

511 **Table S2.** Bayesian information criterion (BIC) for single-location-repeated-measures analysis  
 512 models using different structures in the genetic (G) and residual (R) variance/covariance matrix.

Matrix†		Percent Living Ground Cover			Dark Green Color Index		
R	G	Citra	Raleigh	Tifton	Citra	Raleigh	Tifton
CS	CS	8578.3	2285.0	5644.6	-9371.1	-	-4853.2
CSH	CS	7419.4	2001.3	5396.9	-9981.9	-	-5140.6
EXPV	CS	8356.9	2244.4	5403.9	-9370.1	-	-4861.5
EXPH	CS	<b>7119.5</b>	<b>1991.9</b>	<b>5152.4</b>	<b>-10010.8</b>	-	<b>-5156.3</b>
US	CS	8619.5	NC	5403.5	-8375.4	-	-4740.3
	CSH	7190.8	2017.4	5188.3	-9882.6	-	-5080.7
	US	NC	2371.0	5776.9	NC	-	-4512.2
	FA1	7259.0	2029.9	5212.7	-9827.1	-	-5061.9
	FA2	7346.8	2064.2	5268.3	-9714.8	-	-4998.0
Canopy Height				Turfgrass Quality			
R	G	Citra	Raleigh	Tifton	Citra	Raleigh	Tifton
CS	CS	717.5	<b>657.7</b>	1144.7	-	501.4	214.5
CSH	CS	NC	666.2	1120.3	-	NC	136.9
EXPV	CS	716.7	655.2	1131.6	-	493.7	133.4
EXPH	CS	<b>693.2</b>	660.2	<b>1105.7</b>	-	<b>458.4</b>	<b>97.7</b>
US	CS	796.6	NC	1200.4	-	NC	174.0
	CSH	696.7	675.0	1122.1	-	498.0	114.4
	US	NC	NC	1276.9	-	842.9	227.4

FA1	712.8	693.7	1131.5	-	509.0	129.5
FA2	739.5	721.4	1153.9	-	556.5	149.0

513 †CS, compound symmetry matrix; CSH, compound symmetry heterogeneous matrix; EXPV,  
514 power matrix; EXPH, heterogeneous power matrix; FA1, first-order factor analytic matrix; FA2,  
515 second-order factor analytic matrix; US, unstructured. NC = the model did not converge. The  
516 lowest BIC is bold highlighted.