

Annual Progress Report

Rabi Maize

2015-16



All India Coordinated Research Project on Maize
ICAR-Indian Institute of Maize Research
PAU Campus, Ludhiana-141 004, India

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Annual Maize Workshop-2016 UAS Bengaluru



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2015-16

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24.	ZARS, Indore	Dr. A.M. Rajput, Dean	College of Agriculture, Zonal Agriculture Research Station, Indore, PIN-452001, M.P.
25.	Jhansi	Dr. V.K. Singh, Officer Incharge	Regional Agricultural Research Station, Bharari, P.O. Bhojla, Distt. Jhansi, Pin-284002,Mo.No.-9451334263, UP
26.	Jagadapur	Dr. Abhinav Sao, Scientist (Genetics & Plant Breeding)	SG College of Agriculture and Research Station, Kumharawand, Jagadapur (CG) Mobile-98266-68880, E-Mail ID: saoabhi27@yahoo.co.in
27.	Raipur	Dr. Nandan Mehta Principal Scientist (Genetics & Plant Breeding)	College of Agriculture, Krishak Nagar, Raipur- 492012 (CG), Mobile- 98930-87812, E-Mail ID: mehta.igkv@gmail.com
28.	Chhitrakoot	-	Mahatma Gandhi Chitrakoot Gramodya Vishwavidyalay, Chitrakoot, Satna (MP)-485334

**Decoding list of entries
tested in Rabi 2015-16
coordinated trials**

Decoding of entries tested in Rabi 2015-16 coordinated trials

TRIAL NO. 1 : NIVT-LATE
MATURITY : LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
 BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI,
 KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI,
 BANSWARA, GODHRA

E.No.	Entry Name	IMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	AMH-3436	IMR101	Ajeet Seeds Pvt.Ltd.	1003	1046	1106
2	ADV 0990293	IMR102	ADVANTA LTD.	1001	1054	1100
3	Proline 999	IMR103	Proline seeds company. Pvt.ltd.	1011	1064	1113
4	DAS-MH-901	IMR104	Dow AgroSciences pvt.ltd.	1036	1062	1102
5	BH 412065	IMR105	PJTSAU,ARI, Rajendranagar,Hyderabad	1027	1078	1095
6	HT 15046	IMR106	Hytech deed india pvt.ltd.	1038	1051	1103
7	DKC9175 (IP8514)	IMR107	Monsanto India ltd.	1035	1052	1120
8	MM2323	IMR108	Mahendra &Mahendra	1025	1079	1089
9	PM15203L	IMR109	PHI seeds	1026	1066	1101
10	DKC9177 (IP8572)	IMR110	Monsanto India ltd.	1028	1056	1096
11	MFH 14-11	IMR111	TCA Dholi Muzaffarpur bihar	1004	1076	1107
12	PM15205L	IMR112	PHI seeds	1005	1071	1104
13	MM2222	IMR113	Mahendra &Mahendra	1021	1058	1119
14	PM15204L	IMR114	PHI seeds	1010	1068	1121
15	RCRMH 2 (HTMR2)	IMR115	UASR COA, Bheemaranagudi	1039	1067	1099
16	POLO Gold	IMR116	Kanchan ganga	1022	1049	1092
17	DAS-MH-902	IMR117	Dow AgroSciences pvt.ltd.	1002	1075	1087
18	PM15201L	IMR118	PHI seeds	1019	1050	1118
19	PM15206L	IMR119	PHI seeds	1032	1074	1114
20	IMH 1544	IMR120	IIMR New Delhi	1023	1077	1091
21	115-08-01	IMR121	Kanchan ganga	1014	1069	1097
22	BH 412067	IMR122	PJTSAU,ARI, Rajendranagar Hyderabad	1041	1057	1123
23	GK 3196	IMR123	Ganga Kaveri Seeds Pvt. Ltd.	1009	1061	1090
24	CP.808	IMR124	Charoen pokphand seeds	1020	1042	1111
25	CCH 167	IMR125	Rohini seeds pvt. Ltd.	1031	1060	1105
26	CCH 9241	IMR126	Rohini seeds pvt. Ltd.	1037	1082	1112
27	DKC9170(IQ8579)	IMR127	Monsanto India ltd.	1040	1044	1098
28	KMH-3981	IMR128	Kaveri seed	1012	1081	1085
29	KMH-2852	IMR129	Kaveri seed	1024	1047	1116
30	HKH 425	IMR130	CCS HAU RRS Karnal	1007	1072	1115
31	ADV 7037	IMR131	ADVANTA LTD.	1006	1055	1084
32	AH 1261	IMR132	IARI RRC Dharwad, Karnataka	1034	1065	1083
33	PM15202L	IMR133	PHI seeds	1033	1073	1122
34	MFH 14-9	IMR134	TCA Dholi Muzaffarpur bihar	1030	1063	1093
35	RCRMH 1 (HTMR1)	IMR135	UASR COA, Bheemaranagudi	1008	1070	1110
36	GK 3197	IMR136	Ganga Kaveri Seeds Pvt. Ltd.	1018	1045	1088
37	DKC9176 (IQ8611)	IMR137	Monsanto India ltd.	1015	1048	1117
38	Seedtech 2324 (C)	IMR138	BISCO	1017	1080	1086
39	Buland(C)	IMR139	PAU, Ludhiana	1016	1043	1094
40	Bio 9681 (C)	IMR140	Bioseed	1013	1053	1108
41	P3522 (C)	IMR141	Pioneer	1029	1059	1109

TRIAL NO. 2 : NIVT-Medium
MATURITY : Medium
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
 BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI,
 KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI,
 BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	HKH 350	IMR201	CCS HAU RRS Karnal	1151	1179	1203
2	IMH 1546	IMR202	IIMR New Delhi	1135	1180	1192
3	WH 1006	IMR203	MPAUT Banswara	1159	1166	1191
4	IMH 1547	IMR204	IIMR New Delhi	1144	1186	1218
5	VEH 15-1	IMR205	BHU Varanasi 221006	1131	1187	1190
6	KDMH 01	IMR206	UAS DHARWAD	1130	1181	1212
7	KNMH-4503	IMR207	PJTSAU, ARS, Karimnagar	1142	1188	1209
8	KDMH 03	IMR208	UAS DHARWAD	1156	1178	1211
9	BLH 110	IMR209	Bisco bio sciences pvt ltd.	1141	1174	1213
10	KNMH-4512	IMR210	PJTSAU, ARS, Karimnagar	1148	1182	1194
11	WH 2140	IMR211	MPAUT Banswara	1152	1184	1207
12	BLH 109	IMR212	Bisco bio sciences pvt ltd.	1133	1173	1202
13	KH-2001 Gold	IMR213	Kanchan ganga seed	1140	1163	1210
14	KNMH-4511	IMR214	PJTSAU, ARS, Karimnagar	1139	1162	1216
15	WH 1010	IMR215	MPAUT Banswara	1147	1175	1197
16	KNMH-4509	IMR216	PJTSAU, ARS, Karimnagar	1150	1172	1201
17	MMH 14-5	IMR217	TCA Dholi	1149	1160	1193
18	IMH 1545	IMR218	IIMR New Delhi	1157	1189	1195
19	WH 2127	IMR219	MPAUT Banswara	1154	1164	1196
20	DKC8171 (IP8204)	IMR220	Monsanto India ltd.	1155	1177	1198
21	HT 15066	IMR221	Hytech deed india pvt.ltd.	1138	1161	1204
22	MMH 14-7	IMR222	TCA Dholi	1134	1171	1199
23	DKC8172 (IQ8318)	IMR223	Monsanto India ltd.	1146	1169	1215
24	WH 1019	IMR224	MPAUT Banswara	1145	1167	1206
25	K-88	IMR225	Kanchan ganga seed	1143	1176	1219
26	KNMH-4510	IMR226	PJTSAU, ARS, Karimnagar	1153	1183	1200
27	Bio 9637 (C)	IMR227	Bioseed	1158	1168	1214
28	Bio 9544 (C)	IMR228	Bioseed	1132	1170	1208
29	DHM 117 (C)	IMR229	PJTSAU, Hyderabad	1136	1165	1217
30	HM10 (C)	IMR230	CCS HAU RRS Karnal	1137	1185	1205

Contd.

TRIAL NO. 4 : AVT I-LATE
MATURITY : LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 4
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
 BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI,
 KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI,
 BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	PM14207L	IMR301	PHI seeds	1233	1256	1273
2	HT 142107	IMR302	Hytech deed india	1238	1255	1280
3	CP.444	IMR303	Charoen pokphand seeds	1231	1261	1266
4	PM14205L	IMR304	PHI seeds	1239	1257	1269
5	PM14206L	IMR305	PHI seeds	1236	1251	1275
6	Rasi-394	IMR306	Rasi Seeds (P) Ltd.	1244	1263	1277
7	GK 3153	IMR307	Ganga Kaveri Seeds	1230	1254	1267
8	PM14203L	IMR308	PHI seeds	1240	1250	1278
9	SYN426702	IMR309	SYNGENTA India Ltd.	1247	1264	1281
10	GK 3124	IMR310	Ganga Kaveri Seeds	1241	1259	1274
11	NMH-1290	IMR311	NUZIVEEDU SEEDS	1234	1258	1272
12	DKC9160 (IP8510)	IMR312	Monsanto India ltd.	1232	1248	1283
13	DKC9165 (IM8119)	IMR313	Monsanto India ltd.	1246	1262	1276
14	KH-2977	IMR314	Kanchan ganga seed	1235	1265	1271
15	PM14208L	IMR315	PHI seeds	1243	1260	1279
16	Seedtech 2324(C)	IMR316	Bisco	1242	1252	1270
17	Buland (C)	IMR317	PAU, Ludhiana	1245	1249	1268
18	Bio 9681(C)	IMR318	Bioseed	1237	1253	1282

TRIAL NO. 5 : AVT I-Medium
MATURITY : Medium
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 4
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
 BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI
 KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI
 BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	BLH 101	IMR401	Bisco bio sciences pvt ltd.	1294	1301	1314
2	BH 412044	IMR402	PJTSAU,ARI, Hyderabad.	1298	1311	1320
3	BH 412066	IMR403	PJTSAU,ARI, Hyderabad.	1299	1307	1322
4	DMRH 1419	IMR404	IIMR New Delhi	1291	1309	1315
5	CP.222	IMR405	Charoen pokphand seeds	1296	1310	1313
6	DKC9166 (IM8013)	IMR406	Monsanto India ltd.	1300	1308	1321
7	BLH 102	IMR407	Bisco bio sciences pvt ltd.	1292	1304	1316
8	HT 1412081	IMR408	Hytech deed india pvt.ltd.	1295	1302	1319
9	PM142096M	IMR409	PHI seeds	1290	1306	1312
10	Bio 9637(C)	IMR410	Bioseed	1293	1305	1318
11	HM10 (C)	IMR411	HAU, Karnal	1297	1303	1317

TRIAL NO. 7 : AVT II-LATE
MATURITY : LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 6
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI,
KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI,
BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	Rasi-950	IMR501	Rasi Seeds (P) Ltd.	1332	1364	1370
2	CP.838	IMR502	Charoen pokphand seeds	1333	1359	1371
3	GK 3118	IMR503	Ganga Kaveri Seeds	1341	1366	1381
4	DKC9161 (IM8222)	IMR504	Monsanto India ltd.	1348	1350	1384
5	Rasi-864	IMR505	Rasi Seeds (P) Ltd.	1346	1360	1389
6	X35F880	IMR506	PHI seeds	1334	1356	1374
7	KH-2192	IMR507	Kanchan ganga seed	1336	1361	1385
8	GK 3155	IMR508	Ganga Kaveri Seeds	1338	1362	1382
9	KMH-1411	IMR509	Kaveri seed	1335	1351	1377
10	DMRH1308	IMR510	IIMR New Delhi	1344	1355	1387
11	HTMH 5108	IMR511	Hytech Seed	1339	1367	1383
12	CP.333	IMR512	Charoen pokphand seeds	1337	1368	1372
13	CP.999	IMR513	Charoen pokphand seeds	1330	1352	1388
14	CP.111	IMR514	Charoen pokphand seeds	1349	1353	1375
15	HTMH 5202	IMR515	Hytech Seed	1342	1363	1378
16	KH-3021	IMR516	Kanchan ganga seed	1345	1365	1386
17	Rasi-393	IMR517	Rasi Seeds (P) Ltd.	1343	1358	1380
18	Seedtech 2324 (C)	IMR518	Bisco	1331	1369	1376
19	Buland (C)	IMR519	PAU, Ludhiana	1347	1357	1373
20	Bio 9681 (C)	IMR520	Bioseed	1340	1354	1379

TRIAL NO. 8 : AVT II-Medium
MATURITY : MEDIUM
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 6
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 3
NO. OF LOCATIONS : 18

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR, KALYANI
KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI
BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS		
				R I	R II	R III
1	IM8303	IMR601	Monsanto India ltd.	1395	1408	1417
2	KH-517	IMR602	Kanchan ganga	1402	1403	1414
3	BL 900	IMR603	Bisco bio sciences	1400	1410	1411
4	BL 147	IMR604	Bisco bio sciences	1397	1406	1416
5	BL 798	IMR605	Bisco bio sciences	1401	1407	1415
6	DMRH 1301	IMR606	IIMR New Delhi	1398	1409	1412
7	Bio 9637 (C)	IMR607	Bioseed	1396	1404	1413
8	HM10(C)	IMR608	HAU, Karnal	1399	1405	1418

TR. QPM 1 : QPM1
MATURITY : LATE/MEDIUM
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 4
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 4
NO. OF LOCATIONS : 17

LOCATIONS: LUDHIANA, KARNAL, PANTNAGAR, KANPUR,
 BAHRAICH, DHOLI, VARANASI, RANCHI, BHUBANESHWAR,
 KARIMNAGAR, KOLHAPUR, MANDYA, COIMBATORE, DHARWAD, VAGARAI,
 BANSWARA, GODHRA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS			
				R I	R II	R III	R IV
1	MMHQPM 6-12-13	IMR701	TCA Dholi	1434	1438	1447	1452
2	VEHQ 15-1	IMR702	BHU Varanasi	1430	1440	1444	1450
3	HQPM 1 (C)	IMR703	HAU, Karnal	1432	1439	1445	1451
4	HQPM 4 (C)	IMR704	HAU, Karnal	1433	1437	1443	1449
5	BIO9637(Filler)	IMR705	BIOSEED	1431	1436	1446	1453
6	BIO9681(Filler)	IMR706	BIOSEED	1435	1441	1442	1448

Contd.

TRIAL NO. N X G : AVT II - N X G - LATE,
MATURITY : LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF LOCATIONS : 9
LOCATIONS: LUDHIANA, DELHI, BAHRAICH, DHOLI, KALYANI, KARIMNAGAR,
ARBHAVI, VAGARAI, BANSWARA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME
1	GK 3118	IMR901	Ganga Kaveri Seeds
2	KH-3021	IMR902	Kanchan ganga seed
3	KH-2192	IMR903	Kanchan ganga seed
4	CP.999	IMR904	Charoen pokphand seeds
5	CP.333	IMR905	Charoen pokphand seeds
6	Rasi-864	IMR906	Rasi Seeds (P) Ltd.
7	CP.111	IMR907	Charoen pokphand seeds
8	Rasi-950	IMR908	Rasi Seeds (P) Ltd.
9	CP.838	IMR909	Charoen pokphand seeds
10	KMH-1411	IMR910	Kaveri seed
11	DKC9161 (IM8222)	IMR911	Monsanto India ltd.
12	GK 3155	IMR912	Ganga Kaveri Seeds
13	DMRH 1308	IMR913	IIMR New Delhi
14	HTMH 5108	IMR914	Hytech Seed
15	X35F880	IMR915	PHI seeds
16	HTMH 5202	IMR916	Hytech Seed
17	Rasi-393	IMR917	Rasi Seeds (P) Ltd.
18	Seedtech 2324(C)	IMR918	Bisco
19	Buland (C)	IMR919	PAU, Ludhiana
20	Bio 9681(C)	IMR920	Bioseed

Note: Kindly ignore the code IMR907 IN ZONE-II (Delhi, Ludhiana) and IMR908 at Banswara

TRIAL NO. N X G : AVT II - N X G -MEDIUM
MATURITY : MEDIUM
YEAR : 2015-2016
SEASON : RABI
NO. OF LOCATIONS : 9
LOCATIONS: LUDHIANA, DELHI, BAHRAICH, DHOLI, KALYANI, KARIMNAGAR,
ARBHAVI, VAGARAI, BANSWARA

E.No.	Entry Name	IIMR Code	INSTITUTE NAME
1	BL 900	IMR930	Bisco bio sciences
2	BL 147	IMR931	Bisco bio sciences
3	IM8303	IMR932	Monsanto India ltd.
4	BL 798	IMR933	Bisco bio sciences
5	DMRH 1301	IMR934	IIMR New Delhi
6	KH-517	IMR935	Kanchan ganga
7	Bio 9637(C)	IMR936	Bioseed

Note: Kindly ignore the code IMR932 in ZONE-II (Ludhiana and Delhi)

TRIAL NO.11-NIVT : PATHOLOGY NIVT LATE
MATURITY : NIVT-LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 2
PATHOLOGY LOCATIONS : 9
LOCATIONS NAME : LUDHIANA, DHAULAKUAN, DHOLI, HYDERABAD,
ARBHAVI, COIMBATORE, MANDYA,MANDYA KARNAL

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS	
				RI	R II
1	KMH-2852	IMR151	Kaveri seed	1003	1046
2	MFH 14-9	IMR152	TCA Dholi Muzaffarpur bihar	1001	1054
3	DKC9170(IQ8579)	IMR153	Monsanto India ltd.	1011	1064
4	AMH-3436	IMR154	Ajeet Seeds Pvt.Ltd.	1036	1062
5	CCH 9241	IMR155	Rohini seeds pvt. Ltd.	1027	1078
6	CP.808	IMR156	Charoen pokphand seeds	1038	1051
7	PM15205L	IMR157	PHI seeds	1035	1052
8	DAS-MH-901	IMR158	Dow AgroSciences pvt.ltd.	1025	1079
9	GK 3196	IMR159	Ganga Kaveri Seeds Pvt. Ltd.	1026	1066
10	Proline 999	IMR160	Proline seeds company. Pvt.ltd.	1028	1056
11	ADV 0990293	IMR161	ADVANTA LTD.	1004	1076
12	PM15202L	IMR162	PHI seeds	1005	1071
13	PM15206L	IMR163	PHI seeds	1021	1058
14	AH 1261	IMR164	IARI RRC Dharwad, Karnataka	1010	1068
15	DKC9175 (IP8514)	IMR165	Monsanto India ltd.	1039	1067
16	PM15203L	IMR166	PHI seeds	1022	1049
17	MM2222	IMR167	Mahendra &Mahendra	1002	1075
18	KMH-3981	IMR168	Kaveri seed	1019	1050
19	MM2323	IMR169	Mahendra &Mahendra	1032	1074
20	DKC9177 (IP8572)	IMR170	Monsanto India ltd.	1023	1077
21	IMH 1544	IMR171	IIMR New Delhi	1014	1069
22	GK 3197	IMR172	Ganga Kaveri Seeds Pvt. Ltd.	1041	1057
23	PM15201L	IMR173	PHI seeds	1009	1061
24	PM15204L	IMR174	PHI seeds	1020	1042
25	HT 15046	IMR175	Hytech deed india pvt.ltd.	1031	1060
26	BH 412067	IMR176	PJTSAU,ARI, Rajendranagar Hyderabad.	1037	1082
27	115-08-01	IMR177	Kanchan ganga	1040	1044
28	BH 412065	IMR178	PJTSAU,ARI, Rajendranagar Hyderabad	1012	1081
29	HKH 425	IMR179	CCS HAU RRS Karnal	1024	1047
30	MFH 14-11	IMR180	TCA Dholi Muzaffarpur bihar	1007	1072
31	CCH 167	IMR181	Rohini seeds pvt. Ltd.	1006	1055
32	RCRMH 1 (HTMR1)	IMR182	UASR COA, Bheemaranaganudi	1034	1065
33	ADV 7037	IMR183	ADVANTA LTD.	1033	1073
34	DKC9176 (IQ8611)	IMR184	Monsanto India ltd.	1030	1063
35	DAS-MH-902	IMR185	Dow AgroSciences pvt.ltd.	1008	1070
36	RCRMH 2 (HTMR2)	IMR186	UASR COA, Bheemaranaganudi	1018	1045
37	POLO Gold	IMR187	Kanchan ganga	1015	1048
38	Seedtech 2324 (C)	IMR188	BISCO	1017	1080
39	Buland(C)	IMR189	PAU, Ludhiana	1016	1043
40	Bio 9681 (C)	IMR190	Bioseed	1013	1053
41	P3522 (C)	IMR191	Pioneer	1029	1059

TRIAL NO.11-NIVT : PATHOLOGY NIVT-Medium
MATURITY : NIVT-MEDIUM
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 2
PATHOLOGY LOCATIONS : 9
LOCATIONS NAME : LUDHIANA, DHAULAKUAN, DHOLI, HYDERABAD,
ARBHAVI, COIMBATORE, MANDYA, MANDYA KARNAL

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS	
				R I	R II
1	WH 1019	IMR240	MPAUT Banswara	1151	1179
2	WH 1006	IMR241	MPAUT Banswara	1135	1180
3	WH 2127	IMR242	MPAUT Banswara	1159	1166
4	KDMH 01	IMR243	UAS DHARWAD	1144	1186
5	DKC8171 (IP8204)	IMR244	Monsanto India ltd.	1131	1187
6	KNMH-4512	IMR245	PJTSAU, ARS, Karimnagar	1130	1181
7	KDMH 03	IMR246	UAS DHARWAD	1142	1188
8	MMH 14-5	IMR247	TCA Dholi	1156	1178
9	KNMH-4511	IMR248	PJTSAU, ARS, Karimnagar	1141	1174
10	HKH 350	IMR249	CCS HAU RRS Karnal	1148	1182
11	KNMH-4510	IMR250	PJTSAU, ARS, Karimnagar	1152	1184
12	K-88	IMR251	Kanchan ganga seed	1133	1173
13	IMH 1547	IMR252	IIMR New Delhi	1140	1163
14	IMH 1545	IMR253	IIMR New Delhi	1139	1162
15	VEH 15-1	IMR254	BHU Varanasi 221006	1147	1175
16	KH-2001 Gold	IMR255	Kanchan ganga seed	1150	1172
17	WH 2140	IMR256	MPAUT Banswara	1149	1160
18	KNMH-4503	IMR257	PJTSAU, ARS, Karimnagar	1157	1189
19	BLH 109	IMR258	Bisco bio sciences pvt ltd.	1154	1164
20	HT 15066	IMR259	Hytech deed india pvt.ltd.	1155	1177
21	DKC8172 (IQ8318)	IMR260	Monsanto India ltd.	1138	1161
22	KNMH-4509	IMR261	PJTSAU, ARS, Karimnagar	1134	1171
23	BLH 110	IMR262	Bisco bio sciences pvt ltd.	1146	1169
24	MMH 14-7	IMR263	TCA Dholi	1145	1167
25	WH 1010	IMR264	MPAUT Banswara	1143	1176
26	IMH 1546	IMR265	IIMR New Delhi	1153	1183
27	Bio 9637 (C)	IMR266	Bioseed	1158	1168
28	Bio 9544 (C)	IMR267	Bioseed	1132	1170
29	DHM 117 (C)	IMR268	PJTSAU, Hyderabad	1136	1165
30	HM10 (C)	IMR269	CCS HAU RRS Karnal	1137	1185

TRIAL NO.11-AVT-I-II-LATE : PATHO-ENTO-LATE
MATURITY : AVT-I-II LATE
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 2
LOCATIONS NO. : 9 (Patho)+2 (Ento)=11
PATHOLOGY : LUDHIANA, DHAULAKUAN, DHOLI, HYDERABAD,
ARBHAVI, COIMBATORE, MANDYA, MANDYA KARNAL

ENTOMOLOGY : HYDERABAD, KOLHAPUR

E.No.	Entry Name	IMR Code	INSTITUTE NAME	REPLICATIONS	
				R I	R II
AVT-II-LATE					
1	Rasi-864	IMR330	Rasi Seeds (P) Ltd.	1470	1523
2	HTMH 5202	IMR331	Hytech Seed	1497	1532
3	Rasi-950	IMR332	Rasi Seeds (P) Ltd.	1484	1533
4	GK 3155	IMR333	Ganga Kaveri Seeds	1483	1514
5	KMH-1411	IMR334	Kaveri seed	1491	1539
6	Rasi-393	IMR335	Rasi Seeds (P) Ltd.	1474	1538
7	KH-2192	IMR336	Kanchan ganga seed	1502	1512
8	KH-3021	IMR337	Kanchan ganga seed	1471	1519
9	CP.838	IMR338	Charoen pokphand seeds	1495	1526
10	CP.333	IMR339	Charoen pokphand seeds	1476	1524
11	GK 3118	IMR340	Ganga Kaveri Seeds	1496	1530
12	DMRH 1308	IMR341	IIMR New Delhi	1503	1518
13	X35F880	IMR342	PHI seeds	1488	1506
14	DKC9161 (IM8222)	IMR343	Monsanto India ltd.	1490	1527
15	CP.999	IMR344	Charoen pokphand seeds	1482	1508
16	HTMH 5108	IMR345	Hytech Seed	1494	1537
17	CP.111	IMR346	Charoen pokphand seeds	1493	1516
AVT-I-LATE					
18	DKC9160 (IP8510)	IMR347	Monsanto India ltd.	1498	1509
19	PM14207L	IMR348	PHI seeds	1492	1515
20	NMH-1290	IMR349	NUZIVEEDU SEEDS	1473	1507
21	SYN426702	IMR350	SYNGENTA India Ltd.	1481	1536
22	PM14208L	IMR351	PHI seeds	1501	1525
23	PM14206L	IMR352	PHI seeds	1480	1511
24	GK 3153	IMR353	Ganga Kaveri Seeds	1487	1521
25	HT 142107	IMR354	Hytech deed india	1500	1520
26	KH-2977	IMR355	Kanchan ganga seed	1478	1510
27	PM14205L	IMR356	PHI seeds	1486	1534
28	DKC9165 (IM8119)	IMR357	Monsanto India ltd.	1479	1535
29	GK 3124	IMR358	Ganga Kaveri Seeds	1489	1522
30	PM14203L	IMR359	PHI seeds	1504	1529
31	CP.444	IMR360	Charoen pokphand seeds	1475	1528
32	Rasi-394	IMR361	Rasi Seeds (P) Ltd.	1477	1505
33	Seedtech 2324(C)	IMR362	Bisco	1499	1517
34	Buland (C)	IMR363	PAU, Ludhiana	1472	1531
35	Bio 9681(C)	IMR364	Bioseed	1485	1513

TRIAL NO.11-AVT-I-II-MEDIUM : PATHO-ENTO-MEDIUM
MATURITY : AVT-I-II MEDIUM
YEAR : 2015-2016
SEASON : RABI
NO. OF ROWS : 2
ROW LENGTH (METRE) : 4
NO. OF REPLICATIONS : 2
LOCATIONS NO. : 9 (Patho)+2 (Ento)=11
PATHOLOGY : LUDHIANA, DHAULAKUAN, DHOLI, HYDERABAD,
ARBHAVI, COIMBATORE, MANDYA, MANDYA, KARNAL

ENTOMOLOGY : HYDERABAD, KOLHAPUR

E.No.	Entry Name	IIMR Code	INSTITUTE NAME	REPLICATIONS	
				RI	R II
AVT-II-MEDIUM					
1	BL 147	IMR430	Bisco bio sciences	1551	1577
2	IM8303	IMR431	Monsanto India ltd.	1558	1587
3	BL 900	IMR432	Bisco bio sciences	1562	1583
4	BL 798	IMR433	Bisco bio sciences	1553	1581
5	DMRH 1301	IMR434	IIMR New Delhi	1559	1573
6	KH-517	IMR435	Kanchan ganga	1560	1574
AVT-I-MEDIUM					
7	HT 1412081	IMR436	Hytech deed india pvt.ltd.	1569	1589
8	BLH 101	IMR437	Bisco bio sciences pvt ltd.	1566	1584
9	DMRH 1419	IMR438	IIMR New Delhi	1556	1585
10	BLH 102	IMR439	Bisco bio sciences pvt ltd.	1563	1571
11	DKC9166 (IM8013)	IMR440	Monsanto India ltd.	1552	1586
12	BH 412044	IMR441	PJTSAU,ARI, Hyderabad.	1565	1588
13	CP.222	IMR442	Charoen pokphand seeds	1561	1580
14	BH 412066	IMR443	PJTSAU,ARI, Hyderabad.	1564	1572
15	PM142096M	IMR444	PHI seeds	1555	1582
16	Bio 9637(C)	IMR445	Bioseed	1568	1590
17	HM10 (C)	IMR446	HAU, Karnal	1567	1579
QPM-I					
18	MMHQPM 6-12-13	IMR447	TCA Dholi	1570	1575
19	VEHQ 15-1	IMR448	BHU Varanasi	1557	1591
20	HQPM 1 (C)	IMR449	HAU, Karnal	1554	1578
21	HQPM 4 (C)	IMR450	HAU, Karnal	1550	1576

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BREEDING

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4	Performance of medium maturing experimental hybrids/single crosses/top crosses & composites at Karnal, Ludhiana, Pantnagar, Kanpur, Bahraich, Bhubaneshwar, Dholi, Ranchi, Varanasi, Coimbatore, Dharwad, Karimnagar, Kolhapur, Mandya, Vagarai, Banswara, Godhra in trial no. Tr 5 (AVT I-Medium) during rabi (2015-16)	BR54-60
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Breeding summary of AICRP Rabi 2015-16 trials

During *Rabi* 2015-16, total 112 entries were received for multi-location evaluation in AICRP late, medium maturity and quality protein maize (QPM) trials. Of 112 test entries, 63 entries were received in NIVT, 24 in AVT-I, 23 in AVT-II and 2 entries in QPM trials. Total seven different breeding trials were constituted and put for evaluation at 18 test centres across the four zones. There were 89 entries available for promotion from first and second year of testing, out of which only 32 entries got promoted to their advance stage of testing. The entries were promoted based on the criteria enlisted in table 1. The detail list of entries promoted from rabi 2015-16 to rabi 2016-17 are given in table 2. Out of 37 test entries evaluated in NIVT late, 14 were found superior for set criteria and therefore were promoted to AVT I-Late. Similarly, in NIVT medium, 3 out of 26 entries; AVT-I Late, 5 out of 15; AVT-I Medium, 8 out of 9, and in QPM 2 out of 2 were found superior and hence, promoted to next level of their testing during Rabi 2016-17.

Table 1. Promotion Criteria used to prepare promotion list for entries from Rabi 2015-16 to Rabi 2016-17

S. No.	Criteria
1.	Test entry should have 10% superiority in yield over best relevant check in normal and 5% in QPM maize
2.	In extra-early, early and medium trials, the test entry should not exceed the relevant best check by 1.5 days in days to 50% silking.
3.	In addition to the above, the entry should have resistance to moderately resistance response for major diseases in a zone <i>*One location disease data in a zone was not considered for promotion criteria</i>

Table 2. List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NWPZ (Z2) Late maturity [NIVT Late (Tr.1) To AVT I Late (Tr.4)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
12	PM15205L	10804	1	12.5	Promoted
41	P3522 (C)	9605	6	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NEPZ (Z3) Late maturity [NIVT Late (Tr.1) To AVT I Late (Tr.4)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
7	DKC9175 (IP8514)	11001	1	33	Promoted
14	PM15204L	9835	2	18.9	Promoted
27	DKC9170 (IQ8579)	9664	3	16.8	Promoted
37	DKC9176 (IQ8611)	9589	4	15.9	Promoted
18	PM15201L	9587	5	15.9	Promoted

13	MM2222	9427	6	14	Promoted
12	PM15205L	9351	7	13.1	Promoted
33	PM15202L	9306	8	12.5	Promoted
28	KMH-3981	9209	9	11.3	Promoted
4	DAS-MH-901	9173	10	10.9	Promoted
41	P3522 (C)	8271	19	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
PZ (Z4) Late maturity [NIVT Late (Tr.1) To AVT I Late (Tr.4)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
41	P3522(C)	9204	6	-	No entry Promoted
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
CWZ (Z5) Late maturity [NIVT Late (Tr.1) To AVT I Late (Tr.4)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
18	PM15201L	10917	1	27.2	Promoted
24	CP.808	10785	2	25.7	Promoted
10	DKC9177 (IP8572)	10565	3	23.1	Promoted
7	DKC9175 (IP8514)	10514	4	22.5	Promoted
21	115-08-01	9592	5	11.8	Promoted
13	MM2222	9467	6	10.3	Promoted
37	DKC9176 (IQ8611)	9442	7	10	Promoted
41	P3522(C)	8582	15	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NWPZ (Z2) Medium maturity [NIVT Medium (Tr.2) To AVT I Medium (Tr.5)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
21	HT 15066	9389	2	13.3	Promoted
27	Bio 9637(C)	8286	8	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NEPZ (Z3) Medium maturity [NIVT Medium (Tr.2) To AVT I Medium (Tr.5)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
20	DKC8171 (IP8204)	9979	1	24.7	Promoted
12	BLH 109	8797	3	10	Promoted
28	Bio 9544(C)	8000	7	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
PZ (Z4) Medium maturity [NIVT Medium (Tr.2) To AVT I Medium (Tr.5)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
0	DKC8171 (IP8204)	9057	1	11.7	Promoted
12	BLH 109	8891	2	9.6	Promoted

28	Bio 9544(C)	8110	5	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
CWZ (Z5) Medium maturity [NIVT Medium (Tr.2) To AVT I Medium (Tr.5)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
28	Bio 9544(C)	8732	2	-	
	No entry Promoted				
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NWPZ (Z2) Late maturity [AVTI Late (Tr.4) To AVT II Late (Tr.7)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
13	DKC9165 (IM8119)	10715	1	15.8	Promoted
11	NMH-1290	10470	2	13.2	Promoted
16	Seedtech 2324(C)	9253	11	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NEPZ (Z3) Late maturity [AVTI Late (Tr.4) To AVT II Late (Tr.7)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
16	Seedtech 2324(C)	8806	10	-	No entry Promoted
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
PZ (Z4) Late maturity [AVTI Late (Tr.4) To AVT II Late (Tr.7)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
15	PM14208L	8533	1	10.1	Promoted
16	Seedtech 2324(C)	7754	8	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
CWZ (Z5) Late maturity [AVTI Late (Tr.4) To AVT II Late (Tr.7)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
6	Rasi-394	12262	1	48.7	Promoted
4	PM14205L	10035	2	21.7	Promoted
11	NMH-1290	9698	3	17.6	Promoted
17	Buland(C)	8244	7	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NWPZ (Z2) Medium maturity [AVTI Medium (Tr.5) To AVT II Medium (Tr.8)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
6	DKC9166 (IM8013)	10674	1	15.7	Promoted
10	Bio 9637(C)	9224	9	-	
List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017					
NEPZ (Z3) Medium maturity [AVTI Medium (Tr.5) To AVT II Medium (Tr.8)]					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
5	CP.222	9156	1	22.1	Promoted
6	DKC9166 (IM8013)	8937	2	19.1	Promoted

8	HT 1412081	8911	3	18.8	Promoted
11	HM10(C)	7502	8	-	

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

PZ (Z4) Medium maturity [AVTI Medium (Tr.5) To AVT II Medium (Tr.8)]

E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
6	DKC9166 (IM8013)	8633	1	30.4	Promoted
1	BLH 101	7975	2	20.4	Promoted
9	PM142096M	7788	4	17.6	Promoted
7	BLH 102	7782	5	17.5	Promoted
8	HT 1412081	7645	6	15.4	Promoted
4	DMRH 1419	7302	7	10.3	Promoted
3	BH 412066	7282	8	10	Promoted
11	HM10(C)	6623	9	-	

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

CWZ (Z5) Medium maturity [AVTI Medium (Tr.5) To AVT II Medium (Tr.8)]

E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
3	BH 412066	9779	1	26.2	Promoted
10	Bio 9637(C)	7747	3	-	

QPM Trial

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

NWPZ (Z2) QPMI TO QPMII

E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
6	HQPM 4(C)	7803	2	-	No entry Promoted

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

NEPZ (Z3) QPMI TO QPMII

E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
5	HQPM 1(C)	7963	4	-	No entry Promoted

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

PZ (Z4) QPMI TO QPMII

E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
1	MMHQPM 6-12-13	6390	2	16	Promoted
2	VEHQ 15-1	6062	3	10.1	Promoted
5	HQPM 1(C)	5508	5	-	

List of Entries promoted from Rabi 2015-16 to Rabi 2016-2017

CWZ (Z5) QPMI TO QPMII No entry Promoted					
E.N.	Hybrids Name	Yield (Kg/Hac)	Rank	%Sup	Final Remark
5	HQPM 1(C)	6573	4	-	

ICAR-IIMR identified stable source of charcoal rots resistance in QPM genetic background

A set of 135 inbred lines comprising of 117 Normal, 15 QPM and 3 Popcorn, were evaluated for charcoal rot disease (*Macrophomina phaseolina*) at multiple environments under artificially created epiphytotics in hot-spots locations. The 15 QPM genotypes were also evaluated for their percent lysine and tryptophan content in multiple environments. The promising genotypes identified with stable resistance against charcoal rot disease and high in percent lysine and tryptophan content in three environments were again evaluated and confirmed for their disease reaction (Table 3) and quality traits (Table 4 & 5) during Kharif 2015 at New Delhi (hot-spots for charcoal rot). The mean performance for morpho-agro traits of potential donors vis-a-vis checks has been given in table 6. The promising identified lines viz., DQL1019, DQL1020 and DQL1022 could be used as potential donor lines for charcoal rot resistance, high lysine and tryptophan content in QPM genetic background.

Table 3. Stable sources of resistance against charcoal rot disease in maize

S. No.	Inbred name	Rabi 2012-13 (Hyderabad)-E1	Kharif 2013 (Delhi)-E2	Kharif 2013 (Hyderabad)-E3	Kharif 2015 (Delhi)-	Mean	Remarks
					E4		
1	DQL 1020	2.3	2.3	2.5	2.1	2.3	R
2	DML 339	2.8	2.4	2.1	2.7	2.5	R
3	DQL 1019	2.3	2.2	2.5	2.7	2.4	R
4	DQL 1005	2.5	2.0	3.0	3.2	2.7	R
5	DML33	2.3	2.8	3	5.4	3.4	MR
6	DML 289	3	2.3	2.8	4.7	3.2	MR
7	DML50	5	2.4	4.8	3.7	4.0	MR
8	DQL 1022	4.3	1.8	4.5	3.9	3.6	MR
9	DML315	4.1	3.1	4	2.8	3.5	MR
10	CM117-3-4-1 (C)	3.1	2.7	3	2.4	2.8	R
11	WOSC (C)	7	7	7.6	7.2	7.2	S

E*= Environments, R= Resistant, MR= Moderately Resistant, S- Susceptible, C = Check; Rating scale 1-3.0 disease resistance (R); 3.1-5.0 moderately resistance (MR) and 5.1-9.0 susceptible (S)

Table 4. Genotypes identified with high Lysine content (%)

S. No.	Inbred name	Rabi 2012-13 (Hyderabad)- E1	Kharif 2013 (Delhi)- E2	Rabi 2013-14 (Delhi)- E3	Kharif 2015 (Delhi)- E4	Mean	% Sup. over C1 C2	
1	DQL 1019	3.59	3.71	3.89	3.11	3.58	33.4	32.4
2	DQL 1022	3.51	3.63	3.82	3.71	3.67	36.8	35.8
3	DQL 1017	3.1	3.23	3.38	2.83	3.14	16.9	16.1
4	DQL 1005	2.98	3.1	3.28	3.32	3.17	18.2	17.4
5	DQL 1018	2.64	2.69	2.89	3.3	2.88	7.5	6.7
6	DQL 1001	3.01	3.2	3.55	2.81	3.14	17.26	16.39
7	DQL1020	-	-	-	3.21	3.21	19.78	19.00
8	CML176 (C1)	2.51	2.68	2.71	2.83	2.68	-	-
9	HKI 163 (C2)	2.57	2.71	2.87	2.65	2.70	-	-

E*= Environments, C1, C2= Checks

Table 5. Genotypes identified with high Tryptophan content (%)

S.No	Inbred name	Rabi 2012-13 (Hyderabad)- E1	Kharif 2013 (Delhi)-E2	Rabi 2013-14 (Delhi)-E3	Kharif 2015 (Delhi)-E	Mean	% Sup. Over C1 C2	
1	DQL 1019	0.87	0.89	0.94	0.84	0.89	37.2	32.1
2	DQL 1022	0.85	0.88	0.91	0.8	0.86	32.3	28.4
3	DQL 1017	0.73	0.78	0.81	0.82	0.79	20.8	17.2
4	DQL 1005	0.69	0.74	0.79	0.73	0.74	13.5	10.1
5	DQL 1018	0.63	0.65	0.68	0.72	0.67	3.1	0.0
6	DQL 1001	0.7	0.76	0.85	0.73	0.76	16.9	13.4
7	DQL1020	-	-	-	0.78	0.78	20.0	16.4
8	CML176 (C1)	0.6	0.64	0.65	0.69	0.65	-	-
9	HKI 163 (C2)	0.61	0.65	0.68	0.73	0.67	-	-

E*= Environments, C1, C2= Checks

Table 6: Mean performance of donor lines for morph-agro traits in kharif 2014-2015

S.No	Inbred name	DA	DS	ASI	EH	EL	ED	TW
1	DML1	59	61.5	2.5	53.3	11.8	3.75	316
2	DML 339	58.5	60.5	2.0	55.9	9.8	3.95	294.5
3	DQL 1020	56	58.5	2.5	48.6	8.8	3.65	183
4	DQL1019	61.5	64.5	3.0	53	10.7	4.4	186
5	DML315	55.5	59	3.5	51.7	12.7	3.75	168.5
6	DQL1022	63	65.5	2.5	50.4	12.2	4.0	216
7	DQL 1030	58.5	61.5	3.0	55	8.8	3.7	175.5
8	DQL1017	61.5	63.5	2.0	43.5	13.9	3.05	175.5
9	CM117-3-4-1(C)	57.5	60.5	3.0	55.2	11.2	4.5	187.5
10	WOSC (C)	57	60.5	3.5	54.4	10.9	4.2	184.5
11	HKI 163(C)	62.5	65.5	3.0	47.15	12.75	3.8	162.5
12	BML6 (C)	61	64.5	3.5	55.1	13.75	4.6	136.5
13	CML269(C)	58	60.5	2.5	55.9	12	3.95	206.5
14	HKI1128(C)	59	61.5	2.5	43.6	11.9	3.65	225

*DA: Days to anthesis (50%), DS: Days to silking (50%), ASI: Anthesis silking Interval, EH: Ear height (cm), EL: Ear length (cm) , ED: Ear diameter (cm), TW: Test weight, 1000 kernel weight (g)

Identification of maize genotypes with high iron (Fe) and zinc (Zn) content in kernels

Maize is a major cereal crop widely consumed in developing countries, where there is a high prevalence of iron (Fe) deficiency anemia. The major cause of Fe deficiency in these countries is inadequate intake of bio-available Fe. Sufficient genetic variation is available in the maize germplasm for both iron and zinc content (Dixon et al., 2000). Lung'aho MG, et al., 2011, suggested that iron grain concentration trait is highly interactive and is controlled by many QTLs. The available genetic variability may be utilized to identify the major genomic regions contributes for Fe and Zn enhancement in maize kernels. Further, the available variability in germplasm can be use to develop the Fe and Zn enriched genotypes through breeding. Considering this, a set of trials were constituted and conducted for inbred lines (300) and hybrids (51) at multiple locations during 2015-16 and selfed kernels were used for Fe and Zn content analysis.

Procedures followed for Fe and Zn analysis:

Selfed cobs in each replication were harvested with husk and stored in cloth bags and then dried up to 14% grain moisture content. Cobs/kernels were avoided from soil and any other iron/zinc containing particles. Each cobs of genotype were shelled and bulked per replication. Random sample per

replication was drawn and dried in hot air oven at $60\pm 2^{\circ}\text{C}$ for 6 hours. The oven-dried samples of grain were ground to pass through 40 mesh sieve in a Macro-Wiley Mill. A 0.5 g triplicate sample of grounded grain was taken in to flask for analysis to determine the Zn and Fe concentrations. After adding 10 ml nitric acid, it was then kept overnight for pre-digestion (Prasad *et al.*, 2006). This was followed by adding of 2.5 ml of hydrogen peroxide (Linag *et al.*, 2008) in the samples and then digested by heating it at 200°C until the contents are reduced to 2-3 ml. After cooling, aliquot was filtered by Whatman filter paper and make up the volume up to 100 ml by washing and diluting. The nutrient content in extract was estimated using halocathode lamp in atomic absorption spectrophotometer (AAS) and observation was recorded at wavelength of 328 nm for iron and 213.9 nm for zinc.

In inbred lines, the Fe and Zn content ranges from 8.1-63.5 and 5.7-57.5ppm, with mean value of 32.7 and 29.5ppm, respectively across the locations. Similarly in hybrids, the values for Fe and Zn content ranges from 26.5-44.3 and 15.9-37.3 ppm, with mean value of 35.5 and 28.7 ppm, respectively across the locations. Among newly developed inbreds lines, DML416-1 has shown relatively higher Fe content across the environments. Besides, DQL1005 and IML15-55P have shown relatively higher zinc content across the multiple environments. Similarly, among newly hybrids developed, DMRH1308, 1306 and DMRHP 1402 were showing relatively high zinc content across multiple environments. Further a new hybrid DMRH1306 was also showing average of 37.2 ppm of iron content in its kernels endosperm. The detail of hybrids and inbred with high Fe and Zn content is given below:

Table 7. Maize inbred lines identified with relatively high zinc content (ppm)

Genotypes	Zinc content (ppm)				
	ICAR-IIMR Laboratory (2015)				ICAR-IARI Laboratory (KH2016)
	Bhiloda (E1)	Dholi (E2)	Bajaura (E3)	Delhi (E4)	Delhi (E5)
IML15-55P	44.1	48.4	44.5	40.4	33.5
DQL 1005	42.4	48.0	41.3	39.8	37.3
CML 304	27.8	38.0	40.4	35.2	31.5
DML-19	40.7	46.4	39.2	34.3	27.6
DML-193	48.3	35.9	41.6	40.2	29.3
UMI 1210-C	25.1	34.5	26.1	21.8	23.4
CML 317-C	37.4	22.7	15.4	25.2	29.3

*E1-E5= Environments (total 5), KH=Kharif Season: 2015, 2016

Table 8. Maize inbred lines identified with relatively high iron content (ppm)

Genotypes	Iron content (ppm)				
	ICAR-IIMR Laboratory (KH 2015)				ICAR-IARI Laboratory (KH 2016)
	Bhiloda (E1)	Dholi (E2)	Bajaura (E3)	Delhi (E4)	Delhi (E5)
DML-416-1	39.8	49.4	55.0	45.3	44.8
CM 213	34.1	28.8	38.6	40.2	39.2
IML15-2	39.3	53.3	40.0	34.2	45.1
DML-134B	50.6	36.6	42.4	40.4	34.5
CML 40BBB	49.3	40.1	35.6	44.1	37.1
UMI 1210-C	24.2	26.1	16.2	19.9	29.1
BML 6-C	29.0	23.9	13.8	16.2	32.1

*E1-E5= Environments (total 5) KH=Kharif Season: 2015, 2016

Table 9. Maize hybrids identified with relatively high zinc content (ppm)

Genotypes	ICAR-IIMR Laboratory (KH2015)				ICAR-IARI Laboratory (KH2016)
	Dholi (E1)	Hyderabad (E2)	Udaipur (E3)	Varanasi (E4)	Delhi (E5)
DMRH 1308	31.4	39.5	35.6	36.5	49.6
DMRHP 1402	40.5	42.3	51.2	27.6	49.3
DMRH1306	36.60	30.75	34.70	19.29	38.7

*E1-E5= Environments (total 5) KH=Kharif Season: 2015, 2016

TABLE No. 1: PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR1 DURING RABI (2015-16)

S. No.	PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																				
		KARN	R	LUDH	R	PANT	R	KANP	R	ZN 2				ZN 3								
									MEAN	R	BAHR	R	BHUB	R	DHOL	R	RANC	R	VARA:	MEAN	R	
1	AMH-3436	5160	34	6662	37	9903	21	7949	31	7419	34	6569	16	5167	41	7028	38	11247	10	8660	7735	29
2	ADV 0990293	6791	14	8611	22	9534	24	8937	10	8468	22	6352	20	6612	16	8755	20	9757	25	8151	7926	24
3	Proline 999	4891	38	6077	40	8458	36	9470	9	7224	37	5093	35	6254	25	7060	37	9580	28	9282	7454	32
4	DAS-MH-901	6838	13	9931	10	11323	15	7567	35	8915	14	8049	6	6811	13	7801	27	12575	5	10628	9173	10
5	BH 412065	5714	31	7792	28	7660	41	8361	19	7382	35	4347	41	5875	30	8256	22	8428	34	9418	7265	34
6	HT 15046	8705	3	8802	21	12446	11	8194	25	9537	7	5238	32	5867	31	9397	12	13607	3	11011	9024	11
7	DKC9175 (IP8514)	7280	7	10002	9	12935	7	9651	7	9967	3	10367	1	7003	9	11083	3	13815	1	12740	11001	1
8	MM2323	6546	18	9643	11	13222	5	8623	16	9509	8	6577	15	6571	17	8903	18	7774	36	10376	8040	23
9	PM15203L	5746	29	10265	6	9408	27	8633	15	8513	21	5430	27	6296	24	7095	36	7738	37	11791	7670	31
10	DKC9177 (IP8572)	6130	24	9398	12	11859	13	9750	5	9284	10	6076	24	5316	38	7782	28	11783	9	10530	8297	17
11	MFH 14-11	8568	4	6452	39	9613	23	8251	22	8221	26	7236	10	5830	32	5554	41	6245	40	6160	6205	41
12	PM15205L	10658	1	10697	4	13853	3	8009	29	10804	1	9660	2	5435	36	7459	34	13789	2	10414	9351	7
13	MM2222	8254	5	9266	13	13094	6	7942	32	9639	5	6058	25	7943	3	10816	4	11216	12	11101	9427	6
14	PM15204L	7047	10	8972	18	13942	2	8830	12	9698	4	7633	8	5991	29	11921	2	12389	6	11240	9835	2
15	RCRMH 2 (HTMR2)	7286	6	7839	27	9307	29	9707	6	8535	20	5006	36	6724	14	8907	17	10437	19	7759	7767	28
16	POLO Gold	5509	32	6755	36	9936	20	6780	41	7245	36	4827	38	5307	39	7210	35	10457	18	7319	7024	39
17	DAS-MH-902	7235	8	10339	5	8876	32	8662	14	8778	16	7866	7	5684	34	8059	24	7134	39	12735	8296	18
18	PM15201L	6211	22	7339	31	9994	19	8232	23	7944	31	6955	11	6965	11	12084	1	10055	21	11875	9587	5
19	PM15206L	5910	27	10061	8	12430	12	8307	20	9177	11	6087	23	8465	1	8856	19	8059	35	9872	8268	20
20	IMH 1544	5198	33	7110	33	8194	39	8136	26	7159	38	5338	29	7156	7	7749	30	7714	38	8241	7239	36
21	115-08-01	4969	37	8806	20	9017	31	7426	37	7554	33	5329	30	6550	18	10027	9	9714	26	9025	8129	21
22	BH 412067	9475	2	6493	38	8257	38	8297	21	8130	29	4422	40	6364	22	10745	6	8924	31	5763	7244	35
23	GK 3196	4440	40	9074	17	12751	10	7974	30	8560	19	6017	26	5685	33	9333	13	10027	22	9325	8077	22
24	CP.808	6127	25	9237	15	9995	18	9959	4	8829	15	6793	12	6490	20	9670	10	10691	16	10174	8764	12
25	CCH 167	6630	16	7758	29	9422	26	8779	13	8147	27	5239	31	6403	21	7763	29	12299	7	9880	8317	16
26	CCH 9241	6244	21	8083	26	9884	22	8223	24	8109	30	6281	21	6876	12	10765	5	9803	23	8215	8388	15

TABLE No. 1: (Contd.)

