

# 2023 EARLY EVALUATION TRIAL PLOTS

A PARTNERSHIP BETWEEN  
SCOTGRAIN AGRICULTURE & BAIRDS MALT.  
SOWN, GROWN AND MALTED IN SCOTLAND





Each year Scotgrain Agriculture hold an Early Evaluation Programme (EEP) which allows on average 25-30 varieties of Barley to be assessed in multiple farm locations throughout Scotland with approx 20 new numbered lines introduced for testing each year.

In partnership with the major plant breeders, Scotgrain looks to accelerate the introduction of new varieties to the grower; the program is geared to bringing forward the best available varieties to benefit both growers, the maltster and our distilling and brewing customers.

Scotgrain's unique relationship with Bairds Malt allows us to take the samples from the trials to the Bairds central laboratory where they can be put through a program of micro malting tests enabling our partnership to offer varieties that Scotgrain and Bairds consider to have potential for both grower and distiller and therefore merit introduction into the market. This micro malting programme is run over a series of seasons at incremental levels testing consistency in the field, maltings and distillery. This allows us to help breeders develop varieties that have true scalability within the industry.



**GARY MILLS**  
**SEED TRADER**  
**SCOTGRAIN AGRICULTURE**

# SOURCING SCOTTISH BARLEY

Scotgrain are a leading Agricultural Merchant covering supply of arable inputs, agronomy, procurement & marketing of grains, oilseeds and pulses.

Wholly owned by Bairds Malt and part of United Malt globally, Scotgrain plays a critical part in ensuring quality supply of Scotland's best malting barley to many of the world's leading distillers and brewers, while also ensuring guaranteed supply chain for growers throughout Scotland.

Scotgrain's activities cover the whole scope of farm activities supplying seeds, fertilisers, agrochemicals, animal feeds, agricultural lime and the procurement and marketing of all grains, oilseeds and pulses. Operating throughout the eastern seaboard of Scotland, Scotgrain's field staff are trained experienced individuals able to offer professional advice on the market in addition to the products and services we can offer.

# LEADING THE WAY ON SPRING MALTING BARLEY IN SCOTLAND

For the past 3 decades Scogtrain have been proven innovators on bringing forward new spring malting barley varieties that are best suited to the Scottish environment. And crucially this means varieties that perform well across the full supply chain - from grain to glass.

We host our Early Evaluation Programme (EEP) annually which allows on average 25-30 varieties of Barley to be trialled in multiple farm locations throughout Scotland with approx 20 new numbered lines introduced for testing each year.

