

Supplementary material

Table 1. Combined feed for fattening pigs with included extruded full-fat soybean from cv. Srebrina.

Feed components	I subperiod 20 kg – 60 kg live weight			II subperiod 60 kg – 100 kg live weight		
	I control	II experiment al	III experi mental	I control	II experi mental	III experi mental
Corn	25.00	25.00	25.00	-	-	-
Wheat	27.17	25.69	24.97	40.30	39.60	39.16
Barley	20.00	20.00	20.00	40.00	40.00	40.00
Wheat bran	10.00	10.00	10.00	10.00	10.00	10.00
Soybean meal	16.00	8.00	4.00	8.00	4.00	2.00
Extruded soybean Srebrina	-	9.27	13.90	-	4.60	7.00
Chalk	1.35	1.30	1.30	1.10	1.05	1.05
Dicalcium phosphate	-	0.10	0.10	-	0.07	0.07
Salt	0.20	0.20	0.20	0.20	0.20	0.20
Lysine	0.08	0.24	0.33	0.20	0.28	0.32
Threonine	0.20	0.20	0.20	-	-	-
Premix	-	-	-	0.20	0.20	0.20
Total%	100.00	100.00	100.00	100.00	100.00	100.00
1 kg of combined feed contains:						
OE, kcal	3012	3093	3134	3070	3111	3131
Crude protein %	17.11	17.10	17.00	15.9	15.9	15.9
Lysine%	0.80	0.80	0.80	0.76	0.76	0.75
Methionine + Cysteine %	0.37	0.37	0.37	-	-	-
Threonine %	0.44	0.44	0.43	-	-	-
Tryptophan %	0.23	0.19	0.17	-	-	-
Ca, %	0.70	0.71	0.71	0.60	0.60	0.60
P, %	0.53	0.54	0.54	0.52	0.53	0.52
Fibres %	4.13	4.37	4.49	-	-	-
Fats %	2.10	3.87	4.78	1.21	2.17	2.64

Table 2. Combined feed for fattening pigs with included extruded full-fat soybean from cv. Richy.

Groups Feed Components	I subperiod 30 kg – 60 kg live weight		II subperiod 60 kg – 100 kg live weight	
	I control	II experimental	I control	II experimental
Corn	21.95	22.69	25.71	26.16
Wheat	25.00	25.00	25.00	25.00
Barley	20.00	20.00	20.00	20.00
Wheat bran	10.00	10.00	10.00	10.00
Biovit-14, bioconcentrate *	23.00	15.50	19.03	14.37
Extruded soybean Richy	-	6.00	-	3.73
Synthetic lysine	0.05	0.21	0.06	0.16
Dicalcium phosphate	-	0.30	-	0.21
Chalk	-	0.30	0.20	0.37
Total %	100.00	100.00	100.00	100.00
1 kg of combined feed contains:				
OE, kcal	3216	3198	3015	3003
MJ	13.46	13.38	12.62	12.56
Crude protein %	17.13	17.15	16.00	16.00
Lysine %	0.81	0.81	0.75	0.75
Methionine + Cysteine %	0.62	0.55	0.57	0.53
Ca, %	0.77	0.77	0.73	0.73
P, %	0.75	0.74	0.71	0.71
Tryptophan %	-	-	0.10	0.10
Threonine	-	-	0.55	0.49
Fibers %	-	-	5.91	5.52
Fats %	-	-	2.06	2.93

*Component composition of Biovit-14-high protein sunflower meal, sunflower meal, soybean meal, rice bran, calcium carbonate Lysine, mono calcium phosphate, sodium chloride, sodium bicarbonate, vegetable oil, vit-microelements premix, L threonine, loxidan, hostasim, optiphos.

Fig. S1. Relative transcript level of second set of selected genes /*ANT-1*; *LHT-7*; *Prot-1*; *GABA-1*/ in leaves of cv. Izidor in year 2019. Asterisk denote statistically significant differences ** $p<0.01$; *** $p<0.001$.

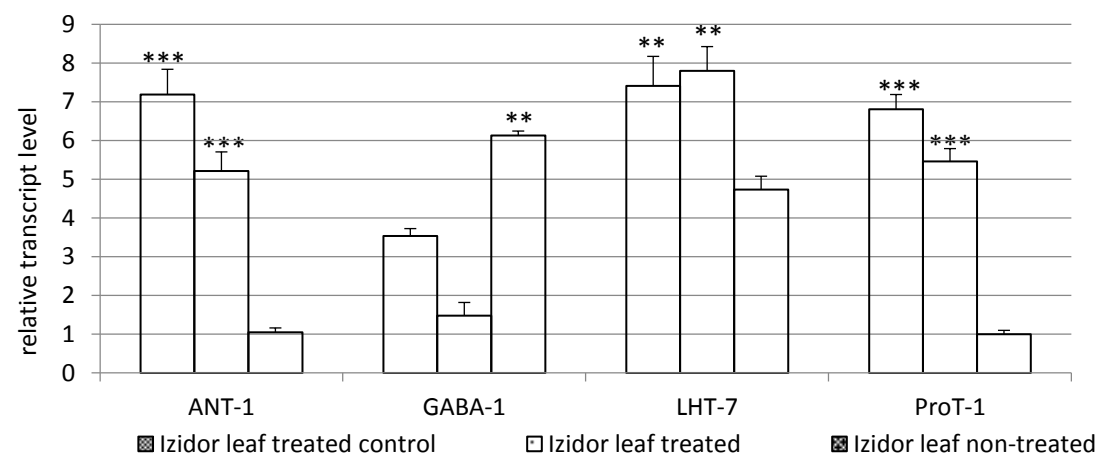


Fig. S2. Relative transcript level of second set of selected genes /*ANT-1*; *LHT-7*; *Prot-1*; *GABA-1*/ in leaves of cv. Richy in year 2019. Asterisk denote statistically significant differences * $p<0.05$; ** $p<0.01$; *** $p<0.001$.