S. No.	PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
		COIM	R	DHAR	R	KARI	R	KOLH	R	MAND	R	VAGA	R	ZN 4		ZN 5		OV'L					
		MEAN	R	BANS	R	GODH	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R						
1	AMH-3436	10819	16	8543	18	5325	23	6810	30	8711	19	7298	27	7917	26	11033	14	5142	34	8088	23	7766	30
2	ADV 0990293	11228	7	8165	23	6242	7	7342	25	9564	12	8949	7	8582	13	9933	24	5586	27	7759	25	8265	21
3	Proline 999	8995	40	7840	25	4231	37	6477	34	41	5621	39	6633	37	9986	23	6252	18	8119	22	7358	34	
4	DAS-MH-901	10227	22	9567	8	5824	13	7848	17	9861	10	7591	25	8486	14	10301	17	6629	12	8465	16	8787	13
5	BH 412065	9037	38	8248	22	4006	40	6609	32	7966	27	6985	31	7142	35	9209	30	6169	20	7689	29	7299	35
6	HT 15046	10969	11	10266	4	4742	34	9589	9	11912	1	8589	14	9345	4	8561	36	8724	5	8642	14	9213	6
7	DKC9175 (IP8514)	9861	27	9753	7	6110	8	10761	6	10569	8	8553	15	9268	5	11499	8	9529	2	10514	4	10089	1
8	MM2323	9496	31	8977	12	5166	27	8146	14	7577	31	8437	16	7967	25	8669	35	6756	11	7713	27	8321	17
9	PM15203L	10952	13	7464	28	5901	10	7996	15	8383	24	7970	21	8111	18	10275	18	8383	6	9329	8	8219	23
10	DKC9177 (IP8572)	10677	17	7922	24	6979	1	11054	4	8624	22	11547	2	9467	2	14707	1	6423	17	10565	3	9209	7
11	MFH 14-11	12529	2	4747	41	4020	39	5262	40	6075	40	7059	28	6615	38	7769	38	4641	37	6205	39	6824	40
12	PM15205L	10972	10	10622	2	5491	19	7035	27	6813	37	5947	37	7813	28	11985	5	6249	19	9117	12	9123	8
13	MM2222	10036	23	6506	35	6864	3	12141	1	8851	16	8403	18	8800	10	12409	3	6524	14	9467	6	9260	5
14	PM15204L	10354	21	7249	30	5392	21	7990	16	10995	5	9771	5	8625	12	11004	15	7466	8	9235	9	9305	4
15	RCRMH 2 (HTMR2)	9018	39	8385	19	4760	33	8835	10	8960	15	6186	32	7691	30	7091	39	6131	22	6611	37	7785	29
16	POLO Gold	9939	25	7195	32	5818	14	6329	36	8402	23	5898	38	7263	33	10038	20	5450	31	7744	26	7245	37
17	DAS-MH-902	11380	5	8321	21	5248	25	5786	39	7763	29	9787	4	8048	22	11733	6	4719	36	8226	21	8313	18
18	PM15201L	10648	18	6673	34	5268	24	10695	7	11622	2	7830	23	8789	11	11483	10	10352	1	10917	1	9075	9
19	PM15206L	10428	20	8372	20	5665	18	7129	26	7978	26	8691	11	8044	23	10055	19	4399	40	7227	34	8280	19
20	IMH 1544	9176	36	6791	33	4913	29	7604	24	6576	39	8222	20	7214	34	9596	27	5495	28	7545	32	7248	36
21	115-08-01	9885	26	9446	9	6864	2	9692	8	8737	17	8712	10	8889	7	14463	2	4722	35	9592	5	8434	16
22	BH 412067	11044	8	7649	27	4828	32	6450	35	7856	28	6085	35	7319	32	8306	37	5636	25	6971	35	7447	33
23	GK 3196	8626	41	8636	17	4889	30	6986	29	7473	33	8805	9	7569	31	11429	11	5479	29	8454	17	8056	25
24	CP.808	9352	33	6291	37	5334	22	11307	3	9617	11	8867	8	8461	15	12060	4	9509	3	10785	2	8910	11
25	CCH 167	9730	29	9235	10	5782	16	10782	5	6808	38	7840	22	8363	16	9250	29	6147	21	7699	28	8220	22
26	CCH 9241	9394	32	11814	1	5162	28	6582	33	7047	35	8638	12	8106	19	9602	26	8084	7	8843	13	8276	20

TABLE No. 1 (Contd.)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	ZN 2									ZN 3												
	KARN	R	LUDH	R	PANT	R	KANP	R	MEAN	R	BAHR	R	BHUB	R	DHOL	R	RANC	R	VARA	R	MEAN	R
27 DKC9170(IQ8579)	5920	26	11147	3	12912	9	10051	3	10008	2	7589	9	6159	27	10716	7	12741	4	11113	9	9664	3
28 KMH-3981	7193	9	10070	7	8750	34	6968	39	8245	25	8174	5	8405	2	7849	26	10967	13	10649	13	9209	9
29 KMH-2852	6268	20	8499	24	12924	8	8584	17	9069	13	6445	18	6616	15	10239	8	9187	30	10766	12	8651	13
30 HKH 425	4192	41	5355	41	8056	40	7616	34	6305	41	6390	19	7246	6	7625	33	4955	41	7057	39	6655	40
31 ADV 7037	6766	15	8514	23	9405	28	8454	18	8285	23	6598	14	7250	5	9068	16	10826	14	8500	29	8448	14
32 AH 1261	4591	39	7119	32	9047	30	6919	40	6919	40	4573	39	5516	35	9228	15	11223	11	7825	36	7673	30
33 PM15202L	5129	35	11172	2	13289	4	8070	27	9415	9	6771	13	7267	4	9236	14	11857	8	11400	6	9306	8
34 MFH 14-9	5098	36	7406	30	8397	37	7473	36	7093	39	5389	28	6510	19	5943	40	9791	24	8529	28	7232	37
35 RCRMH 1 (HTMR1)	6198	23	7010	34	10224	17	9604	8	8259	24	8592	4	5254	40	7925	25	9550	29	7987	35	7862	27
36 GK 3197	6626	17	8944	19	8784	33	10076	2	8607	18	5109	34	7024	8	7699	32	10188	20	9488	22	7902	26
37 DKC9176(IQ8611)	6292	19	11432	1	11661	14	7121	38	9126	12	9486	3	6228	26	9459	11	10788	15	11985	3	9589	4
CHECKS																						
38 Seedtech 2324	5785	28	9249	14	8640	35	8869	11	8136	28	6541	17	6975	10	7703	31	8686	32	9701	21	7921	25
39 Buland	6897	11	6939	35	10738	16	10320	1	8724	17	5159	33	5409	37	8295	21	9698	27	8135	33	7339	33
40 Bio 9681	5728	30	8176	25	9498	25	7737	33	7785	32	6146	22	6060	28	6765	39	8631	33	8067	34	7134	38
41 P3522	6848	12	9091	16	14426	1	8055	28	9605	6	5005	37	6359	23	8206	23	10587	17	11195	8	8271	19
Location Mean	6417		8575		10538		8453		8496		6410		6437		8684		10120		9612		8253	
C.D. (5%)	589		1927		2093		790		1350		840		599		2597		2290		1491		1564	
C.V. (%)	5.65		13.83		12.22		5.75		-		8.06		5.73		18.4		11.19		9.55		-	
F (Prob)	0		0		0		0				0		0		0		0		0		0	
Plot Size	6		5.8		4.5		4.8		-		4.8		4.8		6		5.6		4.8		-	
AGRONOMY DATA																						
Sowing Date	23-11		28-01		12-12		8-12		-		26-11		1-12		3-12		5-02		26-11		-	
Harvest Date	24-05		14-06		9-06		6-05		-		10-05		16-04		6-06		9-06		20-04		-	
Irrigation Nos	9		15		6		4		-		5		-		4		7		4		-	
Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-	
Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-	
Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-	

TRIALS PLANNED AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, KALYANI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA

TABLE No. 1 (Contd.)

BR13

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																																											
	COIM	R DHAR				R KARI				R KOLH				R MAND				R VAGA				R MEAN				R BANS				R GODH				R MEAN				R MEAN				OV'L		
27 DKC9170(IQ8579)	10869	14	10620	3	6579	5	7701	22	10209	9	10427	3	9401	3	11516	7	6807	10	9162	11	9593	2																						
28 KMH-3981	13580	1	8739	16	5795	15	7781	21	8729	18	8269	19	8816	9	11279	13	5599	26	8439	18	8753	15																						
29 KMH-2852	9601	30	9762	6	5213	26	8539	13	10602	7	9464	6	8864	8	10028	22	6610	13	8319	20	8785	14																						
30 HKH 425	9744	28	8879	13	4050	38	6675	31	6918	36	2905	41	6529	40	6812	40	3490	41	5151	41	6351	41																						
31 ADV 7037	11603	4	7197	31	5996	9	7799	20	8709	20	8421	17	8288	17	8691	34	4463	39	6577	38	8133	24																						
32 AH 1261	9307	34	4984	40	5730	17	5900	38	7382	34	2940	40	6041	41	9128	31	6519	15	7824	24	6937	39																						
33 PM15202L	11258	6	8759	15	5855	12	6142	37	7670	30	8625	13	8051	21	11347	12	7102	9	9224	10	8879	12																						
34 MFH 14-9	9043	37	5587	39	4425	36	7000	28	7483	32	6089	34	6605	39	10034	21	5220	33	7627	31	7025	38																						
35 RCRMH 1 (HTMR1)	9947	24	7250	29	5877	11	7815	19	8290	25	7395	26	7762	29	9052	33	5749	23	7400	33	7866	27																						
36 GK 3197	9235	35	8824	14	3788	41	5075	41	8662	21	6175	33	6960	36	10331	16	6503	16	8417	19	7796	28																						
37 DKC9176(IQ8611)	10607	19	10068	5	6701	4	8558	12	11440	3	11586	1	9827	1	9402	28	9482	4	9442	7	9547	3																						
CHECKS																																												
38 Seedtech 2324	10836	15	7811	26	5446	20	7833	18	9174	14	7013	29	8019	24	9127	32	4494	38	6810	36	7875	26																						
39 Buland	11033	9	6475	36	4869	31	7671	23	11243	4	6023	36	7886	27	5425	41	5336	32	5381	40	7627	32																						
40 Bio 9681	12004	3	5877	38	4451	35	8584	11	10643	6	7003	30	8093	20	9854	25	5453	30	7654	30	7687	31																						
41 P3522	10966	12	9189	11	6539	6	11480	2	9435	13	7613	24	9204	6	11486	9	5678	24	8582	15	8951	10																						
Location Mean	10351		8163		5418		7995		8783		7762		8070		10145		6320		8232		8247																							
C.D. (5%)	1536		2528		722		1865		1126		603		1397		1378		334		856		1371																							
C.V. (%)	9.13		19.05		8.19		14.36		8.09		4.78		-		8.36		3.25		-		-																							
F (Prob)	0		0		0		0		0		0		0		0		0		0		0																							
Plot Size	4.8		4.8		4.8		6		5.6		4.8		-		4.8		4.8		-		-																							
AGRONOMY DATA																																												
Sowing Date	11-01		10-12		26-11		14-12		5-12		7-07		-		30-11		28-11		-		-																							
Harvest Date	10-05		27-04		7-04		13-05		21-04		2-05		-		2-05		7-04		-		-																							
Irrigation Nos	10		5		14		-		12		11		-		6		7		-		-																							
Fertilizer Applied N	250		150		240		120		150		250		-		150		120		-		-																							
Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-																							
Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-																							

TRIALS PLANNED AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, KALYANI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA

TABLE No. 1 (Cont..)

S. No	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Seedtech 2324																					
		ZN 2					ZN 3					ZN 4					ZN 5	OV'L					
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	AMH-3436	-	-	14.6	-	-	0.4	-	-	29.5	-	-	-	9.4	-	-	-	4.1	-	20.9	14.4	18.8	-
2	ADV 0990293	17.4	-	10.3	0.8	4.1	-	-	13.7	12.3	-	0.1	3.6	4.5	14.6	-	4.2	27.6	7	8.8	24.3	13.9	5
3	Proline 999	-	-	-	6.8	-	-	-	-	10.3	-	-	-	0.4	-	-	-	-	-	9.4	39.1	19.2	-
4	DAS-MH-901	18.2	7.4	31.1	-	9.6	23.1	-	1.3	44.8	9.6	15.8	-	22.5	6.9	0.2	7.5	8.2	5.8	12.9	47.5	24.3	11.6
5	BH 412065	-	-	-	-	-	-	-	7.2	-	-	-	-	5.6	-	-	-	-	-	0.9	37.3	12.9	-
6	HT 15046	50.5	-	44.1	-	17.2	-	-	22	56.7	13.5	13.9	1.2	31.4	-	22.4	29.8	22.5	16.5	-	94.1	26.9	17
7	DKC9175 (IP8514)	25.8	8.1	49.7	8.8	22.5	58.5	0.4	43.9	59.1	31.3	38.9	-	24.9	12.2	37.4	15.2	22	15.6	26	112	54.4	28.1
8	MM2323	13.2	4.3	53	-	16.9	0.6	-	15.6	-	7	1.5	-	14.9	-	4	-	20.3	-	-	50.3	13.2	5.7
9	PM15203L	-	11	8.9	-	4.6	-	-	-	21.5	-	1.1	-	8.3	2.1	-	13.6	1.1	12.6	86.5	37	4.4	-
10	DKC9177 (IP8572)	6	1.6	37.3	9.9	14.1	-	-	1	35.7	8.5	4.7	-	1.4	28.1	41.1	-	64.7	18.1	61.1	42.9	55.1	16.9
11	MFH 14-11	48.1	-	11.3	-	1.1	10.6	-	-	-	-	-	15.6	-	-	-	-	0.7	-	-	3.3	-	-
12	PM15205L	84.2	15.7	60.3	-	32.8	47.7	-	-	58.8	7.3	18.1	1.3	36	0.8	-	-	-	-	31.3	39	33.9	15.8
13	MM2222	42.7	0.2	51.5	-	18.5	-	13.9	40.4	29.1	14.4	19	-	-	26	55	-	19.8	9.7	36	45.2	39	17.6
14	PM15204L	21.8	-	61.4	-	19.2	16.7	-	54.8	42.6	15.9	24.2	-	-	-	2	19.8	39.3	7.6	20.6	66.1	35.6	18.2
15	RCRMH 2 (HTMR2)	25.9	-	7.7	9.5	4.9	-	-	15.6	20.2	-	-	-	7.4	-	12.8	-	-	-	-	36.4	-	-
16	POLO Gold	-	-	15	-	-	-	-	-	20.4	-	-	-	-	6.8	-	-	-	-	10	21.3	13.7	-
17	DAS-MH-902	25.1	11.8	2.7	-	7.9	20.2	-	4.6	-	31.3	4.7	5	6.5	-	-	-	39.6	0.4	28.6	5	20.8	5.6
18	PM15201L	7.4	-	15.7	-	-	6.3	-	56.9	15.8	22.4	21	-	-	-	36.5	26.7	11.6	9.6	25.8	130.4	60.3	15.2
19	PM15206L	2.2	8.8	43.9	-	12.8	-	21.4	15	-	1.8	4.4	-	7.2	4	-	-	23.9	0.3	10.2	-	6.1	5.1
20	IMH 1544	-	-	-	-	-	-	2.6	0.6	-	-	-	-	-	-	-	-	17.2	-	5.1	22.3	10.8	-
21	115-08-01	-	-	4.4	-	-	-	-	30.2	11.8	-	2.6	-	20.9	26	23.7	-	24.2	10.9	58.5	5.1	40.8	7.1
22	BH 412067	63.8	-	-	-	-	-	-	39.5	2.7	-	-	1.9	-	-	-	-	-	-	-	25.4	2.4	-
23	GK 3196	-	-	47.6	-	5.2	-	-	21.2	15.4	-	2	-	10.6	-	-	-	25.6	-	25.2	21.9	24.1	2.3
24	CP.808	5.9	-	15.7	12.3	8.5	3.9	-	25.5	23.1	4.9	10.6	-	-	-	44.3	4.8	26.4	5.5	32.1	111.6	58.4	13.1
25	CCH 167	14.6	-	9	-	0.1	-	-	0.8	41.6	1.8	5	-	18.2	6.2	37.6	-	11.8	4.3	1.4	36.8	13	4.4
26	CCH 9241	7.9	-	14.4	-	-	-	-	39.8	12.9	-	5.9	-	51.3	-	-	-	23.2	1.1	5.2	79.9	29.9	5.1
27	DKC9170(IQ8579)	2.3	20.5	49.4	13.3	23	16	-	39.1	46.7	14.6	22	0.3	36	20.8	-	11.3	48.7	17.2	26.2	51.5	34.5	21.8
28	KMH-3981	24.3	8.9	1.3	-	1.3	25	20.5	1.9	26.3	9.8	16.3	25.3	11.9	6.4	-	-	17.9	9.9	23.6	24.6	23.9	11.1
29	KMH-2852	8.3	-	49.6	-	11.5	-	-	32.9	5.8	11	9.2	-	25	-	9	15.6	34.9	10.5	9.9	47.1	22.2	11.6
30	HKH 425	-	-	-	-	-	-	3.9	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-
31	ADV 7037	17	-	8.9	-	1.8	0.9	3.9	17.7	24.6	-	6.7	7.1	-	10.1	-	-	20.1	3.4	-	-	-	3.3
32	AH 1261	-	-	4.7	-	-	-	-	19.8	29.2	-	-	-	-	5.2	-	-	-	-	0	45.1	14.9	-
33	PM15202L	-	20.8	53.8	-	15.7	3.5	4.2	19.9	36.5	17.5	17.5	3.9	12.1	7.5	-	-	23	0.4	24.3	58	35.4	12.7
34	MFH 14-9	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	-	-	-	-	9.9	16.2	12	-
35	RCRMH 1 (HTMR1)	7.1	-	18.3	8.3	1.5	31.4	-	2.9	10	-	-	-	-	7.9	-	-	5.4	-	-	27.9	8.7	-
36	GK 3197	14.5	-	1.7	13.6	5.8	-	0.7	-	17.3	-	-	-	13	-	-	-	-	-	13.2	44.7	23.6	-
37	DKC9176(IQ8611)	8.8	23.6	35	-	12.2	45	-	22.8	24.2	23.5	21.1	-	28.9	23	9.3	24.7	65.2	22.5	3	111	38.6	21.2
38	CHECKS																						
38	Seedtech 2324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Buland	19.2	-	24.3	16.4	7.2	-	-	7.7	11.7	-	-	1.8	-	-	-	22.5	-	-	-	18.7	-	-
40	Bio 9681	-	-	9.9	-	-	-	-	-	-	-	-	10.8	-	-	9.6	16	-	0.9	8	21.3	12.4	-
41	P3522	18.4	-	67	-	18.1	-	-	6.5	21.9	15.4	4.4	1.2	17.7	20.1	46.6	2.8	8.6	14.8	25.9	26.3	26	13.7

TABLE No. 1 (Cont..)

S. No	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Buland																				OV'L	
		ZN 2					ZN 3					ZN 4					ZN 5						
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	AMH-3436	-	-	-	-	-	27.3	-	-	16	6.5	5.4	-	31.9	9.4	-	-	21.2	0.4	103.4	-	50.3	1.8
2	ADV 0990293	-	24.1	-	-	-	23.1	22.2	5.5	0.6	0.2	8	1.8	26.1	28.2	-	-	48.6	8.8	83.1	4.7	44.2	8.4
3	Proline 999	-	-	-	-	-	-	15.6	-	-	14.1	1.6	-	21.1	-	-	-	-	-	84.1	17.2	50.9	-
4	DAS-MH-901	-	43.1	5.4	-	2.2	56	25.9	-	29.7	30.6	25	-	47.8	19.6	2.3	-	26	7.6	89.9	24.2	57.3	15.2
5	BH 412065	-	12.3	-	-	-	-	8.6	-	-	15.8	-	-	27.4	-	-	-	16	-	69.7	15.6	42.9	-
6	HT 15046	26.2	26.8	15.9	-	9.3	1.5	8.5	13.3	40.3	35.4	23	-	58.5	-	25	6	42.6	18.5	57.8	63.5	60.6	20.8
7	DKC9175 (IP8514)	5.6	44.1	20.5	-	14.3	100.9	29.5	33.6	42.5	56.6	49.9	-	50.6	25.5	40.3	-	42	17.5	111.9	78.6	95.4	32.3
8	MM2323	-	39	23.1	-	9	27.5	21.5	7.3	-	27.6	9.6	-	38.6	6.1	6.2	-	40.1	1	59.8	26.6	43.3	9.1
9	PM15203L	-	47.9	-	-	-	5.2	16.4	-	-	44.9	4.5	-	15.3	21.2	4.2	-	32.3	2.9	89.4	57.1	73.4	7.8
10	DKC9177 (IP8572)	-	35.4	10.4	-	6.4	17.8	-	-	21.5	29.4	13.1	-	22.3	43.3	44.1	-	91.7	20.1	171.1	20.4	96.3	20.7
11	MFH 14-11	24.2	-	-	-	-	40.2	7.8	-	-	-	-	13.6	-	-	-	-	17.2	-	43.2	-	15.3	-
12	PM15205L	54.5	54.2	29	-	23.9	87.2	0.5	-	42.2	28	27.4	-	64	12.8	-	-	-	-	120.9	17.1	69.4	19.6
13	MM2222	19.7	33.5	21.9	-	10.5	17.4	46.8	30.4	15.7	36.5	28.4	-	0.5	41	58.3	-	39.5	11.6	128.7	22.3	75.9	21.4
14	PM15204L	2.2	29.3	29.8	-	11.2	47.9	10.7	43.7	27.8	38.2	34	-	11.9	10.7	4.2	-	62.2	9.4	102.8	39.9	71.6	22
15	RCRMH 2 (HTMR2)	5.6	13	-	-	-	-	24.3	7.4	7.6	-	5.8	-	29.5	-	15.2	-	2.7	-	30.7	14.9	22.9	2.1
16	POLO Gold	-	-	-	-	-	-	-	-	7.8	-	-	-	11.1	19.5	-	-	-	-	85	2.1	43.9	-
17	DAS-MH-902	4.9	49	-	-	0.6	52.5	5.1	-	-	56.6	13	3.1	28.5	7.8	-	-	62.5	2.1	116.3	-	52.9	9
18	PM15201L	-	5.8	-	-	-	34.8	28.8	45.7	3.7	46	30.6	-	3.1	8.2	39.4	3.4	30	11.5	111.6	94	102.9	19
19	PM15206L	-	45	15.8	-	5.2	18	56.5	6.8	-	21.4	12.7	-	29.3	16.4	-	-	44.3	2	85.3	-	34.3	8.6
20	IMH 1544	-	2.5	-	-	-	3.5	32.3	-	-	1.3	-	-	4.9	0.9	-	-	36.5	-	76.9	3	40.2	-
21	115-08-01	-	26.9	-	-	-	3.3	21.1	20.9	0.2	10.9	10.8	-	45.9	41	26.3	-	44.7	12.7	166.6	-	78.3	10.6
22	BH 412067	37.4	-	-	-	-	-	17.7	29.5	-	-	-	0.1	18.1	-	-	-	1	-	53.1	5.6	29.6	-
23	GK 3196	-	30.8	18.7	-	-	16.6	5.1	12.5	3.4	14.6	10.1	-	33.4	0.4	-	-	46.2	-	110.7	2.7	57.1	5.6
24	CP.808	-	33.1	-	-	1.2	31.7	20	16.6	10.2	25.1	19.4	-	-	9.5	47.4	-	47.2	7.3	122.3	78.2	100.4	16.8
25	CCH 167	-	11.8	-	-	-	1.5	18.4	-	26.8	21.5	13.3	-	42.6	18.7	40.5	-	30.2	6.1	70.5	15.2	43.1	7.8
26	CCH 9241	-	16.5	-	-	-	21.7	27.1	29.8	1.1	1	14.3	-	82.4	6	-	-	43.4	2.8	77	51.5	64.3	8.5
27	DKC9170(IQ8579)	-	60.6	20.2	-	14.7	47.1	13.9	29.2	31.4	36.6	31.7	-	64	35.1	0.4	-	73.1	19.2	112.3	27.6	70.3	25.8
28	KMH-3981	4.3	45.1	-	-	-	58.4	55.4	-	13.1	30.9	25.5	23.1	35	19	1.4	-	37.3	11.8	107.9	4.9	56.8	14.8
29	KMH-2852	-	22.5	20.4	-	4	24.9	22.3	23.4	-	32.4	17.9	-	50.8	7.1	11.3	-	57.1	12.4	84.8	23.9	54.6	15.2
30	HKH 425	-	-	-	-	-	23.9	34	-	-	-	-	-	37.1	-	-	-	-	-	25.6	-	-	-
31	ADV 7037	-	22.7	-	-	-	27.9	34	9.3	11.6	4.5	15.1	5.2	11.2	23.1	1.7	-	39.8	5.1	60.2	-	22.2	6.6
32	AH 1261	-	2.6	-	-	-	-	2	11.2	15.7	-	4.5	-	-	17.7	-	-	-	-	68.2	22.2	45.4	-
33	PM15202L	-	61	23.8	-	7.9	31.2	34.3	11.3	22.3	40.1	26.8	2	35.3	20.2	-	-	43.2	2.1	109.1	33.1	71.4	16.4
34	MFH 14-9	-	6.7	-	-	-	4.4	20.3	-	1	4.9	-	-	-	-	-	-	1.1	-	85	-	41.8	-
35	RCRMH 1 (HTMR1)	-	1	-	-	-	66.5	-	-	-	-	7.1	-	12	20.7	1.9	-	22.8	-	66.8	7.7	37.5	3.1
36	GK 3197	-	28.9	-	-	-	-	29.8	-	5.1	16.6	7.7	-	36.3	-	-	-	2.5	-	90.4	21.9	56.4	2.2
37	DKC9176(IQ8611) CHECKS	-	64.8	8.6	-	4.6	83.9	15.1	14	11.2	47.3	30.7	-	55.5	37.6	11.6	1.8	92.4	24.6	73.3	77.7	75.5	25.2
38	Seedtech 2324	-	33.3	-	-	-	26.8	28.9	-	-	19.3	7.9	-	20.6	11.9	2.1	-	16.4	1.7	68.2	-	26.6	3.3
39	Buland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Bio 9681	-	17.8	-	-	-	19.1	12	-	-	-	-	8.8	-	-	11.9	-	16.3	2.6	81.6	2.2	42.2	0.8
41	P3522	-	31	34.3	-	10.1	-	17.6	-	9.2	37.6	12.7	-	41.9	34.3	49.6	-	26.4	16.7	111.7	6.4	59.5	17.3

TABLE No. 1 (Cont..)

S. No	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE P3522																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	AMH-3436	-	-	-	-	-	31.2	-	-	6.2	-	-	-	-	-	-	-	-	-	-	-	-	
2	ADV 0990293	-	-	-	10.9	-	26.9	4	6.7	-	-	2.4	-	-	-	1.4	17.5	-	-	-	-	-	
3	Proline 999	-	-	-	17.6	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	10.1	-	-	
4	DAS-MH-901	-	9.2	-	-	-	60.8	7.1	-	18.8	-	10.9	-	4.1	-	4.5	-	-	-	16.8	-	-	
5	BH 412065	-	-	-	3.8	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	8.7	-	-	
6	HT 15046	27.1	-	-	1.7	-	4.7	-	14.5	28.5	-	9.1	0	11.7	-	26.2	12.8	1.5	-	53.7	0.7	2.9	
7	DKC9175 (IP8514)	6.3	10	-	19.8	3.8	107.1	10.1	35	30.5	13.8	33	-	6.1	-	12	12.3	0.7	0.1	67.8	22.5	12.7	
8	MM2323	-	6.1	-	7	-	31.4	3.3	8.5	-	-	-	-	-	-	-	10.8	-	-	19	-	-	
9	PM15203L	-	12.9	-	7.2	-	8.5	-	-	-	5.3	-	-	-	-	-	4.7	-	-	47.7	8.7	-	
10	DKC9177 (IP8572)	-	3.4	-	21	-	21.4	-	-	11.3	-	0.3	-	-	6.7	-	51.7	2.9	28	13.1	23.1	2.9	
11	MFH 14-11	25.1	-	-	2.4	-	44.6	-	-	-	-	14.2	-	-	-	-	-	-	-	-	-	-	
12	PM15205L	55.6	17.7	-	-	12.5	93	-	-	30.2	-	13.1	0.1	15.6	-	-	-	-	4.3	10.1	6.2	1.9	
13	MM2222	20.5	1.9	-	-	0.4	21	24.9	31.8	5.9	-	14	-	-	5	5.8	-	10.4	-	8	14.9	10.3	3.5
14	PM15204L	2.9	-	-	9.6	1	52.5	-	45.3	17	0.4	18.9	-	-	-	16.5	28.3	-	-	31.5	7.6	4	
15	RCRMH 2 (HTMR2)	6.4	-	-	20.5	-	0	5.7	8.5	-	-	-	-	-	-	-	-	-	-	8	-	-	
16	POLO Gold	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	DAS-MH-902	5.6	13.7	-	7.5	-	57.2	-	-	-	13.8	0.3	3.8	-	-	-	28.6	-	2.2	-	-	-	
18	PM15201L	-	-	-	2.2	-	39	9.5	47.2	-	6.1	15.9	-	-	-	23.2	2.8	-	-	82.3	27.2	1.4	
19	PM15206L	-	10.7	-	3.1	-	21.6	33.1	7.9	-	-	-	-	-	-	-	14.2	-	-	-	-	-	
20	IMH 1544	-	-	-	1	-	6.6	12.5	-	-	-	-	-	-	-	-	8	-	-	-	-	-	
21	115-08-01	-	-	-	-	-	6.5	3	22.2	-	-	-	-	2.8	5	-	14.4	-	25.9	-	11.8	-	
22	BH 412067	38.4	-	-	3	-	-	0.1	30.9	-	-	-	0.7	-	-	-	-	-	-	-	-	-	
23	GK 3196	-	-	-	-	-	20.2	-	13.7	-	-	-	-	-	-	-	15.7	-	-	-	-	-	
24	CP.808	-	1.6	-	23.6	-	35.7	2.1	17.8	1	-	6	-	-	-	1.9	16.5	-	5	67.5	25.7	-	
25	CCH 167	-	-	-	9	-	4.7	0.7	-	16.2	-	0.6	-	0.5	-	-	3	-	-	8.3	-	-	
26	CCH 9241	-	-	-	2.1	-	25.5	8.1	31.2	-	-	1.4	-	28.6	-	-	13.5	-	-	42.4	3	-	
27	DKC9170(IQ8579)	-	22.6	-	24.8	4.2	51.6	-	30.6	20.3	-	16.8	-	15.6	0.6	-	8.2	37	2.1	0.3	19.9	6.8	7.2
28	KMH-3981	5	10.8	-	-	-	63.3	32.2	-	3.6	-	11.3	23.8	-	-	-	8.6	-	-	-	-	-	
29	KMH-2852	-	-	-	6.6	-	28.8	4	24.8	-	-	4.6	-	6.2	-	12.4	24.3	-	-	16.4	-	-	
30	HKH 425	-	-	-	-	-	27.7	13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	ADV 7037	-	-	-	4.9	-	31.8	14	10.5	2.3	-	2.2	5.8	-	-	-	10.6	-	-	-	-	-	
32	AH 1261	-	-	-	-	-	-	-	12.5	6	-	-	-	-	-	-	-	-	-	14.8	-	-	
33	PM15202L	-	22.9	-	0.2	PM	35.3	14.3	12.5	12	1.8	12.5	2.7	-	-	-	13.3	-	-	25.1	7.5	-	
34	MFH 14-9	-	-	-	-	-	7.7	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	RCRMH 1 (HTMR1)	-	-	-	19.2	-	71.7	-	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-	
36	GK 3197	-	-	-	25.1	-	2.1	10.4	-	-	-	-	-	-	-	-	-	-	-	14.5	-	-	
37	DKC9176(IQ8611)	-	25.8	-	-	-	89.5	-	15.3	1.9	7.1	15.9	-	9.6	2.5	-	21.2	52.2	6.8	-	67	10	6.7
CHECKS																							
38	Seedtech 2324	-	1.7	-	10.1	-	30.7	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	Buland	0.7	-	-	28.1	-	3.1	-	1.1	-	-	-	0.6	-	-	-	19.2	-	-	-	-	-	
40	Bio 9681	-	-	-	-	-	22.8	-	-	-	-	-	9.5	-	-	-	12.8	-	-	-	-	-	
41	P3522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BR25

TABLE No. 2: PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR2 DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	ZN 2										ZN 3											
	KARN	R	LUDH	R	PANT	R	KANP	R	MEAN	R	BAHR	R	BHUB	R	DHOL	R	RANC	R	VARA	R	MEAN	R
1 HKH 350	6668	10	7952	11	13149	2	8236	5	9001	4	6018	8	5756	22	8443	3	9475	15	9487	12	7836	9
2 IMH 1546	7676	8	7738	14	9723	16	7206	22	8086	12	4814	21	6565	12	4426	22	10740	7	7737	28	6856	20
3 WH 1006	4888	27	5947	26	7004	30	7291	20	6283	30	3546	28	5953	20	4682	21	6569	29	5787	30	5308	30
4 IMH 1547	5071	25	8777	7	11159	8	7397	19	8101	11	4978	17	6356	16	9773	1	11967	3	9091	18	8433	4
5 VEH 15-1	9752	1	7083	21	8522	25	6271	28	7907	14	10367	1	7793	1	7276	6	11288	4	9455	14	9236	2
6 KDMH 01	8061	4	5436	29	11252	7	6835	26	7896	15	7639	4	6980	5	8446	2	8473	22	8856	19	8079	6
7 KNMH-4503	6205	19	7508	16	7767	28	6163	29	6911	26	5000	16	6816	6	5947	14	9857	12	9461	13	7416	14
8 KDMH 03	6224	18	6944	22	11357	6	6022	30	7637	18	3271	30	5383	29	3599	29	8221	23	8421	24	5779	28
9 BLH 110	8047	5	8609	9	10201	12	8960	2	8954	6	4061	26	6451	13	6431	10	10033	11	10283	6	7452	13
10 KNMH-4512	5700	22	6500	24	9866	14	10578	1	8161	10	3694	27	5828	21	5036	19	9229	17	9146	17	6587	23
11 WH 2140	5341	24	5761	27	7945	26	6883	25	6482	29	4958	18	6737	8	4224	24	6611	28	8570	23	6220	25
12 BLH 109	9052	2	10416	2	15333	1	7054	24	10464	1	8750	3	7210	2	6218	12	8551	21	13255	1	8797	3
13 KH-2001 Gold	7988	6	9589	4	10245	11	8048	6	8967	5	5511	12	6669	9	6246	11	10684	8	9681	9	7758	10
14 KNMH-4511	7865	7	7947	12	9173	19	7263	21	8062	13	4487	23	6749	7	6738	8	11157	5	9226	16	7671	12
15 WH 1010	6459	14	7810	13	8595	23	7520	18	7596	19	5166	14	6574	11	3997	26	9647	13	7784	27	6634	22
16 KNMH-4509	3814	30	7427	18	8691	21	7982	8	6979	25	4862	20	6225	17	3724	28	7641	26	8584	22	6207	26
17 MMH 14-5	6323	16	6344	25	7771	27	8238	4	7169	24	5685	10	5648	25	3522	30	8879	20	8699	20	6487	24
18 IMH 1545	4697	28	7233	19	9827	15	7747	10	7376	21	4328	25	6215	18	4831	20	10150	10	9455	15	6996	18
19 WH 2127	4931	26	7116	20	9436	18	7529	17	7253	23	6227	7	5393	28	5177	18	9345	16	8685	21	6965	19
20 DKC8171 (IP8204)	5931	20	10976	1	11450	5	7981	9	9085	3	9234	2	6596	10	8360	4	13292	1	12411	2	9979	1
21 HT 15066	8530	3	8992	5	11700	4	8335	3	9389	2	5860	9	7097	3	5726	15	11983	2	9773	8	8088	5

TABLE No. 2: (Contd.)

S. No.	PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																						
		COIM	R	DHAR	R	KARI	R	KOLH	R	MAND	R	VAGA	R	ZN 4	MEAN	R	BANS	R	GODH	R	ZN 5	MEAN	R	OV'L
1	HKH 350	7369	19	5933	23	3941	14	5528	29	7924	17	7112	17	6301	27	10693	6	5401	11	8047	9	7593	10	
2	IMH 1546	7834	14	6933	10	4121	12	8364	14	9899	5	10337	2	7915	7	10029	12	3936	22	6983	19	7534	11	
3	WH 1006	7077	25	5651	24	2475	26	9524	8	7691	18	5905	24	6387	25	9406	24	2856	27	6131	28	6015	28	
4	IMH 1547	8888	8	8301	5	4434	8	7843	21	9612	7	9469	7	8091	6	10706	5	5685	9	8195	7	8206	4	
5	VEH 15-1	8136	12	6410	17	3771	16	10465	5	10226	2	5273	26	7380	12	9428	23	5622	10	7525	14	8067	8	
6	KDMH 01	7645	17	6237	22	2202	29	8157	18	7326	22	5826	25	6232	28	8990	27	3855	23	6422	26	7189	18	
7	KNMH-4503	7081	24	6386	18	3364	20	8084	19	8742	13	6542	19	6700	21	8937	28	4617	15	6777	21	6969	23	
8	KDMH 03	7293	20	6364	19	4589	4	8960	12	9232	10	4734	27	6862	19	10718	4	2792	28	6755	22	6713	25	
9	BLH 110	7771	16	9475	2	2722	25	12081	1	9524	8	9641	5	8536	3	11256	2	6015	6	8635	3	8327	3	
10	KNMH-4512	8159	11	5355	25	4609	3	7050	25	7101	25	6146	22	6403	24	10211	9	6684	5	8448	5	7111	20	
11	WH 2140	6445	29	4094	29	3148	21	7439	22	-	30	2917	30	4809	29	7645	30	4148	20	5896	29	5852	29	
12	BLH 109	10424	5	8426	4	3536	18	11223	3	9761	6	9978	3	8891	2	10848	3	4573	17	7710	12	9095	2	
13	KH-2001 Gold	7969	13	7917	7	4196	11	8251	16	10036	3	6718	18	7514	10	9835	17	5053	13	7444	15	7920	9	
14	KNMH-4511	7600	18	6688	13	2920	24	9975	7	6353	28	7761	14	6883	18	9347	25	4616	16	6982	20	7404	16	
15	WH 1010	8450	10	6261	20	4685	2	7368	23	6537	27	7627	15	6821	20	9936	14	5866	7	7901	10	7075	21	
16	KNMH-4509	7193	21	5203	26	4330	10	7134	24	7223	24	8626	9	6618	22	9145	26	3828	24	6486	24	6567	26	
17	MMH 14-5	6509	27	5080	27	4337	9	7970	20	7361	20	8263	13	6587	23	9953	13	4342	18	7147	17	6760	24	
18	IMH 1545	12049	2	7447	9	3435	19	8729	13	8318	15	9597	6	8263	4	9562	21	3358	26	6460	25	7469	14	
19	WH 2127	8598	9	6838	11	4465	7	9247	10	9176	11	6266	21	7432	11	9639	19	3536	25	6587	23	7153	19	
20	DKC8171 (IP8204)	9811	6	9499	1	3539	17	11054	4	10716	1	9723	4	9057	1	12223	1	3951	21	8087	8	9220	1	
21	HT 15066	6725	26	6504	15	4473	6	8996	11	8030	16	7565	16	7049	15	10584	8	7046	3	8815	1	8113	6	

BR27

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
		KARN		LUDH		PANT		KANP		ZN 2		BAHR		BHUB		DHOL		RANC		VARA		ZN 3	
		R		R		R		R		R		R		R		R		R		R		R	
22	MMH 14-7	6335	15	4094	30	8586	24	7618	13	6658	28	6308	6	5145	30	4353	23	6287	30	8282	26	6075	27
23	DKC8172 (IQ8318)	6526	12	9755	3	10700	10	7651	12	8658	7	5294	13	7030	4	8065	5	8214	24	11269	3	7974	8
24	WH 1019	6229	17	5747	28	7287	29	7532	16	6699	27	4884	19	5611	26	4208	25	6972	27	6426	29	5620	29
25	K-88	5873	21	7658	15	10147	13	6556	27	7558	20	3409	29	6438	15	6099	13	8997	19	10083	7	7005	17
26	KNMH-4510	3830	29	6783	23	10954	9	7675	11	7311	22	4409	24	5466	27	3926	27	11018	6	8361	25	6636	21
	CHECKS																						
27	Bio 9637	5592	23	7485	17	12464	3	7603	14	8286	8	4560	22	5688	23	7084	7	8132	25	9587	10	7010	16
28	Bio 9544	6949	9	8860	6	9573	17	7588	15	8243	9	7293	5	6208	19	6618	9	9003	18	10879	4	8000	7
29	DHM 117	6561	11	8721	8	9075	20	7111	23	7867	16	5557	11	6439	14	5478	17	10416	9	10750	5	7728	11
30	HM10	6475	13	8079	10	8597	22	8005	7	7789	17	5011	15	5665	24	5478	16	9619	14	9546	11	7064	15
	Location Mean	6453		7643		9918		7563		7894		5506		6289		5804		9415		9301		7263	
	C.D. (5%)	966		1746		1704		776		1298		798		498		1045		1840		1066		1049	
	C.V. (%)	9.15		13.97		10.51		6.27		-		8.86		4.84		11.01		9.54		7.01		-	
	F (Prob)	0		0		0		0		-		0		0		0		0		0		-	
	Plot Size	6		5.8		4.5		4.8		-		4.8		4.8		6		5.6		4.8		-	
	AGRONOMY DATA																						
	Sowing Date	23-11		28-01		12-12		13-12		-		26-11		27-11		7-12		5-02		27-11		-	
	Harvest Date	24-05		14-06		7-06		6-05		-		8-05		5-04		8-06		10-06		19-04		-	
	Irrigation Nos	8		15		6		4		-		5		-		2		7		4		-	
	Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-	
	Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-	
	Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-	

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
		COIM	R	DHAR	R	KARI	R	KOLH	R	MAND	R	VAGA	R	ZN 4		ZN 5		OV'L					
		MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R	MEAN	R				
22	MMH 14-7	5709	30	3873	30	3085	23	5758	28	6869	26	3286	29	4763	30	8683	29	2150	30	5417	30	5672	30
23	DKC8172 (IQ8318)	9196	7	8725	3	4016	13	8351	15	7236	23	8497	10	7670	8	9923	15	7135	2	8529	4	8093	7
24	WH 1019	7131	22	4749	28	1961	30	9395	9	8923	12	5942	23	6350	26	9532	22	2735	29	6134	27	6192	27
25	K-88	7799	15	6755	12	3138	22	11327	2	9987	4	6431	20	7573	9	9727	18	6942	4	8334	6	7492	12
26	KNMH-4510	7109	23	6260	21	5085	1	6873	26	7347	21	8639	8	6885	17	10087	10	5686	8	7886	11	7030	22
	CHECKS																						
27	Bio 9637	6450	28	6470	16	2371	27	10352	6	9501	9	8330	12	7246	13	10623	7	4200	19	7412	16	7441	15
28	Bio 9544	11623	3	8122	6	4495	5	6377	27	7622	19	10419	1	8110	5	9856	16	7608	1	8732	2	8182	5
29	DHM 117	10476	4	7594	8	2209	28	8246	17	4802	29	8457	11	6964	16	10068	11	5323	12	7695	13	7487	13
30	HM10	14278	1	6522	14	3801	15	5325	30	8721	14	4552	28	7200	14	9597	20	4684	14	7140	18	7291	17
	Location Mean	8293		6669		3648		8515		8060		7353		7116		9906		4808		7357		7374	
	C.D. (5%)	728		2072		661		2286		1014		762		1254		1124		451		787		1149	
	C.V. (%)	5.37		19		11.08		16.42		7.69		6.33		-		6.94		5.74		-		-	
	F (Prob)	0		0		0		0		0		0		-		0		0		-		-	
	Plot Size	4.8		4.8		4.8		6		5.6		4.8		-		4.8		4.8		-		-	
	AGRONOMY DATA																						
	Sowing Date	11-01		10-12		26-11		14-12		5-12		8-01		-		30-11		28-11		-		-	
	Harvest Date	10-05		27-04		6-04		13-05		22-04		27-04		-		30-04		7-04		-		-	
	Irrigation Nos	9		5		12		-		12		10		-		6		8		-		-	
	Fertilizer Applied N	250		150		240		120		150		250		-		150		120		-		-	
	Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-	
	Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-	

