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Supplementary Tables

Supplementary Table 1. Results of mean comparison of quantitative and qualitative characteristics studied in sugar beet under normal irrigation conditions and water deficit stress

	Root yield ($t\ ha^{-1}$)		Sugar content (%)		Sugar yield ($t\ ha^{-1}$)		White Sugar content (%)		White Sugar yield ($t\ ha^{-1}$)		Sugar extraction coefficient (%)		Molasses sugar percentage(%)	
Genotype	N	S	N	S	N	S	N	S	N	S	N	S	N	S
Aria	62.04j	61.98d	16.88g	19.11f	10.30i	11.84e	12.74j	12.01j	7.78i	7.44g	75.51gh	62.90j	2.80c	2.44bcd
Ekbatan	45.40l	32.86o	18.53e	19.07f	8.41j	6.27k	14.58h	16.82g	6.62j	5.51h	78.67fg	88.24cde	2.85c	1.96fg
Laetitia	89.96c	69.41c	17.60f	21.38d	15.84cde	14.84b	14.60h	17.57ef	13.14efg	12.20b	82.96cdef	82.18h	1.94gh	1.85gh
Merak	100.23b	69.80b	18.52e	21.72c	18.56b	15.16a	14.74h	18.05de	14.77c	12.57b	79.61efg	83.14gh	2.28ef	2.07efg
Flores	72.45h	44.31m	21.62ab	22.02b	15.66de	9.76h	17.55d	19.72a	12.71g	8.74f	81.20def	89.67cd	2.47de	2.10efg
Mandarin	81.92f	54.98h	19.13d	21.35d	15.67de	11.74ef	17.33d	18.06de	14.19cd	9.93e	90.60a	84.63efgh	1.97gh	2.74a
Rosire	100.79b	60.90e	18.70e	21.20d	18.85b	12.91c	15.72g	18.41cd	15.84b	11.21c	84.02cde	86.89def	2.56d	2.29cde
Palma	115.47a	77.74a	18.63e	18.95f	21.51a	14.73b	16.13f	18.15de	18.63a	14.11a	86.61abc	95.79a	2.32e	1.91g
Azare	81.78f	59.68f	18.79de	21.21d	15.37ef	12.66d	15.81fg	18.26cd	12.93fg	10.89cd	84.12bcde	86.07defg	2.40de	2.58ab
Dorothea	86.50d	61.6d	21.3b	20.3e	18.4b	12.5d	18.9b	17.2fg	16.3b	10.6d	89.0ab	84.6efgh	1.8h	1.9fg
Isabella	75.05g	51.7i	21.6a	22.4a	16.2c	11.6f	18.3c	18.8bc	13.7de	9.7e	84.7bcd	84.1fgh	1.8gh	1.6h
Muraille	74.91g	42.7n	21.3ab	21.3d	15.9cd	9.1j	19.4a	17.9de	14.5c	7.6g	91.2a	83.9fgh	1.9gh	2.5abc
Novodoro	80.01f	50.2j	19.8c	22.3a	15.8cd	11.2g	16.8e	19.8a	13.5ef	9.9e	84.9bcd	88.8cd	2.3de	2.4bcd
Delta	80.16f	44.7l	18.8de	21.3d	15.0f	9.5i	14.7h	19.4ab	11.8h	8.6f	78.5fg	90.8bc	2.0fg	2.2def
Pars	57.93k	31.4p	14.08i	17.3h	8.1j	5.4l	12.2k	13.1i	8.2i	4.1i	86.6abc	76.0i	3.6b	2.5abc
Paya	84.15e	49.7k	16.7g	18.5g	14.0g	9.2j	13.5i	17.4efg	11.4h	8.6f	81.1def	94.4ab	3.0c	2.1efg
Sharif	36.95m	19.8q	14.7h	18.8f	5.4k	3.7m	11.0l	15.7h	4.0k	3.1j	74.8gh	83.2gh	5.1a	2.5ab
Shokoofa	67.01i	56.5g	16.7g	17.2h	11.2h	9.7h	11.8k	12.8i	7.9i	7.2g	70.7h	74.4i	3.6b	2.6ab
Mean	77.31	52.24	18.53	20.32	14.48	10.68	15.35	17.19	12.06	9.03	82.52	84.44	2.57	2.23

