end of January. They present the opportunity for an earlier harvest enabling an efficient entry to wheat. Sowing dates for spring beans range from February to early April.





# Tundra

## Winter Beans

Agronomic Characteristics	Tundra
Yield (Relative yield) as % control	93
Earliness of maturity (1-9)	6
Straw length (cm)	104
Standing ability at harvest (1-9)	8
Resistance to Downey Mildew (1-9)	5
Resistance to Rust (1-9)	5
Resistance to Chocolate Spot (1-9)	5

Source: PGRO UK descriptive list 2024

### Key Points

- ✓ Consistently high-yielding variety.
- ✓ Excellent resistance to lodging, minimising the risk of crop damage.
- ✓ Comprehensive agronomic package effectively combats Chocolate Spot and Ascochyta.
- ✓ Early maturing variety, allowing for a timely harvest date for improved crop management and market timing.

# Lynx

## Spring Beans

### Key Points

- ✓ Tops the 2024 DAFM recommended list as the highest yielding variety of spring beans.
- ✓ Exhibits exceptional disease resistance, especially effective against Downy Mildew.
- ✓ Demonstrates strong brackling and lodging resistance, ensuring stable and healthy growth.

# Caprice

## Spring Beans

### Key Points

- ✓ Offers a high yield potential.
- ✓ Shows moderate resistance to diseases such as Chocolate Spot, Downy Mildew, and Rust.
- ✓ Provides excellent resistance to brackling and lodging, ensuring robust crop growth and stability.

Agronomic Characteristics	Lynx	Caprice
Yield (Relative yield) as % control	102	98
% Crude protein	99	103
Plant height (cm)	129	126
Brackling resistance	8	7
Lodging resistance	9	8
Earliness of maturity	6	7
Resistance to Chocolate Spot	6	7
Resistance to Downy Mildew	7	7
Resistance to Rust	5	6

Source: DAFM recommended list

# Winter & Spring Bean Seeding Rates

Sowing Date		Winter Beans		Spring Beans	
		Late-Oct	Late-Nov	Early-Feb	Mid-March
Target Plants/m <sup>2</sup>		20	25	30	35
% Establishment		75%	75%	85%	85%
Check individual labels for TGW	<b>TGW</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>	<b>kg/ha</b>
	500	133	167	176	206
	550	147	183	194	226
	600	160	200	212	247
	650	173	217	229	268
	700	187	233	247	288
	750	200	250	265	309
	<b>TGW</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>	<b>st/ac</b>
	500	8.5	10.6	11.2	13.1
	550	9.3	11.7	12.4	14.4
	600	10.2	12.7	13.5	15.7
	650	11.0	13.8	14.6	17.1
	700	11.9	14.9	15.7	18.4
	750	12.7	15.9	16.9	19.7





# Grain Marketing Service

Recent years have seen increased volatility in global grain markets, primarily driven by geopolitical unrest and climatic anomalies. These factors significantly impact grain supply and prices, making market predictions more challenging. Political and economic instability, particularly in key grain-producing regions, has led to fluctuations in grain availability and prices. Trade policies and international conflicts have also played a role in shaping market trends.

## Grain Procurement and Marketing

Drummonds, as one of Ireland's largest grain trading companies, purchases over 100,000 tonnes of native grain annually from local farms. Our core activity involves handling a wide range of grains, including feed grains like wheat, barley, oats, milling oats, oilseeds, and pulses.

Drummonds actively works with farmers to enhance farm profitability and efficiency. This role in trading grain is integral to our business, aiding farmers in navigating the complexities of the grain market.

A critical tool for farmers to manage market risks, forward selling allows them to lock in selling prices, mitigating the impact of market volatility. This strategy is particularly beneficial during uncertain times. Farmers are advised to stay alert to market fluctuations driven by weather-related issues like drought and excessive rainfall. These conditions often lead to market spikes, presenting opportunities for strategic trading.

The grain market remains dynamic, influenced by a myriad of global factors. For farmers, staying informed and adaptable is key to navigating these challenges successfully. Drummonds continues to play a pivotal role in supporting Irish farmers through these complexities, offering strategic avenues such as forward selling to manage risks and capitalise on market opportunities.





