



High yielding & top  
class A malt profile!



**SAATEN  
UNION**  
Züchtung ist Zukunft



# REVANCHE

Spring malting barley

Breeder

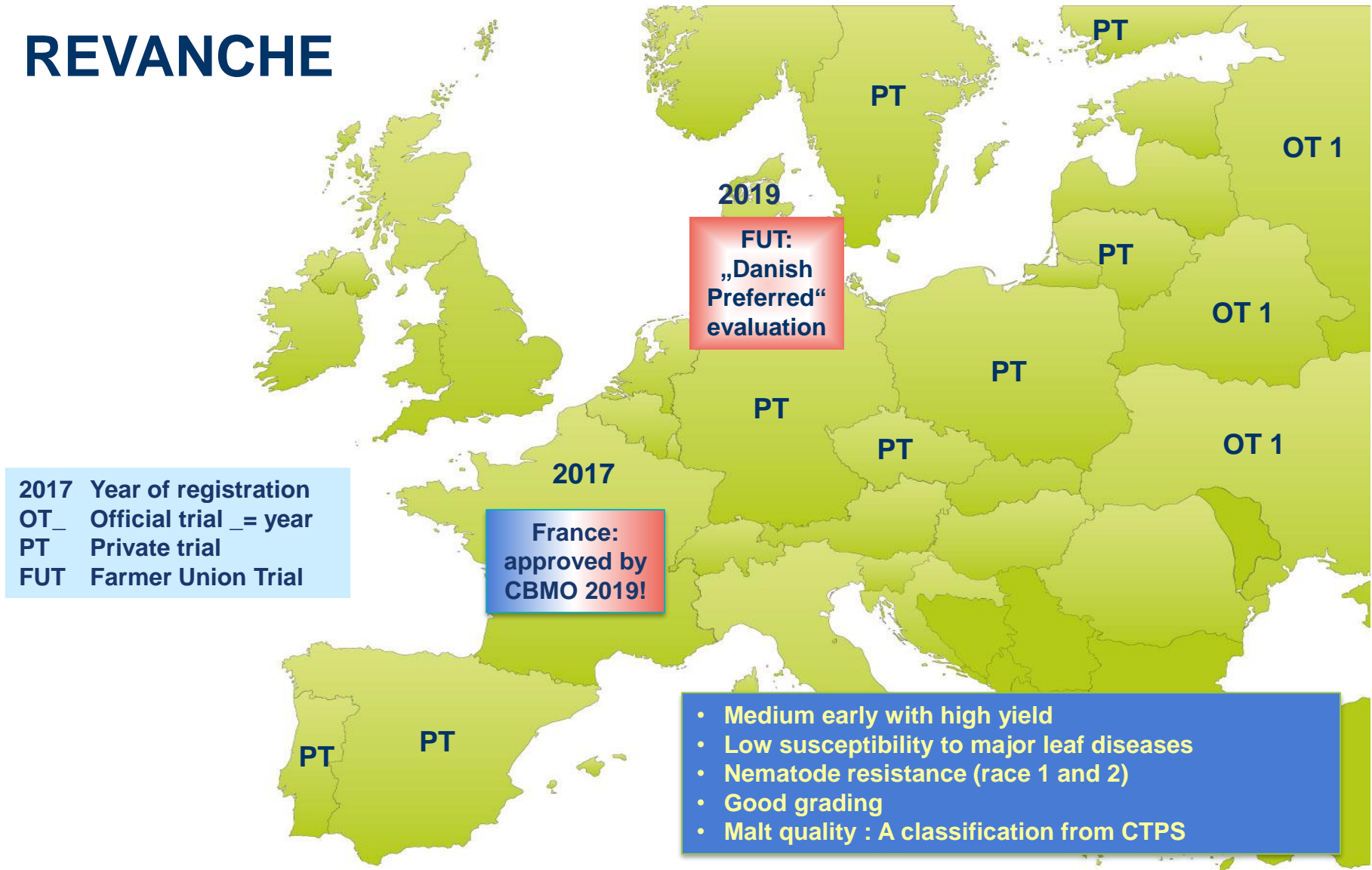
Ackermann Saatzucht

France: approved  
by CBMO 2019!

[www.saaten-union.de](http://www.saaten-union.de)

# International registration status 2019

## REVANCHE



# REVANCHE: Agronomical characters

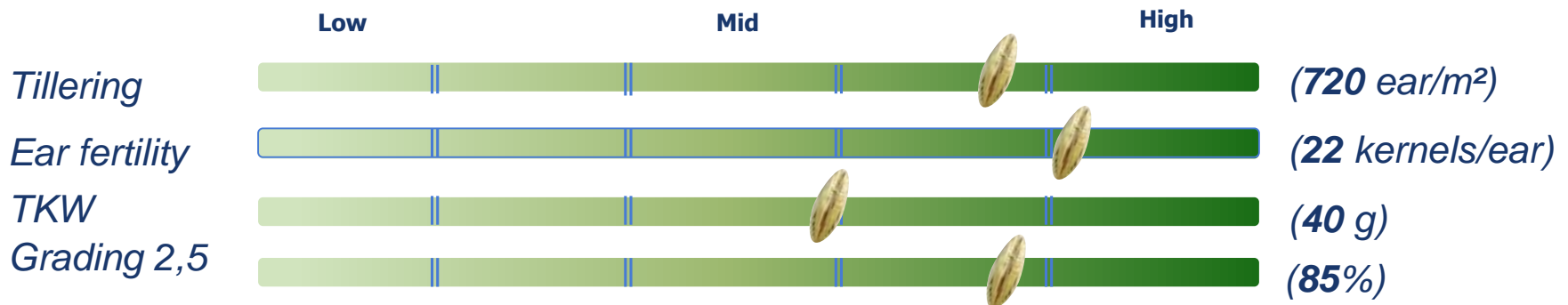
## Agronomical profile

(1 susceptible – 9 resistant)

