

Table S1: Influence of irrigation on maize plant parameters under drip irrigation with biochar and inorganic fertilizer for 2016, 2017 and 2018 growing season

Amendments	0(B ₀)	3(B ₃)	6(B ₆)	10(B ₁₀)	Mean
2016					
Fertiliser (kg/ha)	Plant height (cm)				
0 (F ₀)	90.48b	110.89ab	114.84ab	121.34a	109.39B
300 (F ₃₀₀)	127.71a	143.66ab	146.18ab	152.63b	142.55A
Mean	109.9B	127.28A	130.51A	136.99A	
2017					
	Leaf area index				
0 (F ₀)	1.21a	1.78a	2.06a	2.15a	1.80B
300 (F ₃₀₀)	2.22b	2.69ab	2.91ab	2.99a	2.70A
Mean	1.72B	2.24A	2.49A	2.57A	
2018					
Irrigation Treatment	Amendments	LAI	PH (cm)	LAI	PH (cm)
		2017		2018	
100% FIT	F ₃₀₀ B ₂₀	3.12a	160.48a	2.34a	148.31a
	F ₃₀₀ B ₀	2.89ab	157.61ab	2.13ab	145.44ab
	F ₀ B ₂₀	2.56b	151.14ab	1.82b	138.98ab
	F ₀ B ₀	2.38b	145.99b	1.67b	133.83b
80% FIT	F ₃₀₀ B ₂₀	2.96b	159.11b	2.20b	146.94b
	F ₃₀₀ B ₀	2.82b	153.98b	2.13b	141.82b
	F ₀ B ₂₀	2.45b	149.71b	1.74b	137.54b
	F ₀ B ₀	2.37b	143.53b	1.65b	131.37b
60% FIT	F ₃₀₀ B ₂₀	2.96a	151.71a	1.91c	139.54a
	F ₃₀₀ B ₀	2.50ab	150.34a	1.78c	138.99a
	F ₀ B ₂₀	2.30ab	134.96a	1.50c	122.80a
	F ₀ B ₀	1.62b	110.29b	1.22c	98.12b

Table S2: Maize productivity as affected by biochar, inorganic fertilizer under varying water application in 2017 growing season

Irrigation Treatments	Amendments	Grain yield (t/ha)	Biomass yield (t/ha)	Maize cob yield (t/ha)
100% FIT	F ₃₀₀ B ₂₀	6.35a	17.57a	4.95a
	F ₃₀₀ B ₀	5.48ab	16.85a	4.94a
	F ₀ B ₂₀	4.98ab	14.80ab	4.66ab
	F ₀ B ₀	3.88b	11.76b	3.65b
80% FIT	F ₃₀₀ B ₂₀	6.00a	17.24a	4.75a
	F ₃₀₀ B ₀	5.44ab	15.74ab	4.34ab
	F ₀ B ₂₀	4.48bc	12.46bc	3.72ab
	F ₀ B ₀	3.75c	11.33c	3.31b
60% FIT	F ₃₀₀ B ₂₀	5.32a	14.88a	4.14a
	F ₃₀₀ B ₀	4.85ab	12.49a	4.11a
	F ₀ B ₂₀	3.54bc	11.31ab	3.28b
	F ₀ B ₀	2.57c	7.20b	1.98c

Means that share the same letter are not significantly different at 5% level of significance

Table S3: Maize productivity as affected by biochar, inorganic fertilizer under varying water application in 2018 growing season

Irrigation Treatments	Amendments	Grain yield (t/ha)	Biomass yield (t/ha)	Maize cob yield (t/ha)
100% FIT	F ₃₀₀ B ₂₀	5.24a	10.35a	3.39a
	F ₃₀₀ B ₀	4.77ab	10.14a	3.31a
	F ₀ B ₂₀	4.43bc	6.79b	3.30a
	F ₀ B ₀	3.85c	6.06b	2.55b
80% FIT	F ₃₀₀ B ₂₀	4.92a	10.27a	3.37a
	F ₃₀₀ B ₀	4.46ab	8.79a	3.31a
	F ₀ B ₂₀	3.93b	7.30a	2.29b
	F ₀ B ₀	3.70b	3.73b	2.09b
60% FIT	F ₃₀₀ B ₂₀	4.34a	7.62a	3.15a
	F ₃₀₀ B ₀	3.76b	5.44b	3.03a
	F ₀ B ₂₀	2.85c	4.98b	2.13b
	F ₀ B ₀	2.53c	2.13c	1.11c

Means that share the same letter are not significantly different at 5% level of significance

Table S4: Effect of irrigation treatment on the maize grain yield using one-way ANOVA

Experiments	Irrigation treatments	Grain yield (t/ha)
Experiment II	100% FIT	3.88a
	80% FIT	3.75a
	60% FIT	2.57b
Experiment III	100% FIT	3.85a
	80% FIT	3.70a
	60% FIT	2.53b
Average	100%FIT	3.87a
	80%FIT	3.73a
	60%FIT	2.55b

Means that share the same letter are not significantly different at 5% level of significance