

Table (1): Plant height (cm), Number of branches/ plant and Number of pod/Plant of Faba bean as affected by Rhizobium inoculation, P-fertilization levels of Faba bean cultivars and their interactions in two seasons and their combined

Main effects and interactions:	Plant height (cm)			Number of branches/ plant			Number of pods / Plant		
	First season 2014/2015	Second season 2015/2016	Combined	First season 2014/2015	Second Season 2015/2016	Combined	First season 2014/2015	Second season 2015/2016	Combined
Rhizobium treatment: (R)									
Treated	100.00	101.00	100.50	4.00	5.00	4.50	27.00	24.00	25.50
Un treated	95.00	96.00	95.50	3.00	3.00	3.00	20.00	22.00	21.00
F. test	*	*	*	*	*	*	*	*	*
P-fertilizer levels (kg/fad): (P)									
Zero (check)	82.50c	83.40c	82.95c	2.00c	2.00c	2.00c	20.00c	20.00c	20.00c
15.5 Kg P ₂ O ₅ /Fad	98.85b	96.80b	97.82b	3.00b	3.10b	3.05a	22.00b	21.20b	21.60b
31. Kg P ₂ O ₅ /Fad	103.00b	104.70b	103.85b	3.10b	4.00b	3.55a	23.00b	22.50b	22.75b
46.5Kg P ₂ O ₅ /Fad	109.00a	108.00a	108.50a	4.00a	5.00a	4.50a	27.00a	27.90a	27.75a
F. test	*	*	*	*	*	*	*	*	*
Cultivars: (C)									
Misr-3	96.70b	95.10b	95.92b	4.00	5.00a	4.50	20.00	19.80c	19.95c
Sakha-1	99.10a	103.90a	101.50a	3.10	4.00b	3.55	23.00	23.50b	23.25b
Nubaria-2	95.95b	97.00b	96.47b	3.80	3.10b	3.05	27.00	26.00a	26.50a
F. test	*	*	*	NS	*	NS	NS	*	*
Interactions:									
R×P	**	*	NS	NS	NS	NS	NS	NS	NS
R×C	NS	NS	NS	NS	NS	NS	NS	NS	NS
P×C	NS	NS	NS	NS	**	NS	NS	NS	NS
R×P×C	NS	NS	NS	NS	NS	NS	NS	NS	NS

* Denotes significance at 5% probability level

** Denotes significance at 1% probability level

Table (2): Number of seed/pod, Seed index (gm) and Seed weight/plant (gm) of Faba bean as affected by Rhizobium inoculation, P-fertilization levels of Faba bean cultivars and their interactions in two seasons and their combined

Main effects and interactions:	Number of seeds/pod			Seed index (gm)			Seed weight plant (gm)		
	First season 2014/2015	Second season 2015/2016	Combined	First season 2014/2015	Second season 2015/2016	Combined	First season 2014/2015	Second season 2015/2016	Combined
Rhizobium treatment: (R)									
Treated	3.25	3.00	3.13	75.25	82.60	78.92	20.88	17.52	19.20
Un treated	3.19	2.11	2.65	71.11	78.00	74.55	17.27	13.16	15.21
F. test	NS	*	*	*	*	*	*	*	*
P-fertilizer levels (kg/fad): (P)									
Zero (check)	2.01b	2.05b	2.03b	65.96c	67.70c	66.83c	16.72c	12.27c	14.50c
15.5 Kg P ₂ O ₅ /Fad	3.55a	2.08b	2.82b	69.61c	76.18b	72.89b	18.33b	14.33b	16.33b
31. Kg P ₂ O ₅ /Fad	3.62a	2.90b	3.26b	74.27b	87.60b	80.93b	19.66b	14.83b	17.25b
46.5Kg P ₂ O ₅ /Fad	3.73a	3.00a	3.37a	82.87a	89.80a	86.33a	21.61a	19.94a	20.78a
F. test	*	*	*	*	*	*	*	*	*
Cultivars: (C)									
Misr-3	2.91b	2.23	2.57	73.63	82.00	77.81	17.16b	14.91	16.04b
Sakha-1	3.59a	3.04	3.32	72.64	79.50	76.07	19.20b	15.00	17.10b
Nubaria-2	3.25a	3.29	3.27	73.26	79.40	76.33	20.80a	16.12	18.46a
F. test	*	NS	NS	NS	NS	NS	*	NS	*
Interactions:									
R×P	*	NS	NS	**	**	NS	NS	**	NS
R×C	*	NS	NS	NS	NS	NS	NS	NS	NS
P×C	NS	NS	NS	NS	NS	NS	**	NS	NS
R×P×C	NS	NS	NS	NS	NS	NS	NS	NS	NS

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** Denotes significance at 1% probability level

Table (3): Seed yield (ton) /fad, Straw yield (ton) /fad and Biological yield ton /fad. of Faba bean as affected by Rhizobium inoculation, P-fertilization levels of Faba bean cultivars and their interactions in two seasons and their combined.