# Cover Crops

Cover crops play a vital role in sustainable farming practices, offering a range of benefits that contribute significantly to soil health and overall farm productivity.

The term ‘Cover Crop’ refers to plants grown specifically to cover the ground with green matter, thereby preventing soil erosion, nutrient leaching, and improving soil structure.

### Green Cover must now be established by:

- **September 15<sup>th</sup>** for growers in the Agri-Climate Rural Environmental Scheme (ACRES), who have selected the cover crop option.
- **October 31<sup>st</sup>** on lands not intended for winter cropping.

### ACRES Requirements:

- **Timely Sowing:** Cover crops must be sown immediately post-harvest & no later than September 15<sup>th</sup>.
- **Seed Selection:** Select at least 2 species from the approved list.
- **Establishment:** Use non-inversion crop establishment techniques only.
- **Seeding Rates:** Use recommended seeding rates for optimal establishment.
- **Post-Sowing Management:** Maintain the cover crop until at least January 1<sup>st</sup>.
- **Crop Removal:** After January 1<sup>st</sup>, light grazing or incorporation is permitted.





## Cover Crop Mixes

Drummonds provides a complete range of cover crop mixes that cater for the ACRES scheme, specific rotational requirements, and other farm needs. Our mixes are carefully formulated to improve soil structure, fertility, and overall farm productivity, embodying Drummonds commitment to providing effective and sustainable agricultural solutions. We also offer customised blends, allowing for tailored solutions specific to individual farm conditions.

## ACRES Seed Rates

A seed mixture must comprise of min. two species at the monoculture seed rates from the prescribed list. There is no maximum number of species that can be used but at least 100% of the full sowing rate must be achieved. No one species must account for more than 60% of the mix.



## List of prescribed Catch Crop species

Catch Crop Species	Monoculture Seed Rate (kg/ha)
Buckwheat	50kg
Crimson Clover	15kg
Barseem Clover	15kg
Balansa Clover	15kg
Squarrosa Clover	15kg
Forage/Fodder Rape	8kg
Mustard (White)	15kg
Mustard (Brown)	7kg
Oats	100kg
Black Oats	60kg
Phacelia	8kg
Sunflower	20kg
Rye	150kg
Tillage Radish	10kg
Vetch	30kg
Leafy Turnip	8kg
Peas	80kg
Beans	140kg
Linseed	30kg
Red Clover	20kg
Fodder Radish	10kg
*Kales/Rape Hybrid	8kg

\* Note: the Kale/Rape hybrid is classified as one species; another species will be required to meet the minimum requirement of at least two species in the mix.

Cover Crop Mixes	Pack Size	Mix	Notes
Soil Booster Pro	19 kg (1 ha pack)	Vetch 15kg Phacelia 4kg	N fixing No Clubroot risk
Soil Booster Graze	16 kg (2 ha pack)	Leafy turnip 8kg Forage rape 8kg	Rapid growth Suppress weeds Soil conditioning
Mix 8	37.5 kg (1 ha pack)	Black Oats 30kg Crimson Clover 7.5kg	Brassica free grazing mix N fixing No Clubroot risk
Soil Enhancer	21.9 kg (1 ha pack)	Crimson Clover 3kg Vetch 3kg Phacelia 2.4kg Buckwheat 2.5kg Linseed 6kg Black Oats 3kg Sunflower 2kg	Non Brassica mix. Excellent Soil Conditioner with 7 different species
Potato Power	21 kg (1 ha pack)	Oilseed radish 3kg White mustard 4.5kg Crimson Clover 2.25kg Vetch 4.5kg Black Oats 6kg	Soil conditioning Biofumigant benefits Nitrogen fixing



# Maize

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Maize stands out as a highly productive forage crop, offering excellent high quality livestock feed at competitive prices and is straightforward to grow with correct site selection.

It also offers tillage farms an avenue for additional revenue as a sellable cash crop to livestock farmers. As a break crop, maize can boost yields of subsequent cereal crops, thus benefiting crop rotations.

