7. Manitoba Crop Variety Evaluation trials (MCVET)

PESAI is one of the many sites of MCVET program. MCVET facilitates variety evaluations of different crop types at various sites within Manitoba. The purpose of the MCVET trials is to grow both familiar (check varieties) and new varieties side by side in a replicated manner in order to compare and contrast various variety characteristics such as yield, maturity, protein content, disease tolerance, and many others.

Picture 1. 2021 MCVET Soybean plots at Beausejour site

From each MCVET site across the province, yearly data is collected, combined, and summarized in the 'Seed Manitoba' guide. Seed Manitoba guide and the websites www.seedinteractive.ca and www.seedmb.ca provide valuable variety performance information for Manitoba farmers. Hard copies are available at most Manitoba Agriculture and Ag Industry Offices.

PESAI managed two MCVET sites (Arborg and Beausejour) during 2021 growing season. Variety trials of spring wheat, winter wheat, fall rye, oats, barley and soybeans (both roundup ready and conventional) were conducted at both sites (Table 7.1), whereas trials of peas, silage corn, annual forages and flax were conducted only at Arborg site.

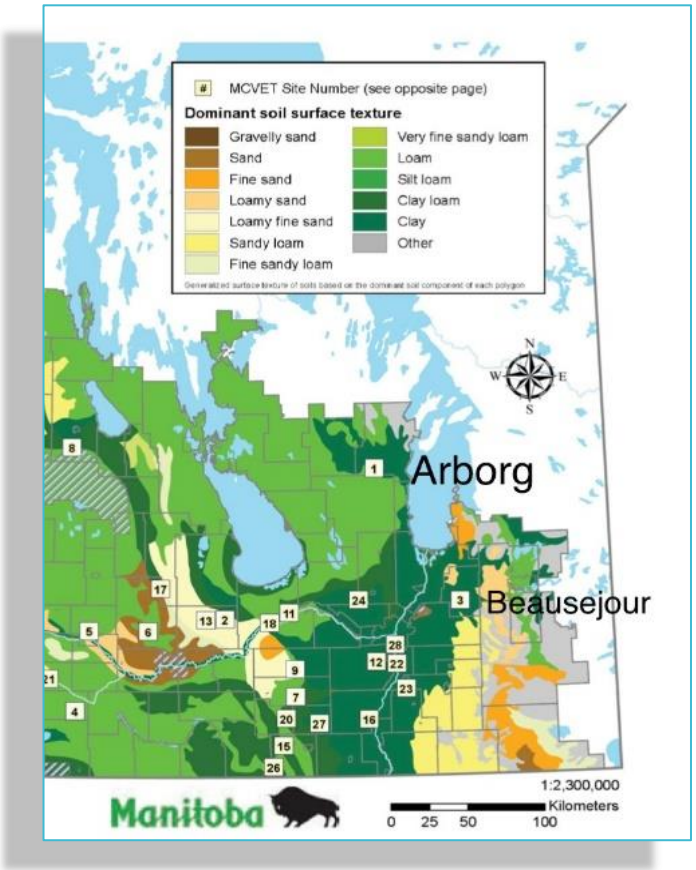

Table 7.1. Agronomic management practices followed at PESAI MCVET sites during 2021 growing season.

Site	Crop type	Stubble	Seeding date	Fertilizer applied (N-P-K)	Harvest date	No. of plots
				lb /ac		
Arborg						
	Spring wheat	Fallow	06-May	55-20-0	17-Aug	108
	Oats	Fallow	07-May	55-20-0	18-Aug	27
	Barley	Fallow	07-May	55-20-0	18-Aug	66
	Winter wheat¥	Canola	10-Sep	30-25-0 (100-0-0)§	03-Aug	18
	Fall rye	Canola	10-Sep	30-25-0 (100-0-0)	03-Aug	18
	Peas	Pasture	11-May	3-15-0	17-Aug	63
	Conv. Soybeans‡	Pasture	27-May	4-20-0	29-Sep	60
	RR soybeans‡	Pasture	27-May	4-20-0	29-Sep	132
	Silage corn	Canola	21-May	72-25-0† + 0-35-0	22-Sep	90
	Flax	Wheat	13-May	4-20-0	08-Sep	21
	Annual forages	Fallow	20-May	55-20-0	26-Jul	36
Beausejour						
	Winter wheat¥	Canola	14-Sep	30-25-0 (100-0-0)	13-Aug	18
	Fall rye	Canola	14-Sep	30-25-0 (100-0-0)	13-Aug	18
	Spring wheat	Soybean	14-May	75-25-0	16-Aug	81
	Oats	Soybean	14-May	75-25-0	16-Aug	15
	Barley	Soybean	14-May	75-25-0	16-Aug	33
	Conv. soybeans	Wheat	17-May	3-15-0	27-Sep	60
	RR soybeans	Wheat	17-May	3-15-0	24-Sep	132

¥ winter wheat was seeded in fall 2020

§ fertilizer values in paranthesis were broadcasted in spring.

