Table S1. Root length (RL), root diameter (RD), root fresh weight (RFW), and leaf area index (LAI), SPAD index of sugar beet as affected by the interactions of two cultivars [e.g., Kawemira (Cv1) and BTS 301 (Cv2)] grown under different fertilizer levels of potassium [e.g., 120 (K_{120}) and 180 kg ha^{-1} (K_{180})] and foliar zinc [e.g., 0 (Zn_0), 150 (Zn_{150}), and 300 ppm (Zn_{300})] under saline soil (EC_e = 8.60 dS m^{-1}) conditions (data pooled over both seasons).

Treatment		RL	RD	RFW (kg plant^{-1})	LAI	SPAD index
		(cm)				
Cv1	K_{120}	25.0±0.3a	9.5±0.2a	0.83±0.02d	3.1±0.06d	43.0±0.4a
	K_{180}	26.9±0.2a	11.3±0.3a	1.16±0.05c	3.6±0.09c	46.6±0.2a
Cv2	K_{120}	28.7±0.6a	12.2±0.2a	1.21±0.05b	4.2±0.10b	52.1±0.5a
	K_{180}	30.9±0.6a	13.9±0.2a	1.51±0.04a	5.2±0.16a	55.6±0.5a
Cv1	Zn_0	25.3±0.5f	9.9±0.4a	0.88±0.05a	3.1±0.12f	43.6±0.7a
	Zn_{150}	26.1±0.3e	10.4±0.4a	1.02±0.07a	3.3±0.10e	44.8±0.6a
	Zn_{300}	26.5±0.3d	10.9±0.4a	1.08±0.08a	3.6±0.12d	46.0±0.5a
Cv2	Zn_0	28.9±0.8c	12.5±0.4a	1.25±0.06a	4.4±0.19c	52.9±0.8a
	Zn_{150}	29.8±0.7b	13.0±0.3a	1.38±0.06a	4.7±0.21b	53.8±0.7a
	Zn_{300}	30.6±0.7a	13.6±0.3a	1.44±0.07a	5.0±0.23a	54.8±0.7a
K_{120}	Zn_0	25.9±0.8f	10.2±0.5f	0.94±0.08f	3.4±0.19f	46.2±1.5f
	Zn_{150}	27.0±0.7e	10.9±0.5e	1.04±0.07e	3.6±0.17e	47.6±1.4e
	Zn_{300}	27.6±0.7d	11.4±0.5d	1.07±0.07d	3.8±0.20d	48.3±1.4d
K_{180}	Zn_0	28.2±0.8c	12.2±0.5c	1.19±0.06c	4.1±0.25c	50.3±1.4c
	Zn_{150}	28.9±0.8b	12.6±0.5b	1.36±0.07b	4.4±0.28b	51.1±1.4b
	Zn_{300}	29.5±0.8a	13.0±0.5a	1.45±0.08a	4.8±0.30a	51.9±1.4a
p-value	Cv x K	0.256^{ns}	0.081^{ns}	0.009**	0.005**	0.811^{ns}
	Cv x Z	0.030*	0.103^{ns}	0.360^{ns}	0.013*	0.183^{ns}
	K x Z	0.026*	<0.001**	<0.001**	0.026*	<0.001**
	Cv x K x Zn	0.750^{ns}	0.260^{ns}	0.029*	0.053^{ns}	0.204^{ns}

*, ** refer to the significant difference at $p \leq 0.05$ and $p \leq 0.01$, respectively; and "ns" refers to non-significant difference. Means sharing the same letter in each column are not significantly different according to Duncan's multiple range test.

Table S2. Sucrose, pure sugar (PS), loss sugar (LS), and purity of sugar beet as affected by the interactions of two sugar beet cultivars [e.g., Kawemira (Cv1) and BTS 301 (Cv2)] grown under different fertilizer levels of potassium [e.g., 120 (K_{120}) and 180 kg ha^{-1} (K_{180})] and foliar zinc [e.g., 0 (Zn_0), 150 (Zn_{150}), and 300 ppm (Zn_{300})] under saline soil (EC_e = 8.60 dS m^{-1}) conditions (data pooled over both seasons).

