Table 1. Effect of soil type, chemical NPK fertilization and bio-fertilizers on plant height (cm), stem diameter (cm), number of branches/ plant and number of leaves/plant in jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Plant height				Stem diameter				Number of branches/ plant				Number of leaves/ plant			
	Soil type (A)				Soil type (A)				Soil type (A)				Soil type (A)			
	Sand	Clay	*Cal. sand	Mean	Sand	Clay	*Cal. sand	Mean	Sand	Clay	*Cal. sand	Mean	Sand	Clay	*Cal. sand	Mean
								First Season								
Control	29.33	36.00	26.67	**30.67**	0.35	0.46	0.36	**0.39**	3.33	4.33	2.33	**3.33**	30.00	75.33	36.00	**47.11**
NPK	43.33	42.33	29.33	**38.33**	0.55	0.56	0.36	**0.49**	3.66	5.66	4.33	**4.55**	74.00	127.3	62.67	**88.00**
½ NPK + *B.*	48.67	41.33	31.33	**40.44**	0.50	0.43	0.40	**0.44**	5.66	3.33	2.66	**3.88**	89.00	112.0	74.67	**91.89**
" + *Azot.*	44.00	44.33	33.33	**40.56**	0.55	0.46	0.35	**0.45**	8.00	4.00	3.00	**5.00**	125.3	102.0	72.0	**99.78**
" + *Azos.*	51.33	48.63	34.96	**44.97**	0.66	0.50	0.43	**0.53**	4.33	5.33	3.66	**4.44**	149.0	78.67	76.67	**101.4**
" + B + *Azot.*	41.33	47.67	31.33	**40.11**	0.63	0.60	0.46	**0.56**	5.66	5.00	7.33	**6.00**	138.0	102.7	88.33	**109.7**
" + B + *Azos.*	38.33	44.00	32.67	**38.33**	0.63	0.66	0.43	**0.57**	8.33	4.00	10.67	**7.66**	134.7	130.7	95.33	**120.2**
" + B + *Azot.*+ P	39.00	27.33	29.00	**31.78**	0.56	0.60	0.35	**0.50**	8.33	9.33	6.66	**8.11**	119.0	134.7	91.00	**114.9**
" + B + *Azos.*+ P	28.67	40.00	29.66	**32.78**	0.70	0.53	0.45	**0.56**	6.00	6.33	4.00	**5.44**	153.7	128.0	40.33	**107.3**
"+*Azot.* + *Azos.* +B + P	34.33	34.33	32.33	**33.67**	0.63	0.63	0.46	**0.57**	9.00	7.00	6.00	**7.33**	143.7	116.0	87.67	**115.8**
Mean	**39.23**	**40.60**	**31.06**	**---**	**0.49**	**0.54**	**0.40**	**---**	**6.23**	**5.43**	**5.06**	**---**	**115.6**	**110.7**	**72.47**	**---**
L.S.D at 0.05																
A	8.493				0.094				N.S.				19.50			
F	4.652				0.051				0.749				10.68			
A x F	14.71				0.163				2.369				33.78			
								Second Season								
Control	20.67	36.00	19.00	**25.22**	0.35	0.48	0.31	**0.38**	2.66	4.00	3.00	**3.22**	40.00	68.67	25.33	**44.67**
NPK	28.00	30.67	28.67	**29.11**	0.42	0.63	0.35	**0.46**	4.66	6.66	3.66	**5.00**	50.67	79.33	53.33	**61.11**
½ NPK + B	60.33	40.33	33.33	**44.66**	0.75	0.53	0.47	**0.58**	4.66	5.00	7.33	**5.66**	123.3	95.33	103.0	**107.2**
" + *Azot.*	61.00	50.47	26.00	**45.89**	0.61	0.60	0.43	**0.55**	7.00	3.33	4.66	**500**	163.3	73.33	47.00	**94.56**
" + *Azos.*	44.64	50.77	43.67	**46.33**	0.60	0.63	0.33	**0.52**	4.66	5.33	4.33	**4.77**	112.0	121.0	90.00	**107.7**
" + B + *Azot.*	35.27	30.37	35.00	**40.44**	0.63	0.50	0.58	**0.57**	5.33	4.66	5.33	**5.11**	106.7	75.00	122.3	**101.3**
" + B + *Azos.*	35.00	43.00	26.33	**34.78**	0.81	0.65	0.43	**0.63**	7.33	8.00	6.66	**7.33**	155.3	142.7	154.3	**150.8**
" + B + *Azot.*+ P	36.67	38.00	31.33	**38.67**	0.63	0.55	0.43	**0.54**	5.00	6.00	5.00	**5.33**	167.7	95.33	102.0	**121.7**
" + B + *Azos.*+ P	36.87	31.00	22.57	**30.14**	0.73	0.61	0.36	**0.57**	6.00	8.66	3.33	**6.00**	102.7	114.7	25.67	**81.00**
" +*Azot.* + *Azos.* +B+ P	40.67	28.67	25.00	**31.44**	0.76	0.60	0.46	**0.61**	6.66	7.00	4.66	**6.11**	130.0	116.3	78.67	**108.0**
Mean	**39.93**	**37.97**	**29.09**	**---**	**0.63**	**0.58**	**0.41**	**---**	**5.40**	**5.86**	**4.80**	**---**	**115.2**	**98.17**	**80.17**	**---**
L.S.D at 0.05																
A	7.142				0.078				N.S.				18.83			
F	3.912				0.043				0.786				10.31			
A x F	12.37				0.136				2.488				32.61			