† fertilizer (N-P-K) was broadcasted before seeding and P =35 lb/ac was band applied with seed.

‡ Conventional and RR soybean plots were written off at Arborg site due to drought, weed and deer damage.

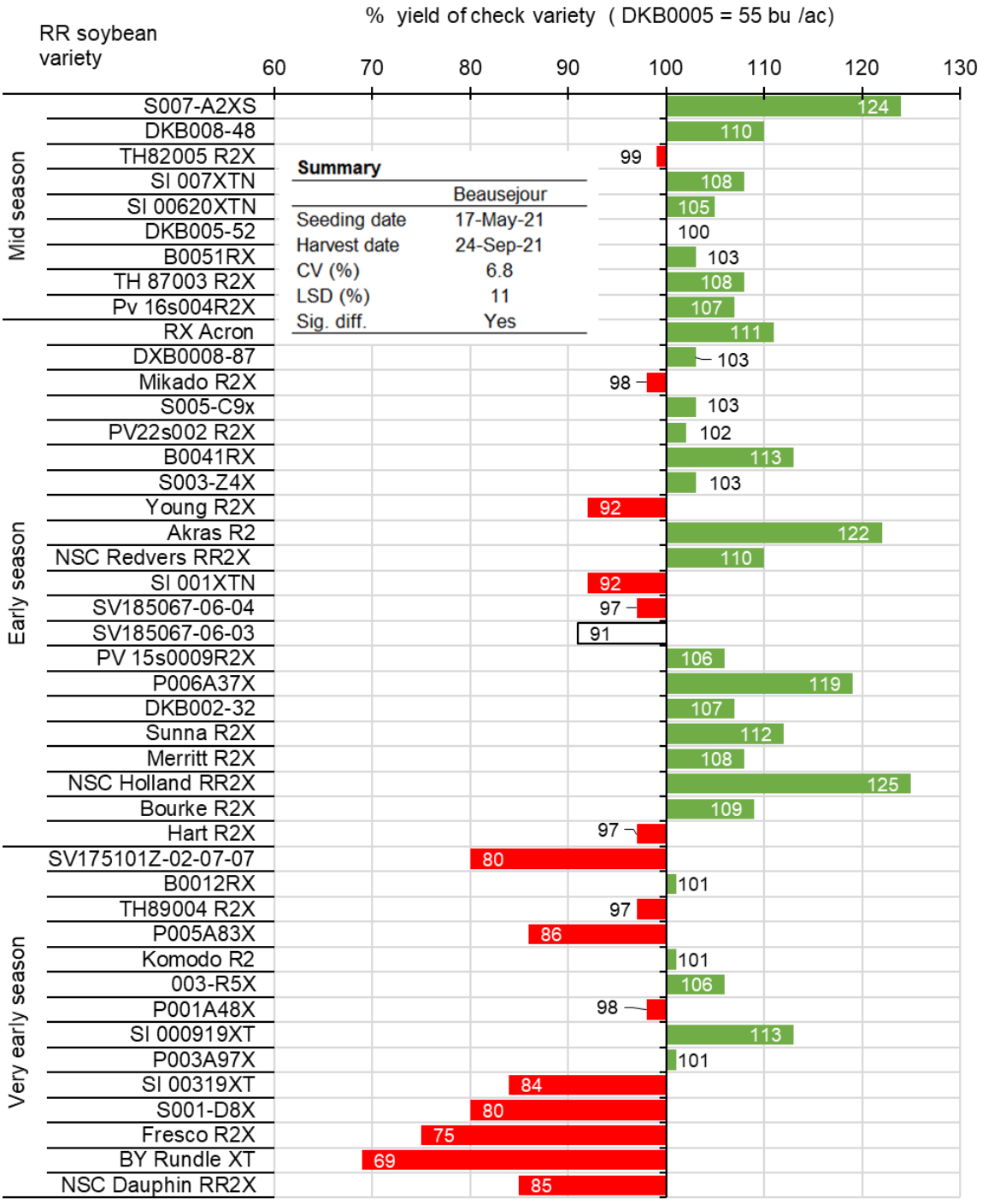

Fig. 7.1. Yield performance of herbicide tolerant soybean varieties as a per cent of the check variety (DKB0005) at Beausejour site. Red bars show yield of a variety lower than the check variety whereas green bars show yield of a variety higher than the check variety.

