

Table 1.1. Northern Hill Zone		RIR-TS-TAS Centrewise			Yield, q/ha	2021-22
Irrigation	Genotype	Almora	Bajaura	Malan	Shimla	Zonal mean
Zero	HPW 349 (C)	41.11	44.13	31.51	25.33	35.52
	VL 2041	44.72	42.63	26.10	22.25	33.92
	VL 907 (C)	42.69	41.79	24.38	29.07	34.48
	HS 562 (C)	46.67	47.29	27.09	29.37	37.61
	HS 507 (C)	45.74	45.17	30.97	24.59	36.62
	Mean	44.19	44.20	28.01	26.12	35.63
One	HPW 349 (C)	41.94	45.42	32.06	27.44	36.72
	VL 2041	47.31	49.25	23.91	23.89	36.09
	VL 907 (C)	46.48	46.38	27.17	30.37	37.60
	HS 562 (C)	48.15	46.63	32.13	36.34	40.81
	HS 507 (C)	48.24	47.54	36.40	25.09	39.32
	Mean	46.43	47.04	30.33	28.63	38.11
Two	HPW 349 (C)	43.24	48.31	36.62	35.54	40.93
	VL 2041	47.13	51.67	32.71	24.56	39.02
	VL 907 (C)	46.67	52.71	34.81	31.32	41.38
	HS 562 (C)	50.46	46.21	34.85	40.62	43.04
	HS 507 (C)	50.09	48.54	39.85	27.38	41.47
	Mean	47.52	49.49	35.77	31.88	41.16
Mean	HPW 349 (C)	42.10	45.95	33.40	29.44	37.72
	VL 2041	46.39	47.85	27.57	23.56	36.34
	VL 907 (C)	45.28	46.96	28.78	30.25	37.82
	HS 562 (C)	48.43	46.71	31.36	35.44	40.48
	HS 507 (C)	48.02	47.08	35.74	25.69	39.13
	Mean	46.04	46.91	31.37	28.88	38.30
CD (0.05)	Irrigation (A)	0.99	1.66	4.04	2.02	1.01
	Genotype (B)	2.19	NS	2.29	1.81	0.94
	B within A	NS	2.23	NS	3.13	NS
	A within B	NS	2.40	NS	3.23	NS
Date of Sowing:		01.11.2021	26.10.2021	11.11.2021	25.10.2021	
Date of Harvesting:		29.04.2022		30.04.2022	10.05.2022	

Table 1.2. Northern Hill Zone		RIR-TS-TAS		Pooled		2021-22		
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	35.52	3	36.72	4	40.93	4	37.72	4
VL 2041	33.92	5	36.09	5	39.02	5	36.34	5
VL 907 (C)	34.48	4	37.60	3	41.38	3	37.82	3
HS 562 (C)	37.61	1	40.81	1	43.04	1	40.48	1
HS 507 (C)	36.62	2	39.32	2	41.47	2	39.13	2
Mean	35.63		38.11		41.16		38.30	
	Irrigation (A)		Genotype (B)		B within A		A within B	
CD (0.05)	1.01		0.94		NS		NS	
Earhead/sqm								
HPW 349 (C)	297	3	332	2	353	3	327	3
VL 2041	286	5	310	5	326	4	307	4
VL 907 (C)	292	4	313	4	314	5	306	5
HS 562 (C)	305	1	337	1	356	1	332	1
HS 507 (C)	303	2	330	3	355	2	329	2
Mean	296		324		341		320	
	Irrigation (A)		Genotype (B)		B within A		A within B	
CD (0.05)	11.47		10.05		NS		NS	
Grains/Earhead								
HPW 349 (C)	28.83	3	27.22	5	28.32	5	28.12	5
VL 2041	29.29	2	27.64	4	28.38	4	28.44	4
VL 907 (C)	28.66	5	27.85	3	31.48	1	29.33	3
HS 562 (C)	30.11	1	29.72	2	29.96	2	29.93	1
HS 507 (C)	28.78	4	30.20	1	29.19	3	29.39	2
Mean	29.14		28.53		29.47		29.04	
	Irrigation (A)		Genotype (B)		B within A		A within B	
CD (0.05)	NS		NS		NS		NS	
1000 Grains Weight, g								
HPW 349 (C)	42.18	4	42.57	4	42.92	3	42.56	3
VL 2041	41.53	5	42.74	3	43.29	2	42.52	4
VL 907 (C)	42.42	2	44.13	1	43.46	1	43.34	1
HS 562 (C)	42.38	3	44.03	2	42.32	4	42.91	2
HS 507 (C)	42.86	1	41.59	5	41.89	5	42.11	5
Mean	42.27		43.01		42.78		42.69	
	Irrigation (A)		Genotype (B)		B within A		A within B	
CD (0.05)	NS		NS		NS		NS	