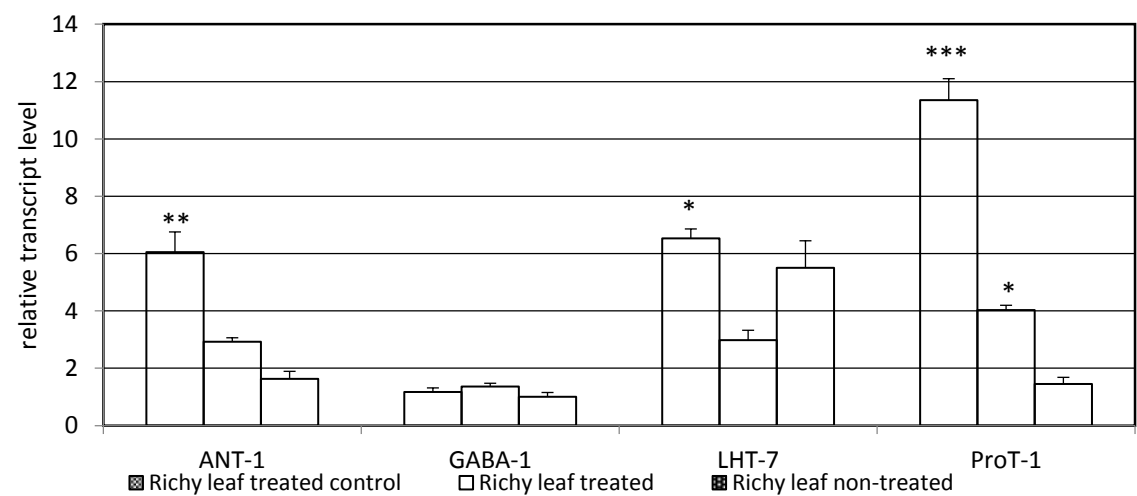


Fig. S3. Relative transcript level of second set of selected genes /*ANT-1*; *LHT-7*; *Prot-1*; *GABA-1*/ in leaves of cv. Avigea in year 2019. Asterisk denote statistically significant differences * $p<0.05$

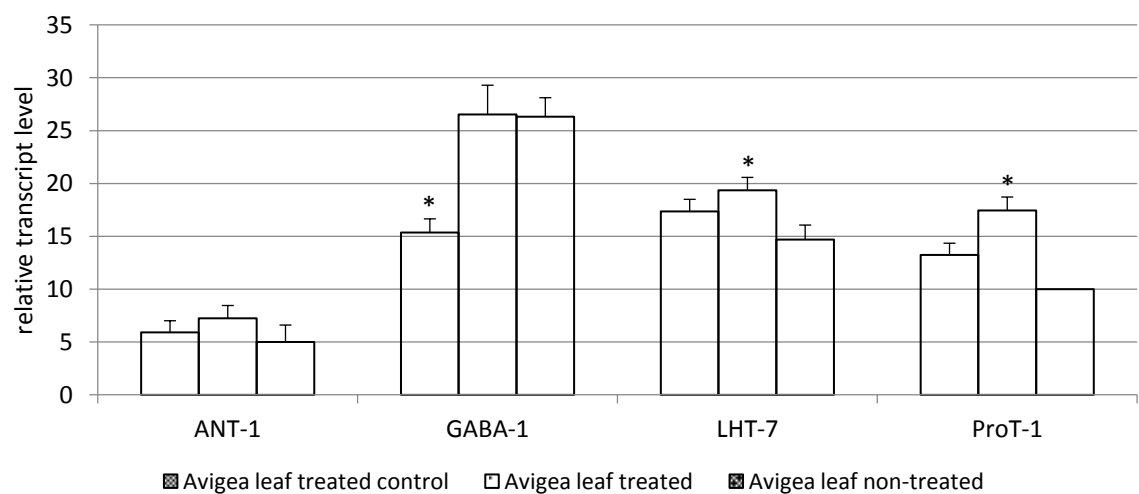


Fig. S4. Relative transcript level of second set of selected genes /*ANT-1*; *LHT-7*; *Prot-1*; *GABA-1*/ in leaves of cv. Izidor in year 2020. Asterisk denote statistically significant differences * $p<0.05$; ** $p<0.01$; *** $p<0.001$.

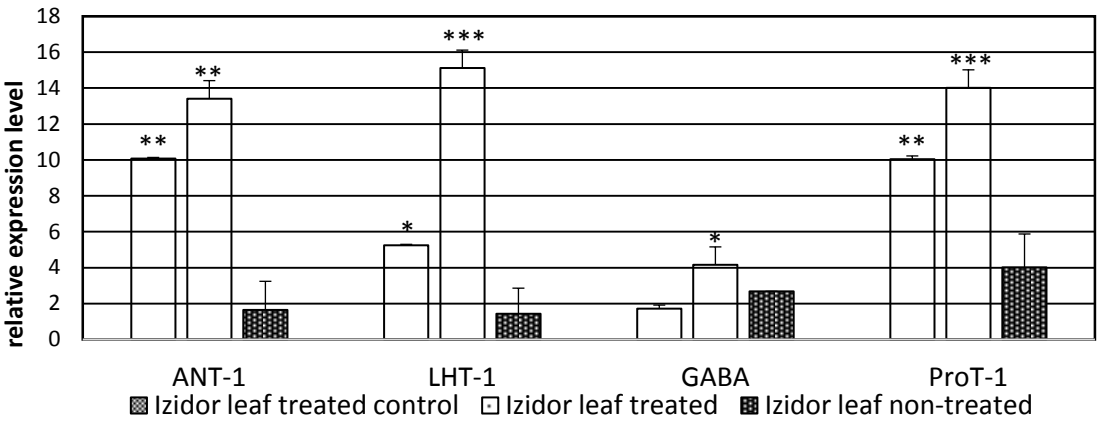


Fig. S5. Relative transcript level of second set of selected genes /*ANT-1*; *LHT-7*; *Prot1*; *GABA-1*/ in leaves of cv. Richy in year 2020. Asterisk denote statistically significant differences * $p<0.05$; ** $p<0.01$; *** $p<0.001$

