



**Farm
Advisory
Service**



Cereal varieties: What to look out for in 2018

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Headlines

- New malting spring barley varieties provide extra yield potential
- More options in spring oats
- Plenty of choice in distilling wheat varieties, with two new varieties added to 2018 list
- Some two-row winter barleys are becoming outclassed, but look out for new six-row varieties

Harvest report 2017

- Total cereal production in 2017 was 2.86 million tonnes
- This is 1% down on the ten year average
- Spring barley down 85,000 tonnes, oats up 35,000 tonnes, both wheat and winter barley up slightly

	Spring barley	Winter barley	Winter wheat	Oats (total)
Area (ha)	243,838	47,509	109,489	32,625
Yield (t/ha)	5.88	7.41	8.12	5.66
Production (t)	1,432,815	352,108	889,308	184,813

Spring barley list 2018

Recommendation	Yield (%)	Position
P1 LG Diablo	109	New. Potential for B and D
P1 LG Tomahawk	107	New. Potential for D
R Laureate	105	Full Approval for B and D
R KWS Sassy	105	Full Approval for D
R Sienna	103	Full Approval for D
P1 RGT Asteroid	102	New. Potential for B, D and GD
P3 Fairing	96	Provisional Approval for GD
R Concerto	93	Full Approval for B and D
R RGT Planet	104	Brewing varieties (Full Approval). Also consider for feed
R KWS Irina	104	
R Propino	101	
R Scholar	105	Feed variety
Varieties no longer on the Scottish list	Belgravia, Odyssey, Olympus, Octavia, LG Opera and Waggon	

Winter barley list 2018

Recommendation	Yield (%)	Position
P2 KWS Creswell	104	Year 2. High yielding 2-row
R KWS Orwell	103	High yielding 2-row
O KWS Infinity	103	Becoming outclassed
R KWS Tower	102	Remains popular
O KWS Glacier	101	Becoming outclassed
S KWS Cassia	99	Special use – high specific weight
P2 Funky	106	Year 2. Highest yielding conv. 6-row
P1 KWS Astaire	104	New. Conventional 6-row
P2 Sunningdale	110	Year 2. Highest yielding hybrid 6-row
P1 Belmont	109	New. High yielding hybrid
R Bazooka	107	Established hybrid variety
P3 Belfry	106	Continues as provisional Year 3
P1 Libra	103	New. Hybrid with excellent specific wt.
Varieties no longer on the Scottish list	Craft, Cassata, Pearl and KWS Meridian	

Winter wheat list 2018

Recommendation	Yield (%)	Position
P1 KWS Jackal	[105]	New. Rated medium for distilling
P1 Elation	[103]	New. Rated good for distilling
R Leeds	102	Established variety, medium for distilling
P2 LG Motown	102	Year 2. Medium for distilling
P2 LG Sundance	102	Year 2. Medium for distilling
R Viscount	101	10 th year. Rated good for distilling
O Myriad	101	Becoming outclassed. Medium for distilling
S Revelation	99	Specific use variety. Good for distilling
R KWS Barrel	107	High yield, soft milling. <u>Poor</u> for distilling
P1 Elicit	[104]	New. Soft milling. <u>Poor</u> for distilling
R Zulu	102	Established variety, medium for distilling
R KWS Lili	103	Hard milling, nabim Group 2
R KWS Siskin	100	Hard milling, nabim Group 2
S Grafton	[101]	10 th year. Hard feed option
Varieties no longer on the Scottish list	Horatio and Savello	