Centers: Almora, Bajaura, Malan, Shimla

Table 1.2.1 Northern Hill Zone			RIR-TS-TAS			Almora	2021-22	
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	41.11	5	41.94	5	43.24	5	42.10	5
VL 2041	44.72	3	47.31	3	47.13	3	46.39	3
VL 907 (C)	42.69	4	46.48	4	46.67	4	45.28	4
HS 562 (C)	46.67	1	48.15	2	50.46	1	48.43	1
HS 507 (C)	45.74	2	48.24	1	50.09	2	48.02	2
Mean	44.19		46.43		47.52		46.04	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		0.33		0.99		2.76	
Genotype (B)	**		0.90		2.19		5.89	
B within A	N.S.		1.57		3.79			
A within B			1.44		3.48			
Earhead/sqm								
HPW 349 (C)	262	3	255	4	270	4	262	4
VL 2041	262	3	282	1	282	3	275	2
VL 907 (C)	252	5	273	2	250	5	258	5
HS 562 (C)	263	2	268	3	305	1	279	1
HS 507 (C)	285	1	250	5	290	2	275	2
Mean	265		266		279		270	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		16.39		49.40		23.51	
Genotype (B)	N.S.		10.52		25.44		11.69	
B within A	N.S.		18.21		44.07			
A within B			23.11		55.91			
Grains/Earhead								
HPW 349 (C)	39.91	5	40.27	5	40.45	5	40.21	5
VL 2041	43.72	2	42.31	3	42.99	3	43.01	4
VL 907 (C)	42.18	3	41.73	4	47.38	1	43.76	3
HS 562 (C)	46.06	1	45.23	2	42.38	4	44.56	1
HS 507 (C)	40.39	4	48.21	1	44.23	2	44.28	2
Mean	42.45		43.55		43.49		43.16	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		2.42		7.31		21.75	
Genotype (B)	N.S.		1.89		4.58		13.17	
B within A	N.S.		3.28		7.94			
A within B			3.81		9.21			
1000 Grains Weight, g								
HPW 349 (C)	39.42	3	40.84	2	40.07	1	40.11	3
VL 2041	39.14	5	40.04	5	39.93	3	39.70	5
VL 907 (C)	40.34	2	41.09	1	40.00	2	40.48	1
HS 562 (C)	39.28	4	40.48	3	39.70	4	39.82	4
HS 507 (C)	40.81	1	40.19	4	39.63	5	40.21	2
Mean	39.80		40.53		39.87		40.06	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.28		0.86		2.74	
Genotype (B)	N.S.		0.26		0.63		1.94	
B within A	N.S.		0.45		1.08			
A within B			0.49		1.19			
Date of Sowing:	01.11.2021							
Date of Harvesting:	29.04.2022							