Treatment		Sucrose	PS	LS	Purity
		(%)			
Cv1	K_{120}	19.4±0.1a	16.8±0.2a	2.61±0.09a	86.5±0.5d
	K_{180}	20.5±0.2a	18.3±0.2a	2.26±0.10a	88.9±0.5c
Cv2	K_{120}	21.1±0.3a	19.4±0.4a	1.77±0.08a	91.5±0.5b
	K_{180}	22.0±0.2a	20.5±0.3a	1.53±0.06a	93.0±0.3a
Cv1	Zn_0	19.6±0.3a	17.2±0.3a	2.50±0.13a	87.2±0.8a
	Zn_{150}	20.0±0.2a	17.5±0.3a	2.44±0.12a	87.7±0.7a
	Zn_{300}	20.3±0.2a	17.9±0.3a	2.36±0.12a	88.3±0.7a
Cv2	Zn_0	21.3±0.4a	19.5±0.4a	1.74±0.09a	91.7±0.6a
	Zn_{150}	21.6±0.3a	19.9±0.4a	1.66±0.10a	92.2±0.6a
	Zn_{300}	21.8±0.3a	20.3±0.4a	1.55±0.09a	92.8±0.5a
K_{120}	Zn_0	19.9±0.4e	17.7±0.5a	2.26±0.16a	88.5±1.0a
	Zn_{150}	20.3±0.4d	18.1±0.5a	2.21±0.16a	88.9±0.9a
	Zn_{300}	20.6±0.4a	18.5±0.5a	2.10±0.17a	89.6±0.9a
K_{180}	Zn_0	21.0±0.3c	19.0±0.5a	1.98±0.15a	90.4±0.8a
	Zn_{150}	21.3±0.3b	19.4±0.4a	1.89±0.15a	91.0±0.8a
	Zn_{300}	21.5±0.3a	19.7±0.5a	1.82±0.15a	91.4±0.8a
p-value	Cv x K	0.216[ns]	0.079[ns]	0.097[ns]	0.011[*]
	Cv x Z	0.646[ns]	0.961[ns]	0.179[ns]	0.964[ns]
	K x Z	0.050[*]	0.068[ns]	0.157[ns]	0.125[ns]
	Cv x K x Zn	0.693[ns]	0.731[ns]	0.204[ns]	0.447[ns]

*, ** refer to the significant difference at $p \leq 0.05$ and $p \leq 0.01$, respectively; and "ns" refers to non-significant difference. Means sharing the same letter in each column are not significantly different according to Duncan's multiple range test.

Table S3. Sodium (Na), potassium (K), α-amino N, and alkalinity index of sugar beet as affected by the interactions of two sugar beet cultivars [e.g., Kawemira (Cv1) and BTS 301 (Cv2)] grown under different fertilizer levels of potassium [e.g., 120 (K_{120}) and 180 kg ha^{-1} (K_{180})] and foliar zinc [e.g., 0 (Zn_0), 150 (Zn_{150}), and 300 ppm (Zn_{300})] under saline soil (EC_e = 8.60 dS m^{-1}) conditions (data pooled over both seasons).

Treatment		Na	K	α-amino N	Alkalinity index
			(mmol kg^{-1})		
Cv1	K_{120}	26.9±0.1a	36.6±0.2a	14.8±0.03a	3.35±0.2c
	K_{180}	22.4±0.1b	31.2±0.2a	14.0±0.03b	3.87±0.2b
Cv2	K_{120}	14.5±0.1c	25.5±0.2a	12.0±0.03c	4.35±0.2a
	K_{180}	12.7±0.1d	21.0±0.2a	8.9±0.02d	3.89±0.3b
Cv1	Zn_0	25.4±0.2a	35.0±0.2a	14.7±0.04a	3.67±0.3a
	Zn_{150}	24.8±0.2b	34.0±0.2a	14.4±0.04b	3.62±0.3a
	Zn_{300}	23.8±0.1c	32.8±0.2a	14.1±0.04c	3.53±0.3a
Cv2	Zn_0	14.2±0.1d	25.0±0.3a	10.9±0.06d	4.16±0.3a
	Zn_{150}	13.7±0.1e	23.4±0.3a	10.5±0.06e	4.14±0.3a
	Zn_{300}	12.9±0.1f	21.3±0.3a	10.0±0.06f	4.06±0.3a
K_{120}	Zn_0	21.3±0.2a	32.3±0.3a	13.8±0.05a	3.88±0.3a
	Zn_{150}	20.9±0.2b	31.5±0.3a	13.4±0.05a	3.90±0.3a
	Zn_{300}	19.8±0.2c	29.4±0.3a	13.0±0.06a	3.77±0.3a
K_{180}	Zn_0	18.3±0.2d	27.7±0.2a	11.8±0.08a	3.95±0.3a
	Zn_{150}	17.6±0.2e	25.9±0.3a	11.5±0.08a	3.86±0.3a
	Zn_{300}	16.8±0.2f	24.7±0.3a	11.1±0.09a	3.82±0.3a
p-value	Cv x K	<0.001**	0.585ns	<0.001**	<0.001**
	Cv x Z	0.024*	0.128ns	0.002**	0.712ns
	K x Z	0.004**	0.377ns	0.534ns	0.135ns
	Cv x K x Zn	0.031**	0.137ns	0.181ns	0.504ns

*, ** refer to the significant difference at $p \leq 0.05$ and $p \leq 0.01$, respectively; and "ns" refers to non-significant difference. Means sharing the same letter in each column are not significantly different according to Duncan's multiple range test.