(Note: Soybean varieties differ in yield if the difference is at least 11 % yield of check variety).

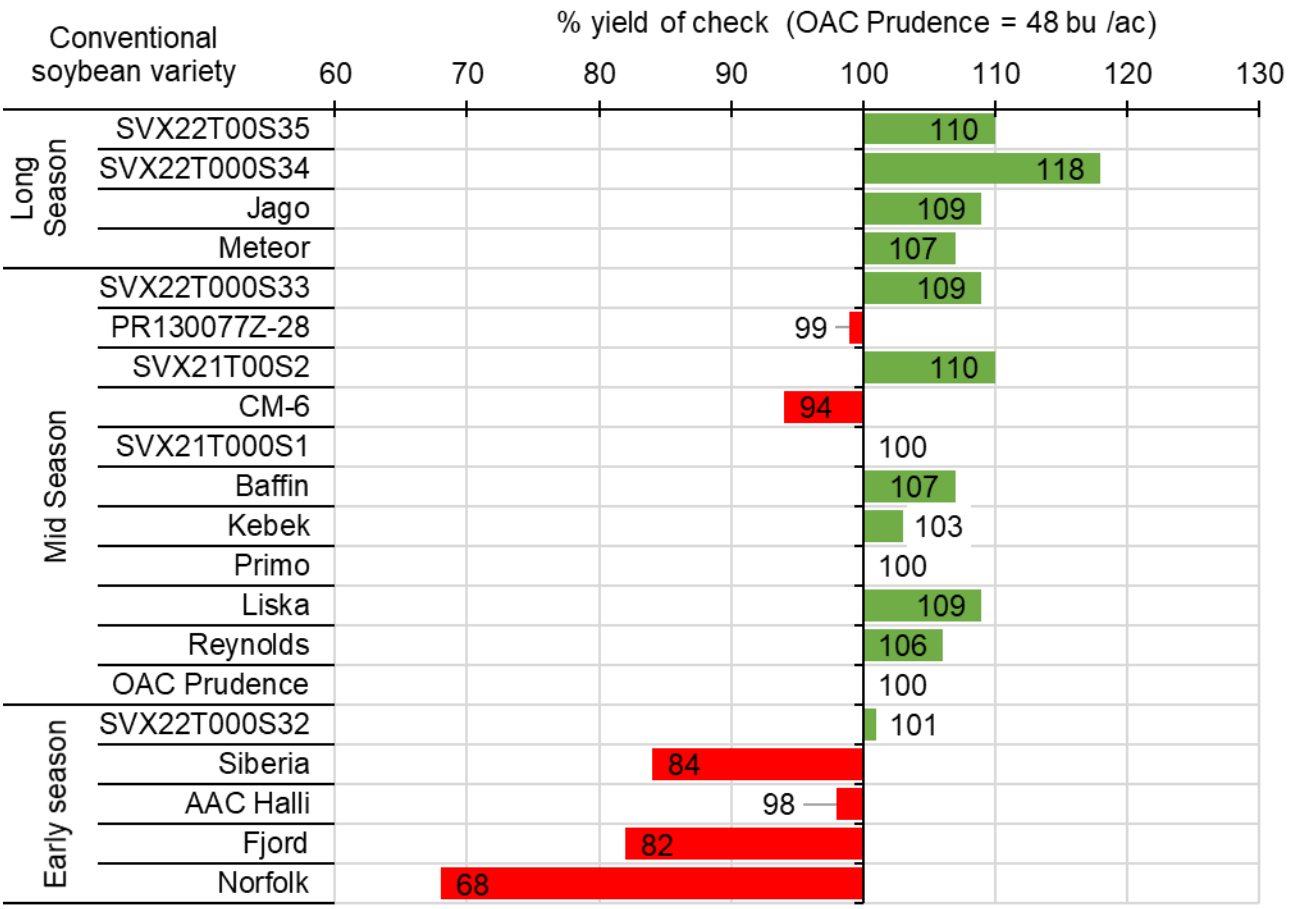

Fig. 7.2. Yield performance of conventional soybean varieties as a per cent of check variety (OAC Prudence) at Beausejour site. Red bars show yield of a variety lower than the check variety whereas green bars show yield of a variety higher than the check variety.

(Note: Soybean varieties differ in yield if the difference is at least 9 % yield of check variety).