The Drummonds team of agronomists specialises in maize variety selection, offering advice that aligns with your specific agricultural conditions and goals. This ensures you achieve optimum yields and quality.





# Scandinav Forage

Maize

## Key Points

- ✓ A high yielding early maturing variety.
- ✓ Suitable for planting in the open.
- ✓ Consistent performing variety.

# Mas08F

Maize

## Key Points

- ✓ A high starch content variety.
- ✓ Excellent yield potential.
- ✓ Medium early, with stay green effect.
- ✓ Suitable for open on favourable sites or with plastic.

# Starlord

Maize

## Key Points

- ✓ A high yielding medium early variety.
- ✓ Excellent starch content.
- ✓ Suitable for open on favourable sites or with plastic.

# Ambition

Maize

## Key Points

- ✓ Best variety for early maturity.
- ✓ High DM yields.
- ✓ High Starch content.
- ✓ Suited with or without plastic.

# Saxon

Maize

## Key Points

- ✓ New variety for 2024.
- ✓ High Dm yields with excellent starch.
- ✓ Suitable for uncovered sites.
- ✓ Early maturity.







# Fodder Beet

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Fodder beet, a crop well suited to the Irish climate, offers tillage farmers high yields (70-100 t/ha) and profitable sales opportunities by diversifying income sources by supplying a high-demand livestock feed. The inclusion of fodder beet in a tillage rotation presents benefits such as improved soil health and disrupting pest and disease cycles. It also plays a valuable role in spreading the workload.

The Conviso Smart system introduces a novel approach for Irish farmers, combining herbicide-resistant beet varieties with the Conviso One herbicide for efficient weed management in challenging areas. This system simplifies weed control, requiring only one or two applications of Conviso One herbicide for satisfactory results. However, it's crucial to ensure that sprayers are free from chemical residues before and after application to avoid cross-contamination.

Our beet agronomy experts deliver not just optimal crop selection advice but also guide you through integrated weed management and fertility strategies to enhance both yield and quality. Their support extends beyond planting, offering insights on maintaining crop health and maximising performance through targeted fertility practices and effective weed control measures. This comprehensive approach ensures that your beet crops achieve their full potential in both yield and quality.





# Enermax

High Dry Matter

### Key Points

- ✓ White roots, low soil tare.
- ✓ Excellent yield.

# Magnum

High Dry Matter

### Key Points

- ✓ Long established variety.
- ✓ White roots.
- ✓ Excellent yield.

# Bolero

Medium Dry Matter

### Key Points

- ✓ Yellow roots.
- ✓ High yield.

# Jamon

Medium Dry Matter

### Key Points

- ✓ Orange roots.
- ✓ Suits grazing in situ.

## Conviso Beet

The conviso beet system is relatively new to Irish growers. The combination of herbicide tolerant varieties to the conviso one herbicide give growers solutions to weed control in difficult sites where weed beet or brassica weeds have been a problem. The weed control is simplified by one or two applications of Conviso one herbicide to give full weed control. It is important to ensure no chemical residues in sprayers before or after

spraying. It is also important to control bolters by hand roguing. If groundkeepers appear in the following crop these are easily controlled by non-las inhibitors such as MCPA / 2,4-D.

Drummonds agronomists are available for all agronomy back up to all maize and beet husbandry requirements.







# Grass Seed

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The Drummonds grass seed mixture range stands out for its exceptional quality and proven performance. These mixtures are derived from carefully chosen varieties, ensuring optimal performance for reseeded swards. Drummonds only includes varieties from the Irish recommended list to create balanced mixtures tailored for specific needs. Bespoke blends can be prepared upon request.

Our agronomy team provides personalised guidance on selecting the ideal grass seed mixture tailored to your farm's specific needs and soil type. Beyond initial recommendations, we offer comprehensive follow-up support, including management advice and practical tips to enhance the performance of your reseeded sward, ensuring you achieve the best possible results.



