Supplementary material

Table S1. Composition of the fresh and saline water irrigation used in the field study.

Fresh and saline water irrigation. Source: [57]		
	Fresh water	Saline water
K (mmol g^{-1}/ml^{-1})	/	0.002
Ca (mmol g^{-1}/ml^{-1})	0.001	0.017
Mg (mmol g^{-1}/ml^{-1})	/	0.015
P (mmol g^{-1}/ml^{-1})	/	/
Na (mmol g^{-1}/ml^{-1})	0.001	0.138

Table S2. Correlation matrix across the three different growing conditions and variables evaluated in this study for moringa. The correlation matrix shows the relationships between various traits for moringa. The data were analyzed using individual values from each species under each salinity condition. Traits included in the correlation matrix: $\delta^{13}C$, carbon isotope composition; GA-DUO-TIR, the temperature of the canopy leaves measured zenithally with the FLIR-Duo; Env-DUO-TIR, the total canopy temperature measured zenithally with the FLIR-Duo; GA-CatS60-TIR, the temperature of the canopy leaves measured from the side with the CatS60; Env-CatS60-TIR, the total canopy temperature measured from the side with the CatS60 CatS60; Gun-TIR, the temperature of the whole canopy measured from the side with an infrared thermometer; Chl, chlorophyll content; Flav, flavonoid concentration: Anth, anthocyanin concentration; N, nitrogen concentration; $\delta^{15}N$, nitrogen isotope composition; NBI, nitrogen balance; FT, steady state fluorescence; NDVI, the normalized difference vegetation index; SAVI, soil adjusted vegetation index; OSAVI, optimized soil adjusted vegetation index; RDVI, renormalized difference vegetation; NDRE, the normalized difference red edge index; GA x100, the percentage of green area; GGA x100, the percentage of greener area; K, potassium; Ca, calcium; Mg, magnesium; P, phosphorus; Fe, iron; Na, sodium; K/Na, the ratio of potassium to sodium. Level of significance: ns, not significant; *p < 0.050; **p < 0.010; ***p < 0.001 are shown. Blue indicates positive correlations, while orange indicates negative correlations.

	$\delta^{13}C$	$\delta^{15}N$	N	GA-DUO-TIR	Env-DUO-TIR	GA-CatS60-TIR	Env-CatS60-TIR	Gun-TIR	Chl	Flav	Anth	NBI	FT	NDVI	SAVI	OSAVI	RDVI	NDRE	GAx100	GGAx100
$\delta^{13}C$	1	ns	**0.627*****	**0.479****	**0.459****	ns	ns	ns	**0.423***	ns	ns	ns	ns	ns	ns	**0.568****	ns	**0.758*****	ns	ns
$\delta^{15}N$	ns	1	**0.406***	ns	ns	ns	ns	**0.383***		**-0.404***	**-0.631*****	**0.398***	ns	ns	ns	ns	ns	ns	ns	ns
N	**0.627*****	**0.406***	1	ns	ns	ns	ns	**0.578****	**0.520****	**-0.462****	**-0.435***	**0.521****	ns	ns	ns	ns	ns	**0.482****	ns	ns
GA-DUO-TIR	**0.479****	ns	ns	1	**0.603*****	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**0.463****	**-0.469****	ns
Env-DUO-TIR	**0.459****	ns	ns	**0.603*****	1	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**0.470****	**-0.569****	**-0.508****
GA-CatS60-TIR	ns	ns	ns	ns	ns	1	**0.734*****	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Env-CatS60-TIR	ns	ns	ns	ns	ns	**0.734*****	1	ns	ns	ns	ns	ns	**0.459****	ns	ns	ns	ns	ns	ns	ns
Gun-TIR	ns	**0.383***	**0.578****	ns	ns	ns	ns	1	**0.507****	ns	**-0.500****	**0.460****	**0.409***	ns	ns	ns	ns	**0.387***	ns	ns
Chl	**0.423***		**0.520****	ns	ns	ns	ns	**0.507****	1	ns	**-0.857*****	**0.983*****	ns	**0.527****	**0.490****	**0.657*****	**0.413***	**0.421***	ns	**0.461****
Flav	ns	**-0.404***	**-0.462****	ns	ns	ns	ns			1			ns	ns	ns	ns	ns	ns		
Anth	ns	**-0.631*****	**-0.435***	ns	ns	ns	ns	**-0.500****	**-0.857*****	ns	1	**-0.878*****	ns	ns	ns	ns	**-0.419***	ns	**-0.407***	**-0.445***