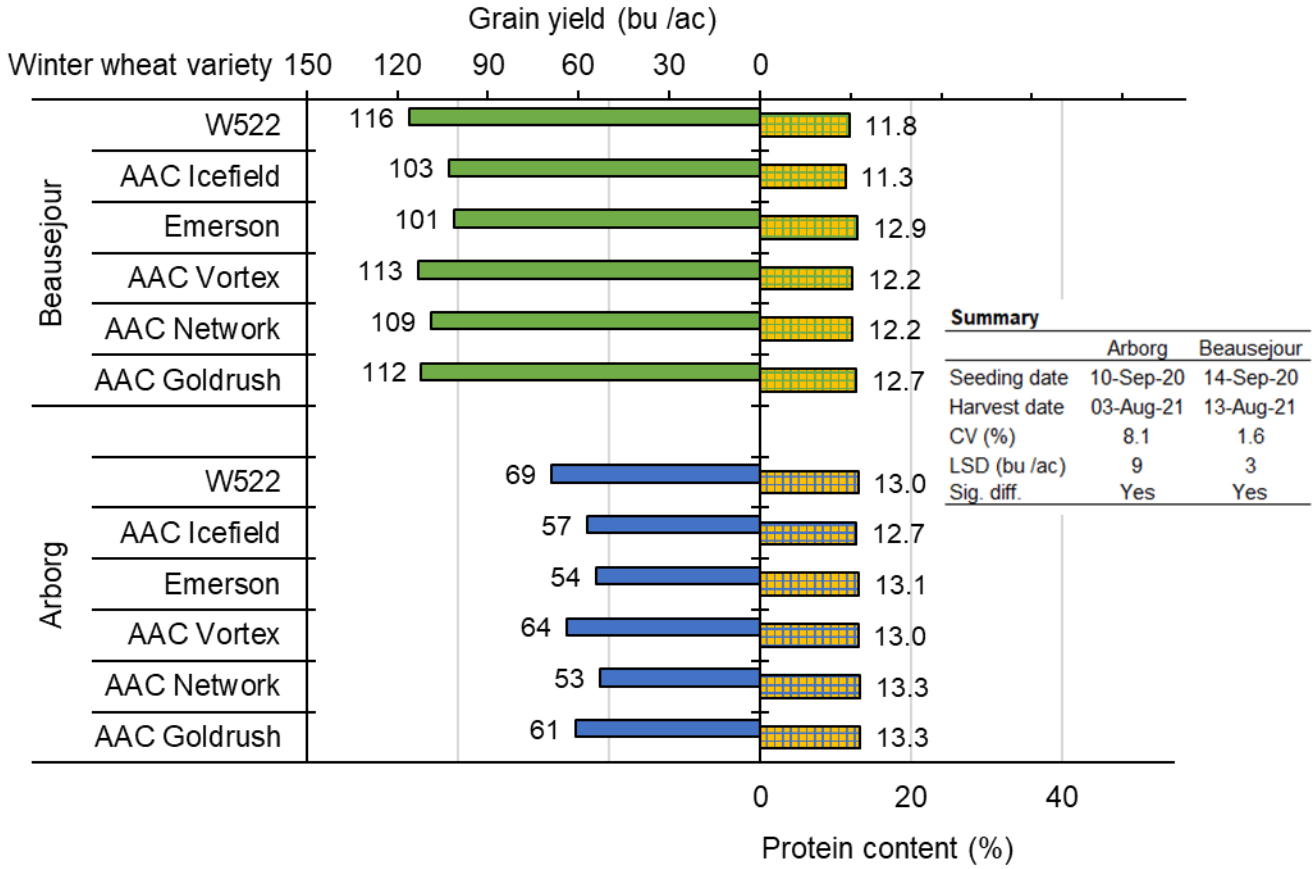

Fig. 7.3. Grain yield (solid bars) and protein content (check pattern bars) comparison of winter wheat varieties tested at Arborg and Beausejour sites in 2021.

(Note: Varieties differ in yield if the difference is 9 bu /ac at Arborg and 3 bu /ac at Beausejour).