# EARLY EVALUATION 2023 ASSESSMENT

**SOWN, GROWN AND HARVESTED FOR  
ASSESSMENT BY BAIRDS MALT.**

**IN 2023, 30 DIFFERENT VARIETIES OF BARLEY WILL BE ASSESSED IN 3 DIFFERENT  
GEOGRAPHICAL LOCATIONS.**

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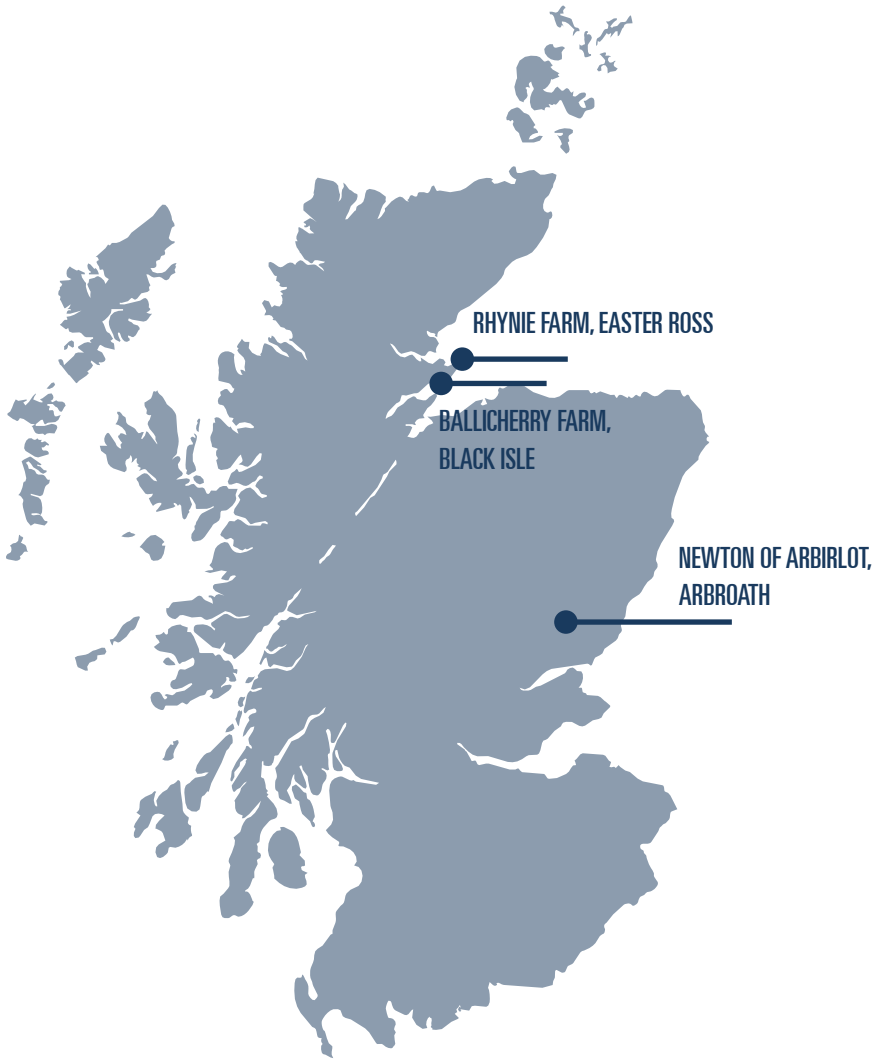
**BALLICHERRY  
BLACK ISLE**

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**NEWTON OF ARBIRLOT  
ARBROATH**

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**RHYNIE FARM  
EASTER ROSS**



## 2023 ARBROATH TRIAL PLOTS

Newton of Arbirlot farm is positioned less than 2 miles away from Bairds' Arbroath malting plant as the crow flies and has been farmed by successive generations of the Lawrie family. Martin currently manages a mixture of both arable and pastoral land across two farms in Angus including both Spring Barley and Potatoes in his rotation.





NUMBER	BREEDER	VARIETY
1	Limagrain	LG Diablo
2	Limagrain	LG Olsen
3	Limagrain	LG Aquarius
4	Limagrain	LGBU21-3131-A
5	Limagrain	LGBU21-3143-A
6	Limagrain	LGBU21-3154-A
7	KWS	KWS Sassy
8	KWS	KWS Maronis
9	KWS	KWS Curtis
10	KWS	KWS Nelis
11	KWS	KWS - 20/3443
12	KWS	KWS - 20/1727
13	KWS	KWS - 20/1726
14	Senova	Munro
15	Senova	Gambit
16	Senova	Florence
17	Senova	Brioni
18	Elsoms	Winston
19	Syngenta	SY Tennyson
20	Syngenta	SY Laureate
21	Syngenta	SY 421164
22	Syngenta	SY422312
23	Syngenta	SY422356
24	Syngenta	SY422379
25	Syngenta	SY422380
26	Secobra	Rocker
27	Secobra	Belter
28	Secobra	SC21-G287-086
29	Secobra	SC21-G287-024
30	Secobra	SC21-G287-046
31	Secobra	SC21-G266-054
32	Secobra	SC21-G3208-040

## 2023 BLACK ISLE TRIAL PLOTS

Ballicherry farm is situated on the north side of the Black Isle, overlooking the Cromarty Firth, and is owned and run by Brian and Caroline Matheson alongside their daughter, Rachel. The farm grows predominantly spring barley, with winter wheat, oilseed rape, spring oats, potatoes, carrots, and cover crops also grown as part of a ten-year rotation. The soil type is mainly sandy loam, with a mix of grade two and grade three land, fertility, and biodiversity.