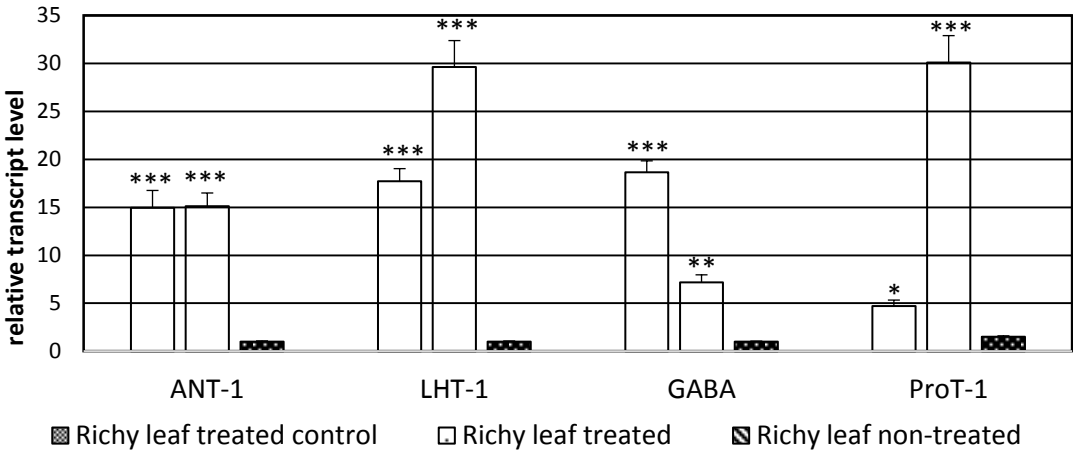


Fig. S 6. Content of detected free sugars (mg/g dw) in GS of three investigated cvs. in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$; ** $p < 0.01$.

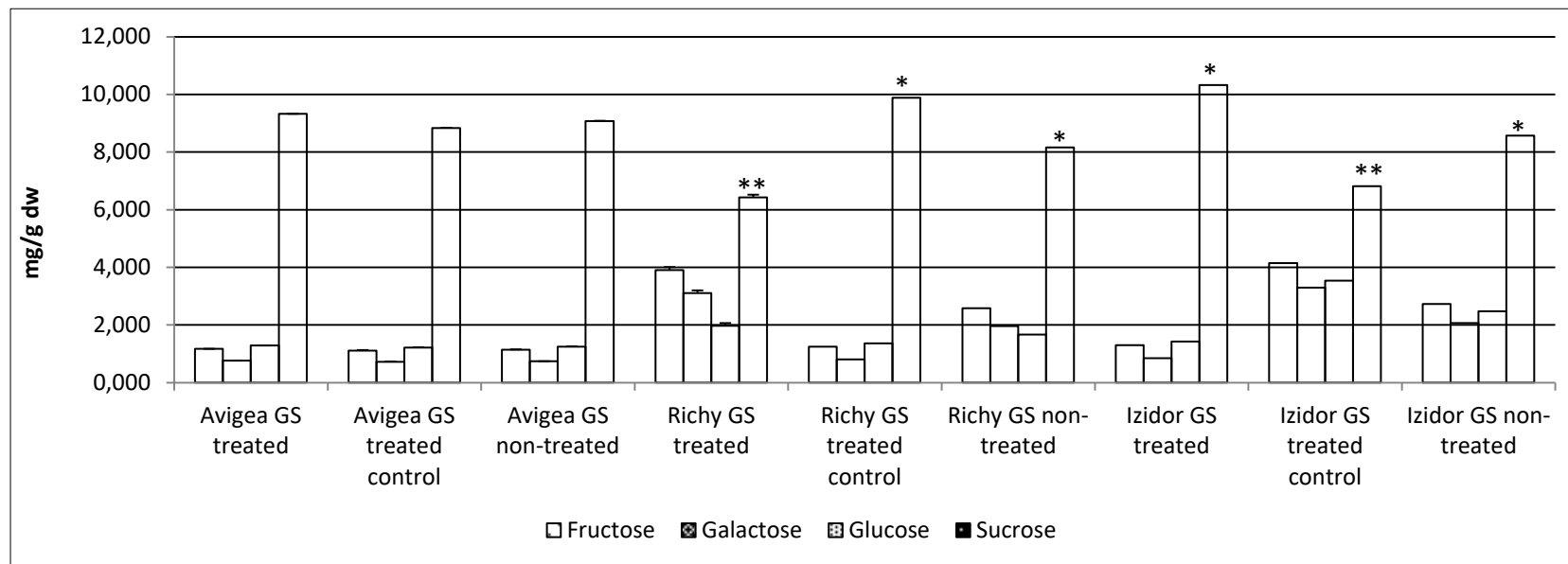


Fig. S 7. Content of detected free fatty acids (mg/g dw) in GS of three investigated cvs. in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$.