*Cal. Sand = Calcareous sand

B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = Azospirillum *lipoferum* P = *Pseudomonas aeruginosa*

Table 2. Effect of soil type, chemical NPK fertilization and bio-fertilizers on leaf area (cm^2), fresh and dry weights (g/plant) of leaves/ plant in jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Leaf area				Leaves fresh weight				Leaves dry weight			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
	First Season											
Control	13.59	15.50	10.05	**13.05**	8.44	13.70	4.54	**8.89**	2.74	4.82	1.91	**3.16**
NPK	16.14	12.00	9.96	**12.70**	13.83	20.48	18.79	**17.70**	5.35	9.29	2.91	**5.85**
½ NPK + B	12.62	13.70	12.04	**12.79**	19.59	24.31	23.47	**22.46**	8.82	10.20	8.92	**9.31**
" + *Azot.*	11.35	14.47	10.54	**12.12**	26.73	16.11	11.55	**18.13**	12.01	4.52	5.12	**7.22**
" + *Azos.*	18.01	18.81	15.55	**17.46**	35.67	14.92	19.33	**23.30**	14.82	5.97	7.60	**9.46**
" + B + *Azot.*	16.70	12.95	11.90	**13.85**	30.48	21.64	20.47	**24.20**	14.27	10.88	7.64	**10.93**
" + B + *Azos.*	14.34	18.55	9.33	**13.97**	24.96	27.49	19.10	**23.85**	14.44	12.71	9.57	**12.24**
" + B + *Azot.*+ P	12.59	13.93	13.79	**13.44**	21.37	16.68	15.09	**17.71**	11.66	7.88	5.76	**8.43**
" + B + *Azos.*+ P	15.05	10.27	10.66	**11.99**	26.77	20.33	9.33	**18.81**	11.73	10.22	3.11	**8.35**
" + *Azot.* + *Azos.* + B + P	15.38	9.83	13.81	**13.01**	32.71	21.84	19.59	**24.71**	13.06	10.18	6.23	**9.82**
Mean	**14.58**	**14.00**	**11.73**	---	**24.05**	**19.75**	**16.13**	---	**10.89**	**8.66**	**5.88**	---
L.S.D. at 0.05												
A	2.096				4.820				2.746			
F	1.148				2.640				1.504			
A x **F**	3.630				8.348				4.756			
	Second Season											
Control	10.12	13.60	9.81	**11.18**	8.85	19.63	6.03	**11.50**	3.31	6.50	2.01	**3.94**
NPK	16.28	13.08	11.29	**13.55**	11.46	13.94	10.07	**11.82**	2.91	5.08	4.38	**4.12**
½ NPK + B	16.77	15.06	15.61	**15.81**	27.96	26.58	29.34	**27.96**	12.36	10.26	11.48	**11.36**
" + *Azot.*	11.58	17.99	12.44	**14.00**	39.52	18.96	11.27	**23.25**	16.34	9.80	3.38	**9.84**
" + *Azos.*	13.31	16.70	14.01	**14.68**	28.01	31.85	22.48	**27.44**	10.44	13.84	10.39	**11.55**
" + B + *Azot.*	12.97	15.19	9.31	**12.49**	28.63	26.72	26.81	**27.38**	12.07	10.65	11.68	**11.47**
" + B + *Azos.*	9.32	15.31	11.48	**12.04**	37.12	20.85	23.48	**27.15**	12.76	8.04	6.42	**9.07**
" + B + *Azot.*+ P	10.35	15.71	10.90	**12.32**	40.34	18.81	28.18	**29.11**	17.13	8.43	11.44	**12.34**
" + B + *Azos.*+ P	13.12	15.24	10.93	**13.10**	29.37	18.92	12.41	**20.24**	11.85	7.04	3.17	**7.35**
½ NPK + N1 + N2 + B + P	13.11	13.96	11.71	**12.93**	50.56	16.22	14.15	**26.98**	15.28	5.01	4.55	**8.28**
Mean	**12.69**	**15.19**	**11.75**	---	**30.18**	**21.25**	**18.42**	---	**11.45**	**8.46**	**6.89**	---
L.S.D. at 0.05												
A	2.406				3.949				2.412			
F	1.318				2.163				1.321			
A x **F**	4.167				0.050				4.178			