# Sweetbite Intensive Grazing

Grass Seed

## Key Points

- ✓ Premium Grazing Mixture for Irish Farms.
- ✓ An all-late heading mixture with 5\* Grazing varieties.
- ✓ Excellent digestibility.
- ✓ Superior Spring growth.
- ✓ Excellent ground cover ensuring sward longevity.
- ✓ Packs of 11.8 kgs with 0.6 kgs white clover.

# Goldbite General Purpose

Grass Seed

## Key Points

- ✓ Superior Quality Mixture suitable for both Grazing and Silage.
- ✓ An all-late heading mixture with excellent silage yields.
- ✓ First Cut Silage ready to harvest 20th May to June 4<sup>th</sup>.
- ✓ Excellent spring and total yields.

# Megabite Intensive Silage

Grass Seed

## Key Points

- ✓ An all-intermediate heading date mixture.
- ✓ Tight Heading date range ensures excellent grass quality at harvest.
- ✓ Exceptional two cut silage mixture.
- ✓ Available with / without clover.

# Heavy Ground

Grass Seed

## Key Points

- ✓ An all-diploid mixture of varieties with excellent ground cover scores.
- ✓ Contains Timothy which gives a tightly grown sod to reduce poaching.
- ✓ Suitable for grazing and cutting.



# Supergrow Permanent Pasture

Grass Seed

## Key Points

- ✓ A blend of both Intermediate and late heading varieties.
- ✓ Suitable for both grazing and silage.
- ✓ Excellent digestibility and spring growth.
- ✓ Early grazing the close up for silage.

# Red Clover Silage

Grass Seed

## Key Points

- ✓ An intensive silage mixture.
- ✓ Designed for frequent cutting and will last 3 to 4 years.
- ✓ Red clover produces high protein forage.
- ✓ Compliant to BISS Red Clover scheme.
- ✓ Important not to over graze or mow too tight as red clover prone to plant loss.

# Multispecies

Grass Seed

## Key Points

- ✓ An all-late mixture suitable for cutting and grazing.
- ✓ Contains 3 kgs Red & White Clover.
- ✓ Plantain and chicory herbs provide deep rooting structure and benefits to animal health.
- ✓ Compliant to BISS MSS Measure Available with / without clover







# Agricultural Conversion Table

Area	Multiply by:
Acres to Hectares	0.4047
Hectares to Acres	2.471
Application	Multiply by:
Kg/ha to Units/acre	0.8
Units/acre to Kg/ha	1.25
Volume	Multiply by:
Gallons to Litres	4.546
Gallons/ac to Litres/ha	11.2
Pints/ac to Litres/ha	1.404
Litres to gallons	0.22
kg/m <sup>3</sup> to Units/tonne	2
kg/m <sup>3</sup> to Units/1,000 gallons	9
To convert units/1,000 gallons to Kg/m	Divide by 9
1m <sup>3</sup> = 220 gallons = 1,000 litres = 1 tonne	-
1,000 gallons = 4.5 tonnes = 4.5m <sup>3</sup>	-
1,000 gallons/acre = 11 tonnes/ha	-
Length	Multiply by:
Inches to Millimetres	25.4
Millimetres to Inches	0.03937
Feet to Metres	0.3048
Yards to Metres	0.9144
Metres to Yards	1.094
Miles to Kilometres	1.609
Kilometres to Miles	0.6214
Weight	Multiply by:
Tonnes/acre to Tonnes/ha	2.505
Oxide to Element	Multiply by:
kg P <sub>2</sub> O <sub>5</sub> to kg P	0.436
kg K <sub>2</sub> O to kg K	0.830