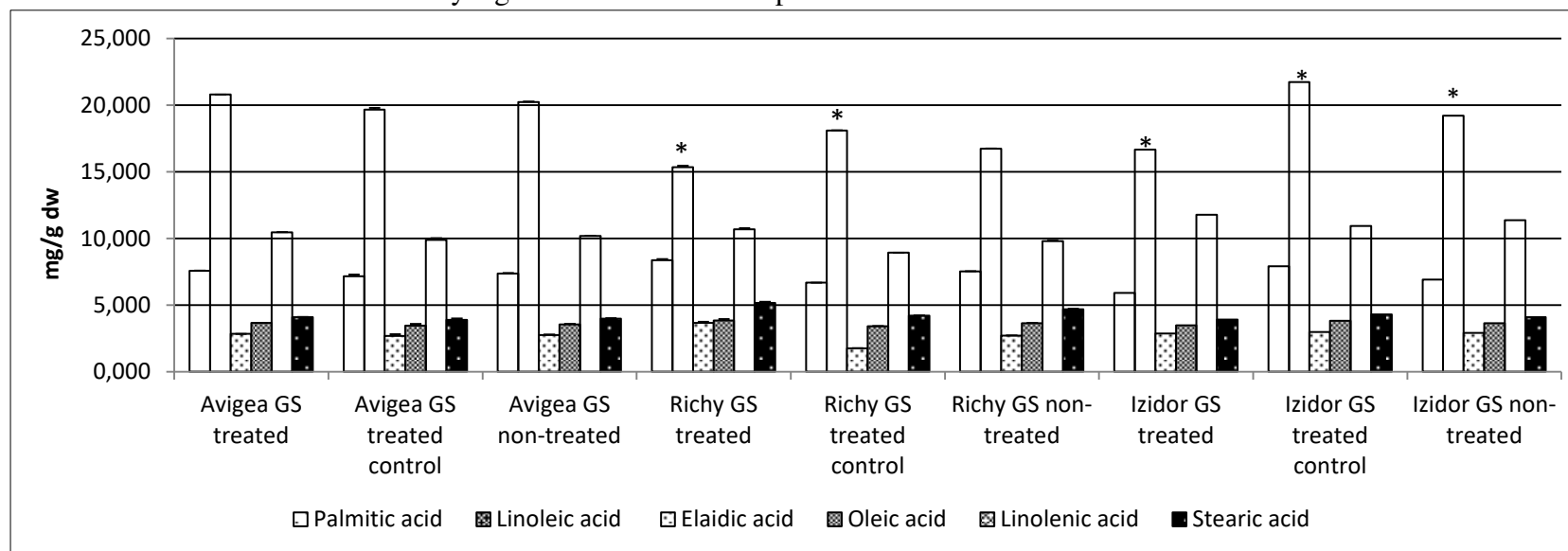


Fig. S 8. Content of detected free AAs (mg/g dw) in GS of three investigated *cvs.* in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$.

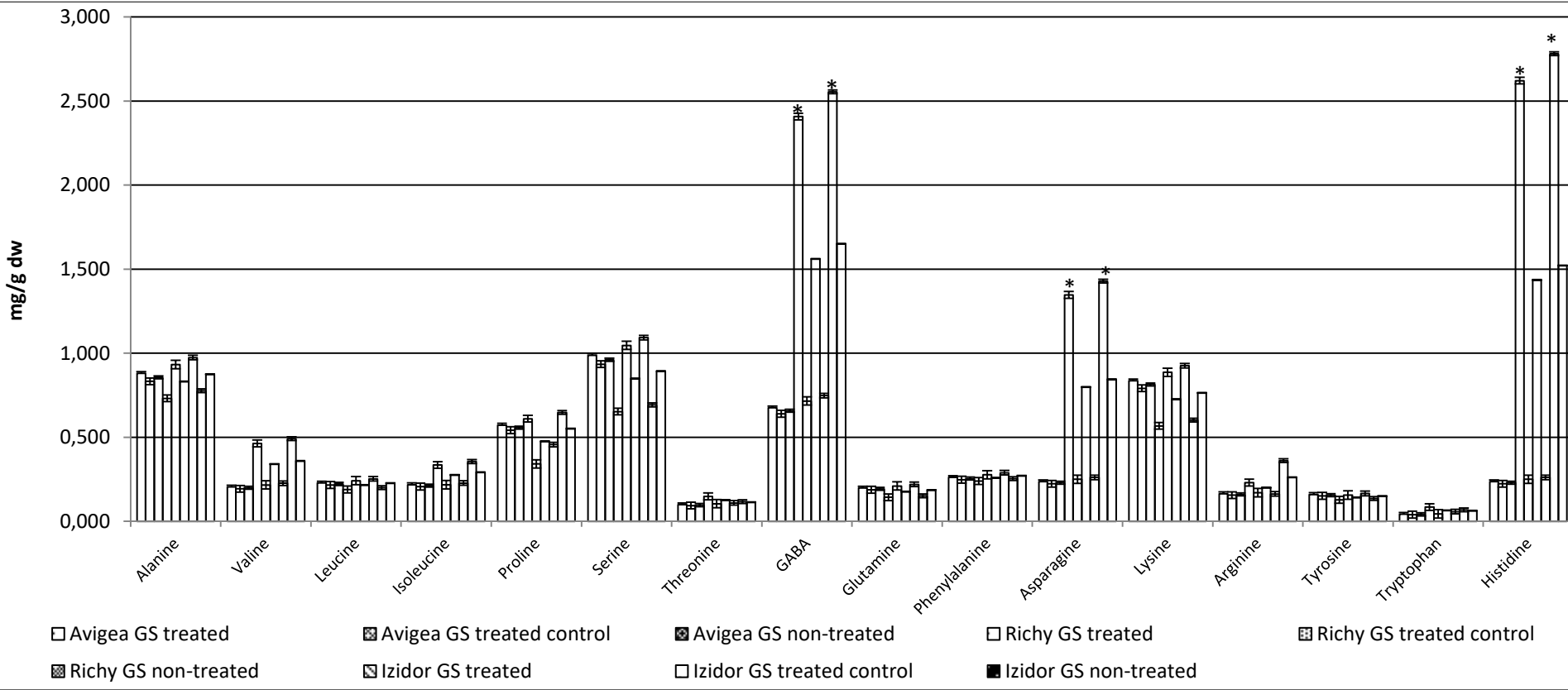


Fig. S 9. Content of detected free AAs (mg/g dw) in MS of three investigated *cvs.* in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ between treated and ordinary.