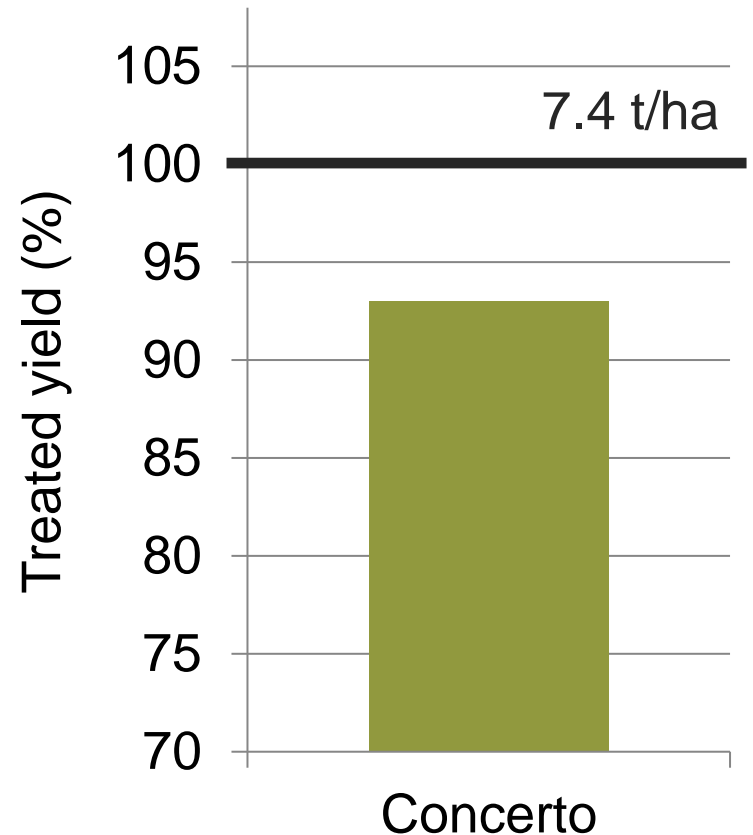
Spring and winter oats 2018

Recommendation	Yield (%)	Position
P1 Delfin	105	New. High yielding. Tall and stiff straw
P2 Yukon	103	Year 2. High yield. Tall and stiff straw
O Aspen	102	Becoming outclassed in market place
R Canyon	100	Establish variety
R Montrose	99	Good specific weight
P2 WPB Elyann	99	Very high kernel content
R Firth	97	19 th year. High kernel content
R Conway	95	High kernel content

Recommendation	Yield (%)	Position
R Dalguise	99	Established variety. Early maturity
R Gerald	98	Long established variety. Later maturity

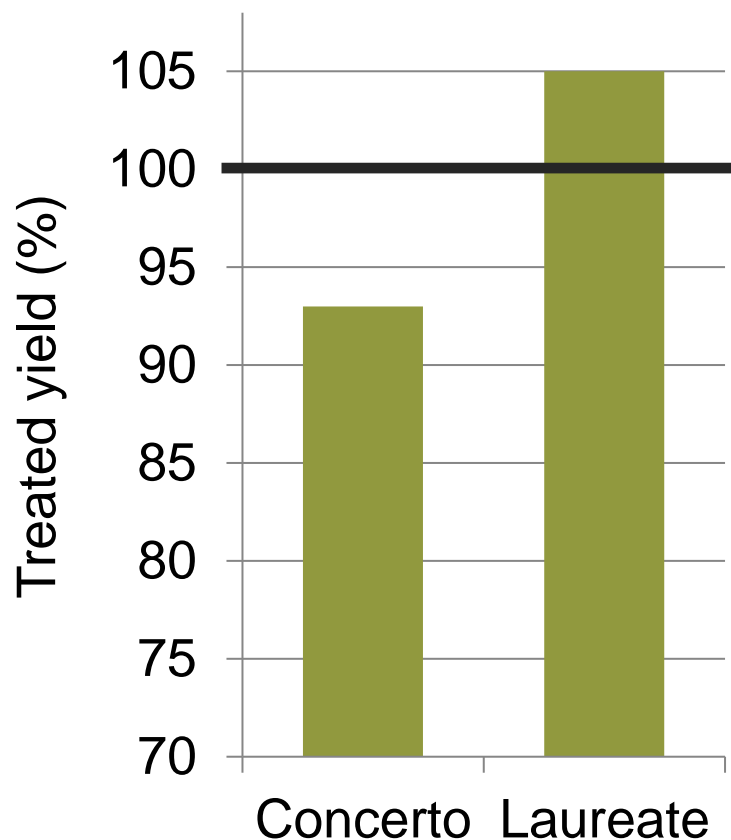
Concerto – *Dominant, but outclassed on yield*

- 10th year on RL
- Almost $\frac{3}{4}$ of Scottish spring malting barley intake in 2017
- Good grain and malt quality (apart from skinning)
- Low agronomic yield
- Moderate straw strength, weak for *Rhynchosporium*



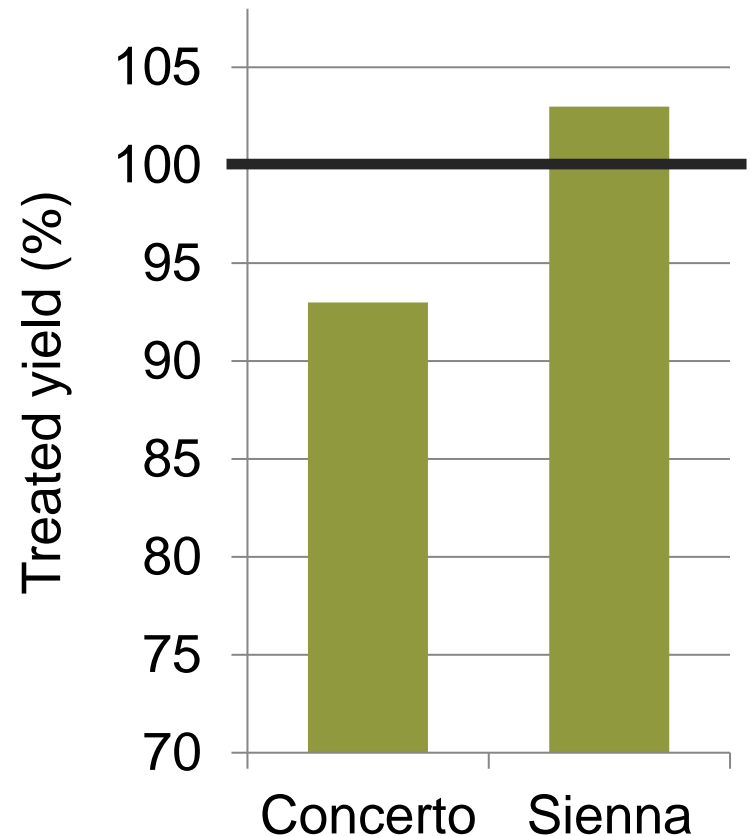
Laureate – *Full Approval for B and D*

- Full MBC Approval for brewing and distilling
- Promising grain quality
- 12% higher yield than Concerto
- Strong agronomic features
- Short straw
- Lowish specific weight