NBI	ns	**0.398***	**0.521****	ns	ns	ns	ns	**0.460****	**0.983*****	ns	**-0.878*****	1	ns	**0.537****	**0.475****	**0.629*****	**0.426***	**0.390***	ns	**0.488****
FT	ns	ns	ns	ns	ns	ns	**0.459****	**0.409***	0.283	ns	ns		1	ns	ns	ns	ns	ns	ns	
NDVI	ns	ns	ns	ns	ns	ns	ns	ns	**0.527****	ns	ns	**0.537****	ns	1	**0.634*****	**0.683*****	**0.742*****	ns	ns	**0.385***
SAVI	ns	ns	ns	ns	ns	ns	ns	ns	**0.490****	ns	ns	**0.475****	ns	**0.634*****	1	**0.661*****	**0.535****	ns	ns	ns
OSAVI	**0.568****	ns	ns	ns	ns	ns	ns	ns	**0.657*****	ns	ns	**0.629*****	ns	**0.683*****	**0.661*****	1	**0.526****	**0.672*****	ns	ns
RDVI		ns	ns	ns	ns	ns	ns	ns	**0.413***	ns	**-0.419***	**0.426***	ns	**0.742*****	**0.535****	**0.526****	1	ns	ns	ns
NDRE	**0.758*****	ns	**0.482****	**0.463****	**0.470****	ns	ns	**0.387***	**0.421***	ns	ns	**0.390***	ns	ns	ns	**0.672*****	ns	1	ns	ns
GAx100	ns	ns	ns	**-0.469****	**-0.569****	ns	ns	ns		ns	**-0.407***	ns	ns	ns	ns	ns	ns	ns	1	**0.788*****
GGAx100	ns	ns	ns	ns	**-0.508****	ns	ns	ns	**0.461****	ns	**-0.445***	**0.488****	**-0.075**	**0.385***	ns	ns	ns	ns	**0.788*****	1
K	ns	**0.382***	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**-0.465****	ns	ns	ns	ns
Ca	ns		ns	**0.399***	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**0.414***	ns	ns	ns	ns
Mg	**0.391***	**-0.546****	ns	**0.702*****	**0.428***	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**0.432***	**-0.585*****	ns
P	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**-0.386***	ns	ns	ns	ns	ns	ns	ns	ns
Fe	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**0.432***	ns	ns	ns	ns	ns	ns
Na	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.366	ns	**0.443***	ns	ns	ns	ns
K/Na	ns	**0.576****	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**-0.387***	ns	**-0.612*****	ns	**-0.437***	ns	ns

Table S3: Correlation matrix across the three different growing conditions and variables evaluated in this study for pomegranate. The correlation matrix shows the relationships between various traits for moringa. The data were analyzed using individual values from each species under each salinity condition. Traits included in the correlation matrix: $\delta^{13}C$, carbon isotope composition; GA-DUO-TIR, the temperature of the canopy leaves measured zenithally with the FLIR-Duo; Env-DUO-TIR, the total canopy temperature measured zenithally with the FLIR-Duo; GA-CatS60-TIR, the temperature of the canopy leaves measured from the side with the CatS60; Env-CatS60-TIR, the total canopy temperature measured from the side with the CatS60 CatS60; Gun-TIR, the temperature of the whole canopy measured from the side with an infrared thermometer; Chl, chlorophyll content; Flav, flavonoid concentration: Anth, anthocyanin concentration; N, nitrogen concentration; $\delta^{15}N$, nitrogen isotope composition; NBI, nitrogen balance; FT, steady state fluorescence; NDVI, the normalized difference vegetation index; SAVI, soil adjusted vegetation index; OSAVI, optimized soil adjusted vegetation index; RDVI, renormalized difference vegetation; NDRE, the normalized difference red edge index; GA x100, the percentage of green area; GGA x100, the percentage of greener area; K, potassium; Ca, calcium; Mg, magnesium; P, phosphorus; Fe, iron; Na, sodium; K/Na, the ratio of potassium to sodium. Level of significance: ns, not significant; *p < 0.050; **p < 0.010; ***p < 0.001 are shown. Blue indicates positive correlations, while orange indicates negative correlations.