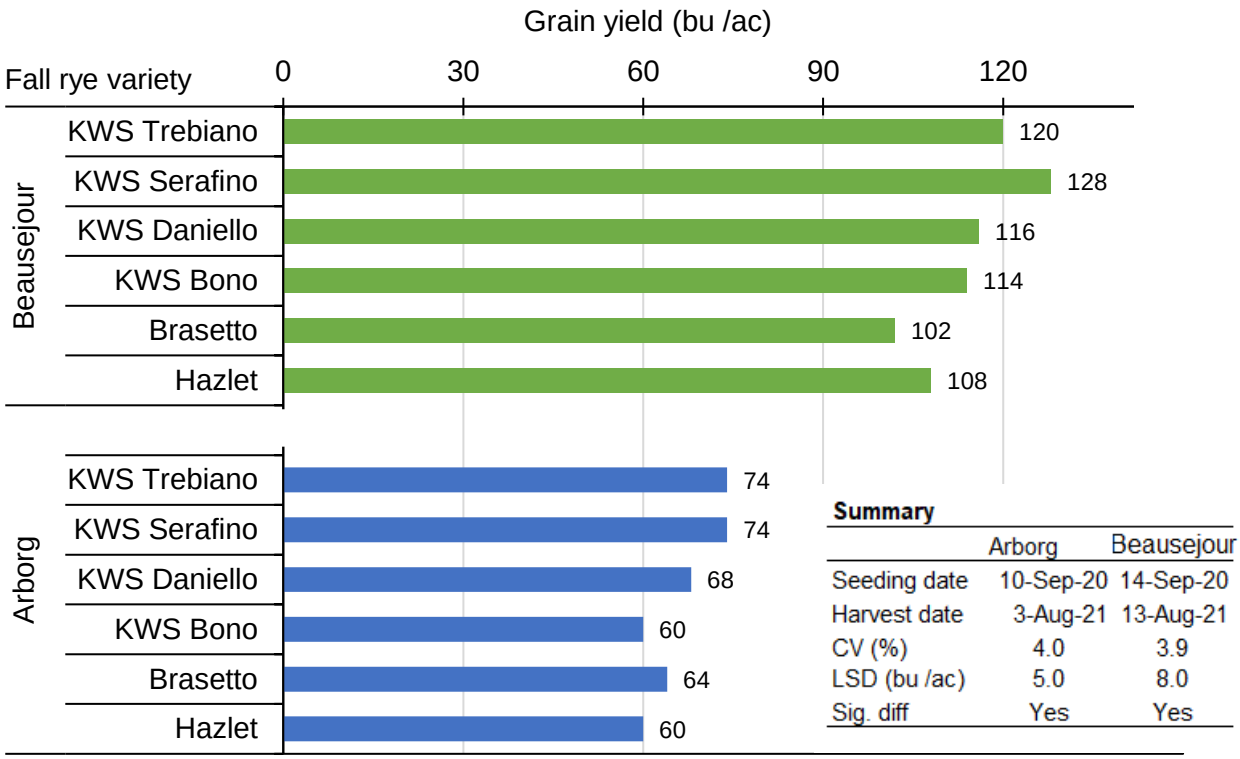

Fig. 7.4. Grain yield comparison of fall rye varieties evaluated at Arborg and Beausejour sites in 2021.

(Note: Varieties differ in yield if the difference is 5 bu /ac at Arborg and 8 bu /ac at Beausejour).