<i>Ear emergence:</i>	<b>5,5</b>	<b>mid late – early ripening</b>
<i>Straw length</i>	<b>4</b>	<b>short to mid</b>
<i>Lodging resistance:</i>	<b>5,5</b>	<b>medium to high</b>

## Grain components

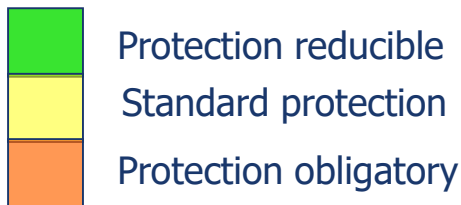
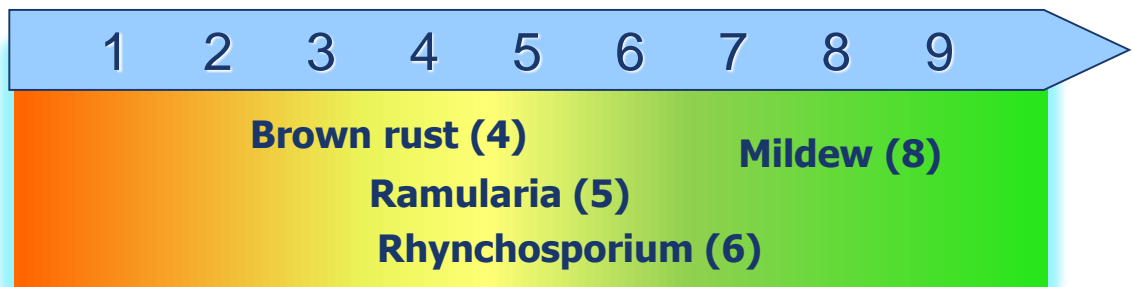
(observation 2016/2017)