	$\delta^{13}C$	$\delta^{15}N$	N	GA-DUO-TIR	Env-DUO-TIR	GA-CatS60-TIR	Env-CatS60-TIR	Gun-TIR	Chl	Flav	Anth	NBI	FT	NDVI	SAVI	OSAVI	RDVI	NDRE	GAx100	GGAx100
$\delta^{13}C$	1	**0.762*****	**0.743*****	ns	**0.476***	**0.563****	**0.491***	ns	**0.767*****	ns	**-0.572****	**0.762*****	ns	**0.633*****	**0.626*****	ns	**0.640*****	ns	ns	ns
$\delta^{15}N$	**0.762*****	1	**0.772*****	ns	ns	**0.555****	ns	ns	**0.924*****	ns	**-0.688*****	**0.899*****	**0.541****	**0.617****	**0.551****	ns	**0.605*****	ns	**0.477***	ns
N	**0.743*****	**0.772*****	1	**0.493****	**0.589****	**0.502****	ns	ns	**0.770*****	ns	**-0.494****	**0.765*****	ns	**0.832*****	**0.780*****	**0.684*****	**0.822*****	ns	**0.530****	ns
GA-DUO-TIR	ns	ns	**0.493****	1	**0.758*****	**0.471***	**0.474***	ns	ns	ns	ns	ns	ns	**0.546****	**0.546****	**0.433***	**0.552****	**0.464***	ns	ns
Env-DUO-TIR	**0.476***	ns	**0.589****	**0.758*****	1	**0.465***	**0.415***	ns	ns	ns	ns	ns	ns	**0.769*****	**0.763*****	**0.653*****	**0.769*****	**0.609****	ns	ns
GA-CatS60-TIR	**0.563****	**0.555****	**0.502****	**0.471***	**0.465***	1	**0.739*****	ns	**0.568****	ns	ns	**0.490****	ns	**0.595****	**0.563****	ns	**0.594****	ns	ns	ns
Env-CatS60-TIR	**0.491****	ns	ns	**0.474***	**0.415***	**0.739*****	1	ns	**0.490****	ns	ns	**0.417***	ns	ns	ns	ns	ns	ns	ns	ns
Gun-TIR	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	ns	0.100	ns	ns	ns	ns	ns	ns	ns	ns
Chl	**0.767*****	**0.924*****	**0.770*****	ns	ns	**0.568****	**0.490****	ns	1	ns	**-0.784*****	**0.967*****	**0.556****	**0.589****	**0.528****	ns	**0.576****	ns	**0.466***	ns
Flav	ns	ns	ns	ns	ns	ns	ns	ns	ns	1	ns	ns	ns	ns	ns	**-0.449***	ns	ns	ns	ns
Anth	**-0.572****	**-0.688*****	**-0.494****	ns	ns	ns	ns	ns	**-0.784*****	ns	1	**-0.857*****	**-0.574****	ns	**-0.436***	ns	ns	ns	ns	ns