*Cal. Sand = Calcareous sand

P = *Pseudomonas aeruginosa* *Azos.* = *Azospirillum lipoferum* *Azot.* = *Azotobacter chroococcum* B = *Bacillus megatherium* var. Phosphaticum

Table 3. Effect of soil type, chemical NPK fertilization and bio-fertilizers on the fresh and dry weights (g/plant) of stems and roots of jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Stems fresh weight				Stems dry weight				Roots fresh weight				Roots dry weight			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
First Season																
Control	3.87	10.06	4.67	**6.20**	1.26	4.13	2.25	**2.54**	2.68	3.32	2.70	**2.90**	0.74	1.36	0.66	**0.92**
NPK	8.89	10.02	9.48	**9.46**	3.72	4.42	1.53	**3.22**	3.62	4.58	3.39	**3.86**	1.29	1.78	1.44	**1.50**
½ NPK + B	14.19	11.38	8.91	**11.49**	4.77	4.27	3.25	**4.10**	5.40	4.03	3.66	**4.36**	1.05	1.62	1.43	**1.36**
" + *Azot.*	13.08	14.37	10.27	**12.57**	4.86	6.45	2.27	**4.53**	5.46	5.26	3.91	**4.88**	1.39	1.43	0.95	**1.26**
" + *Azos.*	20.79	13.19	13.75	**15.91**	9.73	5.03	3.97	**6.24**	5.33	2.95	5.40	**4.56**	2.04	1.07	1.43	**1.51**
" + B + *Azot.*	16.12	13.57	9.16	**12.95**	5.27	5.84	3.23	**4.78**	5.31	6.95	8.20	**6.82**	1.68	2.48	1.84	**2.00**
" + B + *Azos.*	11.86	19.34	13.67	**14.95**	5.83	8.61	5.68	**6.71**	5.25	5.76	5.76	**5.59**	1.72	2.81	2.44	**2.32**
" + B + *Azot.*+ P	14.96	15.23	9.19	**13.13**	5.26	4.90	3.71	**4.62**	5.59	4.32	5.54	**5.15**	1.13	1.32	1.81	**1.42**
" + B + *Azos.*+ P	14.39	10.62	7.23	**10.75**	6.37	5.01	2.13	**4.50**	6.54	5.29	3.04	**4.96**	1.37	2.09	1.02	**1.49**
" + *Azot.* + *Azos.* + B + P	17.31	13.03	11.41	**13.92**	6.05	5.48	3.88	**5.14**	7.37	5.27	2.83	**5.15**	2.80	2.59	1.56	**2.32**
Mean	**13.55**	**13.08**	**9.77**	---	**5.31**	**5.41**	**3.19**	---	**5.78**	**4.77**	**4.44**	---	**1.52**	**1.85**	**1.14**	---
L.S.D. at 0.05																
A	1.643				1.096				0.785				0.626			
F	0.900				0.600				0.430				0.343			
A x **F**	2.846				1.898				1.361				1.085			
Second Season																
Control	5.48	6.25	3.79	**5.18**	1.70	3.47	1.64	**2.27**	2.49	3.42	2.57	**2.82**	0.87	1.67	0.82	**1.12**
NPK	5.68	13.70	5.26	**8.21**	1.48	4.08	1.99	**2.52**	3.00	3.75	3.32	**3.36**	0.81	1.23	1.13	**1.05**
½ NPK + B	15.60	16.36	9.25	**13.74**	7.15	5.52	4.70	**5.79**	5.36	4.88	3.41	**4.55**	2.26	1.59	1.22	**1.69**
" + *Azot.*	20.56	12.35	5.58	**12.83**	9.23	4.74	2.06	**5.34**	5.63	4.73	3.69	**4.68**	1.72	1.65	0.59	**1.32**
" + *Azos.*	15.10	13.53	16.66	**15.10**	6.79	7.01	5.39	**6.40**	4.79	5.62	3.63	**4.68**	1.78	1.98	1.65	**1.80**
" + B + *Azot.*	15.29	13.11	20.43	**16.28**	5.16	4.66	9.14	**6.32**	4.72	5.03	3.32	**4.35**	2.10	1.95	2.17	**2.07**
" + B + *Azos.*	22.58	13.25	13.33	**16.39**	6.31	5.16	2.61	**4.69**	6.54	5.32	4.93	**5.60**	1.71	1.74	1.34	**1.60**
" + B + *Azot.*+ P	20.61	14.25	16.25	**17.04**	6.54	3.75	4.61	**4.97**	4.88	4.65	4.50	**4.68**	1.78	1.48	1.43	**1.56**
" + B + *Azos.*+ P	16.38	12.21	6.36	**11.65**	5.59	3.38	2.28	**3.75**	8.78	3.54	2.63	**4.98**	2.38	1.62	1.17	**1.72**
" + *Azot.* + *Azos.* + B + P	20.28	7.99	9.84	**12.71**	8.04	3.67	3.15	**4.95**	5.29	2.95	3.34	**3.86**	1.85	1.31	0.80	**1.32**
Mean	**15.76**	**12.30**	**10.68**	---	**5.80**	**4.54**	**3.76**	---	**5.15**	**4.39**	**3.53**	---	**1.72**	**1.62**	**1.23**	---
L.S.D. at 0.05																
A	1.377				1.322				0.688				N.S.			
F	0.754				0.724				0.377				0.293			
A x **F**	2.386				2.290				1.192				0.927			