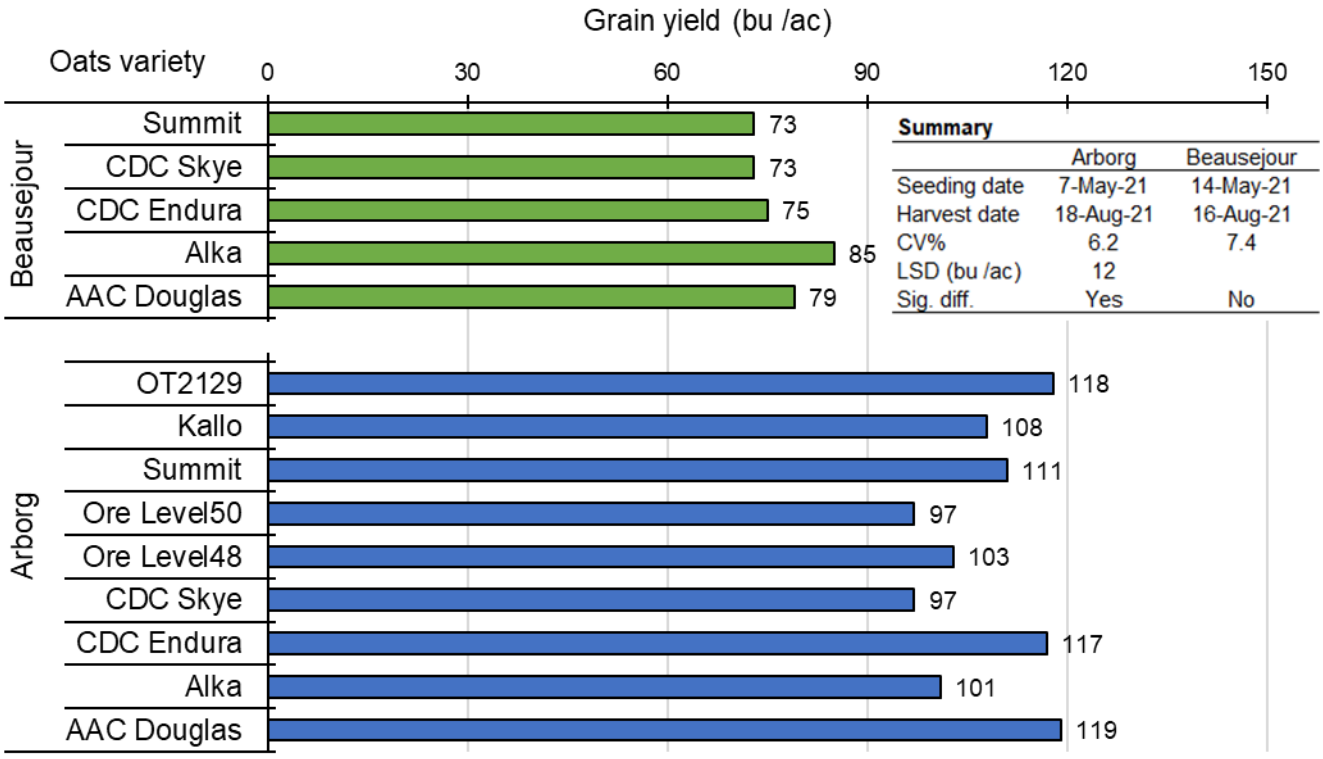

Fig. 7.5. Grain yield comparison of oats varieties evaluated at Arborg and Beausejour sites in 2021.

(Note: Varieties differ in yield if the difference is 12 bu /ac at Arborg. Varieties do not differ in yield at Beausejour site when results were analysed statistically).