In each column, the mean with common letters has no significant difference at the 5 % probability level. **N**= Normal **S**= Stress

Continues **Supplementary Table 1.** Results of mean comparison of quantitative and qualitative characteristics studied in sugar beet under normal irrigationconditions and water deficit stress

	Relative water content (%)		**Proline ($\mu mol\ g^{-1}$ FW)**		**SOD ($nmol\ H_2O_2\ mg^{-1}$ protein min^{-1})**		**CAT ($nmol\ H_2O_2\ mg^{-1}$ protein min^{-1})**		**POX ($nmol\ H_2O_2\ mg^{-1}$ protein min^{-1})**	
Genotype	N	S	N	S	N	S	N	S	N	S
Aria	80.71h	75.64ef	0.44g	1.26cde	4.59cd	7.99def	0. 39cd	0.85cd	0.351hi	0.75fg
Ekbatan	86.60e	67.05j	0.35gh	0.76hi	2.77h	3.90i	0. 20e	0. 66def	0.686abc	0.86defg
Laetitia	74.25k	72.73hi	1.08a	2.84a	2.87h	5.10h	0.03i	0. 39gh	0.390fghi	0.71g
Merak	85.33f	83.24a	0.78cd	1.46c	4.67bc	10.41a	0. 51ab	1.316b	0.649abcd	1.33c
Flores	79.27ij	73.78gh	0.40g	1.09ef	4.03def	8.76cd	0. 18ef	0.35gh	0.506cdefgh	1.02d
Mandarin	88.02d	75.03ef	0.80c	1.87b	4.40cde	7.87def	0. 40c	0.76cde	0.774a	1.41c
Rosire	78.42j	75.5e	0.43g	1.35cd	4.55cd	6.55g	0. 16efg	2.266a	0.357ghi	0.69g
Palma	90.68a	80.89b	0.54f	1.02fg	2.78h	10.04ab	0.07hi	0.20h	0.458efghi	1.67b
Azare	88.83bcd	72.30i	0.82c	1.27cde	3.34gh	8.41cde	0. 44bc	0. 91c	0.313i	1.39c
Dorothea	89.4bc	84.0a	0.6ef	0.9fg	3.2gh	7.8def	0.01ghi	0.60def	0.53bcdefg	0.9def
Isabella	79.6hi	75.7e	0.6de	0.8gh	4.0def	7.6ef	0.14ef	0. 31gh	0.42fghi	0.7fg
Muraille	82.0g	80.0b	0.2hi	0.8gh	3.6fg	7.7ef	0.10ghi	0.21h	0.57bcdef	1.9a
Novodoro	83.1g	77.7cd	0.8c	1.3cd	4.9bc	8.7cd	0. 50a	0.70cd	0.53bcdefgh	1.4c
Delta	89.0bcd	74.6fg	0.2hi	1.0fg	5.1b	6.5g	0. 14efg	0. 71cdef	0.41fghi	0.9def
Pars	80.3hi	73.4h	0.6ef	1.1def	3.2gh	7.4f	0.20e	0.50efg	0.61abcde	0.7fg
Paya	89.5b	77.1d	0.2hi	1.0fg	4.7bc	6.4g	0.31d	1.44b	0.39fghi	0.7efg
Sharif	74.4k	77.1d	0.2i	0.5i	3.8efg	9.7ab	0.04c	0.50fg	0.46defghi	0.9de
Shokoofa	88.3cd	78.2c	0.9b	1.4c	6.1a	9.3bc	0.01fgh	0. 11h	0.70ab	1.7ab
Mean	83.78	76.62	0.58	1.23	4.05	7.81	0.25	0.90	0.50	1.12

Note: In each column, the mean with common letters has no significant difference at the 5 % probability level. SOD – superoxide dismutase, CAT – catalase, POX - Peroxidase

Supplementary Table 2. Comparison results of mean white sugar yield under normal and water deficit conditions and stress tolerance and sensitivity indices in sugar beet genotypes

