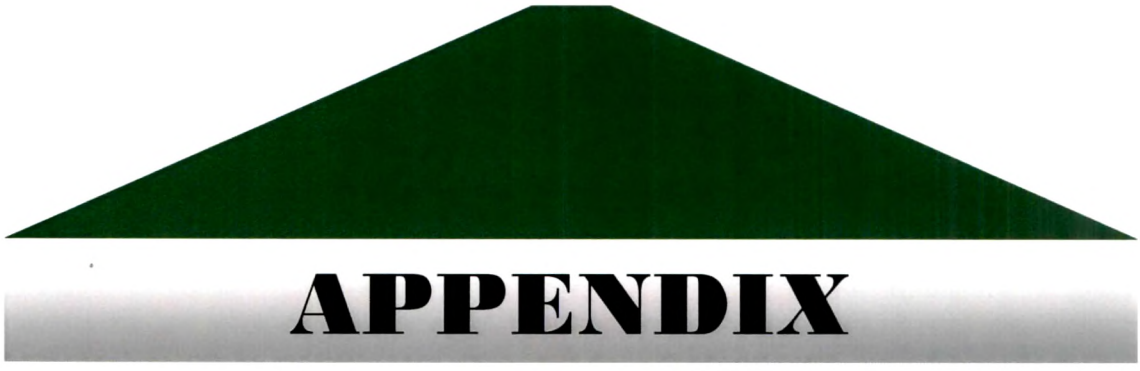

APPENDIX

Two factorial completely randomized design (CRD) analysis

Set No 7.1: No of nodules/plant

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	113.07	22.61	17.90	.00000
Factor B	4	679.15	169.79	134.42	.00000
Factor A X B	20	109.96	5.50	4.35	.00000
Error	60	75.79	1.26		
Total	89	977.97			

****
* TWO WAY MEAN TABLE *
****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	6.000	10.000	10.000	13.000	16.000	11.000
A(2)	6.000	10.000	8.000	10.000	11.000	9.000
A(3)	6.000	10.000	11.000	14.000	14.000	11.000

A(4)	6.000	10.000	10.000	9.283	12.000
	9.457				
A(5)	6.000	10.000	9.000	12.000	14.000
	10.200				
A(6)	6.000	10.000	12.000	16.000	18.000
	12.400				
Mean for B	6.000	10.000	10.000	12.381	14.167

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.8211	0.4104	0.2902
Factor (B)	0.7495	0.3746	0.2649
Factor (A X B)	1.836	0.9176	0.6489

Set No 7.2. Nodule dry wt. mg/plant

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	1035.85	207.17	15.27	.00000
Factor B	4	6609.45	1652.36	121.78	.00000
Factor A X B	20	1098.95	54.95	4.05	.00001
Error	60	814.12	13.57		

Total 89 9558.36

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	17.500	29.000	30.320	46.000	49.000	34.364
A(2)	17.500	29.000	23.320	31.260	33.345	26.885
A(3)	17.500	29.000	32.342	41.420	42.448	32.542
A(4)	17.500	29.000	31.080	25.950	36.384	27.983
A(5)	17.500	29.000	27.288	35.990	42.060	30.368
A(6)	17.500	29.000	36.920	47.000	52.000	36.484
Mean for B	17.500	29.000	30.212	37.937	42.540	

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)

Factor (A)	2.6911	1.3450	0.9511
Factor (B)	2.4566	1.2279	0.8682
Factor (A X B)	6.017	3.0076	2.1267

Set No 7. 3 No. of leaves/plant

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	63.09	12.62	3.81	.00458
Factor B	4	1367.81	341.95	103.35	.00000
Factor A X B	20	102.61	5.13	1.55	.09765
Error	60	198.52	3.31		
Total	89	1732.04			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	9.000	19.000	15.000	19.000	20.000	16.400
A(2)	9.000	19.000	14.000	18.000	18.000	15.600
A(3)	9.000	19.000	16.000	20.000	20.000	

	16.800				
A(4)	9.000	19.000	15.000	13.950	20.000
	15.390				
A(5)	9.000	19.000	11.000	17.000	18.000
	14.800				
A(6)	9.000	19.000	17.000	20.000	21.000
	17.200				

Mean for B	9.000	19.000	14.667	17.992	19.500

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	1.3289	0.6642	0.4697
Factor (B)	1.2131	0.6063	0.4287
Factor (A X B)	N.S.	1.4852	1.0502