BR29

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Bio 9637																					
		ZN 2					ZN 3					ZN 4					ZN 5	OV'L					
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	HKH 350	19.2	6.2	5.5	8.3	8.6	32	1.2	19.2	16.5	-	11.8	14.3	-	66.2	-	-	-	-	0.7	28.6	8.6	2
2	IMH 1546	37.3	3.4	-	-	-	5.6	15.4	-	32.1	-	-	21.5	7.2	73.8	-	4.2	24.1	9.2	-	-	-	1.3
3	WH 1006	-	-	-	-	-	-	4.7	-	-	-	-	9.7	-	4.4	-	-	-	-	-	-	-	-
4	IMH 1547	-	17.3	-	-	-	9.2	11.7	38	47.2	-	20.3	37.8	28.3	87	-	1.2	13.7	11.7	0.8	35.3	10.6	10.3
5	VEH 15-1	74.4	-	-	-	-	127.3	37	2.7	38.8	-	31.7	26.1	-	59.1	1.1	7.6	-	1.9	-	33.8	1.5	8.4
6	KDMH 01	44.1	-	-	-	-	67.5	22.7	19.2	4.2	-	15.2	18.5	-	-	-	-	-	-	-	-	-	-
7	KNMH-4503	11	0.3	-	-	-	9.6	19.8	-	21.2	-	5.8	9.8	-	41.9	-	-	-	-	-	9.9	-	-
8	KDMH 03	11.3	-	-	-	-	-	-	-	1.1	-	-	13.1	-	93.5	-	-	-	-	0.9	-	-	-
9	BLH 110	43.9	15	-	17.8	8.1	-	13.4	-	23.4	7.3	6.3	20.5	46.4	14.8	16.7	0.2	15.8	17.8	6	43.2	16.5	11.9
10	KNMH-4512	1.9	-	-	39.1	-	-	2.5	-	13.5	-	-	26.5	-	94.4	-	-	-	-	-	59.1	14	-
11	WH 2140	-	-	-	-	-	8.7	18.4	-	-	-	-	-	-	32.8	-	-	-	-	-	-	-	-
12	BLH 109	61.9	39.2	23	-	26.3	91.9	26.8	-	5.1	38.3	25.5	61.6	30.2	49.1	8.4	2.7	19.8	22.7	2.1	8.9	4	22.2
13	KH-2001 Gold	42.8	28.1	-	5.8	8.2	20.9	17.3	-	31.4	1	10.7	23.6	22.4	77	-	5.6	-	3.7	-	20.3	0.4	6.4
14	KNMH-4511	40.6	6.2	-	-	-	-	18.7	-	37.2	-	9.4	17.8	3.4	23.1	-	-	-	-	-	9.9	-	-
15	WH 1010	15.5	4.3	-	-	-	13.3	15.6	-	18.6	-	-	31	-	97.6	-	-	-	-	-	39.7	6.6	-
16	KNMH-4509	-	-	-	5	-	6.6	9.4	-	-	-	-	11.5	-	82.6	-	-	3.6	-	-	-	-	-
17	MMH 14-5	13.1	-	-	8.3	-	24.7	-	-	9.2	-	-	0.9	-	82.9	-	-	-	-	-	3.4	-	-
18	IMH 1545	-	-	-	1.9	-	-	9.3	-	24.8	-	-	86.8	15.1	44.9	-	-	15.2	14	-	-	-	0.4
19	WH 2127	-	-	-	-	-	36.6	-	-	14.9	-	-	33.3	5.7	88.3	-	-	-	2.6	-	-	-	-
20	DKC8171 (IP8204)	6.1	46.6	-	5	9.6	102.5	16	18	63.4	29.5	42.3	52.1	46.8	49.3	6.8	12.8	16.7	25	15.1	-	9.1	23.9
21	HT 15066	52.5	20.1	-	9.6	13.3	28.5	24.8	-	47.3	1.9	15.4	4.3	0.5	88.6	-	-	-	-	-	67.7	18.9	9
22	MMH 14-7	13.3	-	-	0.2	-	38.3	-	-	-	-	-	-	-	30.1	-	-	-	-	-	-	-	-
23	DKC8172 (IQ8318)	16.7	30.3	-	0.6	4.5	16.1	23.6	13.8	1	17.5	13.8	42.6	34.8	69.4	-	-	2	5.9	-	69.9	15.1	8.8
24	WH 1019	11.4	-	-	-	-	7.1	-	-	-	-	-	10.6	-	-	-	-	-	-	-	-	-	-
25	K-88	5	2.3	-	-	-	-	13.2	-	10.6	5.2	-	20.9	4.4	32.3	9.4	5.1	-	4.5	-	65.3	12.5	0.7
26	KNMH-4510	-	-	-	1	-	-	-	-	35.5	-	-	10.2	-	114.4	-	-	3.7	-	-	35.4	6.4	-
27	CHECKS																						
27	Bio 9637	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Bio 9544	24.3	18.4	-	-	-	59.9	9.2	-	10.7	13.5	14.1	80.2	25.5	89.6	-	-	25.1	11.9	-	81.1	17.8	10
29	DHM 117	17.3	16.5	-	-	-	21.9	13.2	-	28.1	12.1	10.2	62.4	17.4	-	-	-	1.5	-	-	26.7	3.8	0.6
30	HM10	15.8	7.9	-	5.3	-	9.9	-	-	18.3	-	0.8	121.4	0.8	60.3	-	-	-	-	-	11.5	-	-

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Bio 9544																					
		ZN 2										ZN 3					ZN 4				ZN 5	OV'L	
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	HKH 350	-	-	37.4	8.5	9.2	-	-	27.6	5.2	-	-	-	-	-	4	-	-	8.5	-	-	-	
2	IMH 1546	10.5	-	1.6	-	-	-	5.7	-	19.3	-	-	-	-	31.1	29.9	-	-	1.8	-	-	-	
3	WH 1006	-	-	-	-	-	-	-	-	-	-	-	-	-	49.3	0.9	-	-	-	-	-	-	
4	IMH 1547	-	-	16.6	-	-	-	2.4	47.7	32.9	-	5.4	-	2.2	-	23	26.1	-	-	8.6	-	-	0.3
5	VEH 15-1	40.3	-	-	-	-	42.2	25.5	9.9	25.4	-	15.4	-	-	-	64.1	34.2	-	-	-	-	-	-
6	KDMH 01	16	-	17.5	-	-	4.7	12.4	27.6	-	-	1	-	-	-	27.9	-	-	-	-	-	-	-
7	KNMH-4503	-	-	-	-	-	-	-	9.8	-	9.5	-	-	-	-	26.8	14.7	-	-	-	-	-	-
8	KDMH 03	-	-	18.6	-	-	-	-	-	-	-	-	-	2.1	40.5	21.1	-	-	8.7	-	-	-	-
9	BLH 110	15.8	-	6.6	18.1	8.6	-	3.9	-	11.4	-	-	16.7	-	89.4	25	-	5.3	14.2	-	-	-	1.8
10	KNMH-4512	-	-	3.1	39.4	-	-	-	-	2.5	-	-	-	2.5	10.5	-	-	-	3.6	-	-	-	-
11	WH 2140	-	-	-	-	-	-	8.5	-	-	-	-	-	-	16.7	-	-	-	-	-	-	-	-
12	BLH 109	30.3	17.6	60.2	-	26.9	20	16.1	-	-	21.8	10	-	3.7	-	76	28.1	-	9.6	10.1	-	-	11.2
13	KH-2001 Gold	14.9	8.2	7	6.1	8.8	-	7.4	-	18.7	-	-	-	-	29.4	31.7	-	-	-	-	-	-	-
14	KNMH-4511	13.2	-	-	-	-	-	8.7	1.8	23.9	-	-	-	-	56.4	-	-	-	-	-	-	-	-
15	WH 1010	-	-	-	-	-	-	5.9	-	7.2	-	-	-	4.2	15.5	-	-	-	0.8	-	-	-	-
16	KNMH-4509	-	-	-	5.2	-	-	0.3	-	-	-	-	-	-	11.9	-	-	-	-	-	-	-	-
17	MMH 14-5	-	-	-	8.6	-	-	-	-	-	-	-	-	-	25	-	-	-	1	-	-	-	-
18	IMH 1545	-	-	2.7	2.1	-	-	0.1	-	12.7	-	-	3.7	-	36.9	9.1	-	1.9	-	-	-	-	-
19	WH 2127	-	-	-	-	-	-	-	-	3.8	-	-	-	-	45	20.4	-	-	-	-	-	-	-
20	DKC8171 (IP8204)	-	23.9	19.6	5.2	10.2	26.6	6.2	26.3	47.6	14.1	24.7	-	16.9	-	73.3	40.6	-	11.7	24	-	-	12.7
21	HT 15066	22.7	1.5	22.2	9.8	13.9	-	14.3	-	33.1	-	1.1	-	-	41.1	5.4	-	-	7.4	-	1	-	-
22	MMH 14-7	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	DKC8172 (IQ8318)	-	10.1	11.8	0.8	5	-	13.2	21.9	-	3.6	-	-	7.4	-	31	-	-	0.7	-	-	-	-
24	WH 1019	-	-	-	-	-	-	-	-	-	-	-	-	-	47.3	17.1	-	-	-	-	-	-	-
25	K-88	-	-	6	-	-	-	3.7	-	-	-	-	-	-	77.6	31	-	-	-	-	-	-	-
26	KNMH-4510	-	-	14.4	1.2	-	-	-	-	22.4	-	-	-	-	13.1	7.8	-	-	2.3	-	-	-	-
CHECKS																							
27	Bio 9637	-	-	30.2	0.2	0.5	-	-	7	-	-	-	-	-	62.3	24.7	-	-	7.8	-	-	-	-
28	Bio 9544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	DHM 117	-	-	-	-	-	-	3.7	-	15.7	-	-	-	-	29.3	-	-	-	2.2	-	-	-	-
30	HM10	-	-	-	5.5	-	-	-	-	6.8	-	-	22.8	-	-	14.4	-	-	-	-	-	-	-

BR31

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE DHM 117																						
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L					
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN	
1	HKH 350	1.6	-	44.9	15.8	14.4	8.3	-	54.1	-	-	1.4	-	-	78.4	-	65	-	-	6.2	1.5	4.6	1.4	
2	IMH 1546	17	-	7.1	1.3	2.8	-	2	-	3.1	-	-	-	-	86.6	1.4	106.1	22.2	13.7	-	-	-	0.6	
3	WH 1006	-	-	-	2.5	-	-	-	-	-	-	-	-	-	12.1	15.5	60.2	-	-	-	-	-	-	
4	IMH 1547	-	0.6	23	4	3	-	-	78.4	14.9	-	9.1	-	9.3	100.8	-	100.2	12	16.2	6.3	6.8	6.5	9.6	
5	VEH 15-1	48.6	-	-	-	0.5	86.6	21	32.8	8.4	-	19.5	-	-	70.7	26.9	112.9	-	6	-	5.6	-	7.7	
6	KDMH 01	22.9	-	24	-	0.4	37.5	8.4	54.2	-	-	4.5	-	-	-	-	52.6	-	-	-	-	-	-	
7	KNMH-4503	-	-	-	-	-	-	5.9	8.6	-	-	-	-	-	52.3	-	82	-	-	-	-	-	-	
8	KDMH 03	-	-	25.1	-	-	-	-	-	-	-	-	-	-	107.8	8.7	92.2	-	-	6.5	-	-	-	
9	BLH 110	22.7	-	12.4	26	13.8	-	0.2	17.4	-	-	-	-	24.8	23.2	46.5	98.3	14	22.6	11.8	13	12.2	11.2	
10	KNMH-4512	-	-	8.7	48.8	3.7	-	-	-	-	-	-	-	-	108.7	-	47.9	-	-	1.4	25.6	9.8	-	
11	WH 2140	-	-	-	-	-	-	4.6	-	-	-	-	-	-	42.5	-	-	-	-	-	-	-	-	
12	BLH 109	38	19.4	69	-	33	57.5	12	13.5	-	23.3	13.8	-	11	60.1	36.1	103.3	18	27.7	7.7	-	0.2	21.5	
13	KH-2001 Gold	21.8	10	12.9	13.2	14	-	3.6	14	2.6	-	0.4	-	4.2	90	0.1	109	-	7.9	-	-	-	5.8	
14	KNMH-4511	19.9	-	1.1	2.1	2.5	-	4.8	23	7.1	-	-	-	-	32.2	21	32.3	-	-	-	-	-	-	
15	WH 1010	-	-	-	5.7	-	-	2.1	-	-	-	-	-	-	112.1	-	36.1	-	-	-	10.2	2.7	-	
16	KNMH-4509	-	-	-	12.3	-	-	-	-	-	-	-	-	-	96	-	50.4	2	-	-	-	-	-	
17	MMH 14-5	-	-	-	15.8	-	2.3	-	-	-	-	-	-	-	96.4	-	53.3	-	-	-	-	-	-	
18	IMH 1545	-	-	8.3	9	-	-	-	-	-	-	-	15	-	55.5	5.9	73.2	13.5	18.6	-	-	-	-	
19	WH 2127	-	-	4	5.9	-	12.1	-	-	-	-	-	-	-	102.2	12.1	91.1	-	6.7	-	-	-	-	
20	DKC8171 (IP8204)	-	25.9	26.2	12.2	15.5	66.2	2.4	52.6	27.6	15.5	29.1	-	25.1	60.2	34.1	123.2	15	30.1	21.4	-	5.1	23.2	
21	HT 15066	30	3.1	28.9	17.2	19.4	5.5	10.2	4.5	15	-	4.7	-	-	102.5	9.1	67.2	-	1.2	5.1	32.4	14.5	8.4	
22	MMH 14-7	-	-	-	7.1	-	13.5	-	-	-	-	-	-	-	39.7	-	43	-	-	-	-	-	-	
23	DKC8172 (IQ8318)	-	11.9	17.9	7.6	10.1	-	9.2	47.2	-	4.8	3.2	-	14.9	81.8	1.3	50.7	0.5	10.1	-	34	10.8	8.1	
24	WH 1019	-	-	-	5.9	-	-	-	-	-	-	-	-	-	13.9	85.8	-	-	-	-	-	-	-	
25	K-88	-	-	11.8	-	-	-	-	11.3	-	-	-	-	-	42.1	37.4	108	-	8.7	-	30.4	8.3	0.1	
26	KNMH-4510	-	-	20.7	7.9	-	-	-	-	5.8	-	-	-	-	130.2	-	53	2.1	-	0.2	6.8	2.5	-	
	CHECKS																							
27	Bio 9637	-	-	37.3	6.9	5.3	-	-	29.3	-	-	-	-	-	7.4	25.5	97.8	-	4	5.5	-	-	-	
28	Bio 9544	5.9	1.6	5.5	6.7	4.8	31.2	-	20.8	-	1.2	3.5	11	7	103.5	-	58.7	23.2	16.5	-	42.9	13.5	9.3	
29	DHM 117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	HM10	-	-	-	12.6	-	-	-	0	-	-	-	36.3	-	72.1	-	81.6	-	3.4	-	-	-	-	

TABLE No. 2 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE HM10																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	HKH 350	3	-	52.9	2.9	15.6	20.1	1.6	54.1	-	10.9	-	-	3.7	3.8	-	56.2	-	11.4	15.3	12.7	4.1	
2	IMH 1546	18.5	-	13.1	-	3.8	-	15.9	-	11.7	-	-	6.3	8.4	57.1	13.5	127.1	9.9	4.5	-	-	3.3	
3	WH 1006	-	-	-	-	-	-	5.1	-	-	-	-	-	-	78.9	-	29.7	-	-	-	-	-	
4	IMH 1547	-	8.6	29.8	-	4	-	12.2	78.4	24.4	19.4	-	27.3	16.7	47.3	10.2	108	12.4	11.6	21.4	14.8	12.5	
5	VEH 15-1	50.6	-	-	-	1.5	106.9	37.6	32.8	17.3	30.7	-	-	-	96.5	17.3	15.8	2.5	-	20	5.4	10.6	
6	KDMH 01	24.5	-	30.9	-	1.4	52.4	23.2	54.2	-	14.4	-	-	-	53.2	-	28	-	-	-	-	-	
7	KNMH-4503	-	-	-	-	-	-	20.3	8.6	2.5	5	-	-	-	51.8	0.2	43.7	-	-	-	-	-	
8	KDMH 03	-	-	32.1	-	-	-	-	-	-	-	-	-	20.7	68.3	5.9	4	-	11.7	-	-	-	
9	BLH 110	24.3	6.6	18.7	11.9	15	-	13.9	17.4	4.3	7.7	5.5	-	45.3	-	126.9	9.2	111.8	18.6	17.3	28.4	20.9	14.2
10	KNMH-4512	-	-	14.8	32.2	4.8	-	2.9	-	-	-	-	-	21.3	32.4	-	35	-	6.4	42.7	18.3	-	
11	WH 2140	-	-	-	-	-	-	18.9	-	-	-	-	-	-	39.7	-	-	-	-	-	-	-	
12	BLH 109	39.8	28.9	78.3	-	34.3	74.6	27.3	13.5	-	38.9	24.5	-	29.2	-	110.8	11.9	119.2	23.5	13	-	8	24.7
13	KH-2001 Gold	23.4	18.7	19.2	0.5	15.1	10	17.7	14	11.1	1.4	9.8	-	21.4	10.4	54.9	15.1	47.6	4.4	2.5	7.9	4.3	8.6
14	KNMH-4511	21.5	-	6.7	-	3.5	-	19.1	23	16	-	8.6	-	2.6	-	87.3	-	70.5	-	-	-	-	1.5
15	WH 1010	-	-	-	-	-	3.1	16	-	0.3	-	-	-	-	23.3	38.4	-	67.5	-	3.5	25.2	10.7	-
16	KNMH-4509	-	-	1.1	-	-	-	9.9	-	-	-	-	-	-	13.9	34	-	89.5	-	-	-	-	-
17	MMH 14-5	-	-	-	2.9	-	13.4	-	-	-	-	-	-	-	14.1	49.7	-	81.5	-	3.7	-	0.1	-
18	IMH 1545	-	-	14.3	-	-	-	9.7	-	5.5	-	-	-	14.2	-	63.9	-	110.8	14.8	-	-	-	2.4
19	WH 2127	-	-	9.7	-	-	24.3	-	-	-	-	-	-	4.8	17.5	73.6	5.2	37.6	3.2	0.4	-	-	-
20	DKC8171 (IP8204)	-	35.9	33.2	-	16.6	84.3	16.4	52.6	38.2	30	41.3	-	45.6	-	107.6	22.9	113.6	25.8	27.4	-	13.3	26.5
21	HT 15066	31.7	11.3	36.1	4.1	20.5	16.9	25.3	4.5	24.6	2.4	14.5	-	-	17.7	68.9	-	66.2	-	10.3	50.4	23.5	11.3
22	MMH 14-7	-	-	-	-	-	25.9	-	-	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-
23	DKC8172 (IQ8318)	0.8	20.7	24.5	-	11.2	5.7	24.1	47.2	-	18.1	12.9	-	33.8	5.7	56.8	-	86.6	6.5	3.4	52.3	19.5	11
24	WH 1019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76.4	2.3	30.5	-	-	-	-	-
25	K-88	-	-	18	-	-	-	13.6	11.3	-	5.6	-	-	3.6	-	112.7	14.5	41.3	5.2	1.4	48.2	16.7	2.8
26	KNMH-4510	-	-	27.4	-	-	-	-	-	14.5	-	-	-	-	33.8	29.1	-	89.8	-	5.1	21.4	10.5	-
CHECKS																							
27	Bio 9637	-	-	45	-	6.4	-	0.4	29.3	-	0.4	-	-	-	-	94.4	8.9	83	0.6	10.7	-	3.8	2
28	Bio 9544	7.3	9.7	11.3	-	5.8	45.5	9.6	20.8	-	14	13.3	-	24.5	18.3	19.8	-	128.9	12.6	2.7	62.4	22.3	12.2
29	DHM 117	1.3	7.9	5.6	-	1	10.9	13.7	-	8.3	12.6	9.4	-	16.4	-	54.8	-	85.8	-	4.9	13.7	7.8	2.7
30	HM10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE No. 2 (Contd.)

STAND AT HARVEST ('000/ha)																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5	OV'L					
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	HKH 350	58.3	73.0	64.4	72.9	67.2	60.4	59.0	66.7	67.9	80.6	66.9	66.7	60.4	72.2	51.1	61.9	58.3	61.8	68.1	77.1	72.6	65.8
2	IMH 1546	60.0	77.6	60.7	74.3	68.2	69.4	58.3	32.2	61.6	66.7	57.7	66.0	52.8	79.9	56.7	56.0	66.0	62.9	70.1	77.8	74.0	63.9
3	WH 1006	57.8	67.2	57.8	77.1	65.0	60.4	58.3	41.7	61.6	77.1	59.8	61.8	49.3	77.8	61.7	56.5	56.9	60.7	66.7	76.4	71.5	62.7
4	IMH 1547	60.0	73.0	60.7	68.8	65.6	70.8	63.9	47.2	67.0	78.5	65.5	63.2	65.3	79.2	54.4	58.9	59.7	63.5	70.1	79.2	74.7	65.9
5	VEH 15-1	61.1	65.5	50.4	70.8	62.0	67.4	59.7	40.6	72.3	73.6	62.7	64.6	48.6	75.0	61.7	60.1	30.6	56.8	60.4	70.8	65.6	60.8
6	KDMH 01	60.0	67.8	57.8	74.3	65.0	64.6	62.5	33.3	67.0	77.8	61.0	62.5	61.1	60.4	58.3	61.9	50.0	59.0	70.1	72.9	71.5	62.5
7	KNMH-4503	58.3	69.0	59.3	70.1	64.2	67.4	58.3	43.9	71.4	79.9	64.2	65.3	57.6	74.3	58.9	58.9	59.7	62.5	75.0	77.1	76.0	65.0
8	KDMH 03	60.0	68.4	62.2	77.1	66.9	66.7	60.4	30.0	68.8	72.9	59.8	63.2	54.2	66.0	56.1	61.3	39.6	56.7	64.6	65.3	64.9	61.0
9	BLH 110	56.7	75.9	63.7	71.5	66.9	72.2	59.0	64.4	66.1	80.6	68.5	66.0	72.9	75.0	60.6	60.1	66.0	66.8	72.2	75.0	73.6	68.1
10	KNMH-4512	59.4	67.2	53.3	72.9	63.2	58.3	58.3	45.6	70.5	80.6	62.7	64.6	53.5	79.2	54.4	59.5	56.3	61.2	66.0	68.1	67.0	62.8
11	WH 2140	59.4	45.4	53.3	72.9	57.8	64.6	58.3	31.1	33.0	69.4	51.3	43.1	31.9	59.0	55.6	-	19.4	41.8	61.1	72.9	67.0	51.9
12	BLH 109	60.0	77.0	62.2	75.0	68.6	68.8	59.0	36.7	65.2	79.9	61.9	63.9	63.9	76.4	62.8	62.5	64.6	65.7	70.1	68.8	69.4	65.7
13	KH-2001 Gold	57.8	71.3	60.7	75.0	66.2	61.1	63.9	48.3	65.2	72.9	62.3	63.2	62.5	79.2	57.2	59.5	59.0	63.4	66.7	75.0	70.8	64.6
14	KNMH-4511	58.9	71.8	60.7	77.1	67.1	60.4	60.4	60.0	67.0	79.9	65.5	63.2	64.6	81.9	58.9	56.0	63.2	64.6	61.8	78.5	70.1	66.1
15	WH 1010	61.7	67.2	59.3	74.3	65.6	65.3	58.3	36.7	63.4	72.2	59.2	59.0	54.2	60.4	54.4	56.0	61.8	57.6	67.4	71.5	69.4	61.4
16	KNMH-4509	58.3	71.8	58.5	72.2	65.2	70.1	59.0	51.7	61.6	80.6	64.6	66.0	51.4	81.9	55.6	57.1	60.4	62.1	71.5	78.5	75.0	65.1
17	MMH 14-5	59.4	77.0	57.8	76.4	67.7	66.7	59.0	37.8	62.5	79.2	61.0	64.6	58.3	81.3	56.7	57.7	60.4	63.2	72.9	76.4	74.7	64.9
18	IMH 1545	58.9	56.9	57.0	73.6	61.6	68.8	61.8	37.2	58.9	71.5	59.6	64.6	61.8	62.5	60.6	56.0	63.9	61.5	58.3	62.5	60.4	60.9
19	WH 2127	59.4	74.1	60.7	72.2	66.6	66.7	58.3	56.7	64.3	79.9	65.2	64.6	73.6	75.0	59.4	58.9	55.6	64.5	63.2	64.6	63.9	65.1
20	DKC8171 (IP8204)	60.0	76.4	65.9	76.4	69.7	64.6	63.9	52.2	69.6	79.2	65.9	66.0	64.6	80.6	62.2	61.9	63.9	66.5	70.1	72.9	71.5	67.7
21	HT 15066	60.0	69.5	59.3	74.3	65.8	66.0	57.6	51.1	66.1	73.6	62.9	63.2	57.6	79.9	59.4	57.1	58.3	62.6	66.7	76.4	71.5	64.5
22	MMH 14-7	58.3	65.5	54.1	73.6	62.9	54.9	58.3	36.7	58.0	77.1	57.0	47.2	47.9	75.7	55.0	56.5	23.6	51.0	63.2	77.1	70.1	57.8
23	DKC8172 (IQ8318)	58.9	77.0	62.2	75.0	68.3	61.1	61.8	48.3	59.8	79.2	62.0	65.3	71.5	69.4	55.6	58.3	59.0	63.2	65.3	75.7	70.5	64.9
24	WH 1019	60.0	68.4	55.6	75.7	64.9	54.9	59.7	50.6	66.1	76.4	61.5	63.2	60.4	61.8	57.2	59.5	56.9	59.9	62.5	63.2	62.8	61.9
25	K-88	58.3	70.7	59.3	77.1	66.3	53.5	59.7	42.2	66.1	78.5	60.0	63.2	59.7	68.1	61.7	58.3	59.7	61.8	68.8	68.8	68.8	63.1
26	KNMH-4510	62.2	70.7	62.2	71.5	66.7	73.6	59.7	38.3	64.3	75.0	62.2	63.2	62.5	82.6	56.7	59.5	57.6	63.7	70.1	64.6	67.4	64.4
CHECKS																							
27	Bio 9637	57.8	74.1	60.7	69.4	65.5	60.4	61.8	56.7	67.0	80.6	65.3	63.9	55.6	79.2	60.0	62.5	56.3	62.9	67.4	75.0	71.2	65.2
28	Bio 9544	60.0	75.3	65.2	72.9	68.3	63.2	59.7	46.1	67.9	79.9	63.3	66.0	68.8	75.0	55.0	57.7	61.8	64.0	66.7	72.2	69.4	65.5
29	DHM 117	59.4	78.7	60.0	75.7	68.5	60.4	59.7	56.7	67.0	83.3	65.4	66.0	54.9	69.4	56.7	60.7	59.7	61.2	68.1	68.1	68.1	65.0
30	HM10	60.0	72.4	59.3	75.0	66.7	67.4	59.0	54.4	65.2	77.8	64.8	65.3	68.8	68.8	51.7	56.0	36.1	57.8	68.1	78.5	73.3	63.7
Loc. Mean		59.4	70.5	59.5	73.8	65.8	64.3	59.9	45.8	64.4	77.1	62.3	62.9	59.0	73.6	57.5	58.9	54.8	61.0	67.1	72.7	69.9	63.6
C.D. (5%)		3.44	8.82	7.57	3.99	5.13	5.56	3.76	8.06	10.42	7.03	7.18	2.56	16.22	6.65	3.74	3.82	5.52	6.92	8.82	4.28	7.27	3.58
C.V. (%)		3.54	7.65	7.79	3.30	5.54	5.28	3.84	10.76	7.91	5.58	9.20	2.49	16.82	5.53	3.97	3.91	6.16	9.94	8.04	3.60	5.09	8.35
F (Prob)		0.53	0.00	0.03	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00

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TABLE No. 3: PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR4 DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	ZN 2										ZN 3											
	KARN	R	LUDH	R	PANT	R	KANP	R	MEAN	R	BAHR	R	BHUB	R	DHOL	R	RANC	R	VARA	R	MEAN	R
1 PM14207L	7765	14	10034	11	11279	11	5455	16	8633	16	7019	10	7081	3	12327	1	10672	5	9806	14	9381	3
2 HT 142107	7980	12	9644	13	11164	13	4339	18	8282	17	7377	7	6544	8	8689	9	12595	2	10397	13	9120	7
3 CP.444	8742	5	10316	9	13142	3	6680	13	9720	7	6935	11	5940	15	12222	2	10260	8	10575	12	9186	6
4 PM14205L	8063	10	10930	4	11427	10	8555	7	9744	6	6432	12	7723	1	6287	16	10134	9	11444	8	8404	15
5 PM14206L	8739	6	10237	10	10958	14	8019	9	9488	8	7307	8	7235	2	8357	11	10290	7	11544	6	8946	8
6 Rasi-394	7062	17	10718	5	13139	4	8313	8	9808	5	6120	14	6187	11	10138	6	11127	3	12598	3	9234	5
7 GK 3153	8119	9	10697	6	10767	15	5648	15	8807	14	6360	13	5946	14	10908	5	10704	4	9521	16	8688	13
8 PM14203L	7670	15	10572	7	11673	9	7708	12	9406	9	7602	5	6430	9	7418	15	10580	6	11703	4	8747	11
9 SYN426702	7997	11	10529	8	13517	2	7872	10	9978	4	7146	9	5932	16	7516	14	9381	15	12809	2	8557	14
10 GK 3124	7646	16	11194	3	12598	7	8669	6	10027	3	9839	2	6286	10	7980	12	8918	16	11529	7	8910	9
11 NMH-1290	8204	8	11323	2	13034	5	9321	2	10470	2	7835	4	6713	6	8593	10	8697	17	11682	5	8704	12
12 DKC9160 (IP8510)	8291	7	9509	14	11262	12	7731	11	9198	12	6046	15	5918	17	11526	3	13133	1	10745	10	9474	2
13 DKC9165 (IM8119)	7946	13	11882	1	12961	6	10072	1	10715	1	10214	1	6185	12	7748	13	9793	10	13479	1	9484	1
14 KH-2977	8854	2	8545	17	9887	17	8864	5	9038	13	4782	18	5483	18	6267	18	9490	12	9162	18	7037	18
15 PM14208L CHECKS	8759	4	9250	15	14005	1	5174	17	9297	10	7516	6	7012	4	11056	4	9416	13	11351	9	9270	4
16 Seedtech 2324	6788	18	9092	16	12123	8	9009	4	9253	11	8387	3	6704	7	10132	7	9600	11	9206	17	8806	10
17 Buland	9588	1	6297	18	6342	18	9081	3	7827	18	4996	17	6801	5	9877	8	7941	18	10625	11	8048	16
18 Bio 9681	8777	3	9685	12	10394	16	6018	14	8719	15	5185	16	6036	13	6282	17	9404	14	9753	15	7332	17
Location Mean	8166		10025		11649		7585		9356		7061		6453		9074		10119		10996		8740	
C.D. (5%)	840		1361		1487		462		1037		544		445		1319		2394		1355		1211	
C.V. (%)	6.19		8.17		7.68		3.66		-		4.63		4.15		8.75		11.16		7.42		-	
F (Prob)	0		0		0		0		-		0		0		0		0.036		0		-	
Plot Size	12		11.5		9.6		9.6		-		9.6		9.6		12		5.6		9.6		-	
AGRONOMY DATA																						
Sowing Date	23-11		28-01		12-12		12-12		-		28-11		27-11		4-12		6-02		26-11		-	
Harvest Date	25-05		14-06		9-06		8-05		-		9-05		6-04		7-06		14-06		18-04		-	
Irrigation Nos	9		15		6		4		-		5		-		2		7		4		-	
Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-	
Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-	
Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-	

TABLE No. 3: (Contd.)

S. No. PEDIGREE	COIM		DHAR		KARI		KOLH		MAND		VAGA		ZN 4			ZN 5			OV'L			
		R		R		R		R		R		R	MEAN	R	BANS	R	GODH	R	MEAN	R	MEAN	R
1 PM14207L	10338	3	6051	11	4456	8	7220	11	7733	18	9885	2	7614	9	10463	11	5359	9	7911	9	8408	11
2 HT 142107	9140	7	6574	7	3252	16	7143	13	9232	12	7723	11	7177	13	10499	10	2677	16	6588	16	7939	14
3 CP.444	10974	1	6426	9	3511	14	8252	8	9528	9	7866	9	7759	7	11015	4	3818	12	7417	12	8600	6
4 PM14205L	8063	10	6688	6	5346	2	7067	15	9605	8	7607	13	7396	10	10788	7	9282	3	10035	2	8555	8
5 PM14206L	6082	18	6805	5	3929	11	8060	9	9918	6	7229	15	7004	15	9791	16	2149	18	5970	18	8038	13
6 Rasi-394	8117	9	7487	2	4401	9	10589	3	10763	1	8302	8	8276	3	10117	13	14407	1	12262	1	9387	1
7 GK 3153	9430	5	7484	3	4486	6	7290	10	9904	7	9153	6	7958	5	10748	8	3814	13	7281	13	8293	12
8 PM14203L	8984	8	5408	14	5009	3	11444	1	10398	2	9219	5	8410	2	10300	12	2769	15	6535	17	8523	9
9 SYN426702	7331	13	4468	18	3120	18	7183	12	8951	13	5874	17	6154	17	9868	15	3621	14	6744	15	7830	15
10 GK 3124	6176	17	7632	1	4484	7	10211	4	8064	17	7288	14	7309	11	10825	6	6295	6	8560	6	8567	7
11 NMH-1290	7169	14	5495	13	5870	1	6432	17	9440	10	7710	12	7019	14	9685	17	9712	2	9698	3	8642	5
12 DKC9160 (IP8510)	9795	4	6467	8	3650	12	8475	7	8792	14	10058	1	7873	6	11385	2	6455	5	8920	4	8779	3
13 DKC9165 (IM8119)	7489	11	7096	4	3387	15	10176	5	10093	4	9793	3	8006	4	10872	5	5158	10	8015	8	9079	2
14 KH-2977	7038	15	5863	12	3176	17	7116	14	8777	15	7123	16	6515	16	10541	9	6909	4	8725	5	7522	17
15 PM14208L	10966	2	5372	15	4287	10	11027	2	10020	5	9527	4	8533	1	11147	3	2511	17	6829	14	8729	4
CHECKS																						
16 Seedtech 2324	7476	12	6319	10	4611	5	9128	6	10289	3	8699	7	7754	8	10084	14	5616	8	7850	10	8427	10
17 Buland	6828	16	5210	17	3560	13	6010	18	8756	16	4303	18	5778	18	11457	1	5032	11	8244	7	7218	18
18 Bio 9681	9240	6	5238	16	4825	4	7007	16	9375	11	7840	10	7254	12	9484	18	5813	7	7648	11	7668	16
Location Mean	8369		6227		4186		8324		9424		8067		7433		10504		5633		8068		8345	
C.D. (5%)	998		1382		552		1274		828		543		929		930		509		720		1013	
C.V. (%)	7.18		13.36		7.94		9.21		5.29		4.05		-		5.33		5.44		-		-	
F (Prob)	0		0.001		0		0		0		0		-		0.001		0		-		-	
Plot Size	9.6		9.6		9.6		12		11.2		9.6		-		9.6		4.8		-		-	
AGRONOMY DATA																						
Sowing Date	11-01		10-12		27-11		14-12		5-12		8-01		-		30-11		28-11		-		-	
Harvest Date	10-05		28-04		7-04		14-05		23-04		2-05		-		2-05		7-04		-		-	
Irrigation Nos	10		5		14		-		12		11		-		6		8		-		-	
Fertilizer Applied N	150		150		240		120		150		250		-		150		120		-		-	
Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-	
Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-	

TABLE No. 3 (Contd.)

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Buland																					
	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
	KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1 PM14207L	-	59.3	77.9	-	10.3	40.5	4.1	24.8	34.4	-	16.6	51.4	16.1	25.2	20.1	-	129.7	31.8	-	6.5	-	16.5
2 HT 142107	-	53.1	76.1	-	5.8	47.6	-	-	58.6	-	13.3	33.8	26.2	-	18.9	5.4	79.5	24.2	-	-	-	10
3 CP.444	-	63.8	107.2	-	24.2	38.8	-	23.7	29.2	-	14.1	60.7	23.3	-	37.3	8.8	82.8	34.3	-	-	-	19.1
4 PM14205L	-	73.6	80.2	-	24.5	28.7	13.6	-	27.6	7.7	4.4	18.1	28.4	50.2	17.6	9.7	76.8	28	-	84.5	21.7	18.5
5 PM14206L	-	62.6	72.8	-	21.2	46.2	6.4	-	29.6	8.6	11.2	-	30.6	10.4	34.1	13.3	68	21.2	-	-	-	11.4
6 Rasi-394	-	70.2	107.2	-	25.3	22.5	-	2.6	40.1	18.6	14.7	18.9	43.7	23.6	76.2	22.9	92.9	43.2	-	186	48.7	30.1
7 GK 3153	-	69.9	69.8	-	12.5	27.3	-	10.4	34.8	-	7.9	38.1	43.6	26	21.3	13.1	112.7	37.7	-	-	-	14.9
8 PM14203L	-	67.9	84.1	-	20.2	52.1	-	-	33.2	10.1	8.7	31.6	3.8	40.7	90.4	18.8	114.2	45.6	-	-	-	18.1
9 SYN426702	-	67.2	113.1	-	27.5	43	-	-	18.1	20.6	6.3	7.4	-	-	19.5	2.2	36.5	6.5	-	-	-	8.5
10 GK 3124	-	77.8	98.7	-	28.1	96.9	-	-	12.3	8.5	10.7	-	46.5	26	69.9	-	69.4	26.5	-	25.1	3.8	18.7
11 NMH-1290	-	79.8	105.5	2.6	33.8	56.8	-	-	9.5	9.9	8.1	5	5.5	64.9	7	7.8	79.2	21.5	-	93	17.6	19.7
12 DKC9160 (IP8510)	-	51	77.6	-	17.5	21	-	16.7	65.4	1.1	17.7	43.4	24.1	2.5	41	0.4	133.7	36.3	-	28.3	8.2	21.6
13 DKC9165 (IM8119)	-	88.7	104.4	10.9	36.9	104.4	-	-	23.3	26.9	17.8	9.7	36.2	-	69.3	15.3	127.6	38.6	-	2.5	-	25.8
14 KH-2977	-	35.7	55.9	-	15.5	-	-	-	19.5	-	-	3.1	12.5	-	18.4	0.2	65.5	12.8	-	37.3	5.8	4.2
15 PM14208L CHECKS	-	46.9	120.8	-	18.8	50.4	3.1	11.9	18.6	6.8	15.2	60.6	3.1	20.4	83.5	14.4	121.4	47.7	-	-	-	20.9
16 Seedtech 2324	-	44.4	91.2	-	18.2	67.9	-	2.6	20.9	-	9.4	9.5	21.3	29.5	51.9	17.5	102.1	34.2	-	11.6	-	16.8
17 Buland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 Bio 9681	-	53.8	63.9	-	11.4	3.8	-	-	18.4	-	-	35.3	0.5	35.5	16.6	7.1	82.2	25.5	-	15.5	-	6.2

Table No. 3 (Contd.)

GRAIN SHELLING %																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	PM14207L	78.5	81.3	83.8	75.7	79.8	77.4	81.3	78.7	86.8	75.3	79.9	77.5	85.4	79.3	84.8	78.5	81.5	81.2	78.2	81.1	79.6	80.3
2	HT 142107	76.0	80.8	80.9	76.7	78.6	78.5	80.1	78.0	86.5	77.0	80.0	77.3	83.5	78.9	83.2	80.0	78.2	80.2	80.0	82.0	81.0	79.8
3	CP.444	77.4	82.2	87.2	76.3	80.8	79.1	78.7	82.0	88.3	77.3	81.1	81.0	85.9	81.2	81.8	81.4	77.7	81.5	80.3	83.5	81.9	81.2
4	PM14205L	77.3	84.2	84.1	75.0	80.2	77.3	82.3	76.0	87.1	79.3	80.4	76.1	85.4	80.9	84.9	80.6	77.8	80.9	80.2	82.4	81.3	80.6
5	PM14206L	78.9	81.3	84.5	75.0	79.9	77.4	80.1	82.0	86.0	79.7	81.0	78.9	85.9	82.7	81.8	78.8	76.8	80.8	80.1	82.9	81.5	80.7
6	Rasi-394	76.9	83.0	83.3	75.3	79.6	74.1	80.6	83.7	83.8	75.0	79.4	72.4	85.6	78.9	80.4	82.7	78.1	79.7	79.8	80.7	80.2	79.7
7	GK 3153	75.1	84.2	81.7	77.3	79.6	78.0	80.5	85.3	86.5	77.3	81.5	78.7	85.9	80.6	85.3	82.0	79.7	82.0	79.6	82.7	81.2	81.2
8	PM14203L	75.0	83.7	82.6	75.7	79.2	76.1	79.0	77.3	85.3	76.3	78.8	78.1	86.5	75.1	83.5	82.0	78.5	80.6	80.1	78.8	79.4	79.6
9	SYN426702	74.5	82.4	84.2	75.0	79.0	77.8	79.8	78.0	86.2	80.7	80.5	81.8	84.9	83.9	84.5	78.6	76.3	81.6	79.8	82.0	80.9	80.6
10	GK 3124	77.1	84.8	81.0	74.3	79.3	80.0	80.6	76.3	86.3	77.3	80.1	80.0	84.2	79.3	82.3	78.4	76.8	80.2	79.8	89.4	84.6	80.5
11	NMH-1290	76.0	87.1	85.0	78.0	81.5	78.9	79.7	76.7	87.3	77.7	80.0	81.9	87.2	79.8	81.9	79.1	77.5	81.2	80.1	82.3	81.2	80.9
12	DKC9160 (IP8510)	76.9	83.4	81.5	76.0	79.4	77.6	79.0	80.3	88.1	76.7	80.3	77.7	87.6	84.2	84.6	78.6	80.8	82.2	80.1	79.5	79.8	80.7
13	DKC9165 (IM8119)	77.7	83.7	83.8	74.0	79.8	81.3	81.5	78.7	85.7	75.7	80.5	76.8	85.9	80.2	78.0	80.6	80.6	80.3	80.2	83.6	81.9	80.5
14	KH-2977	79.4	79.5	80.9	73.3	78.3	71.1	80.7	79.0	82.6	73.3	77.3	81.4	86.9	76.6	83.4	79.9	77.3	80.9	80.7	79.5	80.1	79.1
15	PM14208L	77.7	81.8	81.9	74.0	78.8	75.4	80.9	86.7	83.9	75.3	80.4	76.8	84.9	75.4	83.3	79.0	80.0	79.9	79.3	71.0	75.2	79.2
	CHECKS																						
16	Seedtech 2324	75.5	82.3	83.6	74.3	78.9	78.0	80.7	85.0	87.1	74.7	81.1	78.3	87.7	78.4	83.1	81.1	77.8	81.1	81.1	83.7	82.4	80.7
17	Buland	79.2	79.9	75.5	75.7	77.6	68.7	79.4	78.3	81.4	76.3	76.8	79.9	84.9	78.6	75.7	78.5	74.5	78.7	80.6	81.5	81.0	78.2
18	Bio 9681	75.6	80.4	81.0	77.3	78.6	74.9	79.9	79.0	84.1	77.0	79.0	81.1	85.7	79.9	81.0	79.3	77.6	80.7	79.4	83.6	81.5	79.8
	Loc. Mean	76.9	82.5	82.6	75.5	79.4	76.7	80.3	80.1	85.7	76.8	79.9	78.6	85.8	79.7	82.4	79.9	78.2	80.8	79.9	81.7	80.8	80.2
	C.D. (5%)	0.41	2.85	1.55	2.84	2.63	1.33	0.33	2.94	2.33	2.85	2.83	1.97	2.16	1.96	1.37	1.81	1.25	2.30	1.23	2.48	5.17	1.39
	C.V. (%)	0.32	2.08	1.13	2.26	2.33	1.05	0.25	2.21	1.29	2.24	2.81	1.51	1.52	1.48	1.00	1.36	0.97	2.48	0.92	1.83	3.03	2.57
	F (Prob)	0.00	0.00	0.00	0.09	0.50	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.03	0.00	0.00	0.00	0.00	0.35	0.03	0.00	0.40	0.00

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Table No. 3 (Contd.)

MOISTURE % AT HARVEST																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	PM14207L	24.7	16.3	19.7	14.3	18.7	25.0	18.0	15.9	21.9	33.9	22.9	21.9	14.7	18.3	8.7	15.5	18.0	16.2	17.1	18.3	17.7	18.9
2	HT 142107	28.1	15.2	21.4	15.0	19.9	27.0	17.7	17.7	20.9	32.0	23.0	21.6	15.4	17.3	8.1	15.5	19.0	16.1	18.0	14.8	16.4	19.1
3	CP.444	27.1	14.4	21.5	15.0	19.5	26.7	18.3	13.1	20.7	32.0	22.1	21.6	12.6	19.5	9.5	18.2	17.1	16.4	18.1	16.4	17.2	18.9
4	PM14205L	27.7	14.4	18.7	14.3	18.8	24.0	18.3	15.6	20.9	30.5	21.8	22.2	14.4	18.0	8.2	16.8	17.2	16.1	17.9	16.5	17.2	18.5
5	PM14206L	28.4	12.5	17.0	15.0	18.2	25.9	17.8	14.1	21.4	31.1	22.1	21.1	14.2	14.1	7.6	13.2	16.7	14.5	18.4	16.9	17.6	18.0
6	Rasi-394	27.4	14.6	17.9	15.0	18.7	26.2	18.3	18.0	20.8	31.6	22.9	25.9	14.4	20.2	9.9	15.9	18.0	17.4	17.2	16.6	16.9	19.3
7	GK 3153	27.7	14.3	21.1	14.0	19.3	26.0	18.6	12.3	22.5	32.5	22.4	22.7	12.5	17.8	8.4	15.6	17.4	15.7	17.8	17.1	17.4	18.7
8	PM14203L	26.5	16.4	18.6	14.0	18.9	24.5	18.0	19.2	21.2	31.5	22.9	25.0	13.8	21.2	8.3	16.5	16.6	16.9	17.4	18.8	18.1	19.2
9	SYN426702	27.0	13.6	20.7	12.0	18.3	27.0	18.4	18.6	20.4	30.7	23.0	22.3	14.4	16.2	8.0	16.6	16.9	15.7	17.5	15.6	16.5	18.6
10	GK 3124	27.0	13.7	18.3	14.3	18.3	27.8	19.2	16.8	21.2	31.7	23.3	22.9	12.7	17.0	7.6	15.4	16.8	15.4	17.0	15.5	16.3	18.5
11	NMH-1290	26.2	13.3	18.6	14.0	18.0	27.0	18.5	19.1	21.0	33.0	23.7	22.1	12.4	14.1	8.9	15.9	16.9	15.0	18.0	18.4	18.2	18.7
12	DKC9160 (IP8510)	26.2	15.2	21.4	15.0	19.4	26.4	18.5	19.1	21.2	27.1	22.5	23.9	14.0	17.7	8.2	14.6	17.0	15.9	17.6	15.1	16.3	18.7
13	DKC9165 (IM8119)	28.5	12.5	17.7	15.0	18.4	28.0	17.8	18.3	19.5	31.5	23.0	23.7	15.0	15.0	8.7	15.5	17.1	15.8	17.4	15.2	16.3	18.6
14	KH-2977	26.8	16.1	19.6	14.0	19.1	24.8	17.6	19.1	21.9	32.7	23.2	17.5	13.1	19.9	8.3	17.0	17.1	15.5	18.0	16.9	17.4	18.8
15	PM14208L	28.0	14.6	17.1	14.0	18.4	26.7	17.4	19.0	20.8	33.8	23.5	23.0	11.8	17.5	8.5	15.4	18.5	15.8	18.1	16.7	17.4	18.9
CHECKS																							
16	Seedtech 2324	25.6	17.1	20.3	15.0	19.5	26.1	18.7	13.2	22.3	33.3	22.7	23.1	13.5	19.2	8.6	16.1	16.4	16.1	17.5	17.8	17.6	19.0
17	Buland	28.8	12.5	18.4	15.3	18.7	24.7	17.5	17.0	22.8	29.8	22.3	17.9	13.6	17.7	8.2	14.6	16.9	14.8	17.5	16.9	17.2	18.2
18	Bio 9681	28.1	13.7	17.4	15.3	18.6	24.0	17.8	18.9	21.2	28.1	22.0	19.2	14.0	14.0	8.2	15.6	16.8	14.6	17.1	16.5	16.8	18.0
Loc. Mean		27.2	14.4	19.2	14.5	18.8	26.0	18.1	16.9	21.2	31.5	22.7	22.1	13.7	17.5	8.4	15.7	17.2	15.8	17.6	16.6	17.1	18.7
C.D. (5%)		0.90	1.49	1.41	0.76	1.84	1.02	0.42	0.93	3.11	1.92	1.97	1.87	2.13	1.59	0.52	0.37	0.55	1.54	0.59	0.66	1.85	0.90
C.V. (%)		2.00	6.24	4.45	3.15	6.88	2.36	1.41	3.30	6.94	3.67	6.85	5.12	9.40	5.49	3.75	1.43	1.93	8.48	2.00	2.39	5.12	7.16
F (Prob)		0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.00	0.86	0.00	0.88	0.00	0.07	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.53	0.17

Table No. 3 (Contd.)