# DAFM 2024 Recommended Lists

## Winter Barley Recommended List 2024

Agronomic & Quality Characteristics*	Recommended							Provisionally Recommended	
	Belfry	KWS Cassia	KWS Infinity	KWS Joyau *	KWS Tarais	LG Casting	SY Armadillo	Bordeaux	Molly **
<b>Relative Yield #</b>	105	98	97	105	104	98	109	98	102
<b>Varietal Type</b>	6R(H)	2R	2R	6R	2R	2R	6R(H)	2R	2R
Straw Height (cm)	110.2	93.2	92.6	95.4	91.7	88.0	115.0	90.0	95.1
Resistance to Lodging	7	7	7	7	7	5	6	5	(5)
Straw Breakdown	6	6	6	7	6	5	6	5	(6)
Earliness of Ripening	7	6	6	8	6	7	7	7	(7)
<b>Resistance to:</b>									
Mildew	6	5	5	5	6	8	(6)	(5)	(8)
Rhynchosporium	8	4	6	6	7	5	8	5	(7)
Brown Rust	7	7	6	7	6	7	5	7	(7)
Net Blotch	7	7	7	7	7	7	(7)	(6)	-
<b>Grain Quality:</b>									
Screenings % (<2.2mm)	2.6	1.7	2.5	1.3	1.9	2.5	2.3	1.4	2.4
1000 Grain Weight (g)	46.9	53.4	52.8	49.1	55.6	51.3	48.6	52.9	56.5
Hectolitre Weight (kg/hl)	68.2	70.8	68.2	69.5	69.5	68.8	68.1	69.0	65.8
<b>Year First Listed</b>	<b>2019</b>	<b>2011</b>	<b>2016</b>	<b>2022</b>	<b>2022</b>	<b>2020</b>	<b>2023</b>	<b>2023</b>	<b>2024</b>

Data in this table based on trial results from 2021, 2022 and 2023.

\* Breeder claim of BYDV tolerance.

\*\* Breeder claim of BYDV resistance.

# Yields are expressed as a percentage of the mean of KWS Cassia, KWS Infinity and Belfry (100 = 9.88t/ha @ 15% moisture content).

( ) Limited Data.



## Winter Wheat Recommended List 2024

Agronomic & Quality Characteristics*	Recommended				
	Graham	JB Diego	KWS Dawsum	Spearhead	Torp
<b>Relative Yield #</b>	<b>102</b>	<b>98</b>	<b>100</b>	<b>103</b>	<b>104</b>
Straw Height (cm)	78.9	80.3	73.9	78.6	79.9
Resistance to Lodging	6	6	7	5	7
Straw Breakdown	5	7	7	6	6
Earliness of Ripening	7	6	6	6	5
<b>Resistance to:</b>					
Mildew	8	6	8	8	5
Septoria Spp.	5	4	5	5	6
Yellow Rust	7	4	8	7	4
Fusarium Ear Blight	5	6	-	-	4
Sprouting	6	7	8	4	6
<b>Grain Quality:</b>					
Grain Protein % (15%MC)	10.3	10.2	9.6	9.8	9.7
Hagberg Falling No. ~	305	359	397	141	221
1000 Grain Weight (g)	51.7	48.3	45.9	50.3	48.3
Hectolitre Weight (kg/hl)	77.3	77.8	78.7	75.9	74.7
Market +	F	F	F	F	F
<b>Year First Listed</b>	<b>2020</b>	<b>2010</b>	<b>2023</b>	<b>2022</b>	<b>2018</b>

\* Based on results from 2021, 2022 and 2023.

# Yields are expressed as a percentage of the mean JB Diego, Graham and KWS Dawsum (100 = 11.11t/ha @ 15% moisture content).

- No data.

~ Based on results from harvests 2021, 2022 & 2023.

+ F - Feed quality.

() Limited Data.



# DAFM 2024 Recommended Lists

## Winter Oats Recommended List 2024

Agronomic & Quality Characteristics*	Recommended	
	Husky	WPB Isabel
<b>Relative Yield #</b>	<b>102</b>	<b>98</b>
Straw Height (cm)	116.5	119.2
Resistance to Lodging	7	7
Straw Breakdown	5	7
Earliness of Ripening	8	5
Winter Hardiness **	5	-
<b>Resistance to:</b>		
Mildew	5	5
Crown Rust	4	5
<b>Grain Quality:</b>		
Kernal Content (%)	71.8	73.0
1000 Grain Weight (g)	38.7	41.7
Hectolitre Weight (kg/hl)	57.9	60.2
<b>Year First Listed</b>	<b>2010</b>	<b>2020</b>

\* Based on trial results from 2021, 2022 and 2023 (with exception of kernel content which is based on 2022 & 2021 only)

# Yields are expressed as a percentage of the mean of Husky and WPB Isabel (100 = 9.44t/ha @ 15% moisture content).

- No data.