Table 1.2.2 Northern Hill Zone			RIR-TS-TAS		Bajaura		2021-22	
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	44.13	3	45.42	5	48.31	4	45.95	5
VL 2041	42.63	4	49.25	1	51.67	2	47.85	1
VL 907 (C)	41.79	5	46.38	4	52.71	1	46.96	3
HS 562 (C)	47.29	1	46.63	3	46.21	5	46.71	4
HS 507 (C)	45.17	2	47.54	2	48.54	3	47.08	2
Mean	44.20		47.04		49.49		46.91	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		0.55		1.66		4.54	
Genotype (B)	N.S.		0.53		1.29		3.41	
B within A	**		0.92		2.23			
A within B			0.99		2.40			
Earhead/sqm								
HPW 349 (C)	321	5	340	5	384	2	348	5
VL 2041	323	4	363	4	401	1	362	2
VL 907 (C)	350	1	368	2	379	3	365	1
HS 562 (C)	344	2	366	3	366	5	358	4
HS 507 (C)	338	3	368	1	374	4	360	3
Mean	335		361		381		359	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		2.91		8.76		3.14	
Genotype (B)	N.S.		5.38		13.03		4.50	
B within A	N.S.		9.33		22.57			
A within B			8.83		21.37			
Grains/Earhead								
HPW 349 (C)	31.15	2	29.29	1	28.01	2	29.48	1
VL 2041	31.25	1	29.26	2	27.19	5	29.23	2
VL 907 (C)	28.02	5	27.11	5	28.87	1	28.00	5
HS 562 (C)	29.53	4	28.50	3	28.01	3	28.68	3
HS 507 (C)	29.63	3	28.40	4	27.89	4	28.64	4
Mean	29.91		28.51		27.99		28.81	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.46		1.39		6.19	
Genotype (B)	N.S.		0.56		1.36		5.84	
B within A	N.S.		0.97		2.35			
A within B			0.98		2.38			
1000 Grains Weight, g								
HPW 349 (C)	44.15	3	45.59	3	44.98	5	44.90	5
VL 2041	42.38	5	46.37	2	47.46	2	45.40	4
VL 907 (C)	42.63	4	46.57	1	48.22	1	45.81	2
HS 562 (C)	46.68	1	44.89	5	45.17	4	45.58	3
HS 507 (C)	45.36	2	45.55	4	46.56	3	45.82	1
Mean	44.24		45.79		46.48		45.50	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.59		1.77		4.99	
Genotype (B)	N.S.		0.34		0.83		2.26	
B within A	**		0.59		1.44			
A within B			0.79		1.91			
Date of Sowing:	26.10.2021							
Date of Harvesting:								

Table 1.2.3. Northern Hill Zone			RIR-TS-TAS		Khudwani		2021-22	
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	53.30	2	61.31	3	66.31	4	60.33	3
VL 2041	34.53	5	58.91	4	66.43	3	53.29	4
VL 907 (C)	37.80	4	52.13	5	58.08	4	49.34	5
HS 562 (C)	65.21	1	68.62	1	68.48	2	67.44	1
HS 507 (C)	52.03	3	64.40	2	70.37	1	62.27	2
Mean	48.57		61.07		65.93		58.53	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		1.38		4.16		9.12	
Genotype (B)	**		1.00		2.41		5.11	
B within A			1.73		4.18			
A within B			2.07		5.01			
Earhead/sqm								
HPW 349 (C)	399	1	294	4	400	1	364	1
VL 2041	317	4	335	3	347	4	333	5
VL 907 (C)	354	3	347	1	341	5	347	2
HS 562 (C)	385	2	293	5	351	3	343	3
HS 507 (C)	310	5	339	2	356	2	335	4
Mean	353		322		359		345	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		7.96		24.01		8.95	
Genotype (B)	*		6.70		16.22		5.84	
B within A	**		11.61		28.10			
A within B			13.09		31.67			
Grains/Earhead								
HPW 349 (C)								
VL 2041								
VL 907 (C)								
HS 562 (C)								
HS 507 (C)								
Mean								
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)								
Genotype (B)								
B within A								
A within B								
1000 Grains Weight, g								
HPW 349 (C)								
VL 2041								
VL 907 (C)								
HS 562 (C)								
HS 507 (C)								
Mean								
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)								
Genotype (B)								
B within A								
A within B								
Date of Sowing:	20.10.2021							
Date of Harvesting:	14.06.2022							