STAND AT HARVEST ('000/ha)																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	PM14207L	62.8	74.5	57.6	65.6	65.1	63.2	59.4	67.2	72.3	79.5	68.3	65.6	52.1	70.8	58.6	56.8	64.2	61.4	71.2	79.2	75.2	65.9
2	HT 142107	63.1	76.2	58.0	67.4	66.2	62.5	59.7	61.4	73.2	83.3	68.0	64.9	54.2	58.7	58.6	56.0	61.8	59.0	68.1	69.4	68.7	64.5
3	CP.444	61.9	77.4	60.1	69.4	67.2	66.3	57.6	59.4	72.3	80.6	67.3	64.9	53.8	70.1	60.8	55.7	60.8	61.0	73.6	79.2	76.4	66.1
4	PM14205L	63.1	77.1	56.6	70.5	66.8	62.5	58.0	60.8	68.8	81.6	66.3	64.6	45.5	66.0	58.9	56.3	62.2	58.9	73.3	77.1	75.2	64.9
5	PM14206L	64.2	76.2	61.1	69.1	67.7	59.7	63.9	60.0	70.5	80.2	66.9	66.3	46.5	71.2	60.8	55.1	59.4	59.9	75.3	69.4	72.4	65.2
6	Rasi-394	62.5	75.4	61.8	66.3	66.5	63.9	65.3	59.4	67.0	80.9	67.3	65.6	53.8	81.9	63.6	58.0	62.8	64.3	68.8	66.7	67.7	66.1
7	GK 3153	63.9	75.9	60.1	66.7	66.6	61.8	58.7	60.0	70.5	80.2	66.2	63.9	46.9	73.3	59.7	56.0	61.1	60.1	68.4	79.2	73.8	65.1
8	PM14203L	63.6	76.2	58.7	69.8	67.1	60.4	59.7	53.3	71.4	83.0	65.6	66.7	48.3	66.0	63.6	57.4	62.2	60.7	71.9	78.5	75.2	65.3
9	SYN426702	63.3	74.2	60.8	70.5	67.2	65.3	62.2	58.1	68.8	83.7	67.6	63.9	39.6	61.5	59.7	56.3	59.4	56.7	67.7	70.8	69.3	63.9
10	GK 3124	61.7	74.8	61.8	68.8	66.8	61.8	59.7	59.7	68.8	82.6	66.5	63.5	56.6	68.8	62.5	57.1	62.2	61.8	71.5	78.5	75.0	65.9
11	NMH-1290	63.1	75.9	60.1	66.0	66.3	66.7	59.4	63.3	73.2	83.3	69.2	65.6	51.4	75.7	58.1	57.1	60.1	61.3	68.4	78.5	73.4	66.2
12	DKC9160 (IP8510)	63.9	77.4	60.8	68.8	67.7	61.1	59.0	63.6	79.5	77.1	68.1	66.3	47.9	63.9	60.0	57.1	64.9	60.0	71.9	78.5	75.2	66.0
13	DKC9165 (IM8119)	62.5	78.6	61.8	69.1	68.0	62.5	63.9	56.7	71.4	85.4	68.0	64.9	55.6	55.9	62.5	57.4	66.0	60.4	71.5	78.5	75.0	66.1
14	KH-2977	62.2	73.3	54.9	70.8	65.3	64.9	58.3	57.8	72.3	79.9	66.6	63.9	43.4	55.6	58.6	57.7	60.4	56.6	72.2	79.2	75.7	63.9
15	PM14208L	62.2	73.3	59.4	66.7	65.4	62.2	62.5	58.1	69.6	84.7	67.4	64.2	38.9	70.5	64.2	55.7	62.5	59.3	70.5	76.4	73.4	64.8
CHECKS																							
16	Seedtech 2324	63.1	74.2	59.7	69.4	66.6	56.9	59.4	54.2	69.6	75.7	63.2	63.9	46.2	74.0	61.1	56.5	62.5	60.7	73.6	77.8	75.7	64.6
17	Buland	62.8	73.3	59.0	67.0	65.5	59.4	58.7	53.6	70.5	79.5	64.3	65.3	44.4	66.0	57.8	55.7	45.5	55.8	71.2	77.1	74.1	62.7
18	Bio 9681	62.5	73.0	59.7	72.6	67.0	63.2	59.0	58.6	70.5	85.4	67.4	64.6	47.9	66.7	59.4	56.3	60.4	59.2	73.6	68.8	71.2	64.8
Loc. Mean		62.9	75.4	59.5	68.6	66.6	62.5	60.2	59.2	71.1	81.5	66.9	64.9	48.5	67.6	60.5	56.6	61.0	59.8	71.3	75.7	73.5	65.1
C.D. (5%)		1.64	3.48	4.36	2.22	2.26	4.14	3.51	6.86	6.01	5.46	3.33	2.41	14.48	5.36	2.40	2.03	3.35	4.40	6.79	3.06	6.92	2.10
C.V. (%)		1.57	2.78	4.41	1.95	2.39	3.99	3.51	6.99	4.00	4.04	3.94	2.24	17.99	4.78	2.39	2.16	3.31	6.41	5.74	2.43	4.46	4.79
F (Prob)		0.16	0.06	0.15	0.00	0.36	0.00	0.00	0.03	0.12	0.04	0.12	0.26	0.42	0.00	0.00	0.19	0.00	0.06	0.58	0.00	0.32	0.05

BR49

Table No. 3 (Contd.)

DAYS TO 50% POLLEN SHED																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5	OV'L					
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	PM14207L	131.0	82.0	118.3	95.7	106.8	123.3	73.3	110.0	75.0	102.0	96.7	54.0	72.7	69.0	70.3	68.0	57.7	65.3	100.0	85.3	92.7	87.5
2	HT 142107	131.0	81.0	117.7	87.3	104.3	120.3	73.0	111.3	70.5	102.0	95.4	55.7	74.3	68.0	73.0	68.0	58.0	66.2	100.0	91.7	95.8	87.2
3	CP.444	132.0	82.7	117.3	96.0	107.0	126.7	71.7	111.0	72.5	101.0	96.6	53.7	71.0	65.0	70.0	63.7	56.3	63.3	98.0	87.7	92.8	86.8
4	PM14205L	127.0	80.0	115.7	95.3	104.5	115.7	71.3	113.3	67.0	99.7	93.4	53.7	71.0	62.0	71.0	63.7	58.0	63.2	97.3	82.0	89.7	84.9
5	PM14206L	128.0	80.0	118.3	97.7	106.0	121.3	72.0	111.3	73.5	100.7	95.8	53.7	76.0	67.0	73.3	66.7	56.7	65.6	99.0	92.7	95.8	87.5
6	Rasi-394	133.0	81.3	117.0	103.3	108.7	122.7	73.0	111.3	73.0	98.7	95.7	55.7	72.7	70.7	73.0	65.0	57.3	65.7	100.7	85.0	92.8	87.8
7	GK 3153	129.0	82.3	118.7	100.0	107.5	128.7	73.0	111.3	71.0	94.7	95.7	54.0	71.0	68.3	73.0	66.0	61.3	65.6	99.0	87.3	93.2	87.6
8	PM14203L	132.0	82.0	120.0	94.7	107.2	122.7	73.0	117.3	73.0	100.0	97.2	57.3	74.3	66.7	73.7	65.7	59.7	66.2	100.7	94.0	97.3	88.6
9	SYN426702	130.0	82.3	114.7	96.0	105.8	118.7	72.0	114.0	76.5	96.3	95.5	56.0	72.7	70.3	76.0	67.0	58.3	66.7	97.3	85.3	91.3	87.3
10	GK 3124	136.0	81.7	119.3	96.3	108.3	123.3	72.7	115.3	71.5	100.0	96.6	56.0	70.0	65.7	73.0	66.7	56.3	64.6	102.0	90.7	96.3	88.0
11	NMH-1290	134.0	81.3	118.3	90.3	106.0	126.3	72.3	111.3	73.5	102.7	97.2	54.7	76.0	69.3	70.0	68.0	57.3	65.9	101.0	82.0	91.5	87.6
12	DKC9160 (IP8510)	134.0	82.0	118.0	93.7	106.9	121.3	72.7	111.3	72.0	96.7	94.8	52.7	72.7	70.3	71.7	66.7	58.7	65.4	98.7	82.7	90.7	86.8
13	DKC9165 (IM8119)	130.0	82.0	118.0	96.0	106.5	126.3	71.7	112.3	75.5	100.0	97.2	55.3	72.7	71.0	75.3	65.0	59.3	66.4	98.3	88.7	93.5	88.1
14	KH-2977	131.0	81.7	117.7	97.3	106.9	124.3	73.3	110.0	75.5	100.0	96.6	55.0	74.3	68.7	71.0	66.7	57.0	65.4	95.7	85.3	90.5	87.3
15	PM14208L	140.0	85.0	118.7	86.7	107.6	123.7	74.3	114.7	74.0	103.7	98.1	58.0	76.0	69.0	75.7	66.3	61.0	67.7	101.7	90.7	96.2	89.4
CHECKS																							
16	Seedtech 2324	131.0	81.0	117.7	91.0	105.2	120.7	71.7	110.0	76.0	100.3	95.7	56.7	74.3	67.3	72.7	65.0	57.3	65.6	99.7	84.7	92.2	86.9
17	Buland	134.0	86.7	119.7	94.7	108.8	124.3	74.0	115.3	74.5	101.3	97.9	57.3	77.0	71.3	74.7	68.7	60.3	68.2	103.0	94.0	98.5	90.0
18	Bio 9681	128.0	78.0	116.7	99.0	105.4	113.3	71.3	112.7	74.5	94.7	93.3	54.3	71.0	63.7	73.0	65.0	56.3	63.9	96.3	83.3	89.8	85.4
Loc. Mean		131.7	81.8	117.9	95.1	106.6	122.4	72.6	112.4	73.3	99.7	96.1	55.2	73.3	68.0	72.8	66.2	58.2	65.6	99.4	87.4	93.4	87.5
C.D. (5%)		1.07	2.56	4.30	5.15	4.15	3.12	1.19	1.22	2.81	1.07	3.04	1.08	3.15	1.59	1.86	1.91	1.69	1.72	3.62	1.09	5.15	1.53
C.V. (%)		0.49	1.89	2.20	3.26	2.74	1.54	0.99	0.65	1.82	0.65	2.51	1.18	2.59	1.41	1.54	1.74	1.75	2.28	2.20	0.75	2.61	2.59
F (Prob)		0.00	0.00	0.70	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.00

Table No. 3 (Contd.)

DAYS TO 50% SILKING																							
S.No	PEDIGREE	ZN 2								ZN 3						ZN 4				ZN 5		OV'L	
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH		Mean
1	PM14207L	134.0	83.0	122.0	99.0	109.5	125.3	76.3	112.0	80.0	104.3	99.6	57.0	76.7	70.7	72.3	69.7	61.0	67.9	104.0	87.7	95.8	90.3
2	HT 142107	133.0	82.3	121.3	91.0	106.9	122.3	76.0	113.3	75.5	104.0	98.2	59.3	76.0	70.7	74.3	70.3	61.0	68.6	104.0	94.3	99.2	89.9
3	CP.444	135.0	83.7	120.7	99.3	109.7	128.7	74.3	113.0	77.0	102.7	99.1	56.7	76.0	67.0	71.0	65.3	59.3	65.9	101.7	89.7	95.7	89.5
4	PM14205L	130.0	81.3	119.3	98.7	107.3	117.7	74.3	115.3	71.5	102.7	96.3	57.0	72.7	65.3	73.7	65.3	61.0	65.8	101.3	84.3	92.8	87.7
5	PM14206L	131.0	81.0	121.3	102.7	109.0	123.3	75.0	113.3	77.5	103.7	98.6	57.0	77.0	68.7	75.0	68.7	59.7	67.7	103.0	93.7	98.3	90.1
6	Rasi-394	135.0	82.7	120.3	107.0	111.3	124.7	76.0	113.7	77.5	102.7	98.9	58.7	76.0	75.3	76.0	67.0	60.7	68.9	104.7	87.0	95.8	90.9
7	GK 3153	132.0	83.7	122.3	104.3	110.6	130.7	76.0	113.3	76.0	99.3	99.1	57.7	76.0	72.7	74.0	68.3	64.3	68.8	103.0	89.3	96.2	90.8
8	PM14203L	135.0	82.7	124.0	99.0	110.2	124.7	76.0	119.3	77.5	103.7	100.2	61.0	78.0	70.7	74.3	68.7	62.7	69.2	104.7	96.0	100.3	91.6
9	SYN426702	133.0	83.3	118.0	99.7	108.5	120.7	75.0	117.0	80.5	99.3	98.5	59.0	77.0	71.7	77.0	69.3	61.3	69.2	102.0	87.0	94.5	90.0
10	GK 3124	138.0	83.0	123.0	100.3	111.1	125.3	75.7	117.3	75.5	104.7	99.7	58.7	74.7	70.7	75.0	69.7	59.3	68.0	106.0	92.3	99.2	91.1
11	NMH-1290	136.0	82.7	121.3	94.7	108.7	128.3	75.0	113.3	77.5	105.3	99.9	57.7	76.3	70.7	73.0	69.0	61.0	67.9	105.0	85.3	95.2	90.1
12	DKC9160 (IP8510)	136.0	83.0	121.0	97.7	109.4	123.3	75.3	113.3	76.0	99.7	97.5	56.0	74.3	71.3	73.0	68.0	61.7	67.4	102.7	84.0	93.3	89.2
13	DKC9165 (IM8119)	133.0	83.0	121.3	100.0	109.3	128.3	74.3	115.0	79.5	102.3	99.9	58.3	76.0	75.3	77.0	66.3	61.0	69.0	102.3	90.3	96.3	90.8
14	KH-2977	133.0	83.7	121.3	101.3	109.8	126.3	76.3	112.0	80.5	103.7	99.8	58.3	76.0	71.3	73.0	68.7	60.0	67.9	100.3	86.7	93.5	90.1
15	PM14208L	142.0	86.7	121.0	91.3	110.3	125.7	77.3	117.3	78.5	107.0	101.2	60.0	77.7	73.7	78.7	69.0	63.0	70.3	105.7	92.7	99.2	92.2
CHECKS																							
16	Seedtech 2324	134.0	82.3	121.3	95.0	108.2	123.0	74.7	113.0	80.5	103.0	98.8	59.7	76.0	70.3	75.0	66.3	60.3	67.9	103.7	87.0	95.3	89.7
17	Buland	136.0	88.0	122.3	98.3	111.2	126.3	77.0	117.0	79.0	105.0	100.9	60.3	75.3	75.0	76.7	70.7	63.3	70.2	107.0	95.7	101.3	92.5
18	Bio 9681	131.0	79.3	120.0	103.0	108.3	115.3	74.0	114.7	79.0	100.0	96.6	57.0	76.0	66.7	75.0	67.0	59.7	66.9	100.3	85.3	92.8	88.4
Loc. Mean		134.3	83.1	121.2	99.0	109.4	124.4	75.5	114.6	77.7	102.9	99.0	58.3	76.0	71.0	74.7	68.2	61.1	68.2	103.4	89.4	96.4	90.3
C.D. (5%)		1.07	2.20	4.20	5.04	4.03	3.18	1.36	1.36	2.72	1.44	2.94	1.32	2.86	1.88	2.41	2.32	1.10	1.66	3.67	1.29	4.80	1.46
C.V. (%)		0.48	1.59	2.09	3.07	2.59	1.54	1.09	0.72	1.66	0.84	2.35	1.36	2.27	1.60	1.94	2.05	1.09	2.12	2.14	0.87	2.36	2.40
F (Prob)		0.00	0.00	0.64	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.03	0.00

BR51

Table No. 3 (Contd.)

		DAYS TO 75% DRY HUSK																				
		ZN 2					ZN 3					ZN 4					ZN 5	OV'L				
S.No.	PEDIGREE	KARN	LUDH	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	PM14207L	170.0	121.0	144.7	145.2	160.3	116.0	147.0	114.5	141.3	135.8	97.0	116.3	110.7	115.3	112.0	99.7	108.5	134.7	113.3	124.0	125.9
2	HT 142107	171.0	119.0	137.7	142.6	158.3	117.0	146.7	113.5	140.7	135.2	100.0	116.3	110.7	118.0	109.0	100.0	109.0	136.3	108.7	122.5	125.2
3	CP.444	171.0	120.0	134.0	141.7	157.3	114.0	146.7	112.0	138.7	133.7	98.0	113.0	107.0	114.0	112.0	98.0	107.0	132.0	108.0	120.0	123.5
4	PM14205L	170.0	117.0	136.7	141.2	155.7	115.0	146.3	109.5	138.3	133.0	97.7	113.0	105.3	116.0	109.3	100.3	106.9	133.7	109.0	121.3	123.3
5	PM14206L	170.0	120.7	136.3	142.3	157.3	117.3	145.0	113.5	140.7	134.8	98.0	118.0	108.7	118.0	112.0	98.7	108.9	135.3	108.3	121.8	124.9
6	Rasi-394	171.0	119.7	129.0	139.9	160.3	116.0	144.7	114.5	138.7	134.8	100.0	118.0	115.3	117.0	107.7	99.0	109.5	136.7	121.3	129.0	125.6
7	GK 3153	172.0	121.7	134.3	142.7	161.3	118.0	144.7	113.5	139.0	135.3	98.0	114.7	112.7	117.0	112.0	103.3	109.6	134.7	109.0	121.8	125.4
8	PM14203L	170.0	117.7	135.3	141.0	157.3	117.7	149.0	114.5	139.7	135.6	101.3	118.0	110.7	118.0	108.3	101.7	109.7	138.0	108.3	123.2	125.3
9	SYN426702	172.0	119.0	137.7	142.9	156.3	116.0	148.0	116.0	138.0	134.9	99.3	118.0	111.7	120.0	112.0	100.7	110.3	135.0	108.7	121.8	125.5
10	GK 3124	170.0	119.7	141.3	143.7	159.3	115.0	147.0	110.0	140.7	134.4	98.7	116.3	110.7	118.0	115.0	98.0	109.4	139.0	108.3	123.7	125.4
11	NMH-1290	171.0	118.3	144.3	144.6	161.3	115.0	145.3	114.0	139.7	135.1	98.3	116.3	110.7	116.0	114.0	100.0	109.2	134.7	116.7	125.7	126.0
12	DKC9160 (IP8510)	173.0	117.7	149.0	146.6	161.3	115.0	147.7	110.5	139.3	134.8	96.7	111.3	111.3	116.0	112.0	100.7	108.0	132.0	115.0	123.5	125.5
13	DKC9165 (IM8119)	169.0	119.3	141.7	143.3	158.7	115.0	144.0	116.0	141.3	135.0	99.0	118.0	115.3	119.3	112.0	100.3	110.7	136.3	108.3	122.3	125.9
14	KH-2977	171.0	122.7	142.0	145.2	159.3	116.0	144.3	115.0	141.0	135.1	98.3	118.0	111.3	116.0	114.0	99.7	109.6	135.3	120.7	128.0	126.5
15	PM14208L	173.0	122.7	145.7	147.1	157.7	116.0	149.3	116.0	141.3	136.1	100.3	118.0	113.7	122.3	115.0	101.7	111.8	138.0	108.3	123.2	127.4
CHECKS																						
16	Seedtech 2324	172.0	118.3	148.0	146.1	154.7	115.0	144.0	114.5	139.3	133.5	100.3	113.0	110.3	117.0	107.7	99.0	107.9	135.0	108.7	121.8	124.8
17	Buland	170.0	121.0	151.3	147.4	158.3	116.0	149.3	116.0	139.0	135.7	101.0	114.7	115.0	120.0	109.0	102.3	110.3	139.0	120.7	129.8	127.7
18	Bio 9681	170.0	115.7	148.3	144.7	152.7	115.0	145.7	110.5	137.0	132.2	98.0	111.3	106.7	118.0	107.7	98.7	106.7	133.3	115.0	124.2	124.0
Loc. Mean		170.9	119.5	141.0	143.8	158.2	115.8	146.4	113.6	139.6	134.7	98.9	115.7	111.0	117.6	111.1	100.1	109.1	135.5	112.0	123.8	125.4
C.D. (5%)		1.41	3.13	2.19	6.29	1.45	1.63	1.08	3.11	2.26	2.10	1.35	3.13	1.88	1.82	1.76	1.74	2.12	5.97	3.24	7.89	1.76
C.V. (%)		0.50	1.58	0.94	2.64	0.55	0.85	0.44	1.30	0.98	1.24	0.82	1.63	1.02	0.93	0.96	1.05	1.70	2.66	1.74	3.02	2.02
F (Prob)		0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.00

Table No. 3 (Contd.)

S.No.	PEDIGREE	PLANT HEIGHT(cm)																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	PM14207L	200.0	253.3	237.7	197.3	222.1	214.3	189.3	227.3	199.8	201.7	206.5	217.5	201.0	220.0	171.7	221.0	172.1	200.6	236.7	202.3	219.5	209.6
2	HT 142107	245.0	248.3	245.3	173.7	228.1	225.6	185.3	224.7	200.8	181.7	203.6	199.5	210.0	211.3	171.7	233.3	174.0	200.0	248.3	182.3	215.3	209.5
3	CP.444	210.0	183.3	220.0	182.7	199.0	214.0	194.7	205.0	168.2	178.3	192.0	184.4	205.0	175.0	138.3	214.0	159.7	179.4	231.7	173.3	202.5	190.4
4	PM14205L	250.0	265.0	238.0	192.7	236.4	219.6	187.0	237.7	198.6	228.3	214.2	206.3	207.3	214.0	178.3	250.3	171.7	204.7	245.0	197.7	221.3	216.9
5	PM14206L	225.0	236.7	217.3	194.0	218.3	189.3	187.0	196.0	180.5	195.0	189.6	198.6	206.0	204.7	153.3	234.7	155.7	192.2	255.0	182.0	218.5	200.6
6	Rasi-394	200.0	236.7	232.7	195.7	216.3	196.2	191.0	214.7	180.3	198.3	196.1	203.4	212.0	196.0	165.0	223.0	151.9	191.9	243.3	194.7	219.0	202.0
7	GK 3153	210.0	241.7	219.3	197.3	217.1	194.1	182.7	192.0	183.1	183.3	187.0	197.2	218.3	184.3	136.7	235.3	176.2	191.3	230.0	180.0	205.0	197.7
8	PM14203L	240.0	248.3	245.0	195.3	232.2	200.7	188.0	209.3	183.6	203.3	197.0	207.2	212.7	211.0	186.7	231.0	174.0	203.8	243.3	166.7	205.0	208.6
9	SYN426702	240.0	250.0	232.0	206.0	232.0	200.9	186.7	175.0	173.2	221.7	191.5	196.6	216.3	205.3	140.0	237.3	169.4	194.2	256.7	178.0	217.3	205.0
10	GK 3124	215.0	246.7	234.3	187.0	220.8	203.9	193.3	191.7	192.5	203.3	197.0	187.5	209.3	202.7	166.7	229.3	165.3	193.5	223.3	181.7	202.5	202.0
11	NMH-1290	220.0	236.7	218.3	188.0	215.8	217.8	188.7	204.7	182.6	186.7	196.1	208.9	206.3	212.0	148.3	220.7	161.3	192.9	235.0	204.0	219.5	202.3
12	DKC9160 (IP8510)	220.0	238.3	217.0	193.7	217.3	190.7	188.7	181.7	171.5	193.3	185.2	193.0	206.7	179.0	171.7	213.3	164.9	188.1	231.7	183.3	207.5	196.4
13	DKC9165 (IM8119)	225.0	238.3	223.0	188.3	218.7	195.0	191.0	197.7	161.4	185.0	186.0	197.4	216.0	169.3	158.3	209.7	157.4	184.7	230.0	176.7	203.3	195.3
14	KH-2977	220.0	240.0	209.7	185.7	213.8	186.7	187.7	170.0	175.8	185.0	181.0	179.1	205.7	172.3	161.7	221.0	140.6	180.1	220.0	182.3	201.2	190.8
15	PM14208L	215.0	275.0	273.0	190.3	238.3	227.3	188.0	227.3	189.5	225.0	211.4	219.8	213.3	240.3	188.3	247.3	193.7	217.1	225.0	174.3	199.7	218.4
CHECKS																							
16	Seedtech 2324	190.0	210.0	190.3	173.7	191.0	220.0	187.0	184.7	159.1	171.7	184.5	188.2	204.3	182.7	153.3	214.0	132.5	179.2	220.0	181.0	200.5	186.0
17	Buland	215.0	260.0	220.7	187.0	220.7	215.4	191.0	194.0	188.2	213.3	200.4	207.4	218.0	199.3	145.0	239.0	175.5	197.4	248.3	204.3	226.3	207.2
18	Bio 9681	210.0	246.7	226.0	192.0	218.7	205.6	184.7	178.0	182.5	191.7	188.5	185.3	204.0	186.3	131.7	220.3	167.6	182.5	214.0	165.3	189.7	193.6
Loc. Mean		219.4	241.9	227.8	190.0	219.8	206.5	188.4	200.6	181.7	197.0	194.9	198.7	209.6	198.1	159.3	227.5	164.6	193.0	235.4	183.9	209.6	201.8
C.D. (5%)		9.67	33.61	12.18	9.34	18.00	28.35	5.97	4.45	16.10	18.19	14.65	2.90	16.40	14.48	32.39	15.79	18.42	11.97	28.45	11.73	20.96	7.74
C.V. (%)		2.66	8.37	3.22	2.96	5.77	8.27	1.91	1.34	4.20	5.56	5.96	0.88	4.71	4.40	12.26	4.18	6.74	5.40	7.28	3.84	4.74	5.68
F (Prob)		0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.02	0.00	0.00	0.00	0.12	0.00	0.08	0.00

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Table No. 3 (Contd.)

		EAR HEIGHT(cm)																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
S.No.	PEDIGREE	KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	PM14207L	85.0	128.3	83.7	86.7	95.9	90.5	86.7	114.3	87.0	93.3	94.4	112.4	111.7	93.7	80.0	105.3	72.5	95.9	125.0	104.0	114.5	97.6
2	HT 142107	105.0	111.7	75.0	69.0	90.2	85.1	84.7	121.3	87.9	71.7	90.1	112.4	115.0	91.7	76.7	115.7	76.3	98.0	128.3	90.0	109.2	95.1
3	CP.444	100.0	100.0	79.0	58.3	84.3	87.7	87.3	107.0	67.4	80.0	85.9	86.4	108.7	75.3	65.0	103.7	69.5	84.8	110.0	87.0	98.5	86.6
4	PM14205L	130.0	125.0	83.3	86.7	106.3	95.6	86.0	114.7	77.1	105.0	95.7	103.9	113.0	100.0	83.3	122.7	70.3	98.9	115.0	88.3	101.7	100.0
5	PM14206L	100.0	106.7	68.3	69.0	86.0	63.5	84.0	95.3	76.0	73.3	78.4	91.8	108.0	84.0	65.0	114.0	67.0	88.3	113.3	85.7	99.5	86.2
6	Rasi-394	85.0	145.0	91.7	58.3	95.0	97.0	87.0	131.7	81.5	106.7	100.8	123.1	121.7	97.3	96.7	112.0	71.5	103.7	123.3	102.0	112.7	101.8
7	GK 3153	85.0	120.0	65.3	80.7	87.8	78.2	82.0	105.0	75.9	73.3	82.9	110.7	119.0	88.0	65.0	115.0	75.9	95.6	122.5	85.3	103.9	91.0
8	PM14203L	110.0	116.7	77.7	79.3	95.9	93.6	85.0	101.7	80.7	100.0	92.2	111.6	113.7	83.0	83.3	116.7	73.6	97.0	123.3	68.0	95.7	95.2
9	SYN426702	125.0	126.7	93.0	96.3	110.3	88.3	86.7	105.0	73.6	100.0	90.7	111.1	108.3	94.0	73.3	116.7	78.4	97.0	128.3	87.7	108.0	99.6
10	GK 3124	85.0	115.0	81.0	86.7	91.9	80.4	87.7	91.7	82.6	81.7	84.8	101.7	110.3	85.7	76.7	111.7	71.1	92.9	116.7	87.0	101.8	91.3
11	NMH-1290	110.0	130.0	81.3	87.7	102.3	82.1	84.3	109.3	81.0	93.3	90.0	117.4	111.3	105.3	66.7	107.7	74.1	97.1	123.3	104.3	113.8	98.2
12	DKC9160 (IP8510)	100.0	118.3	80.7	79.7	94.7	80.7	85.7	98.3	72.5	83.3	84.1	108.6	104.0	77.0	83.3	103.0	71.9	91.3	113.3	88.3	100.8	91.1
13	DKC9165 (IM8119)	110.0	118.3	75.0	87.3	97.7	78.8	92.0	104.7	70.3	80.0	85.2	102.5	108.7	69.3	76.7	102.0	65.3	87.4	113.3	106.7	110.0	91.8
14	KH-2977	85.0	133.3	83.7	97.0	99.7	81.7	86.7	75.3	78.5	90.0	82.4	106.8	107.0	77.3	81.7	109.0	61.7	90.6	110.0	83.3	96.7	91.1
15	PM14208L	120.0	143.3	113.3	80.7	114.3	94.2	85.7	116.3	81.4	108.3	97.2	128.9	112.7	105.3	90.0	123.3	77.1	106.2	120.0	89.7	104.8	105.3
CHECKS																							
16	Seedtech 2324	105.0	121.7	76.3	66.0	92.3	99.3	82.7	109.3	80.3	90.0	92.3	103.5	114.3	96.0	80.0	108.0	72.9	95.8	111.7	85.0	98.3	94.2
17	Buland	130.0	161.7	90.0	67.3	112.3	93.3	87.7	97.0	95.0	108.3	96.3	140.8	141.3	121.0	76.7	130.3	94.9	117.5	109.3	107.0	108.2	108.9
18	Bio 9681	85.0	120.0	74.3	90.3	92.4	94.5	83.0	95.0	75.9	78.3	85.4	100.4	111.7	76.3	66.7	106.7	72.1	89.0	110.0	73.3	91.7	89.0
Loc. Mean		103.1	124.5	81.8	79.3	97.2	86.9	85.8	105.2	79.1	89.8	89.4	109.7	113.4	90.0	77.0	112.4	73.1	95.9	117.6	90.1	103.9	95.2
C.D. (5%)		6.29	18.11	7.83	11.86	16.74	22.31	3.88	2.28	12.31	15.92	10.27	2.35	14.86	7.61	18.81	9.49	9.18	7.78	15.79	5.81	18.11	6.00
C.V. (%)		3.68	8.76	5.77	9.02	12.14	15.47	2.73	1.31	7.37	10.68	9.11	1.29	7.90	5.09	14.72	5.09	7.57	7.07	8.09	3.89	8.26	9.33
F (Prob)		0.00	0.00	0.00	0.00	0.01	0.23	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.17	0.00	0.35	0.00

TABLE No. 4 : PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRACH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR5 DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	ZN 2										ZN 3											
	KARN	R	LUDH	R	PANT	R	KANP	R	MEAN	R	BAHR	R	BHUB	R	DHOL	R	RANC	R	VARA	R	MEAN	R
1 BLH 101	9330	3	10955	3	16262	2	5853	6	10600	2	5587	11	7247	6	7415	8	9510	9	8835	1	7719	7
2 BH 412044	7876	5	4579	11	13862	10	5860	5	8044	11	5591	10	4824	11	5790	11	9782	7	5161	11	6230	11
3 BH 412066	9554	1	8060	8	14331	9	5384	8	9332	7	6146	7	7568	3	8334	5	10009	3	7971	6	8005	6
4 DMRH 1419	6514	11	11101	2	14449	8	7015	2	9770	4	7745	5	7607	2	7846	7	9901	5	7729	7	8166	5
5 CP.222	7436	8	10176	6	18423	1	4440	#	10119	3	11260	1	5729	10	8990	4	11166	1	8636	2	9156	1
6 DKC9166(IM8013)	9464	2	11895	1	15925	3	5413	7	10674	1	10057	2	7186	7	9116	3	9964	4	8362	4	8937	2
7 BLH 102	8415	4	10288	5	13670	11	4709	9	9270	8	6352	6	7273	5	9428	2	9669	8	8559	3	8256	4
8 HT 1412081	7514	7	10715	4	15531	4	4298	#	9515	5	8114	3	7307	4	9803	1	11043	2	8286	5	8911	3
9 PM142096M CHECKS	6852	10	8459	7	14662	7	7464	1	9359	6	5966	9	7608	1	6193	10	9827	6	7007	10	7320	10
10 Bio 9637	7713	6	7625	10	14801	6	6757	3	9224	9	6104	8	7021	8	8023	6	8397	11	7270	9	7363	9
11 HM10	7064	9	7730	9	14910	5	6017	4	8930	10	7937	4	6925	9	6394	9	8788	10	7464	8	7502	8
Location Mean	7976		9235		15166		5746		9531		7351		6936		7939		9823		7753		7960	
C.D. (5%)	1048		1391		1183		321		986		482		334		2620		1337		1161		1187	
C.V. (%)	7.69		8.81		4.56		3.27		-		3.84		2.82		19.31		7.96		8.76		-	
F (Prob)	0		0		0		0				0		0		0.037		0.008		0			
Plot Size	12		11.5		9		9.6		-		9.6		9.6		12		5.6		9.6		-	
AGRONOMY DATA																						
Sowing Date	23-11		28-01		12-12		8-12		-		28-11		1-12		7-12		6-02		3-12		-	
Harvest Date	25-05		15-06		7-06		6-05		-		7-05		8-04		7-06		13-06		23-04		-	
Irrigation Nos	8		15		6		4		-		5		-		2		7		5		-	
Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-	
Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-	
Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-	

TABLE No. 4 : (Contd.)

S. No. PEDIGREE	COIM		DHAR		KARI		KOLH		MAND		VAGA		ZN 4			ZN 5			OV'L			
		R		R		R		R		R		R	MEAN	R	BANS	R	GODH	R	MEAN	R	MEAN	R
1 BLH 101	10266	1	7598	5	4311	4	10348	2	7476	10	7854	5	7975	2	10302	5	3171	6	6736	6	8372	3
2 BH 412044	6143	11	3237	11	4051	6	7771	8	8219	7	6191	9	5935	11	11030	2	2385	8	6707	7	6609	11
3 BH 412066	9228	5	6751	7	4540	2	9377	4	6956	11	6839	7	7282	8	9097	11	10462	1	9779	1	8271	5
4 DMRH 1419	10020	3	6869	6	3023	11	8472	6	7601	9	7826	6	7302	7	11334	1	5442	3	8388	2	8264	6
5 CP.222	8686	9	8169	1	3534	7	8206	7	9552	3	9372	1	7920	3	10074	7	2239	10	6157	10	8593	2
6 DKC9166(IM8013)	10140	2	7974	2	4642	1	10792	1	9510	4	8739	3	8633	1	10253	6	3551	5	6902	5	8999	1
7 BLH 102	8980	7	7962	3	3213	10	9919	3	9829	1	6788	8	7782	5	10647	3	2484	7	6565	8	8128	7
8 HT 1412081	9092	6	6489	10	4380	3	8540	5	9234	5	8133	4	7645	6	10044	8	2354	9	6199	9	8287	4
9 PM142096M CHECKS	9835	4	7671	4	4121	5	7709	9	8137	8	9258	2	7788	4	10437	4	3736	4	7087	4	7938	8
10 Bio 9637	7154	10	6600	9	3283	8	6477	10	8325	6	5052	11	6148	10	9272	10	6222	2	7747	3	7417	9
11 HM10	8854	8	6744	8	3277	9	5840	11	9604	2	5417	10	6623	9	9309	9	1219	11	5264	11	7264	10
Location Mean	8945		6915		3852		8496		8586		7406		7367		10164		3933		7048		8013	
C.D. (5%)	887		2204		388		1536		712		443		1029		1104		404		754		1033	
C.V. (%)	5.8		18.65		5.9		10.58		4.86		3.5		-		6.36		6.01		-		-	
F (Prob)	0		0.011		0		0		0		0		-		0.003		0		-		-	
Plot Size	9.6		9.8		9.6		12		11.2		9.6		-		9.6		4.8		-		-	
AGRONOMY DATA																						
Sowing Date	6-01		10-12		26-11		15-12		5-12		8-01		-		30-11		28-11		-		-	
Harvest Date	6-05		27-04		6-04		14-05		24-04		27-04		-		30-04		7-04		-		-	
Irrigation Nos	9		5		12		-		12		10		-		6		8		-		-	
Fertilizer Applied N	250		150		240		120		150		250		-		150		120		-		-	
Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-	
Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-	

TABLE No. 4 (Contd.)

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Bio 9637																					
	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
	KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1 BLH 101	21	43.7	9.9	-	14.9	-	3.2	-	13.2	21.5	4.8	43.5	15.1	31.3	59.8	-	55.5	29.7	11.1	-	-	12.9
2 BH 412044	2.1	-	-	-	-	-	-	-	16.5	-	-	-	-	23.4	20	-	22.6	-	19	-	-	-
3 BH 412066	23.9	5.7	-	-	1.2	0.7	7.8	3.9	19.2	9.6	8.7	29	2.3	38.3	44.8	-	35.4	18.4	-	68.1	26.2	11.5
4 DMRH 1419	-	45.6	-	3.8	5.9	26.9	8.3	-	17.9	6.3	10.9	40.1	4.1	-	30.8	-	54.9	18.8	22.2	-	8.3	11.4
5 CP.222	-	33.5	24.5	-	9.7	84.5	-	12.1	33	18.8	24.4	21.4	23.8	7.7	26.7	14.7	85.5	28.8	8.6	-	-	15.9
6 DKC9166(IM8013)	22.7	56	7.6	-	15.7	64.8	2.3	13.6	18.7	15	21.4	41.7	20.8	41.4	66.6	14.2	73	40.4	10.6	-	-	21.3
7 BLH 102	9.1	34.9	-	-	0.5	4.1	3.6	17.5	15.2	17.7	12.1	25.5	20.6	-	53.1	18.1	34.4	26.6	14.8	-	-	9.6
8 HT 1412081	-	40.5	4.9	-	3.2	32.9	4.1	22.2	31.5	14	21	27.1	-	33.4	31.9	10.9	61	24.3	8.3	-	-	11.7
9 PM142096M	-	10.9	-	10.5	1.5	-	8.4	-	17	-	-	37.5	16.2	25.5	19	-	83.3	26.7	12.6	-	-	7
CHECKS																						
10 Bio 9637	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 HM10	-	1.4	0.7	-	-	30	-	-	4.7	2.7	1.9	23.8	2.2	-	-	15.4	7.2	7.7	0.4	-	-	-

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE HM10																						
	ZN 2					ZN 3					ZN 4					ZN 5		OV'L					
	KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN	
1 BLH 101	32.1	41.7	9.1	-	18.7	-	4.7	16	8.2	18.4	2.9	16	12.7	31.6	77.2	-	45	20.4	10.7	160	28	15.2	
2 BH 412044	11.5	-	-	-	-	-	-	-	11.3	-	-	-	-	23.6	33.1	-	14.3	-	18.5	95.7	27.4	-	
3 BH 412066	35.2	4.3	-	-	4.5	-	9.3	30.3	13.9	6.8	6.7	4.2	0.1	38.6	60.6	-	26.3	10	-	758	85.8	13.9	
4 DMRH 1419	-	43.6	-	16.6	9.4	-	9.8	22.7	12.7	3.6	8.9	13.2	1.9	-	45.1	-	44.5	10.3	21.8	347	59.4	13.8	
5 CP.222	5.3	31.7	23.6	-	13.3	41.9	-	40.6	27.1	15.7	22.1	-	21.1	7.9	40.5	-	73	19.6	8.2	83.7	17	18.3	
6 DKC9166(IM8013)	34	53.9	6.8	-	19.5	26.7	3.8	42.6	13.4	12	19.1	14.5	18.2	41.7	84.8	-	61.3	30.4	10.1	191	31.1	23.9	
7 BLH 102	19.1	33.1	-	-	3.8	-	5	47.4	10	14.7	10.1	1.4	18.1	-	69.8	2.3	25.3	17.5	14.4	104	24.7	11.9	
8 HT 1412081	6.4	38.6	4.2	-	6.5	2.2	5.5	53.3	25.7	11	18.8	2.7	-	33.7	46.2	-	50.1	15.4	7.9	93.2	17.8	14.1	
9 PM142096M	-	9.4	-	24	4.8	-	9.9	-	11.8	-	-	11.1	13.7	25.8	32	-	70.9	17.6	12.1	207	34.6	9.3	
CHECKS																							
10 Bio 9637	9.2	-	-	12.3	3.3	-	1.4	25.5	-	-	-	-	-	0.2	10.9	-	-	-	-	-	411	47.2	2.1
11 HM10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table No. 4 (Contd.)

GRAIN SHELLING %																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	BLH 101	81.2	81.7	81.9	74.3	79.8	78.0	78.2	77.0	89.0	76.3	79.7	85.1	86.2	80.0	86.1	78.1	78.3	82.3	78.8	80.8	79.8	80.6
2	BH 412044	76.4	75.1	78.8	75.7	76.5	76.6	80.0	77.5	85.0	72.0	78.2	75.1	82.7	77.3	83.1	82.0	75.8	79.3	81.4	79.3	80.3	78.5
3	BH 412066	79.9	78.9	81.7	75.7	79.0	78.0	82.6	77.5	85.8	75.0	79.8	80.9	84.0	80.4	84.1	78.6	76.8	80.8	80.2	82.4	81.3	80.1
4	DMRH 1419	76.6	82.8	86.2	75.3	80.2	78.6	82.1	83.0	87.0	75.0	81.2	81.4	87.6	80.7	75.6	78.3	79.0	80.4	78.1	83.1	80.6	80.6
5	CP.222	80.3	84.2	85.0	74.3	81.0	81.0	77.5	78.0	87.7	75.0	79.8	78.3	87.2	80.7	81.9	79.9	79.1	81.2	80.1	78.4	79.3	80.5
6	DKC9166(IM8013)	80.1	81.4	84.2	75.7	80.3	80.0	79.6	81.5	86.0	75.0	80.4	83.4	84.3	80.4	86.0	78.0	78.3	81.7	80.4	77.7	79.0	80.7
7	BLH 102	80.6	83.0	84.2	74.3	80.5	76.5	78.1	79.5	87.9	77.0	79.8	79.7	85.1	81.4	86.3	81.4	76.1	81.7	77.8	81.4	79.6	80.6
8	HT 1412081	79.3	81.5	84.3	75.7	80.2	79.0	80.4	80.0	81.2	76.0	79.3	80.1	83.8	82.0	83.5	79.2	76.9	80.9	80.0	88.6	84.3	80.7
9	PM142096M	78.5	75.5	83.0	74.3	77.8	75.1	82.1	77.5	84.3	72.3	78.3	79.0	84.6	73.9	78.4	80.3	78.0	79.0	80.1	82.0	81.1	78.7
CHECKS																							
10	Bio 9637	79.7	79.1	81.7	76.3	79.2	75.1	79.2	79.5	82.9	74.3	78.2	78.5	86.5	78.8	71.1	78.8	74.8	78.1	79.5	83.8	81.7	78.8
11	HM10	75.6	76.4	79.3	76.0	76.8	74.7	81.3	75.5	81.2	73.7	77.3	87.0	84.2	77.7	79.0	81.6	76.7	81.0	78.9	74.9	76.9	78.4
Loc. Mean		78.9	80.0	82.7	75.2	79.2	77.5	80.1	78.8	85.3	74.7	79.3	80.8	85.1	79.4	81.4	79.6	77.2	80.6	79.6	81.1	80.3	79.8
C.D. (5%)		0.31	1.77	1.78	1.73	2.68	0.94	0.92	4.13	3.20	2.98	2.48	2.15	3.08	1.69	1.38	1.18	1.12	3.16	1.27	1.15	6.02	1.57
C.V. (%)		0.23	1.30	1.26	1.35	2.34	0.72	0.67	3.08	2.21	2.34	2.45	1.56	2.13	1.25	0.99	0.87	0.85	3.38	0.94	0.83	3.36	2.90
F (Prob)		0.00	0.00	0.00	0.15	0.02	0.00	0.00	0.05	0.00	0.05	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.54	0.00

MOISTURE % AT HARVEST																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	BLH 101	25.8	12.3	17.8	14.3	17.6	24.1	17.8	16.2	20.7	34.4	22.6	19.2	12.6	18.5	8.2	15.4	17.1	15.2	17.7	15.7	16.7	18.1
2	BH 412044	25.9	12.4	23.4	15.0	19.2	24.7	18.5	19.1	20.1	37.0	23.8	21.0	13.6	21.7	8.1	15.3	18.8	16.4	17.4	16.2	16.8	19.3
3	BH 412066	25.9	11.7	17.6	15.0	17.5	25.8	17.8	15.0	19.6	30.8	21.8	17.5	14.0	15.2	7.9	14.0	16.8	14.2	17.2	16.5	16.8	17.5
4	DMRH 1419	27.0	12.4	17.3	14.0	17.7	24.0	18.4	17.4	20.9	35.0	23.1	23.2	14.8	15.4	8.0	15.0	17.1	15.6	17.1	16.5	16.8	18.4
5	CP.222	26.3	13.2	17.8	14.0	17.8	27.8	18.5	22.0	22.0	36.3	25.3	25.6	14.6	21.1	8.5	16.3	16.3	17.1	17.8	16.8	17.3	19.7
6	DKC9166(IM8013)	25.9	12.1	17.0	12.0	16.7	26.9	18.4	15.9	22.0	30.4	22.7	17.1	12.5	13.9	8.2	14.6	17.8	14.0	17.3	15.2	16.2	17.5
7	BLH 102	28.6	12.4	18.7	14.3	18.5	26.1	17.7	14.9	22.2	37.6	23.7	22.3	13.3	18.2	8.1	16.3	16.5	15.8	17.5	17.0	17.2	18.9
8	HT 1412081	26.7	11.8	18.5	12.0	17.2	26.9	17.9	21.3	23.0	33.3	24.5	23.0	14.7	15.1	8.2	16.6	17.0	15.8	18.0	16.6	17.3	18.8
9	PM142096M	26.2	12.1	16.6	14.3	17.3	24.9	18.1	14.8	23.2	32.8	22.8	21.6	11.5	20.6	8.5	14.6	17.0	15.6	18.1	16.7	17.4	18.3
CHECKS																							
10	Bio 9637	27.6	11.8	17.8	14.0	17.8	24.9	17.8	17.3	21.9	31.5	22.7	17.8	13.5	18.1	8.0	16.7	16.4	15.1	17.8	16.7	17.2	18.2
11	HM10	27.8	12.0	17.2	15.0	18.0	26.1	17.9	18.5	23.4	31.7	23.5	19.0	12.2	16.7	8.4	15.6	16.5	14.7	17.0	17.0	17.0	18.3
Loc. Mean		26.7	12.2	18.1	14.0	17.8	25.6	18.1	17.5	21.7	33.7	23.3	20.6	13.4	17.7	8.2	15.5	17.0	15.4	17.5	16.4	17.0	18.5
C.D. (5%)		1.52	0.89	1.36	0.63	1.65	0.96	0.34	2.76	1.05	1.25	2.12	2.64	2.64	2.01	0.30	0.37	0.49	1.83	0.68	0.63	1.02	0.95
C.V. (%)		3.35	4.27	4.40	2.64	6.44	2.21	1.11	9.28	2.84	2.18	7.11	7.53	11.59	6.69	2.19	1.39	1.69	10.28	2.28	2.24	2.70	7.58
F (Prob)		0.01	0.10	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.20	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.41	0.00

Table No. 4 (Contd.)

STAND AT HARVEST ('000/ha)																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	BLH 101	62.8	77.7	65.6	67.4	68.3	63.2	60.4	53.9	66.7	64.9	61.8	66.3	74.8	70.8	62.5	58.6	63.2	66.1	72.2	70.8	71.5	66.0
2	BH 412044	62.8	35.1	61.5	67.7	56.8	62.5	58.3	51.1	45.8	41.3	51.8	56.3	27.9	36.8	59.2	57.1	44.4	47.0	71.9	67.4	69.6	53.4
3	BH 412066	63.3	50.4	60.4	68.8	60.7	59.7	58.7	44.4	61.3	57.6	56.4	56.9	63.3	49.3	61.1	56.5	59.7	57.8	69.8	72.9	71.4	59.7
4	DMRH 1419	62.2	77.4	64.4	70.8	68.7	65.6	56.9	50.3	70.2	64.2	61.5	66.0	67.7	72.6	60.8	57.7	60.4	64.2	70.1	68.8	69.4	65.1
5	CP.222	62.5	78.0	65.6	64.6	67.7	60.8	61.5	52.8	70.8	64.2	62.0	65.3	76.5	84.0	59.7	56.3	63.2	67.5	72.6	70.8	71.7	66.4
6	DKC9166(IM8013)	63.1	74.5	66.7	69.1	68.3	59.7	59.0	53.1	65.5	63.5	60.2	63.9	61.9	71.2	62.5	56.8	62.5	63.1	69.1	72.9	71.0	64.4
7	BLH 102	62.8	72.5	65.9	66.3	66.9	60.1	58.3	53.3	66.1	64.9	60.5	65.3	65.3	79.5	61.1	57.4	59.0	64.6	70.5	68.1	69.3	64.5
8	HT 1412081	62.8	75.4	65.2	62.8	66.5	59.7	61.5	53.9	72.6	66.0	62.7	66.0	61.2	79.5	61.1	57.4	62.8	64.7	72.2	68.1	70.1	65.2
9	PM142096M	62.2	77.4	65.6	65.3	67.6	59.4	58.3	55.3	66.1	65.6	60.9	64.9	62.9	77.4	60.0	55.1	62.2	63.7	72.2	65.3	68.8	64.4
CHECKS																							
10	Bio 9637	63.3	72.2	65.2	70.8	67.9	62.5	59.7	57.2	68.5	62.8	62.1	65.3	61.9	82.3	59.4	56.8	44.4	61.7	71.9	67.4	69.6	64.2
11	HM10	63.3	73.3	62.2	67.7	66.6	59.4	61.5	53.1	66.7	61.5	60.4	64.2	60.5	67.0	57.2	57.4	44.4	58.5	72.6	64.6	68.6	62.2
Loc. Mean		62.8	69.4	64.4	67.4	66.0	61.1	59.5	52.6	65.5	61.5	60.0	63.7	62.2	70.0	60.4	57.0	56.9	61.7	71.4	68.8	70.1	63.2
C.D. (5%)		2.40	8.84	4.33	3.48	10.01	3.24	2.80	8.15	8.54	6.09	5.26	2.98	14.56	3.78	1.89	2.15	3.14	8.35	3.98	3.99	5.80	3.95
C.V. (%)		2.24	7.47	3.95	3.03	10.50	3.11	2.77	9.10	7.66	5.81	6.86	2.74	13.74	3.17	1.83	2.21	3.24	11.66	3.28	3.40	3.71	9.21
F (Prob)		0.99	0.00	0.10	0.00	0.34	0.01	0.03	0.25	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.59	0.00	0.93	0.00

DAYS TO 50% POLLEN SHED																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	BLH 101	129.7	79.7	115.0	93.3	104.4	117.7	65.7	110.0	67.0	102.3	92.5	52.3	71.0	63.0	73.0	64.3	55.0	63.1	92.3	81.7	87.0	84.3
2	BH 412044	128.3	83.0	121.3	94.3	106.8	127.7	67.0	111.3	73.7	107.0	97.3	55.0	76.0	63.7	73.0	65.3	55.0	64.7	96.7	84.0	90.3	87.2
3	BH 412066	125.3	81.0	112.3	90.0	102.2	119.7	66.0	106.3	72.3	100.7	93.0	53.7	71.0	61.7	73.0	62.3	55.3	62.8	92.7	81.0	86.8	83.8
4	DMRH 1419	124.7	80.3	113.7	86.3	101.3	117.7	65.0	109.0	66.3	103.7	92.3	52.3	76.0	66.3	71.0	65.0	54.7	64.2	93.3	81.7	87.5	83.9
5	CP.222	127.7	81.7	119.3	88.7	104.3	118.7	66.0	111.3	67.0	105.7	93.7	55.3	76.0	65.7	74.0	66.3	56.0	65.6	97.3	86.3	91.8	86.1
6	DKC9166(IM8013)	123.0	78.7	111.0	85.7	99.6	114.7	65.0	107.3	66.7	99.0	90.5	51.3	70.0	60.3	74.0	60.7	53.7	61.7	90.7	81.3	86.0	81.9
7	BLH 102	126.0	82.0	119.7	81.3	102.3	125.7	66.0	112.0	71.3	105.0	96.0	55.3	76.0	64.7	72.0	68.3	53.3	64.9	94.0	85.0	89.5	85.7
8	HT 1412081	126.0	79.0	113.3	82.3	100.2	116.3	65.0	109.7	67.0	100.3	91.7	53.0	71.7	60.7	73.0	61.3	54.7	62.4	96.3	81.7	89.0	83.0
9	PM142096M	132.0	82.0	116.7	81.7	103.1	119.3	66.0	109.7	67.0	104.7	93.3	53.7	72.7	65.3	72.0	63.0	55.0	63.6	89.0	81.0	85.0	84.2
CHECKS																							
10	Bio 9637	128.0	79.7	115.0	79.0	100.4	121.7	66.0	109.7	68.7	101.3	93.5	53.0	72.7	61.7	71.0	63.0	55.3	62.8	95.3	82.3	88.8	83.7
11	HM10	126.0	79.3	113.0	79.0	99.3	120.3	66.0	108.0	71.7	101.3	93.5	54.3	71.0	62.3	75.0	64.0	55.7	63.7	94.7	82.0	88.3	83.7
Loc. Mean		127.0	80.6	115.5	85.6	102.2	119.9	65.8	109.5	69.0	102.8	93.4	53.6	73.1	63.2	72.8	64.0	54.9	63.6	93.8	82.5	88.2	84.3
C.D. (5%)		4.15	2.12	2.29	3.25	4.38	1.66	1.71	3.81	2.79	1.64	2.42	1.31	3.18	1.72	-	1.96	0.85	1.71	2.48	1.41	3.10	1.45
C.V. (%)		1.92	1.55	1.17	2.23	2.97	0.81	1.53	2.04	2.38	0.94	2.03	1.43	2.56	1.60	-	1.80	0.91	2.31	1.55	1.00	1.58	2.54
F (Prob)		0.01	0.00	0.00	0.00	0.03	0.00	0.43	0.12	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.02	0.00

BR59

Table No. 4 (Contd.)