() Limited Data.

\*\* Winter hardiness score for Husky is 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 Wheat Recommended List 2024

Agronomic & Quality Characteristics*	Recommended			
	KWS Fixum	KWS Helium	WPB Duncan	WPB Escape
<b>Relative Yield #</b>	<b>104</b>	<b>100</b>	<b>100</b>	<b>102</b>
Straw Height (cm)	68.8	73.9	66.6	61.6
Resistance to Lodging	6	5	5	7
Earliness of Ripening	5	6	5	5
<b>Resistance to:</b>				
Mildew	(6)	(7)	(7)	(6)
Septoria Spp.	5	5	6	5
Yellow Rust	6	5	7	7
Sprouting	(7)	(7)	(7)	(5)
<b>Quality:</b>				
Grain Protein Content (%)	10.8	11.4	10.6	11.0
Hagberg Falling Number ~	280	275	309	327
1000 Grain Weight (g)	50.1	50.4	46.3	48.8
Hectolitre Weight (kg/hl)	78.5	81.3	79.3	78.2
Hardness Index	Hard	Hard	Hard	Hard
<b>Year First Listed</b>	<b>2023</b>	<b>2022</b>	<b>2022</b>	<b>2023</b>

\* Based on trial results from 2021, 2022 and 2023.

# Yields are expressed as a percentage of the yield of WPB DUNCAN. (100 = 9.05t/ha @ 15% moisture content).

~ Based on results from 2020, 2021 and 2022.

## Spring Oats Recommended List 2024

Agronomic & Quality Characteristics*	Recommended	
	Husky	WPB Isabel
<b>Relative Yield #</b>	<b>99</b>	<b>101</b>
Straw Height (cm)	98.9	102.9
Resistance to Lodging	6	7
Straw Breakdown	5	8
Earliness of Ripening	8	6
<b>Resistance to:</b>		
Mildew	5	5
Crown Rust	4	5
<b>Grain Quality:</b>		
1000 Grain Weight (g)	40.3	43.9
Kernal Content (%)	69.9	69.7
Hectolitre Weight (kg/hl)	58.0	59.3
<b>Year First Listed</b>	<b>2009</b>	<b>2019</b>

\* Based on trial results from 2021, 2022 and 2023.

# Yields are expressed as a percentage of the mean of Husky and WPB Isabel. (100 = 7.75t/ha @ 15% moisture).





## Spring Barley Recommended List 2024

Agronomic & Quality Characteristics*	Recommended							Provisionally Recommended		
	Gangway	Geraldine	Gretchen	RGT Planet	Rockway	Skyway	SY Amity	Florence	LG Mermaid	Spinner
<b>Relative Yield #</b>	<b>100</b>	<b>105</b>	<b>104</b>	<b>100</b>	<b>104</b>	<b>105</b>	<b>104</b>	<b>106</b>	<b>105</b>	<b>105</b>
Straw Height (cm)	74.7	71.4	73.6	74.4	77.6	77.1	75.3	69.8	70.8	71.6
Resistance to Lodging	6	7	7	5	6	5	7	(7)	(5)	(6)
Straw Breakdown	7	6	6	4	6	4	6	(6)	(4)	(6)
Earliness of Ripening	5	6	6	5	5	5	5	(6)	(5)	(5)
<b>Resistance to:</b>										
Mildew	8	8	8	8	8	8	8	(8)	(8)	(8)
Rhynchosporium	5	7	7	5	7	7	6	(7)	(7)	(7)
Brown Rust	6	6	6	5	6	6	6	(5)	(6)	(6)
Net Blotch	8	8	8	4	7	6	8	(7)	(8)	(8)
<b>Grain Quality:</b>										
1000 Grain Weight (g)	50.7	55.0	55.0	52.7	52.7	52.6	55.9	53.6	53.5	53.1
Hectolitre Weight (kg/hl)	69.8	67.8	67.8	67.6	68.6	68.6	68.0	67.8	68.9	68.1
Screenings % (<2.2mm)	1.2	1.1	0.9	1.2	0.8	0.9	0.7	1.2	1.5	1.2
Grain Protein %	10.3	10.3	10.5	10.3	10.3	10.1	10.3	10.3	10.1	10.2
<b>Year First Listed</b>	<b>2018</b>	<b>2022</b>	<b>2023</b>	<b>2017</b>	<b>2023</b>	<b>2022</b>	<b>2022</b>	<b>2024</b>	<b>2024</b>	<b>2024</b>

