

APPENDIX

Table No: I Means of seed and seedling vigor traits for 40 genotypes of pea raised at Mountain Research Centre for Field Crops (MRCFC) Khudwani Anantnag, SKUAST-K and Kisan (KPGC) Simbhaoli, Hapur during 2009-2010.

S.No	Name of Accession	Selected parent	100 Seed weight (gm)		Germination percentage		Speed of germination	
			MRCFC	KPGC	MRCFC	KPGC	MRCFC	KPGC
1	IC-424886	Line	11.57	11.65	71.33	72.33	10.36	9.93
2	EC-342007	Line	12.85	12.46	65.33	65.00	9.33	9.23
3	IC-417876		10.13	9.68	83.67	84.33	11.95	13.35
4	IC-424896	Line	10.23	10.60	84.33	83.67	9.06	8.71
5	IC-208368	Line	13.25	12.68	62.67	61.00	8.01	8.92
6	IC-267151	Line	11.87	11.50	76.00	77.33	10.17	9.14
7	EC-538004	Line	9.51	9.06	61.67	61.33	9.27	10.53
8	DMR-11	Line	11.89	11.36	60.33	59.33	9.43	9.49
9	EC-389377		13.25	12.96	80.67	82.33	12.11	12.24
10	IC-208364	Line	11.28	10.83	75.33	76.67	10.01	10.21
11	IC-417976		10.90	10.21	76.67	75.33	11.46	10.99
12	IC-417586	Line	11.83	11.04	68.67	69.00	10.17	10.88
13	EC-538005	Line	10.67	10.59	54.00	53.33	6.92	6.96
14	IC-267181	Line	12.24	11.94	52.67	51.67	8.97	8.53
15	IC-208385	Line	13.80	13.38	79.67	78.33	9.39	9.40
16	EC-50777		13.72	13.39	84.33	83.33	11.42	11.37
17	IC-424895	Line	11.05	10.55	81.67	82.67	9.63	8.93
18	IC-417880		10.02	10.24	80.00	80.33	12.04	10.95
19	EC-6620		10.01	10.81	71.67	72.00	11.28	12.13
20	EC-538010		17.19	16.26	80.33	82.00	11.44	11.30
21	EC-398599	Line	13.87	13.16	85.67	85.00	9.84	10.20
22	IC-208366	Line	12.60	12.39	70.00	68.67	10.49	10.27
23	EC-398602	Tester	15.08	14.36	88.67	89.67	14.65	14.64
24	EC-501259		13.13	12.90	86.67	88.33	13.23	13.49
25	DMR-7	Line	12.46	12.24	77.33	77.67	10.48	10.03
26	IC-417878	Line	10.63	10.37	67.33	67.67	10.50	10.62
27	IC-417585		8.52	5.93	83.00	82.33	11.32	10.98
28	EC-381866-1		11.89	11.18	81.00	81.33	11.39	11.50
29	IC-267127	Line	11.84	11.23	72.67	73.33	10.45	11.00
30	EC-538008	Line	12.60	12.31	86.33	86.33	10.73	10.57
31	EC-499762		10.72	10.45	86.67	87.67	12.62	12.89
32	IC-208375	Tester	16.24	15.22	86.67	87.67	15.25	14.99
33	IC-208369		13.06	12.53	68.00	69.67	11.64	11.05
34	IC-267162	Line	13.82	13.70	88.67	87.33	10.34	10.87
35	NBP-72		14.18	14.08	82.00	81.00	10.82	10.50
36	NBP-61		12.65	12.24	76.67	75.00	10.99	10.53
37	NBP-82	Tester	14.33	13.74	87.67	88.00	14.48	14.48
38	NBP-60		14.23	13.71	87.00	86.00	11.45	11.53
39	EC-397113		14.10	13.91	80.67	80.67	12.72	12.31
40	IC-418020		11.05	11.17	77.33	78.33	10.93	10.72
Grand Mean			12.35	11.95	76.77	76.82	10.95	10.90