DAYS TO 50% SILKING																							
S.No	PEDIGREE	KARN	LUDH	PANT	KANP	ZN 2					ZN 3					ZN 4				ZN 5	OV'L		
						Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	BLH 101	132.7	81.0	118.7	97.0	107.3	119.7	68.3	112.0	71.0	107.0	95.6	55.0	76.0	65.7	75.0	66.7	58.0	66.1	96.0	83.7	89.8	87.3
2	BH 412044	131.0	84.0	124.7	98.3	109.5	129.7	70.0	113.3	78.0	111.3	100.5	57.7	77.3	66.7	75.0	67.0	58.3	67.0	100.7	85.0	92.8	89.9
3	BH 412066	128.3	82.0	115.3	93.7	104.8	121.7	69.0	108.3	77.0	104.7	96.1	56.0	72.7	63.0	75.0	64.3	58.3	64.9	97.0	82.7	89.8	86.4
4	DMRH 1419	127.7	81.7	116.3	90.0	103.9	119.7	67.7	111.0	71.0	107.0	95.3	55.7	76.0	70.0	73.0	67.0	58.0	66.6	97.3	83.3	90.3	86.6
5	CP.222	130.0	83.0	123.0	92.3	107.1	120.7	68.3	113.3	71.7	109.0	96.6	58.0	77.7	69.3	76.0	68.0	60.0	68.2	101.3	89.0	95.2	88.9
6	DKC9166(IM8013)	126.0	80.0	113.7	89.7	102.3	116.7	68.0	109.3	71.3	102.7	93.6	54.3	70.0	62.3	76.0	63.3	56.7	63.8	94.3	83.3	88.8	84.6
7	BLH 102	129.3	84.0	123.0	85.0	105.3	127.7	69.0	114.0	75.7	108.7	99.0	58.0	76.7	69.0	73.0	69.3	56.7	67.1	97.7	86.3	92.0	88.4
8	HT 1412081	129.0	81.0	117.3	86.7	103.5	118.3	68.0	111.7	71.7	105.7	95.1	56.7	74.3	65.0	75.0	64.0	57.7	65.4	100.0	83.7	91.8	86.2
9	PM142096M	134.7	83.3	120.7	86.7	106.3	121.3	69.0	111.7	71.7	108.7	96.5	57.0	76.7	69.0	74.0	65.0	59.0	66.8	93.0	83.0	88.0	87.3
CHECKS																							
10	Bio 9637	130.3	81.0	118.7	83.3	103.3	123.7	69.0	111.7	73.3	106.3	96.8	56.3	74.3	64.7	72.0	65.3	58.3	65.2	99.3	84.0	91.7	86.6
11	HM10	129.7	81.0	115.7	84.0	102.6	122.3	69.0	110.0	76.7	104.0	96.4	57.3	74.3	65.7	77.0	65.7	59.0	66.5	98.7	83.7	91.2	86.7
Loc. Mean		129.9	82.0	118.8	89.7	105.1	121.9	68.7	111.5	73.5	106.8	96.5	56.5	75.1	66.4	74.6	66.0	58.2	66.1	97.8	84.3	91.0	87.2
C.D. (5%)		4.21	2.18	2.20	3.18	4.29	1.66	1.57	3.81	2.92	2.62	2.45	1.31	3.02	1.72	-	2.10	1.05	1.72	2.50	1.27	3.35	1.45
C.V. (%)		1.90	1.56	1.09	2.08	2.82	0.80	1.34	2.01	2.33	1.44	1.98	1.36	2.36	1.52	-	1.87	1.06	2.24	1.50	0.89	1.65	2.46
F (Prob)		0.03	0.01	0.00	0.00	0.04	0.00	0.19	0.12	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.03	0.00

DAYS TO 75% DRY HUSK																						
S.No	PEDIGREE	KARN	LUDH	KANP	ZN 2					ZN 3					ZN 4				ZN 5	OV'L		
					Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	BLH 101	166.7	115.0	150.7	144.1	153.7	105.0	136.7	114.0	138.3	129.5	95.0	109.7	100.7	116.0	105.7	97.0	104.0	128.0	108.7	118.3	121.3
2	BH 412044	168.7	122.3	134.7	141.9	159.7	107.0	138.3	114.0	140.7	131.9	98.0	111.3	101.7	116.0	114.0	97.3	106.4	129.7	107.7	118.7	122.6
3	BH 412066	169.3	119.7	140.3	143.1	158.3	108.0	134.0	114.7	139.3	130.9	95.7	111.3	98.0	116.0	108.3	97.3	104.4	128.3	117.0	122.7	122.2
4	DMRH 1419	170.0	121.3	146.3	145.9	157.7	106.0	136.3	110.0	139.3	129.9	95.3	118.0	105.0	114.7	116.3	97.0	107.7	129.0	109.3	119.2	123.2
5	CP.222	169.0	118.0	147.0	144.7	158.7	107.0	139.3	110.3	140.7	131.2	97.7	118.0	104.3	117.0	106.3	100.0	107.2	132.0	109.0	120.5	123.4
6	DKC9166(IM8013)	169.7	116.7	145.7	144.0	156.3	107.0	136.7	109.0	137.7	129.3	95.0	113.0	97.3	117.0	109.0	95.7	104.5	126.0	109.3	117.7	121.3
7	BLH 102	168.7	117.7	142.0	142.8	159.7	106.0	140.3	115.0	140.0	132.2	97.0	113.0	104.0	114.0	112.0	95.7	105.9	130.3	115.7	123.0	123.2
8	HT 1412081	168.3	119.0	145.7	144.3	153.0	107.0	139.0	112.3	139.0	130.1	96.0	118.0	100.0	116.0	115.0	96.7	106.9	132.0	109.0	120.5	122.9
9	PM142096M	169.3	116.7	139.0	141.7	153.7	108.0	136.3	110.3	138.7	129.4	97.0	114.7	104.0	116.0	106.3	98.0	106.0	128.7	111.0	119.8	121.7
CHECKS																						
10	Bio 9637	168.7	118.0	144.0	143.6	156.7	106.0	137.7	110.7	138.3	129.9	96.7	116.3	99.7	113.0	107.7	97.7	105.2	131.7	111.0	121.3	122.1
11	HM10	166.3	120.7	138.3	141.8	156.7	108.0	136.0	114.0	139.7	130.9	97.3	118.0	100.7	118.0	111.0	98.0	107.2	130.7	109.3	120.0	122.7
Loc. Mean		168.6	118.6	143.1	143.4	156.7	106.8	137.3	112.2	139.2	130.5	96.4	114.7	101.4	115.8	110.2	97.3	106.0	129.7	110.6	120.2	122.4
C.D. (5%)		2.64	2.23	4.94	5.71	2.58	1.76	4.46	2.48	1.22	2.08	1.11	5.01	1.72	1.02	1.60	1.06	2.64	4.63	3.69	5.78	1.64
C.V. (%)		0.92	1.10	2.03	2.34	0.97	0.97	1.91	1.30	0.52	1.25	0.68	2.56	0.99	0.52	0.85	0.64	2.15	2.10	1.96	2.16	1.92
F (Prob)		0.16	0.00	0.00	0.88	0.00	0.03	0.24	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.23	0.00	0.59	0.10

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TABLE No. 5: PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, DHOLI, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR7 DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																																
	KARN						LUDH						PANT						KANP						ZN 2		ZN 3						
	R		R		R	R		R		R		R		R		R		R		MEAN	R	R		R		R		R		R		MEAN	R
1 Rasi-950	6803	19	8810	16	12796	17	8112	6	9130	18	6993	17	6471	8	7490	13	9248	17	6918	17	7424	18											
2 CP.838	8054	12	9761	7	16732	3	7149	12	10424	1	10421	3	6447	10	6684	18	9661	15	8841	2	8411	6											
3 GK 3118	7567	13	9946	4	9684	20	7034	13	8558	19	7870	12	6494	7	9315	2	12557	3	6733	18	8594	3											
4 DKC9161(IM8222)	8517	5	11103	1	9936	19	8145	5	9425	14	8614	7	6136	12	7884	9	7956	20	8494	3	7817	13											
5 Rasi-864	8092	10	9377	14	15377	6	8352	3	10299	4	7118	15	5893	18	7709	11	12143	4	7930	6	8158	9											
6 X35F880	8334	6	9618	10	15833	4	7515	10	10325	2	10898	2	5977	16	7958	7	10489	11	7070	14	8478	5											
7 KH-2192	8057	11	9523	12	16783	2	6352	16	10179	6	9131	5	7231	1	6901	15	10260	12	7057	16	8116	10											
8 GK 3155	8667	3	9378	13	15456	5	5911	18	9853	9	12464	1	6040	13	7726	10	13424	2	9111	1	9753	1											
9 KMH-1411	9111	2	8765	17	15220	7	7898	8	10248	5	8504	8	6698	3	6907	14	8878	18	7602	8	7718	14											
10 DMRH1308	8622	4	9756	8	14767	9	5185	20	9582	13	9233	4	6281	11	8192	4	11859	5	7237	11	8560	4											
11 HTMH 5108	8168	8	9802	6	13827	13	5877	19	9419	15	7075	16	6567	5	8051	6	11796	6	7498	9	8197	7											
12 CP.333	6340	20	9626	9	18337	1	6986	14	10322	3	8882	6	6729	2	6296	19	10504	10	8164	4	8115	11											
13 CP.999	6873	18	9848	5	13491	14	7390	11	9400	16	8274	11	5979	15	7924	8	14192	1	7619	7	8798	2											
14 CP.111	8101	9	9597	11	13042	16	6800	15	9385	17	7124	14	5837	19	6787	17	10114	13	7960	5	7564	17											
15 HTMH 5202	7402	15	10417	2	15055	8	6118	17	9748	11	6983	18	6450	9	8089	5	9899	14	7120	13	7708	15											
16 KH-3021	8286	7	8161	18	14045	12	8947	1	9860	8	8423	9	6522	6	6871	16	11198	7	5429	20	7689	16											
17 Rasi-393 CHECKS	9640	1	7990	19	14104	11	8348	4	10021	7	7706	13	5752	20	8667	3	10739	9	7137	12	8000	12											
18 Seedtech 2324	7561	14	9129	15	14511	10	7560	9	9690	12	6594	19	6570	4	9549	1	10795	8	7456	10	8193	8											
19 Buland	6967	17	6636	20	11775	18	8068	7	8361	20	8356	10	5982	14	5822	20	8171	19	7064	15	7079	20											
20 Bio 9681	7106	16	10217	3	13158	15	8559	2	9760	10	6336	20	5939	17	7577	12	9528	16	6284	19	7133	19											
Location Mean	7913		9373		14196		7315		9699		8350		6300		7620		10670		7436		8075												
C.D. (5%)	1083		1553		1744		504		1221		443		307		2376		1319		992		1087												
C.V. (%)	8.27		10.02		7.42		4.16		-		3.2		2.94		18.85		5.88		8.06		-												
F (Prob)	0		0.001		0		0		-		0		0		0.211		0		0		-												
Plot Size	18		17.3		13.5		14.4		-		14.4		14.4		18		5.6		14.4		-												
AGRONOMY DATA																																	
Sowing Date	23-11		28-01		12-12		12-12		-		27-11		30-11		8-12		8-02		2-12		-												
Harvest Date	25-05		15-06		8-06		9-05		-		12-05		12-04		10-06		15-06		24-04		-												
Irrigation Nos	9		15		6		4		-		5		-		2		7		5		-												
Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-												
Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-												
Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-												

TABLE No. 5: (Contd.)

S. No. PEDIGREE	ZN 4														ZN 5			OV'L				
	COIM	R	DHAR	R	KARI	R	KOLH	R	MAND	R	VAGA	R	MEAN	R	BANS	R	GODH	R	MEAN	R	MEAN	R
1 Rasi-950	7157	16	6442	14	3818	14	8064	9	7920	13	8702	2	7017	14	8764	12	6744	18	7754	19	7721	18
2 CP.838	9636	7	7204	6	4662	10	8288	8	8492	4	8650	3	7822	3	8582	15	7818	15	8200	16	8652	6
3 GK 3118	6231	18	6740	8	3497	16	6653	19	8243	7	5944	17	6218	18	8366	17	11790	5	10078	6	7921	15
4 DKC9161(IM8222)	12066	1	9003	1	4967	5	9624	3	7976	12	8025	5	8610	1	10002	4	12913	3	11458	1	8904	1
5 Rasi-864	8279	9	7977	3	2817	19	9422	4	8270	6	8182	4	7491	6	8694	13	14101	1	11397	2	8808	2
6 X35F880	7190	15	7379	5	5224	1	6977	17	10149	1	6645	14	7261	11	7791	18	12459	4	10125	5	8677	5
7 KH-2192	7707	12	6643	13	4929	6	7917	10	7592	15	7416	10	7034	13	8666	14	9889	8	9277	7	8356	9
8 GK 3155	7794	11	6739	9	4750	7	7668	13	7686	14	6934	11	6929	15	10224	1	7796	16	9010	9	8692	3
9 KMH-1411	10393	2	6657	12	4059	13	7414	15	8792	3	7965	6	7547	5	8493	16	8356	11	8425	15	8336	11
10 DMRH1308	10010	4	7781	4	5008	4	7822	12	8082	9	6752	13	7576	4	10026	3	10963	6	10495	4	8681	4
11 HTMH 5108	7344	14	8344	2	4495	11	8704	6	8019	10	7540	9	7408	7	9044	8	8104	13	8574	13	8250	13
12 CP.333	7627	13	6258	20	4737	8	9388	5	8014	11	7783	8	7301	10	10099	2	8354	12	9226	8	8478	8
13 CP.999	9641	6	6370	18	4350	12	10291	1	8322	5	9023	1	7999	2	9060	7	7936	14	8498	14	8622	7
14 CP.111	8340	8	6747	7	5196	2	8636	7	7385	17	6454	16	7127	12	9716	5	6239	19	7978	18	7887	16
15 HTMH 5202	10206	3	6660	11	4722	9	7840	11	8190	8	6753	12	7395	8	7466	19	10192	7	8829	11	8209	14
16 KH-3021	5752	20	6283	19	3462	17	7030	16	6603	20	5281	20	5735	19	6917	20	6218	20	6568	20	7378	19
17 Rasi-393 CHECKS	7795	10	6709	10	3372	18	6678	18	6880	19	6495	15	6321	17	9008	9	13265	2	11136	3	8252	12
18 Seedtech 2324	7080	17	6382	17	3520	15	9911	2	9464	2	7943	7	7383	9	9129	6	8813	9	8971	10	8351	10
19 Buland	6204	19	6407	16	2671	20	5261	20	7456	16	5925	18	5654	20	8823	10	7210	17	8017	17	6988	20
20 Bio 9681	9715	5	6431	15	5071	3	7569	14	6919	18	5463	19	6861	16	8767	11	8528	10	8647	12	7833	17
Location Mean	8308		6958		4266		8058		8023		7194		7134		8882		9384		9133		8250	
C.D. (5%)	804		1268		448		1441		541		328		805		1019		522		771		982	
C.V. (%)	5.85		11.01		6.35		10.81		4.07		2.76		-		6.94		3.36		-		-	
F (Prob)	0		0.001		0		0		0		0		-		0		0		-		-	
Plot Size	14.4		14.4		14.4		18		14		14.4		-		14.4		9.6		-		-	
AGRONOMY DATA																						
Sowing Date	11-01		10-12		28-11		16-12		5-12		12-01		-		30-11		28-11		-		-	
Harvest Date	15-05		28-04		7-04		14-05		25-04		8-05		-		2-05		7-04		-		-	
Irrigation Nos	10		5		14		-		12		11		-		6		8		-		-	
Fertilizer Applied N	250		150		240		120		150		250		-		150		120		-		-	
Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-	
Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-	

TABLE No. 5 (Contd.)

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Buland																					
	ZN 2						ZN 3						ZN 4						ZN 5		OV'L	
	KARN	LUDHPANT	KANP	MEAN	BAHR	BHUB DHOL	RANC VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN			
1 Rasi-950	-	32.8	8.7	0.5	9.2	-	8.2	28.7	13.2	-	4.9	15.4	0.5	42.9	53.3	6.2	46.9	24.1	-	-	-	10.5
2 CP.838	15.6	47.1	42.1	-	24.7	24.7	7.8	14.8	18.2	25.2	18.8	55.3	12.4	74.5	57.6	13.9	46	38.3	-	8.4	2.3	23.8
3 GK 3118	8.6	49.9	-	-	2.4	-	8.6	60	53.7	-	21.4	0.4	5.2	30.9	26.5	10.5	0.3	10	-	63.5	25.7	13.4
4 DKC9161(IM8222)	22.2	67.3	-	1	12.7	3.1	2.6	35.4	-	20.2	10.4	94.5	40.5	86	82.9	7	35.5	52.3	13.4	79.1	42.9	27.4
5 Rasi-864	16.1	41.3	30.6	3.5	23.2	-	-	32.4	48.6	12.3	15.2	33.4	24.5	5.5	79.1	10.9	38.1	32.5	-	95.6	42.2	26
6 X35F880	19.6	44.9	34.5	-	23.5	30.4	-	36.7	28.4	0.1	19.8	15.9	15.2	95.6	32.6	36.1	12.1	28.4	-	72.8	26.3	24.2
7 KH-2192	15.6	43.5	42.5	-	21.7	9.3	20.9	18.5	25.6	-	14.6	24.2	3.7	84.5	50.5	1.8	25.2	24.4	-	37.1	15.7	19.6
8 GK 3155	24.4	41.3	31.3	-	17.8	49.2	1	32.7	64.3	29	37.8	25.6	5.2	77.8	45.8	3.1	17	22.5	15.9	8.1	12.4	24.4
9 KMH-1411	30.8	32.1	29.3	-	22.6	1.8	12	18.6	8.7	7.6	9	67.5	3.9	52	40.9	17.9	34.4	33.5	-	15.9	5.1	19.3
10 DMRH1308	23.8	47	25.4	-	14.6	10.5	5	40.7	45.1	2.4	20.9	61.3	21.4	87.5	48.7	8.4	14	34	13.6	52	30.9	24.2
11 HTMH 5108	17.2	47.7	17.4	-	12.6	-	9.8	38.3	44.4	6.1	15.8	18.4	30.2	68.3	65.5	7.5	27.3	31	2.5	12.4	6.9	18.1
12 CP.333	-	45.1	55.7	-	23.5	6.3	12.5	8.1	28.6	15.6	14.6	22.9	-	77.3	78.5	7.5	31.4	29.1	14.5	15.9	15.1	21.3
13 CP.999	-	48.4	14.6	-	12.4	-	-	36.1	73.7	7.9	24.3	55.4	-	62.9	95.6	11.6	52.3	41.5	2.7	10.1	6	23.4
14 CP.111	16.3	44.6	10.8	-	12.2	-	-	16.6	23.8	12.7	6.9	34.4	5.3	94.5	64.2	-	8.9	26	10.1	-	-	12.9
15 HTMH 5202	6.2	57	27.9	-	16.6	-	7.8	38.9	21.2	0.8	8.9	64.5	3.9	76.8	49	9.8	14	30.8	-	41.3	10.1	17.5
16 KH-3021	18.9	23	19.3	10.9	17.9	0.8	9	18	37.1	-	8.6	-	-	29.6	33.6	-	-	1.4	-	-	-	5.6
17 Rasi-393	38.4	20.4	19.8	3.5	19.8	-	-	48.9	31.4	1	13	25.6	4.7	26.2	26.9	-	9.6	11.8	2.1	84	38.9	18.1
CHECKS																						
18 Seedtech 2324	8.5	37.6	23.2	-	15.9	-	9.8	64	32.1	5.5	15.7	14.1	-	31.8	88.4	26.9	34.1	30.6	3.5	22.2	11.9	19.5
19 Buland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 Bio 9681	2	54	11.7	6.1	16.7	-	-	30.1	16.6	-	0.8	56.6	0.4	89.8	43.9	-	-	21.3	-	18.3	7.9	12.1

TABLE No. 5 (Contd.)

GRAIN SHELLING %																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	76.7	81.6	81.0	76.7	79.0	74.7	81.3	77.0	83.6	73.3	78.0	78.6	82.7	78.9	83.3	80.5	80.3	80.7	80.2	79.8	80.0	79.4
2	CP.838	80.5	83.0	81.8	75.0	80.1	77.9	81.5	79.0	88.3	77.0	80.7	77.5	86.9	79.6	87.6	80.3	80.0	82.0	80.9	83.6	82.2	81.2
3	GK 3118	74.2	84.0	82.6	74.3	78.8	78.7	81.5	80.5	88.4	74.0	80.6	80.1	85.9	82.0	83.7	81.4	77.5	81.7	80.5	87.5	84.0	81.0
4	DKC9161(IM8222)	77.9	83.3	79.1	76.3	79.2	77.5	79.1	80.0	86.9	76.7	80.0	80.2	87.5	80.6	87.6	79.9	80.8	82.8	78.8	86.2	82.5	81.1
5	Rasi-864	76.7	80.2	81.5	74.7	78.3	76.6	79.6	79.5	84.5	72.3	78.5	80.1	84.2	78.9	75.8	82.9	79.9	80.3	79.4	83.1	81.3	79.4
6	X35F880	78.6	80.9	78.9	76.7	78.8	78.4	82.7	80.0	84.5	72.3	79.6	77.0	84.3	76.5	75.7	83.0	77.4	79.0	80.3	84.7	82.5	79.5
7	KH-2192	77.8	82.5	81.3	75.3	79.2	78.1	82.8	78.5	84.5	74.3	79.6	76.0	84.4	79.5	84.0	80.6	78.3	80.5	79.9	84.2	82.0	80.1
8	GK 3155	78.5	81.7	83.3	77.3	80.2	81.5	80.4	80.0	85.4	75.3	80.5	79.9	84.5	77.9	83.4	78.8	77.8	80.4	81.1	85.4	83.2	80.7
9	KMH-1411	76.9	76.1	76.8	74.3	76.0	78.3	79.9	78.5	83.4	75.7	79.2	74.5	83.1	81.0	81.8	81.8	80.6	80.4	80.1	82.9	81.5	79.1
10	DMRH1308	74.8	82.1	83.8	75.0	78.9	76.5	80.0	79.0	87.0	73.7	79.2	80.7	84.5	82.0	80.7	77.1	79.4	80.7	81.4	84.8	83.1	80.1
11	HTMH 5108	80.6	82.0	81.8	74.3	79.7	75.6	80.2	80.0	87.9	73.3	79.4	76.1	85.0	76.9	85.6	79.1	78.8	80.2	81.9	82.0	81.9	80.1
12	CP.333	70.9	81.3	84.5	76.7	78.3	76.8	80.2	83.5	85.5	75.3	80.3	78.7	87.1	81.1	86.7	78.3	79.5	81.9	79.8	88.9	84.3	80.9
13	CP.999	78.4	82.3	88.1	75.7	81.1	77.4	80.4	84.0	89.1	77.7	81.7	79.8	87.1	79.8	86.5	78.9	79.9	82.0	80.8	84.5	82.6	81.8
14	CP.111	75.4	79.9	82.6	77.0	78.7	77.8	81.3	80.0	86.0	74.7	79.9	78.6	86.1	80.1	83.6	79.1	77.5	80.8	80.4	77.7	79.1	79.9
15	HTMH 5202	75.3	81.6	84.2	76.3	79.3	78.0	80.8	76.0	87.1	75.3	79.4	79.1	86.4	81.4	72.7	79.4	77.7	79.4	80.5	87.8	84.1	80.0
16	KH-3021	74.9	78.8	83.3	74.7	77.9	75.1	79.7	77.5	83.1	69.3	77.0	77.8	81.9	78.5	80.7	80.3	76.0	79.2	80.0	63.5	71.7	77.4
17	Rasi-393	77.5	78.1	83.4	76.0	78.7	74.1	80.3	78.5	83.4	72.0	77.7	74.7	81.3	78.0	82.0	81.4	77.8	79.2	76.0	84.1	80.0	78.7
CHECKS																							
18	Seedtech 2324	78.5	80.3	82.4	76.0	79.3	76.0	80.4	81.5	86.1	73.7	79.5	76.0	84.4	79.0	88.5	81.7	80.6	81.7	80.7	81.7	81.2	80.4
19	Buland	76.8	78.4	79.0	74.0	77.1	71.5	80.8	80.5	81.5	71.3	77.1	82.1	80.2	76.8	75.8	79.4	77.2	78.6	78.6	78.1	78.3	77.8
20	Bio 9681	76.6	79.3	85.3	75.3	79.1	77.3	81.7	81.0	84.2	71.7	79.2	77.0	83.4	80.0	82.5	78.0	77.7	79.8	80.4	82.8	81.6	79.7
Loc. Mean		76.9	80.9	82.2	75.6	78.9	76.9	80.7	79.7	85.5	74.0	79.4	78.2	84.5	79.4	82.4	80.1	78.7	80.6	80.1	82.6	81.4	79.9
C.D. (5%)		0.34	4.28	1.63	1.07	2.79	1.40	1.17	3.94	2.20	2.28	2.00	1.37	1.30	1.55	1.24	1.22	0.83	2.69	2.15	3.39	8.08	1.50
C.V. (%)		0.27	3.20	1.20	0.86	2.50	1.10	0.88	2.99	1.23	1.87	2.00	1.06	0.93	1.18	0.91	0.92	0.64	2.91	1.62	2.48	4.75	2.78
F (Prob)		0.00	0.07	0.00	0.00	0.27	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.47	0.00

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TABLE No. 5 (Contd.)

MOISTURE % AT HARVEST																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	28.4	11.6	17.0	17.3	18.6	25.2	17.9	18.1	19.0	33.7	22.8	20.7	12.8	15.0	8.4	15.1	16.4	14.7	18.0	15.9	16.9	18.2
2	CP.838	27.1	12.3	17.2	15.7	18.1	27.0	18.8	18.7	19.9	31.9	23.3	24.0	13.3	20.0	8.7	16.1	16.8	16.5	17.8	16.2	17.0	18.9
3	GK 3118	25.5	12.4	18.1	16.7	18.2	25.1	18.5	14.4	20.5	32.4	22.2	19.7	13.2	20.7	8.7	15.5	16.2	15.7	17.1	18.8	17.9	18.4
4	DKC9161(IM8222)	25.7	12.0	18.9	17.3	18.5	26.8	19.3	18.3	20.8	32.7	23.6	23.2	16.4	12.4	8.9	15.6	16.9	15.6	19.1	16.9	18.0	18.9
5	Rasi-864	26.4	14.1	17.8	18.3	19.1	25.5	19.1	18.9	19.5	29.6	22.5	23.4	11.6	15.3	8.5	15.6	18.3	15.4	17.6	18.2	17.9	18.7
6	X35F880	28.3	13.4	17.8	17.3	19.2	28.0	17.8	17.6	21.3	29.6	22.8	22.1	9.2	20.7	8.7	15.6	17.3	15.6	18.0	16.8	17.4	18.8
7	KH-2192	25.3	13.3	16.6	17.0	18.1	26.8	18.8	18.2	20.5	30.9	23.0	24.4	17.9	17.7	8.1	15.5	16.2	16.6	18.2	17.1	17.6	19.0
8	GK 3155	27.1	13.4	19.2	13.7	18.3	28.0	18.4	18.0	19.1	32.7	23.2	19.8	14.4	15.6	8.8	16.1	16.3	15.1	17.5	15.7	16.6	18.4
9	KMH-1411	26.5	12.8	17.5	13.7	17.6	26.0	19.0	16.4	22.2	33.8	23.5	24.2	10.2	18.8	8.4	17.7	17.5	16.1	18.1	16.6	17.4	18.8
10	DMRH1308	26.3	11.6	18.0	13.7	17.4	27.0	18.8	16.3	19.0	31.3	22.5	19.4	13.8	18.0	8.3	14.7	17.4	15.3	17.4	16.7	17.1	18.1
11	HTMH 5108	27.7	13.7	16.8	13.3	17.9	25.8	17.9	19.8	20.2	34.9	23.7	26.9	19.6	21.3	9.2	16.1	16.0	18.2	18.2	17.1	17.6	19.7
12	CP.333	27.6	12.4	17.9	14.7	18.1	26.2	18.5	20.9	21.2	33.2	24.0	25.7	14.9	21.0	8.6	16.9	17.7	17.4	18.0	16.6	17.3	19.5
13	CP.999	28.5	12.2	17.5	14.0	18.0	26.5	18.0	19.5	20.2	33.9	23.6	22.2	13.4	20.8	8.4	15.4	16.7	16.1	17.6	16.4	17.0	18.9
14	CP.111	26.5	13.0	17.3	15.3	18.0	25.1	18.4	18.7	20.0	32.4	22.9	23.2	16.2	15.3	9.3	14.1	17.5	15.9	18.2	16.0	17.1	18.6
15	HTMH 5202	24.4	12.0	16.9	15.7	17.2	26.9	18.8	15.5	19.9	32.4	22.7	23.2	15.4	12.9	8.6	15.1	16.9	15.3	18.0	16.7	17.3	18.2
16	KH-3021	28.8	12.9	17.2	16.7	18.9	25.3	18.4	16.8	19.9	32.0	22.5	24.3	13.9	19.4	8.8	15.4	17.5	16.5	17.9	17.9	17.9	19.0
17	Rasi-393	25.5	13.2	18.1	17.3	18.5	26.7	19.1	14.3	20.9	35.5	23.3	24.9	11.8	13.3	9.7	15.2	16.5	15.2	17.6	16.6	17.1	18.6
CHECKS																							
18	Seedtech 2324	29.2	12.6	17.9	15.7	18.8	25.0	17.8	16.4	20.4	33.6	22.6	23.6	12.0	21.7	8.5	15.6	17.3	16.4	18.2	17.0	17.6	19.0
19	Buland	28.7	11.6	18.4	15.0	18.4	25.8	18.8	16.8	20.5	30.5	22.5	18.0	12.0	16.0	8.8	14.9	16.9	14.4	17.7	14.4	16.0	17.9
20	Bio 9681	26.4	12.9	17.0	14.3	17.6	24.0	18.8	16.6	20.2	32.2	22.4	18.6	13.8	14.1	8.6	14.0	16.1	14.2	18.0	16.8	17.4	17.8
Loc. Mean		27.0	12.7	17.6	15.6	18.2	26.1	18.5	17.5	20.3	32.4	23.0	22.5	13.8	17.5	8.7	15.5	16.9	15.8	17.9	16.7	17.3	18.7
C.D. (5%)		0.37	0.89	0.85	1.23	1.65	0.75	0.46	3.66	1.80	1.64	1.55	1.70	2.98	2.11	0.50	0.41	0.59	2.15	0.55	0.71	1.58	0.97
C.V. (%)		0.82	4.24	2.90	4.74	6.38	1.74	1.52	12.68	4.25	3.07	5.37	4.56	13.09	7.32	3.52	1.61	2.10	11.86	1.85	2.57	4.36	7.70
F (Prob)		0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.06	0.12	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.66	0.01

TABLE No. 5 (Contd.)

STAND AT HARVEST ('000/ha)																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANTKANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean		BANS	GODH	Mean	Mean
1	Rasi-950	62.6	76.9	64.4	69.9	68.5	65.5	61.1	55.4	67.0	63.7	62.5	65.5	50.0	74.8	58.3	61.2	61.6	61.9	67.8	73.6	70.7	64.7
2	CP.838	61.1	76.7	64.7	72.2	68.7	65.3	63.2	60.2	67.9	62.0	63.7	65.5	55.6	54.4	58.9	61.7	62.0	59.7	66.0	77.8	71.9	64.4
3	GK 3118	60.2	72.4	61.7	71.1	66.4	66.7	58.3	58.5	68.8	65.3	63.5	65.0	48.6	72.2	56.5	61.0	55.3	59.8	67.8	76.0	71.9	63.9
4	DKC9161(IM8222)	62.2	77.1	64.7	69.4	68.4	66.7	62.0	55.2	71.4	63.7	63.8	65.3	68.8	73.6	60.7	61.2	62.5	65.3	68.1	77.4	72.7	66.5
5	Rasi-864	62.0	76.1	64.4	71.5	68.5	62.3	58.8	57.6	71.4	65.5	63.1	65.5	61.6	75.2	63.5	62.9	62.7	65.2	69.9	79.2	74.5	66.5
6	X35F880	62.0	74.6	63.0	70.4	67.5	59.5	58.3	59.6	66.1	64.8	61.7	65.5	54.6	62.5	57.8	63.1	52.8	59.4	68.3	79.5	73.9	63.7
7	KH-2192	63.7	68.0	64.0	70.8	66.6	68.3	59.3	56.1	67.9	63.4	63.0	64.8	52.5	50.7	58.7	62.9	51.6	56.9	66.0	74.7	70.3	62.5
8	GK 3155	62.2	72.1	64.0	68.8	66.7	62.7	58.6	56.3	71.4	66.2	63.0	64.8	50.0	78.9	58.3	61.4	57.4	61.8	67.1	74.0	70.5	64.4
9	KMH-1411	62.4	74.8	65.2	68.8	67.8	61.3	58.1	60.0	73.2	65.7	63.7	65.0	52.3	78.9	58.1	59.5	62.5	62.7	67.4	75.0	71.2	65.2
10	DMRH1308	63.0	76.7	63.7	70.6	68.5	67.6	62.5	52.2	68.8	63.4	62.9	64.8	54.4	80.3	57.6	59.5	61.6	63.0	71.8	75.3	73.6	65.5
11	HTMH 5108	63.0	72.1	64.2	71.8	67.7	65.0	58.3	57.0	67.0	62.3	61.9	63.9	51.4	79.2	60.0	61.2	59.7	62.6	68.5	74.0	71.2	64.6
12	CP.333	62.8	70.9	62.7	67.1	65.9	64.8	58.8	52.8	66.1	64.4	61.4	66.0	48.6	79.4	61.7	61.7	62.7	63.3	67.6	73.6	70.6	64.2
13	CP.999	61.7	73.6	63.2	68.8	66.8	65.7	58.8	56.1	69.6	65.0	63.1	65.5	55.1	66.4	62.2	59.0	62.0	61.7	65.3	67.0	66.1	63.8
14	CP.111	62.8	74.2	62.7	70.6	67.6	70.4	58.3	56.9	69.6	65.5	64.1	65.5	55.6	73.6	59.6	60.0	58.3	62.1	66.0	73.6	69.8	64.9
15	HTMH 5202	62.2	77.5	64.9	70.4	68.7	61.3	62.5	68.9	69.6	65.7	65.6	65.5	59.7	77.5	60.9	61.4	59.5	64.1	65.5	76.7	71.1	66.5
16	KH-3021	63.3	77.1	64.4	74.8	69.9	64.8	59.3	51.7	72.3	66.2	62.9	65.7	52.3	68.8	58.9	61.0	50.2	59.5	64.8	73.3	69.0	64.0
17	Rasi-393	61.9	73.4	65.7	73.6	68.6	64.8	60.2	57.0	75.9	66.2	64.8	65.5	59.0	69.2	55.7	62.1	55.3	61.2	68.3	77.1	72.7	65.4
CHECKS																							
18	Seedtech 2324	62.0	74.6	64.7	75.5	69.2	69.2	59.0	60.9	67.0	67.4	64.7	65.5	49.3	79.9	60.6	60.5	61.8	62.9	64.4	76.7	70.5	65.8
19	Buland	61.5	72.8	60.7	73.6	67.2	69.2	60.2	61.3	68.8	65.3	64.9	65.7	57.2	81.0	54.1	60.5	57.4	62.6	68.1	74.0	71.0	65.4
20	Bio 9681	63.0	76.3	63.5	74.8	69.4	72.2	62.5	47.0	72.3	63.7	63.5	65.3	55.8	82.4	57.0	60.2	56.7	62.9	67.1	76.0	71.6	65.6
Loc. Mean		62.3	74.4	63.8	71.2	67.9	65.7	59.9	57.0	69.6	64.8	63.4	65.3	54.6	73.0	59.0	61.1	58.7	61.9	67.3	75.2	71.3	64.9
C.D. (5%)		2.06	4.04	2.75	1.56	2.43	3.11	2.00	11.96	8.37	4.19	3.80	1.58	13.45	7.09	3.43	3.08	3.04	5.08	4.83	3.31	4.02	2.21
C.V. (%)		2.00	3.28	2.60	1.33	2.52	2.86	2.02	12.68	5.75	3.92	4.76	1.46	14.90	5.88	3.52	3.05	3.14	7.15	4.35	2.66	2.70	5.06
F (Prob)		0.28	0.00	0.11	0.00	0.09	0.00	0.00	0.35	0.62	0.56	0.84	0.79	0.37	0.00	0.00	0.39	0.00	0.18	0.39	0.00	0.10	0.03

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TABLE No. 5 (Contd.)

DAYS TO 50% POLLEN SHED																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L Mean				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	Rasi-950	129.0	81.0	117.3	97.0	106.1	126.0	73.0	114.7	74.5	104.7	98.6	55.0	74.7	63.3	70.0	67.0	57.3	64.6	99.3	89.0	94.2	87.8
2	CP.838	126.7	79.0	115.7	95.7	104.3	122.7	71.0	110.7	65.5	103.0	94.6	55.7	73.7	66.3	74.0	63.7	57.3	65.1	97.3	86.0	91.7	86.1
3	GK 3118	127.7	77.3	115.0	96.0	104.0	120.7	73.0	111.3	66.0	101.3	94.5	56.3	73.7	65.0	76.0	66.7	57.7	65.9	99.3	87.7	93.5	86.5
4	DKC9161(IM8222)	132.0	78.3	114.7	94.7	104.9	123.7	71.0	110.7	70.5	102.7	95.7	53.7	70.0	64.7	71.0	63.3	58.3	63.5	97.7	88.7	93.2	86.2
5	Rasi-864	131.7	79.0	116.0	96.7	105.8	122.3	73.0	111.0	67.5	103.7	95.5	53.0	74.0	64.0	74.0	66.0	60.3	65.2	94.3	86.0	90.2	86.6
6	X35F880	128.0	81.7	120.0	97.0	106.7	120.3	72.0	110.7	74.5	104.3	96.4	56.3	74.7	65.3	76.0	66.3	60.0	66.4	97.0	87.7	92.3	87.8
7	KH-2192	128.0	78.7	115.3	95.0	104.3	120.7	72.7	111.3	72.0	101.7	95.7	56.0	73.7	64.0	74.3	65.7	57.0	65.1	95.3	89.3	92.3	86.5
8	GK 3155	132.0	78.0	116.7	96.7	105.8	122.7	72.0	112.3	75.5	105.3	97.6	53.3	73.7	64.3	76.0	66.7	55.7	64.9	97.0	88.3	92.7	87.4
9	KMH-1411	128.3	80.3	114.7	96.0	104.8	126.7	71.7	113.7	71.5	101.3	97.0	57.7	72.0	65.3	75.0	65.0	60.7	65.9	97.7	87.7	92.7	87.4
10	DMRH1308	130.0	78.7	117.7	97.3	105.9	124.3	74.0	115.0	70.5	102.3	97.2	56.3	72.0	64.7	75.0	64.0	58.0	65.0	96.0	90.7	93.3	87.4
11	HTMH 5108	129.3	80.3	118.0	95.7	105.8	124.3	72.7	113.7	75.0	103.3	97.8	54.7	73.7	64.7	76.0	65.7	57.3	65.3	94.3	87.7	91.0	87.4
12	CP.333	127.3	78.7	118.0	94.7	104.7	124.7	71.0	111.0	74.5	103.7	97.0	54.3	74.3	65.3	75.0	63.7	57.3	65.0	98.7	86.3	92.5	87.0
13	CP.999	132.0	81.0	121.3	93.3	106.9	124.0	73.0	114.3	72.0	107.7	98.2	55.3	73.7	66.3	72.0	65.7	58.7	65.3	97.7	93.0	95.3	88.3
14	CP.111	129.0	79.3	117.7	94.0	105.0	127.3	71.7	112.7	71.0	104.7	97.5	54.3	71.0	65.0	74.0	65.0	57.0	64.4	95.0	93.0	94.0	87.2
15	HTMH 5202	126.3	77.0	114.7	96.3	103.6	124.7	70.7	110.0	66.5	100.0	94.4	54.3	70.0	63.0	73.0	63.7	57.3	63.6	95.3	87.0	91.2	85.3
16	KH-3021	132.0	78.0	115.7	96.0	105.4	125.3	74.0	115.0	69.5	103.0	97.4	57.3	74.0	64.0	73.7	66.3	57.0	65.4	96.7	90.3	93.5	87.5
17	Rasi-393	131.0	80.3	120.3	93.3	106.3	126.7	74.0	113.0	74.0	107.3	99.0	55.7	73.7	65.3	74.0	65.3	57.7	65.3	100.7	91.0	95.8	88.4
CHECKS																							
18	Seedtech 2324	130.0	79.3	116.3	92.7	104.6	123.7	72.0	110.3	73.0	102.0	96.2	55.7	74.7	66.7	71.0	62.3	57.3	64.6	96.7	89.3	93.0	86.6
19	Buland	131.3	83.3	122.7	95.3	108.2	124.7	73.7	115.7	75.0	107.3	99.3	57.7	74.0	68.7	76.0	67.7	57.3	66.9	97.7	87.0	92.3	89.1
20	Bio 9681	127.3	76.0	115.3	94.0	103.2	118.7	71.7	111.3	70.5	100.0	94.4	54.3	70.0	61.3	68.7	61.0	58.0	62.2	95.0	89.0	92.0	84.8
Loc. Mean		129.5	79.3	117.2	95.4	105.3	123.7	72.4	112.4	71.5	103.5	96.7	55.4	73.1	64.9	73.7	65.0	57.9	65.0	96.9	88.7	92.8	87.1
C.D. (5%)		0.75	2.15	3.67	1.73	2.35	2.38	1.44	3.05	3.02	1.33	2.28	1.27	2.93	1.94	0.63	2.35	0.97	1.57	4.38	2.15	3.91	1.12
C.V. (%)		0.35	1.64	1.90	1.10	1.57	1.16	1.21	1.64	2.02	0.78	1.87	1.39	2.43	1.81	0.52	2.18	1.02	2.10	2.73	1.47	2.01	1.91
F (Prob)		0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.43	0.00

TABLE No. 5 (Contd.)

DAYS TO 50% SILKING																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5	OV'L					
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	131.0	82.7	121.7	101.3	109.2	128.0	76.0	116.7	79.0	109.7	101.9	58.3	76.7	70.0	72.0	69.0	60.7	67.8	103.3	90.7	97.0	91.0
2	CP.838	130.7	80.3	119.0	99.7	107.4	124.7	74.0	113.0	70.0	105.7	97.5	58.0	77.0	68.7	76.0	65.7	61.0	67.7	101.0	87.3	94.2	88.9
3	GK 3118	128.7	79.3	118.3	100.3	106.7	122.7	76.0	113.3	71.0	106.7	97.9	58.7	75.3	70.0	77.0	69.0	60.7	68.4	103.0	89.7	96.3	89.4
4	DKC9161(IM8222)	136.0	79.3	119.0	98.7	108.3	125.7	74.0	113.0	74.5	105.0	98.4	56.0	71.0	65.7	73.0	65.3	61.7	65.4	102.0	91.0	96.5	88.9
5	Rasi-864	133.7	80.0	119.3	100.3	108.3	124.3	76.0	113.0	72.0	107.3	98.5	56.0	74.3	66.3	75.0	67.0	63.3	67.0	98.3	87.7	93.0	89.1
6	X35F880	131.0	82.7	123.3	101.0	109.5	122.3	75.0	112.7	79.5	107.3	99.4	59.7	78.0	69.7	78.0	67.7	63.0	69.3	100.7	89.0	94.8	90.6
7	KH-2192	130.0	80.0	118.3	99.0	106.8	122.7	75.7	113.3	76.5	106.0	98.8	59.3	75.0	66.3	76.0	68.0	60.0	67.4	99.3	90.7	95.0	89.2
8	GK 3155	135.0	79.3	120.3	101.0	108.9	124.7	75.0	114.3	80.0	108.0	100.4	56.3	73.7	66.3	77.0	67.7	58.7	66.6	101.0	90.0	95.5	89.9
9	KMH-1411	130.3	81.7	118.3	101.0	107.8	128.7	74.3	116.0	76.5	106.7	100.4	61.0	75.3	69.7	77.0	68.3	63.0	69.1	99.7	89.7	94.7	90.4
10	DMRH1308	135.0	80.3	121.0	102.3	109.7	126.3	77.0	117.0	74.5	107.3	100.4	59.0	74.7	69.0	77.0	68.0	61.0	68.1	100.3	92.0	96.2	90.7
11	HTMH 5108	131.3	81.3	121.7	99.7	108.5	126.3	75.7	115.7	79.0	108.0	100.9	57.0	75.3	68.0	77.7	67.3	60.3	67.6	98.3	89.3	93.8	90.1
12	CP.333	130.3	79.7	121.3	98.7	107.5	126.7	74.0	113.0	79.5	107.0	100.0	57.0	75.7	67.7	77.0	65.7	60.7	67.3	102.3	89.3	95.8	89.7
13	CP.999	135.0	82.3	125.0	97.3	109.9	126.0	76.0	116.3	77.0	111.0	101.3	58.0	77.3	69.7	74.0	67.3	62.0	68.1	101.7	95.3	98.5	91.3
14	CP.111	133.0	80.3	121.3	97.3	108.0	129.3	74.3	114.3	76.5	108.0	100.5	57.0	72.0	67.3	76.0	66.3	60.0	66.4	99.0	95.3	97.2	89.9
15	HTMH 5202	133.3	78.3	118.3	100.3	107.6	126.7	73.3	112.0	71.0	106.7	97.9	57.0	73.7	66.0	75.0	66.7	60.3	66.4	99.7	89.3	94.5	88.7
16	KH-3021	136.0	79.3	119.7	100.3	108.8	127.3	77.0	117.3	73.0	108.0	100.5	60.0	76.7	67.7	75.3	69.7	60.0	68.2	100.7	91.7	96.2	90.6
17	Rasi-393	133.0	81.3	124.0	96.7	108.8	128.7	77.0	115.0	79.0	110.7	102.1	58.7	76.3	69.0	77.0	68.0	61.3	68.4	104.3	93.0	98.7	91.4
CHECKS																							
18	Seedtech 2324	132.0	80.3	120.3	96.7	107.3	125.7	75.0	112.3	78.0	106.7	99.5	58.7	75.7	70.0	73.0	64.3	60.3	67.0	100.7	91.0	95.8	89.5
19	Buland	135.3	84.7	125.7	99.0	111.2	126.7	76.7	117.7	79.0	111.3	102.3	61.3	76.3	71.7	78.0	69.3	60.3	69.5	101.3	89.0	95.2	92.0
20	Bio 9681	132.3	77.7	119.3	97.7	106.8	120.7	74.3	113.3	74.5	105.0	97.6	56.7	73.7	64.0	70.0	64.0	61.3	64.9	98.7	90.7	94.7	87.9
Loc. Mean		132.7	80.6	120.8	99.4	108.3	125.7	75.3	114.5	76.0	107.6	99.8	58.2	75.2	68.1	75.6	67.2	61.0	67.5	100.8	90.6	95.7	89.9
C.D. (5%)		0.75	1.96	3.88	1.85	2.58	2.38	1.44	3.07	3.02	1.57	2.23	0.91	3.19	2.27	0.96	2.42	1.03	1.56	4.26	2.15	3.67	1.15
C.V. (%)		0.34	1.47	1.94	1.13	1.68	1.14	1.16	1.62	1.90	0.88	1.77	0.94	2.57	2.02	0.77	2.18	1.02	2.02	2.56	1.43	1.83	1.89
F (Prob)		0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.25	0.00

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TABLE No. 5 (Contd.)

