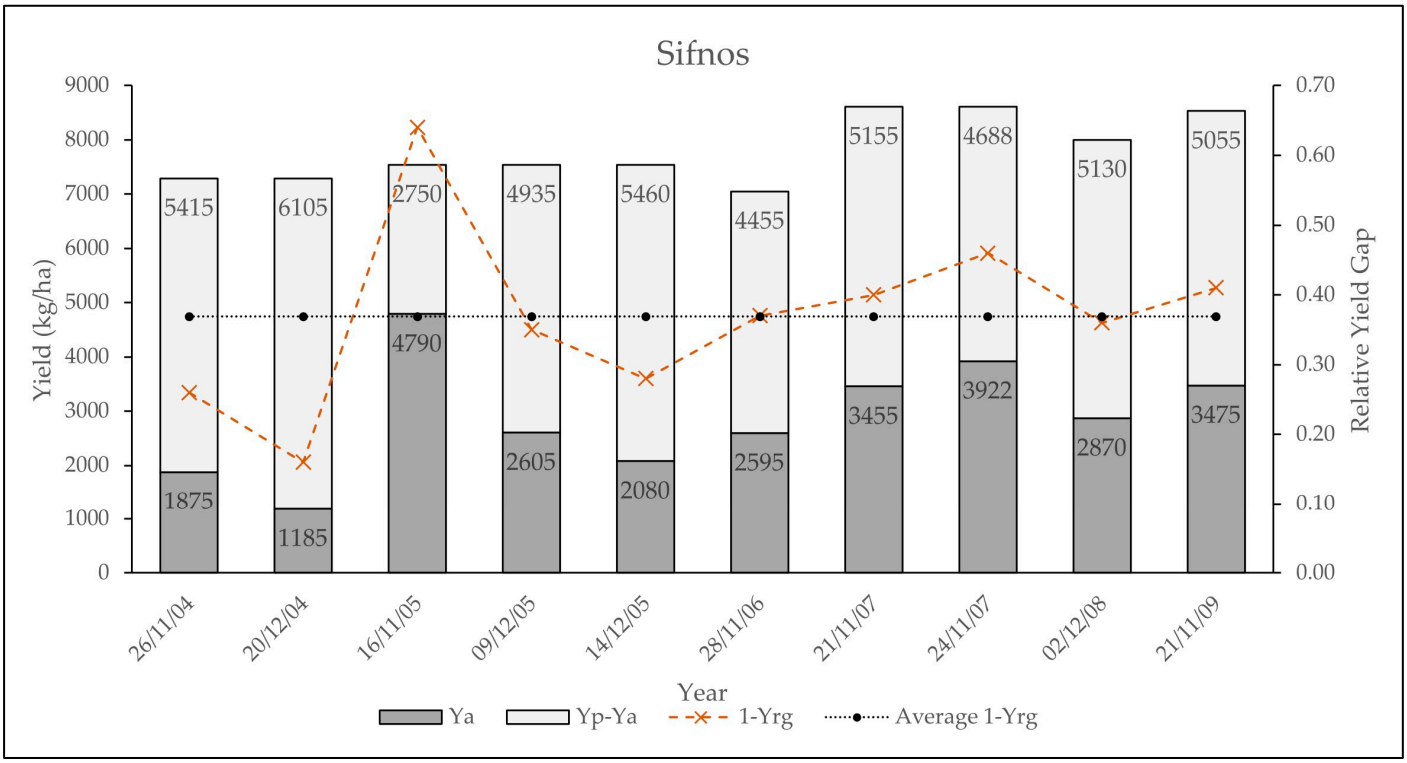
Supplementary materials



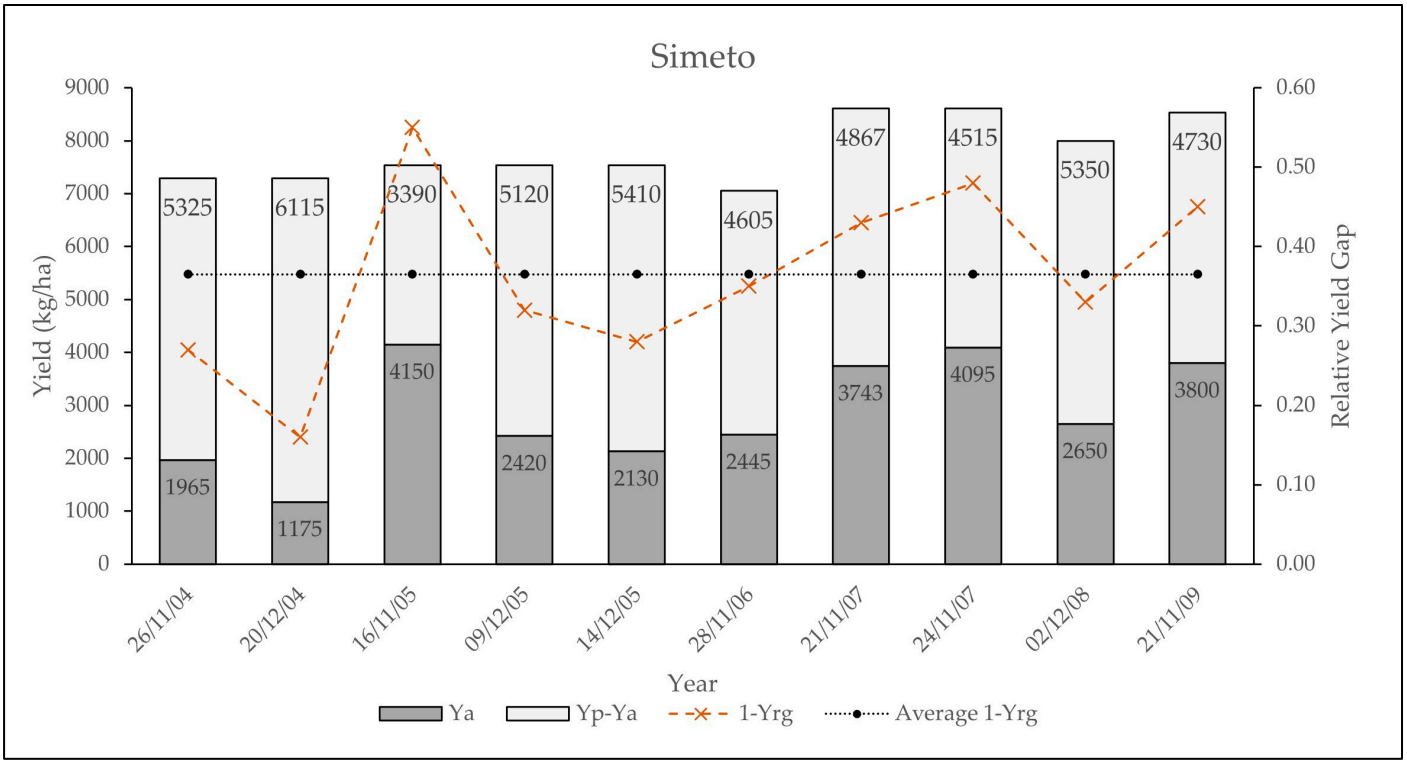


Figure S1 Actual Yield (Ya) (kg dm/ha), Yield Gap (Yp-Ya) (kg dm/ha), relative Yield Gap (1-Yrg) and average relative Yield Gap for Sifnos and Simeto. Planting dates of the reported years are also shown on the horizontal axis.

