

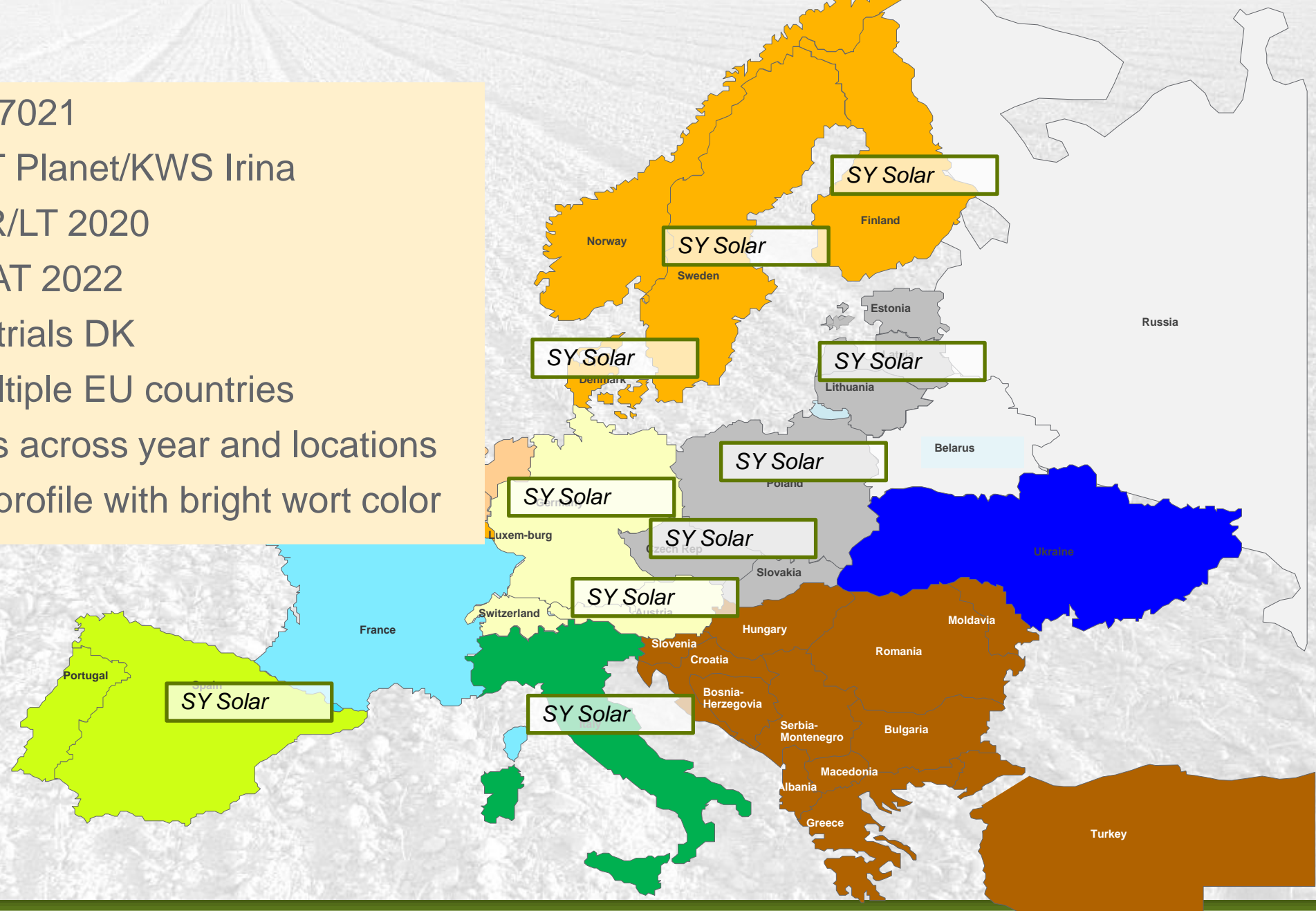


syngenta

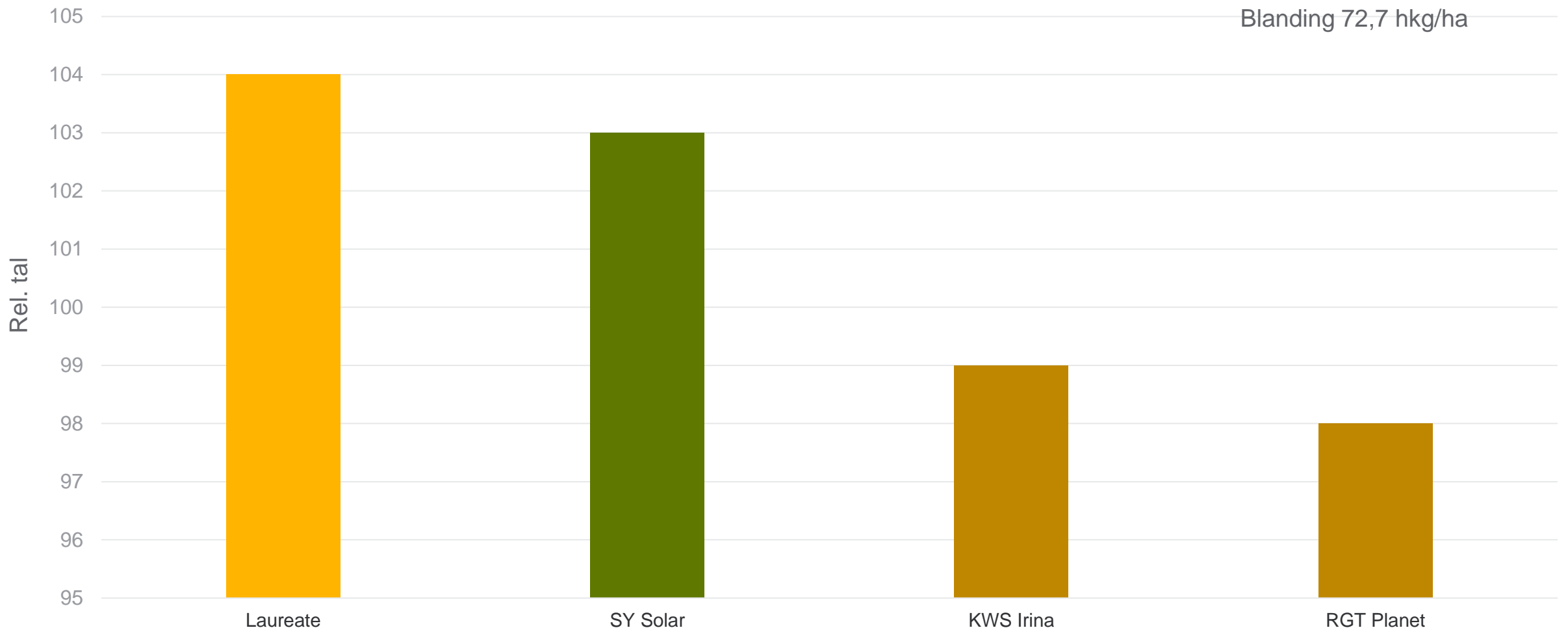
SY SOLAR Danish Preferred 2022

23 FEB 2022

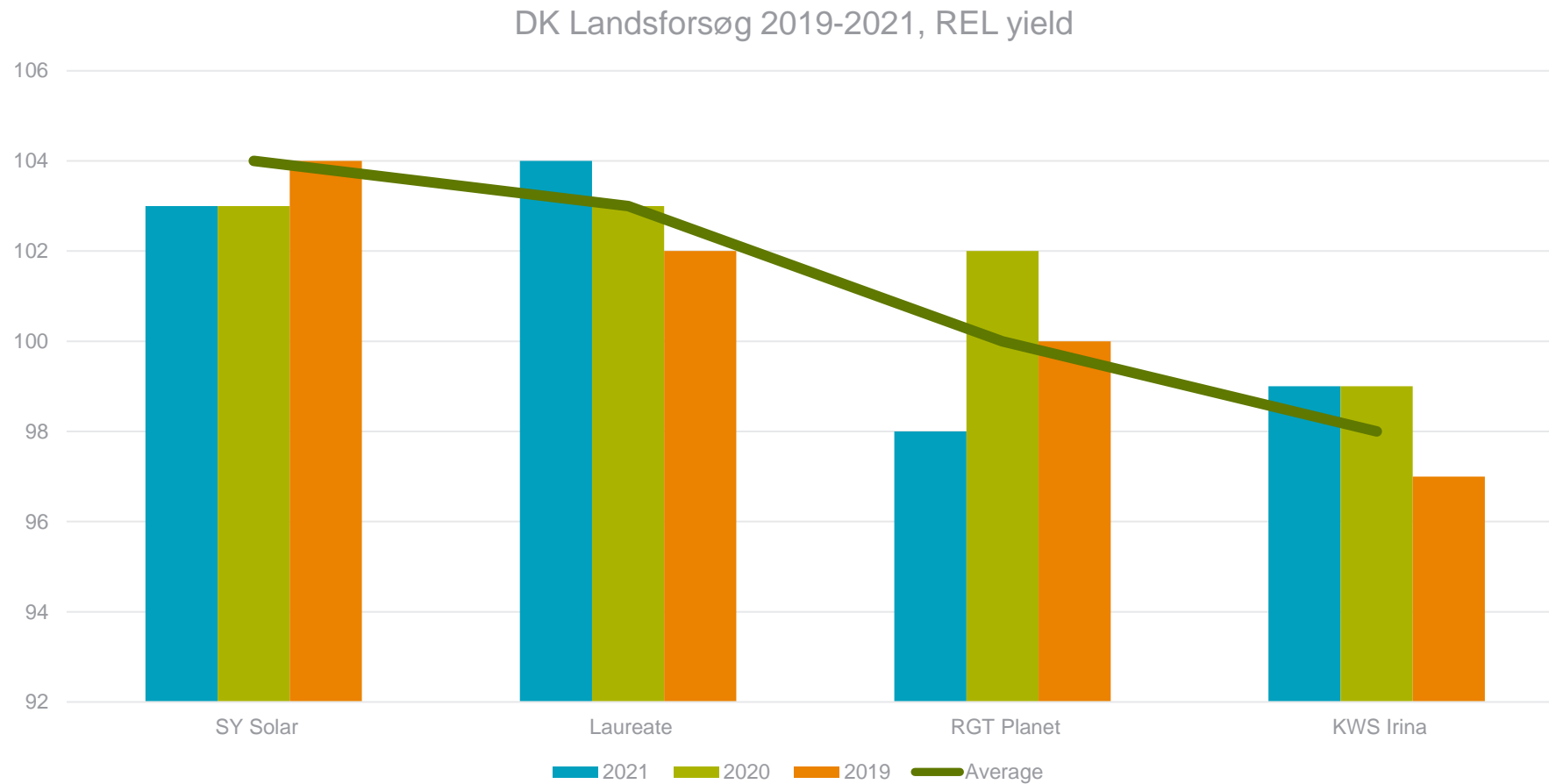
- SY SOLAR/SY417021
- Pedigree: RGT Planet/KWS Irina
- National reg: GER/LT 2020
CZ/AT 2022
- 3 years in official trials DK
- Developing in multiple EU countries
- High stable yields across year and locations
- Balanced quality profile with bright wort color