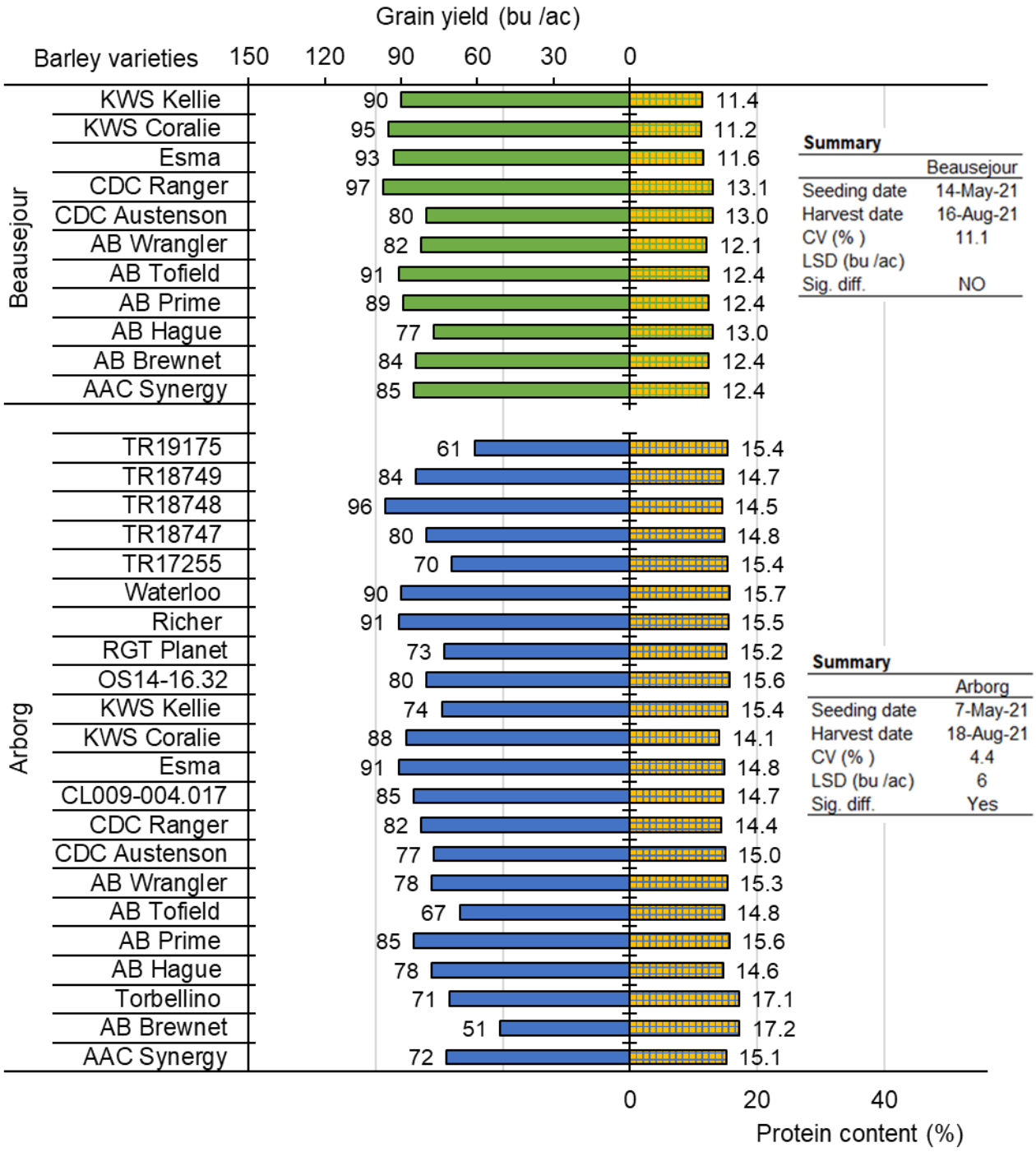

Fig. 7.6. Grain yield (solid bars) and protein content (check pattern bars) comparison of barley varieties evaluated at Arborg and Beausejour sites in 2021.

(Note: Varieties differ in yield if the difference is 6 bu /ac at Arborg. Varieties do not differ in yield at Beausejour site when results were analysed statistically).

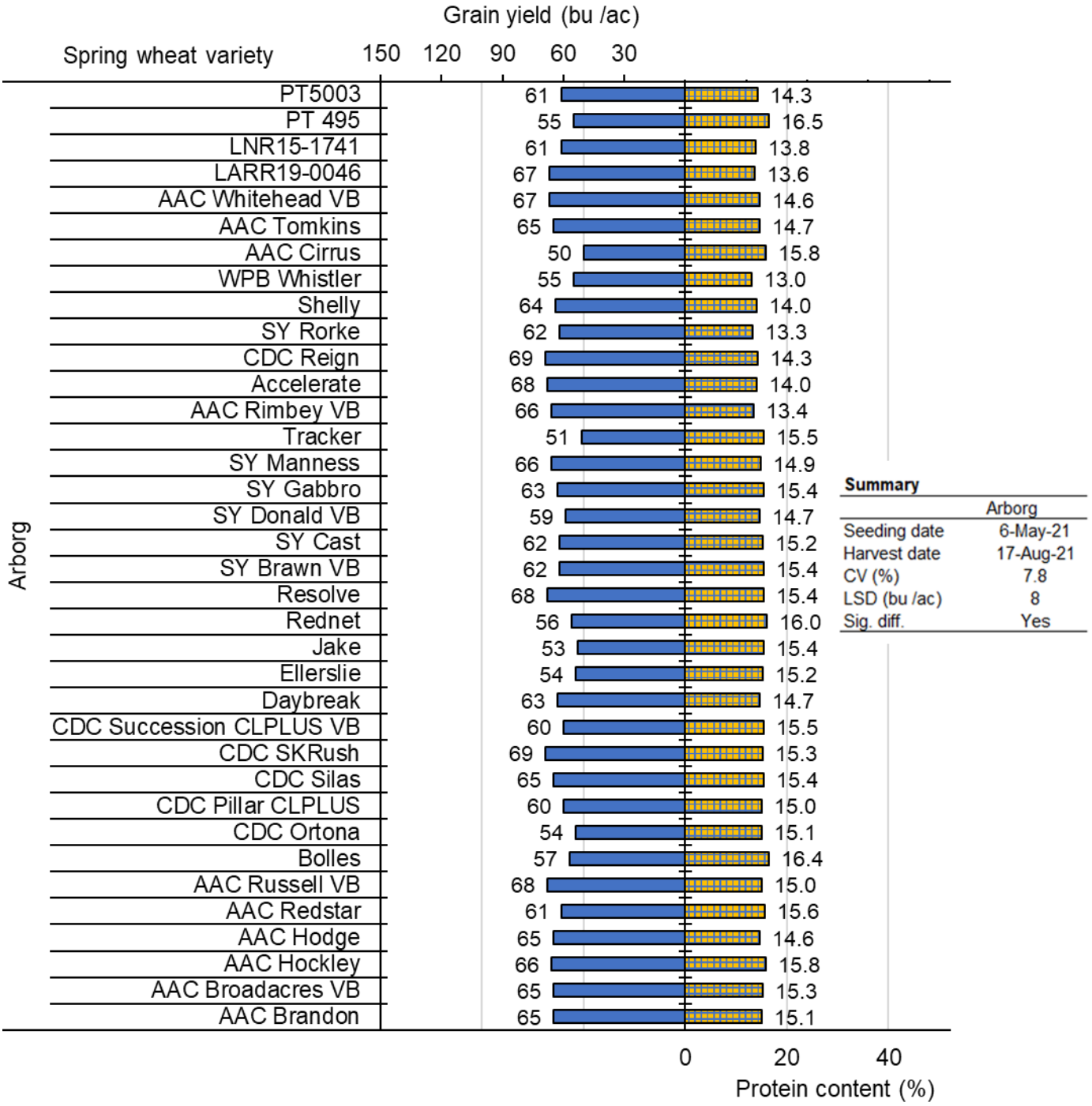

Fig. 7.7. Grain yield (solid bar) and protein content (check patterned bar) comparison of spring wheat varieties evaluated at Arborg in 2021.