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S.No	Name of Accession	Selected parent	Seedling Root Length(cm)		Seedling Shoot Length (cm)		Total Seedling Length(cm)	
			MRCFC	KPGC	MRCFC	KPGC	MRCFC	KPGC
1	IC-424886	Line	1.90	1.77	2.11	2.60	4.01	4.39
2	EC-342007	Line	2.73	2.63	4.27	3.47	7.00	6.10
3	IC-417876		4.14	2.90	5.38	4.60	9.52	7.50
4	IC-424896	Line	1.93	2.33	3.73	4.67	6.17	7.00
5	IC-208368	Line	3.10	4.73	6.00	6.70	9.10	11.43
6	IC-267151	Line	3.17	3.03	5.05	8.73	8.21	11.73
7	EC-538004	Line	3.67	3.57	5.23	4.17	8.90	7.73
8	DMR-11	Line	2.21	3.23	4.12	5.27	6.33	8.50
9	EC-389377		5.48	5.57	8.54	6.87	14.02	12.43
10	IC-208364	Line	3.79	3.63	7.51	5.97	11.29	9.60
11	IC-417976		3.47	2.70	4.13	3.33	7.60	6.03
12	IC-417586	Line	3.47	3.97	5.73	6.57	8.47	10.53
13	EC-538005	Line	3.13	2.67	4.74	3.50	8.34	6.17
14	IC-267181	Line	2.53	4.90	3.36	4.93	6.93	9.83
15	IC-208385	Line	5.69	4.53	6.40	5.73	11.85	10.27
16	EC-50777		4.29	4.50	13.71	10.13	17.21	14.63
17	IC-424895	Line	2.90	2.13	3.80	3.73	6.27	5.87
18	IC-417880		1.99	1.53	6.39	5.47	8.19	7.00
19	EC-6620		2.86	3.00	5.17	4.80	7.39	7.80
20	EC-538010		2.09	3.13	5.59	6.73	7.68	9.73
21	EC-398599	Line	3.78	3.47	7.41	6.30	11.19	9.77
22	IC-208366	Line	2.01	3.83	6.77	6.80	8.79	10.63
23	EC-398602	Tester	8.59	8.03	14.81	11.23	23.30	19.27
24	EC-501259		2.53	2.30	4.47	5.00	7.00	7.37
25	DMR-7	Line	5.36	5.90	10.41	9.23	15.60	15.13
26	IC-417878	Line	2.38	5.77	6.83	6.50	9.21	12.27
27	IC-417585		4.30	5.13	7.90	6.83	12.20	11.97
28	EC-381866-1		3.71	6.40	10.89	8.97	14.27	15.37
29	IC-267127	Line	4.11	3.80	5.20	5.60	9.31	9.40
30	EC-538008	Line	6.47	5.80	12.40	8.77	18.87	14.57
31	EC-499762		5.41	5.53	11.03	10.87	16.44	16.40
32	IC-208375	Tester	8.35	7.60	14.57	15.13	22.91	22.73
33	IC-208369		3.94	6.07	5.31	7.47	9.25	12.50
34	IC-267162	Line	5.89	4.03	11.35	6.53	17.25	10.57
35	NBP-72		6.13	5.70	9.00	9.60	15.13	15.30
36	NBP-61		10.87	11.47	24.21	21.37	35.08	32.82
37	NBP-82	Tester	9.83	9.23	22.52	24.50	32.35	33.73
38	NBP-60		5.57	5.97	14.15	10.40	19.71	16.37
39	EC-397113		5.66	3.83	13.67	10.00	19.33	13.83
40	IC-418020		5.26	2.10	9.07	7.70	13.66	9.80
Grand Mean			4.36	4.46	8.32	7.66	12.63	12.10