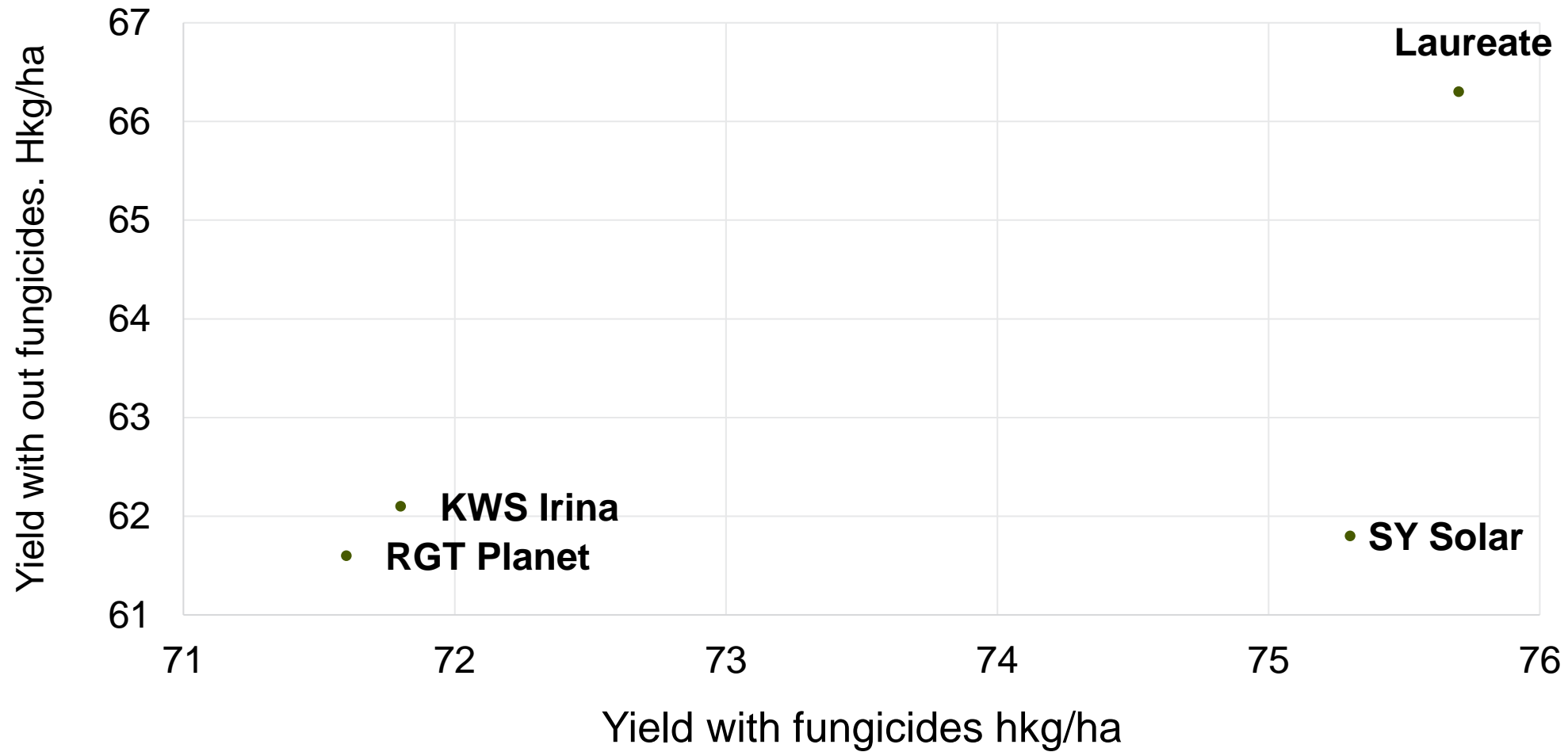
Spring barley, yield DK 2021



DK Yield 3 years average

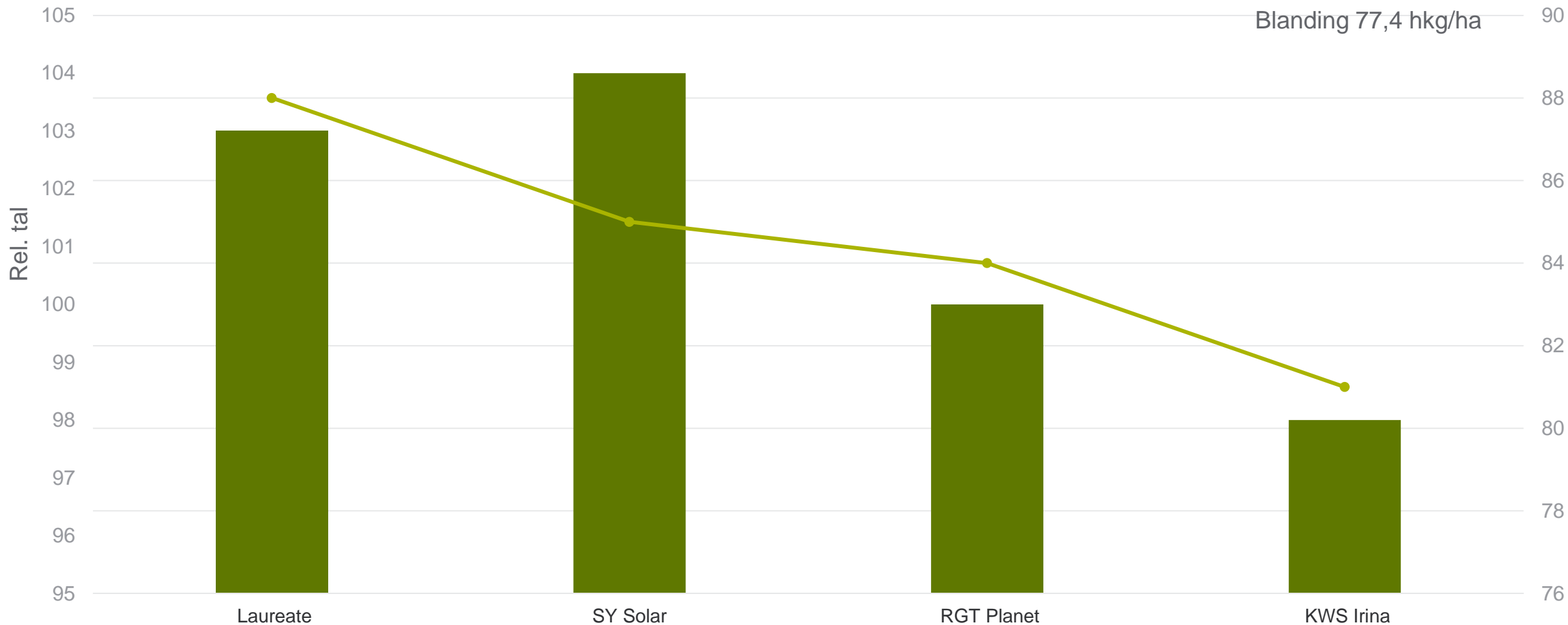


DK Yield (hkg/ha) with or without fungicide application - 2021



DK Yield and size grading

-procent grains > 2,8 mm(%) 3 year average (2019-2021)