*Cal. Sand = Calcareous sand

B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = *Azospirillum lipoferum* P = *Pseudomonas aeruginosa*

Table 4. Effect of soil type, chemical NPK fertilization and bio-fertilizers on chlorophyll "a", chloprophyll "b", total chlorophyll (a + b) carotenoids contents (mg/g F.W.) in leaves of jojoba (*Simmondsia chinensis* Link.) during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Chlorophyll "a"				Chlorophyll "b"				Total Chlorophyll				Carotenoids			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
								First Season								
Control	0.680	0.765	0.573	**0.672**	0.301	0.351	0.293	**0.315**	0.981	1.066	0.866	**0.971**	0.595	0.600	0.693	**0.629**
NPK	0.910	0.953	0.835	**0.899**	0.461	0.491	0.431	**0.461**	1.371	1.444	1.266	**1.360**	0.390	0.401	0.415	**0.402**
½ NPK + B	0.853	0.893	0.800	**0.845**	0.431	0.445	0.436	**0.437**	1.284	1.338	1.236	**1.286**	0.410	0.463	0.493	**0.455**
" + *Azot.*	0.931	0.993	0.910	**0.944**	0.516	0.501	0.532	**0.516**	1.447	1.494	1.442	**1.461**	0.391	0.392	0.388	**0.390**
" + *Azos.*	0.830	0.901	0.730	**0.820**	0.491	0.561	0.431	**0.494**	1.321	1.462	1.161	**1.315**	0.385	0.375	0.393	**0.384**
" + B + *Azot.*	0.593	0.630	0.550	**0.591**	0.351	0.367	0.306	**0.341**	0.944	0.997	0.856	**0.932**	0.579	0.593	0.563	**0.601**
" + B + *Azos.*	0.831	0.950	0.811	**0.864**	0.461	0.531	0.431	**0.474**	1.292	1.481	1.242	**1.338**	0.436	0.473	0.493	**0.467**
" + B + *Azot.*+ P	0.931	0.950	0.870	**0.917**	0.531	0.551	0.431	**0.504**	1.462	1.505	1.301	**1.423**	0.393	0.357	0.400	**0.383**
" + B + *Azos.*+ P	0.801	0.881	0.793	**0.825**	0.431	0.453	0.463	**0.449**	1.232	1.334	1.256	**1.274**	0.446	0.493	0.499	**0.479**
" + *Azot.* + *Azos.* + B + P	0.736	0.831	0.701	**0.761**	0.481	0.491	0.440	**0.470**	1.217	1.322	1.341	**1.293**	0.483	0.93	0.500	**0.637**
Mean	**0.810**	**0.877**	**0.757**	---	**0.445**	**0.474**	**0.419**	---	**1.255**	**1.344**	**1.197**	---	**0.457**	**0.507**	**0.483**	---