NBI	**0.762*****	**0.899*****	**0.765*****	ns	ns	**0.490****	**0.417***	ns	**0.967*****	ns	**-0.857*****	1	**0.497****	**0.612****	**0.578****	**0.439***	**0.604****	ns	**0.470***	ns
FT	ns	**0.541****	0.246	ns	ns	0.367	ns	ns	**0.556****	ns	**-0.574****	**0.497****	1	ns	ns	ns	ns	ns	ns	ns
NDVI	**0.633****	**0.617****	**0.832*****	**0.546****	**0.769*****	**0.595****	ns	ns	**0.589****	ns	ns	**0.612****	ns	1	**0.968*****	**0.896*****	**0.998*****	ns	**0.652*****	ns
SAVI	**0.626****	**0.551****	**0.780*****	**0.546****	**0.763*****	**0.563*****	ns	ns	**0.528****	ns	**-0.436***	**0.578****	ns	**0.968*****	1	**0.891*****	**0.971*****	ns	**0.600****	ns
OSAVI	ns	ns	**0.684*****	**0.433***	**0.653*****	0.333	ns	ns	ns	**-0.449***	ns	**0.439***	ns	**0.896*****	**0.891*****	1	**0.900*****	ns	**0.693*****	ns
RDVI	**0.640****	**0.605****	**0.822*****	**0.552****	**0.769*****	**0.594****	ns	ns	**0.576****	ns	ns	**0.604****	ns	**0.998*****	**0.971*****	**0.900*****	1	ns	**0.652*****	ns
NDRE	ns	ns	ns	**0.464***	**0.609****	ns	ns	ns	ns	ns	ns	-0.127	ns	ns	ns	ns	ns	1	ns	ns
GAx100	ns	**0.477***	**0.530****	ns	ns	ns	ns	ns	**0.466***	ns	ns	**0.470***	ns	**0.652*****	**0.600****	**0.693*****	**0.652*****	ns	1	ns
GGAx100	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.116	ns	ns	ns	ns	ns	ns	ns	1
K	**0.551****	**0.649*****	**0.579****	ns	ns	ns	ns	ns	**0.588****	ns	**-0.503****	**0.630*****	ns	**0.598****	**0.524****	**0.461***	**0.590****	ns	ns	ns
ca	**-0.494****	**-0.492****	ns	ns	ns	ns	ns	ns	**-0.434***	ns	ns	ns	ns	**-0.445***	ns	ns	**-0.444***	ns	ns	ns
Mg	ns	ns	ns	**0.483****	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