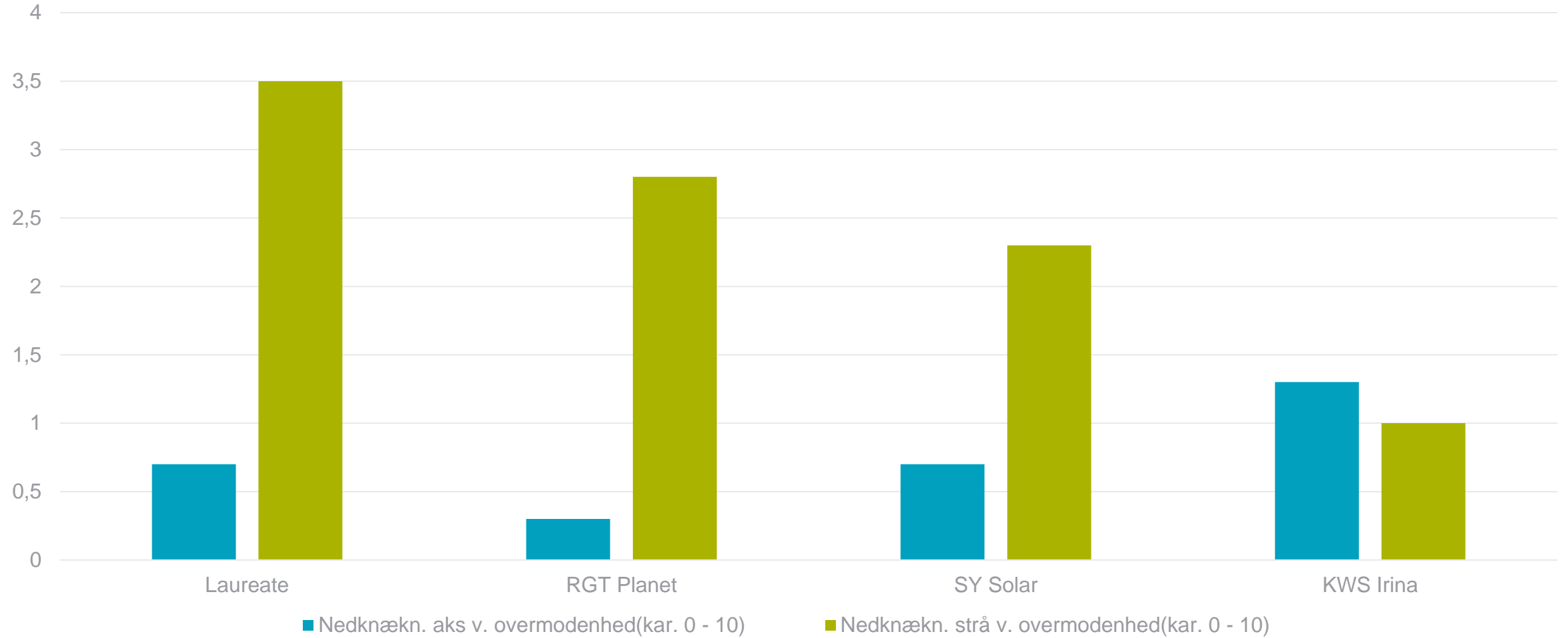
Specific weight and grain size

-procent above 2,8 mm (%) and KG/HL 3 years AVG (2019-2021)