L.S.D. at 0.05																
A	0.042				0.051				0.094				0.140			
F	0.023				0.028				0.051				0.076			
A x **F**	0.073				0.089				0.163				0.242			
								Second Season								
Control	0.510	0.551	0.423	**0.494**	0.270	0.295	0.293	**0.286**	0.780	0.846	0.716	**0.780**	0.601	0.601	0.635	**0.612**
NPK	0.915	0.971	0.930	**0.938**	0.531	0.556	0.401	**0.496**	1.446	1.527	1.331	**1.435**	0.433	0.403	0.488	**0.441**
½ NPK + B	0.801	0.735	0.701	**0.745**	0.455	0.491	0.401	**0.449**	1.256	1.226	1.102	**1.195**	0.575	0.531	0.553	**0.528**
" + *Azot.*	0.963	0.993	0.901	**0.952**	0.501	0.553	0.491	**0.515**	1.514	1.546	1.392	**1.484**	0.446	0.431	0.435	**0.437**
" + *Azos.*	0.851	0.951	0.973	**0.925**	0.432	0.591	0.411	**0.478**	1.283	1.542	1.384	**1.403**	0.431	0.463	0.531	**0.475**
" + B + *Azot.*	0.631	0.695	0.531	**0.619**	0.300	0.312	0.273	**0.295**	0.931	1.007	0.804	**0.914**	0.570	0.573	0.595	**0.579**
" + B + *Azos.*	0.951	0.937	0.962	**0.950**	0.431	0.415	0.493	**0.446**	1.382	1.452	1.455	**1.430**	0.431	0.453	0.473	**0.452**
" + B + *Azot.*+ P	0.825	0.835	0.791	**0.817**	0.450	0.501	0.530	**0.493**	1.275	1.336	1.321	**1.311**	0.421	0.410	0.434	**0.421**
" + B + *Azos.*+ P	0.831	0.791	0.620	**0.747**	0.610	0.553	0.500	**0.548**	1.441	1.344	1.120	**1.302**	0.535	0.591	0.630	**0.585**
" + *Azot.* + *Azos.* + B + P	0.882	0.803	0.682	**0.789**	0.451	0.481	0.449	**0.460**	1.333	1.284	1.131	**1.249**	0.539	0.500	0.510	**0.516**
Mean	**0.816**	**0.826**	**0.751**	---	**0.443**	**0.472**	**0.424**	---	**1.264**	**1.311**	**1.176**	---	**0.498**	**0.488**	**0.528**	---
L.S.D. at 0.05																
A	0.089				0.062				0.119				0.051			
F	0.049				0.028				0.065				0.028			
A x **F**	0.155				0.012				0.206				0.050			

*Cal. Sand = Calcareous sand

B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = *Azospirillum lipoferum* P = *Pseudomonas aeruginosa*