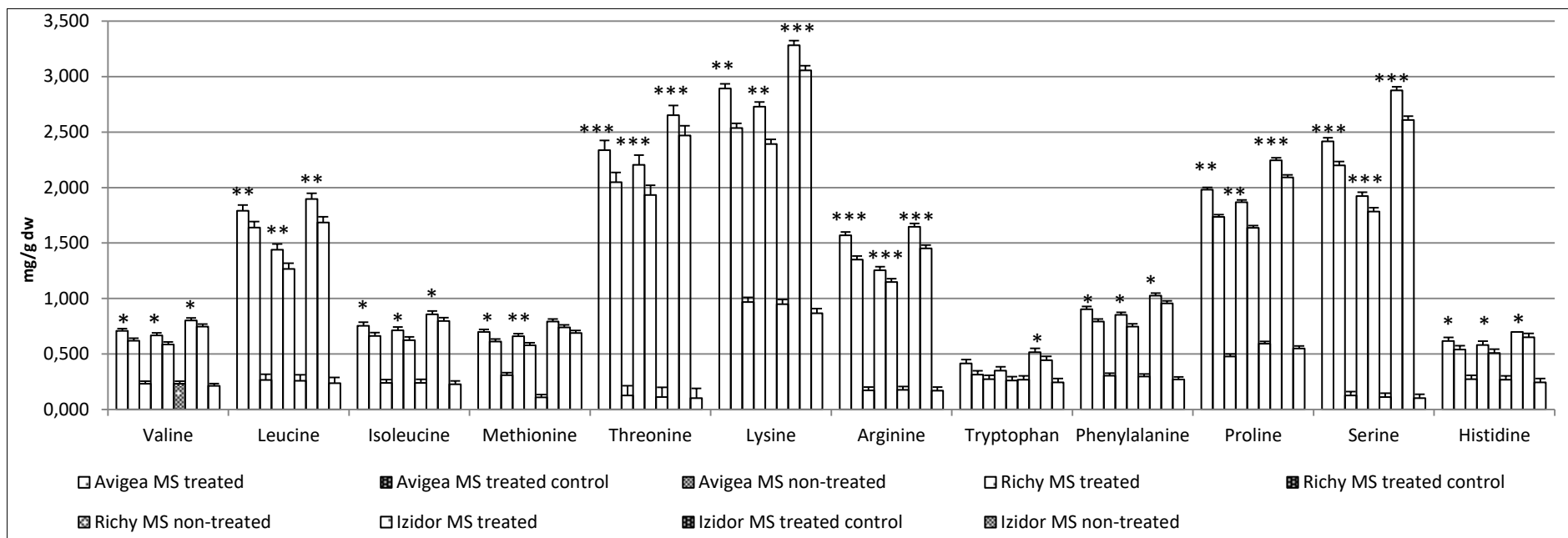


Fig. S 10. Content of detected free sugars (mg/g dw) in MS of three investigated *cvs.* in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ between treated and ordinary.

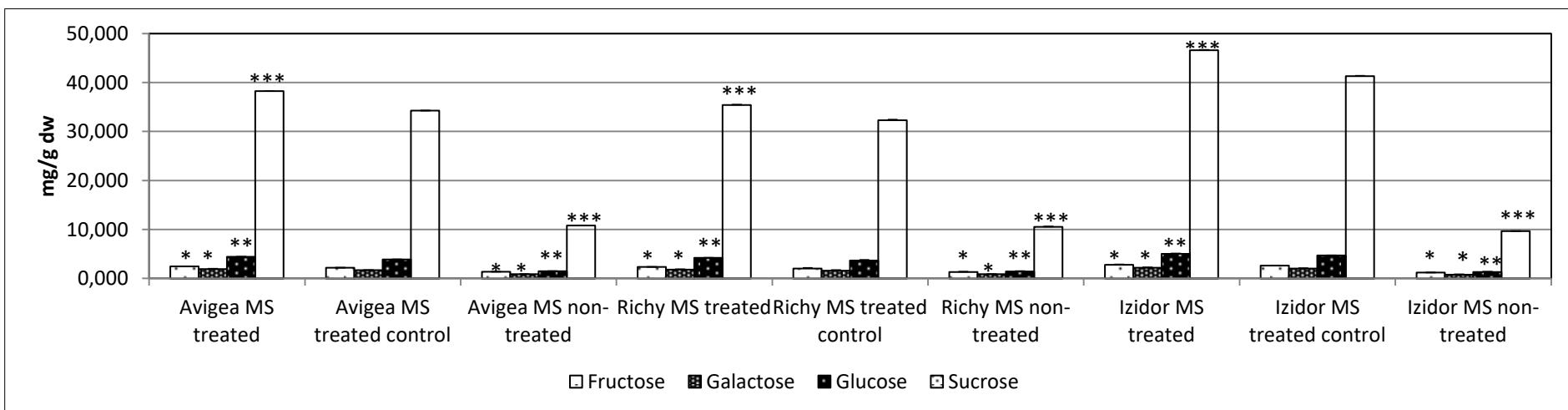


Fig. S 11. Content of detected free fatty acids (mg/g dw) in MS of three investigated cvs. in year 2019. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ between treated and ordinary.