Set No 7. 4 Root length (cm)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	199.61	39.92	5.33	.00041
Factor B	4	3130.91	782.73	104.46	.00000
Factor A X B	20	296.86	14.84	1.98	.02194

Error 60 449.59 7.49

Total 89 4076.97

****

* TWO WAY MEAN TABLE *

****

Factors B(1) B(2) B(3) B(4) B(5)

Mean for A

A(1) 13.260 28.090 22.350 27.830 32.900

24.886

A(2) 13.260 28.090 21.620 26.340 26.290

23.120

A(3) 13.260 28.090 23.540 29.810 28.690

24.678

A(4) 13.260 28.090 21.280 19.897 29.132

22.332

A(5) 13.260 28.090 16.370 25.320 26.530

21.914

A(6) 13.260 28.090 24.950 31.250 32.840

26.078

Mean for B 13.260 28.090 21.685 26.741 29.397

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	1.9998	0.9995	0.7068
Factor (B)	1.8256	0.9125	0.6452
Factor (A X B)	4.472	2.2350	1.5804

Set No 7.5 Shoot length(cm)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	503.43	100.69	3.61	.00640
Factor B	4	10273.46	2568.36	92.07	.00000
Factor A X B	20	912.10	45.61	1.63	.07369
Error	60	1673.71	27.90		
Total	89	13362.70			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	24.750	52.250	41.250	52.250	55.000	45.100
A(2)	24.750	52.250	38.500	49.500	49.500	

	42.900				
A(3)	24.750	52.250	44.000	55.000	55.000
	46.200				
A(4)	24.750	52.250	41.250	36.117	55.000
	41.873				
A(5)	24.750	52.250	30.250	46.750	49.500
	40.700				
A(6)	24.750	52.250	46.750	55.000	57.750
	47.300				
Mean for B	24.750	52.250	40.333	49.103	53.625

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	3.8585	1.9286	1.3637
Factor (B)	3.5223	1.7605	1.2449
Factor (A X B)	N.S.	4.3124	3.0493

Set No 7. 6 Root dry wt. (g/plant)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	0.07	0.01	5.87	.00018
Factor B	4	1.02	0.26	102.37	.00000

Factor A X B	20	0.07	0.00	1.34	.19040
Error	60	0.15	0.00		
Total	89	1.32			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	0.244	0.496	0.409	0.532	0.565	0.449
A(2)	0.244	0.496	0.369	0.484	0.520	0.423
A(3)	0.244	0.496	0.362	0.499	0.506	0.422
A(4)	0.244	0.496	0.350	0.499	0.469	0.412
A(5)	0.244	0.496	0.241	0.402	0.451	0.367
A(6)	0.244	0.496	0.376	0.540	0.612	0.454
Mean for B	0.244	0.496	0.351	0.493	0.521	

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.0365	0.0183	0.0129
Factor (B)	0.0334	0.0167	0.0118
Factor (A X B)	N.S.	0.0408	0.0289

Set No 7. 7 Shoot dry wt.(g/plant)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	4.81	0.96	3.46	.00819
Factor B	4	114.98	28.75	103.29	.00000
Factor A X B	20	5.04	0.25	0.91	.58164
Error	60	16.70	0.28		
Total	89	141.53			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	2.574	5.434	4.290	5.434	5.720	4.690
A(2)	2.574	5.434	4.004	5.148	5.148	

	4.462				
A(3)	2.574	5.434	4.576	5.720	5.720
	4.805				
A(4)	2.574	5.434	4.290	4.906	5.720
	4.585				
A(5)	2.574	5.434	3.146	4.862	5.148
	4.233				
A(6)	2.574	5.434	4.991	5.720	6.006
	4.945				
Mean for B	2.574	5.434	4.216	5.298	5.577

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.3854	0.1926	0.1362
Factor (B)	0.3518	0.1758	0.1243
Factor (A X B)	N.S.	0.4307	0.3046

Set No 7.8 P content in root(%)

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	0.10	0.02	15.36	.00000

Factor B	4	1.32	0.33	250.83	.00000
Factor A X B	20	0.14	0.01	5.13	.00000
Error	60	0.08	0.00		
Total	89	1.64			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	0.257	0.567	0.353	0.547	0.653	0.475
A(2)	0.257	0.567	0.370	0.500	0.467	0.432
A(3)	0.257	0.567	0.510	0.590	0.553	0.495
A(4)	0.257	0.567	0.420	0.597	0.560	0.480
A(5)	0.257	0.567	0.320	0.470	0.503	0.423
A(6)	0.257	0.567	0.513	0.597	0.660	0.519
Mean for B	0.257	0.567	0.414	0.550	0.566	