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6	Limagrain	LGBU21-3154-A
7	KWS	KWS Sassy
8	KWS	KWS Maronis
9	KWS	KWS Curtis
10	KWS	KWS Nelis
11	KWS	KWS - 20/3443
12	KWS	KWS - 20/1727
13	KWS	KWS - 20/1726
14	Senova	Munro
15	Senova	Gambit
16	Senova	Florence
17	Senova	Brioni
18	Elsoms	Winston
19	Syngenta	SY Tennyson
20	Secobra	Rocker
21	Secobra	Belter
22	Secobra	SC21-G287-086
23	Secobra	SC21-G287-024
24	Secobra	SC21-G287-046
25	Secobra	SC21-G266-054
26	Secobra	SC21-G3208-040

## 2023 EASTER ROSS TRIAL PLOTS – WINTER WHEAT

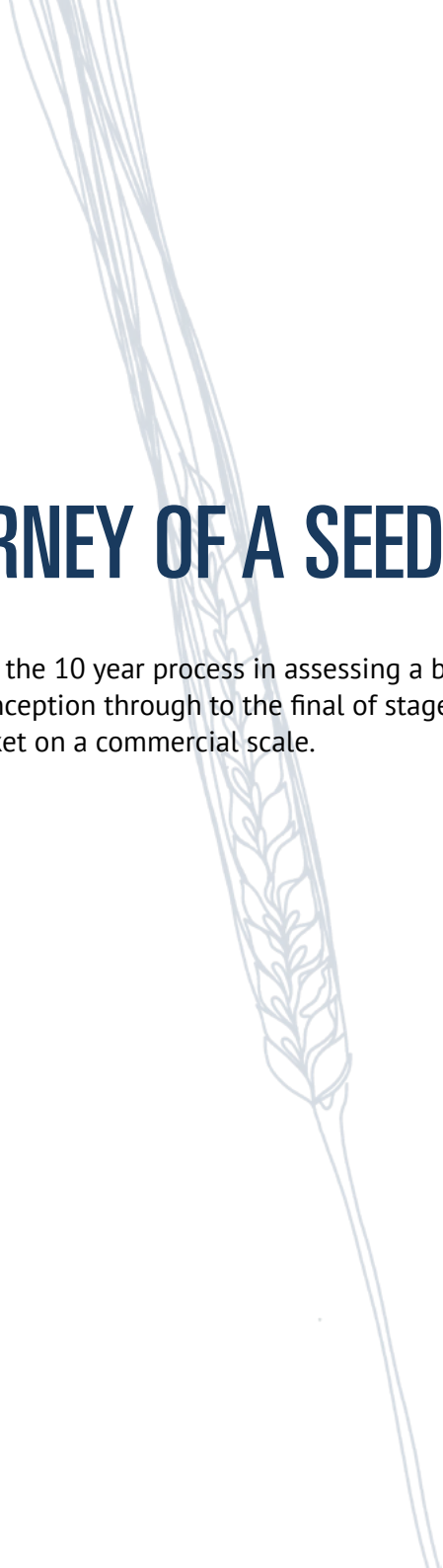
The Ross family have been farming at Rhyynie Farm since 1868 and completed the purchase of the land in 1908. Rhyynie Farm is 700 acres in total and Donald currently manages around 400 acres of arable land comprising of a wide range of soil types allowing for a large and varied rotation. Crops include Wheat, Spring barley, OSR, Oats, Potatoes, Beans, Peas, and Grass. Land fertility is supplemented by Rhyynie's pastoral land, including 100 head of cattle.