## Disease resistance

*susceptible*

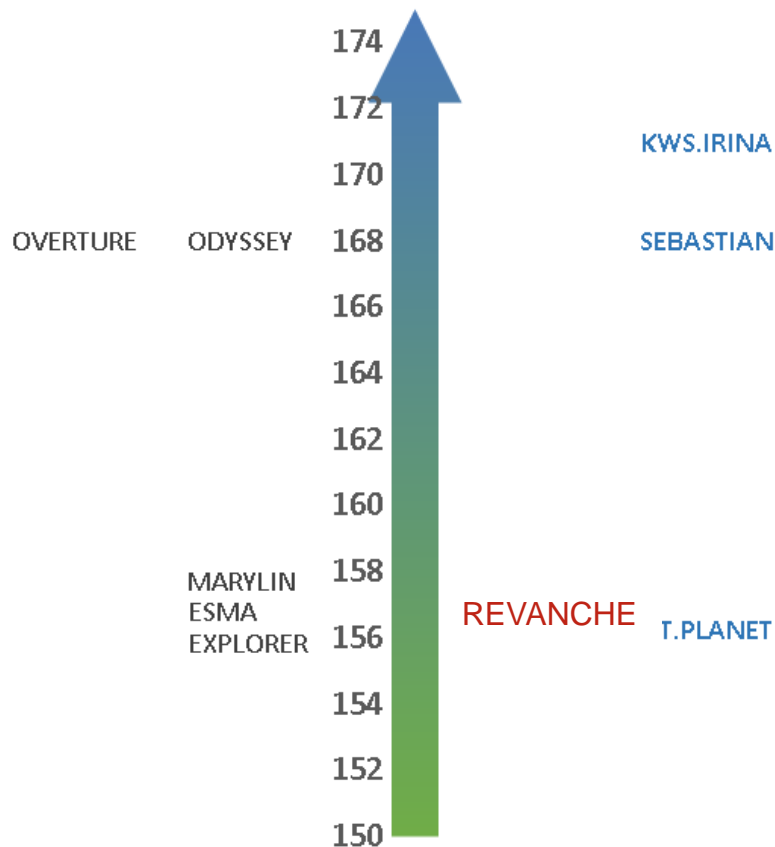
*resistant*



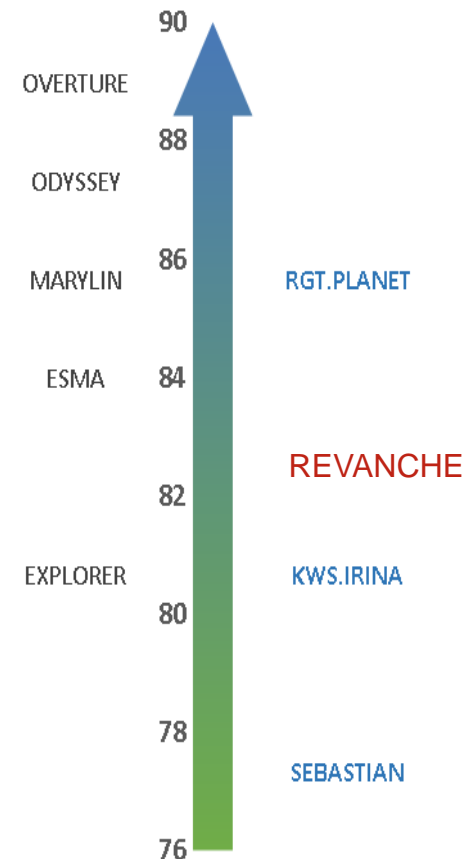
# REVANCE: Agronomical properties

France, CTPS 1+2 , 2016 / 2017

## Ear emergence

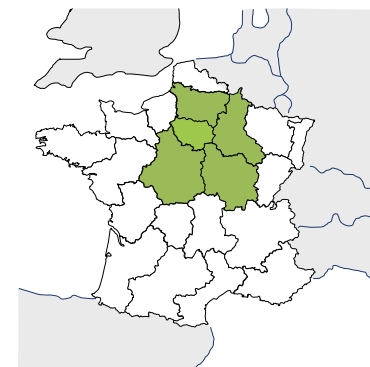
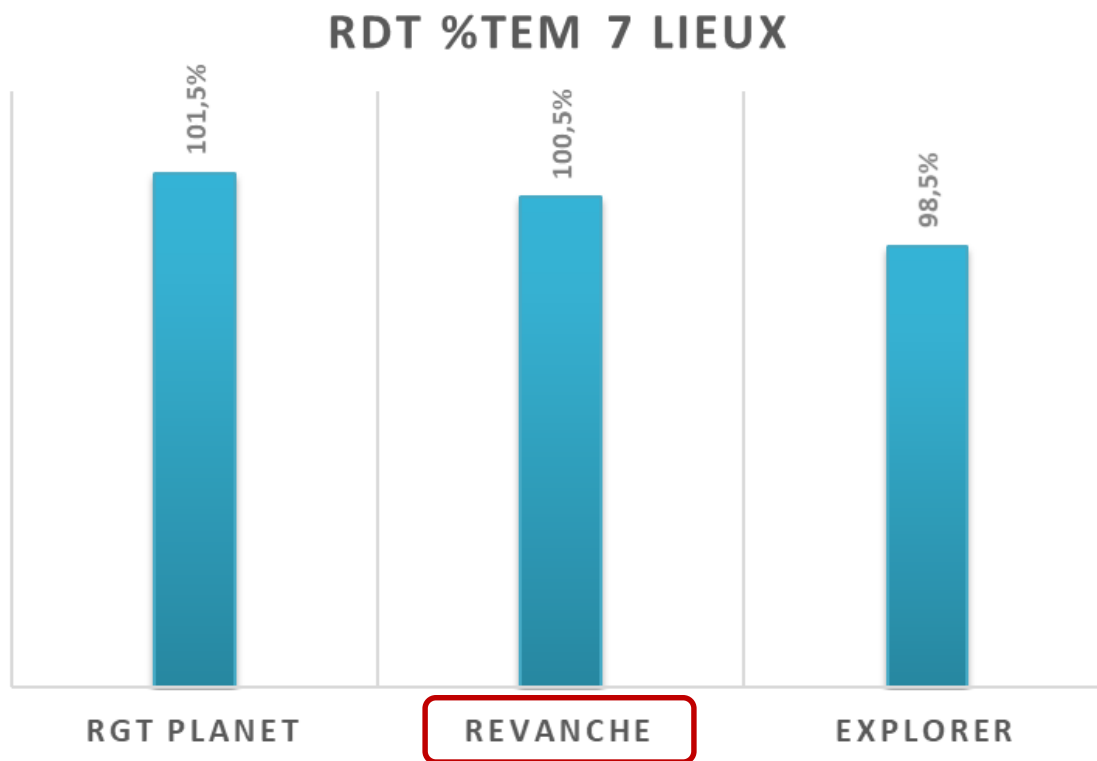