Table S4. Root yield (RY), top yield (RY), biological yield (BY), and gross sugar yield (GSY) of sugar beet as affected by the interactions of two cultivars [e.g., Kawemira (Cv1) and BTS 301 (Cv2)] grown under different fertilizer levels of potassium [e.g., 120 (K_{120}) and 180 kg ha^{-1} (K_{180})] and foliar zinc [e.g., 0 (Zn_0), 150 (Zn_{150}), and 300 ppm (Zn_{300})] under saline soil (EC_e = 8.60 dS m^{-1}) conditions (data pooled over both seasons).

Treatment		RY	TY	BY	GSY
		(t ha^{-1})			
Cv1	K_{120}	51.0±0.9a	16.3±0.4a	67.3±1.3a	10.8±0.20a
	K_{180}	58.8±1.6a	19.6±0.5a	78.4±2.1a	12.9±0.27a
Cv2	K_{120}	57.9±1.0a	21.5±0.8a	79.4±1.5a	11.3±0.24a
	K_{180}	65.8±1.5a	24.9±0.6a	90.7±1.5a	13.5±0.32a
Cv1	Zn_0	53.0±2.1a	16.6±0.8a	69.6±2.9a	11.3±0.48a
	Zn_{150}	55.2±1.9a	18.2±0.6a	73.4±2.4a	11.9±0.38a
	Zn_{300}	56.6±1.9a	18.9±0.6a	75.5±2.6a	12.3±0.38a
Cv2	Zn_0	59.8±2.1a	21.9±1.2a	81.7±2.9a	11.8±0.50a
	Zn_{150}	62.1±1.8a	23.4±0.8a	85.5±2.1a	12.4±0.45a
	Zn_{300}	63.7±1.9a	24.2±0.8a	87.9±2.2a	12.9±0.45a
p-value	Cv x K	0.841^{ns}	0.832^{ns}	0.822^{ns}	0.60^{ns}
	Cv x Z	0.321^{ns}	0.353^{ns}	0.216^{ns}	0.231^{ns}
	Cv x K x Zn	0.222^{ns}	0.634^{ns}	0.405^{ns}	0.173^{ns}

*, ** refer to the significant difference at $p \leq 0.05$ and $p \leq 0.01$, respectively; and "ns" refers to non-significant difference. Means sharing the same letter in each column are not significantly different according to Duncan's multiple range test.

Table S5. Potassium use efficiencies based on root yield (R-KUE) and pure sugar yield (S-KUE) of sugar beet as affected by the interactions of two cultivars [e.g., Kawemira (Cv1) and BTS 301 (Cv2)] grown under different fertilizer levels of potassium [e.g., 120 (K_{120}) and 180 kg ha^{-1} (K_{180})] and foliar zinc [e.g., 0 (Zn_0), 150 (Zn_{150}), and 300 ppm (Zn_{300})] under saline soil (EC_e = 8.60 dS m^{-1}) conditions (data pooled over both seasons).

Treatment		PSY (t ha^{-1})	R-KUE (kg roots kg k^{-1})	S-KUE (kg sugar kg k^{-1})
Cv1	K_{120}	9.9±0.22a	0.43±0.008b	0.082±0.002a
	K_{180}	12.0±0.22a	0.33±0.009d	0.067±0.001a
Cv2	K_{120}	9.7±0.23a	0.48±0.008a	0.081±0.002a
	K_{180}	12.0±0.27a	0.37±0.009c	0.067±0.002a
Cv1	Zn_0	10.4±0.46a	0.36±0.014a	0.070±0.002a
	Zn_{150}	11.0±0.37a	0.38±0.018a	0.075±0.003a
	Zn_{300}	11.4±0.35a	0.39±0.020a	0.078±0.003a
Cv2	Zn_0	10.3±0.48a	0.41±0.017a	0.070±0.003a
	Zn_{150}	10.9±0.42a	0.43±0.021a	0.074±0.003a
	Zn_{300}	11.4±0.42a	0.44±0.022a	0.078±0.003a
p-value	Cv x K	0.552^{ns}	0.002**	0.401^{ns}
	Cv x Z	0.736^{ns}	0.428^{ns}	0.869^{ns}
	Cv x K x Zn	0.065^{ns}	0.277^{ns}	0.122^{ns}

*, ** refer to the significant difference at $p \leq 0.05$ and $p \leq 0.01$, respectively; and "ns" refers to non-significant difference. Means sharing the same letter in each column are not significantly different according to Duncan's multiple range test.