VARIETY	CROSS	BREEDER	END-USE GROUP
Bairstow	(Revelation x KWS Santiago) x Cougar	R.A.G.T	Group 4 Soft
Stokes	(Cougar x KWS Santiago) x Revelation	R.A.G.T	Group 4 Soft
Wilkinson	(Pembroke x Evolution) x Dickens	R.A.G.T	Group 3
Rashid	(Icebreaker x KWS Solo) x Cougar	R.A.G.T	Group 3
LG Skyscraper	(Cassius x Naww29) x KWS Santiago	Limagrain	Group 4 Soft
KWS Brium	KWS Solo x KWS Basset	KWS	Group 3
LG Spotlight	Scribe x Horatio	Limagrain	Group 4 Soft
KWS Zealum	KWS Basset x Reflection	KWS	Group 4 Soft
SY Insitor	AB111-101 x Hereford	Syngenta	Group 4 Hard
Gleam	Hereford x KWS Kielder	Syngenta	Group 4 Hard
KWS Dawsum	KWS Kerrin x Costello	KWS	Group 4 Hard
LG Redwald	LG Sundance x Generation	Limagrain	Group 4 Soft

# THE JOURNEY OF A SEED

This chart highlights the 10 year process in assessing a barley variety from the point of conception through to the final of stage of being able to deliver it to the market on a commercial scale.





YEAR 1

2007: Cross of 1st generation seed (F1) sown & harvested in the UK. The 2nd generation seed (F2) is then sown in New Zealand.

YEAR  
2-5

Seeds are sown in both the Northern and Southern hemisphere over a 5 year period to multiply the seed generations. In year 5 the 8th generation seed (F8) sown in National List 1 in UK & harvested. First cut of variety selection after considering Distinction, Uniformity, Stability (DUS), yield & quality. This can be the first year when the seed is assessed in our Early Evaluation Programme.

YEAR 6

9th generation seed (F9) varieties usually named & sown in NL2 in UK & harvested. At this stage Bairds are looking more closely at varieties in the early evaluation programme and making a selection as to what will be taken forward.

YEAR 7

At this stage we bring forward the best varieties in tier 1 of our Macro-scale malting evaluation, which is the 1st part of MAGB approval process.

YEAR  
8-9

Tier 2 and Tier 3 of our Macro-scale malting evaluation takes place, this allows us to reference performance over multiple malting batches and in partnership with customers who trial the malt in their production cycles.

YEAR 10

A full mainstream roll-out of the product takes place, introducing the malt to the wider market.

Having undertaken rigorous tests over multiple years, only a limited number of varieties make it to this stage.

# SCOTGRAIN RECOMMENDED SPRING BARLEY LINES FOR HARVEST 2024

## **LAUREATE (100, 93) – SYNGENTA (SANETTE X CONCERTO)**

**5 / 9 / 6**

Fully approved for brewing and malt distilling, it currently holds over 50% of the UK spring malting barley market. This variety has produced good yields in both fungicide-treated and untreated UK trials. Having a relatively stiff straw it has a high resistance to brackling & mildew. It has been a mainstream variety of ours since 2016 acceptability on intake has been consistent over the last 2 seasons, however, there remains a question mark over its resistance to skinning.

## **KWS SASSY (99, 91) – KWS UK (CONCERTO X PUBLICAN)**

**5 / 9 / 6**

A non GN producing spring malting barley which services the Scottish low nitrogen distilling market. Full MBC approval for distilling. Performing well UK wide, it is the North where Sassy is at its strongest. Earlier to mature with moderate resistance to lodging and high resistance to Mildew. Through our EEP, Scotgrain helped identify this variety several years ago as ideally suited to the Scottish growing environment. We have had very positive feedback over last 3 seasons from distillers. The variety was about 40% of our own Scottish Spring barley purchases from 2022 crop which is likely to maintain for 2023 crop and into next season.

## **LG DIABLO (103, 94) – LIMAGRAIN UK (OVERTURE X SANETTE)**

**5 / 9 / 5**

Fully approved for both malt distilling and brewing. This variety has good yields in untreated UK trials and has given very high yields in North and East regions. A later-maturing variety with relatively stiff straw and high resistance to brackling & mildew. The variety has performed very well in recent years of trials, and



we are now at full commercial scale production with excellent feedback from distilling customers so far. Acceptability at harvest through malting intakes has been very high and it has consistently outperformed the likes of Laureate in this respect.