DK straw stability 2021

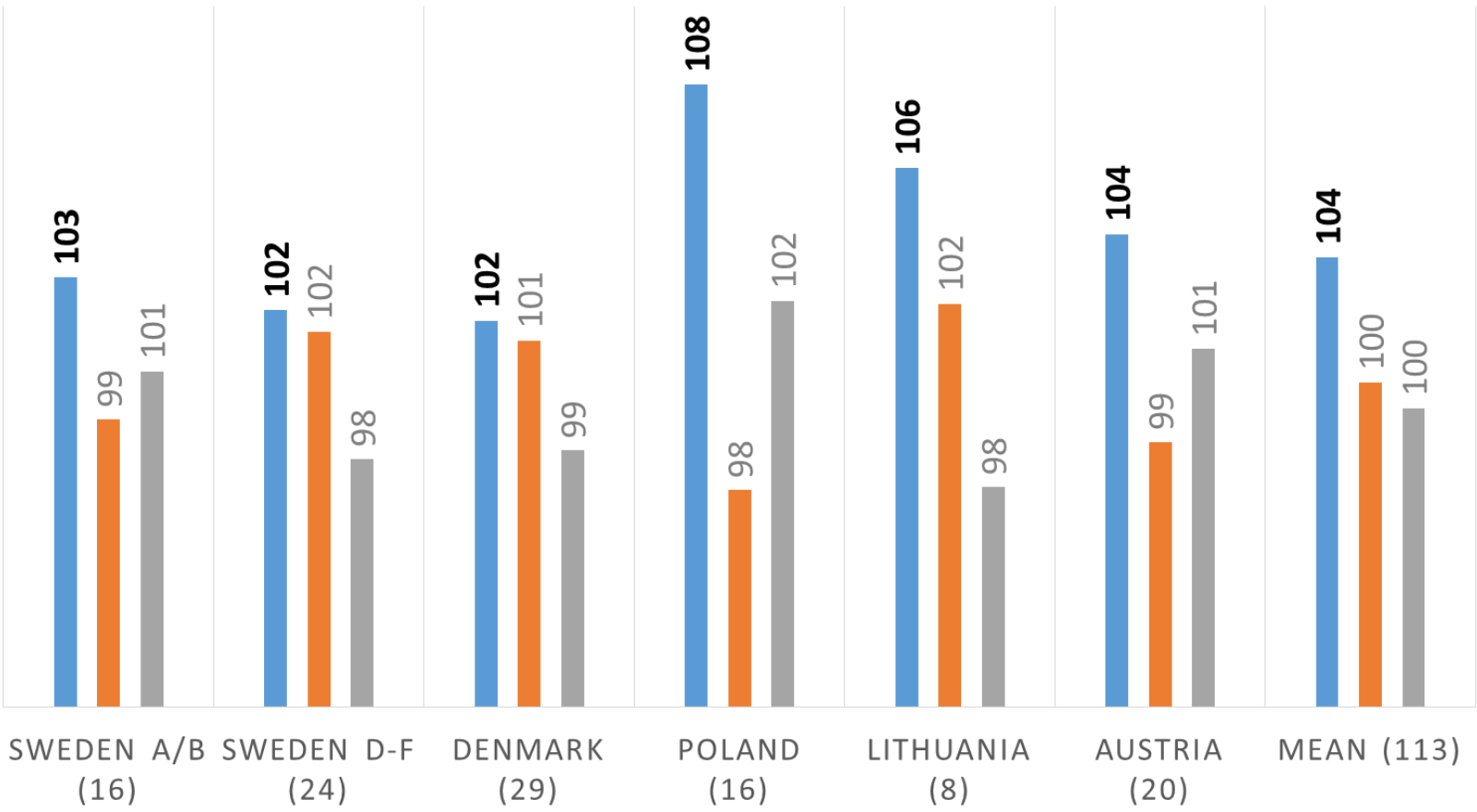
Ear breaking and straw breaking after full maturity (kar. 0 - 10)



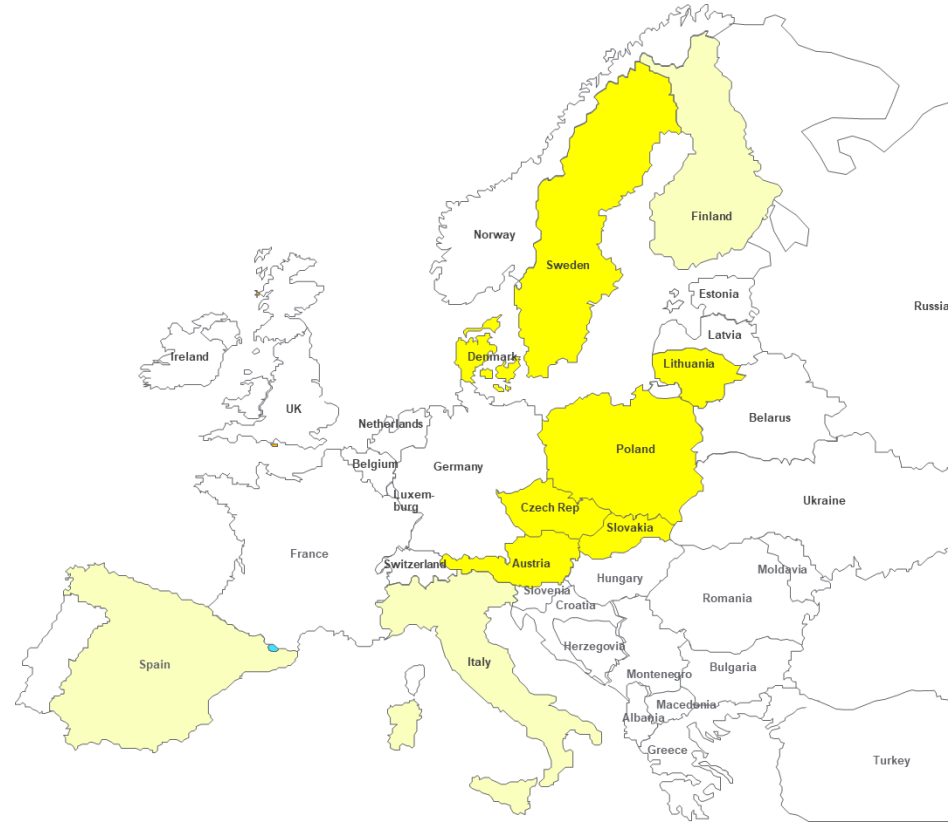
SY Solar – A Strong and Very Stable Yield Performance in Volatile Growing Conditions