Main effects and interactions:	Seed yield(ton)/ fad			Straw yield (ton)/ fad			Biological yield(ton)/ fad		
	First season 2014/2015	Second season 2015/2016	Combined	First season 2014/2015	Second season 2015/2016	Combined	First season 2014/2015	Second season 2015/2016	Combined
Rhizobium treatment: (R)									
Treated	1.523	1.391	1.457	1.854	1.567	1.711	3.377	2.958a	3.167a
Un treated	1.235	1.334	1.285	1.132	1.369	1.251	2.367	2.703b	2.535b
F. test	*	NS	**	**	**	*	NS	*	*
P-fertilizer levels (kg/fad):(P)									
Zero (check)	1.142b	1.271	1.207b	1.227b	1.200c	1.214c	2.369c	2.471c	2.421c
15.5 Kg P ₂ O ₅ /Fad	1.309b	1.286	1.298b	1.295b	1.390b	1.343b	2.604b	2.676b	2.641b
31. Kg P ₂ O ₅ /Fad	1.441a	1.353	1.397a	1.495a	1.499a	1.497a	2.936a	2.852a	2.894a
46.5Kg P ₂ O ₅ /Fad	1.469a	1.377	1.423a	1.566a	1.539a	1.553a	3.035a	2.916a	2.976a
F. test	*	NS	*	*	*	*	*	*	*
Cultivars: (C)									
Misr-3	1.376	1.220c	1.298b	0.971c	1.524a	1.248c	2.347b	2.744	2.545
Sakha-1	1.376	1.350b	1.363b	1.358b	1.426b	1.392b	2.734a	2.776	2.755
Nubaria-2	1.384	1.387a	1.385a	1.962a	1.425b	1.694a	3.346b	2.812	3.079
F. test	NS	*	*	*	*	*	*	NS	NS
Interactions:									
R×P	**	**	NS	**	**	NS	**	**	NS
R×C	NS	NS	NS	NS	NS	NS	*	**	NS
P×C	NS	**	NS	NS	*	NS	NS	**	NS
R×P×C	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Table (6): Correlation coefficients seed yield and its attributes calculated from combined analysis.

1-characters	2	3	4	5	6	7	8	9	10	11	12
1-Seed yield/ to fad	.851 ^{**}	.795 [*]	.560	.716 [*]	.909 ^{**}	.780 [*]	.591	.678 [*]	.847 ^{**}	.721 [*]	.691 [*]
2- straw yield/ ton./fad.	1	.711 [*]	.648	.621	.786 [*]	.782 [*]	.520	.622	.816 ^{**}	.728 [*]	.598
3-Plant height (cm)		1	.751 [*]	.770 [*]	.727 [*]	.808 ^{**}	.810 ^{**}	.923 ^{**}	.949 ^{**}	.915 ^{**}	.924 ^{**}
4-Number of branches/plant		. [*]	1	.718 [*]	.452	.932 ^{**}	.702 [*]	.705 [*]	.780 [*]	.664	.800 ^{**}
5-Number of seeds /pod				1	.755 [*]	.830 ^{**}	.683 [*]	.808 ^{**}	.783 [*]	.732 [*]	.856 ^{**}
6-Number of pods / plant					1	.722 [*]	.576	.707 [*]	.793 [*]	.771 [*]	.692 [*]
7-Seed Index (gm)						1	.687 [*]	.748 [*]	.887 ^{**}	.729 [*]	.835 ^{**}
8-Germination (%)							1	.924 ^{**}	.661	.891 ^{**}	.916 ^{**}
9-Good seedling (%)								1	.833 ^{**}	.962 ^{**}	.977 ^{**}
10-Germination index									1	.841 ^{**}	.855 ^{**}
11-Seeding dry weight (mg)										1	.910 ^{**}
12-Protein %											1

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