

Table S1. Gaussian processes regression (GPR) model hyperparameter values used for predicting yield as a function of specific factors when calibrated for each year/season. Hyperparameter include scaling factor (ν), standard deviation describing the variance of the estimates (σ_n) and length-scale (σ_m).

	2007			2008		
	σ_m	σ_n	ν	σ_m	σ_n	ν
Height	1.486	4.010	0.903	1.521	4.686	1.144
DOY	1.039			1.721		
DOY	0.389	1.052	1.230	1.631	2.233	1.287
SPAD	1.052			1.490		
DOY	2.618	2.315	0.841	0.797	3.041	1.303
LAI	2.135			1.506		
Height	2.011	2.868	0.775	2.184	3.889	0.995
DOY	1.372			1.133		
LAI	2.935			2.599		
Height	1.579	2.420	0.726	2.056	3.215	0.801
DOY	1.266			1.382		
SPAD	4.650			3.205		
LAI	2.796			3.960		