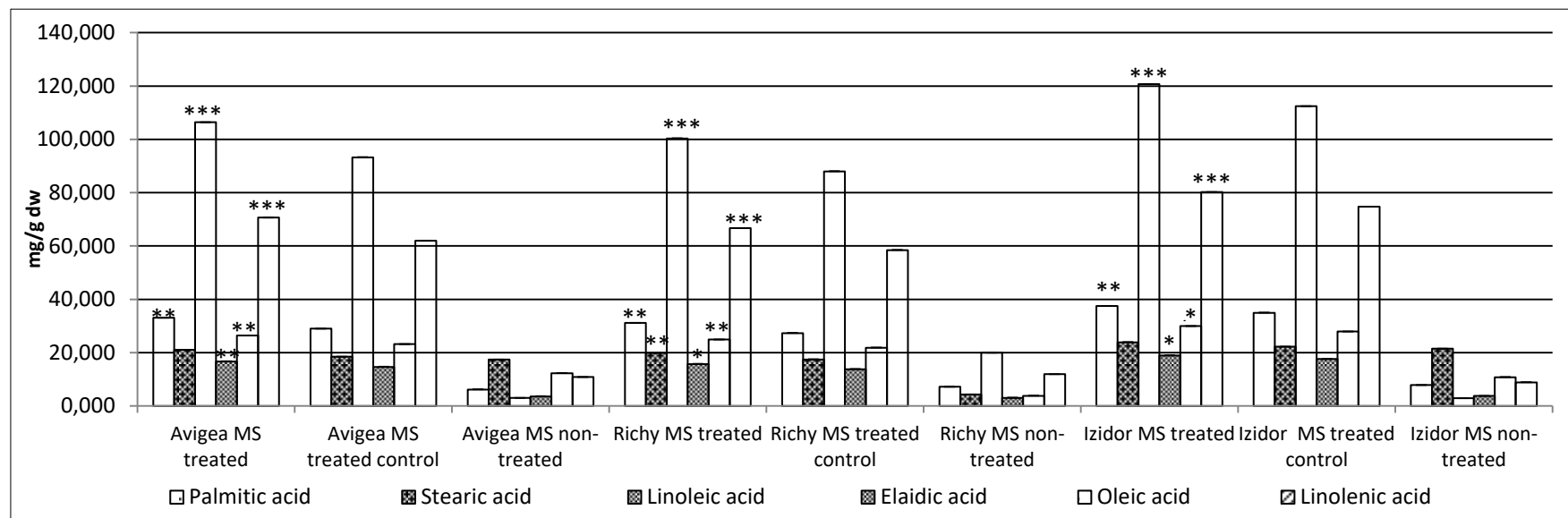


Fig. S 12. Content of detected free AAs (mg/g dw) in GS of two investigated cvs. in year 2020. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p < 0.05$ between treated and ordinary.

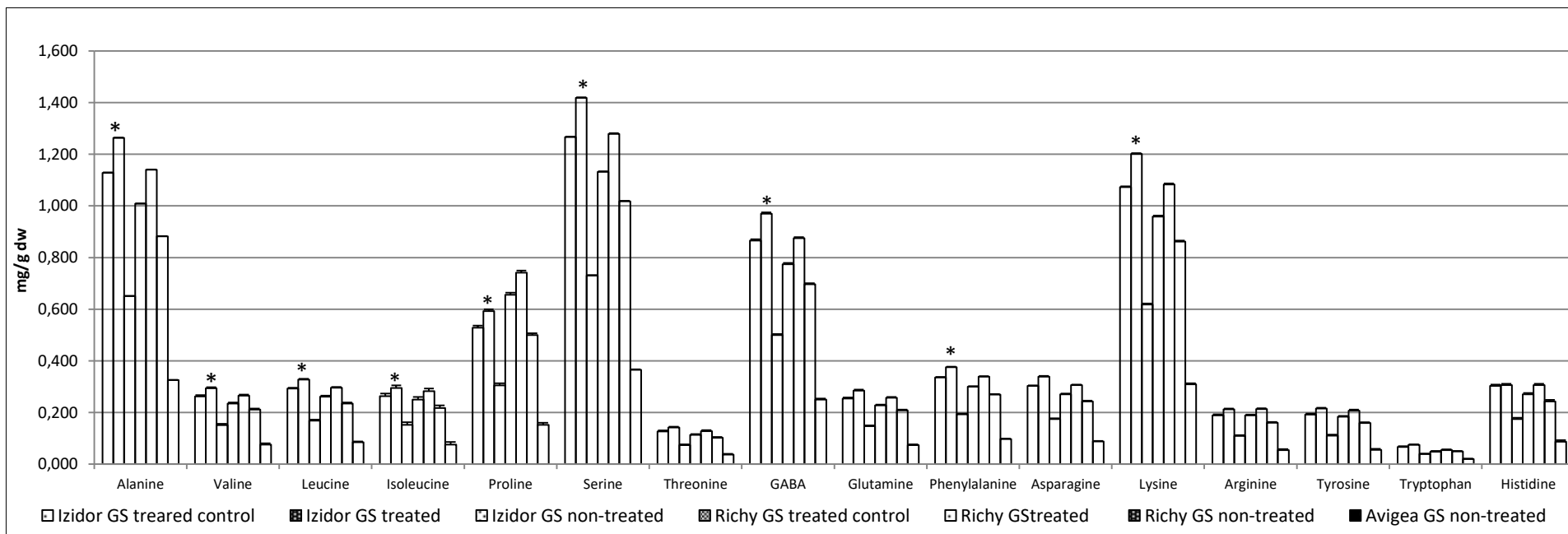


Fig. S 13. Content of detected free sugars (mg/g dw) in GS of investigated *cvs.* in year 2020. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p<0.05$; *** $p<0.001$ between treated and ordinary.