p	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Fe	ns	**-0.476***	ns	ns	ns	ns	ns	ns	**-0.515****	**-0.492****	**0.482***	**-0.501****	ns	ns	ns	ns	ns	ns	ns	ns
Na	ns	ns	ns	**0.814*****	**0.510****	**0.465***	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
K/Na	ns	ns	ns	**-0.549****	**-0.440***	ns	ns	**-0.497****	ns	ns	ns	ns	**0.416***	ns	ns	ns	ns	**-0.503***	ns	ns

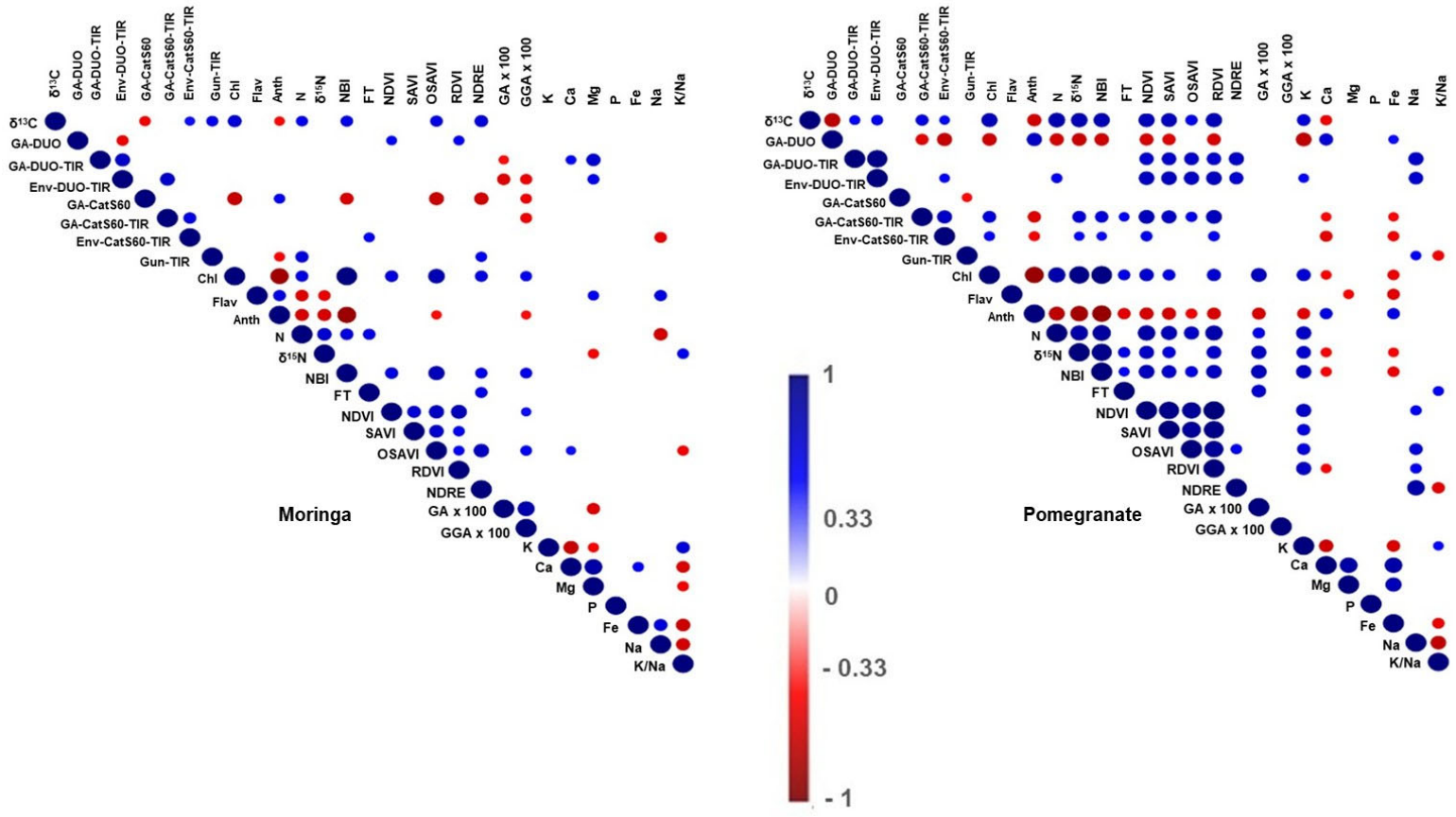

δ13C
GA-DUO
GA-DUO-TIR
Env-DUO-TIR
GA-CatS60
GA-CatS60-TIR
Env-CatS60-TIR
Gun-TIR
Chl
Flav
Anth
N
δ15N
NBI
FT
NDVI
SAVI
OSAVI
RDVI
NDRE
GA x 100
GGA x 100
K
Ca
Mg
P
Fe
Na
K/Na
Moringa
Pomegranate
1
0.33
0
- 0.33
- 1

Figure S1: Correlation matrix for moringa (left) and pomegranate (right) across all variables evaluated in this study. The correlation matrix shows the relationships between various traits for moringa and pomegranate across the different low and medium growing conditions. The data were analyzed using individual values from each species under each salinity condition. Only correlations with a coefficient ≤ 0.05 are shown. White blocks represent non-significant correlations, while the size of the circles and the intensity of the color indicate the strength of the correlation. Larger circles with more intense colors reflect higher correlation coefficients, while smaller circles with lighter colors represent lower correlations. Blue circles indicate positive correlations, while red circles represent negative correlations. Traits included in the correlation matrix: $\delta^{13}C$, carbon isotope composition; GA-DUO, the vegetation index green area of the tree canopy assessed zenithally with the FLIR-Duo; GA-DUO-TIR, the temperature of the canopy leaves measured zenithally with the FLIR-Duo; Env-DUO-TIR, the total canopy temperature measured zenithally