Table 1.2.4. Northern Hill Zone			RIR-TS-TAS				Malan	2021-22
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	31.51	1	32.06	3	36.62	2	33.40	2
VL 2041	26.10	4	23.91	5	32.71	5	27.57	5
VL 907 (C)	24.38	5	27.17	4	34.81	4	28.78	4
HS 562 (C)	27.09	3	32.13	2	34.85	3	31.36	3
HS 507 (C)	30.97	2	36.40	1	39.85	1	35.74	1
Mean	28.01		30.33		35.77		31.37	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	*		1.34		4.04		16.53	
Genotype (B)	**		0.95		2.29		9.05	
B within A	N.S.		1.64		3.96			
A within B			1.98		4.80			
Earhead/sqm								
HPW 349 (C)	299	5	421	2	434	3	385	3
VL 2041	319	3	349	4	363	4	344	4
VL 907 (C)	314	4	319	5	335	5	322	5
HS 562 (C)	338	1	417	3	442	2	399	2
HS 507 (C)	324	2	422	1	469	1	405	1
Mean	318		386		409		371	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		7.18		21.64		7.49	
Genotype (B)	**		10.41		25.18		8.42	
B within A	*		18.02		43.61			
A within B			17.65		42.70			
Grains/Earhead								
HPW 349 (C)	24.65	1	18.97	3	19.50	5	21.04	3
VL 2041	21.72	3	17.17	5	22.36	3	20.42	4
VL 907 (C)	18.78	5	19.55	2	24.88	1	21.07	2
HS 562 (C)	20.64	4	18.57	4	20.02	4	19.74	5
HS 507 (C)	23.29	2	23.16	1	22.78	2	23.08	1
Mean	21.82		19.48		21.91		21.07	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		1.05		3.17		19.32	
Genotype (B)	N.S.		1.14		2.75		16.20	
B within A	N.S.		1.97		4.77			
A within B			2.05		4.96			
1000 Grains Weight, g								
HPW 349 (C)	43.15	1	40.52	3	43.31	1	42.33	2
VL 2041	39.27	4	39.89	4	40.41	3	39.86	4
VL 907 (C)	41.38	3	43.84	2	42.29	2	42.51	1
HS 562 (C)	38.87	5	44.40	1	39.74	4	41.01	3
HS 507 (C)	42.59	2	37.64	5	37.38	5	39.20	5
Mean	41.05		41.26		40.63		40.98	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.79		2.38		7.46	
Genotype (B)	N.S.		1.53		3.70		11.19	
B within A	N.S.		2.65		6.41			
A within B			2.50		6.04			
Date of Sowing:	11.11.2021							
Date of Harvesting:	30.04.2022							

Table 1.2.5. Northern Hill Zone			RIR-TS-TAS			Shimla	2021-22	
Genotype	Irrigation level						Mean	Rk
	Zero	Rk	One	Rk	Two	Rk		
Yield, q/ha								
HPW 349 (C)	25.33	3	27.44	3	35.54	2	29.44	3
VL 2041	22.25	5	23.89	5	24.56	5	23.56	5
VL 907 (C)	29.07	2	30.37	2	31.32	3	30.25	2
HS 562 (C)	29.37	1	36.34	1	40.62	1	35.44	1
HS 507 (C)	24.59	4	25.09	4	27.38	4	25.69	4
Mean	26.12		28.63		31.88		28.88	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	**		0.67		2.02		9.00	
Genotype (B)	**		0.75		1.81		7.75	
B within A	**		1.29		3.13			
A within B			1.34		3.23			
Earhead/sqm								
HPW 349 (C)	308	1	312	1	324	1	315	1
VL 2041	241	5	245	5	259	5	248	5
VL 907 (C)	251	4	294	3	292	3	279	3
HS 562 (C)	274	2	296	2	310	2	293	2
HS 507 (C)	265	3	278	4	285	4	276	4
Mean	268		285		294		282	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	*		4.15		12.50		5.69	
Genotype (B)	**		6.74		16.31		7.16	
B within A	N.S.		11.67		28.24			
A within B			11.23		27.18			
Grains/Earhead								
HPW 349 (C)	19.61	5	20.34	5	25.32	2	21.76	3
VL 2041	20.48	4	21.83	3	20.99	5	21.10	5
VL 907 (C)	25.66	1	23.04	2	24.80	3	24.50	2
HS 562 (C)	24.23	2	26.59	1	29.43	1	26.75	1
HS 507 (C)	21.82	3	21.04	4	21.87	4	21.58	4
Mean	22.36		22.57		24.48		23.14	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.50		1.51		8.36	
Genotype (B)	**		0.73		1.77		9.50	
B within A	N.S.		1.27		3.07			
A within B			1.24		3.00			
1000 Grains Weight, g								
HPW 349 (C)	42.00	5	43.33	4	43.33	4	42.89	5
VL 2041	45.33	1	44.67	3	45.33	1	45.11	2
VL 907 (C)	45.33	1	45.00	2	43.33	4	44.56	3
HS 562 (C)	44.67	3	46.33	1	44.67	2	45.22	1
HS 507 (C)	42.67	4	43.00	5	44.00	3	43.22	4
Mean	44.00		44.47		44.13		44.20	
	F Test		SEm		CD (0.05)		CV (%)	
Irrigation (A)	N.S.		0.30		0.90		2.61	
Genotype (B)	*		0.64		1.56		4.37	
B within A	N.S.		1.11		2.70			
A within B			1.04		2.52			
Date of Sowing:	25.10.2021							
Date of Harvesting:	10.05.2022							