Table 6. Effect of soil type, chemical NPK fertilization and bio-fertilizers on the nitrogen content in leaves, stems and roots of jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Nitrogen (%)											
	Leaves				Stems				Roots			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
						First Season						
Control	1.23	0.99	1.12	**1.11**	0.96	0.93	1.33	**1.07**	0.78	1.00	1.01	**0.93**
NPK	1.53	1.12	1.25	**1.30**	1.21	1.11	1.42	**1.25**	1.18	1.10	1.12	**1.13**
½ NPK + B	1.50	1.23	1.56	**1.43**	1.04	1.12	1.33	**1.16**	1.53	1.54	1.66	**1.58**
" + *Azot.*	1.88	1.43	1.54	**1.62**	1.24	1.07	1.53	**1.26**	1.18	1.52	1.77	**1.49**
" + *Azos.*	1.90	1.07	1.47	**1.48**	0.67	1.11	1.42	**1.07**	0.93	1.94	2.06	**1.64**
" + B + *Azot.*	2.56	1.67	2.00	**2.08**	1.35	1.12	1.90	**1.46**	1.23	1.22	2.00	**1.48**
" + B + *Azos.*	2.34	1.82	2.03	**2.06**	1.38	1.38	1.68	**1.48**	1.70	1.71	2.15	**1.85**
" + B + *Azot.*+ P	2.70	1.90	1.76	**2.12**	1.27	1.63	1.99	**1.63**	1.71	1.23	2.09	**1.68**
" + B + *Azos.*+ P	1.87	1.37	1.90	**1.71**	1.23	1.26	1.88	**1.46**	1.46	1.28	1.45	**1.40**
" + *Azot.* + *Azos.* + B + P	1.89	1.12	1.67	**1.56**	1.17	1.47	1.67	**1.44**	1.63	1.28	1.23	**1.38**
Mean	**1.94**	**1.37**	**1.62**	**---**	**1.15**	**1.22**	**1.61**	**---**	**1.33**	**1.38**	**1.65**	**---**
L.S.D. at 0.05												
A		0.346				0.211				0.389		
F		0.245				0.119				0.258		
A x **F**		0.659				0.362				0.673		
						Second Season						
Control	1.35	0.93	1.01	**1.09**	0.86	0.98	1.41	**1.08**	0.80	1.05	1.20	**1.03**
NPK	1.50	1.01	1.36	**1.29**	1.03	1.00	1.35	**1.13**	1.21	1.20	1.30	**1.24**
½ NPK + B	1.49	1.35	1.50	**1.45**	1.30	1.05	1.53	**1.71**	1.06	1.35	1.60	**1.35**
" + *Azot.*	1.90	1.39	1.43	**1.57**	1.33	1.00	1.73	**1.35**	1.11	1.49	1.80	**1.47**
" + *Azos.*	1.91	0.90	1.50	**1.43**	0.83	1.17	1.63	**1.21**	0.73	1.63	2.15	**1.50**
" + B + *Azot.*	2.83	1.95	2.13	**2.30**	1.49	1.20	1.93	**1.54**	1.53	1.73	2.50	**1.92**
" + B + *Azos.*	2.73	1.83	2.10	**2.22**	1.40	1.41	1.80	**1.54**	1.73	1.83	2.16	**1.91**
" + B + *Azot.*+ P	2.77	1.90	1.21	**1.96**	1.61	1.73	2.01	**1.78**	1.77	1.90	2.30	**1.99**
" + B + *Azos.*+ P	1.93	1.53	1.99	**1.82**	1.43	1.43	1.93	**1.60**	1.15	1.78	1.21	**1.38**
" + *Azot.* + *Azos.* + B + P	1.73	1.50	1.90	**1.71**	1.39	1.56	1.92	**1.62**	1.21	1.88	1.30	**1.46**
Mean	**2.01**	**1.43**	**1.62**	**---**	**1.26**	**1.25**	**1.72**	**---**	**1.23**	**1.58**	**1.75**	**---**
L.S.D. at 0.05												
A		0.458				0.204				0.450		
F		0.251				0.112				0.246		
A x **F**		0.794				0.354				0.780		

*Cal. Sand = Calcareous sand

B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = *Azospirillum lipoferum* P = *Pseudomonas aeruginosa*