## Height



# REVANCHE: Yield performance 2018 (%)

## External trials Saaten Union France



# REVANCHE - Denmark 2018

	Yield 1)		Agronomic data (Yield trials) 1)				Diseases (Observation Plots) 2)			Cultivation (Observation Plots) 2)		
	Grain yield index	Grain yield, hkg per ha	Crude protein in dry matter, Tested variety	Grading, kernels over 2,5 mm, Tested variety	Mildew coverage	Barley Rust coverage	Scald coverage	Net and Spot blotch coverage	Straw length	Ear breaking	Straw breaking	
	(index)	(hkg/ha)	(%)	(%)	(%)	(%)	(%)	(%)	(cm)	(score 0 - 10)	(score 0 - 10)	
Year	2018	2018	2018	2018	2018	2018	2017	2018	2018	2018	2018	
○	●	○	○	○	○	○	○	○	○	○	○	
1. Raceway	108 (4)	67,6 (4)	12,2 (4)	99 (4)	0	6 (7)	0,2 (4)	0 (2)	57 (8)	1,0	7,0	
2. NOS 111.317-63	105 (4)	65,6 (4)	11,9 (4)	98 (4)	0	21 (7)		0,3 (2)	59 (8)	2,0	5,0	
3. NOS 111.394-55	104 (4)	64,9 (4)	11,6 (4)	97 (4)	0	2,7 (7)		0 (2)	58 (8)	1,0	1,0	
4. Wish	104 (4)	64,9 (4)	11,7 (4)	98 (4)	0	8 (7)	0,05 (4)	1,5 (2)	57 (8)	2,0	5,0	
5. Flair	104 (4)	64,7 (4)	12,2 (4)	98 (4)	0	4,4 (7)	0 (4)	0 (2)	54 (8)	2,0	2,0	
6. Feedway	104 (4)	64,6 (4)	12,2 (4)	98 (4)	0	6 (7)	0,3 (4)	0 (2)	53 (8)	4,0	3,0	
7. Applaus	104 (4)	64,5 (4)	11,6 (4)	99 (4)	0	12 (7)	2,0 (4)	6 (2)	57 (8)	2,0	1,0	
8. SJ 176798	103 (4)	64,3 (4)	11,8 (4)	99 (4)	0	3,7 (7)		5 (2)	60 (8)	1,0	2,0	
9. Revanche	103 (4)	64,2 (4)	11,8 (4)	98 (4)	0	19 (7)		4,0 (2)	57 (8)	2,0	3,0	
10. Laurikka	103 (4)	63,9 (4)	12,1 (4)	97 (4)	0	8 (7)	0,3 (4)	0,3 (2)	56 (8)	1,0	3,0	
11. Focus	102 (4)	63,7 (4)	12,0 (4)	98 (4)	0	3,6 (7)		0,05 (2)	58 (8)	1,0	1,0	
12. KWS Fantex	102 (4)	63,6 (4)	12,6 (4)	99 (4)	0	8 (7)	0,3 (4)	0 (2)	54 (8)	1,0	2,0	
13. Champ	102 (4)	63,6 (4)	12,1 (4)	98 (4)	0	8 (7)	0,3 (4)	0 (2)	54 (8)	2,0	1,0	
14. Cosmopolitan	102 (4)	63,4 (4)	12,4 (4)	99 (4)	0	8 (7)	0 (4)	0,05 (2)	56 (8)	2,0	1,0	
15. Embrace	102 (4)	63,3 (4)	12,0 (4)	98 (4)	0	11 (7)	1,5 (4)	0 (2)	53 (8)	2,0	1,0	
16. Br12834hz1	101 (4)	63,2 (4)	12,1 (4)	99 (4)	0	15 (7)		0 (2)	57 (8)	0,0	1,0	
17. SC 38271 Q4	101 (4)	63,1 (4)	12,0 (4)	98 (4)	0	8 (7)		0,5 (2)	55 (8)	3,0	1,0	
18. LGBU15-4827-C	101 (4)	63,1 (4)	12,2 (4)	98 (4)	0	6 (7)		0,05 (2)	55 (8)	2,0	3,0	
19. LGBN14223-3	101 (4)	63,1 (4)	11,7 (4)	98 (4)	0	5 (7)		5 (2)	54 (8)	1,0	2,0	
20. Newway	101 (4)	63,0 (4)	12,1 (4)	99 (4)	0	10 (7)	0,1 (4)	0 (2)	52 (8)	1,0	1,0	
21. NOS 111.390-52	101 (4)	62,8 (4)	12,6 (4)	99 (4)	0	27 (7)		0 (2)	54 (8)	2,0	1,0	
22. Charles	101 (4)	62,7 (4)	12,6 (4)	99 (4)	0	10 (7)	0 (4)	0 (2)	58 (8)	1,0	2,0	
23. Chanson	101 (4)	62,7 (4)	11,9 (4)	98 (4)	0	5 (7)	0,3 (4)	0 (2)	56 (8)	1,0	1,0	
24. KWS Chrissie	101 (4)	62,6 (4)	12,4 (4)	99 (4)	0	9 (7)		0,5 (2)	55 (8)	1,0	2,0	
25. Scholar	100 (4)	62,5 (4)	11,8 (4)	98 (4)	0	3,8 (7)	0 (4)	0 (2)	53 (8)	2,0	1,0	
26. Crossway	100 (4)	62,4 (4)	12,4 (4)	98 (4)	0	21 (7)	0 (4)	0,6 (2)	60 (8)	1,0	5,0	
27. Luther	100 (4)	62,4 (4)	12,6 (4)	98 (4)	0	11 (7)	0,3 (4)	27 (2)	57 (8)	3,0	7,0	

**REVANCHE 2018:  
103% rel.yield in  
difficult  
environmental  
conditions!**

# REVANCHE – Malt quality Denmark 2018

	KWS Irina	RGT Planet	REVANCHE
Viscosity	1,86	1,77	1,61
Betaglucan	548	383	180
Extract	80,4	81,0	81,8
Protein malt	10,8	11,0	9,9
Sol N	616	668	636
Kolbach Index	36	38	40
Friability	72,5	75,5	86,0
Final attn.	82,7	83,3	83,9
FAN	103	106	106

# REVANCHE: Malt quality

Official trials France CTPS 1+ 2, 2016 and 2017

	First year - harvest 2016				Second year- harvest 2017				Mean	Technol Class	New control
location:	45	51	60	10	17	63	21	80			
moisture content	5,1	4,4	4,1	4,2	4,6	4,3	4,2	4,3	4,4		
Extract	84,7	84,1	86,5	83	83,2	82,1	82,6	81,9	83,5	108	100
Colour	3,6	5,5	5,3	4,6	3,8	3,7	3,4	3,6	4,2		
pH	6	5,95	5,93	5,96	6,16	6,17	6,08	6,19	6,06		
Total Protein	10,1	9,8	10,1	9,7	8,6	10,3	9	9,3	9,6	98	105
Soluble Protein	4,54	5,52	4,78	5,06	3,91	3,81	4,5	3,76	4,49		
Index Kolbach	45	56	47	52	45	37	50	40	47		
Diastatic Power	370	410	340	390	250	170	370	210	314	100	100
Viscosity	1,56	1,47	1,52	1,43	1,46	1,56	1,44	1,51	1,49	107	105
Friability	79	95	86	95	98	86	99	90	91	105	105
glassy kernels	0,2	0,2	0,6	0,1	0	0,1	0	0,1	0,2		
partly modified grains	4,6	0,8	2,4	0,5	0,5	2,9	0,1	1,3	1,6		
Beta Glucanes	291	81	229	69	49	327	49	144	155	115	111
Calculated quality index:										105	103
Technological quality class *											A