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.0265	0.0133	0.0094
Factor (B)	0.0242	0.0121	0.0086
Factor (A X B)	0.059	0.0297	0.0210

Set No 7.9 P content in shoot(%)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	0.06	0.01	12.05	.00000
Factor B	4	1.06	0.26	283.13	.00000
Factor A X B	20	0.07	0.00	3.52	.00008
Error	60	0.06	0.00		
Total	89	1.23			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	0.410	0.690	0.509	0.660	0.702	0.594

A(2)	0.410	0.690	0.522	0.670	0.668
	0.592				
A(3)	0.410	0.690	0.565	0.630	0.696
	0.598				
A(4)	0.410	0.690	0.525	0.565	0.675
	0.573				
A(5)	0.410	0.690	0.403	0.577	0.617
	0.539				
A(6)	0.410	0.690	0.570	0.667	0.763
	0.620				
Mean for B	0.410	0.690	0.516	0.628	0.687

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.0223	0.0112	0.0079
Factor (B)	0.0204	0.0102	0.0072
Factor (A X B)	0.050	0.0249	0.0176

Set No 7.10 Available P content in soil (mg kg^{-1} soil)

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.

Factor A	5	12.64	2.53	20.66	.00000
Factor B	4	297.01	74.25	606.72	.00000
Factor A X B	20	15.73	0.79	6.43	.00000
Error	60	7.34	0.12		
Total	89	332.73			

****
* TWO WAY MEAN TABLE *
****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)
Mean for A					
A(1)	4.180	8.783	6.969	8.807	9.320
	7.612				
A(2)	4.179	8.783	6.502	8.323	8.322
	7.222				
A(3)	4.179	8.783	7.407	9.280	9.233
	7.776				
A(4)	4.179	8.783	6.922	7.280	9.272
	7.287				
A(5)	4.179	8.783	5.099	7.886	8.325
	6.855				
A(6)	4.179	8.783	7.847	9.299	9.776
	7.977				
Mean for B	4.179	8.783	6.791	8.479	9.041

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.2556	0.1277	0.0903
Factor (B)	0.2333	0.1166	0.0825
Factor (A X B)	0.571	0.2856	0.2020

Set No 7.11 SOD(units g^{-1} protein)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	76.05	15.21	226.62	.00000
Factor B	4	140.47	35.12	523.22	.00000
Factor A X B	20	54.73	2.74	40.77	.00000
Error	60	4.03	0.07		
Total	89	275.29			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)
Mean for A					

A(1)	3.000	5.300	4.000	4.500	6.000
	4.560				
A(2)	3.000	5.300	4.410	5.477	6.300
	4.897				
A(3)	3.000	5.300	3.650	5.010	5.200
	4.432				
A(4)	3.000	5.300	3.200	3.633	5.700
	4.167				
A(5)	3.000	5.300	6.000	6.333	8.000
	5.727				
A(6)	3.000	5.300	7.800	8.100	10.000
	6.840				
Mean for B	3.000	5.300	4.843	5.509	6.867

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.1893	0.0946	0.0669
Factor (B)	0.1728	0.0864	0.0611
Factor (A X B)	0.423	0.2115	0.1496

Set No 7.12 CAT(μ mol H_2O_2 min^{-1} g^{-1} protein)

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	68.33	13.67	30.54	.00000
Factor B	4	201.25	50.31	112.42	.00000
Factor A X B	20	50.26	2.51	5.61	.00000
Error	60	26.85	0.45		
Total	89	346.69			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	11.000	12.000	12.500	13.000	14.000	12.500
A(2)	11.000	12.000	13.167	13.300	13.900	12.673
A(3)	11.000	12.000	12.100	13.600	15.000	12.740
A(4)	11.000	12.000	11.900	12.400	14.200	12.300
A(5)	11.000	12.000	14.400	15.263	16.300	13.793
A(6)	11.000	12.000	15.900	16.920	18.000	14.764

Mean for B 11.000 12.000 13.328 14.081 15.233

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.4887	0.2443	0.1727
Factor (B)	0.4461	0.2230	0.1577
Factor (A X B)	1.093	0.5462	0.3862

Set No 7.13 APX(μmole ascorbate min^{-1} g^{-1} protein)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	62.79	12.56	43.11	.00000
Factor B	4	50.13	12.53	43.03	.00000
Factor A X B	20	47.91	2.40	8.22	.00000
Error	60	17.48	0.29		
Total	89	178.30			

