

Table S1: ANOVA of Grain yield, Total biomass yield, NR, and BC ratio (Factorial RCBD)

ANOVA Table of Total Biomass Yield

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	1.285	0.643	0.358	0.701	NS
Treatments	23	163.663	7.116	3.963	0.000	S
Year	1	0.390	0.390	0.217	0.643	NS
Treatment	11	143.902	13.082	7.286	0.000	S
Year X Treatment	11	19.372	1.761	0.981	0.477	NS
Error	46	82.595	1.796	-	-	
Total	71	-	-	-	-	

ANOVA Table of Grain Yield

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.309	0.154	0.643	0.53	NS
Treatments	23	14.004	0.609	2.537	0.004	S
Year	1	0.724	0.724	3.016	0.089	S
Treatment	11	12.527	1.139	4.745	0.000	S
Year X Treatment	11	0.753	0.068	0.285	0.986	NS
Error	46	11.041	0.24			
Total	71					

ANOVA Table of Net Return

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	41138.757	20569.378	0.633	0.535	NS
Treatments	23	2540708.253	110465.576	3.402	0.000	S
Year	1	5474.067	5474.067	0.169	0.683	NS
Treatment	11	2430493.468	220953.952	6.804	0.000	S
Year X Treatment	11	104740.718	9521.883	0.293	0.984	NS
Error	46	1493762.976	32473.108	-	-	
Total	71	-	-	-	-	

ANOVA Table of Benefit-cost ratio

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.158	0.079	0.642	0.531	NS
Treatments	23	7.898	0.343	2.797	0.001	S
Year	1	0.142	0.142	1.158	0.287	S
Treatment	11	7.376	0.671	5.462	0.000	S
Year X Treatment	11	0.379	0.034	0.281	0.987	NS
Error	46	5.648	0.123	-	-	
Total	71	-	-	-	-	

Table S2: ANOVA Table of PFP and AE of N, P, and K

ANOVA Table of PFP N

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.185	0.093	0.007	0.993	NS
Treatments	23	11596.833	504.210	38.184	0.000	S
Year	1	46.964	46.964	3.557	0.066	S
Treatment	11	11512.950	1046.632	79.262	0.000	S
Year X Treatment	11	36.919	3.356	0.254	0.991	NS
Error	46	607.416	13.205	-	-	
Total	71	-	-	-	-	

ANOVA Table of PFP P

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	6.711	3.355	0.038	0.963	NS
Treatments	23	98529.562	4283.894	48.620	0.000	S
Year	1	134.863	134.863	1.531	0.222	S
Treatment	11	98105.120	8918.647	101.221	0.000	S
Year X Treatment	11	289.579	26.325	0.299	0.983	NS
Error	46	4053.085	88.111	-	-	
Total	71					

ANOVA Table of PFP K

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	225.362	112.681	2.239	0.9578	NS
Treatments	23	80049.514	3480.414	69.149	0.000	S
Year	1	74.685	74.685	1.484	0.229	S
Treatment	11	79731.683	7248.335	144.010	0.000	S
Year X Treatment	11	243.146	22.104	0.439	0.930	NS
Error	46	2315.283	50.332	-	-	
Total	71	-	-	-	-	

ANOVA Table of AE N

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	43.807	21.903	2.732	0.8547	NS
Treatments	23	706.851	30.733	3.833	0.000	S
Year	1	22.984	22.984	2.867	0.097	S
Treatment	11	657.972	59.816	7.460	0.000	S
Year X Treatment	11	25.895	2.354	0.294	0.984	NS
Error	46	368.815	8.018	-	-	
Total	71	-	-	-	-	

ANOVA Table of AE P

Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	95.945	47.972	0.669	0.517	NS
Treatments	23	3895.738	169.380	2.361	0.007	S
Year	1	0.327	0.327	0.005	0.946	S

Treatment	11	3768.514	342.592	4.775	0.000	S
Year X Treatment	11	126.898	11.536	0.161	0.999	NS
Error	46	3300.496	71.750	-	-	
Total	71	-	-	-	-	
ANOVA Table of AE K						
Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	125.175	62.588	0.988	0.580	NS
Treatments	23	3023.403	131.452	2.074	0.018	S
Year	1	139.751	139.751	2.205	0.144	S
Treatment	11	2657.776	241.616	3.812	0.001	S
Year X Treatment	11	225.875	20.534	0.324	0.976	NS
Error	46	2915.309	63.376	-	-	
Total	71	-	-	-	-	

Table S3: ANOVA of IWP, TWP, and CWUE						
ANOVA table of IWP						
Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.013	0.007	0.629	0.538	NS
Treatments	23	0.899	0.039	3.721	0.000	S
Year	1	0.313	0.313	29.835	0.000	S
Treatment	11	0.549	0.050	4.754	0.000	S
Year X Treatment	11	0.036	0.003	0.315	0.979	NS
Error	46	0.483	0.011	-	-	
Total	71	-	-	-	-	
ANOVA table of TWP						
Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.004	0.002	0.649	0.527	NS
Treatments	23	0.187	0.008	2.400	0.006	S
Year	1	0.000	0.000	0.109	0.743	S
Treatment	11	0.176	0.016	4.724	0.000	S
Year X Treatment	11	0.011	0.001	0.284	0.986	NS
Error	46	0.156	0.003	-	-	
Total	71	-	-	-	-	
ANOVA table of CWUE						
Source of variation	Degrees of freedom	Sum of squares	Mean sum of squares	F cal	F prob	S/NS
Replications	2	0.022	0.011	0.648	0.528	NS
Treatments	23	0.919	0.040	2.399	0.006	S
Year	1	0.000	0.000	0.024	0.878	S
Treatment	11	0.867	0.079	4.730	0.000	S
Year X Treatment	11	0.052	0.005	0.283	0.986	NS
Error	46	0.766	0.017	-	-	
Total	71	-	-	-	-	