with the FLIR-Duo; GA-CatS60, the vegetation index green area corresponding to the side canopy and measured with the CatS60; GA-CatS60-TIR, the temperature of the canopy leaves measured from the side with the CatS60; Env-CatS60-TIR, the total canopy temperature measured from the side with the CatS60 CatS60; Gun-TIR, the temperature of the whole canopy measured from the side with an infrared thermometer; Chl, chlorophyll content; Flav, flavonoid concentration: Anth, anthocyanin concentration; N, nitrogen concentration; $\delta^{15}N$, nitrogen isotope composition; NBI, nitrogen balance; FT, steady state fluorescence; NDVI, the normalized difference vegetation index; SAVI, soil adjusted vegetation index; OSAVI, optimized soil adjusted vegetation index; RDVI, renormalized difference vegetation; NDRE, the normalized difference red edge index; GA x100, the percentage of green area; GGA x100, the percentage of greener area; K, potassium; Ca, calcium; Mg, magnesium; P, phosphorus; Fe, iron; Na, sodium; K/Na, the ratio of potassium to sodium.

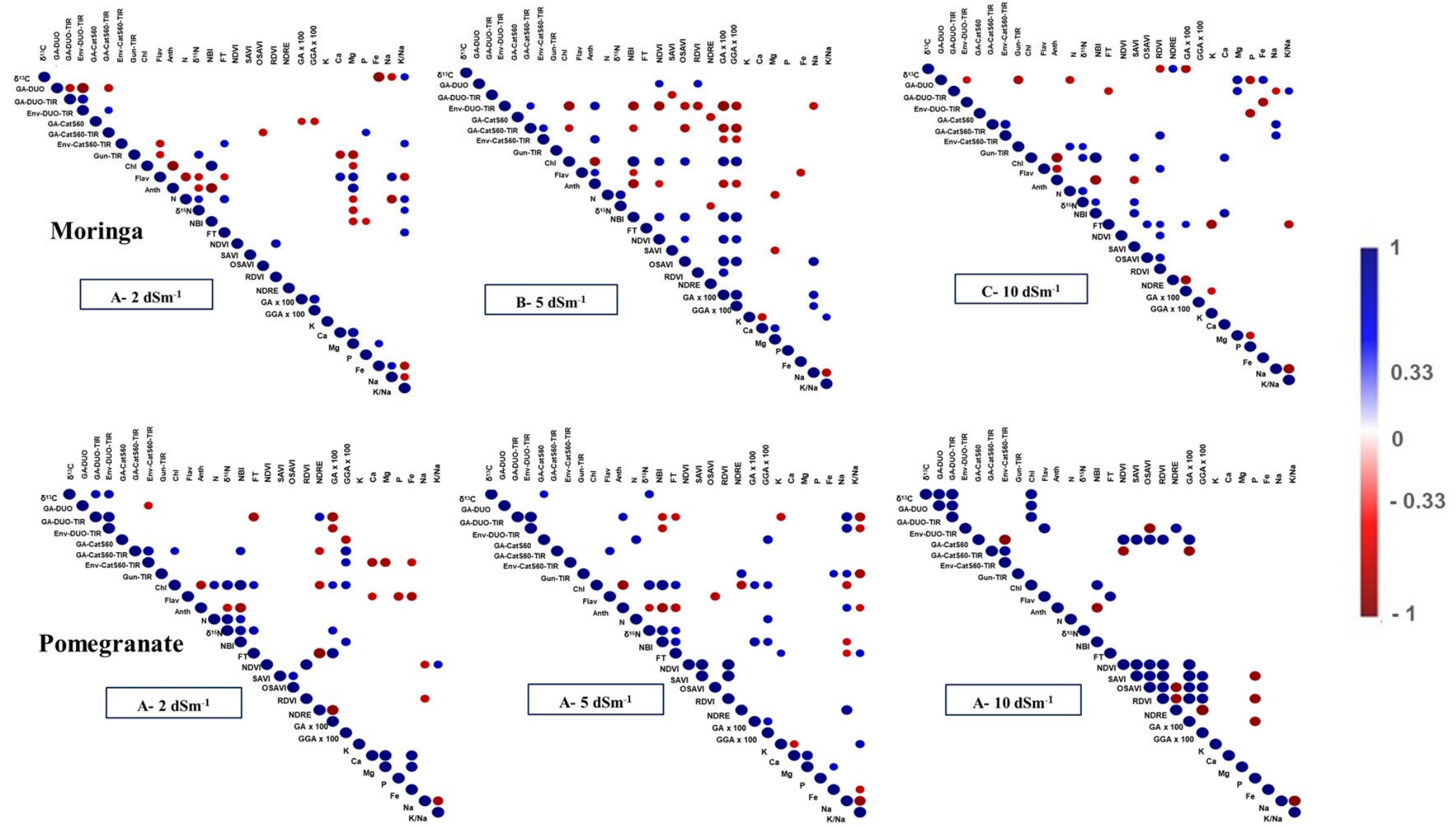

Moringa
A- 2 dSm-1
B- 5 dSm-1
C- 10 dSm-1
Pomegranate
A- 2 dSm-1
A- 5 dSm-1
A- 10 dSm-1
δ13C
GA-DUO
GA-DUO-TIR
Env-DUO-TIR
GA-CatS60
GA-CatS60-TIR
Env-CatS60-TIR
Gun-TIR
Chl
Flav
Anth
N
δ15N
NBI
FT
NDVI
SAVI
OSAVI
RDVI
NDRE
GA x 100
GGA x 100
K
Ca
Mg
P
Fe
Na
K/Na
1
0.33
0
- 0.33
- 1

Figure S2. Correlation matrix for moringa (upper) and pomegranate (lower) across all variables evaluated in this study and under each level of salinity. The data were analyzed using individual values from each species under each salinity condition. Only correlations with a coefficient ≤ 0.05 are shown. White blocks represent non-significant correlations, while