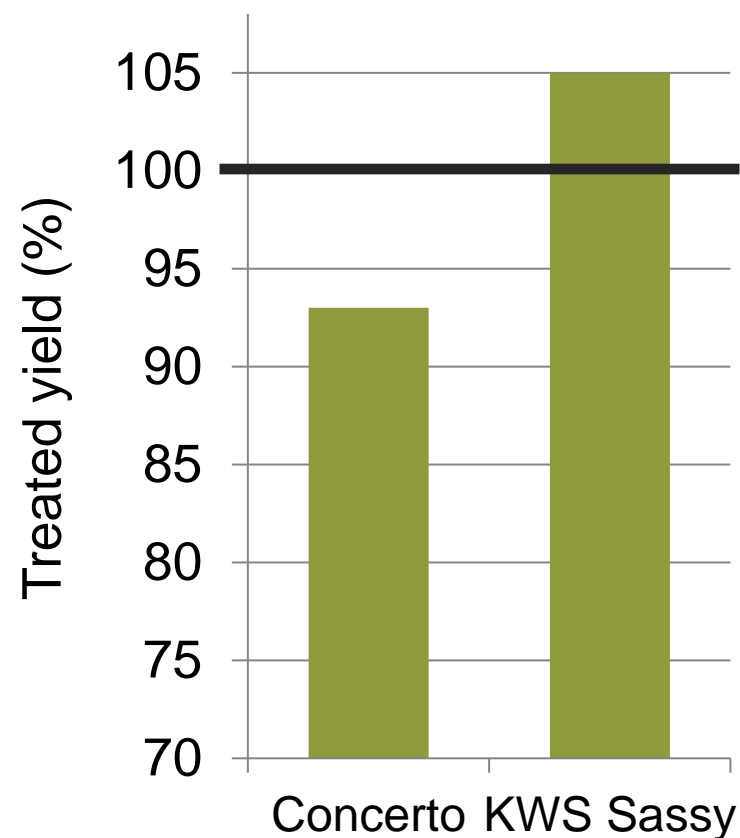
Sienna – *Full Approval for distilling*

- Full MBC Approval for distilling
- 10% higher yield than Concerto
- With better straw strength and *Rhynchosporium* resistance
- Very high specific weight
- Future will depend on further commercial evaluation in 2018, and progress with Laureate



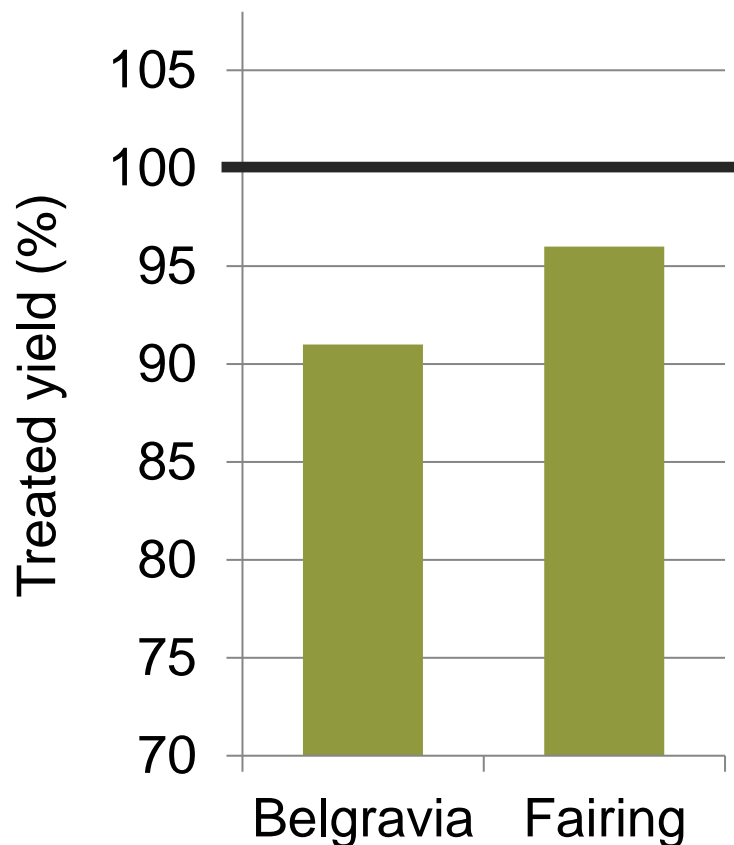
KWS Sassy – *Full Approval for distilling*