(Note: Varieties differ in yield if the difference is 8 bu /ac).

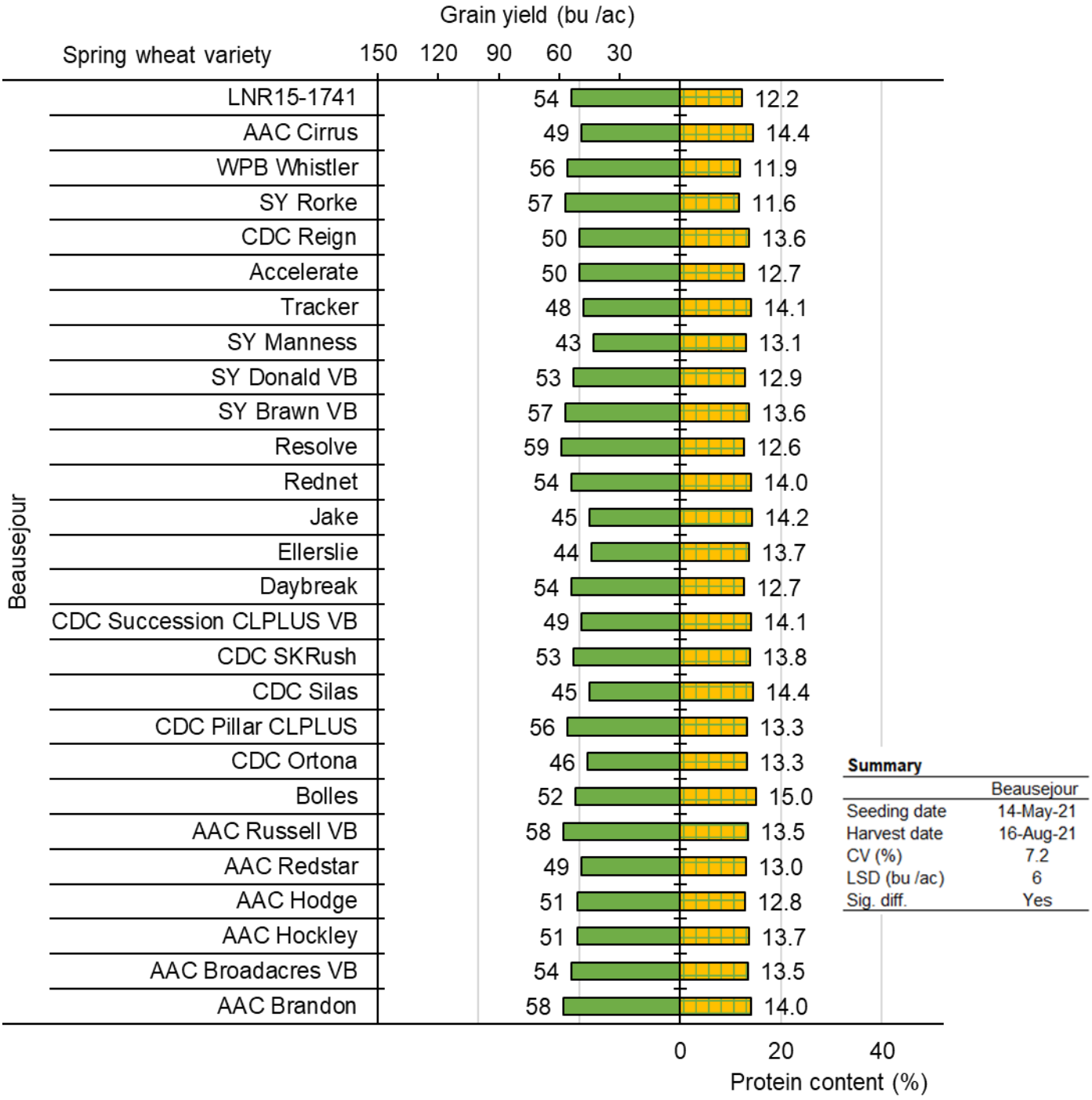

Fig. 7.8. Grain yield (solid bar) and protein content (check patterned bar) comparison of spring wheat varieties evaluated at Beausejour in 2021.

(Note: Varieties differ in yield if the difference is 6 bu /ac).