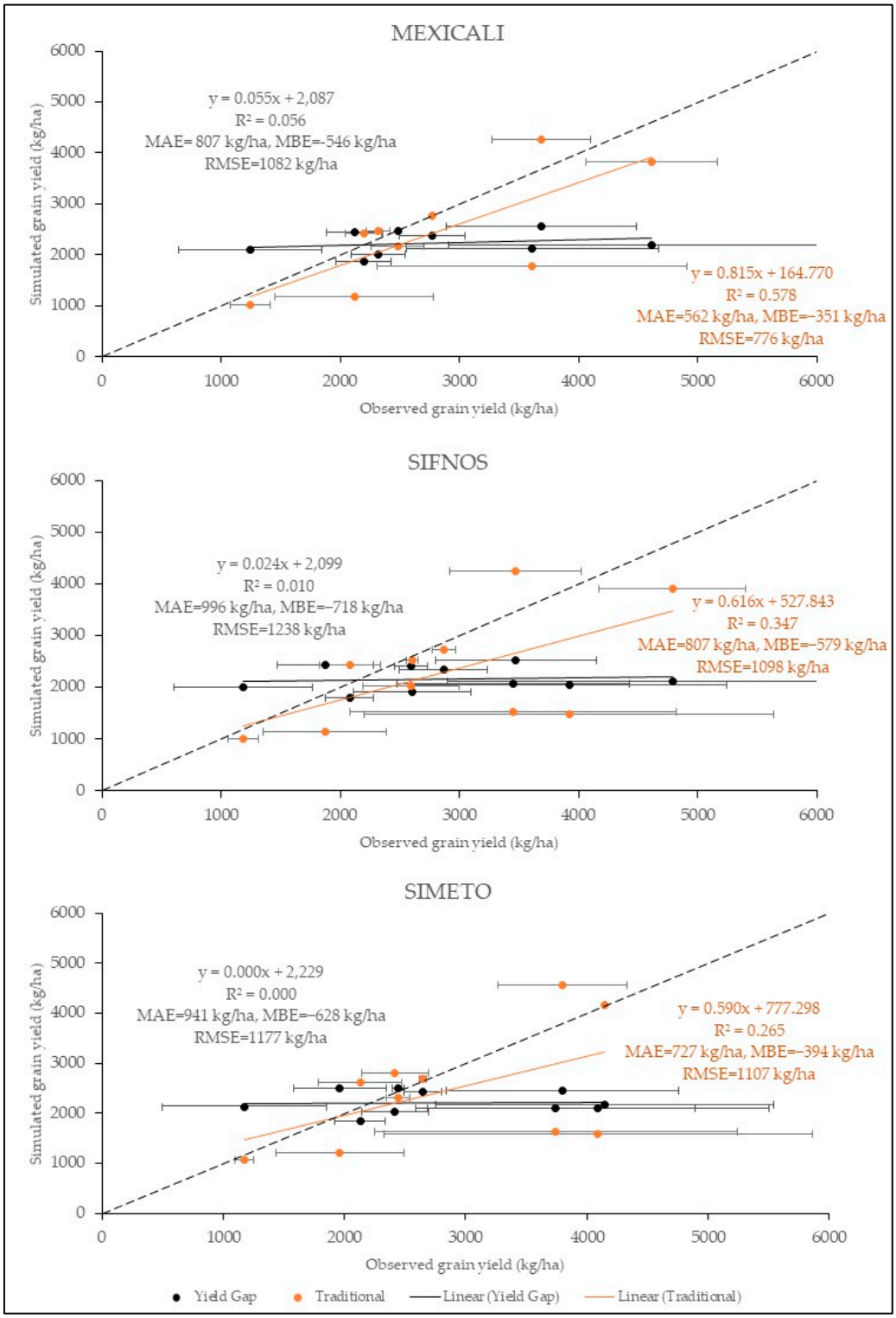


Figure S2. Comparison of the two calibration strategies ("Traditional (TrC)" vs "Yield gap (YgC_unadj)") grain yield for the three cultivars (Mexicali (n=9), Sifnos (n=10) and Simeto (n=10)). Bars indicate standard deviations of observations in relation to the average. The solid lines represent the linear regression fits to crop data, while the dotted line represents the 1:1 line.