Control: (SEBASTIAN + KWS IRINA)/2

New control: (KWS IRINA + RGT PLANET)/2

\* A : >= 103 ; B : >= 99 et < 103 ; C : <99

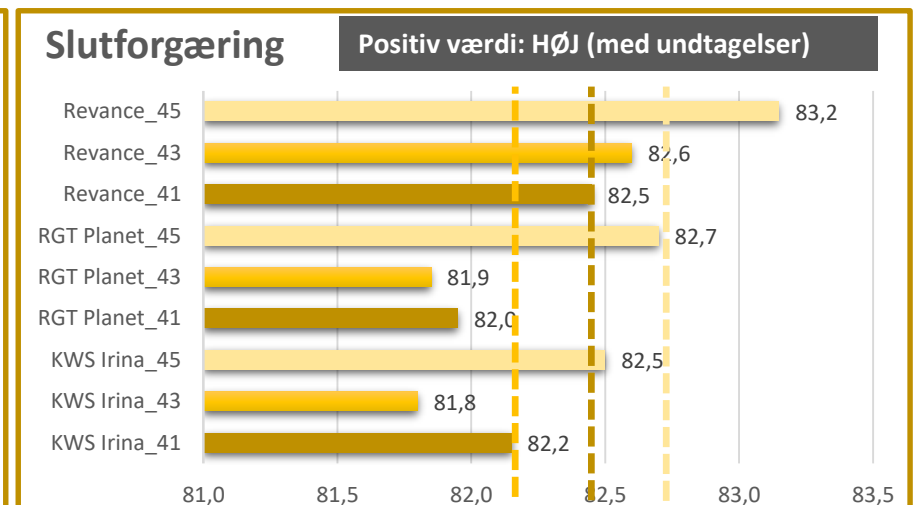
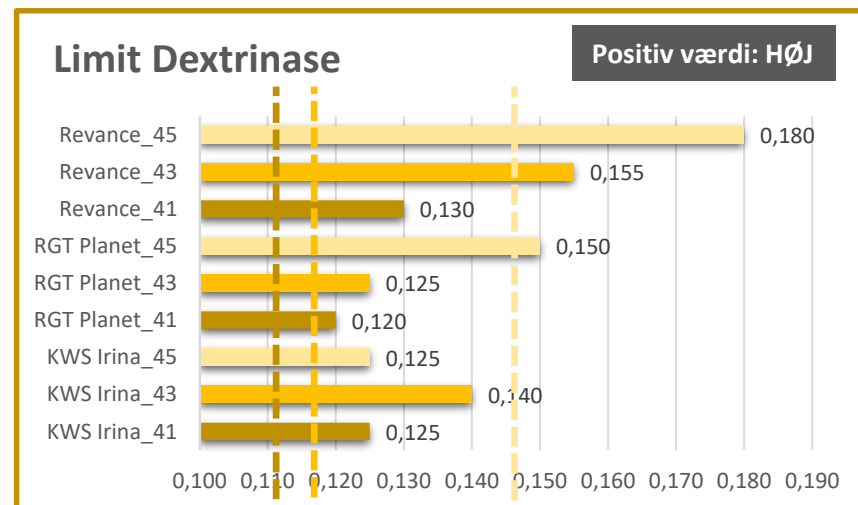
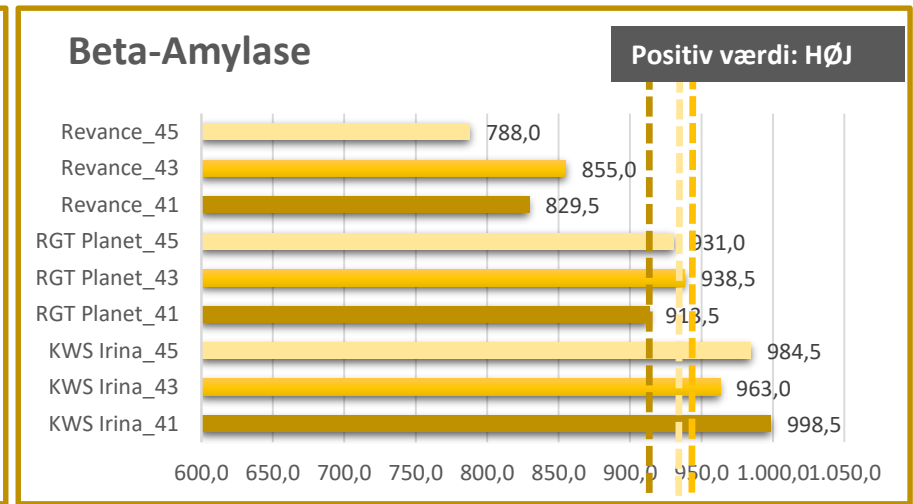
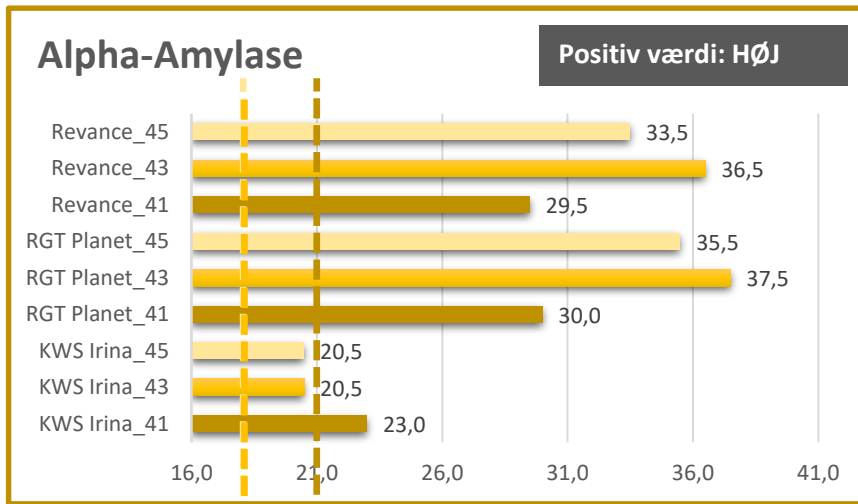