- Full MBC Approval for distilling
- 12% higher yield than Concerto
- Moderate for straw stiffness and brackling
- Low screenings
- Relatively tall straw
- Future will depend on further commercial evaluation in 2018, and progress with Laureate



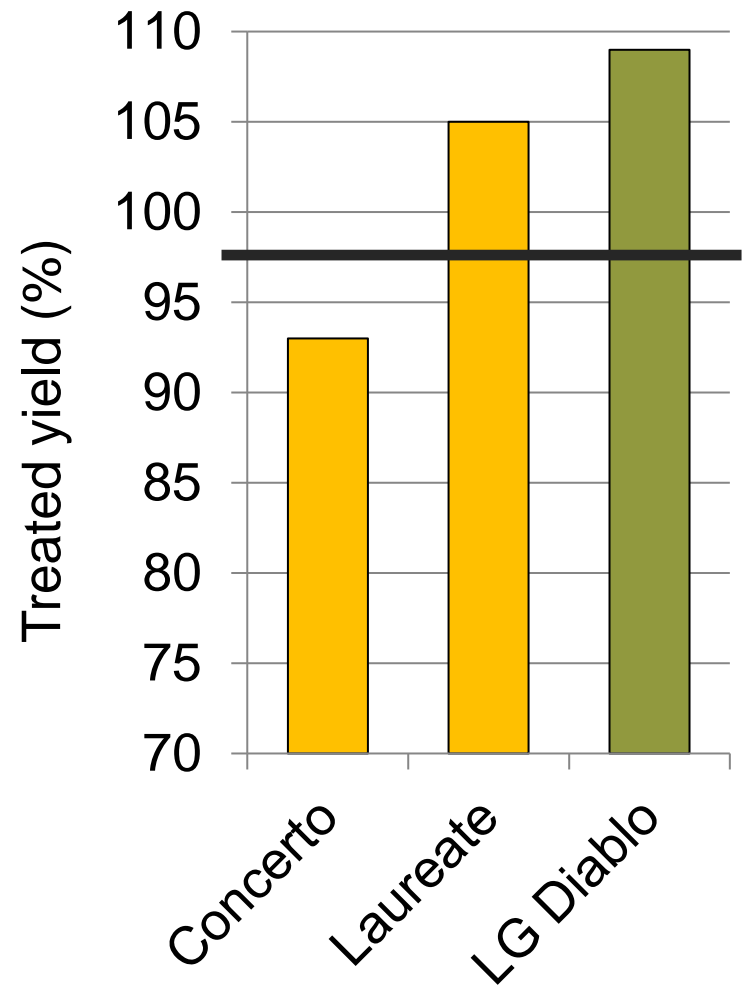
Fairing – *Grain distilling variety*

- Provisional Year 3 on Scottish List
- Provisional MBC Approval for grain distilling
- 5% yield improvement over Belgravia
- Earliest variety on the RL
- Strong agronomic features, including very good *Rhynchosporium* resistance



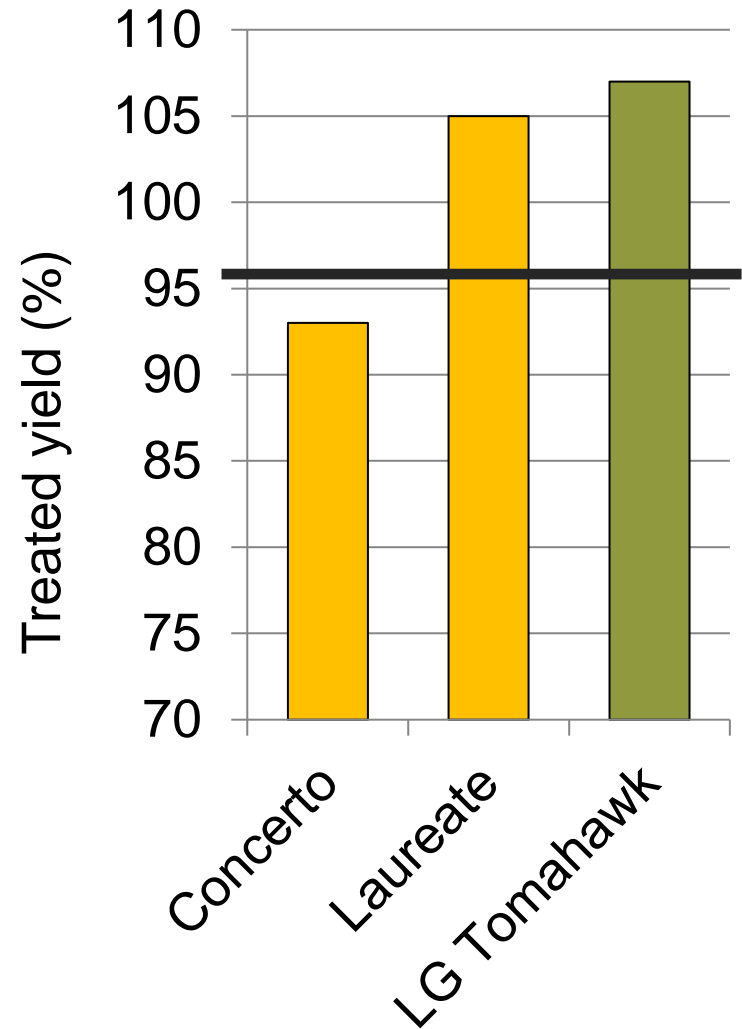
LG Diablo – *New, potential for B and D*