Genotype	YN	YS	PYR	MP	GMP	STI	HM	YI	DI	TOL	SSI	SSPI	YSI	RDI	REI	MRP
Aria	7.78i	7.44g	0.042i	7.61i	0.84i	0.397j	7.59i	0.82g	0.79cd	0.33k	0.169i	1.37k	0.957a	0.164d	0.53j	1.47h
Ekbatan	6.62j	5.51h	0.168h	6.06j	1.27h	0.251k	5.94j	0.61h	0.53g	1.10j	0.673h	4.57j	0.831b	0.193b	0.33k	1.16i
Laetitia	13.14efg	12.20b	0.072i	12.67c	0.96i	1.101d	12.62d	1.35b	1.26a	0.94j	0.288i	3.90j	0.927a	0.097fgh	1.47d	2.44d
Merak	14.77c	12.57b	0.148h	13.67b	1.46gh	1.275b	13.57b	1.39b	1.18a	2.20hi	0.595h	9.12hi	0.851b	0.086j	1.70b	2.62b
Flores	12.71g	8.74f	0.311cd	10.73g	1.98cd	0.762h	10.35g	0.96f	0.66f	3.97de	1.245cd	16.48de	0.688fg	0.100f	1.02h	2.02f
Mandarin	14.19cd	9.93e	0.300de	12.06d	2.06cd	0.968e	11.68ef	1.10e	0.76de	4.26cd	1.201de	17.68cd	0.699ef	0.090ij	1.29e	2.27e
Rosire	15.84b	11.21c	0.292de	13.52b	2.14c	1.220c	13.12c	1.24c	0.88c	4.62c	1.169de	19.18c	0.707ef	0.080k	1.63c	2.55c
Palma	18.63a	14.11a	0.242fg	16.37a	2.12c	1.805a	16.06a	1.56a	1.18a	4.51cd	0.969fg	18.73cd	0.757cd	0.068l	2.41a	3.11a
Azare	12.93fg	10.89cd	0.157h	11.91de	1.42h	0.967ef	11.82e	1.20cd	1.01b	2.03i	0.628h	8.42i	0.842b	0.099fg	1.29ef	2.28e
Dorothea	16.3b	10.6d	0.35c	13.5b	2.3b	1.19c	12.8cd	1.17d	0.76de	5.76b	1.40c	23.88b	0.648g	0.078k	1.60c	2.53c
Isabella	13.7de	9.7e	0.29def	11.7de	1.9cd	0.92g	11.4f	1.08e	0.77de	3.99de	1.16def	16.55de	0.709def	0.093hi	1.23g	2.22e
Muraille	14.5c	7.6g	0.47a	11.1f	2.6a	0.76h	10.0h	0.84g	0.44g	6.92a	1.89a	28.70a	0.525i	0.087j	1.02h	2.06f
Novodoro	13.5ef	9.9e	0.25efg	11.7e	1.8de	0.92fg	11.4f	1.10e	0.82cd	3.52ef	1.02efg	14.60ef	0.743cde	0.095gh	1.23fg	2.22e
Delta	11.8h	8.6f	0.26defg	10.2h	1.7ef	0.70i	10.0h	0.96f	0.70ef	3.15fg	1.06defg	13.07fg	0.733cdef	0.108e	0.94i	1.94g
Pars	8.2i	4.1i	0.41b	5.6k	1.7ef	0.20l	5.21k	0.45i	0.27h	2.92g	1.64b	12.10g	0.589h	0.182c	0.26l	1.04j
Paya	11.4h	8.6f	0.23g	10.0h	1.6fg	0.68i	9.83h	0.96f	0.73def	2.71gh	0.95g	11.26gh	0.762c	0.112e	0.91i	1.91g
Sharif	4.0k	3.1j	0.23g	3.5l	0.9i	0.08m	3.50l	0.34j	0.26h	0.96j	0.94g	3.99j	0.764c	0.314a	0.11m	0.68k
Shokoofa	7.9i	7.2g	0.08i	7.5i	0.8i	0.39j	7.50i	0.80g	0.73def	0.68jk	0.34i	2.81jk	0.913a	0.161d	0.52j	1.46h

Note; In each column, the mean with common letters has no significant difference at the 5 % probability level. PYR- percentage of yield reduction, MP- Mean productivity, GMP- Geometric mean productivity, STI- Stress tolerance index. HM- Harmonicmeanindex, YI- Yield index , DI- Drought index, TOL- Tolerance index, SSI- Stress susceptibility index, SSPI- Stress susceptibility percentage index, YSI- Yield stability index, RDI- Relative drought index, REI- Relative efficiency index, MRP-Mean relative performance.