		DAYS TO 75% DRY HUSK																				
S.No.	PEDIGREE	ZN 2							ZN 3					ZN 4				ZN 5	OV'L			
		KARN	LUDH	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	169.7	118.0	145.3	144.3	155.3	117.0	147.7	115.0	139.3	134.9	98.7	115.7	110.0	115.0	110.0	100.7	108.3	136.0	124.0	130.0	126.1
2	CP.838	168.3	116.0	146.3	143.6	157.7	118.0	145.0	109.5	139.0	133.8	98.3	115.7	108.7	119.0	107.7	100.7	108.3	135.3	128.3	131.8	125.8
3	GK 3118	169.3	117.3	147.7	144.8	160.7	117.0	146.7	108.0	139.7	134.4	99.0	115.7	110.0	120.0	112.0	100.3	109.5	136.0	127.0	131.5	126.6
4	DKC9161(IM8222)	170.7	117.7	139.3	142.6	161.7	117.0	144.3	111.5	140.7	135.0	96.0	113.3	105.7	116.0	112.0	101.0	107.3	134.3	126.0	130.2	125.4
5	Rasi-864	170.3	117.3	143.3	143.7	159.7	119.0	145.3	111.5	140.0	135.1	96.3	113.3	106.3	118.0	112.0	102.3	108.1	136.3	127.7	132.0	126.2
6	X35F880	169.0	117.7	145.7	144.1	164.7	118.0	145.0	115.0	140.0	136.5	99.7	115.7	109.7	121.0	114.0	102.3	110.4	134.7	127.3	131.0	127.5
7	KH-2192	170.0	118.7	141.0	143.2	162.7	119.0	145.3	108.5	140.7	135.2	99.7	115.7	106.3	119.0	109.0	99.0	108.1	134.0	127.0	130.5	126.0
8	GK 3155	169.3	118.0	145.7	144.3	163.7	119.0	145.7	113.5	139.7	136.3	96.7	113.3	106.3	120.0	112.0	97.7	107.7	136.3	127.7	132.0	126.5
9	KMH-1411	168.3	117.3	146.0	143.9	160.7	118.0	146.3	112.5	140.0	135.5	100.7	115.7	109.7	120.0	109.0	102.0	109.5	133.7	123.7	128.7	126.5
10	DMRH1308	168.7	115.3	147.3	143.8	157.7	118.0	147.3	112.0	138.3	134.7	99.3	113.3	109.0	120.0	112.0	101.0	109.1	134.3	125.3	129.8	126.2
11	HTMH 5108	170.7	119.0	144.0	144.6	158.7	120.0	148.7	109.0	141.0	135.5	97.0	113.3	108.0	120.0	111.0	100.0	108.2	133.3	126.7	130.0	126.3
12	CP.333	170.0	115.7	139.0	141.6	161.7	117.0	146.0	115.0	139.7	135.9	97.3	113.3	107.7	118.3	109.0	100.3	107.7	135.7	127.3	131.5	125.8
13	CP.999	169.0	116.7	141.3	142.3	161.7	119.0	147.7	112.0	141.7	136.4	98.3	115.7	109.7	117.0	109.0	101.3	108.5	136.0	126.0	131.0	126.4
14	CP.111	169.0	117.3	145.3	143.9	163.7	117.0	145.7	111.0	139.7	135.4	97.3	112.3	107.3	119.0	107.7	99.3	107.2	131.3	127.0	129.2	125.6
15	HTMH 5202	169.0	118.0	146.7	144.6	158.7	116.0	146.0	109.0	140.3	134.0	97.3	112.3	106.0	118.0	112.0	100.0	107.6	133.0	126.0	129.5	125.5
16	KH-3021	168.3	118.0	144.7	143.7	162.7	120.0	150.0	109.5	139.3	136.3	100.0	115.7	107.7	118.0	112.0	100.0	108.9	133.3	125.3	129.3	126.5
17	Rasi-393	170.0	116.7	141.3	142.7	162.3	118.0	146.3	115.0	141.0	136.5	99.0	113.3	109.0	120.0	109.0	101.0	108.6	136.7	127.0	131.8	126.6
	CHECKS																					
18	Seedtech 2324	171.0	117.3	143.7	144.0	163.3	117.0	145.3	113.0	140.3	135.8	98.7	113.3	110.0	117.0	108.3	100.0	107.9	134.0	127.0	130.5	126.2
19	Buland	169.0	118.3	145.7	144.3	157.7	116.0	146.3	114.0	140.3	134.9	101.3	118.0	111.7	121.0	109.0	100.0	110.2	136.0	124.7	130.3	126.8
20	Bio 9681	169.3	115.7	142.3	142.4	153.7	117.0	145.0	111.0	139.0	133.1	98.0	115.7	104.0	113.0	107.0	101.0	106.4	133.0	124.7	128.8	124.3
	Loc. Mean	169.5	117.3	144.1	143.6	160.4	117.9	146.3	111.8	140.0	135.3	98.4	114.5	108.1	118.5	110.2	100.5	108.4	134.7	126.3	130.5	126.1
	C.D. (5%)	1.01	1.66	1.31	2.87	1.61	1.59	2.26	2.77	1.90	2.33	1.33	5.61	2.27	1.86	1.36	1.40	1.74	4.64	2.21	2.58	1.16
	C.V. (%)	0.36	0.86	0.55	1.21	0.61	0.82	0.94	1.18	0.82	1.37	0.82	2.97	1.27	0.95	0.74	0.84	1.40	2.09	1.06	0.95	1.32
	F (Prob)	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.16	0.20	0.00	0.87	0.00	0.00	0.00	0.00	0.68	0.00	0.19	0.00	

TABLE No. 5 (Contd.)

		PLANT HEIGHT(cm)																					
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	251.7	240.0	225.3	177.7	223.7	217.2	217.7	187.7	169.6	193.3	197.1	194.9	203.3	####	161.7	233.7	163.1	192.1	246.7	163.7	205.2	202.5
2	CP.838	230.0	225.0	232.7	194.3	220.5	228.4	214.7	184.7	191.6	190.0	201.9	198.9	211.3	####	178.3	237.0	164.1	195.7	245.0	165.0	205.0	204.4
3	GK 3118	203.3	233.3	201.3	203.7	210.4	217.3	212.7	177.7	185.4	180.0	194.6	202.6	203.3	####	173.3	214.0	173.8	195.7	266.7	211.3	239.0	203.9
4	DKC9161(IM8222)	203.3	226.7	180.3	186.0	199.1	202.5	217.7	172.3	167.4	193.3	190.6	197.2	204.7	####	168.3	226.0	165.5	195.9	231.7	190.0	210.8	196.9
5	Rasi-864	210.0	210.0	207.0	174.3	200.3	204.2	221.3	170.7	177.9	183.3	191.5	200.7	190.7	####	190.0	213.0	179.0	190.7	240.0	163.7	201.8	194.5
6	X35F880	231.7	231.7	189.7	185.0	209.5	194.0	211.7	195.7	181.6	200.0	196.6	197.5	203.3	####	190.0	242.0	167.3	198.8	240.0	172.7	206.3	201.6
7	KH-2192	200.0	228.3	232.0	185.0	211.3	207.9	215.7	183.3	191.9	186.7	197.1	202.6	210.3	####	183.3	208.7	157.0	191.0	271.7	165.3	218.5	200.8
8	GK 3155	198.3	228.3	199.0	176.3	200.5	207.9	219.0	182.0	178.4	190.0	195.5	215.0	206.0	####	185.0	211.7	176.7	197.3	246.7	165.0	205.8	198.5
9	KMH-1411	221.7	238.3	234.3	177.7	218.0	225.7	216.7	200.7	182.0	200.0	205.0	208.8	207.7	####	195.0	247.3	171.0	206.1	268.3	150.3	209.3	208.9
10	DMRH1308	213.3	240.0	212.7	202.0	217.0	222.0	219.3	187.3	187.8	205.0	204.3	194.5	198.0	####	180.0	217.0	180.5	192.4	263.3	204.3	233.8	206.6
11	HTMH 5108	181.7	220.0	195.0	181.0	194.4	188.0	219.7	165.0	173.7	188.3	186.9	190.0	215.0	####	156.7	220.3	169.2	185.6	246.7	170.0	208.3	190.8
12	CP.333	210.0	245.0	225.7	184.0	216.2	186.6	219.7	174.3	195.4	188.3	192.9	197.7	208.0	####	176.7	221.0	172.9	192.3	246.7	166.3	206.5	199.7
13	CP.999	205.0	226.7	214.3	194.3	210.1	215.4	214.7	190.0	178.7	193.3	198.4	190.0	205.7	####	183.3	199.0	168.3	188.8	251.7	182.3	217.0	200.0
14	CP.111	198.3	228.3	209.0	200.3	209.0	228.3	217.0	188.7	176.7	181.7	198.5	190.5	207.0	####	186.7	233.0	165.4	197.9	275.0	165.7	220.3	203.3
15	HTMH 5202	201.7	226.7	223.7	184.3	209.1	221.0	209.0	175.3	185.0	175.0	193.1	194.5	195.7	####	188.3	206.7	161.4	183.3	256.7	191.0	223.8	197.0
16	KH-3021	220.0	240.0	217.0	187.7	216.2	215.2	217.7	179.3	186.4	193.3	198.4	161.3	200.3	####	170.0	205.0	160.5	176.9	243.3	163.3	203.3	195.6
17	Rasi-393 CHECKS	243.3	236.7	236.7	177.7	223.6	226.3	217.7	211.3	193.2	218.3	213.4	191.2	208.0	####	183.3	216.0	177.6	195.7	265.0	205.3	235.2	212.1
18	Seedtech 2324	191.7	216.7	200.3	190.0	199.7	222.8	213.3	191.3	175.5	178.3	196.3	200.7	212.7	####	171.7	226.0	159.7	189.6	255.0	162.3	208.7	196.2
19	Buland	218.3	260.0	218.0	200.0	224.1	218.2	216.3	207.3	208.5	205.0	211.1	217.9	200.3	####	180.0	231.7	185.8	204.4	221.7	175.7	198.7	210.3
20	Bio 9681	203.3	233.3	213.3	200.7	212.7	208.4	218.7	175.0	171.7	200.0	194.8	189.4	193.0	####	166.7	214.7	178.0	187.0	241.7	166.7	204.2	197.3
	Loc. Mean	211.8	231.8	213.4	188.1	211.3	212.9	216.5	185.0	182.9	192.2	197.9	196.8	204.2	####	178.4	221.2	169.8	192.9	251.2	175.0	213.1	201.0
	C.D. (5%)	7.26	25.50	24.73	4.44	17.17	38.14	6.17	17.07	13.46	14.64	11.18	2.64	14.08	####	34.35	24.49	11.30	11.79	32.50	8.88	29.39	7.63
	C.V. (%)	2.07	6.66	7.01	1.43	5.74	10.84	1.73	5.58	3.52	4.61	4.48	0.81	4.17	3.68	11.65	6.70	4.03	5.33	7.83	3.07	6.59	5.63
	F (Prob)	0.00	0.14	0.00	0.00	0.01	0.58	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.78	0.01	0.00	0.00	0.14	0.00	0.23	0.00

BR73

Table No. 5 (Continued)

S.No. PEDIGREE		EAR HEIGHT(cm)																					
		KARN LUDH PANT KANP				ZN 2					ZN 3					ZN 4				ZN 5		OV'L	
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	Rasi-950	136.7	138.3	79.3	76.3	107.7	111.7	112.7	94.7	78.4	103.3	100.2	116.2	111.7	93.7	86.7	117.3	78.0	100.6	116.7	79.7	98.2	101.8
2	CP.838	110.0	118.3	70.0	76.3	93.7	99.1	108.7	85.0	79.4	85.0	91.4	109.6	104.0	80.7	78.3	119.7	72.1	94.1	111.7	77.0	94.3	93.2
3	GK 3118	103.3	115.0	75.7	80.0	93.5	98.6	118.3	90.7	84.4	83.3	95.1	115.7	110.7	101.3	90.0	107.7	81.7	101.2	138.3	107.7	123.0	100.1
4	DKC9161(IM8222)	96.7	106.7	54.0	73.7	82.8	88.4	114.7	81.7	68.3	81.7	86.9	98.4	106.3	82.0	83.3	111.7	68.9	91.8	110.0	92.7	101.3	89.4
5	Rasi-864	90.0	105.0	68.0	71.0	83.5	96.4	116.3	84.0	77.0	95.0	93.8	101.0	103.7	80.7	90.0	102.7	77.1	92.5	140.0	85.0	112.5	93.1
6	X35F880	111.7	115.0	66.3	74.0	91.8	103.4	107.0	85.0	77.5	86.7	91.9	101.2	108.0	80.0	83.3	122.0	69.5	94.0	111.7	85.3	98.5	93.4
7	KH-2192	105.0	121.7	68.7	76.3	92.9	99.4	108.7	79.0	73.9	86.7	89.5	109.1	111.0	69.7	75.0	92.0	59.7	86.1	120.0	77.7	98.8	90.2
8	GK 3155	103.3	138.3	81.3	67.0	97.5	84.9	117.7	85.7	72.6	93.3	90.8	114.1	117.7	90.7	78.3	105.7	76.7	97.2	118.3	66.0	92.2	94.8
9	KMH-1411	111.7	113.3	76.7	66.3	92.0	103.8	114.3	88.7	70.8	91.7	93.9	114.6	107.7	81.7	85.0	119.0	70.3	96.4	131.7	69.0	100.3	95.1
10	DMRH1308	101.7	118.3	68.7	71.3	90.0	93.8	118.3	83.3	73.7	93.3	92.5	98.6	109.0	76.3	86.7	98.3	68.0	89.5	125.0	87.0	106.0	92.4
11	HTMH 5108	101.7	123.3	66.7	64.7	89.1	89.6	118.0	79.3	82.5	100.0	93.9	90.7	105.3	76.0	76.7	109.3	64.8	87.1	135.0	84.0	109.5	92.2
12	CP.333	98.3	121.7	68.7	68.3	89.3	90.5	116.3	79.7	91.7	86.7	93.0	114.6	113.0	74.3	85.0	110.3	76.3	95.6	118.3	84.3	101.3	94.0
13	CP.999	100.0	111.7	63.3	72.3	86.8	85.8	116.0	88.3	73.5	91.7	91.1	108.0	111.0	84.0	83.3	91.7	70.1	91.4	131.7	75.3	103.5	91.6
14	CP.111	83.3	111.7	61.3	70.7	81.8	102.5	117.0	83.7	73.1	76.7	90.6	112.3	103.3	81.3	78.3	125.0	66.5	94.5	125.0	76.7	100.8	91.1
15	HTMH 5202	91.7	111.7	71.7	64.3	84.8	86.8	108.7	82.3	83.8	85.0	89.3	120.0	110.3	71.3	86.7	96.7	70.1	92.5	118.3	93.7	106.0	91.4
16	KH-3021	111.7	136.7	75.7	67.7	97.9	89.9	118.0	80.7	88.9	95.0	94.5	91.1	107.3	75.7	83.3	96.3	69.5	87.2	106.7	82.3	94.5	92.7
17	Rasi-393	118.3	130.0	87.3	68.0	100.9	102.1	113.0	103.0	93.7	115.0	105.4	112.7	114.7	95.3	86.7	105.3	78.4	98.9	146.7	104.3	125.5	104.4
18	CHECKS																						
18	Seedtech 2324	98.3	125.0	84.0	67.7	93.8	101.6	117.0	97.3	87.9	103.3	101.4	115.6	113.0	85.3	98.3	114.0	76.5	100.5	135.0	82.3	108.7	100.1
19	Buland	131.7	171.7	90.0	78.7	118.0	102.5	115.7	102.7	108.8	118.3	109.6	137.6	117.0	118.3	95.0	121.0	96.5	114.3	123.3	81.7	102.5	112.4
20	Bio 9681	91.7	118.3	72.3	84.7	91.7	92.2	115.7	78.3	82.2	80.0	89.7	98.9	103.3	80.3	76.7	106.3	65.3	88.5	121.7	73.7	97.7	90.7
	Loc. Mean	104.8	122.6	72.5	72.0	93.0	96.1	114.6	86.7	81.1	92.6	94.2	109.0	109.4	83.9	84.3	108.6	72.8	94.7	124.3	83.3	103.8	95.2
	C.D. (5%)	5.09	20.20	6.88	2.07	11.96	18.25	4.36	13.29	13.02	12.65	8.35	2.53	14.28	7.57	20.50	20.89	7.88	7.59	18.32	5.82	18.32	5.30
	C.V. (%)	2.94	9.97	5.74	1.74	9.09	11.48	2.30	9.28	7.67	8.27	7.03	1.41	7.89	5.46	14.71	11.64	6.55	7.00	8.92	4.23	8.44	8.25
	F (Prob)	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.01	0.00	0.00	0.00	0.00	0.73	0.00	0.76	0.04	0.00	0.00	0.00	0.07	0.00	0.00

TABLE No. 6: PERFORMANCE OF EXPERIMENTAL HYBRIDS AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. TR8 DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	KARNAL						Z N 2			Z N 3												
	R	R	R	R	R	R	R	R	R	R	R	R	R									
1 IM8303	7871	6	11058	2	12796	6	6878	1	9651	4	7285	8	5654	7	7375	1	8191	6	8160	4	7322	7
2 KH-517	7763	7	9553	3	16732	2	6330	3	10095	2	10137	2	5590	8	5735	8	9009	4	7584	6	8080	4
3 BL 900	8275	4	9337	4	9684	8	5604	8	8225	8	9398	3	5918	4	6494	3	9327	3	7753	5	8099	3
4 BL 147	11230	1	8737	5	9936	7	5823	6	8931	7	7941	6	6850	1	6984	2	11267	1	8789	2	8712	2
5 BL 798	9452	2	11499	1	15377	5	6517	2	10711	1	8105	5	5855	6	6117	6	8925	5	8519	3	7851	5
6 DMRH 1301 CHECKS	8141	5	7758	8	15833	3	5706	7	9359	5	10199	1	5944	3	6266	4	11110	2	8872	1	9031	1
7 Bio 9637	8891	3	7894	7	16783	1	6020	5	9897	3	9376	4	5895	5	5759	7	7242	7	6832	8	7336	6
8 HM10	7144	8	7954	6	15456	4	6042	4	9149	6	7804	7	6067	2	6159	5	7151	8	7203	7	7056	8
Location Mean	8596		9224		14075		6115		9502		8780		5972		6361		9028		7964		7936	
C.D. (5%)	1065		1653		1448		315		1120		2124		302		2408		1806		774		1251	
C.V. (%)	7.02		10.16		5.83		2.92		-		13.71		2.87		21.46		11.34		5.51		-	
F (Prob)	0		0.001		0		0				0.049		0		0.81		0.001		0			
Plot Size	18		17.3		13.5		14.4		-		14.4		14.4		18		5.6		14.4		-	
AGRONOMY DATA																						
Sowing Date	23-11		28-01		12-12		12-12		-		27-11		28-11		8-12		8-02		3-12		-	
Harvest Date	25-05		15-06		8-06		8-05		-		8-05		7-04		10-06		14-06		23-04		-	
Irrigation Nos	8		15		6		4		-		5		-		2		7		5		-	
Fertilizer Applied N	150		70		120		140		-		150		120		150		140		150		-	
Fertilizer Applied P	60		24		60		60		-		75		60		70		60		75		-	
Fertilizer Applied K	60		12		40		50		-		60		60		60		40		60		-	

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 21.5 %

BR75

TABLE No. 6: (Contd.)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																					
	COIM		DHAR		KARI		KOLH		MAND		VAGA		ZN 4		BANS		GODH		ZN 5		OV'L	
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
1 IM8303	9631	5	6113	3	4012	6	8130	7	9746	2	7817	2	7575	3	9286	2	5783	4	7534	2	8026	6
2 KH-517	11548	1	7052	1	4779	3	8345	6	7693	8	8542	1	7993	2	6923	6	8714	2	7819	1	8518	1
3 BL 900	11280	2	6390	2	4822	2	10696	2	8531	6	6937	5	8109	1	6100	8	8821	1	7461	3	8054	5
4 BL 147	8854	6	4624	6	4493	4	11549	1	9193	3	6633	6	7558	4	8209	3	5200	7	6705	6	8083	4
5 BL 798	8193	8	5199	5	5382	1	10623	3	8664	4	7021	4	7514	5	9425	1	4985	8	7205	5	8359	2
6 DMRH 1301 CHECKS	10935	3	3678	8	3659	8	8533	5	9862	1	7508	3	7362	6	7953	4	6849	3	7401	4	8284	3
7 Bio 9637	10722	4	4330	7	4012	7	8711	4	8654	5	5740	7	7028	7	7279	5	5541	5	6410	7	7745	7
8 HM10	8783	7	5670	4	4415	5	6797	8	7743	7	5491	8	6483	8	6168	7	5309	6	5738	8	7200	8
Location Mean	9993		5382		4447		9173		8761		6961		7453		7668		6400		7034		8034	
C.D. (5%)	798		1781		413		1894		714		281		980		1833		378		1105		1099	
C.V. (%)	4.53		18.76		5.27		11.7		4.62		2.29		-		13.55		3.35		-		-	
F (Prob)	0		0.01		0		0.001		0		0		-		0.006		0		-		-	
Plot Size	14.4		14.4		14.4		18		16.8		14.4		-		14.4		9.6		-		-	
AGRONOMY DATA																						
Sowing Date	6-01		10-12		28-07		15-12		5-12		7-01		-		30-11		28-11		-		-	
Harvest Date	2-05		28-04		6-04		14-05		26-04		26-04		-		2-05		7-04		-		-	
Irrigation Nos	8		5		12		-		12		10		-		6		7		-		-	
Fertilizer Applied N	250		150		240		120		150		250		-		150		120		-		-	
Fertilizer Applied P	75		65		60		60		75		75		-		80		60		-		-	
Fertilizer Applied K	75		65		60		40		40		75		-		-		-		-		-	

TABLE No. 6 (Contd.)

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE Bio 9637																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	IM8303	-	40.1	-	14.3	-	-	-	28.1	13.1	19.4	-	-	41.2	0	-	12.6	36.2	7.8	27.6	4.4	17.5	3.6
2	KH-517	-	21	-	5.2	2	8.1	-	-	24.4	11	10.1	7.7	62.9	19.1	-	-	48.8	13.7	-	57.3	22	10
3	BL 900	-	18.3	-	-	-	0.2	0.4	12.8	28.8	13.5	10.4	5.2	47.6	20.2	22.8	-	20.9	15.4	-	59.2	16.4	4
4	BL 147	26.3	10.7	-	-	-	-	16.2	21.3	55.6	28.7	18.8	-	6.8	12	32.6	6.2	15.6	7.5	12.8	-	4.6	4.4
5	BL 798	6.3	45.7	-	8.3	8.2	-	-	6.2	23.2	24.7	7	-	20.1	34.1	21.9	0.1	22.3	6.9	29.5	-	12.4	7.9
6	DMRH 1301 CHECKS	-	-	-	-	-	8.8	0.8	8.8	53.4	29.9	23.1	2	-	-	-	14	30.8	4.8	9.3	23.6	15.5	7
7	Bio 9637	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	HM10	-	0.8	-	0.4	-	-	2.9	7	-	5.4	-	-	31	10.1	-	-	-	-	-	-	-	-

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 21.5 %

S. No.	PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE HM10																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1	IM8303	10.2	39	-	13.8	5.5	-	-	19.7	14.5	13.3	3.8	9.7	7.8	-	19.6	25.9	42.4	16.8	50.6	8.9	31.3	11.5
2	KH-517	8.7	20.1	8.3	4.8	10.3	29.9	-	-	26	5.3	14.5	31.5	24.4	8.2	22.8	-	55.6	23.3	12.2	64.1	36.2	18.3
3	BL 900	15.8	17.4	-	-	-	20.4	-	5.4	30.4	7.6	14.8	28.4	12.7	9.2	57.4	10.2	26.3	25.1	-	66.2	30	11.9
4	BL 147	57.2	9.8	-	-	-	1.8	12.9	13.4	57.6	22	23.5	0.8	-	1.8	69.9	18.7	20.8	16.6	33.1	-	16.8	12.3
5	BL 798	32.3	44.6	-	7.9	17.1	3.9	-	-	24.8	18.3	11.3	-	-	21.9	56.3	11.9	27.9	15.9	52.8	-	25.6	16.1
6	DMRH 1301 CHECKS	14	-	2.4	-	2.3	30.7	-	1.7	55.4	23.2	28	24.5	-	-	25.5	27.4	36.7	13.6	28.9	29	29	15.1
7	Bio 9637	24.4	-	8.6	-	8.2	20.1	-	-	1.3	-	4	22.1	-	-	28.2	11.8	4.5	8.4	18	4.4	11.7	7.6
8	HM10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 21.5 %

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TABLE No. 6 (Contd.)

GRAIN SHELLING %																							
S.No.	PEDIGREE	KARN	LUDH	PANT	ZN 2					ZN 3					ZN 4					ZN 5		OV'L	
					Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean		Mean
1	IM8303	80.2	80.8	81.0	77.3	79.8	75.9	80.6	80.5	85.3	74.3	79.3	80.1	82.9	75.7	81.5	80.1	78.1	79.7	80.0	76.8	78.4	79.5
2	KH-517	79.6	82.0	81.8	77.3	80.2	79.6	83.8	74.5	85.2	74.3	79.5	81.6	84.9	79.7	84.8	79.1	80.7	81.8	81.6	78.7	80.2	80.5
3	BL 900	77.5	82.1	82.6	74.7	79.2	77.8	82.6	73.5	86.1	76.7	79.3	82.0	85.7	83.3	85.5	78.9	79.6	82.5	79.7	84.6	82.1	80.8
4	BL 147	80.7	82.5	79.1	76.0	79.6	78.3	82.8	82.5	86.6	76.3	81.3	80.7	84.8	81.7	82.8	79.5	78.3	81.3	81.0	80.0	80.5	80.8
5	BL 798	78.5	82.7	81.5	73.7	79.1	77.7	82.6	80.0	85.6	78.0	80.8	81.7	85.2	82.9	84.8	79.2	77.9	81.9	81.2	80.5	80.9	80.8
6	DMRH 1301	78.6	80.8	78.9	76.0	78.6	79.5	81.8	79.0	86.6	75.0	80.4	77.6	78.2	75.6	75.3	78.5	81.0	77.7	80.6	84.9	82.8	79.3
CHECKS																							
7	Bio 9637	79.7	81.9	81.3	75.0	79.5	74.9	80.2	80.5	83.4	72.3	78.3	81.5	84.5	82.7	84.4	80.9	77.7	81.9	80.9	78.3	79.6	80.0
8	HM10	75.8	78.5	83.3	77.3	78.7	72.9	80.9	79.0	79.7	73.7	77.2	81.1	80.8	79.0	79.9	79.3	75.9	79.3	79.4	84.6	82.0	78.9
Loc. Mean		78.8	81.4	81.2	75.9	79.3	77.1	81.9	78.7	84.8	75.1	79.5	80.8	83.4	80.1	82.4	79.4	78.6	80.8	80.5	81.0	80.8	80.1
C.D. (5%)		0.32	3.87	1.90	1.48	2.33	1.56	0.83	6.03	0.93	2.46	2.63	1.70	1.69	1.39	1.65	1.07	1.23	2.17	1.77	2.12	6.13	1.41
C.V. (%)		0.23	2.72	1.34	1.11	2.00	1.15	0.58	4.38	0.63	1.87	2.55	1.20	1.16	0.99	1.15	0.77	0.89	2.29	1.25	1.49	3.21	2.59
F (Prob)		0.00	0.40	0.00	0.00	0.84	0.00	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.15	0.00	0.73	0.03

MOISTURE % AT HARVEST																							
S.No.	PEDIGREE	KARN	LUDH	PANT	ZN 2					ZN 3					ZN 4					ZN 5		OV'L	
					Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean		Mean
1	IM8303	25.7	13.2	17.0	12.7	17.1	26.7	18.3	18.2	19.3	33.8	23.3	21.2	13.3	18.1	8.3	15.2	16.8	15.5	17.4	15.9	16.6	18.3
2	KH-517	27.1	12.3	17.2	15.3	18.0	27.0	17.8	18.6	20.6	30.4	22.9	18.1	10.4	14.6	8.4	15.5	16.6	13.9	17.2	15.3	16.3	17.8
3	BL 900	26.7	10.6	18.1	13.3	17.2	25.8	18.6	15.4	20.7	33.3	22.7	20.7	12.3	13.1	7.9	14.9	16.7	14.2	16.3	15.2	15.8	17.6
4	BL 147	26.2	11.6	18.9	15.0	17.9	27.0	17.9	14.9	19.2	34.6	22.7	21.1	12.2	16.7	7.6	14.5	17.9	15.0	18.0	16.3	17.1	18.2
5	BL 798	29.3	9.7	17.8	12.7	17.3	27.8	18.4	16.9	19.6	32.9	23.1	18.3	10.5	15.1	8.5	14.0	16.9	13.9	18.0	16.7	17.4	17.8
6	DMRH 1301	28.5	11.8	17.8	14.7	18.2	26.9	18.4	16.9	20.3	31.0	22.7	20.8	11.9	19.2	8.5	14.7	16.7	15.3	17.0	15.2	16.1	18.2
CHECKS																							
7	Bio 9637	26.8	11.9	16.6	15.3	17.7	26.8	18.4	16.2	20.0	32.4	22.8	15.7	11.3	15.5	8.1	15.4	16.2	13.7	17.4	17.5	17.5	17.7
8	HM10	27.5	11.3	19.2	13.3	17.8	25.7	17.8	17.7	19.9	30.7	22.4	18.9	9.9	15.7	8.3	14.8	16.3	14.0	16.6	15.6	16.1	17.6
Loc. Mean		27.2	11.5	17.8	14.0	17.6	26.7	18.2	16.8	20.0	32.4	22.8	19.3	11.4	16.0	8.2	14.9	16.7	14.4	17.2	15.9	16.6	17.9
C.D. (5%)		0.39	0.52	0.75	1.63	1.72	1.28	0.50	4.19	1.60	2.89	1.39	2.15	1.71	1.40	0.55	0.37	0.75	1.35	0.55	0.24	1.08	0.74
C.V. (%)		0.81	2.57	2.41	6.62	6.64	2.73	1.57	14.22	4.58	5.10	4.70	6.34	8.55	5.01	3.85	1.43	2.54	7.97	1.83	0.85	2.76	6.08
F (Prob)		0.00	0.00	0.00	0.01	0.87	0.06	0.02	0.54	0.41	0.06	0.93	0.00	0.01	0.00	0.04	0.00	0.01	0.05	0.00	0.00	0.04	0.31

TABLE No. 6 (Contd.)

STAND AT HARVEST ('000/ha)																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	IM8303	60.9	76.7	64.4	75.2	69.3	67.4	61.6	54.8	62.5	66.2	62.5	65.5	66.2	38.9	57.8	58.7	61.6	56.5	68.3	77.8	73.0	63.6
2	KH-517	62.2	74.2	64.7	74.3	68.9	65.5	60.2	53.3	67.9	65.0	62.4	65.5	57.6	77.5	57.8	57.9	61.6	64.1	67.4	78.1	72.7	65.8
3	BL 900	63.1	78.2	61.7	73.8	69.2	64.6	59.3	62.8	66.1	66.0	63.7	66.2	53.9	74.1	63.0	56.7	61.3	64.3	62.3	80.9	71.6	66.3
4	BL 147	63.1	73.2	64.7	74.8	69.0	69.2	60.2	51.5	64.3	64.4	61.9	65.0	52.8	66.7	64.4	57.1	54.4	61.5	66.4	80.6	73.5	65.0
5	BL 798	61.1	75.0	64.4	75.7	69.1	63.2	59.0	53.9	69.0	66.4	62.3	66.4	51.9	67.8	62.8	56.3	61.6	63.0	65.7	76.7	71.2	65.3
6	DMRH 1301	62.2	75.5	63.0	75.7	69.1	68.1	61.8	55.6	66.1	67.1	63.7	65.5	53.7	80.8	60.0	57.1	61.3	65.0	67.4	79.9	73.6	66.7
CHECKS																							
7	Bio 9637	60.9	76.1	64.0	72.9	68.5	66.9	61.8	63.0	65.5	64.4	64.3	65.0	50.7	76.9	57.8	56.9	54.4	62.2	65.5	77.1	71.3	65.6
8	HM10	62.0	73.2	64.0	72.5	67.9	63.9	58.6	52.6	67.9	64.4	61.5	64.8	51.2	60.4	57.8	57.3	46.8	57.4	63.9	76.4	70.1	62.9
Loc. Mean		62.0	75.3	63.9	74.4	68.9	66.1	60.3	55.9	66.1	65.5	62.8	65.5	54.7	67.9	60.2	57.3	57.9	61.7	65.9	78.4	72.1	65.1
C.D. (5%)		2.29	5.66	2.57	1.49	2.00	6.29	3.68	11.60	5.87	3.67	3.35	1.76	21.07	4.85	4.00	2.09	2.04	8.48	3.92	4.02	4.70	2.81
C.V. (%)		2.11	4.30	2.29	1.15	1.98	5.44	3.48	11.84	5.06	3.20	4.12	1.53	21.98	4.08	3.80	2.08	2.01	10.61	3.40	2.93	2.76	6.14
F (Prob)		0.26	0.55	0.25	0.00	0.85	0.44	0.39	0.29	0.36	0.59	0.63	0.50	0.79	0.00	0.01	0.39	0.00	0.35	0.08	0.17	0.62	0.13

Locations Rejected due to High C.V.(i.e.> 20%) : DHARWAD 22.0%

DAYS TO 50% POLLEN SHED																							
S.No.	PEDIGREE	ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA		Mean	BANS	GODH	Mean
1	IM8303	126.7	78.3	117.3	98.3	105.2	124.3	69.0	111.0	63.3	102.0	93.9	51.3	72.3	64.7	74.0	66.3	52.3	63.5	97.7	83.0	90.3	85.4
2	KH-517	128.0	78.3	115.7	101.3	105.8	121.3	68.0	108.0	62.7	99.0	91.8	51.0	71.0	62.0	72.0	59.3	51.7	61.2	96.3	80.3	88.3	83.9
3	BL 900	127.3	82.3	115.0	101.7	106.6	124.3	67.0	112.0	66.0	101.0	94.1	52.7	72.3	63.3	74.0	67.0	52.3	63.6	96.3	81.7	89.0	85.7
4	BL 147	125.7	82.7	114.7	101.3	106.1	121.3	68.0	111.7	62.0	102.7	93.1	53.7	72.3	65.0	74.0	65.7	54.3	64.2	96.0	83.3	89.7	85.5
5	BL 798	126.3	77.0	116.0	95.7	103.8	126.7	67.7	111.3	62.7	100.0	93.7	51.3	70.3	62.0	73.0	64.0	51.7	62.1	93.3	79.7	86.5	84.0
6	DMRH 1301	127.7	79.3	120.0	97.7	106.2	122.7	65.7	109.0	61.3	97.7	91.3	53.3	73.7	62.7	73.0	67.0	53.3	63.8	92.7	80.0	86.3	84.5
CHECKS																							
7	Bio 9637	128.3	81.0	115.3	98.3	105.8	121.7	66.0	112.7	63.0	101.7	93.0	51.0	72.3	62.3	73.0	64.3	52.7	62.6	98.0	83.7	90.8	85.0
8	HM10	124.7	78.3	116.7	94.7	103.6	120.0	68.0	111.0	66.0	101.7	93.3	54.0	72.3	63.3	74.0	65.0	52.3	63.5	99.7	82.3	91.0	84.9
Loc. Mean		126.8	79.7	116.3	98.6	105.4	122.8	67.4	110.8	63.4	100.7	93.0	52.3	72.1	63.2	73.4	64.8	52.6	63.1	96.3	81.8	89.0	84.9
C.D. (5%)		1.06	2.14	2.64	1.69	2.80	6.32	1.24	3.15	2.55	2.41	1.97	1.12	2.11	1.60	-	1.88	1.05	1.20	3.82	1.07	2.66	1.10
C.V. (%)		0.48	1.53	1.29	0.98	1.81	2.94	1.05	1.63	2.30	1.37	1.64	1.23	1.67	1.45	-	1.65	1.14	1.62	2.27	0.75	1.27	1.91
F (Prob)		0.00	0.00	0.01	0.00	0.26	0.42	0.00	0.09	0.01	0.01	0.07	0.00	0.12	0.01	-	0.00	0.00	0.00	0.02	0.00	0.02	0.01

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TABLE No. 6 (Contd.)

DAYS TO 50% SILKING																							
S.No.	PEDIGREE	KARN	LUDH	PANT	KANP	ZN 2				ZN 3				ZN 4				ZN 5		OV'L			
						Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean		BANS	GODH	Mean
1	IM8303	128.7	79.7	121.7	102.7	108.2	126.3	71.3	113.7	67.7	106.3	97.1	55.3	73.7	67.3	76.0	67.7	56.0	66.0	101.3	84.7	93.0	88.2
2	KH-517	131.0	79.7	119.0	105.7	108.8	123.3	71.0	110.3	66.7	104.0	95.1	54.0	72.7	65.7	73.0	62.7	55.3	63.9	99.7	82.3	91.0	86.8
3	BL 900	130.3	83.7	118.3	107.0	109.8	126.3	70.0	114.7	70.7	106.0	97.5	56.0	75.7	67.3	76.0	70.7	55.3	66.8	100.3	84.0	92.2	89.0
4	BL 147	128.7	84.0	119.0	107.3	109.8	123.3	71.0	114.0	66.3	107.0	96.3	56.3	77.0	67.3	76.0	67.7	57.3	66.9	100.0	85.0	92.5	88.7
5	BL 798	129.3	79.0	119.3	99.7	106.8	128.7	70.3	113.7	67.0	104.3	96.8	54.3	72.7	64.0	74.0	66.3	54.7	64.3	97.3	81.0	89.2	86.8
6	DMRH 1301 CHECKS	129.7	80.7	123.3	102.7	109.1	124.7	68.3	111.3	66.0	101.7	94.4	56.7	76.7	66.3	75.0	71.3	56.3	67.1	96.7	82.0	89.3	87.6
7	Bio 9637	131.3	82.7	118.3	104.3	109.2	123.7	69.0	115.0	67.3	107.0	96.4	54.0	77.0	65.7	74.0	66.3	55.7	65.4	101.3	86.7	94.0	88.2
8	HM10	127.7	80.0	120.3	101.7	107.4	122.0	71.0	113.0	70.0	105.0	96.2	57.3	76.3	65.7	75.0	67.0	55.3	66.1	103.7	83.7	93.7	87.9
Loc. Mean		129.6	81.2	119.9	103.9	108.6	124.8	70.3	113.2	67.7	105.2	96.2	55.5	75.2	66.2	74.9	67.5	55.8	65.8	100.0	83.7	91.9	87.9
C.D. (5%)		1.06	2.23	3.07	2.06	2.84	6.32	1.67	3.17	2.76	2.01	1.99	1.43	4.57	2.02	-	2.07	0.98	1.41	4.15	1.35	2.96	1.13
C.V. (%)		0.47	1.57	1.46	1.13	1.78	2.89	1.36	1.60	2.33	1.09	1.59	1.47	3.47	1.74	-	1.75	1.01	1.83	2.37	0.92	1.36	1.89
F (Prob)		0.00	0.00	0.04	0.00	0.32	0.42	0.02	0.08	0.02	0.00	0.06	0.00	0.22	0.03	-	0.00	0.00	0.00	0.05	0.00	0.03	0.00

DAYS TO 75% DRY HUSK																						
S.No.	PEDIGREE	KARN	LUDH	KANP	ZN 2				ZN 3				ZN 4				ZN 5		OV'L			
					Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean		BANS	GODH	Mean
1	IM8303	166.0	117.0	142.3	141.8	162.0	107.0	137.3	102.7	139.0	129.6	95.3	111.0	102.3	117.0	110.0	95.0	105.1	130.0	110.7	120.3	121.5
2	KH-517	168.7	117.3	141.0	142.3	161.0	110.0	134.7	101.7	138.3	129.1	94.3	117.0	100.7	113.3	107.3	94.3	104.5	133.0	111.0	122.0	121.5
3	BL 900	168.7	119.7	141.7	143.3	161.0	107.0	138.3	106.3	138.0	130.1	96.0	111.7	102.3	117.0	110.0	94.3	105.2	131.0	110.0	120.5	122.1
4	BL 147	166.0	118.3	147.3	143.9	160.0	108.0	137.7	105.0	138.0	129.7	96.3	111.0	102.3	117.0	108.3	96.3	105.2	129.3	110.0	119.7	121.9
5	BL 798	166.0	112.7	146.0	141.6	162.3	109.0	138.0	104.0	137.3	130.1	95.0	117.0	99.0	115.0	107.7	93.3	104.5	128.3	109.3	118.8	121.3
6	DMRH 1301 CHECKS	167.0	117.3	148.0	144.1	158.7	107.0	135.7	101.3	137.3	128.0	96.0	117.0	101.3	116.0	110.0	95.3	105.9	128.0	110.0	119.0	121.6
7	Bio 9637	165.3	118.0	143.7	142.3	158.0	107.0	137.7	102.7	138.3	128.7	95.7	114.7	100.7	114.7	107.7	94.7	104.7	131.7	116.0	123.8	121.6
8	HM10	167.3	120.0	145.3	144.2	161.0	108.0	137.3	107.3	138.7	130.5	97.0	117.0	100.7	116.0	109.3	94.7	105.8	135.7	110.0	122.8	122.8
Loc. Mean		166.9	117.5	144.4	142.9	160.5	107.9	137.1	103.9	138.1	129.5	95.7	114.5	101.2	115.8	108.8	94.8	105.1	130.9	110.9	120.9	121.8
C.D. (5%)		1.14	3.22	2.95	3.96	2.53	1.57	2.85	2.92	1.29	1.70	1.18	4.94	2.02	0.49	2.89	1.01	1.84	3.76	1.56	4.97	1.22
C.V. (%)		0.39	1.56	1.17	1.58	0.90	0.83	1.19	1.61	0.53	1.01	0.70	2.46	1.14	0.24	1.51	0.61	1.49	1.64	0.80	1.74	1.43
F (Prob)		0.00	0.01	0.00	0.69	0.03	0.01	0.17	0.00	0.14	0.09	0.01	0.03	0.03	0.00	0.24	0.00	0.65	0.01	0.00	0.30	0.27

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TABLE No. 7: PERFORMANCE OF EXPERIMENTAL HYBRIDS/SINGLE CROSSES/TOP CROSSES & COMPOSITES AT KARNAL, LUDHIANA, PANTNAGAR, KANPUR, BAHRAICH, BHUBANESHWAR, RANCHI, VARANASI, COIMBATORE, DHARWAD, KARIMNAGAR, KOLHAPUR, MANDYA, VAGARAI, BANSWARA, GODHRA IN TRIAL No. QPM DURING RABI (2015-16)

S. No. PEDIGREE	GRAIN YIELD (kg/ha) AT 15% MOISTURE																			
	ZN 2										ZN 3									
	KARN R	LUDH R	PANT R	KANP R	MEAN R	BAHR R	BHUB R	DHOL R	RANC R	VARA R	MEAN R									
1 MMHQPM 6-12-13	7710 4	6909 4	8107 3	4740 6	6867 6	10171 3	6654 2	7561 1	6823 4	8958 4	8151 3									
2 VEHQ 15-1	6866 6	7320 3	9926 2	6917 4	7757 3	8059 5	6499 4	4621 5	7255 3	9430 2	7811 5									
3 BIO9637(Filler)	8574 3	7936 2	6904 4	6120 5	7384 5	11265 2	6375 5	5567 2	7468 2	9604 1	8678 1									
4 BIO9681(Filler)	8884 2	8603 1	6718 6	7648 1	7963 1	13529 1	5367 6	4298 6	6306 6	9147 3	8587 2									
CHECKS																				
5 HQPM 1	8923 1	6534 5	6774 5	7382 2	7403 4	9517 4	6619 3	4910 4	7636 1	8079 6	7963 4									
6 HQPM 4	7552 5	6074 6	10404 1	7180 3	7803 2	7382 6	6997 1	5000 3	6498 5	8502 5	7345 6									
Location Mean	8085	7229	8139	6665	7529	9987	6418	5326	6998	8953	8089									
C.D. (5%)	430	1160	1462	1889	1235	675	361	1898	1121	902	765									
C.V. (%)	3.5	10.58	11.84	18.69	-	4.46	3.7	23.49	10.56	6.64	-									
F (Prob)	0	0.003	0	0.027	-	0	0	0.015	0.098	0.015	-									
Plot Size	12	11.5	9	9.6	-	9.6	9.6	12	6	9.6	-									
AGRONOMY DATA																				
Sowing Date	23-11	28-01	12-12	12-12	-	27-11	1-12	8-12	8-02	27-11	-									
Harvest Date	25-05	15-06	9-06	8-05	-	6-05	14-04	13-06	7-06	21-04	-									
Irrigation Nos	8	15	6	4	-	5	-	2	7	4	-									
Fertilizer Applied N	150	70	120	140	-	150	120	150	140	150	-									
Fertilizer Applied P	60	24	60	60	-	75	60	70	60	75	-									
Fertilizer Applied K	60	12	40	50	-	60	60	60	40	60	-									

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 23.5 %

TABLE No. 7: (Contd.)

S. No. PEDIGREE	ZN 4												ZN 5		OV'L
	COIM R	DHAR R	KARI R	KOLH R	MAND R	VAGA R	MEAN R	BANS R	GODH R	MEAN R	MEAN R				
1 MMHQPM 6-12-13	8500	2 4695	2 3214	4 7809	3 7344	3 6776	4 6390	2 8680	3 3216	5 5948	5 6894	4			
2 VEHQ 15-1	6812	3 4289	3 3115	5 6957	4 7940	1 7261	3 6062	3 8276	4 4986	3 6631	3 6994	3			
3 BIO9637(Filler)	8882	1 3828	6 4201	1 8159	1 7699	2 8110	1 6813	1 7907	6 5783	2 6845	2 7426	1			
4 BIO9681(Filler)	5735	4 4893	1 3750	2 8121	2 7315	4 6372	5 6031	4 9391	1 5898	1 7644	1 7355	2			
CHECKS															
5 HQPM 1	5552	6 4211	4 3000	6 6407	6 6201	6 7677	2 5508	5 8266	5 4881	4 6573	4 6729	5			
6 HQPM 4	5713	5 4178	5 3477	3 6900	5 7291	5 3872	6 5238	6 9145	2 2477	6 5811	6 6478	6			
Location Mean	6866	4349	3459	7392	7298	6678	6007	8611	4540	6575	6979				
C.D. (5%)	657	1305	494	1763	1013	306	923	880	256	568	917				
C.V. (%)	6.31	19.79	9.42	15.73	9.15	3.02	-	6.74	3.05	-	-				
F (Prob)	0	0.45	0	0.169	0.022	0	-	0.016	0	-	-				
Plot Size	9.6	9.8	9.6	12	11.2	9.6	-	9.6	9.6	-	-				
AGRONOMY DATA															
Sowing Date	6-01	10-12	26-11	16-12	5-12	7-01	-	30-11	28-11	-	-				
Harvest Date	2-05	27-04	4-04	15-05	26-04	26-04	-	30-04	7-04	-	-				
Irrigation Nos	10	5	12	-	12	11	-	6	8	-	-				
Fertilizer Applied N	250	150	240	120	150	250	-	150	120	-	-				
Fertilizer Applied P	75	65	60	60	75	75	-	80	60	-	-				
Fertilizer Applied K	75	65	60	40	40	75	-	-	-	-	-				

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TABLE No. 7 (Contd.)