- Provisional Year 1
- Under MBC testing for brewing and distilling
- Very high yielding
- 4% above Laureate
- Slightly later than Concerto
- Intermediate straw length
- Very good brackling resistance



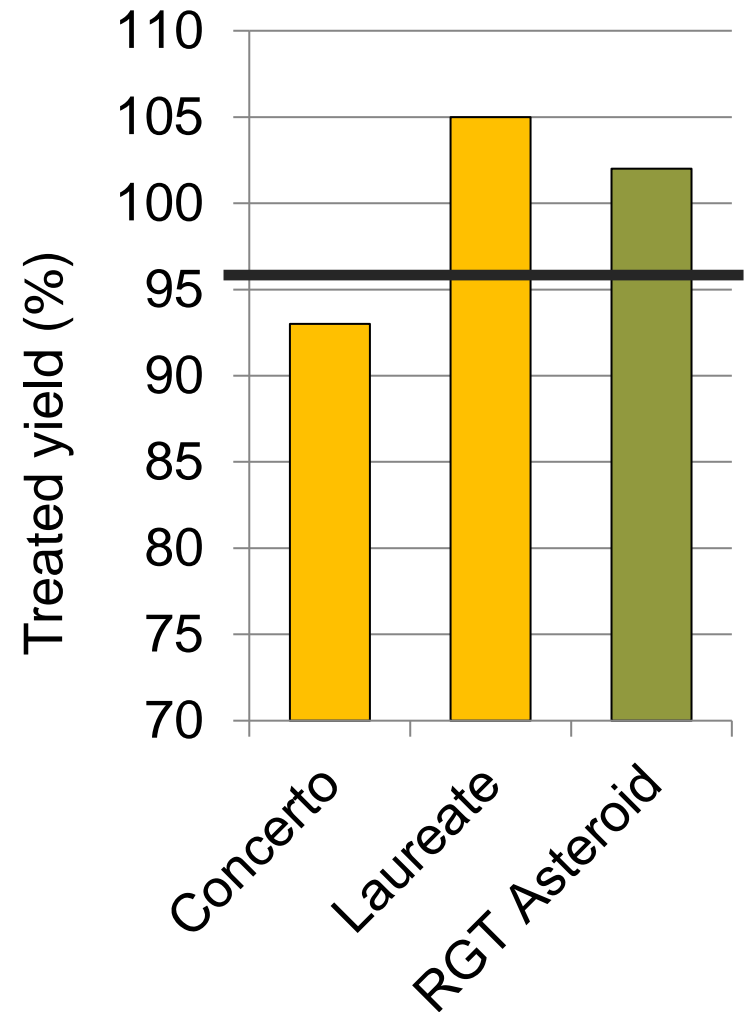
LG Tomahawk – *New, potential for D*

- Provisional year 1
- Under MBC testing for distilling
- Very high yielding
- 2% above Laureate
- Slightly later than Concerto
- Shortish straw
- Lowish specific weight



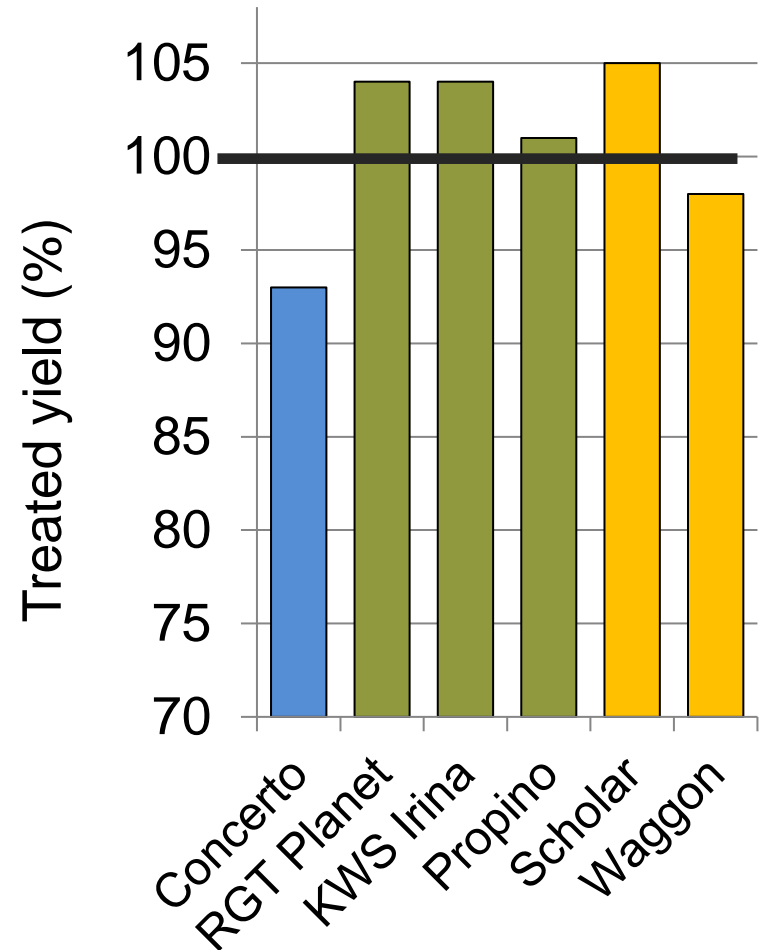
RGT Asteroid – *New, potential for B, D & GD*