\* Based on trial results from 2021, 2022 and 2023.

# Yields are expressed as a percentage of the mean of RGT Planet and Gangway. (100= 8.25t/ha @ 15% moisture content).

## Spring Beans Recommended List 2024

Agronomic & Quality Characteristics*	Recommended			Provisionally Recommended
	Caprice (R)	Lynx (R)	Victus (R)	Protina (PR-1)
<b>Treated Yield</b> (t/ha @ 15% moisture)	<b>99</b>	<b>102</b>	<b>99</b>	<b>100</b>
% Crude Protein	102	100	100	102
Plant Height (cm)	132	132	126	133
Brackling Resistance (1 - 9, 9 = best)	7	8	5	7
Lodging Resistance (1 - 9, 9 = best)	(8)	(9)	(7)	(8)
Earliness of Maturity (1 - 9, 9 = Earliest)	(7)	(6)	(7)	(6)
<b>Resistance to:</b>				
Chocolate Spot (1 - 9, 9 = most resistant)	(6)	(6)	(7)	(6)
Downy Mildew (1 - 9, 9 = most resistant)	(7)	(7)	(7)	(8)
Rust (1 - 9, 9 = most resistant)	(6)	(5)	(5)	(6)
<b>Year First Recommended</b>	<b>2022</b>	<b>2019</b>	<b>2022</b>	<b>2024</b>

- Data is based on results of fungicide treated trials with the exception of disease resistance data which uses untreated trial data.
- Disease resistance ratings are based on a scale of 1 to 9. Disease ratings with scores of 8 and over are very resistant; 7 indicates good resistance and 6 indicates moderate resistance; 5 indicates moderate susceptibility while 4 is rated susceptible; 1,2 and 3 are very susceptible.
- Figures shown in brackets ( ) are based on limited data and should be treated with caution.
- Yield and crude protein content are expressed relative to the mean of the control varieties (100 = mean of control varieties). The control varieties used were Fanfare, Lynx and Victus in 2021 and 2022 and Caprice, Lynx and Victus in 2023.
- The mean yield and mean crude protein content of the control varieties over the period 2021 to 2023 was 7.3t/ha and 23.6% respectively.

# Appendix

## Organic fertiliser nutrient content

	N-kg/m <sup>3</sup> (units/1,000gals)	P-kg/m <sup>3</sup> (units/1,000 gals)	K-kg/m <sup>3</sup> (units/1,000 gals)
Cattle Slurry (6% DM)	1.0 (9)	0.6 (5)	3.5 (32)
Pig (4% DM)	2.1 (19)	0.8 (7)	2.2 (20)
	N-kg/t (units/t)	P-kg/t (units/t)	K-kg/t (units/t)
Farmyard Manure	1.35 (3)	1.2 (2)	6.0 (12)
Broiler Manure	14 (28)	6.0 (12)	18.0 (36)
Layers Manure (30% DM)	6.58 (14)	2.9 (6)	6.0 (12)
Layers Manure (55% DM)	11.5 (23)	5.5 (11)	12.0 (24)
Mushroom Compost	1.6 (3)	1.5 (3)	8.0 (16)

Source: Teagasc

## Chopped straw P&K values

Crop Type	Crop yield t/ha	P-kg/ha (units/ac)	K-kg/ha (units/ac)
Winter Barley	10	4 (3.2)	51 (41)
Winter Wheat	11	4.4 (3.6)	56 (45)

Source: Teagasc









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