Table 7. Effect of soil type, chemical NPK fertilization and bio-fertilizers on the phosphorus content in leaves, stems and roots of jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Phosphorus (%)											
	Leaves				Stems				Roots			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
First Season												
Control	0.300	0.500	0.170	**0.320**	0.084	0.048	0.020	**0.052**	0.015	0.031	0.018	**0.021**
NPK	0.210	0.850	0.250	**0.440**	0.018	0.022	0.048	**0.029**	0.028	0.045	0.021	**0.031**
½ NPK + B	0.130	0.700	0.180	**0.340**	0.132	0.078	0.064	**0.091**	0.026	0.056	0.019	**0.034**
" + *Azot.*	0.120	0.520	0.200	**0.280**	0.028	0.056	0.075	**0.053**	0.021	0.048	0.023	**0.031**
" + *Azos.*	0.180	0.930	0.210	**0.440**	0.044	0.058	0.021	**0.041**	0.025	0.032	0.026	**0.028**
" + B + *Azot.*	0.300	0.600	0.260	**0.390**	0.104	0.157	0.026	**0.096**	0.029	0.037	0.029	**0.032**
" + B + *Azos.*	0.410	0.910	0.280	**0.530**	0.102	0.127	0.028	**0.086**	0.031	0.048	0.030	**0.036**
" + B + *Azot.*+ P	0.170	0.840	0.180	**0.400**	0.028	0.058	0.018	**0.035**	0.025	0.061	0.028	**0.038**
" + B + *Azos.*+ P	0.230	0.950	0.250	**0.480**	0.106	0.099	0.024	**0.076**	0.027	0.072	0.027	**0.042**
" + *Azot.* + *Azos.* + B + P	0.190	0.700	0.170	**0.650**	0.123	0.123	0.016	**0.087**	0.029	0.062	0.030	**0.040**
Mean	**0.220**	**0.750**	**0.210**	**---**	**0.07**	**0.08**	**0.03**	**---**	**0.025**	**0.049**	**0.025**	**---**
L.S.D. at 0.05												
A	0.013				0.019				0.011			
F	0.009				0.014				0.018			
A x F	0.037				0.049				0.047			
Second Season												
Control	0.250	0.350	0.150	**0.250**	0.024	0.021	0.011	**0.019**	0.021	0.025	0.012	**0.019**
NPK	0.260	0.950	0.200	**0.470**	0.053	0.038	0.025	**0.039**	0.026	0.055	0.018	**0.033**
½ NPK + B	0.150	0.790	0.090	**0.340**	0.065	0.153	0.040	**0.086**	0.030	0.042	0.020	**0.031**
" + *Azot.*	0.160	0.680	0.110	**0.320**	0.023	0.096	0.019	**0.046**	0.029	0.067	0.014	**0.037**
" + *Azos.*	0.320	0.900	0.210	**0.480**	0.042	0.098	0.021	**0.054**	0.038	0.058	0.021	**0.039**
" + B + *Azot.*	0.390	0.590	0.190	**0.390**	0.116	0.176	0.027	**0.106**	0.042	0.070	0.027	**0.047**
" + B + *Azos.*	0.490	0.930	0.250	**0.650**	0.111	0.182	0.035	**0.109**	0.054	0.053	0.030	**0.043**
" + B + *Azot.*+ P	0.530	0.900	0.300	**0.580**	0.023	0.056	0.015	**0.031**	0.050	0.077	0.032	**0.053**
" + B + *Azos.*+ P	0.580	0.980	0.380	**0.650**	0.072	0.118	0.023	**0.071**	0.042	0.069	0.033	**0.048**
" + *Azot.* + *Azos.* + B + P	0.360	0.930	0.290	**0.490**	0.120	0.132	0.059	**0.104**	0.058	0.080	0.034	**0.057**
Mean	**0.350**	**0.790**	**0.220**	**---**	**0.064**	**0.107**	**0.027**	**---**	**0.038**	**0.060**	**0.024**	**---**
L.S.D. at 0.05												
A	0.010				0.011				0.009			
F	0.008				0.015				0.017			
A x F	0.026				0.050				0.056			

*Cal. Sand = Calcareous sand

B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = *Azospirillum lipoferum* P = *Pseudomonas aeruginosa*

Table 8. Effect of soil type, chemical NPK fertilization and bio-fertilizers on the potassium content in leaves, stems and roots of jojoba (*Simmondsia chinensis* Link.) plants during the 2002/2003 and 2003/2004 seasons.

