

DIGITAL APPENDIX 1

Mean, minimum, maximum, standard deviation, correlation coefficient and quadratic equation for morphological traits and yield (cumulative) of guinea grass in open and shaded conditions

APÉNDICE DIGITAL 1

Media, mínimo, máximo, desviación estándar, coeficiente de correlación y ecuación cuadrática para los caracteres morfológicos y rendimiento (acumulativo) del zacate guinea en condiciones abiertas y sombreadas

		Ambient sunlight (Open)	25 % shade	50 % shade	75 % shade	Correlation coefficient open vs 50 % shade	Quadratic equation
Green forage yield MT/ha	Minimum	14.93	32.11	51.00	46.51	0.5051**	y=- 9.779x <sup>2</sup> +66.06x -14.35
	Maximum	77.50	146.12	203.34	180.80		
	Mean	43.56	73.78** <sup>a</sup>	100.70* * a	91.81* a		
	SD	13.94	27.31	39.70	26.24		
Dry matter yield MT/ha	Minimum	3.93	6.82	9.93	9.85	0.5433**	y=- 1.559x <sup>2</sup> +10.44x +2.176
	Maximum	19.46	30.41	39.24	38.66		
	Mean	11.31	16.09** a	20.42** a	18.78		
	SD	3.52	5.74	7.31	5.42		
Plant height (cm)	Minimum	94.30	121.30	128.30	140.30	0.2989**	y=- 7.65x <sup>2</sup> +55.47x +74.5
	Maximum	153.30	184.30	221.0	203.30		
	Mean	122.30	154.80* * a	172.0** a	174.0		
	SD	14.40	16.0	16.70	16.60		
Leaf length (cm)	Minimum	40.0	46.30	68.70	77.0	0.5193**	y=- 4.275x <sup>2</sup> +32.1x +38.27
	Maximum	88.70	104.0	111.0	132.0		
	Mean	66.30	84.80** a	96.70** a	98.10		
	SD	12.60	13.90	8.10	9.70		
Leaf width (cm)	Minimum	1.70	1.70	1.70	1.70	0.4368**	y=- 1.075x <sup>2</sup> +13.32x +9.075
	Maximum	2.70	3.30	3.10	3.50		
	Mean	2.10	2.30** <sup>a</sup>	2.40* <sup>a</sup>	2.50		
	SD	0.20	0.30	0.30	0.40		
Chlorophyll index	Minimum	12.30	17.60	22.90	30.0	0.2069	y=- 0.025x <sup>2</sup> +0.255x +1.875
	Maximum	37.40	55.60	58.20	58.50		
	Mean	20.90	32.10** a	38.70** a	45.40* * a		
	SD	5.40	7.50	8.20	7.10		

\* = significant at 5 %; \*\* = significant at 1 %, <sup>a</sup> = paired t-test significance with respect to values in immediate left column.

DIGITAL APPENDIX 2  
ANOVA test based on grouped genotypes  
APÉNDICE DIGITAL 2  
Tabla de ANOVA basada en genotipos agrupados

Source of Variation	df	Group 1- GFY		Group 1- DMY	
		MS	F	MS	F
Genotypes	26	165061.06	3.16**	5358.06	2.52**
Treatment	3	1880182.61	35.99**	47188.11	22.16**
Error	78	52239.17		2129.39	
		Group 2 - GFY		Group 2 - DMY	
Genotypes	16	222740.97	11.85**	10087.99	9.93**
Treatments	3	1219253.71	64.88**	38064.42	37.49**
Error	48	18793.78		1015.42	
F*			2.7796		2.097043
P value			0.000114		0.003319

\* = significant at 5 %; \*\* = significant at 1 %, F\*= modified F value.