- Provisional year 1
- Under MBC testing for brewing, distilling and grain distilling
- Intermediate yield, 3% below Laureate
- Slightly later than Concerto
- Very good brackling resistance
- Good specific weight, low screenings



Brewing varieties – *also suit feed use*

- RGT Planet
- KWS Irina
- Propino
- All three brewing varieties are competitive for yield and are relatively early with good straw strength
- Scholar is a fully recommended feed-only variety
- Waggon has become outclassed for yield



Spring oats – *New choices*

- Delfin

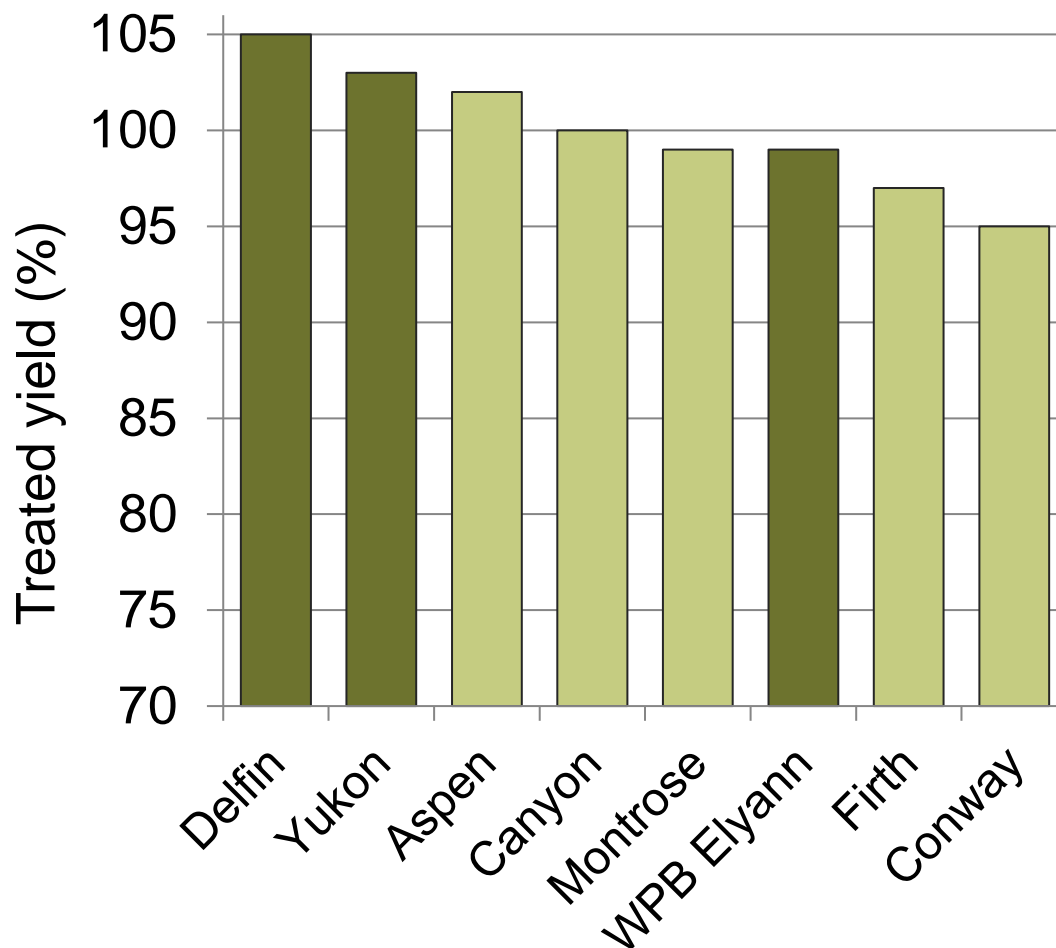
Very high yield. Intermediate kernel content and specific weight. Very tall, stiff straw.