YIELD RESULTS 2019/20/21

■ SY Solar ■ Laureate© ■ RGT Planet ©



() # of trial locations

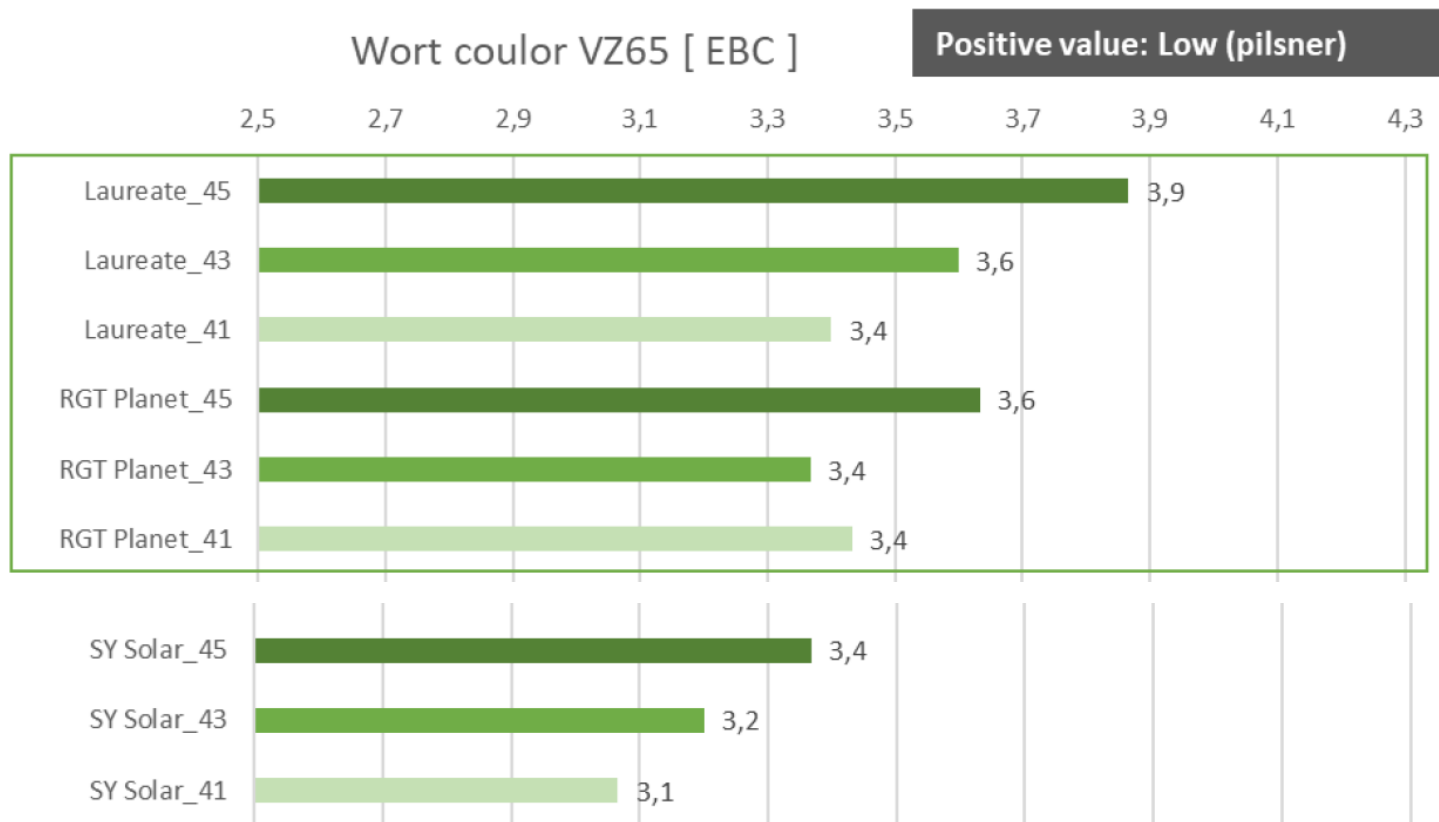


Tystofte Micro Malting 2019-2020

Maltningssegenskaber VZ65, vårbyg

Sort	Viskositet, mPa*s		β-glucan, mg/l		Ekstraktudbytte, % tørstof		Proteinindhold, % tørstof		Opløselig N, mg/100 g tørstof		Kolbach Index, %		Friabilitet, %		Attenuation, %		FAN, mg/100g tørstof		β-amylase, BU/g tørstof		
	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	Gns. 2019	Gns. 2020	
Antal fs.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
KWS Irina	1,53	1,55	330	306	83,0	83,9	9,7	8,8	646	672	41,7	48,0	86,0	92,3	85,1	85,7	124	129	1031	829	
RGT Planet	1,47	1,53	168	202	84,0	83,7	9,4	9,2	660	731	44,0	49,3	91,0	91,7	85,9	84,9	121	131	1078	939	
SY SOLAR	1,45	1,49	81	100	84,4	83,6	9,5	9,1	649	698	43,0	48,0	95,3	95,0	85,1	84,5	131	124	953	808	

Stress test 2021 Wort color



IFBM: Micro maltage – Indice Qualité

Première année - Récolte 2019 Deuxième année - Récolte 2020	Moyenne (8)			Classe technologique	
INDICE QUALITE*	KWS Irina	RGT Planet	SY Solar		
Humidité (%)	4,3	4,3	4,4	100	
Extrait fine mouture (% m.s.)	83,1	83,6	= 83,5		
Couleur (EBC)	3,3	3,7	3,2		
pH	5,91	5,97	5,96		
Protéines totales (% m.s.)	10,3	9,9	9,9		105
Protéines solubles (% m.s.)	4,41	4,47	4,33		100
Indice Kolbach	43	45	44		
Pouvoir diastasique (WK m.s.)	348	335	= 329		
Viscosité du moût (mPa.s)	1,52	1,53	1,50		
Friabilité (%)	89	88	90		101
Grains entiers (%)	0,4	0,2	0,3	110	
Grains Insuffisamment Désagrégés (%)	1,7	2,1	1,6		
Beta-glucanes du moût (mg/l)	214	184	136		