# REVANCHE: Stress Test Results 2018

Danish Preferred



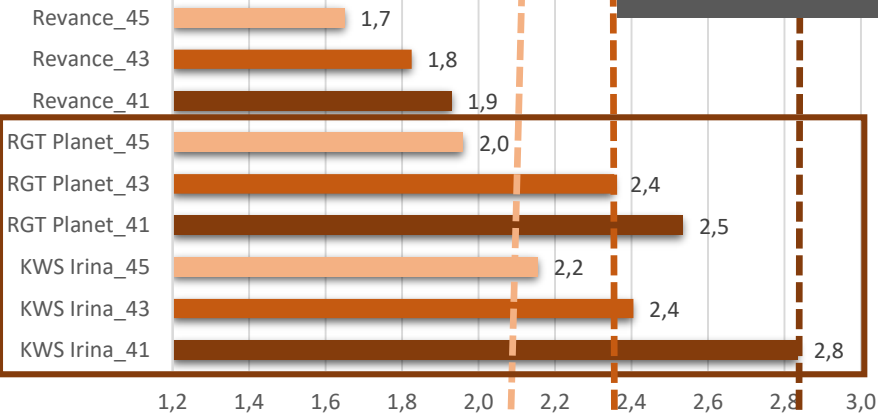
## Starch modification



# REVANCHE: Stress Test Results 2018

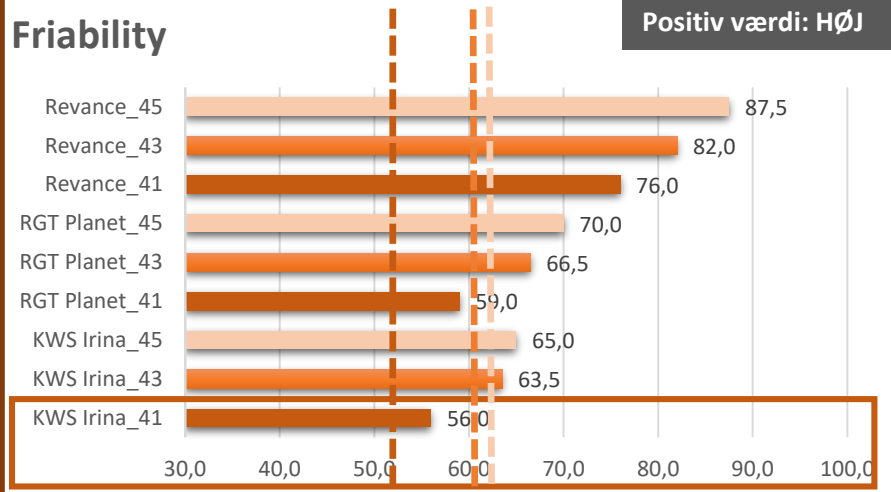
## Cell wall modification

### Viscosity

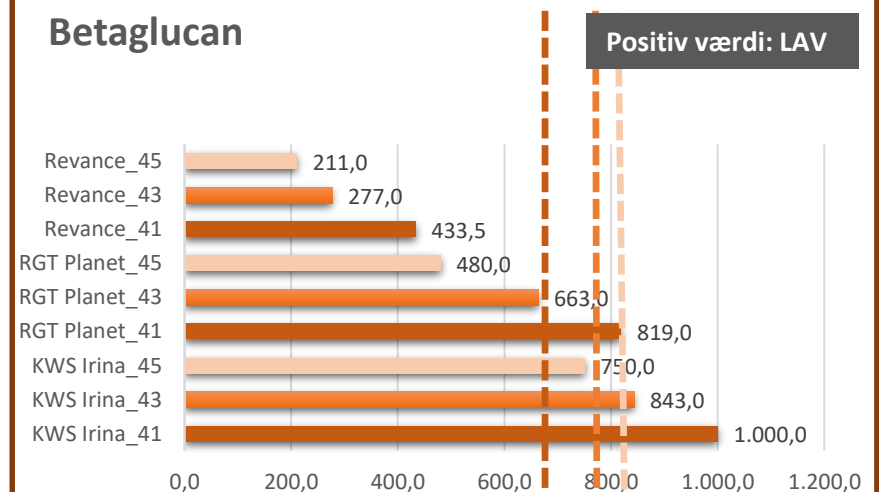


Flexible malting possible with REVANCHE without affecting the cell wall degradation