## **SY VESSEL – SYNGENTA UK (OVERTURE X SY VENTURE)**

**5 / 7 / 6**

SY Vessel is the only non-GN winter malting barley on the UK market. It is a variety that demonstrates potential for malt distilling and in particular grain distilling due to its high enzyme activity. SY Vessel has comparable yields to Craft with high specific weight and can achieve grain nitrogen suitable for both brewing and distilling. This year we will be using this variety in the production of HDP malt.

## **ASTEROID – R.G.T UK (OVERTURE X RGT CAMPERA)**

**5 / 9 / 4**

RGT Asteroid was added to the 2018/19 Recommended. It is a variety that is particularly well suited to the Scottish grain distilling market due to the high enzyme activity it produces. It has relatively stiff straw with high resistance to brackling. RGT Asteroid has given good yields in untreated UK trials and has high resistance to mildew. It is susceptible to Rhynchosporium, but this can be resolved with chemistry. This variety produces good quality grain with a high hot water extract and high diastatic power and has very good agronomic yields in comparison with other HDP varieties such as Brioni or Fairing.

## VARIETIES TO WATCH FOR THE FUTURE

### **MARONIS (103, 92) – KWS UK (LG DIABLO x SY ARELLIA)**

**5 / 9 / 7**

On the candidate malting variety list in 2022. One of the best performing varieties from our trials last year – a variety that we are watching closely. Very good extract and PSY (Predicted Spirit Yield) through micro-malt testing and promising results through a macro-scale trial with one of our distilling customers. Similar maturity to Diablo with an even stronger disease resistance profile. This variety has demonstrated particularly high agronomic yields in the Northern region with a score of 105 in comparison with both Diablo and Laureate at 102. Certainly, a potential variety for the future.

### **SY TENNYSON (105, 92) – SYNGENTA (SY SPLENDOR x LG DIABLO)**

**4 / 9 / 3**

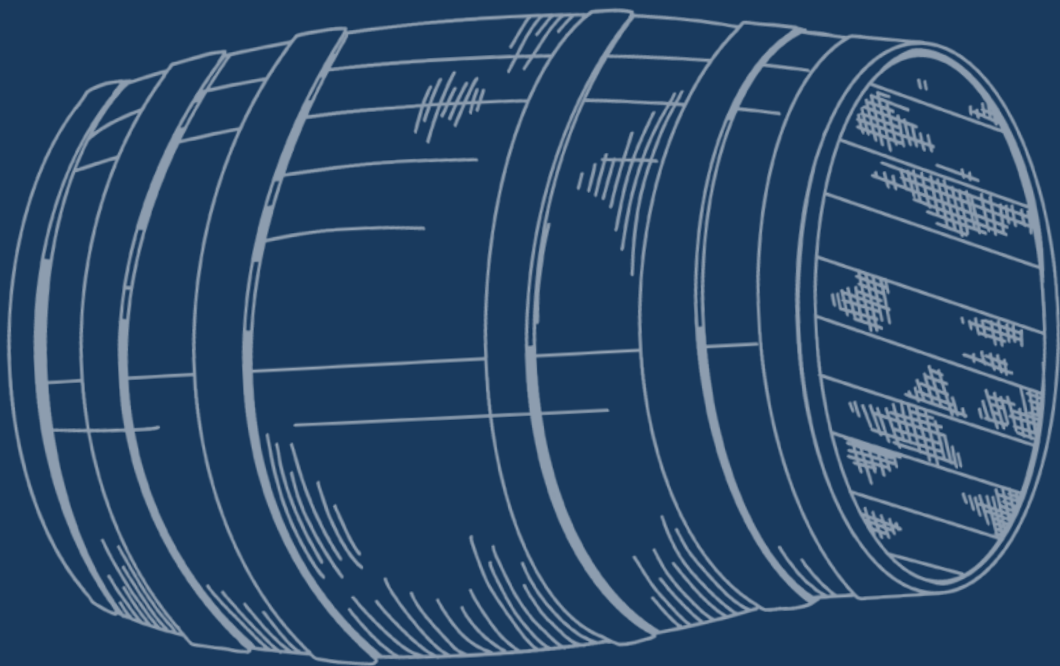
This variety sits at the top of the recommended list for 2023 in terms of yield and has performed consistently in this aspect over the last three seasons, showing a maturity similar to that of Laureate. Tennyson is currently under test by the MBC for Brewing and Malt distilling, and it currently sits at the provisional approval 1 stage (Macroscale). Syngenta are positive about this variety being a direct replacement for Laureate and it showed promising alcohol yield in our trials last year. Questions currently remain over its disease resistance profile with the Rhynchosporium scoring only a 3 on the 2023 RL although the breeder notes that this is down to a lack of data. A variety drawing a lot of interest for the future, but more data required to determine disease resistance characteristics.