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S.No	Name of Accession	Selected parent	Fresh Seedling Weight (Grams)		Dry Seedling Weight (Milligram)		Vigor index I	
			MRCFC	KPGC	MRCFC	KPGC	MRCFC	KPGC
1	IC-424886	Line	1.84	2.50	391.00	373.50	286.03	318.25
2	EC-342007	Line	2.15	2.60	370.00	396.83	459.93	397.62
3	IC-417876		1.82	1.91	369.67	355.00	798.60	634.45
4	IC-424896	Line	1.96	1.95	448.33	496.97	474.70	589.13
5	IC-208368	Line	1.84	2.33	454.00	553.77	611.40	701.38
6	IC-267151	Line	2.44	2.38	264.00	240.73	623.37	908.82
7	EC-538004	Line	2.08	1.65	296.67	197.73	550.83	476.02
8	DMR-11	Line	3.27	3.07	540.00	402.27	382.73	505.83
9	EC-389377		2.32	2.13	460.00	354.77	1131.93	1025.25
10	IC-208364	Line	2.49	2.35	306.67	246.57	849.67	737.37
11	IC-417976		1.83	2.05	186.67	209.47	582.87	455.63
12	IC-417586	Line	1.88	1.86	423.33	410.00	557.23	729.45
13	EC-538005	Line	2.15	2.38	510.33	417.30	481.07	329.92
14	IC-267181	Line	2.19	2.51	320.00	336.67	369.67	511.35
15	IC-208385	Line	1.87	2.60	255.33	252.33	942.03	806.69
16	EC-50777		3.01	3.20	326.67	880.73	1449.00	1221.73
17	IC-424895	Line	2.00	2.23	183.33	236.53	512.37	479.17
18	IC-417880		2.70	2.45	183.33	150.83	655.23	562.73
19	EC-6620		2.16	2.38	146.67	130.37	528.07	564.85
20	EC-538010		2.23	2.01	203.33	169.87	616.33	800.71
21	EC-398599	Line	2.67	2.78	300.00	307.73	958.40	834.26
22	IC-208366	Line	2.07	2.37	266.67	306.20	614.97	734.70
23	EC-398602	Tester	6.80	6.41	472.67	449.20	2065.37	1730.47
24	EC-501259		2.56	2.50	360.00	322.37	606.00	652.33
25	DMR-7	Line	2.32	2.23	380.00	420.20	1207.90	1180.60
26	IC-417878	Line	1.98	2.02	440.00	420.07	621.10	833.37
27	IC-417585		2.17	2.27	363.33	321.13	1012.93	989.03
28	EC-381866-1		3.21	3.23	203.33	208.10	1156.57	1254.80
29	IC-267127	Line	2.02	1.89	300.00	260.43	675.00	891.68
30	EC-538008	Line	3.84	3.74	320.00	313.70	1627.53	1216.04
31	EC-499762		2.75	2.45	265.67	214.70	1424.67	1396.95
32	IC-208375	Tester	4.11	4.09	566.67	525.23	1984.13	2000.48
33	IC-208369		2.67	2.33	280.00	223.93	629.53	875.84
34	IC-267162	Line	3.84	2.89	386.67	256.13	1529.33	927.42
35	NBP-72		4.08	4.02	450.00	362.27	1242.07	1246.95
36	NBP-61		6.11	5.97	556.67	469.27	2694.27	2476.13
37	NBP-82	Tester	4.52	5.63	320.00	533.40	2837.47	2974.22
38	NBP-60		3.09	3.22	196.67	224.93	1714.50	1413.23
39	EC-397113		3.44	3.44	523.33	385.37	1559.33	1119.01
40	IC-418020		2.75	2.44	289.00	327.17	1056.70	771.63
Grand Mean			2.78	2.81	347.00	341.59	1002.02	951.88