### Friability

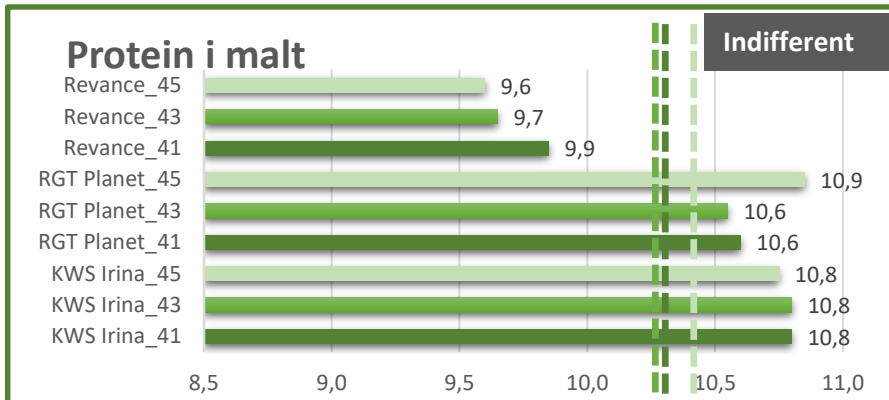


### Betaglucan

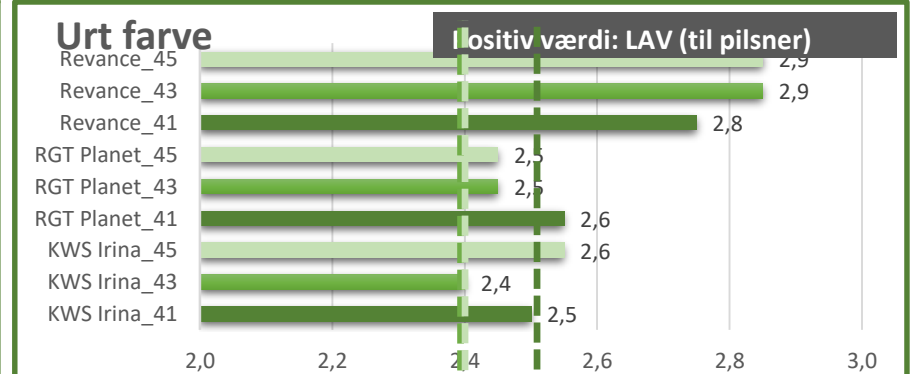
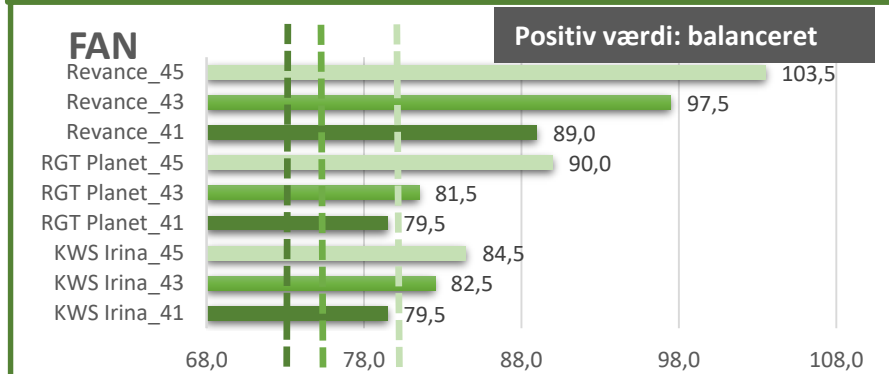
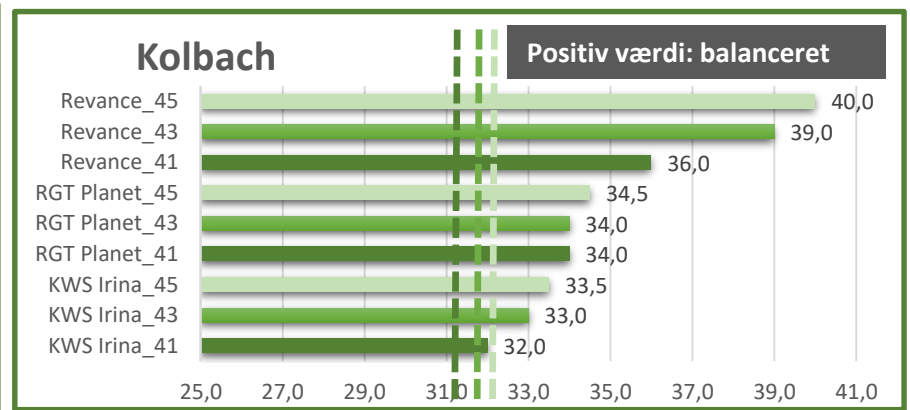
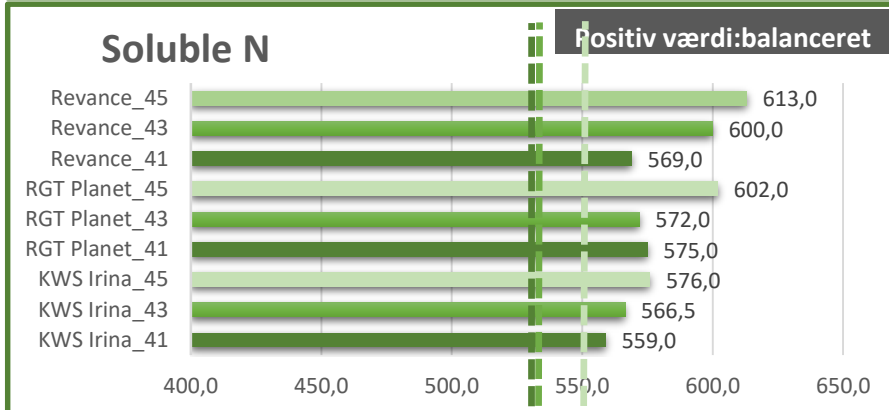