BREEDER	VARIETY	PARENTAGE	END USE / MARKET
Limagrain	LG Olsen	[(LGDIABLO x SJ180777)]	Standard Pot Still
Limagrain	LGBU21-3131-A	[(LGFLAMENCO x LGBU18-1446)]	Standard Pot Still
Limagrain	LGBU21-3143-A	[[[(LGSCULPTOR x SYSPLENDOR) x (SY417021 x LGBU17-2903-A)]]]	Standard Pot Still
Limagrain	LGBU21-3154-A	[[[(LGSCULPTOR x SYSPLENDOR) x (SY417021 x LGBU17-2903-A)]]]	Standard Pot Still
KWS	KWS Maronis	[(LG Diablo x SY Ariella)]	Standard Pot Still
KWS	KWS Nelis	[(LG Diablo x SY Contour)]	Standard Pot Still
KWS	KWS - 20/3443	[(KWS 17/2222 X KWS WILLIS)]	Standard Pot Still
KWS	KWS - 20/1727	[(LG DIABLO X LGBU 15/4563C)]	Standard Pot Still
KWS	KWS - 20/1726	[(LG DIABLO X LGBU 15/4563C)]	Standard Pot Still
Senova	Munro	[(SY Laureate x coded)]	Standard Pot Still
Syngenta	SY Tennyson	[(SY Splendor x LG Diablo)]	Standard Pot Still
Syngenta	SY 421164	[(Laureate x SY Splendor x SY Bronte)]	Standard Pot Still
Syngenta	SY422312	[(SY Bronte x Maronis)]	Standard Pot Still
Syngenta	SY422356	[(LG Bohemian x SY Tennyson)]	Standard Pot Still
Syngenta	SY422379	[(Iconic x SY Tennyson)]	Standard Pot Still
Syngenta	SY422380	[(Iconic x SY Tennyson)]	Standard Pot Still
Secobra	Rocker	[(Prospect x SY Contour)]	Standard Pot Still
Secobra	Belter	[(Cosmopolitan x SY Laureate)]	Standard Pot Still
Secobra	SC21-G287-086	[(Firefox x Spinner)]	Enhanced Nitrogen - HDP
Secobra	SC21-G287-024	[(Firefox x Spinner)]	Standard Pot Still
Secobra	SC21-G287-046	[(Firefox x Spinner)]	Standard Pot Still
Secobra	SC21-G266-054	[(Spinner x SY Tungsten)]	Enhanced Nitrogen - HDP
Secobra	SC21-G3208-040	[(Skyway x Hurler)]	Standard Pot Still

# NOTES

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# EXPANDING OUR MALTING BARLEY PURCHASING FOOTPRINT

Scotgrain and Bairds Malt hold a proud record with the most recent malting plant investments in the UK. We built a new state of the art maltings at our Arbroath site in 2010, providing a quality malting product to meet increasing demand from Scotland's distillers.

Bairds have again invested in new maltings with support and investment from our parent company – United Malt.

Work has recently completed at our Inverness facility on Longman Road, increasing capacity by 57,000mt per annum.

Bairds expansions in Scotland provide a long term malt supply to Scotland's distilling customers, while also ensuring a local home for Scotland's barley growers. Please contact your local farm trader for more information.

## FIND YOUR LOCAL FARM TRADER

Scotgrain have a team of farm traders based throughout Scotland's most arable areas.

You can find your local farm trader via our website, or contact us at the details below.