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S.No	Name of Accession	Selected parent	Vigor Index II		Electrical Conductivity ($\mu\text{s}/\text{gm}$)		Viability Percentage	
			MRCFC	KPGC	MRCFC	KPGC	MRCFC	KPGC
1	IC-424886	Line	27823.50	27010.67	24.43	23.37	79.18	83.07
2	EC-342007	Line	24163.80	25794.33	23.43	23.00	84.82	82.00
3	IC-417876		30950.00	29940.33	26.90	24.87	75.00	74.63
4	IC-424896	Line	37817.33	41582.67	24.07	24.27	83.49	84.17
5	IC-208368	Line	28840.33	33775.33	26.50	23.03	90.04	89.93
6	IC-267151	Line	20073.80	18593.67	16.47	15.27	91.22	89.37
7	EC-538004	Line	18320.33	12129.00	13.53	12.73	81.48	85.77
8	DMR-11	Line	32583.33	23864.00	13.63	13.57	77.14	82.20
9	EC-389377		37066.90	29209.00	10.77	12.57	86.41	85.27
10	IC-208364	Line	23173.43	18904.67	13.13	12.20	93.70	94.47
11	IC-417976		14126.87	15782.00	23.40	22.53	79.74	85.30
12	IC-417586	Line	29057.07	28304.00	16.03	15.77	76.51	73.50
13	EC-538005	Line	27580.63	22257.00	21.50	20.43	85.08	86.33
14	IC-267181	Line	16787.30	17394.33	20.17	22.77	83.22	81.03
15	IC-208385	Line	20380.33	19767.00	36.17	32.97	86.29	86.17
16	EC-50777		27563.63	73401.00	30.10	29.63	88.33	90.20
17	IC-424895	Line	14937.07	19553.67	28.20	23.70	73.74	77.70
18	IC-417880		14663.37	12116.33	19.67	23.67	79.66	81.73
19	EC-6620		10480.07	9386.33	20.17	17.63	89.89	93.70
20	EC-538010		16326.87	13929.33	22.40	16.80	93.66	91.27
21	EC-398599	Line	25707.03	26157.67	24.23	21.53	78.18	93.20
22	IC-208366	Line	18666.90	21026.67	11.40	10.97	77.29	78.13
23	EC-398602	Tester	41963.57	40279.33	7.63	9.50	91.74	90.30
24	EC-501259		31210.60	28476.00	9.43	10.07	87.00	86.20
25	DMR-7	Line	29430.53	32637.33	22.10	24.77	93.11	78.53
26	IC-417878	Line	29710.20	28426.33	26.20	25.27	76.07	73.50
27	IC-417585		30163.53	26437.00	21.40	23.57	79.55	76.53
28	EC-381866-1		16473.53	16927.00	20.93	20.87	89.66	94.30
29	IC-267127	Line	21840.33	19101.67	16.00	14.80	83.74	81.53
30	EC-538008	Line	27570.33	27083.00	21.63	20.80	96.40	97.70
31	EC-499762		24910.43	18818.00	15.04	12.57	88.00	97.17
32	IC-208375	Tester	49247.07	46049.33	6.63	5.63	95.11	84.10
33	IC-208369		21016.77	15599.33	14.67	15.20	83.88	79.37
34	IC-267162	Line	34580.36	22369.00	20.03	18.77	81.33	78.20
35	NBP-72		37140.40	29343.67	16.07	14.30	85.66	79.60
36	NBP-61		42873.37	35194.33	16.90	12.80	82.37	69.83
37	NBP-82	Tester	32226.80	49939.00	5.43	6.23	94.11	86.53
38	NBP-60		17096.93	19344.00	19.23	17.27	77.89	76.47
39	EC-397113		42267.46	31077.33	26.40	23.73	81.22	81.50
40	IC-418020		23967.03	25629.33	37.27	39.13	73.22	91.27
Grand Mean			26760.00	26240.25	19.73	18.96	84.35	84.29

Table No: II Means of agronomic traits for 23 parents of pea raised at Kisan (KPGC) Simbhaoli, Hapur during 2011-12.

S No	Name of Genotype	Type	Plant height (cm)	Pods per plant	Pod length (cm)	Seeds per pod	Seed yield per plant (gms)
1	IC-208375	Tester	113.50	17.93	4.40	5.60	13.63
2	EC-398602	Tester	89.00	10.60	5.63	4.80	13.60
3	NBP-82	Tester	150.17	28.00	6.43	3.23	20.13
4	EC-538008	Line	51.97	10.67	6.33	5.00	6.73
5	IC-417878	Line	87.40	25.07	4.53	4.83	13.30
6	IC-208366	Line	49.97	19.13	5.67	4.23	19.53
7	IC-267127	Line	170.73	28.60	7.70	5.50	22.17
8	DMR-7	Line	98.77	33.20	6.70	3.53	18.43
9	IC-424886	Line	77.70	19.47	4.23	5.87	19.83
10	IC-267162	Line	100.87	16.67	3.90	5.40	18.47
11	IC-417586	Line	105.90	20.27	4.77	4.17	6.57
12	IC-267151	Line	56.20	11.27	5.53	3.90	15.70
13	IC-208364	Line	55.83	19.33	5.53	5.50	16.40
14	EC-398599	Line	113.40	21.27	4.80	4.73	26.70
15	IC-424895	Line	69.60	14.03	5.27	5.20	14.90
16	DMR-11	Line	113.77	13.73	8.47	5.07	12.03
17	IC-208385	Line	109.40	15.07	5.33	5.40	10.43
18	EC-342007	Line	80.20	19.80	8.13	5.50	17.07
19	EC-538004	Line	108.23	5.70	4.83	5.53	11.97
20	IC-424896	Line	106.03	36.87	4.97	4.77	25.33
21	IC-267181	Line	92.43	46.53	5.73	3.93	15.87
22	IC-208368	Line	85.67	18.63	5.33	4.23	20.53
23	EC-538005	Line	67.83	22.33	4.83	4.37	6.60