- Yukon

High yield. Intermediate for kernel content and specific weight. Tall, stiff straw.

- WPB Elyann

Good yield. High kernel content and low screenings. Intermediate specific weight.



Research updates

- Grain skinning and malting
- Remote sensing for diagnosing limits to crop yield

Grain skinning and malting quality



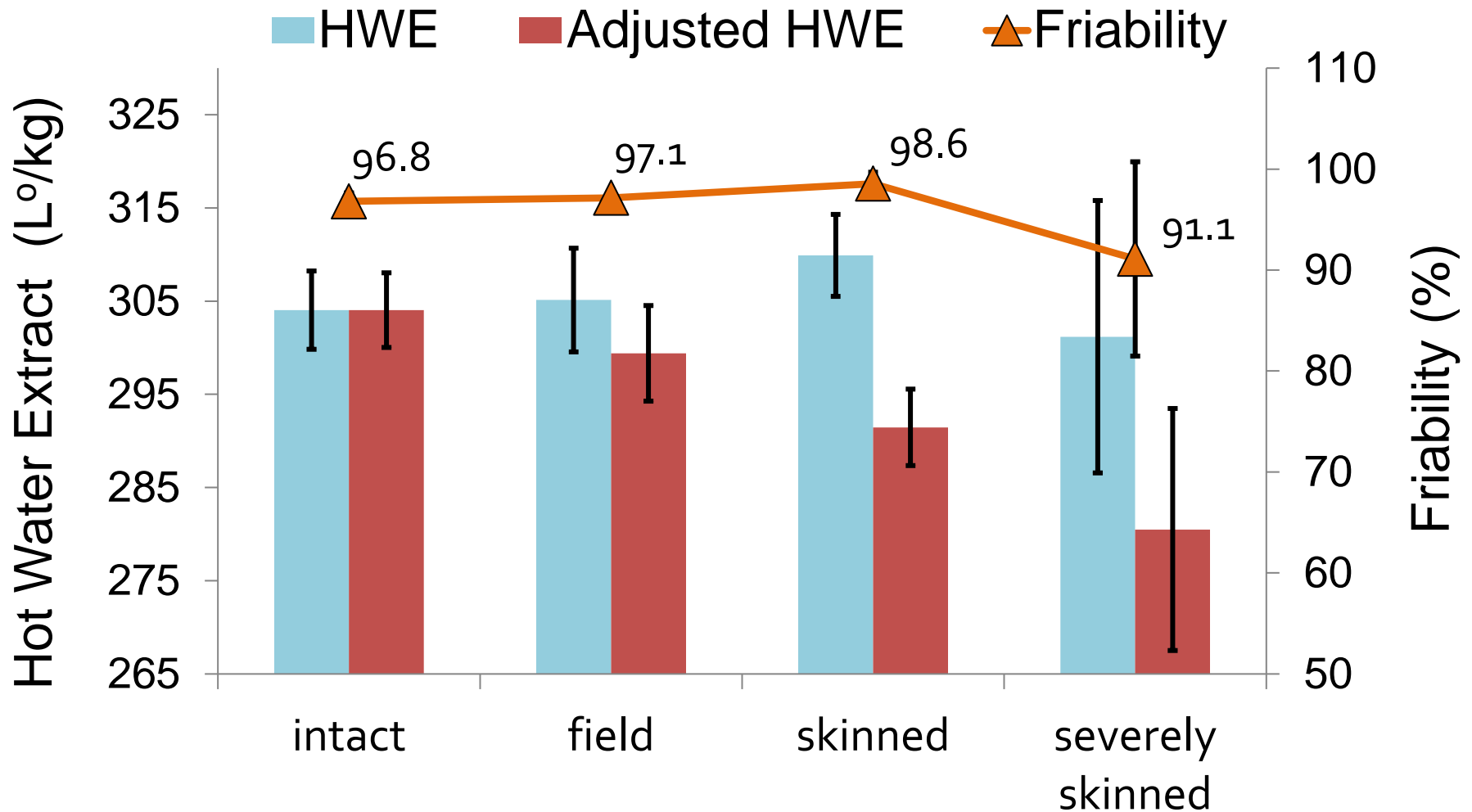
- SRUC PhD studentship – Paulina Okoro



- Aim: To quantify the effects of grain skinning on the malting process
- Objectives: (1) To understanding how pre-harvest and crop handling conditions affect skinning and (2) Establish the impacts of skinning on malting parameters

Grain skinning and malting

- Micro-malting study of skinned barley grains:
Focus on hot water extract





ATEC Project



Advanced Technologies for Efficient Crop management

Objectives:

- Evaluation of crop observations in wheat and potatoes
- Demonstrate technologies to diagnose yield limitations
- Provide recommendations for optimising sensors and processing techniques to support management decisions