the size of the circles and the intensity of the color indicate the strength of the correlation. Larger circles with more intense colors reflect higher correlation coefficients, while smaller circles with lighter colors represent lower correlations. Blue circles indicate positive correlations, while red circles represent negative correlations. Traits included in the correlation matrix: $\delta^{13}C$, carbon isotope composition; GA-DUO, the vegetation index green area of the tree canopy assessed zenithally with the FLIR-Duo; GA-DUO-TIR, the temperature of the canopy leaves measured zenithally with the FLIR-Duo; Env-DUO-TIR, the total canopy temperature measured zenithally with the FLIR-Duo; GA-CatS60, the vegetation index green area corresponding to the side of the canopy and measured with the CatS60; GA-CatS60-TIR, the temperature of the canopy leaves measured from the side with the CatS60; Env-CatS60-TIR, the total canopy temperature measured from the side with the CatS60 CatS60; Gun-TIR, the temperature of the whole canopy measured from the side with an infrared thermometer; Chl, chlorophyll content; Flav, flavonoid concentration: Anth, anthocyanin concentration; N, nitrogen concentration; $\delta^{15}N$, nitrogen isotope composition; NBI, nitrogen balance; FT, steady state fluorescence; NDVI, the normalized difference vegetation index; SAVI, soil adjusted vegetation index; OSAVI, optimized soil adjusted vegetation index; RDVI, renormalized difference vegetation; NDRE, the normalized difference red edge index; GA x100, the percentage of green area; GGA x100, the percentage of greener area; K, potassium; Ca, calcium; Mg, magnesium; P, phosphorus; Fe, iron; Na, sodium; K/Na, the ratio of potassium to sodium.