Indice Qualité calculé				101	
CLASSE DE QUALITE TECHNOLOGIQUE**				B	
* En application du règlement CTPS concernant la nouvelle classification technologique entérinée à la section de 19 Juillet 2011					
** Classes technologiques: A: >= 103; B: >= 99 et < 103; C: <99					

Danish Preferred stress test 2021

Index Result

	Laureate_45	Laureate_43	Laureate_41	RGT Planet_45	RGT Planet_43	RGT Planet_41	SY Solar_45	SY Solar_43	SY Solar_41
Extract	1	1	3	3	4	4	1	2	3
Friability	3	3	5	1	2	4	1	2	4
Beta-Glucan	2	3	5	1	2	3	1	2	3
Viscosity	2	3	4	1	2	4	1	2	4
FAN	2	4	5	1	3	4	2	3	5
Soluble N	1	3	4	1	2	3	2	3	4
Kolback	1	2	4	1	2	3	2	3	4
FAN dev.*	6%	-1%	4%	7%	-4%	1%	-2%	-6%	-9%
Soluble N dev.*	1%	3%	4%	1%	2%	3%	2%	3%	4%
Kolback dev.*	1%	2%	4%	1%	2%	3%	2%	3%	4%
Proteolyse compared to modification	5 % higher			2 % higher			6 % higher		
Alpha-Amylase	3	4	4	2	3	4	5	5	5
Beta-Amylase	4	4	4	2	2	3	3	4	4
Limit Dextrinase	3	3	3	2	2	3	3	3	4
Attenuation	2	3	3	2	3	5	1	3	4
Turbidity	1	1	1	3	2	3	1	1	1
Index **	10	12	18	12	16	21	8	13	18
Index mean ***	25			31			24		



- Similar quality profile to RGT Planet with lower beta-glucan and brighter wort colors
- Lower gelatinisation temperature confirmed
- Outyields RGT Planet in official trials in north and central Europe by 4 %
- At least similar yield stability over years and locations with better grain quality like Planet
- Better in lodging resistance vs RGT Planet
- Preparing for industry pilots in Austria and Denmark
- The best and immediate choice for malting barley production in the Baltic sea area