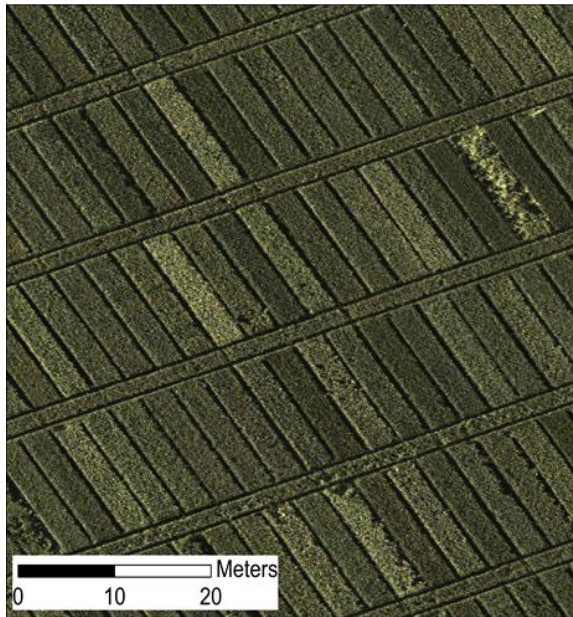
- University of Edinburgh: Mathew Williams, Andrew Revill and Alasdair MacArthur
- SRUC: Anna Florence, Bob Rees, Andrew Barnes and Steve Hoad



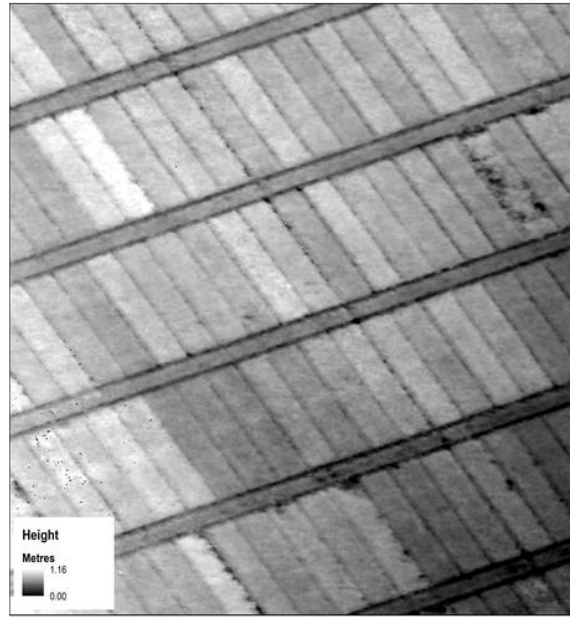
ATEC Project

Advanced Technologies for Efficient Crop management

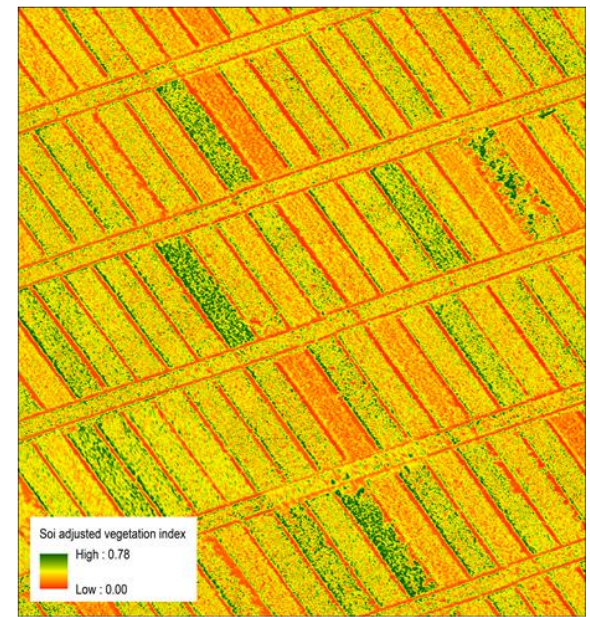
Aerial imagery



Crop height and structure



Crop health



Sample UAV sensor imagery data of the winter wheat trial plots acquired on 18th July 2017.

- The ATEC project is looking for collaboration with local farms in 2018 and 2019. Contact anna.florence@sruc.ac.uk

Summary



Spring barley

- Laureate to grow market share
- KWS Sassy and Sienna develop some market interest
- Fairing has potential for grain distilling
- ***New varieties***: LG Diablo, LG Tomahawk and RGT Asteroid
- RGT Planet and KWS Irina can be considered for feed use

Spring Oats

- Firth, Canyon and Conway remain the market leaders because of their preferred milling qualities
- Delfin is a ***new variety*** with high yield potential
- Consider Yukon and WPB Elyann



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Summary

Winter barley

- The highest yielding two-row options are KWS Orwell, KWS Infinity and KWS Creswell. The older variety KWS Cassia is appreciated for its superior specific weight.
- Three ***new six-row varieties***. Hybrids Belmont and Libra, and conventional KWS Astaire

Winter wheat

- Plenty of choice for distilling wheat varieties. List includes ***new varieties*** KWS Jackal and Elation, as well as LG Motown and LG Sundance (added in 2017)



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Thank you

<https://cereals.ahdb.org.uk/varieties>

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