# REVANCHE: Stress Test Results 2018

## Proteolytic modification

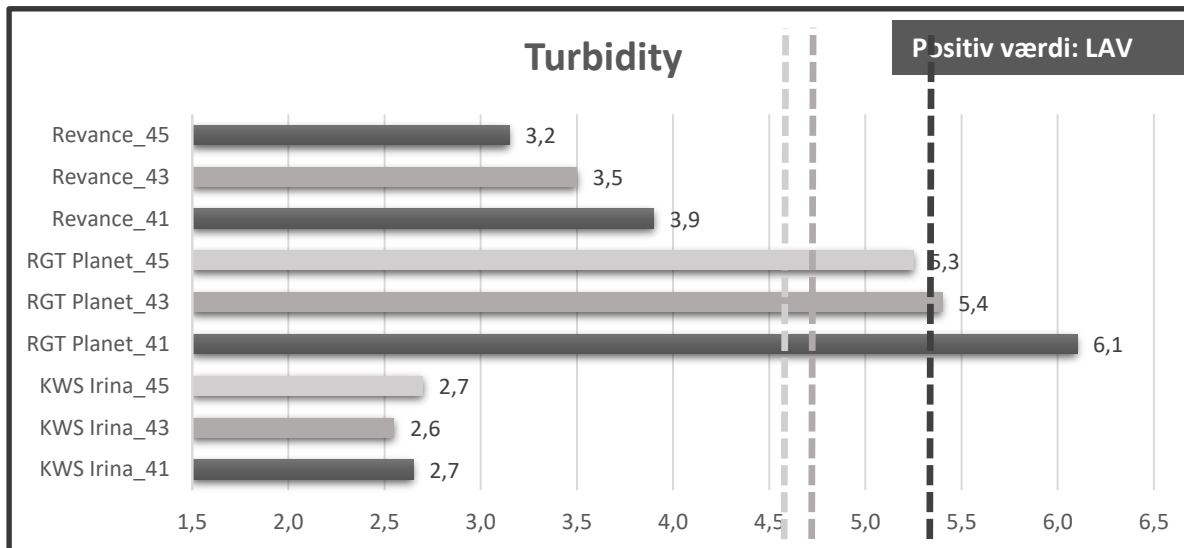
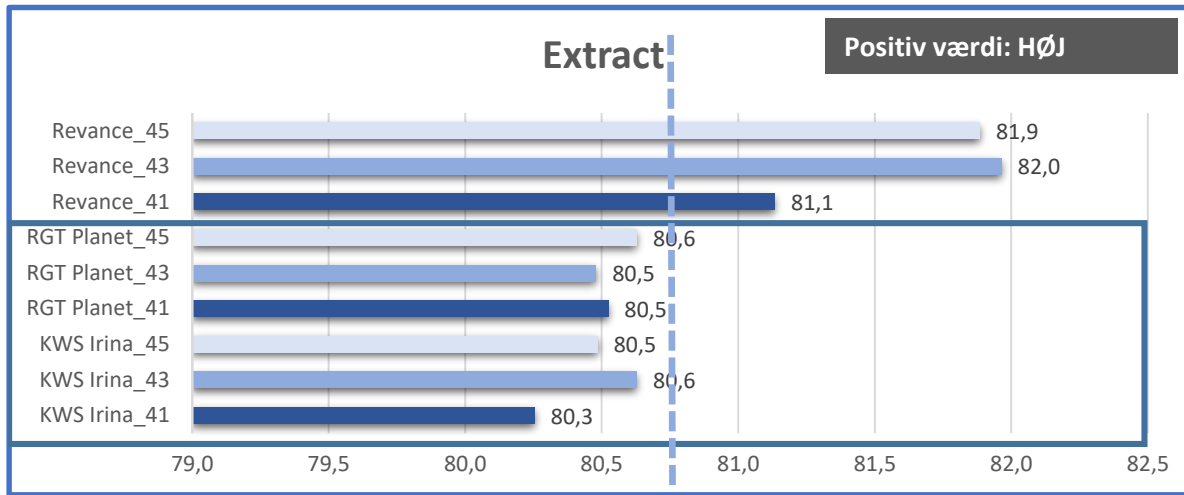


REVANCHE  
good proteolytic modification on  
low total protein level



# REVANCHE: Stress Test Results 2018

Danish Preferred



REVANCHE:  
high extract and  
low turbidity  
values!

# REVANCHE - Summary

Danish Preferred 



- high extract
- very good cell wall modification
- low turbidity values
- balanced starch and protein degradation

	KWS Irina_45	KWS Irina_43	KWS Irina_41	RGT Planet_45	RGT Planet_43	RGT Planet_41	Revanche_45	Revanche_43	Revanche_41
<b>Extract</b>	4	4	4	4	4	4	2	2	3
<b>Friability</b>	4	4	5	3	4	5	1	2	3
<b>Beta-Glucan</b>	4	5	5	2	4	4	1	1	2
<b>Viscosity</b>	3	4	5	2	4	4	1	1	2
<b>FAN, diff. *</b>	3	5	8	-2	-3	1	2	-2	-4
<b>Soluble N, diff.*</b>	20	25	45	5	5	30	-30	-30	-40
<b>Kolbach, diff.*</b>	1	1	2	-1	0	2	2	2	0
<b>Alpha-Amylase</b>	5	5	4	1	1	3	2	1	3
<b>Beta-Amylase</b>	1	1	1	2	1	2	4	3	3
<b>Limit Dextrinase</b>	3	2	3	2	3	3	1	2	3
<b>Attenuation</b>	2	4	3	2	4	4	1	2	3
<b>Turbidity</b>	1	1	1	4	4	5	2	2	3
<b>Index **</b>	19	23	22	19	25	27	10	12	19
<b>Index mean ***</b>	41			45			26		
<i>Before limit dex. data</i>									
<b>Index **</b>	19	23	22	19	25	27	11	13	19
<b>Index mean ***</b>	41			45			27		

# Contact

## Product Manager Malting Cereals

**Dirk Haemke**

SAATEN UNION GmbH  
Eisenstrasse 12  
30916 Isernhagen HB  
Germany

Phone +49 511 72 666 283  
Cellular +49 171 387 1238

E-mail: [Dirk.Haemke@saaten-union.de](mailto:Dirk.Haemke@saaten-union.de)  
URL: [www.saaten-union.de](http://www.saaten-union.de)

## Area Manager Scandinavia

**Jens-Ole Dalum Nielsen**

SAATEN UNION GmbH  
Eisenstrasse 12  
30916 Isernhagen HB  
Germany

+45 61 55 47 05

[jensole.nielsen@saaten-union.de](mailto:jensole.nielsen@saaten-union.de)  
[www.saaten-union.com](http://www.saaten-union.com)