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE HQPM 1																					
	ZN 2										ZN 3					ZN 4				ZN 5		OV'L
	KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1 MMHQPM 6-12-13	-	5.7	19.7	-	-	6.9	0.5	54	-	10.9	2.4	53.1	11.5	7.1	21.9	18.4	-	16	5	-	-	2.5
2 VEHQ 15-1	-	12	46.5	-	4.8	-	-	-	-	16.7	-	22.7	1.9	3.8	8.6	28	-	10.1	0.1	2.2	0.9	3.9
3 BIO9637(Filler)	-	21.5	1.9	-	-	18.4	-	13.4	-	18.9	9	60	-	40	27.4	24.2	5.6	23.7	-	18.5	4.1	10.4
4 BIO9681(Filler) CHECKS	-	31.7	-	3.6	7.6	42.2	-	-	-	13.2	7.8	3.3	16.2	25	26.8	18	-	9.5	13.6	20.8	16.3	9.3
5 HQPM 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 HQPM 4	-	-	53.6	-	5.4	-	5.7	1.8	-	5.2	-	2.9	-	15.9	7.7	17.6	-	-	10.6	-	-	-

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 23.5 %

S. No. PEDIGREE	GRAIN YIELD % SUPERIORITY OVER THE HQPM 4																					
	ZN 2										ZN 3					ZN 4				ZN 5		OV'L
	KARN	LUDH	PANT	KANP	MEAN	BAHR	BHUB	DHOL	RANC	VARA	MEAN	COIM	DHAR	KARI	KOLH	MAND	VAGA	MEAN	BANS	GODH	MEAN	MEAN
1 MMHQPM 6-12-13	2.1	13.7	-	-	-	37.8	-	51.2	5	5.4	11	48.8	12.4	-	13.2	0.7	75	22	-	29.8	2.4	6.4
2 VEHQ 15-1	-	20.5	-	-	-	9.2	-	-	11.6	10.9	6.3	19.2	2.7	-	0.8	8.9	87.6	15.7	-	101.3	14.1	8
3 BIO9637(Filler)	13.5	30.6	-	-	-	52.6	-	11.3	14.9	13	18.1	55.5	-	20.8	18.2	5.6	109.5	30.1	-	133.4	17.8	14.6
4 BIO9681(Filler) CHECKS	17.6	41.6	-	6.5	2.1	83.3	-	-	-	7.6	16.9	0.4	17.1	7.8	17.7	0.3	64.6	15.1	2.7	138.1	31.6	13.5
5 HQPM 1	18.2	7.6	-	2.8	-	28.9	-	-	17.5	-	8.4	-	0.8	-	-	-	98.3	5.1	-	97	13.1	3.9
6 HQPM 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATIONS REJECTED DUE TO HIGH C.V.(i.e.> 20%) : DHOL 23.5 %

S. No. PEDIGREE	GRAIN SHELLING %																					
	ZN 2										ZN 3					ZN 4				ZN 5		OV'L
	KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1 MMHQPM 6-12-13	74.8	79.8	82.3	76.8	78.4	80.0	80.5	82.0	84.4	75.3	80.4	82.0	84.2	78.2	80.9	80.2	77.4	80.5	80.0	76.0	78.0	79.7
2 VEHQ 15-1	74.5	80.9	82.3	75.8	78.4	74.9	79.8	76.0	84.6	74.5	77.9	80.3	82.9	79.8	83.3	80.1	76.4	80.5	79.2	78.6	78.9	79.0
3 BIO9637(Filler)	77.8	80.9	80.7	76.5	79.0	80.7	78.6	83.5	83.9	74.0	80.1	81.1	85.7	79.7	83.6	81.1	78.8	81.6	78.8	83.7	81.2	80.5
4 BIO9681(Filler) CHECKS	78.8	79.5	80.6	76.3	78.8	82.1	80.2	80.3	83.8	75.3	80.3	78.6	83.2	80.8	82.4	79.0	77.8	80.3	79.8	84.6	82.2	80.2
5 HQPM 1	77.5	82.4	80.0	75.0	78.7	78.5	79.5	81.5	82.8	74.8	79.4	80.6	84.5	78.1	81.1	79.4	77.1	80.1	81.2	72.5	76.8	79.2
6 HQPM 4	76.4	78.4	82.8	76.8	78.6	73.8	79.4	81.5	79.3	72.5	77.3	75.7	81.1	74.9	80.5	78.8	75.2	77.7	80.1	71.6	75.8	77.6
Loc. Mean	76.6	80.3	81.4	76.2	78.6	78.3	79.7	80.8	83.1	74.4	79.2	79.7	83.6	78.6	81.9	79.7	77.1	80.1	79.8	77.8	78.8	79.4
C.D. (5%)	0.41	2.41	0.96	1.47	2.21	1.15	0.27	4.56	0.96	1.36	2.49	1.10	1.64	2.68	1.05	0.64	1.29	1.27	2.16	2.91	11.16	1.30
C.V. (%)	0.35	1.99	0.78	1.28	1.87	0.98	0.22	3.74	0.76	1.21	2.38	0.91	1.30	2.26	0.85	0.54	1.11	1.33	1.79	2.06	5.51	2.40
F (Prob)	0.00	0.04	0.00	0.14	0.99	0.00	0.00	0.05	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.67	0.00

TABLE No. 7 (Contd.)

S.No. PEDIGREE		MOISTURE % AT HARVEST																				OV'L	
		ZN 2					ZN 3					ZN 4					ZN 5						
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	MMHQPM 6-12-13	26.4	14.0	17.9	14.5	18.2	26.0	17.7	17.9	21.5	31.9	23.0	22.1	14.0	18.6	8.8	15.6	17.0	16.0	18.1	15.8	16.9	18.7
2	VEHQ 15-1	27.3	12.8	17.5	14.5	18.0	24.9	18.4	17.1	21.7	33.6	23.1	20.1	14.3	19.2	8.6	15.2	17.1	15.7	16.7	18.3	17.5	18.6
3	BIO9637(Filler)	26.4	13.5	18.0	14.8	18.1	26.8	18.8	19.0	19.7	32.3	23.3	18.2	12.6	20.2	8.8	14.5	16.7	15.1	17.1	17.1	17.1	18.5
4	BIO9681(Filler)	25.7	13.7	17.7	14.8	17.9	27.9	18.5	16.2	18.8	28.7	22.0	19.4	14.9	13.4	8.3	14.2	17.0	14.5	16.9	17.2	17.0	17.8
	CHECKS																						
5	HQPM 1	27.0	13.1	17.8	15.5	18.3	25.9	18.4	14.8	19.6	33.9	22.5	20.4	13.5	20.3	8.6	13.8	17.0	15.6	18.3	17.5	17.9	18.5
6	HQPM 4	26.9	13.6	17.3	15.3	18.3	24.0	18.1	17.4	20.0	32.3	22.3	23.1	13.2	22.5	8.7	15.1	16.9	16.6	16.7	16.9	16.8	18.7
	Loc. Mean	26.6	13.4	17.7	14.9	18.1	25.9	18.3	17.0	20.2	32.1	22.7	20.5	13.7	19.0	8.6	14.7	16.9	15.6	17.3	17.1	17.2	18.5
	C.D. (5%)	0.43	0.79	0.52	1.15	0.71	0.59	0.21	2.61	1.91	1.31	1.82	1.35	1.87	2.70	0.37	0.25	0.66	1.74	0.52	0.29	2.38	0.81
	C.V. (%)	1.06	3.92	1.97	5.15	2.60	1.50	0.75	10.15	6.28	2.70	6.06	4.37	9.05	9.43	2.81	1.12	2.59	9.40	2.00	0.94	5.38	6.45
	F (Prob)	0.00	0.05	0.14	0.38	0.85	0.00	0.00	0.06	0.03	0.00	0.66	0.00	0.19	0.00	0.05	0.00	0.89	0.25	0.00	0.00	0.85	0.26

S.No. PEDIGREE		STAND AT HARVEST ('000/ha)																				OV'L	
		ZN 2					ZN 3					ZN 4					ZN 5						
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	MMHQPM 6-12-13	63.1	76.7	60.3	70.8	67.7	58.9	61.2	63.3	62.5	80.2	65.2	65.4	39.8	81.5	61.0	59.4	60.2	65.5	71.1	70.1	70.6	66.6
2	VEHQ 15-1	63.1	72.0	61.1	71.4	66.9	60.7	61.5	52.7	62.5	78.4	63.1	63.5	41.6	58.3	60.4	60.9	61.7	61.0	70.1	74.7	72.4	64.6
3	BIO9637(Filler)	62.7	73.9	64.4	69.5	67.6	66.4	59.9	59.4	59.6	78.1	64.7	64.6	40.1	80.7	61.7	56.3	62.0	65.0	70.1	76.4	73.2	66.6
4	BIO9681(Filler)	63.1	76.1	62.5	70.3	68.0	63.5	59.9	54.2	58.8	79.2	63.1	62.5	45.4	59.6	61.7	56.0	62.5	60.5	70.6	74.7	72.6	64.7
	CHECKS																						
5	HQPM 1	63.3	62.6	54.7	70.1	62.7	63.8	59.9	43.5	58.8	79.4	61.1	64.1	39.8	66.7	57.9	60.0	60.7	61.9	71.1	69.8	70.4	62.9
6	HQPM 4	62.5	63.7	50.8	68.8	61.4	59.9	60.9	51.3	59.6	75.0	61.3	63.0	34.9	61.2	59.0	58.0	35.9	55.4	70.6	68.1	69.3	60.5
	Loc. Mean	63.0	70.8	59.0	70.1	65.7	62.2	60.5	54.1	60.3	78.4	63.1	63.8	40.3	68.0	60.3	58.4	57.2	61.5	70.6	72.3	71.4	64.3
	C.D. (5%)	1.96	6.00	4.15	1.77	4.95	4.03	3.12	8.85	5.19	4.24	4.56	2.24	12.54	4.80	3.70	3.62	1.89	8.37	2.53	3.89	6.77	3.04
	C.V. (%)	2.06	5.62	4.67	1.68	5.00	4.30	3.42	10.86	5.71	3.59	5.48	2.33	20.66	4.69	4.07	4.11	2.20	10.30	2.38	2.96	3.69	6.72
	F (Prob)	0.94	0.00	0.00	0.08	0.04	0.01	0.77	0.00	0.43	0.20	0.35	0.14	0.66	0.00	0.23	0.05	0.00	0.19	0.90	0.00	0.67	0.00

Locations Rejected due to High C.V.(i.e.> 20%) : DHARWAD 20.7%

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TABLE No. 7 (Contd.)

DAYS TO 50% POLLEN SHED																							
S.No.	PEDIGREE	ZN 2								ZN 3				ZN 4				ZN 5		OV'L			
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean		BANS	GODH	Mean
1	MMHQPM 6-12-13	131.8	83.0	117.3	90.8	105.7	122.0	70.8	114.3	65.5	101.5	94.8	53.8	73.8	63.8	70.0	66.0	53.0	63.4	99.8	88.7	94.2	86.2
2	VEHQ 15-1	133.3	83.3	117.8	96.3	107.6	125.0	71.3	114.3	64.3	102.8	95.5	56.0	73.3	64.8	72.0	66.5	51.5	64.0	101.5	87.7	94.6	87.1
3	BIO9637(Filler)	129.0	80.8	118.0	96.5	106.1	123.0	65.8	113.3	64.3	101.3	93.5	52.0	71.0	62.0	68.5	62.8	51.8	61.3	98.8	83.3	91.0	84.8
4	BIO9681(Filler)	130.0	79.8	115.0	96.0	105.2	120.5	64.8	113.3	62.5	99.5	92.1	52.0	71.5	62.0	70.0	62.8	50.8	61.5	97.8	83.3	90.5	84.2
5	CHECKS HQPM 1	133.0	83.0	119.3	97.0	108.1	127.0	71.0	114.8	67.8	103.0	96.7	55.8	73.5	64.0	73.0	67.5	54.5	64.7	99.5	86.3	92.9	87.6
6	HQPM 4	131.3	83.0	117.3	97.8	107.3	121.0	71.0	112.5	63.8	103.5	94.4	56.0	74.5	63.3	72.0	66.5	54.0	64.4	102.5	86.7	94.6	86.8
Loc. Mean		131.4	82.1	117.4	95.7	106.7	123.1	69.1	113.7	64.7	101.9	94.5	54.3	72.9	63.3	70.9	65.3	52.6	63.2	100.0	86.0	93.0	86.1
C.D. (5%)		1.13	2.60	2.10	2.93	2.43	1.61	1.11	2.74	2.29	1.15	1.93	1.05	2.96	1.50	0.62	1.58	0.71	0.97	2.01	1.10	3.12	0.89
C.V. (%)		0.57	2.10	1.19	2.03	1.51	0.87	1.07	1.60	2.35	0.75	1.55	1.29	2.69	1.57	0.58	1.61	0.90	1.29	1.34	0.70	1.31	1.51
F (Prob)		0.00	0.05	0.02	0.00	0.12	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

DAYS TO 50% SILKING																							
S.No.	PEDIGREE	ZN 2								ZN 3				ZN 4				ZN 5		OV'L			
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean		BANS	GODH	Mean
1	MMHQPM 6-12-13	134.5	84.3	121.3	94.8	108.7	124.0	73.5	116.5	70.3	107.0	98.3	57.3	76.5	69.5	71.0	69.3	56.5	66.7	104.0	90.3	97.2	89.4
2	VEHQ 15-1	136.3	84.5	121.3	99.5	110.4	127.0	74.0	116.3	69.3	107.0	98.7	58.8	74.5	69.0	74.0	68.3	54.5	66.5	105.3	89.7	97.5	89.9
3	BIO9637(Filler)	131.8	82.5	121.8	100.3	109.1	125.3	68.8	115.3	68.8	105.5	96.7	55.0	73.5	65.0	71.0	66.0	54.8	64.2	102.8	85.0	93.9	87.8
4	BIO9681(Filler)	133.0	81.0	118.8	99.5	108.1	122.5	67.8	115.5	67.3	102.5	95.1	55.8	74.5	64.8	72.0	65.3	54.3	64.4	101.5	85.0	93.3	87.1
5	CHECKS HQPM 1	135.8	84.0	122.8	100.8	110.8	129.0	73.8	116.8	72.5	107.0	99.8	59.3	75.8	68.8	75.0	70.3	57.5	67.8	103.5	88.0	95.8	90.6
6	HQPM 4	133.3	84.8	120.8	101.3	110.0	123.0	74.0	114.8	68.0	107.8	97.5	59.5	76.3	66.0	74.0	69.5	56.8	67.0	106.3	88.0	97.1	89.6
Loc. Mean		134.1	83.5	121.1	99.3	109.5	125.1	72.0	115.8	69.3	106.1	97.7	57.6	75.2	67.2	72.8	68.1	55.7	66.1	103.9	87.7	95.8	89.1
C.D. (5%)		1.09	3.17	2.30	3.31	2.44	1.65	0.94	2.52	2.37	1.54	1.97	1.26	2.29	1.79	1.67	1.99	0.85	1.31	2.06	0.58	3.04	0.95
C.V. (%)		0.54	2.52	1.26	2.21	1.48	0.87	0.86	1.44	2.27	0.96	1.53	1.45	2.02	1.77	1.52	1.94	1.01	1.67	1.32	0.36	1.23	1.56
F (Prob)		0.00	0.15	0.04	0.01	0.19	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

TABLE No. 7 (Contd.)

S.No. PEDIGREE	DAYS TO 75% DRY HUSK																				
	ZN 2				ZN 3					ZN 4					ZN 5		OV'L				
	KARN	LUDH	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1 MMHQPM 6-12-13	168.8	119.8	137.8	142.1	158.5	119.0	147.0	104.5	140.8	134.0	97.3	99.3	104.5	114.0	113.5	95.3	104.0	133.0	116.0	124.5	123.0
2 VEHQ 15-1	170.3	123.8	135.3	143.1	160.0	119.5	147.5	104.5	144.0	135.1	98.5	103.0	104.0	117.0	113.5	93.8	105.0	132.8	122.3	127.5	124.3
3 BIO9637(Filler)	169.8	117.3	134.5	140.5	155.5	109.3	145.0	103.3	140.3	130.7	94.8	100.5	100.0	112.8	108.5	93.8	101.7	132.5	120.3	126.4	121.1
4 BIO9681(Filler)	169.5	116.8	136.3	140.8	155.0	109.0	145.0	101.3	138.8	129.8	95.5	96.0	99.8	115.0	107.5	93.8	101.3	130.3	115.3	122.8	120.3
CHECKS																					
5 HQPM 1	169.5	123.5	136.3	143.1	158.0	120.3	147.8	107.3	143.5	135.4	99.0	103.0	103.8	118.0	114.3	96.5	105.8	133.0	120.7	126.8	124.6
6 HQPM 4	169.3	121.3	131.3	140.6	156.5	117.8	145.8	102.8	141.5	132.9	99.3	101.8	101.0	117.0	112.8	95.5	104.5	134.5	113.3	123.9	122.6
Loc. Mean	169.5	120.4	135.2	141.7	157.3	115.8	146.3	103.9	141.5	133.0	97.4	100.6	102.2	115.6	111.7	94.8	103.7	132.7	118.0	125.3	122.7
C.D. (5%)	0.84	2.25	2.29	4.03	1.02	1.41	2.05	2.51	1.46	2.47	1.15	3.99	1.79	0.31	1.79	0.86	1.63	1.53	4.78	7.16	1.30
C.V. (%)	0.33	1.24	1.12	1.56	0.43	0.81	0.93	1.60	0.69	1.41	0.79	2.63	1.16	0.18	1.06	0.60	1.33	0.77	2.23	2.22	1.51
F (Prob)	0.04	0.00	0.00	0.51	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.54	0.00

S.No. PEDIGREE	PLANT HEIGHT(cm)																				OV'L	
	ZN 2				ZN 3					ZN 4					ZN 5							
	KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH		Mean
1 MMHQPM 6-12-13	192.5	218.8	174.8	173.3	189.8	188.4	183.3	165.5	183.8	181.3	180.4	186.2	219.3	158.3	165.0	186.3	153.1	178.0	215.0	184.0	199.5	184.0
2 VEHQ 15-1	192.5	237.5	205.3	189.5	206.2	183.7	180.8	166.3	193.5	175.0	179.8	183.2	210.3	181.8	176.3	198.8	163.9	185.7	220.0	200.7	210.3	191.7
3 BIO9637(Filler)	227.5	236.3	193.5	194.5	212.9	214.9	176.0	184.3	187.6	198.8	192.3	193.9	208.3	185.5	202.5	206.0	171.2	194.5	225.0	205.7	215.3	200.7
4 BIO9681(Filler)	198.8	241.3	193.5	193.3	206.7	201.4	183.3	172.8	198.3	190.0	189.1	184.3	212.5	166.3	170.0	203.3	157.5	182.3	245.0	202.0	223.5	194.9
CHECKS																						
5 HQPM 1	192.5	228.8	192.8	194.5	202.1	180.8	176.3	159.5	181.0	177.5	175.0	168.0	214.5	164.0	163.8	187.5	157.3	175.8	198.8	190.3	194.5	184.0
6 HQPM 4	198.8	226.3	203.8	203.8	208.1	179.0	182.8	172.3	189.2	183.8	181.4	193.7	208.5	174.8	190.0	195.0	157.3	186.5	226.3	185.0	205.6	192.3
Loc. Mean	200.4	231.5	193.9	191.5	204.3	191.4	180.4	170.1	188.9	184.4	183.0	184.9	212.2	171.8	177.9	196.1	160.0	183.8	221.7	194.6	208.1	191.3
C.D. (5%)	6.35	16.77	15.31	6.09	13.07	21.91	5.01	10.64	11.54	15.46	9.11	4.82	11.11	10.03	30.50	12.80	6.61	9.13	31.26	10.97	24.90	5.53
C.V. (%)	2.10	4.81	5.24	2.11	4.24	7.60	1.84	4.15	4.05	5.56	3.77	1.73	3.47	3.88	11.37	4.33	2.74	4.18	9.36	3.10	4.65	4.23
F (Prob)	0.00	0.10	0.01	0.00	0.03	0.02	0.01	0.00	0.06	0.05	0.01	0.00	0.32	0.00	0.10	0.02	0.00	0.00	0.12	0.00	0.18	0.00

TABLE No. 7 (Contd.)

S.No.	PEDIGREE	EAR HEIGHT(cm)																					
		ZN 2					ZN 3					ZN 4					ZN 5		OV'L				
		KARN	LUDH	PANT	KANP	Mean	BAHR	BHUB	DHOL	RANC	VARA	Mean	COIM	DHAR	KARI	KOLH	MAND	VAGA	Mean	BANS	GODH	Mean	Mean
1	MMHQPM 6-12-13	113.8	126.3	79.8	66.5	96.6	100.6	78.3	87.8	95.2	100.0	92.4	114.6	115.0	87.0	101.3	98.5	88.0	####	122.5	86.7	104.6	97.7
2	VEHQ 15-1	93.8	115.0	73.8	71.8	88.6	74.1	83.0	74.3	89.9	75.0	79.2	105.8	110.3	84.8	80.0	88.0	67.5	89.4	120.0	95.3	107.7	88.4
3	BIO9637(Filler)	118.8	121.3	78.0	74.3	98.1	97.2	75.5	89.3	91.4	93.8	89.4	111.9	107.3	85.5	105.0	99.0	78.2	97.8	115.0	113.3	114.2	97.3
4	BIO9681(Filler)	87.5	111.3	72.5	95.3	91.6	95.0	79.3	77.5	99.1	80.0	86.2	97.1	108.0	69.3	77.5	96.8	71.5	86.7	125.0	110.0	117.5	91.3
	CHECKS																						
5	HQPM 1	98.8	118.8	67.5	74.0	89.8	72.8	76.3	75.3	82.8	77.5	76.9	90.1	116.0	75.3	80.0	97.5	67.5	87.7	106.3	86.0	96.1	86.0
6	HQPM 4	96.3	120.0	77.0	93.5	96.7	88.4	84.8	81.0	86.0	85.0	85.0	116.5	106.8	82.5	102.5	90.3	81.6	96.7	107.5	93.0	100.3	93.7
	Loc. Mean	101.5	118.8	74.8	79.2	93.5	88.0	79.5	80.8	90.7	85.2	84.8	106.0	110.5	80.7	91.0	95.0	75.7	93.2	116.0	97.4	106.7	92.4
	C.D. (5%)	5.93	15.09	6.92	14.38	14.42	16.45	5.22	15.07	4.42	15.60	8.25	7.74	11.87	5.47	19.90	12.76	4.76	7.98	26.29	2.69	20.77	5.18
	C.V. (%)	3.88	8.43	6.15	12.04	10.23	12.41	4.35	12.37	3.23	12.15	7.37	4.84	7.12	4.50	14.50	8.91	4.18	7.20	15.03	1.52	7.57	8.22
	F (Prob)	0.00	0.41	0.02	0.00	0.62	0.01	0.01	0.21	0.00	0.02	0.01	0.00	0.42	0.00	0.02	0.35	0.00	0.00	0.56	0.00	0.23	0.00

AGRONOMY

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Performance of pre-release genotypes in *rabi* under varying planting density and nutrient management levels in different locations.

A set of 17 pre-release late maturing genotypes with three checks were evaluated under different nutrient levels (200:65:80, 250:80:100 N:P₂O₅:K₂O kg/ha) in NWPZ (Delhi and Ludhiana), NEPZ (Bahraich, Dholi and Kalyani, PZ (Karimnagar, Dharwad and Vagarai) and CWZ (Banswara). At Delhi and Ludhiana (NWPZ) Seedtech 2324 check gave significantly higher yield and no tested entries was superior to check. The interaction effect of pre-release late maturing genotypes were found significant at different nutrient levels and plant densities at Ludhiana. The genotype KH-3021, DMRH 1308 and X35F880, DMRH 1308 and DKC9161 (IM8222) at Bahraich, Dholi and Kalyani (NEPZ) respectively. At Karimnagar (PZ) the genotype KH-2192, DKC9161 (IM8222), HTMH-5108, X35F880 gave significantly higher yield over checks. The interaction effect found significant between genotypes and plant density in PZ. The genotype CP.111 gave significantly superior yield over best checks at higher nutrient level and plant density at Banswara (CWZ).

Seven pre-release medium maturing genotypes were evaluated under different nutrient levels (200:65:80, 250:80:100 N:P₂O₅:K₂O kg/ha) at 9 locations in Delhi and Ludhiana (NWPZ), Bahraich and Dholi (NEPZ), Karimnagar, Vagarai and Dharwad) (PZ) and Banswara (CWZ). At Delhi and Ludhiana (NWPZ) BL 900, BL 147, IM 8303, BL 798, DMRH 1301 and KH-517 genotypes yielded significantly higher than the best check Bio 9637 (C) at high nutrient levels and planting density but no significant effect was found at different nutrient levels and planting densities at Delhi. At Bahraich and Dholi (NEPZ) the genotypes DMRH 1301 and IM 8303 yielded significantly higher than the best check Bio 9637 (C), but at Kalyani BL 147 genotype gave significantly superior at higher nutrient levels and planting density. However, the genotype BL 798, KH-517 and BL 147 in yielded significantly superior over the best check at Karimnagar and Dharwad (PZ). The genotype BL 798 yielded significantly higher than the best checked Bio 9637 (C) at Banswara (CWZ).

Nutrient management in maize-wheat-greengram cropping system under different tillage practices

In maize-wheat-greengram cropping system, zero tillage resulted in significantly higher crops yield and site specific nutrient management (SSNM) gave higher yield over farmer's fertilization practices (FFP) and RDF at Banswara. Conventional tillage resulted significantly higher crops yield over ZT and PB. The RDF and SSNM also resulted in significantly higher yield at maize-wheat-mungbean

system at Pantnagar over FFP while at Dholi, FFP gave significantly higher yields over RDF and SSNM under PB.

Nutrient management in Rice- Maize cropping system under different tillage practices

In Rice-maize cropping system, at Dholi the tillage practice of permanent beds (PB) resulted in significantly higher cob yield and site specific nutrient management (SSNM) gave higher yield over farmer's fertilization practices (FFP) and RDF in grain yield and RDF found statistically at par.

Nutrient management in rainfed cropping systems under different tillage practices

In maize-mustard cropping system, permanent beds (PB) resulted in significantly higher crops yield over zero tillage (ZT) and site specific nutrient management (SSNM) gave higher yield over farmer's fertilization practices (FFP) and RDF at Chhindwara while conventional tillage (CT) found statistically at par. In maize based cropping system, zero tillage (ZT) resulted in significantly higher maize equivalent yield of mustard yield over CT while PB was statistically at par. Further, application of 100% RDF gave higher yield over control, however, SSNM and 50% RDF + CR @2.5 t/ha were found statistically at par. Application of 100% RDF recorded highest maize equivalent yield of maize-chickpea system but no significant effect of different tillage practices was found at Delhi.

Effect of plant density and nutrient management practices on performance of hybrids in *rabi* season

The STCR based nutrient management gave significantly higher yields over RDF at higher plant density under hybrid Bio-9628 and SSNM found statistically at par with STCR at Banswara (CWZ). While at Chhindwara, nutrient management under SSNM gave significantly higher yield over RDF and FFP under DKC 7074 but plant density was found to be non significant. The two full season hybrids tested based different nutrient management and planting density in *rabi* at Karimnagar where the nutrient application based on 150% RDF gave significantly higher yield over RDF and SSNM at low planting density, while STCR and SSNM found statistically at par. While at Pantnagar, no significant yield effect was found under different planting density, nutrient management and hybrids. Similarly at Vagarai, only hybrid K-3110 resulted in significantly higher yield. However, at Dholi the STCR based nutrient management gave significantly higher yields over RDF and SSNM at higher plant density the hybrid syngenta NK7720. Application of SSNM (225:60:80) based nutrient management recorded significantly higher yield over RDF (200:60:60) and higher doses (250:50:50) at low planting density under hybrid Dekalb 900 at Bagraich. While at Coimbatore, the nutrient application based on RDF resulted in significantly higher yield over SSNM at high planting density under hybrid COH 7 but STCR found statistically at par. The nutrient application based on SSNM

was significantly superior over RDF and STCR at high planting density under hybrid ranger SMH-1188 at Dharwad. Further, the nutrient management under SSNM gave significantly superior crops yield over STCR and RDF but no significant effect was found between the planting density and hybrids at Dholi.

Nutrient management for maize genotypes under different cropping systems under maize-mustard relay in *rabi* season

The nutrient management under SSNM gave significantly higher yield over RDF and FFP but no significant effect was found among the genotypes under of maize-mustard relay at Chhindwara.

Long-term trial on integrated nutrient management in maize wheat cropping system at Pantnagar

In maize-wheat cropping system, the application of 100% RDF + 5 t/ha FYM under integrated nutrient management gave significantly superior system yield but Maize + cowpea with FYM 10 t/ha + Azotobacter gave significantly higher system net returns over all the remaining treatment of long term trial at Pantnagar.

Weed management in maize systems

In maize based system weed management, the weed free treatment resulted in significantly superior crops yield over remaining treatments of different weed management practices at Banswara. However, no significant effects on yield of succeeding crop were found at Pantnagar and Dholi.

Enhancing water use efficiency in rainfed maize systems

The application of hydrogel @ 2.5 or 5.0 kg/ha in maize could not able to increase the succeeding wheat yield in any tillage practices. However, the succeeding wheat yield was at par under all four tillage and residue management practices of conventional tillage or zero tillage with and without mulching at Dholi which suggest that the ZT can be adopted in Eastern IGP as it has no yield penalty on succeeding wheat crop besides saves cost of field preparation.

Optimization of plant geometry and nutrient management for *rabi* zero-tillage maize

This experiment was conducted at the farmer's field. The use of the 60 x 20 cm² planting density along with STCR based nutrient application with improved nutrient management of fertilizer placement resulted in maximum yield of zero-till *rabi* maize at Hyderabad over higher plant population, farmer fertilizer doses and the surface phosphorus nutrient application. It suggest the existing practices of the higher planting density and inappropriate nutrient management practices needs to be reoriented for yield maximization and sustainability of *rabi* maize.

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Table 1. Performance of pre release late maturity genotype in *rab1* under varying planting density and Nutrient managements levels in different location.

Density	Nutrient management	Genotypes	Grain yield (kg/ha)								
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Karim.	Dharwad	Vagarai	Banswara
60x20 cm (Normal)	200:65:80	GK 3118	7555	7359	5577	8133	10599	5472	5990	7724	10630
		KH-3021	8315	7541	6563	7589	11120	7180	5610	8057	10815
		KH-2192	7977	6585	5670	7331	10326	7654	5815	6113	10222
		CP.999	8793	6174	5688	10134	13181	4960	6035	5647	10519
		CP.333	11505	6911	5783	6279	12870	5593	5615	6983	11000
		Rasi-864	10056	6796	5900	7287	10388	6265	5925	7253	10519
		CP.111			5893	10113	10228	6113	5815	6246	13759
		Rasi-950	8689	7063	6210	6205	9028	4194	5470	7509	
		CP.838	10290	8056	6186	5934	11663	5369	5925	7869	9259
		KMH-1411	10084	7204	5483	7859	11994	5633	5740	6859	9593
		DKC9161 (IM8222)	11910	7037	5654	9711	13002	9636	5720	7308	10519
		GK-3155	9639	7022	5778	8598	11299	5181	5985	7700	12444
		DMRH 1308	7488	9156	5809	8107	12938	6063	5675	7161	11481
		HTMH-5108	8253	7544	5797	7384	11142	8882	5750	6790	8630
		X35F880	10631	7407	5612	9045	13211	6802	5600	7777	11074
		HTMH 5202	6162	6767	5207	6197	9786	5945	5975	6447	11407
		Rasi-393	8318	8000	5143	7350	10863	3369	5860	7214	10667
		Seedtech 2324 (C)	11446	7081	5258	9441	9300	5487	5675	6723	9815
	Buland (C)	8376	6974	5587	11984	11400	4132	4620	6883	9259	
	Bio 9681 (C)	7539	4990	5410	7374	12000	4806	5985	6650	10667	
	GK 3118	7159	8174	6945	6055	10882	5268	5985	5437	11296	
	KH-3021	7881	7733	6900	7873	12698	6035	5745	6147	11111	
	KH-2192	10410	7419	6292	8996	11997	7194	5750	6533	10704	
	CP.999	7363	6493	6347	7658	13473	3689	5735	7933	11481	
	CP.333	9565	7037	6240	9535	13034	4790	5895	8332	11630	
	Rasi-864	10242	6948	6400	9062	9830	4472	5925	7087	10556	
	CP.111			6477	7673	9750	5179	5775	6683	14164	
	Rasi-950	8590	7330	6383	9458	9700	4642	5905	6417		
	CP.838	12173	8281	5896	9458	11601	4051	5970	7406	10519	
	KMH-1411	11927	7485	6292	6722	12560	7041	5770	6446	10481	
	DKC9161 (IM8222)	10610	7607	6562	8151	13251	7629	5705	8010	10741	
	GK-3155	10075	7107	6008	6838	11493	4794	5770	7403	12815	
	DMRH 1308	12122	9430	5965	8726	13112	6382	5880	7092	11926	
	HTMH-5108	10934	7911	5970	8276	11343	6852	5915	6531	9630	
	X35F880	13155	7811	6335	6788	13855	8935	5725	8806	12185	
	HTMH 5202	7797	7222	6025	6758	10125	6382	6040	6363	11519	
Rasi-393	11449	8244	5833	9387	11233	3220	5925	8042	11000		
Seedtech 2324 (C)	12141	7459	6063	7227	9483	6406	5930	7757	10704		
Buland (C)	8210	7248	5803	8470	11735	3621	4300	6765	9815		
Bio 9681 (C)	8598	5493	5637	9368	11995	4617	5925	6568	11000		
60x15 cm (High)	200:65:80	GK 3118	7015	7930	5760	6649	12679	3976	6395	8744	12222
		KH-3021	7414	7993	6857	6592	12976	4568	6115	8369	11815
		KH-2192	8433	7067	5786	9261	11827	6396	6055	8567	11852
		CP.999	9358	7219	5867	7090	13520	3858	6165	8961	12407
		CP.333	11787	8007	5943	8423	13085	4802	6255	8143	12667

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Density	Nutrient management	Genotypes	Grain yield (kg/ha)								
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Karim.	Dharwad	Vagarai	Banswara
250:80:100		Rasi-864	10294	7074	6027	9367	10364	4107	6010	8889	12593
		CP.111			6033	7062	10511	4555	5920	8600	11507
		Rasi-950	9102	8719	6653	8377	10536	2534	6080	8400	Cont...
		CP.838	11427	9730	6590	6078	11635	3971	6080	8592	12963
		KMH-1411	10469	9552	6288	8005	12707	4497	6160	9109	11370
		DKC9161 (IM8222)	14509	8511	6025	9096	13388	7116	6100	7034	12296
		GK-3155	12595	8348	6523	7709	12341	4612	5955	8111	14074
		DMRH 1308	11223	9241	6238	9555	13209	6634	6160	8530	13296
		HTMH-5108	9231	8544	6165	9372	11466	7477	6260	9717	10926
		X35F880	10214	8407	6112	6771	13856	5096	6295	9311	12407
		HTMH 5202	7001	7626	5707	8345	10987	5956	6035	8178	12963
		Rasi-393	10957	9130	5725	6698	10978	4795	6230	8128	12259
		Seedtech 2324 (C)	12333	8526	5580	8773	10302	5183	6200	10266	11556
		Buland (C)	7456	8219	5790	8476	12535	3437	4685	10088	9889
		Bio 9681 (C)	6177	6104	5723	6747	12775	3690	6015	9298	11630
		GK 3118	8464	8781	7095	7887	14124	4213	6590	8505	12926
		KH-3021	9149	8333	7043	10109	14290	4813	6385	8227	12407
		KH-2192	9281	8259	6863	8726	13331	5703	6600	8613	12741
		CP.999	9876	8570	6835	8200	14580	3236	6460	9191	13667
		CP.333	10882	9681	6702	7494	14341	5187	6680	7989	13481
		Rasi-864	12875	8852	6967	8655	13550	3610	6510	9328	13519
		CP.111			6543	8132	14034	3715	6390	9452	15675
		Rasi-950	10255	9804	6883	7532	14004	2768	6545	8100	
		CP.838	11450	9885	6243	9018	13892	5531	6335	9971	13333
		KMH-1411	11704	10307	6440	6196	14089	4035	6480	8697	12185
		DKC9161 (IM8222)	15722	9389	6830	7158	14520	6762	6455	9678	13148
		GK-3155	9036	8570	6653	9282	13708	4379	6550	9207	13370
		DMRH 1308	10229	9637	6457	11700	14476	5371	6600	8346	14111
		HTMH-5108	10254	9167	6276	8250	13679	6812	6535	8606	11667
		X35F880	11900	9437	6817	7584	14646	5871	6490	9541	13333
		HTMH 5202	7313	7756	6517	7343	13601	5345	6550	7888	13741
		Rasi-393	10344	9878	6210	10230	13954	4200	6420	9856	12741
		Seedtech 2324 (C)	11469	8959	6447	6307	13440	5980	6765	9151	12407
Buland (C)	8778	8826	5697	7427	14245	2060	4710	10103	10556		
Bio 9681 (C)	9532	7867	5972	10189	14186	4482	6570	10174	12704		
Mean of location			9854.4	7973.7	6143.3	8129.9	12273.2	5265.9	6001.8	7979.2	11812.6
60x20 cm (Normal)			9564	7318	5965	8113	11487	5748	5759	7067	10936
60x15 cm (High)			10145	8629	6322	8147	13059	4783	6245	8892	12690
CD at 5%			NS	375.8	38.8	15.3	202.6	488.2	195.4	1349.0	846.0
CV (%)			46.3	8.3	1.14	0.3	2.97	16.7	1.62	30.4	12.6
200:65:80			9474	7674	5890	8012	11700	5400	5899	7899	11494
250:80:100			10235	8273	6397	8247	12846	5132	6105	8059	12131

A-3

Density	Nutrient management	Genotypes	Grain yield (kg/ha)								
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Karim.	Dharwad	Vagarai	Banswara
CD at 5%			671.9	356.1	222.9	14.5	225.6	NS	NS	NS	551.5
CV (%)			9.8	12.1	10.1	0.5	5.13	63.7	5.80	19.4	12.7
GK 3118			7548	8061	6344	7181	12071	4732	6240	7603	11769
KH-3021			8190	7900	6841	8041	12771	5649	5964	7700	11537
KH-2192			9025	7332	6153	8578	11870	6737	6055	7457	11380
CP.999			8848	7114	6184	8270	13688	3936	6099	7933	12019
CP.333			10935	7909	6167	7933	13332	5093	6111	7862	12194
Rasi-864			10866	7418	6323	8593	11033	4614	6093	8139	11796
CP.111					6237	8245	11131	4891	5975	7745	14726
Rasi-950			9159	8229	6532	7893	10817	3534	6000	7608	
CP.838			11335	8988	6229	7622	12198	4731	6078	8459	Cont...
KMH-1411			11046	8637	6126	7196	12837	5302	6038	7778	10907
DKC9161 (IM8222)			13188	8136	6268	8529	13540	7786	5995	8008	11676
GK-3155			10336	7762	6241	8107	12210	4741	6065	8105	13176
DMRH 1308			10266	9366	6117	9522	13434	6113	6079	7782	12704
HTMH-5108			9668	8292	6052	8320	11907	7506	6115	7911	10213
X35F880			11475	8266	6219	7547	13892	6676	6028	8859	12250
HTMH 5202			7068	7343	5864	7161	11125	5907	6150	7219	12407
Rasi-393			10267	8813	5728	8416	11757	3896	6109	8310	11667
Seedtech 2324 (C)			11847	8006	5837	7937	10631	5764	6143	8474	11120
Buland (C)			8205	7817	5719	9089	12479	3313	4579	8460	9880
Bio 9681 (C)			7962	6113	5685	8420	12739	4399	6124	8173	11500
			1162.								
CD at 5%			1	591.0	182.7	104.4	474.5	1229.0	270.0	NS	1026.5
CV (%)			11.8	9.2	3.7	1.6	4.79	28.9	4.52	16.3	10.8

Density	Nutrient management	Genotypes	Stover yield (kg/ha)					Cob yield (kg/ha)		
			Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai	Karim.	Delhi	Dholi
60x20 cm (Normal)	200:65:80	GK 3118	6683	12417	8909	8075	9360	6261	8750	13300
		KH-3021	7828	13080	9253	7815	9013	8724	9653	12227
		KH-2192	6993	12107	9636	8020	6289	8973	9306	11760
		CP.999	6543	15473	9717	8120	7293	5978	10000	16333
		CP.333	6757	14910	9586	7520	7862	6865	13194	10033
		Rasi-864	6983	12440	9505	8090	8054	7215	11806	11760
		CP.111	6800	12004	9596	7795	7380	8706		16333
		Rasi-950	7165	11035	9697	7190	8679	5549	10139	10033
		CP.838	6842	13701	9828	7910	10875	6005	11528	9625
		KMH-1411	6627	13999	9778	7695	7157	6953	11667	12740
		DKC9161 (IM8222)	6508	15794	10101	7890	8788	8893	13194	15867
		GK-3155	6712	12704	10000	8055	7488	6010	10972	14000
		DMRH 1308	6598	14964	9636	7865	7128	6673	8611	13113
		HTMH-5108	6543	13041	9959	7925	8777	7707	9583	12133
		X35F880	6443	15991	9485	7555	9065	7905	12848	14611
HTMH 5202	6083	12468	9232	8090	7234	7714	7500	10087		
Rasi-393	5998	12535	9222	7900	8429	5533	10417	11783		

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Density	Nutrient management	Genotypes	Stover yield (kg/ha)					Cob yield (kg/ha)		
			Bahrach	Kalyani	Karlmnagar	Dharwad	Vagaral	Karlm.	Delhi	Dholi
60x15 cm (High)	250:80:100	Seedtech 2324 (C)	5953	11217	9444	7845	7677	6990	13056	15271
		Buland (C)	6027	13403	9808	6145	8108	6661	10000	19325
		Bio 9681 (C)	5950	13938	7980	8070	6431	6180	8889	11783
	200:65:80	GK 3118	7458	12940	9061	8070	6726	6729	8333	9893
		KH-3021	7900	14837	9737	7830	6712	8179	9167	12833
		KH-2192	6717	13107	9192	7955	6859	8667	12083	14653
		CP.999	7157	16642	10343	7800	8038	5733	8333	12367
		CP.333	6787	15737	9323	8110	8896	6738	10972	15400
		Rasi-864	7700	11522	8980	7900	7244	6091	11667	14653
		CP.111	7292	11813	9424	8135	7589	6466	Cont... 7	
		Rasi-950	7297	11710	9788	8160	7939	7555	11250	15400
		CP.838	6685	13680	9788	8130	8816	5599	13750	15400
		KMH-1411	7085	14457	9879	7975	6384	7776	13750	10873
		DKC9161 (IM8222)	7325	15823	8525	7795	7700	8361	11806	13393
		GK-3155	6967	12810	9475	8080	6668	6362	10075	10733
		DMRH 1308	6783	16381	9424	8120	7186	6246	13889	14000
		HTMH-5108	6735	13334	9889	8060	6842	8153	12778	13533
		X35F880	7120	16766	9798	7985	10191	8272	15417	10935
		HTMH 5202	6860	12034	10020	8300	6501	7749	9306	10841
		Rasi-393	6493	13170	9465	8090	8833	6235	14306	15130
		Seedtech 2324 (C)	6852	11325	10394	8100	8810	7236	14097	11548
		Buland (C)	6215	13767	10101	5965	8134	6124	9861	13669
		Bio 9681 (C)	5820	13937	10212	8245	6772	6889	10139	15130
	250:80:100	GK 3118	7107	14677	9929	8485	9247	6790	8194	10827
		KH-3021	8198	15000	9707	8340	7739	5831	8681	10733
		KH-2192	7260	13873	9576	8170	7310	6965	9861	14980
		CP.999	6813	16825	9838	8375	8595	5733	10556	11433
		CP.333	7300	15852	9212	8520	8160	6134	13403	13533
		Rasi-864	7800	12470	9838	8090	7045	5637	12083	14980
CP.111		7047	12659	9909	8250	7713	5647		11433	
Rasi-950		7657	11941	9798	8060	8251	5660	10833	13533	
CP.838		7230	13500	9717	8295	9139	5119	12917	9893	
KMH-1411		7317	15672	10081	8455	8133	7236	12222	12833	
DKC9161 (IM8222)		6917	16600	9737	8290	6407	6435	16111	14653	
GK-3155		7278	14300	9646	8180	8170	5294	14583	12367	
DMRH 1308		7040	16474	9030	8385	7449	7580	12917	15400	
HTMH-5108		7083	13450	9767	8515	7937	7821	10694	15400	
X35F880		6950	16882	10737	8465	8934	6032	12083	10982	
HTMH 5202		6833	12770	11960	8290	8149	7151	8333	13527	
Rasi-393		6503	13010	12556	8405	7853	5891	13472	10841	
Seedtech 2324 (C)		6785	12337	11040	8435	9212	6089	14306	14140	
Buland (C)		6480	14273	9798	6215	8908	4791	8889	13669	
Bio 9681 (C)		6547	14972	9000	8275	7439	5065	7361	10841	
250:80:100	GK 3118	7677	16277	9444	8650	7302	5482	9722	12740	

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Density	Nutrient management	Genotypes	Stover yield (kg/ha)					Cob yield (kg/ha)		
			Bahrach	Kalyani	Karlmnagar	Dharwad	Vagaral	Karlm.	Delhi	Dholi
		KH-3021	8238	16422	10404	8550	8376	5890	10556	15867
		KH-2192	7483	14997	10545	8630	8029	7166	10833	14000
		CP.999	7695	16953	9050	8595	8535	4885	11250	13113
		CP.333	7228	16919	11202	8805	6733	7065	12917	12133
		Rasi-864	8930	15527	9818	8475	6544	5770	14861	14000
		CP.111	7557	16279	9646	8510	9276	5842		13113
		Rasi-950	7937	16094	8899	8740	7486	4379	11944	12133
		CP.838	7087	15804	9323	8550	9068	6539	12778	14467
		KMH-1411	7497	16162	9576	8660	9118	5725	13750	14007
		DKC9161 (IM8222)	7835	16747	10222	8585	7903	7850	17631	Cont...
		GK-3155	7396	15022	8879	8665	7123	6027	10417	15120
		DMRH 1308	7207	16605	9444	8790	8093	7383	11806	19133
		HTMH-5108	7165	15007	9818	8725	7355	6116	11944	13433
		X35F880	7443	17100	10424	8680	8693	7110	14306	12349
		HTMH 5202	7068	15024	9606	8805	8329	6192	8750	11878
		Rasi-393	6813	15004	9394	8575	8827	6622	12639	16497
		Seedtech 2324 (C)	7185	15008	9565	8685	8147	7076	13333	10134
		Buland (C)	6727	16254	9869	6330	8226	5800	10556	11878
		Bio 9681 (C)	6791	16297	10586	8705	7999	6524	11250	16497
Mean of location			7029.9	14375.6	9747.3	8119.8	7960.9	6637.5	11458.4	13137.6
60x20 cm (Normal)			6782	13575	9580	7859	7848	7066	11108	13122
60x15 cm (High)			7278	15176	9915	8380	8074	6209	11809	13153
CD at 5%			33.1	333.9	NS	197.0	NS	576.6	NS	3.9
CV (%)			0.8	4.2	16.1	1.2	15.2	15.6	41.7	0.1
200:65:80			6855	13869	9781	8002	8072	6610	11016	12953
250:80:100			7205	14882	9713	8238	7850	6665	11901	13322
CD at 5%			301.7	327.0	NS	NS	NS	NS	NS	28.4
CV (%)			12.0	6.3	8.1	6.7	24.6	17.2	11.7	0.6
GK 3118			7231	14078	9336	8320	8159	6315	8750	11690
KH-3021			8041	14835	9775	8134	7960	7156	9514	12915
KH-2192			7113	13521	9737	8194	7122	7943	10521	13848
CP.999			7052	16474	9737	8223	8115	5582	10035	13312
CP.333			7018	15854	9831	8239	7913	6701	12622	12775
Rasi-864			7853	12990	9535	8139	7222	6178	12604	13848
CP.111			7174	13189	9644	8173	7989	6665		13312
Rasi-950			7514	12695	9545	8038	8089	5786	11042	12775
CP.838			6961	14171	9664	8221	9474	5815	12743	12346
KMH-1411			7131	15072	9828	8196	7698	6923	12847	11608
DKC9161 (IM8222)			7146	16241	9647	8140	7699	7885	14688	13895
GK-3155			7088	13709	9500	8245	7362	5923	11512	13055
DMRH 1308			6907	16106	9384	8290	7464	6970	11806	15412
HTMH-5108			6882	13708	9858	8306	7728	7449	11250	13625
X35F880			6989	16685	10111	8171	9220	7330	13663	12219
HTMH 5202			6711	13074	10204	8371	7553	7202	8472	11583

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Density	Nutrient management	Genotypes	Stover yield (kg/ha)					Cob yield (kg/ha)		
			Bahraich	Kalyani	Karimnagar	Dharwad	Vagaral	Karim.	Delhi	Dholi
Rasi-393			6452	13430	10159	8243	8485	6070	12708	13563
Seedtech 2324 (C)			6694	12471	10111	8266	8461	6848	13698	12773
Buland (C)			6362	14424	9894	6164	8344	5844	9826	14635
Bio 9681 (C)			6277	14786	9444	8324	7160	6164	9410	13563
CD at 5%			199.3	567.2	NS	287.0	1086.0	726.4	1330.0	86.3
CV (%)			3.5	4.9	10.7	3.5	16.9	13.6	11.6	0.8