DIGITAL APPENDIX3

Correlation matrix based on residuals (below the diagonals) and variances  $\times 10^{-2}$  (on the diagonals) of the repeated cuttings

APÉNDICE DIGITAL 3

Matriz de correlación basada en el efecto residual (por debajo de las diagonales) y varianzas  $\times 10^{-2}$ (en las diagonales) de los cortes repetidos

	I <sup>st</sup> cut	II <sup>nd</sup> cut	III <sup>rd</sup> cut	IV <sup>th</sup> cut	I <sup>st</sup> cut	II <sup>nd</sup> cut	III <sup>rd</sup> cut	IV <sup>th</sup> cut
	GFY Open				DMY Open			
I <sup>st</sup> cut	0.17				0.01			
II <sup>nd</sup> cut	0.92	0.27			0.95	0.02		
III <sup>rd</sup> cut	0.79	0.84	0.66		0.84	0.89	0.04	
IV <sup>th</sup> cut	0.59	0.63	0.92	1.94	0.63	0.66	0.89	0.12
	GFY 25 % shade				DMY 25 % shade			
I <sup>st</sup> cut	2.72				0.16			
II <sup>nd</sup> cut	0.95	5.16			0.96	0.26		
III <sup>rd</sup> cut	0.82	0.80	35.47		0.90	0.89	1.30	
IV <sup>th</sup> cut	0.75	0.73	0.98	74.58	0.81	0.78	0.95	3.29
	GFY 50 % shade				DMY 50 % shade			
I <sup>st</sup> cut	0.30				0.02			
II <sup>nd</sup> cut	0.89	0.72			0.94	0.03		
III <sup>rd</sup> cut	0.85	0.82	9.68		0.88	0.87	0.26	
IV <sup>th</sup> cut	0.83	0.81	0.98	15.76	0.87	0.85	0.97	0.53
	GFY 75 % shade				DMY 75 % shade			
I <sup>st</sup> cut	2.30				0.12			
II <sup>nd</sup> cut	0.80	7.95			0.87	0.33		
III <sup>rd</sup> cut	0.73	0.91	43.91		0.82	0.93	1.55	
IV <sup>th</sup> cut	0.70	0.82	0.93	68.83	0.75	0.80	0.89	2.93

DIGITAL APPENDIX 4

Covariance adjusted and unadjusted t-test for the pooled (all genotypes) genotypes for yield

APÉNDICE DIGITAL 4

Prueba-t ajustada y no ajustada para los genotipos agrupados (todos los genotipos) para rendimiento

	GFY open			GFY 25 % shade			GFY 50 % shade			GFY 75 % shade		
	1 vs 2 cutting	2 vs 3 cutting	3 vs 4 cutting	1 vs 2 cutting	2 vs 3 cutting	3 vs 4 cutting	1 vs 2 cutting	2 vs 3 cutting	3 vs 4 cutting	1 vs 2 cutting	2 vs 3 cutting	3 vs 4 cutting
t adjusted	8.52**	- 9.74**	- 5.25**	6.45**	- 10.59**	2.34**	3.57**	- 9.41**	3.98**	1.26	- 10.53**	3.41**
t unadjusted	-3.93**	- 7.88**	- 7.52**	- 5.46**	-9.78**	- 4.75**	- 6.90**	- 9.45**	- 3.93**	- 8.63**	- 10.58**	- 5.47**
	DMY open			DMY 25 % shade			DMY 50 % shade			DMY 75 % shade		
t adjusted	11.13**	- 9.86**	- 8.60**	9.61**	- 10.85**	- 2.47**	8.24**	- 9.83**	- 0.98**	5.32**	- 10.18**	-1.66
t unadjusted	-3.12**	- 6.82**	- 8.77**	- 4.17**	-8.59**	- 6.26**	- 5.05**	- 8.86**	- 5.89**	- 6.96**	-9.40**	- 6.94**

\*\* = significant at 1 %

DIGITAL APPENDIX 5

Covariance adjusted and unadjusted t-test for the grouped genotypes for yield  
 APENDICE DIGITAL 5

Prueba-t ajustada y no ajustada para los genotipos agrupados para el rendimiento

	open	25 % shade	50 % shade	75 % shade
	GFY			
t adjusted	-0.52	-1.58	-1.30	3.17**
t unadjusted	-0.31	-1.56	-1.57	2.55**
	DMY			
t adjusted	-0.55	-1.27	-0.88	3.39**
t unadjusted	-0.63	-1.69*	-1.61	3.44**

\* = significant at 5 %; \*\* = significant at 1 %.