****

* T W O W A Y M E A N T A B L E *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	8.000	8.533	7.607	9.113	8.800	8.411
A(2)	8.000	8.533	7.550	8.883	7.800	8.153
A(3)	8.000	8.533	7.200	9.530	8.900	8.433
A(4)	8.000	8.533	8.067	8.300	8.900	8.360
A(5)	8.000	8.533	9.460	11.477	10.800	9.654
A(6)	8.000	8.533	10.867	12.900	11.800	10.420
Mean for B	8.000	8.533	8.458	10.034	9.500	

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.3943	0.1971	0.1393
Factor (B)	0.3599	0.1799	0.1272
Factor (A X B)	0.882	0.4406	0.3116

Set No 7.14 GPOX(µmole guaiacol min^{-1} g^{-1} protein)

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance
Factor A	5	61.37	12.27	11.37	.00000
Factor B	4	843.09	210.77	195.23	.00000
Factor A X B	20	62.86	3.14	2.91	.00073
Error	60	64.78	1.08		
Total	89	1032.09			

****
* TWO WAY MEAN TABLE *
****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	48.000	52.000	52.333	55.000	54.000	52.267
A(2)	48.000	52.000	54.600	55.600	55.000	53.040
A(3)	48.000	52.000	52.700	57.200	56.000	53.180
A(4)	48.000	52.000	53.333	56.333	52.800	52.493
A(5)	48.000	52.000	55.000	58.000	56.000	53.800

A(6)	48.000	52.000	56.800	58.667	58.200
	54.733				
Mean for B	48.000	52.000	54.128	56.800	55.333

****
* TABLES OF SEM, SED, AND C.D. *
****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.7591	0.3794	0.2683
Factor (B)	0.6929	0.3463	0.2449
Factor (A X B)	1.697	0.8484	0.5999

Set No 7.15 Acid Phosphatase(mmoles p-nitrophenol g^{-1} protein)

****
* ANALYSIS OF VARIANCE TABLE *
****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	1.27	0.25	253426.00	.00000
Factor B	4	47.51	11.88	11877760.00	.00000
Factor A X B	20	5.14	0.26	257206.00	.00000
Error	60	0.00	0.00		
Total	89	53.92			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	1.320	1.980	1.200	2.600	3.680	2.156
A(2)	1.320	1.980	1.200	2.650	3.160	2.062
A(3)	1.320	1.980	1.180	2.580	2.050	1.822
A(4)	1.320	1.980	1.180	2.610	2.810	1.980
A(5)	1.320	1.980	1.170	2.770	2.790	2.006
A(6)	1.320	1.980	1.150	2.620	3.810	2.176
Mean for B	1.320	1.980	1.180	2.638	3.050	

****

* TABLES OF SEM, SED, AND C.D. *

****

Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.0007	0.0004	0.0003
Factor (B)	0.0007	0.0003	0.0002

Factor (A X B) 0.002 0.0008 0.0006

Set No 7.16 NR(µg nitrite min^{-1} g^{-1} protein)

****

* ANALYSIS OF VARIANCE TABLE *

****

Source	D.F.	S.S.	M.S.	F-cal	Significance.
Factor A	5	103.14	20.63	112.00	.00000
Factor B	4	394.88	98.72	536.00	.00000
Factor A X B	20	74.23	3.71	20.15	.00000
Error	60	11.05	0.18		
Total	89	583.31			

****

* TWO WAY MEAN TABLE *

****

Factors	B(1)	B(2)	B(3)	B(4)	B(5)	Mean for A
A(1)	2.000	6.000	3.660	5.013	8.080	4.951
A(2)	2.000	6.000	3.837	5.117	7.800	4.951
A(3)	2.000	6.000	3.963	5.060	8.280	5.061

A(4)	2.000	6.000	2.910	3.683	5.110
	3.941				
A(5)	2.000	6.000	6.140	7.357	9.900
	6.279				
A(6)	2.000	6.000	7.870	8.823	11.600
	7.259				
Mean for B	2.000	6.000	4.730	5.842	8.462

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* TABLES OF SEM, SED, AND C.D. *

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Factors	C.D.	SE(d)	SE(m)
Factor (A)	0.3135	0.1567	0.1108
Factor (B)	0.2862	0.1431	0.1012
Factor (A X B)	0.701	0.3504	0.2478