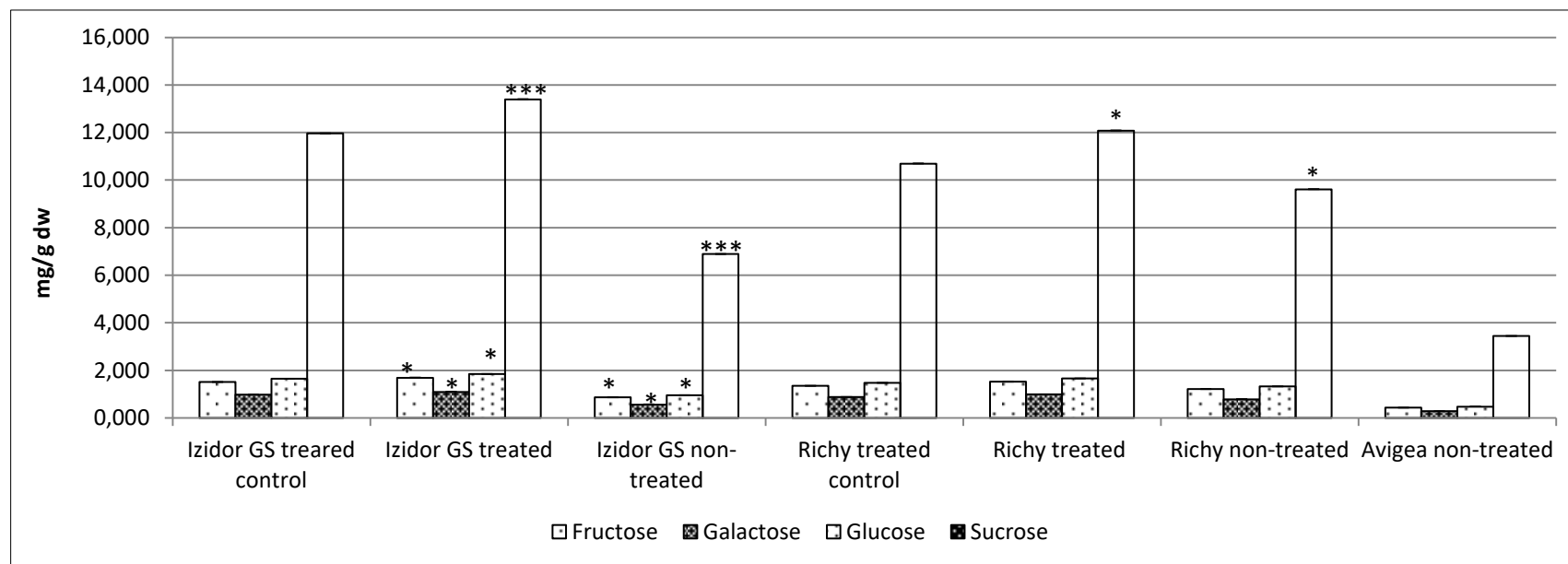


Fig. S 14. Content of detected free fatty acids (mg/g dw) in GS of two investigated *cvs.* in year 2020. Data represent the mean $\pm$ SD. Asterisks denote statistically significant differences * $p<0.05$

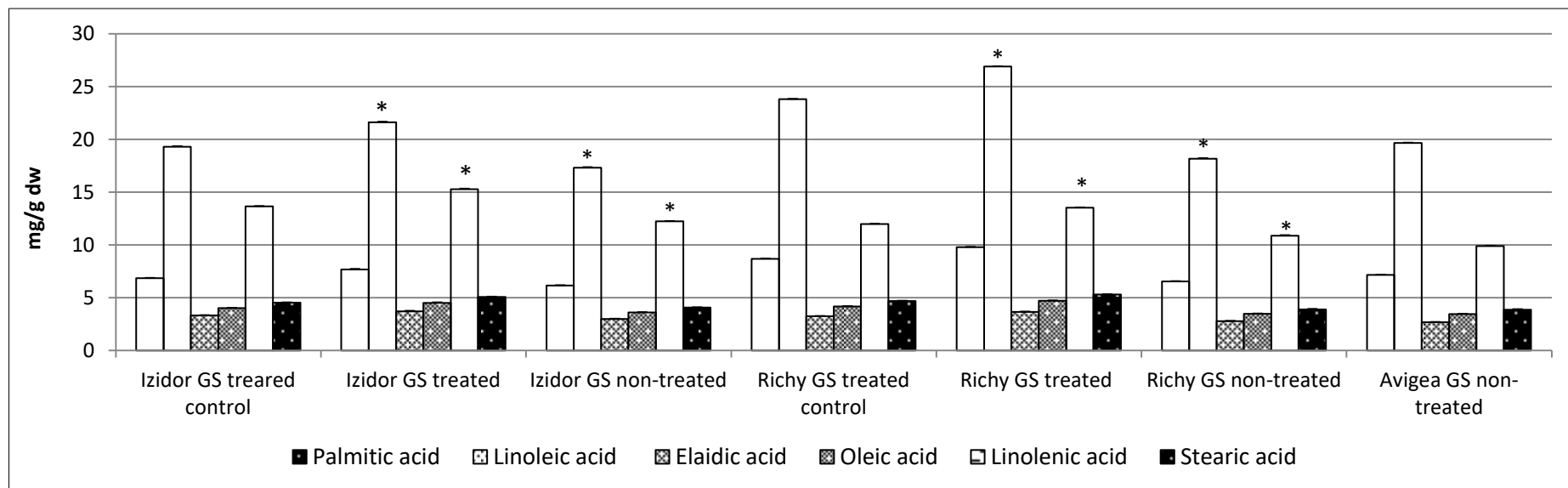


Fig. S 15. Content of detected free AAs (mg/g dw) in MS of two investigated cvs. in year 2020. Data represent the mean $\pm$ SD.

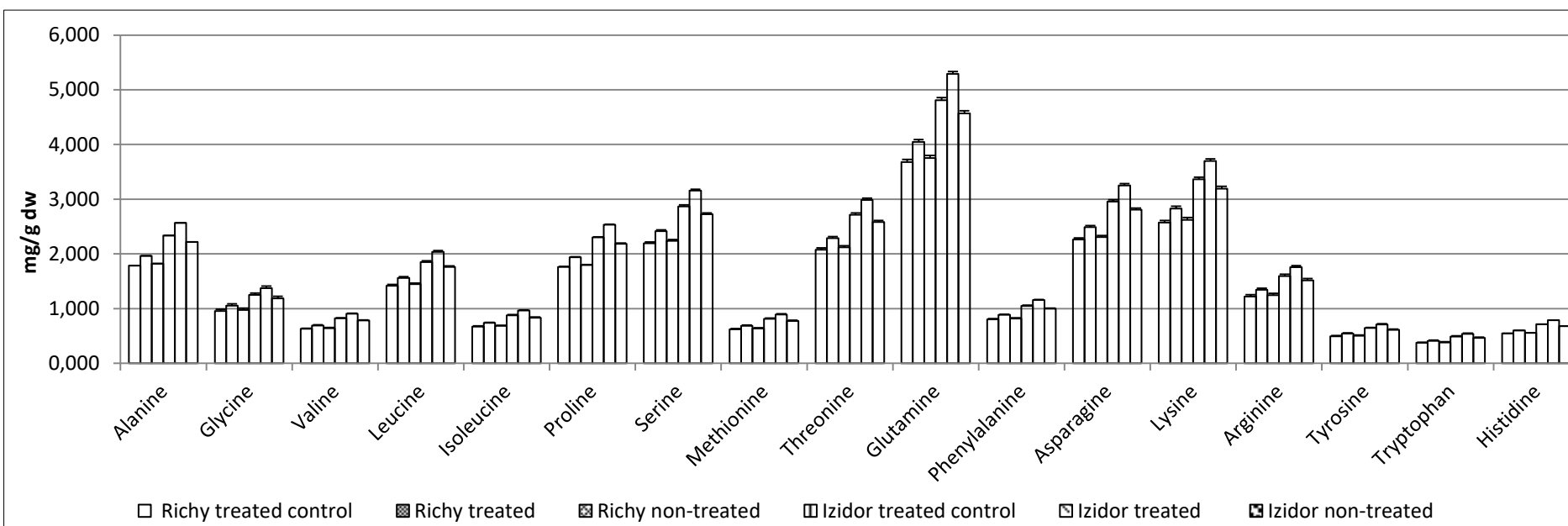


Fig. S 16. Content of detected free sugars (mg/g dw) in MS of two investigated cvs. in year 2020. Data represent the mean $\pm$ SD.