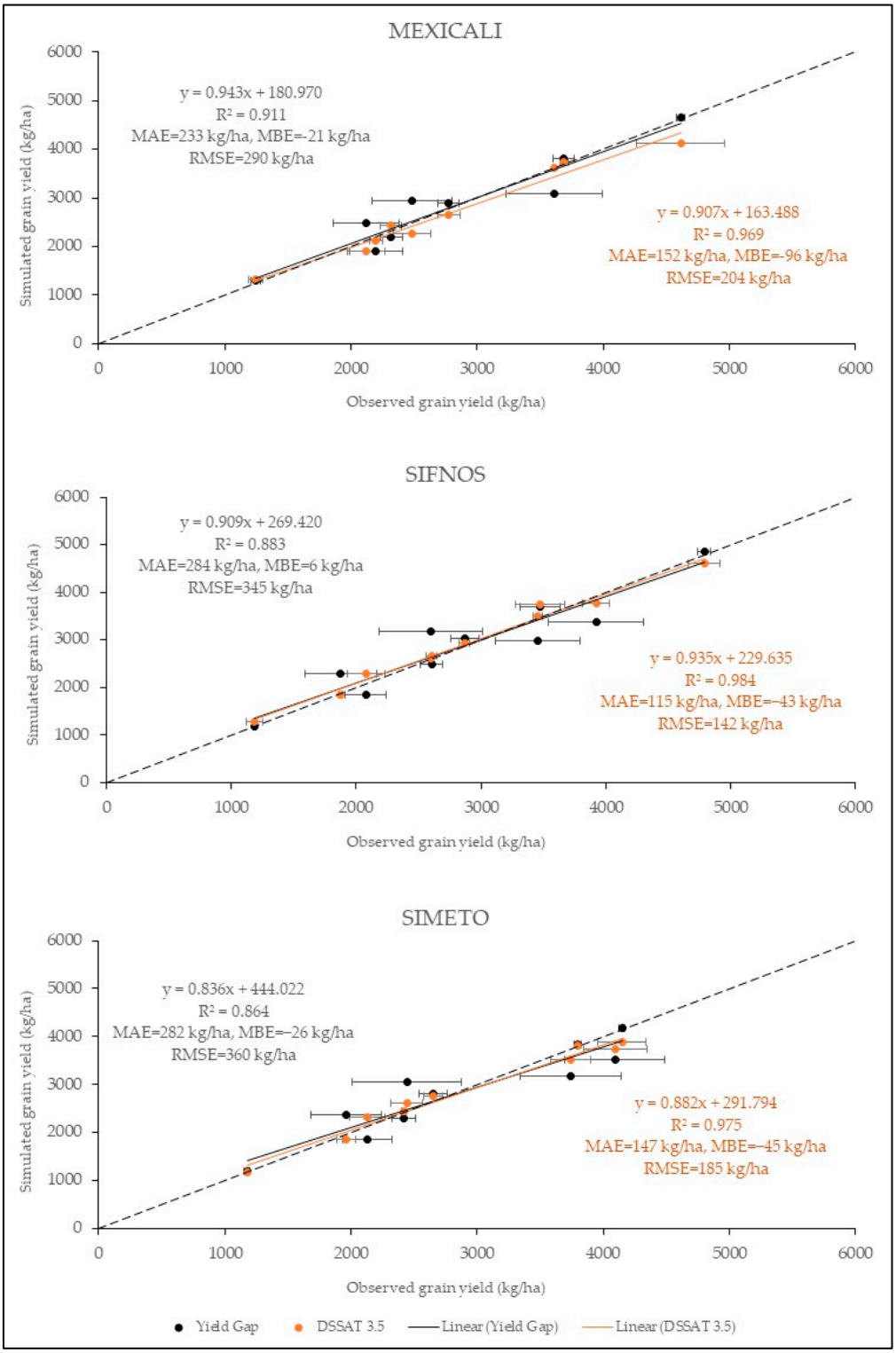


Figure S3. Comparison of the two calibration strategies ("DSSAT 3.5" vs "Yield gap (YgC_unadj)") grain yield for the three cultivars (Mexicali (n=9), Sifnos (n=10) and Simeto (n=10)). Bars indicate standard deviations of observations in relation to the average. The solid lines represent the linear regression fits to crop data, while the dotted line represents the 1:1 line.

Table S1. The EURO-CORDEX regional climate models whose simulations were used in the present study. The corresponding driving GCMs and the specific realizations are also shown.

	RCM	Driving GCM	Realization
1	ALADIN63.v2	CNRM.CNRM-CERFACS-CNRM-CM5	r1i1p1
2	CCLM4-8-17.v1	CLMcom.ICHEC-EC-EARTH	r12i1p1
3	HIRHAM5.v2	DMI.ICHEC-EC-EARTH	r3i1p1
4	RACMO22E.v1	KNMI.ICHEC-EC-EARTH	r12i1p1
5	RACMO22E.v2	KNMI.MOHC-HadGEM2-ES	r1i1p1
6	RACMO22E.v2	KNMI.CNRM-CERFACS-CNRM-CM5	r1i1p1
7	RCA4.v1	SMHI.MOHC-HadGEM2-ES	r1i1p1
8	RCA4.v1	SMHI.MPI-M-MPI-ESM-LR	r1i1p1
9	RCA4.v1	SMHI.ICHEC-EC-EARTH	r12i1p1
10	REMO2009.v1	MPI-CSC.MPI-M-MPI-ESM-LR	r1i1p1
11	REMO2009.v1	MPI-CSC.MPI-M-MPI-ESM-LR	r2i1p1

Table S2. Statistical indicators (correlation coefficient r, mean absolute error (MAE), mean bias (MBE), root mean squared error (RMSE) and the slope of the regression line (slope)) of the evaluation of CERES-Wheat results for anthesis and yield for the three cultivars with DSSAT 3.5 (Symeonidis, 2011). The same yield trials, with this study, were used.

Anthesis

	DSSAT v3.5				
	R^2	MAE (days)	MBE (days)	RMSE (days)	slope
Mexicali	0.95	2.11	1.22	3.38	0.71
Sifnos	0.99	0.80	0.20	1.10	0.96
Simeto	0.98	1.10	0.50	1.38	1.04

Yield

	DSSAT v3.5				
	R^2	MAE (kg/ha)	MBE (kg/ha)	RMSE (kg/ha)	slope
Mexicali	0.98	152	-96	204	1.07
Sifnos	0.99	115	43	142	1.05
Simeto	0.99	147	-45	185	1.11