Fertilization Treatments (F)	Potassium (%)											
	Leaves				Stems				Roots			
	Soil type (A)			Mean	Soil type (A)			Mean	Soil type (A)			Mean
	Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand		Sand	Clay	*Cal. sand	
						First Season						
Control	1.00	0.95	0.83	**0.93**	0.83	0.73	0.70	**0.75**	0.30	0.20	0.20	**0.23**
NPK	1.01	0.99	1.13	**1.04**	0.95	0.88	1.03	**0.95**	0.50	0.23	0.21	**0.31**
½ NPK + B	1.31	1.03	1.23	**1.19**	0.99	0.99	1.00	**0.99**	0.49	0.40	0.53	**0.47**
" + *Azot.*	2.20	1.09	1.73	**1.68**	1.03	0.93	1.30	**1.09**	0.69	0.53	0.49	**0.57**
" + *Azos.*	2.19	2.13	2.10	**2.14**	1.43	1.53	1.93	**1.63**	0.63	0.63	0.60	**0.62**
" + B + *Azot.*	2.27	2.10	2.31	**2.23**	1.50	1.73	1.82	**1.68**	0.70	0.66	0.61	**0.66**
" + B + *Azos.*	2.20	2.15	2.16	**2.17**	1.79	1.93	1.99	**1.90**	0.78	0.73	0.72	**0.74**
" + B + *Azot.*+ P	2.10	2.19	2.17	**2.15**	1.83	1.98	1.93	**1.91**	0.69	0.81	0.83	**0.78**
" + B + *Azos.*+ P	1.73	1.91	1.73	**1.79**	1.52	1.55	1.63	**1.57**	0.41	0.40	0.63	**0.48**
" + *Azot.* + *Azos.* + B + P	1.83	2.00	1.93	**1.92**	1.49	1.63	1.59	**1.57**	0.45	0.51	0.52	**0.49**
Mean	**1.78**	**1.65**	**1.73**	**---**	**1.33**	**1.38**	**1.49**	**---**	**0.56**	**0.51**	**0.53**	**---**
L.S.D. at 0.05												
A	N.S.				0.140				N.S.			
F	0.173				0.076				0.096			
A x **F**	0.547				0.242				0.305			
						Second Season						
Control	1.03	1.00	1.09	**1.04**	0.72	0.58	0.57	**0.62**	0.26	0.29	0.23	**0.26**
NPK	1.11	1.21	1.05	**1.14**	0.90	0.80	1.22	**0.97**	0.37	0.26	0.23	**0.29**
½ NPK + B	1.22	1.10	1.18	**1.17**	0.93	0.92	1.13	**0.99**	0.56	0.46	0.55	**0.52**
" + *Azot.*	2.11	2.31	2.17	**2.20**	1.43	0.87	1.78	**1.36**	0.38	0.56	0.47	**0.47**
" + *Azos.*	2.09	1.51	2.18	**1.93**	1.13	1.69	1.78	**1.53**	0.56	0.56	0.65	**0.59**
" + B + *Azot.*	2.16	2.11	2.13	**2.13**	1.60	1.72	1.26	**1.59**	0.62	0.97	0.68	**0.76**
" + B + *Azos.*	2.10	1.99	2.13	**2.07**	1.49	1.92	1.90	**1.77**	0.79	0.49	0.71	**0.66**
" + B + *Azot.*+ P	2.12	1.99	1.78	**1.96**	1.73	1.92	1.91	**1.85**	0.76	0.70	0.58	**0.68**
" + B + *Azos.*+ P	1.17	1.89	1.94	**1.67**	1.50	1.89	1.63	**1.67**	0.39	0.34	0.34	**0.36**
" + *Azot.* + *Azos.* + B + P	1.45	2.10	1.69	**1.75**	1.63	1.62	1.87	**1.71**	0.74	0.61	0.68	**0.68**
Mean	**1.66**	**1.72**	**1.73**	**---**	**1.31**	**1.39**	**1.51**	**---**	**0.54**	**0.52**	**0.51**	**---**
L.S.D. at 0.05												
A	N.S.				0.168				N.S.			
F	0.185				0.173				0.104			
A x **F**	0.638				0.253				0.311			

*Cal. Sand = Calcareous sand B = *Bacillus megatherium* var. Phosphaticum *Azot.* = *Azotobacter chroococcum* *Azos.* = *Azospirillum lipoferum*
P = *Pseudomonas aeruginosa*