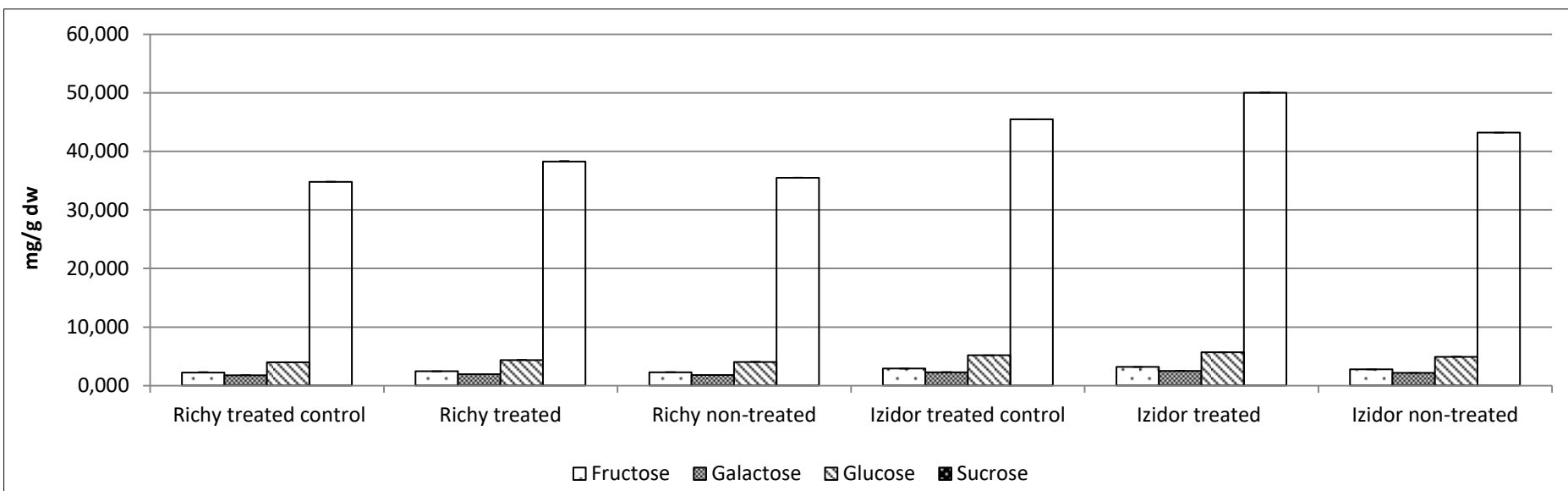


Fig. S 17. Content of detected free fatty acids (mg/g dw) in MS of two investigated cvs. in year 2020. Data represent the mean $\pm$ SD.

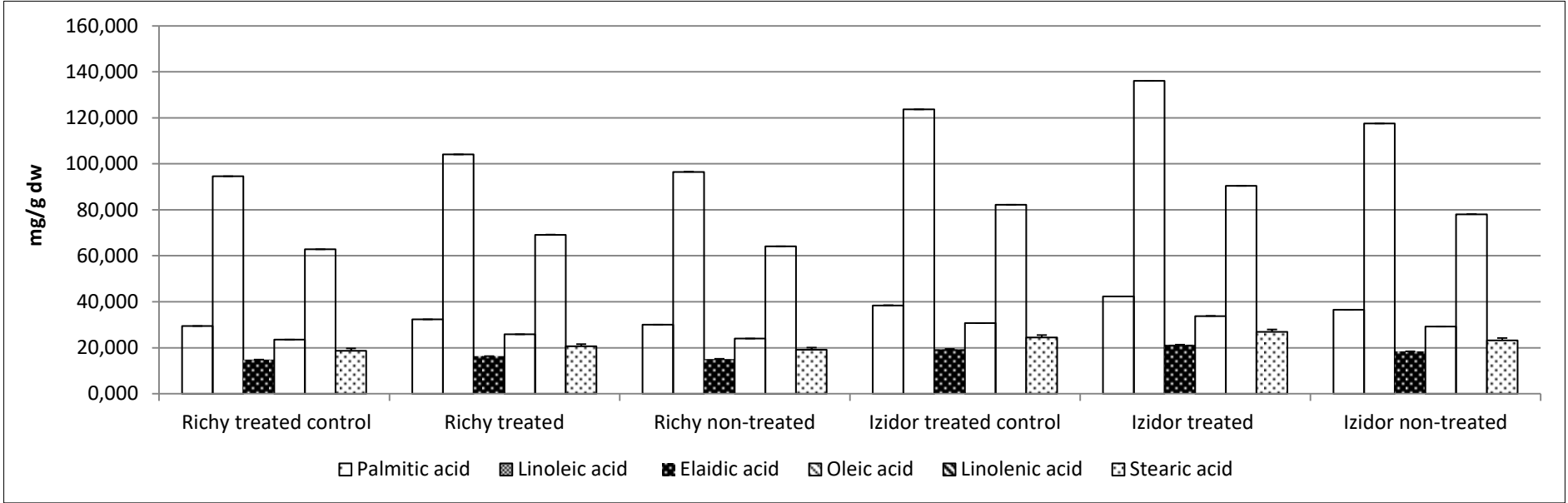


Fig. S 18. Main indicators for nutrient quality of soybean meal, and extruded full-fat soybean from cvs. Richy and Srebrina.