Density	Nutrient management	Genotypes	Plants ('000/ha) 25 DAS		Plants ('000/ha) at harvest							Cont...
			Kalyani	Vagaral	Ludhiana	Bahraich	Dholi	Kalyani	Dharwad	Vagaral	Banswara	
60x20 cm (Normal)	200:65:80	GK 3118	83.3	73.1	80.4	82.9	62.8	81.8	77.1	59.2	81.3	
		KH-3021	83.3	71.4	79.3	82.9	63.1	82.5	78.5	61.7	80.6	
		KH-2192	83.3	69.4	79.3	82.5	63.9	82.8	77.1	58.3	76.0	
		CP.999	83.3	67.8	79.6	82.6	74.7	82.5	77.8	55.3	82.6	
		CP.333	83.3	68.6	79.3	82.4	70.6	81.5	76.4	55.6	79.9	
		Rasi-864	83.3	78.9	78.9	82.3	73.1	82.0	75.7	64.2	79.2	
		CP.111	83.3	75.0		82.7	63.9	82.8	78.5	58.3	83.3	
		Rasi-950	83.3	75.8	78.5	82.7	69.7	81.3	77.1	62.8		
		CP.838	83.3	74.4	79.3	82.8	70.6	82.2	75.7	62.5	79.9	
		KMH-1411	83.3	71.4	78.1	82.2	63.9	81.8	79.2	57.5	79.5	
		DKC9161 (IM8222)	83.3	75.8	78.1	82.5	62.2	82.2	78.5	62.2	80.2	
		GK-3155	83.3	70.8	79.6	82.6	63.9	81.7	78.5	59.2	82.6	
		DMRH 1308	83.3	74.7	80.4	82.4	72.2	82.2	77.1	60.3	80.2	
		HTMH-5108	83.3	72.5	79.3	82.4	63.1	81.5	77.8	60.0	79.9	
		X35F880	83.3	73.6	79.3	82.3	62.2	82.9	79.2	57.8	80.9	
		HTMH 5202	83.3	74.7	79.3	82.3	63.1	82.0	77.1	59.7	82.6	
		Rasi-393	83.3	76.7	80.0	82.4	65.6	82.7	78.5	60.6	83.3	
		Seedtech 2324 (C)	83.3	77.2	80.0	82.3	73.1	81.5	77.8	62.8	82.6	
	Buland (C)	83.3	73.1	78.5	82.2	63.9	81.7	77.1	58.3	81.3		
	Bio 9681 (C)	83.3	74.4	80.4	82.3	67.2	82.5	79.9	59.4	82.3		
	250:80:100	GK 3118	83.3	62.2	81.1	82.9	64.4	82.2	79.2	50.3	82.6	
		KH-3021	83.3	63.6	79.3	83.1	65.6	83.0	81.3	50.3	79.2	
		KH-2192	83.3	70.8	79.6	82.7	66.4	83.1	77.1	55.3	80.9	
		CP.999	83.3	69.7	80.0	82.9	70.6	82.7	77.8	57.5	81.3	
		CP.333	83.3	78.6	79.6	82.5	62.2	82.2	79.2	64.7	78.5	
		Rasi-864	83.3	74.4	79.3	82.4	64.7	82.2	77.1	59.7	81.3	
CP.111		83.3	67.2		82.7	67.2	83.1	78.5	51.4	83.3		
Rasi-950		83.3	70.6	78.9	82.8	73.1	81.8	77.8	53.3			
CP.838		83.3	69.4	79.6	82.6	62.2	82.5	77.8	54.2	81.3		
KMH-1411		83.3	66.7	80.0	82.2	72.2	82.3	78.5	53.9	79.9		
DKC9161 (IM8222)		83.3	72.2	78.1	82.6	64.7	82.3	79.9	59.7	82.6		
GK-3155		83.3	72.5	77.8	82.5	67.2	82.2	79.2	60.6	82.6		
DMRH 1308		83.3	76.1	81.1	82.3	68.1	82.3	78.5	60.0	80.2		
HTMH-5108		83.3	67.8	79.3	81.8	68.1	82.3	80.6	57.5	79.9		
X35F880		83.3	78.9	80.7	82.2	70.6	83.3	77.8	63.1	81.3		

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Density	Nutrient management	Genotypes	Plants ('000/ha) 25 DAS		Plants ('000/ha) at harvest						
			Kalyani	Vagaral	Ludhlana	Bahralch	Dholl	Kalyani	Dharwad	Vagaral	Banswara
			HTMH 5202	83.3	67.2	78.1	81.5	68.1	82.5	79.9	53.3
Rasi-393	83.3	76.7	80.0	82.3	73.9	82.9	77.8	63.1	81.3		
Seedtech 2324 (C)	83.3	74.4	80.0	82.2	64.7	82.5	78.5	61.9	81.9		
Buland (C)	83.3	69.2	78.1	82.3	68.1	82.0	78.5	60.3	81.9		
Bio 9681 (C)	83.3	73.3	80.4	82.4	73.9	82.9	79.9	58.6	79.9		
60x15 cm (High)	200:65:80	GK 3118	111.1	86.7	95.6	109.2	83.3	108.0	106.3	70.3	93.3
		KH-3021	111.1	86.4	94.8	109.0	83.9	108.4	106.3	72.2	98.3
		KH-2192	111.1	93.1	95.2	110.2	96.4	110.3	105.6	78.3	93.3
		CP.999	111.1	84.4	95.9	110.4	90.6	106.7	106.3	71.7	98.7
		CP.333	111.1	84.4	95.2	109.9	91.4	108.7	104.9	69.4	97.3
		Rasi-864	111.1	89.2	94.4	110.4	93.1	107.3	104.2	71.9	Cont...
		CP.111	111.1	87.2		110.8	86.4	108.7	106.9	71.7	97.3
		Rasi-950	111.1	87.8	95.6	110.8	85.6	106.3	106.3	74.2	
		CP.838	111.1	85.0	96.7	110.8	83.9	105.0	105.6	72.5	98.7
		KMH-1411	111.1	87.8	95.6	110.6	87.2	106.0	107.6	74.2	97.3
		DKC9161 (IM8222)	111.1	88.6	94.1	110.2	88.9	107.3	104.9	73.6	94.0
		GK-3155	111.1	84.4	94.8	110.4	85.6	106.0	107.6	68.9	98.7
		DMRH 1308	111.1	88.6	94.8	110.2	89.7	107.7	105.6	73.1	98.0
		HTMH-5108	111.1	95.3	96.7	110.3	85.6	106.7	107.6	81.4	96.7
		X35F880	111.1	89.2	94.4	110.1	98.1	109.3	104.9	74.2	98.7
	HTMH 5202	111.1	88.9	95.6	110.2	96.4	105.0	107.6	73.9	100.0	
	Rasi-393	111.1	84.2	96.3	110.3	98.9	107.3	106.9	68.9	99.3	
	Seedtech 2324 (C)	111.1	96.9	95.6	110.2	96.4	105.3	107.6	80.3	100.0	
	Buland (C)	111.1	95.0	95.6	110.1	95.6	107.3	106.3	79.7	97.0	
	Bio 9681 (C)	111.1	90.0	94.8	110.3	83.9	108.7	105.6	76.4	98.7	
	250:80:100	GK 3118	111.1	85.8	94.8	108.7	95.3	108.7	104.9	73.1	97.7
		KH-3021	111.1	85.3	94.8	108.9	96.4	109.0	103.5	70.3	97.7
		KH-2192	111.1	87.5	93.0	110.5	84.7	110.7	106.3	71.7	95.7
		CP.999	111.1	94.2	94.8	110.5	93.1	110.3	103.5	78.9	100.0
		CP.333	111.1	86.1	95.6	110.4	87.2	109.3	105.6	75.0	98.3
		Rasi-864	111.1	92.8	94.8	110.7	90.6	108.0	104.9	79.7	97.3
		CP.111	111.1	97.2		110.9	89.7	110.3	106.9	84.7	99.3
		Rasi-950	111.1	91.1	94.8	110.8	83.9	107.3	104.9	76.9	
		CP.838	111.1	90.8	96.3	110.8	90.6	106.3	104.9	76.7	98.7
		KMH-1411	111.1	94.7	95.6	110.5	89.7	107.3	104.2	78.6	98.0
DKC9161 (IM8222)		111.1	93.9	94.1	110.3	91.4	108.3	106.3	81.4	98.3	
GK-3155		111.1	93.9	94.4	110.4	90.6	108.3	105.6	83.1	99.3	
DMRH 1308		111.1	90.3	95.2	110.1	94.7	109.4	106.9	77.8	100.0	
HTMH-5108		111.1	90.8	95.9	110.1	89.7	109.0	105.6	76.7	98.7	
X35F880		111.1	93.9	94.4	110.3	93.1	110.7	105.6	80.6	100.0	
HTMH 5202	111.1	92.5	93.7	110.2	91.4	107.3	105.6	77.5	100.0		
Rasi-393	111.1	92.2	97.0	110.2	93.1	109.0	105.6	79.4	97.7		
Seedtech 2324 (C)	111.1	93.1	94.8	110.2	88.9	107.3	105.6	77.5	99.3		
Buland (C)	111.1	95.6	95.6	110.3	90.6	109.3	106.3	81.9	98.3		

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Density	Nutrient management	Genotypes	Plants ('000/ha) 25 DAS		Plants ('000/ha) at harvest						
			Kalyani	Vagaral	Ludhiana	Bahraich	Dholi	Kalyani	Dharwad	Vagaral	Banswara
		Bio 9681 (C)	111.1	94.4	94.8	110.3	93.1	109.7	105.6	81.9	99.3
Mean of location			97.2	81.3	87.3	96.3	78.8	95.2	92.0	67.3	89.5
60x20 cm (Normal)			83.3	72.3	79.4	82.5	67.2	82.3	78.2	58.6	81.0
60x15 cm (High)			111.1	90.2	95.2	110.2	90.5	108.0	105.8	76.0	98.0
CD at 5%			0.0	9.0	2.5	0.06	1.89	1.41	1.1	9.5	0.8
CV (%)			0.00	19.9	5.1	0.11	4.32	2.67	0.60	25.3	1.6
200:65:80			97.2	81.1	87.3	96.3	78.3	94.7	92.0	66.8	89.2
250:80:100			97.2	81.4	87.3	96.4	79.3	95.7	92.0	67.8	89.8
CD at 5%			0.0	NS	NS	NS	0.08	0.70	NS	NS	NS
CV (%)			NS	6.7	2.9	0.20	0.30	2.06	2.91	6.2	4.3
GK 3118			97.2	76.9	88.0	95.9	76.5	95.2	91.8	63.2	Cont...
KH-3021			97.2	76.7	87.0	96.0	77.2	95.7	92.4	63.6	88.9
KH-2192			97.2	80.2	86.8	96.5	77.8	96.7	91.5	65.9	86.5
CP.999			97.2	79.0	87.6	96.6	82.2	95.5	91.3	65.8	90.6
CP.333			97.2	79.4	87.4	96.3	77.8	95.4	91.5	66.2	88.5
Rasi-864			97.2	83.8	86.9	96.5	80.3	94.9	90.5	68.9	88.3
CP.111			97.2	81.7		96.8	76.8	96.2	92.7	66.5	90.8
Rasi-950			97.2	81.3	86.9	96.8	78.1	94.2	91.5	66.8	
CP.838			97.2	79.9	88.0	96.7	76.8	94.0	91.0	66.5	89.6
KMH-1411			97.2	80.1	87.3	96.4	78.3	94.4	92.4	66.0	88.7
DKC9161 (IM8222)			97.2	82.6	86.1	96.4	76.8	95.0	92.4	69.2	88.8
GK-3155			97.2	80.4	86.7	96.5	76.8	94.5	92.7	67.9	90.8
DMRH 1308			97.2	82.4	87.9	96.2	81.2	95.4	92.0	67.8	89.6
HTMH-5108			97.2	81.6	87.8	96.1	76.6	94.9	92.9	68.9	88.8
X35F880			97.2	83.9	87.2	96.2	81.0	96.6	91.8	68.9	90.2
HTMH 5202			97.2	80.8	86.7	96.0	79.7	94.2	92.5	66.1	90.8
Rasi-393			97.2	82.4	88.3	96.3	82.8	95.5	92.2	68.0	90.4
Seedtech 2324 (C)			97.2	85.4	87.6	96.2	80.8	94.2	92.4	70.6	91.0
Buland (C)			97.2	83.2	86.9	96.2	79.5	95.1	92.0	70.1	89.6
Bio 9681 (C)			97.2	83.1	87.6	96.3	79.5	96.0	92.7	69.1	90.0
CD at 5%			0.0	NS	NS	0.15	0.28	1.45	NS	NS	2.2
CV (%)			0.00	8.6	3.50	0.19	0.43	1.89	2.12	10.2	3.1

Density	Nutrient management	Genotypes	Cobs ('000/ha)						
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Vagaral	Banswara
60x20 cm (Normal)	200:65:80	GK 3118	76.4	80.4	82.9	65.3	80.0	55.6	80.6
		KH-3021	75.0	79.6	82.7	65.6	79.6	58.3	80.2
		KH-2192	70.8	79.6	82.3	66.4	79.4	54.4	75.0
		CP.999	81.9	80.0	82.4	78.1	81.3	50.0	73.3
		CP.333	79.2	79.3	82.4	73.9	80.3	51.4	78.8
		Rasi-864	83.3	78.5	82.3	76.4	79.0	57.5	78.5
		CP.111			82.5	66.4	78.4	53.6	83.3
		Rasi-950	81.9	78.1	82.5	73.1	78.6	57.2	
		CP.838	84.7	80.7	82.5	73.9	79.4	58.9	81.3

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Density	Nutrient management	Genotypes	Cobs ('000/ha)						
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Vagaral	Banswara
60x15 cm (High)		KMH-1411	86.1	78.5	82.9	66.4	78.7	53.3	83.0
		DKC9161 (IM8222)	84.7	78.1	81.3	64.7	81.5	58.3	80.6
		GK-3155	86.1	80.0	81.5	66.4	79.3	55.0	88.5
		DMRH 1308	83.3	82.2	81.1	75.6	81.6	57.8	80.9
		HTMH-5108	73.6	78.9	81.2	65.6	79.0	56.1	84.0
		X35F880	88.9	80.7	81.2	64.7	83.0	55.0	81.6
		HTMH 5202	61.1	80.7	81.2	65.6	79.3	55.0	82.6
		Rasi-393	66.7	81.1	81.2	68.3	78.0	57.2	85.4
		Seedtech 2324 (C)	91.7	80.7	81.2	76.4	79.0	58.6	87.8
		Buland (C)	91.7	79.3	81.1	66.4	79.3	55.3	80.6
		Bio 9681 (C)	75.0	81.1	81.2	70.3	79.7	56.7	Cont...
	250:80:100	GK 3118	73.6	80.7	82.8	66.9	80.1	46.4	81.9
		KH-3021	68.1	79.6	82.9	68.3	80.4	47.2	78.8
		KH-2192	79.2	80.0	82.5	69.4	80.1	51.4	79.6
		CP.999	79.2	80.4	82.5	73.9	82.8	54.4	72.0
		CP.333	80.6	78.9	82.4	64.7	81.3	61.7	77.4
		Rasi-864	87.5	78.5	82.3	67.2	79.3	57.2	80.6
		CP.111			82.6	70.3	79.1	47.2	83.3
		Rasi-950	77.8	80.4	82.6	76.4	79.1	50.8	
		CP.838	91.7	81.1	82.6	64.7	79.8	51.9	82.8
		KMH-1411	73.6	80.0	82.4	75.6	79.0	49.4	83.3
		DKC9161 (IM8222)	84.7	79.3	81.5	67.2	82.6	56.1	83.0
		GK-3155	79.2	77.4	81.4	70.3	79.4	57.2	88.5
		DMRH 1308	100.0	81.9	81.1	71.4	82.2	57.2	80.9
		HTMH-5108	70.8	79.6	81.1	71.4	79.1	54.7	84.0
		X35F880	95.8	81.1	81.1	73.9	83.3	59.4	82.0
		HTMH 5202	65.3	77.8	81.4	71.4	79.5	49.2	80.4
		Rasi-393	83.3	80.4	81.2	77.2	78.9	59.4	83.2
		Seedtech 2324 (C)	88.9	80.7	82.1	67.2	79.4	58.6	87.1
Buland (C)	72.2	78.5	81.2	71.4	79.9	55.8	81.2		
Bio 9681 (C)	84.7	81.1	81.3	77.2	80.0	53.9	84.6		
200:65:80	GK 3118	68.1	94.1	108.7	87.2	103.8	65.3	94.1	
	KH-3021	62.5	93.0	108.1	87.8	104.0	66.7	98.0	
	KH-2192	61.1	94.1	109.1	100.6	103.5	71.7	93.3	
	CP.999	94.4	94.8	109.2	94.7	109.6	66.1	87.5	
	CP.333	70.8	94.1	108.7	95.6	106.3	62.5	96.3	
	Rasi-864	80.6	93.0	110.1	97.2	103.3	66.4	94.0	
	CP.111			110.7	90.6	103.3	65.8	97.3	
	Rasi-950	72.2	94.1	110.7	89.7	103.0	69.4		
	CP.838	97.2	96.3	110.1	87.8	105.1	68.3	101.0	
	KMH-1411	72.2	95.2	110.1	91.4	106.0	70.8	101.8	
	DKC9161 (IM8222)	88.9	93.7	109.2	93.1	107.6	66.4	94.6	
	GK-3155	106.9	93.7	109.1	89.7	104.1	61.7	105.2	
	DMRH 1308	95.8	94.4	109.1	93.9	107.0	66.4	98.2	

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Density	Nutrient management	Genotypes	Cobs ('000/ha)						
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Vagaral	Banswara
		HTMH-5108	56.9	95.2	109.2	89.7	112.2	76.1	101.0
		X35F880	91.7	93.3	109.1	102.5	109.7	65.8	99.0
		HTMH 5202	81.9	94.1	109.1	100.6	103.3	64.7	100.0
		Rasi-393	80.6	95.2	109.1	103.3	103.2	60.3	101.8
		Seedtech 2324 (C)	100.0	94.4	109.1	100.6	103.0	74.2	105.8
		Buland (C)	72.2	94.4	109.2	99.7	104.3	72.8	97.4
		Bio 9681 (C)	75.0	93.7	109.2	87.8	104.8	68.1	99.9
	250:80:100	GK 3118	72.2	93.7	107.8	99.4	104.8	65.3	102.3
		KH-3021	81.9	93.7	107.6	100.6	104.5	63.3	99.3
		KH-2192	87.5	91.9	109.3	88.6	104.4	64.2	100.7
		CP.999	87.5	93.7	109.3	97.2	109.8	70.8	98.0
		CP.333	98.6	94.1	110.1	91.4	107.1	68.1	99.3
		Rasi-864	106.9	93.3	110.2	94.7	104.3	70.8	98.0
		CP.111			110.8	93.9	104.1	75.3	99.3
		Rasi-950	91.7	93.7	110.7	87.8	104.4	68.6	
		CP.838	95.8	95.9	110.0	94.7	105.6	68.1	102.0
		KMH-1411	112.5	94.1	110.3	93.6	104.3	68.3	101.0
		DKC9161 (IM8222)	106.9	93.3	109.2	95.6	107.8	71.4	102.7
		GK-3155	102.8	93.3	109.1	94.7	104.3	74.2	99.7
		DMRH 1308	88.9	95.2	109.1	98.9	107.3	68.2	101.7
		HTMH-5108	80.6	95.2	109.1	93.9	103.8	67.5	97.7
		X35F880	86.1	93.7	109.1	97.2	110.4	71.4	100.0
		HTMH 5202	73.6	92.2	109.1	96.4	103.8	68.1	99.3
		Rasi-393	84.7	95.6	109.1	97.2	104.2	70.6	103.3
		Seedtech 2324 (C)	101.4	93.3	109.2	93.1	103.5	69.2	102.7
		Buland (C)	98.6	94.1	109.2	94.7	105.1	73.9	98.3
		Bio 9681 (C)	97.2	93.3	109.2	97.2	105.7	71.7	102.0
Mean of location			83.5	87.0	95.6	82.4	92.7	61.7	90.7
60x20 cm (Normal)			80.5	79.9	81.9	70.1	80.0	54.9	81.8
60x15 cm (High)			86.4	94.1	109.4	94.6	105.4	68.5	99.6
CD at 5%			0.5	2.9	0.04	1.94	0.1	5.4	3.3
CV (%)			0.3	5.9	0.07	4.24	0.28	15.7	6.3
200:65:80			80.3	87.1	95.6	81.8	92.5	61.6	90.0
250:80:100			86.6	86.9	95.7	82.9	92.9	61.7	91.4
CD at 5%			4.7	NS	NS	0.2	NS	NS	NS
CV (%)			8.0	5.2	0.22	0.51	1.72	6.2	7.7
GK 3118			72.6	87.2	95.5	79.7	92.2	58.1	89.7
KH-3021			71.9	86.5	95.3	80.6	92.1	58.9	89.1
KH-2192			74.7	86.4	95.8	81.3	91.8	60.4	87.2
CP.999			85.8	87.2	95.9	86.0	95.8	60.3	84.4
CP.333			82.3	86.6	95.9	81.4	93.7	60.9	88.8
Rasi-864			89.6	85.8	96.2	83.9	91.5	63.0	87.8
CP.111					96.6	80.3	91.2	60.5	90.8

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Density	Nutrient management	Genotypes	Cobs ('000/ha)						
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Vagaral	Banswara
		Rasi-950	80.9	86.6	96.6	81.7	91.3	61.5	
		CP.838	92.4	88.5	96.3	80.3	92.5	61.8	91.8
		KMH-1411	86.1	86.9	96.4	81.7	92.0	60.5	92.3
		DKC9161 (IM8222)	91.3	86.1	95.3	80.1	94.9	63.1	90.2
		GK-3155	93.8	86.1	95.3	80.3	91.8	62.0	95.5
		DMRH 1308	92.0	88.4	95.1	84.9	94.5	62.4	90.4
		HTMH-5108	70.5	87.2	95.2	80.1	93.5	63.6	91.7
		X35F880	90.6	87.2	95.1	84.6	96.6	62.9	90.6
		HTMH 5202	70.5	86.2	95.2	83.5	91.5	59.2	90.6
		Rasi-393	78.8	88.1	95.2	86.5	91.0	61.9	93.4
		Seedtech 2324 (C)	95.5	87.3	95.4	84.3	91.2	65.1	Cont...
		Buland (C)	83.7	86.6	95.2	83.1	92.1	64.4	
		Bio 9681 (C)	83.0	87.3	95.2	83.1	92.5	62.6	93.4
		CD at 5%	8.8	NS	0.16	0.34	1.5	NS	3.3
		CV (%)	10.5	4.85	0.21	0.52	2.03	10.6	4.5

Density	Nutrient management	Genotypes	Plant height (cm)								
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Karim.	Dharwad	Vagaral	Banswara
60x20 cm (Normal)	200:65:80	GK 3118	158.8	161.0	184.7	167.0	245.3	229.7	197.5	212.9	233.3
		KH-3021	166.3	168.3	182.3	169.7	296.7	235.7	198.5	182.5	233.3
		KH-2192	166.3	164.3	186.0	161.7	276.3	251.0	198.7	173.0	218.3
		CP.999	187.5	162.3	187.3	164.0	285.2	238.7	201.4	151.6	228.3
		CP.333	188.8	162.0	185.3	170.7	301.7	253.3	200.5	166.1	211.7
		Rasi-864	169.0	161.0	186.0	166.3	273.7	230.7	205.7	166.6	221.7
		CP.111			186.0	161.3	289.0	225.0	201.1	168.2	226.7
		Rasi-950	175.5	173.3	184.7	158.3	276.0	234.0	197.6	179.5	
		CP.838	186.3	171.7	187.7	159.3	292.0	231.0	199.3	194.0	245.0
		KMH-1411	195.5	164.3	185.3	159.7	296.0	255.7	202.2	219.4	248.3
	DKC9161 (IM8222)	191.3	168.3	185.0	161.7	306.3	249.3	204.3	189.9	235.0	
	GK-3155	191.3	164.0	187.3	157.0	287.3	235.7	198.4	188.0	226.7	
	DMRH 1308	163.8	152.7	186.0	165.0	309.7	251.3	200.3	182.1	233.3	
	HTMH-5108	155.5	159.3	187.3	159.7	257.5	231.7	201.0	180.5	226.7	
	X35F880	210.0	184.3	185.7	164.7	307.7	235.3	202.3	188.5	228.3	
	HTMH 5202	170.0	170.7	185.7	162.3	250.7	231.3	202.9	165.8	238.3	
	Rasi-393	220.0	169.0	186.7	161.7	287.7	221.7	202.0	193.7	228.3	
	Seedtech 2324 (C)	181.3	153.3	186.0	157.7	252.7	222.4	202.5	165.5	238.3	
	Buland (C)	216.0	167.0	186.0	160.0	290.0	232.7	168.0	214.0	225.0	
	Bio 9681 (C)	184.5	169.3	186.0	161.0	284.7	218.0	198.8	161.1	238.3	
	250:80:100	GK 3118	165.0	165.7	192.3	171.0	273.3	242.7	206.4	186.5	218.7
		KH-3021	173.8	174.3	189.3	164.7	286.0	239.7	204.0	173.2	216.0
		KH-2192	168.8	169.0	189.0	163.3	274.0	256.3	203.5	189.5	234.1
		CP.999	163.8	168.7	188.7	162.0	302.3	225.7	202.7	172.8	246.6
		CP.333	176.3	173.7	186.7	165.3	285.9	262.7	201.5	191.5	228.4
		Rasi-864	170.5	167.7	188.0	161.3	277.7	236.3	203.9	187.0	244.9

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Density	Nutrient management	Genotypes	Plant height (cm)								
			Delhi	Ludhiana	Bahraich	Dholl	Kalyani	Karim.	Dharwad	Vagaral	Banswara
60x15 cm (High)		CP.111			187.3	158.3	287.7	226.3	205.6	162.2	244.8
		Rasi-950	178.5	178.7	188.0	166.0	288.7	237.3	201.1	169.5	
		CP.838	185.0	184.7	186.0	158.0	288.7	248.7	185.4	179.3	263.1
		KMH-1411	197.5	169.3	187.7	155.7	274.0	257.0	204.4	175.1	257.9
		DKC9161 (IM8222)	180.0	173.0	187.7	157.7	294.7	250.7	204.6	181.9	254.1
		GK-3155	181.1	167.3	187.3	152.3	270.9	261.3	202.5	168.9	245.6
		DMRH 1308	165.0	158.7	187.0	164.3	298.5	238.7	200.7	185.5	252.3
		HTMH-5108	163.0	162.7	185.7	157.0	275.3	236.3	200.0	165.1	244.8
		X35F880	185.0	187.0	186.0	160.7	313.7	249.7	200.3	178.3	246.6
		HTMH 5202	175.0	174.3	186.3	161.3	280.3	199.7	200.5	155.0	257.7
		Rasi-393	208.8	177.0	186.3	159.7	265.3	206.7	199.7	170.	Cont...
		Seedtech 2324 (C)	170.0	160.0	187.0	153.0	280.0	222.7	202.0	166.0	230.0
		Buland (C)	208.8	173.0	186.3	156.0	268.7	232.7	169.1	190.7	243.8
		Bio 9681 (C)	185.0	170.0	185.7	165.3	292.3	232.7	200.6	162.8	256.3
		60x15 cm (High)	200:65:80	GK 3118	162.5	169.7	182.7	158.3	262.0	217.0	203.3
KH-3021	161.3			175.0	180.3	160.0	283.7	232.7	203.3	169.2	242.3
KH-2192	181.3			169.3	184.3	155.0	262.8	235.7	205.4	160.5	227.7
CP.999	180.0			169.3	185.0	161.3	306.8	230.3	204.4	149.9	234.9
CP.333	173.5			175.0	186.7	154.0	299.0	235.0	205.6	148.5	219.3
Rasi-864	187.5			170.7	185.3	162.7	282.0	207.3	206.8	172.6	229.4
CP.111					187.0	160.0	278.2	206.3	203.4	136.1	232.8
Rasi-950	182.5			179.3	185.7	154.7	270.7	198.7	205.4	160.6	
CP.838	185.0			186.0	188.7	161.7	284.3	227.7	206.8	178.2	247.5
KMH-1411	197.5			170.0	186.3	161.0	278.8	245.3	205.5	171.0	253.2
DKC9161 (IM8222)	195.0		175.7	186.0	160.7	311.7	234.3	201.6	155.5	239.7	
GK-3155	190.0		169.3	188.7	155.3	283.0	223.3	204.3	177.0	233.8	
DMRH 1308	165.0		159.7	187.0	166.0	301.0	230.7	203.0	160.1	237.9	
HTMH-5108	170.0		167.0	188.3	163.0	276.7	223.0	202.2	160.9	232.9	
X35F880	195.0		188.7	187.0	156.7	317.7	239.3	206.0	178.4	234.6	
HTMH 5202	160.0		174.7	186.7	160.3	294.3	231.3	203.4	155.6	241.5	
Rasi-393	200.0		177.3	187.7	155.7	288.0	237.3	201.5	150.6	235.2	
Seedtech 2324 (C)	165.0		164.0	187.0	156.7	276.7	243.3	205.9	146.3	246.4	
Buland (C)	193.5		178.3	187.0	154.7	270.0	210.3	170.5	159.0	231.8	
Bio 9681 (C)	175.0		178.3	187.0	155.3	288.0	224.0	204.3	164.2	245.5	
250:80:100	GK 3118	172.0	172.7	187.7	174.0	285.7	235.0	207.0	162.6	258.4	
	KH-3021	190.0	176.7	186.3	162.7	286.7	239.3	204.0	166.7	262.1	
	KH-2192	187.5	173.0	188.0	166.0	292.0	240.7	204.5	157.1	244.5	
	CP.999	185.0	170.7	188.0	161.3	323.0	240.3	206.0	133.3	254.9	
	CP.333	208.0	179.0	188.0	165.0	305.7	256.0	204.0	158.8	237.1	
	Rasi-864	193.0	171.3	189.0	162.3	260.0	229.3	201.5	159.6	249.5	
	CP.111			189.0	162.3	260.1	225.3	206.0	144.3	251.3	
	Rasi-950	195.0	182.7	190.0	165.0	276.0	205.3	203.5	151.3		
	CP.838	196.5	187.3	187.0	155.0	289.7	243.3	207.0	160.4	267.7	
	KMH-1411	220.0	175.3	188.7	165.3	286.7	249.0	203.0	157.2	271.1	

A-13

Density	Nutrient management	Genotypes	Plant height (cm)								
			Delhi	Ludhiana	Bahraich	Dholl	Kalyani	Karim.	Dharwad	Vagaral	Banswara
		DKC9161 (IM8222)	186.0	180.7	188.0	161.0	314.3	238.3	207.0	153.6	260.3
		GK-3155	195.0	170.7	189.3	161.0	296.0	241.0	205.0	162.3	253.3
		DMRH 1308	163.5	164.3	188.0	160.7	311.3	233.7	203.5	149.9	261.7
		HTMH-5108	165.0	170.0	186.7	163.0	268.0	235.0	206.0	150.3	253.9
		X35F880	206.5	189.3	187.0	162.0	337.7	253.7	204.5	163.9	255.7
		HTMH 5202	180.0	177.0	187.3	163.3	289.7	237.0	204.5	155.2	262.5
		Rasi-393	218.0	180.7	187.3	163.3	295.5	255.3	203.5	155.5	258.2
		Seedtech 2324 (C)	188.0	166.0	187.3	155.3	282.2	230.7	205.5	148.0	265.2
		Buland (C)	206.5	181.7	187.3	161.3	284.1	238.7	174.2	145.6	252.0
		Bio 9681 (C)	200.0	181.0	186.7	162.3	294.7	244.7	205.0	160.7	265.9
Mean of location			183.6	171.7	186.8	161.1	286.2	234.8	201.2	168.6	Cont...
60x20 cm (Normal)			181.0	168.4	186.6	161.5	283.6	236.9	199.5	178.8	238.0
60x15 cm (High)			186.2	174.9	187.0	160.6	288.9	232.6	202.9	158.4	247.2
CD at 5%			NS	6.3	0.36	NS	NS	NS	2.9	NS	4.6
CV (%)			3.7	6.4	0.35	4.0	7.68	7.6	0.71	39.4	3.4
200:65:80			181.5	169.6	186.0	160.5	284.5	231.2	200.9	172.0	234.0
250:80:100			185.7	173.8	187.6	161.6	287.9	238.4	201.6	165.2	251.1
CD at 5%			1.6	3.2	0.43	0.7	NS	5.44	NS	NS	3.4
CV (%)			1.3	5.1	0.64	1.3	7.78	6.5	1.45	17.3	3.8
GK 3118			164.6	167.3	186.8	167.6	266.6	231.1	203.6	186.7	237.9
KH-3021			172.8	173.6	184.6	164.3	288.3	236.8	202.5	172.9	238.4
KH-2192			175.9	168.9	186.8	161.5	276.3	245.9	203.0	170.1	231.2
CP.999			179.1	167.8	187.3	162.2	304.3	233.8	203.6	151.9	241.2
CP.333			186.6	172.4	186.7	163.8	298.1	251.8	202.9	166.2	224.1
Rasi-864			180.0	167.7	187.1	163.2	273.3	225.9	204.5	171.5	236.3
CP.111					187.3	160.5	278.7	220.8	204.0	152.7	238.9
Rasi-950			182.9	178.5	187.1	161.0	277.8	218.8	201.9	165.2	
CP.838			188.2	182.4	187.3	158.5	288.7	237.7	199.6	178.0	255.8
KMH-1411			202.6	169.8	187.0	160.4	283.9	251.8	203.8	180.7	257.6
DKC9161 (IM8222)			188.1	174.4	186.7	160.3	306.8	243.2	204.4	170.2	247.2
GK-3155			189.3	167.8	188.2	156.4	284.3	240.3	202.6	174.0	239.9
DMRH 1308			164.3	158.8	187.0	164.0	305.1	238.6	201.9	169.4	246.3
HTMH-5108			163.4	164.8	187.0	160.7	269.4	231.5	202.3	164.2	239.6
X35F880			199.1	187.3	186.4	161.0	319.2	244.5	203.3	177.3	241.3
HTMH 5202			171.3	174.2	186.5	161.8	278.8	224.8	202.8	157.9	250.0
Rasi-393			211.7	176.0	187.0	160.1	284.1	230.3	201.7	167.5	242.1
Seedtech 2324 (C)			176.1	160.8	186.8	155.7	272.9	229.8	204.0	156.4	251.5
Buland (C)			206.2	175.0	186.7	158.0	278.2	228.6	170.5	177.3	238.1
Bio 9681 (C)			186.1	174.7	186.3	161.0	289.9	229.8	202.2	162.2	251.5
CD at 5%			2.2	5.7	0.79	4.0	14.5	14.33	4.5	11.4	8.4
CV (%)			1.2	4.14	0.52	3.1	6.28	7.6	2.22	8.4	4.3

A-14

Density	Nutrient management	Genotypes	Days to 50% tasselling					
			Ludhiana	Dholi	Kalyani	Karimnagar	Dharwad	Vagaral
60x20 cm (Normal)	200:65:80	GK 3118	78.7	105.7	73.0	65.7	49.0	43.0
		KH-3021	81.3	107.3	72.0	64.3	47.5	41.0
		KH-2192	83.7	107.0	73.7	63.7	49.0	44.3
		CP.999	85.3	110.0	73.7	65.0	50.0	44.0
		CP.333	80.3	104.3	74.3	65.0	49.5	43.7
		Rasi-864	82.3	107.0	77.0	65.7	48.0	40.3
		CP.111		107.0	73.7	65.3	49.0	44.7
		Rasi-950	83.0	106.0	75.0	66.0	45.5	41.0
		CP.838	79.7	107.0	76.3	64.0	47.5	43.3
		KMH-1411	81.3	107.3	73.7	64.3	47.5	43.0
		DKC9161 (IM8222)	80.3	106.7	72.7	63.7	49.5	41.0
		GK-3155	79.7	108.0	71.7	64.7	49.5	42.7
		DMRH 1308	79.3	107.7	72.7	62.7	48.0	40.3
		HTMH-5108	82.3	108.0	72.3	64.7	48.0	42.0
		X35F880	83.0	108.7	75.0	65.7	48.0	43.7
		HTMH 5202	82.3	109.0	75.0	65.0	49.0	41.7
		Rasi-393	83.7	107.0	72.7	65.0	49.5	42.3
		Seedtech 2324 (C)	82.0	107.7	74.0	65.7	49.5	42.3
	Buland (C)	87.3	105.0	77.3	65.7	48.5	43.3	
	Bio 9681 (C)	79.7	107.3	71.0	61.3	49.0	41.3	
	250:80:100	GK 3118	80.3	108.0	71.7	65.7	49.0	43.7
		KH-3021	80.7	108.3	74.3	65.0	48.0	41.7
		KH-2192	81.3	107.7	74.0	64.0	49.0	45.7
		CP.999	82.3	110.3	74.0	65.3	49.5	44.7
		CP.333	80.3	107.3	74.3	64.7	49.5	44.7
		Rasi-864	80.7	105.3	75.0	65.7	49.5	41.0
		CP.111		105.0	75.0	64.7	48.0	45.7
		Rasi-950	81.7	109.0	76.7	65.3	50.0	41.7
		CP.838	79.3	109.3	75.7	64.0	49.5	44.3
		KMH-1411	81.0	107.0	74.7	65.0	50.0	44.0
		DKC9161 (IM8222)	79.3	107.0	72.3	64.0	49.5	41.7
		GK-3155	81.0	105.3	73.0	64.7	48.0	43.7
		DMRH 1308	79.0	107.7	71.3	63.7	48.0	40.7
		HTMH-5108	81.3	106.3	74.0	65.0	48.0	42.7
X35F880		80.7	106.3	75.0	65.3	49.0	44.3	
HTMH 5202		82.0	110.0	74.3	65.7	49.5	41.0	
Rasi-393	81.7	105.7	74.3	65.7	50.5	42.7		
Seedtech 2324 (C)	80.3	109.0	74.3	65.3	48.5	42.7		
Buland (C)	82.3	106.7	77.3	67.3	49.0	43.7		
Bio 9681 (C)	79.0	109.0	72.0	61.3	48.0	41.7		
15 cm (High)	20 0:6 5:8 0	GK 3118	80.0	108.7	72.3	65.7	50.0	42.0
		KH-3021	82.0	107.0	74.3	64.3	50.0	40.0

A-15

Density	Nutrient management	Genotypes	Days to 50% tasseling							
			Ludhiana	Dholi	Kalyani	Karimnagar	Dharwad	Vagarai		
		KH-2192	84.7	106.3	73.7	63.7	49.0	42.0		
		CP.999	85.0	109.0	76.7	65.3	50.5	43.0		
		CP.333	80.7	107.3	75.7	65.0	48.5	42.0		
		Rasi-864	82.0	107.0	76.7	65.3	48.5	42.0		
		CP.111		109.0	76.7	65.3	48.5	42.0		
		Rasi-950	82.0	108.3	75.0	65.7	48.5	40.0		
		CP.838	78.0	108.3	75.7	65.0	48.5	42.0		
		KMH-1411	79.3	108.3	76.0	65.3	49.0	41.0		
		DKC9161 (IM8222)	78.0	110.7	72.3	65.0	49.5	40.0		
		GK-3155	80.3	106.7	72.7	64.7	48.5	41.0		
		DMRH 1308	79.7	109.0	72.3	63.7	48.0	40.0		
		HTMH-5108	82.7	107.0	73.3	64.7	48.5	41.0		
		X35F880	83.3	108.7	76.7	65.7	48.0	42.0		
		HTMH 5202	82.3	110.0	75.7	65.0	49.0	43.0		
		Rasi-393	80.3	108.3	75.3	65.0	49.0	42.0		
		Seedtech 2324 (C)	79.7	108.0	75.7	65.7	48.5	42.0		
		Buland (C)	84.0	105.7	76.7	65.7	49.5	43.0		
		Bio 9681 (C)	77.7	106.0	72.0	62.3	49.5	41.0		
			250:80:100	GK 3118	81.0	109.0	73.0	65.7	47.5	43.0
				KH-3021	81.7	108.0	76.3	65.3	47.5	41.0
		KH-2192		81.0	107.3	73.0	64.3	48.5	43.7	
		CP.999		83.3	105.7	76.0	65.3	49.5	43.3	
		CP.333		78.3	104.7	77.0	64.7	48.0	43.0	
		Rasi-864		83.0	108.7	76.3	65.0	48.0	40.7	
		CP.111			106.0	76.3	64.7	49.0	44.0	
		Rasi-950		82.0	108.3	76.7	65.3	50.5	41.0	
		CP.838		79.0	107.0	76.0	65.0	49.5	43.0	
		KMH-1411		80.0	108.0	76.0	65.0	49.5	42.0	
		DKC9161 (IM8222)		78.3	106.3	74.3	64.0	49.0	41.7	
		GK-3155		80.7	106.7	73.3	65.0	50.0	42.3	
		DMRH 1308		78.7	105.7	72.3	63.7	48.5	40.7	
		HTMH-5108	81.3	109.0	73.7	65.0	49.5	41.3		
		X35F880	83.7	105.7	77.0	65.3	47.5	43.7		
	HTMH 5202	84.0	107.7	76.7	66.0	49.5	41.3			
	Rasi-393	81.3	107.0	77.3	65.7	50.0	42.3			
	Seedtech 2324 (C)	80.0	107.3	77.0	65.3	48.0	42.3			
	Buland (C)	83.0	105.7	76.3	65.7	49.0	42.3			
	Bio 9681 (C)	80.3	105.7	73.3	61.3	48.5	41.7			
Mean of location			81.2	107.4	74.5	64.8	48.8	42.3		
60x20 cm (Normal)			81.3	107.4	74.0	64.8	48.8	42.8		
60x15 cm (High)			81.1	107.5	75.1	64.9	48.9	41.8		
CD at 5%			NS	NS	0.24	NS	NS	0.25		
CV (%)			6.9	0.9	0.57	0.91	1.94	1.07		
200:65:80			81.5	107.6	74.3	64.8	48.8	42.0		
250:80:100			80.9	107.2	74.8	64.9	48.9	42.7		

A-16

Density	Nutrient management	Genotypes	Days to 50% tasseling					
			Ludhiana	Dholi	Kalyani	Karimnagar	Dharwad	Vagarai
CD at 5%			NS	NS	0.43	NS	NS	NS
CV (%)			2.3	2.5	1.62	2.36	2.47	7.6
GK 3118			80.0	107.8	72.5	65.7	48.9	Cont...
KH-3021			81.4	107.7	74.3	64.8	48.3	
KH-2192			82.7	107.1	73.6	63.9	48.9	43.9
CP.999			84.0	108.8	75.1	65.3	49.9	43.8
CP.333			79.9	105.9	75.3	64.8	48.9	43.3
Rasi-864			82.0	107.0	76.3	65.4	48.5	40.3
CP.111				106.8	75.4	65.0	48.6	44.3
Rasi-950			82.2	107.9	75.8	65.6	48.6	40.9
CP.838			79.0	107.9	75.9	64.5	48.8	43.2
KMH-1411			80.4	107.7	75.1	64.9	49.0	42.5
DKC9161 (IM8222)			79.0	107.7	72.9	64.2	49.4	41.1
GK-3155			80.4	106.7	72.7	64.8	49.0	42.4
DMRH 1308			79.2	107.5	72.2	63.4	48.1	40.4
HTMH-5108			81.9	107.6	73.3	64.8	48.5	41.8
X35F880			82.7	107.3	75.9	65.5	48.1	43.4
HTMH 5202			82.7	109.2	75.4	65.4	49.3	41.8
Rasi-393			81.8	107.0	74.9	65.3	49.8	42.3
Seedtech 2324 (C)			80.5	108.0	75.3	65.5	48.6	42.3
Buland (C)			84.2	105.8	76.9	66.1	49.0	43.1
Bio 9681 (C)			79.2	107.0	72.1	61.6	48.8	41.4
CD at 5%			1.49	1.8	0.71	0.83	NS	0.57
CV (%)			2.27	2.0	1.17	1.58	2.39	1.67

Cont...

A-17

Density	Nutrient management	Genotypes	Days to 50% silking								
			Ludhiana	Bahraich	Dholi	Kalyani	Karim.	Dharwad	Vagarai	Banswara	
60x20 cm (Normal)	200:65:80	GK 3118	80.7	124.7	110.0	76.0	68.7	52.5	47.3	96.7	
		KH-3021	83.0	121.0	111.7	75.0	66.7	51.5	45.0	96.3	
		KH-2192	86.0	126.7	110.3	76.7	65.7	52.5	47.3	96.7	
		CP.999	88.0	129.0	112.7	77.0	67.3	53.5	47.7	99.0	
		CP.333	82.3	128.0	108.7	78.0	67.0	52.5	46.7	95.3	
		Rasi-864	84.3	128.0	112.7	79.0	68.0	52.0	44.7	98.0	
		CP.111		126.0	111.3	76.7	68.3	52.0	47.0	97.3	
		Rasi-950	85.0	124.0	110.0	78.0	68.3	49.0	45.7		
		CP.838	81.3	125.0	111.0	79.3	66.3	51.5	47.0	96.3	
		KMH-1411	83.3	125.3	111.3	76.7	67.3	51.0	46.7	96.7	
		DKC9161 (IM8222)	82.3	125.3	110.7	75.7	66.3	53.0	46.0	96.3	
		GK-3155	82.3	125.7	112.0	74.7	67.7	53.0	46.3	94.7	
		DMRH 1308	81.0	125.3	112.0	75.7	66.3	52.0	45.3	95.3	
		HTMH-5108	84.3	128.3	109.7	75.3	67.7	52.0	46.3	94.3	
		X35F880	85.3	124.0	112.3	78.0	68.7	51.5	46.7	95.3	
		HTMH 5202	84.7	127.0	112.7	78.0	68.0	52.5	45.0	96.3	
		Rasi-393	85.7	125.0	110.7	75.7	68.0	53.0	46.0	96.0	
		Seedtech 2324 (C)	84.7	126.7	111.7	77.0	68.7	52.5	46.3	97.3	
	Buland (C)	89.3	125.3	109.0	80.3	68.3	52.0	46.3	96.7		
	Bio 9681 (C)	81.7	126.3	109.3	74.0	65.3	52.5	45.3	98.0		
		250:80:100	GK 3118	82.7	122.7	112.3	74.7	68.7	53.0	47.0	94.7
			KH-3021	82.3	123.3	112.7	77.3	67.7	52.0	46.0	94.3
			KH-2192	83.0	130.3	111.3	77.0	66.7	53.0	47.7	94.7
			CP.999	84.3	133.0	111.7	77.0	68.3	52.0	47.3	97.0
			CP.333	82.0	130.0	111.7	77.3	67.7	52.5	47.7	93.3
			Rasi-864	82.7	131.7	112.3	78.0	68.7	52.5	45.0	96.0
			CP.111		128.0	110.3	78.0	67.7	52.0	48.3	95.3
			Rasi-950	84.0	125.7	113.0	79.7	68.3	53.0	45.3	
			CP.838	81.3	125.3	113.3	78.7	66.3	52.0	47.7	94.3
			KMH-1411	83.3	126.7	111.0	77.7	68.0	52.5	48.0	94.7
			DKC9161 (IM8222)	81.3	127.0	111.0	75.0	67.0	52.5	45.7	94.3
			GK-3155	83.3	125.7	109.3	75.7	67.7	51.5	47.3	92.7
			DMRH 1308	80.7	126.3	111.0	74.3	66.3	52.0	44.7	93.3
			HTMH-5108	83.7	127.3	110.7	77.0	68.0	51.0	47.0	92.3
	X35F880		82.7	126.3	110.0	78.0	68.3	52.5	48.3	93.3	
	HTMH 5202		84.0	128.0	113.7	77.3	68.7	52.0	45.3	94.3	
	Rasi-393	83.7	127.7	109.3	77.3	68.7	53.0	46.7	94.0		
	Seedtech 2324 (C)	81.3	126.3	113.0	77.3	68.3	52.5	47.0	95.3		
	Buland (C)	84.7	125.0	110.7	80.3	70.0	52.5	47.0	94.7		
	Bio 9681 (C)	81.0	126.7	114.3	75.0	64.3	51.5	46.0	96.0		
60x15 cm (High)	200:65:80	GK 3118	82.0	125.3	113.0	75.3	68.7	53.5	46.3	97.3	
		KH-3021	84.3	122.0	111.3	77.3	66.0	52.5	44.3	98.3	
		KH-2192	87.0	125.3	110.0	76.7	66.3	52.5	45.7	98.0	

A-18

Density	Nutrient management	Genotypes	Days to 50% silking							
			Ludhlana	Bahraich	Dholl	Kalyani	Karim.	Dharwad	Vagaral	Banswara
		CP.999	87.0	130.0	113.3	79.7	68.3	53.0	47.7	100.0
		CP.333	82.7	126.3	111.7	78.7	68.0	52.0	46.3	97.3
		Rasi-864	83.7	126.7	113.3	79.7	68.3	52.0	43.7	99.3
		CP.111		127.3	113.3	79.7	68.3	51.5	46.	Cont...
		Rasi-950	84.0	125.0	112.3	78.0	68.7	52.0	44.3	
		CP.838	80.0	126.3	112.3	78.3	68.0	51.5	46.0	97.7
		KMH-1411	81.3	125.7	112.3	79.0	68.3	52.5	45.3	98.7
		DKC9161 (IM8222)	80.0	126.3	114.7	75.3	68.0	52.5	44.3	97.7
		GK-3155	82.3	127.0	110.7	75.7	67.7	52.0	44.3	96.3
		DMRH 1308	81.7	126.3	112.0	75.3	67.0	52.0	43.7	96.7
		HTMH-5108	85.0	129.3	110.7	76.3	67.7	52.0	45.3	95.7
		X35F880	85.3	125.0	112.3	79.7	68.7	51.5	46.0	96.7
		HTMH 5202	84.7	128.0	113.7	78.7	68.0	52.0	46.3	97.3
		Rasi-393	82.3	126.0	112.0	78.3	68.0	52.0	45.0	98.0
		Seedtech 2324 (C)	81.7	127.7	112.0	78.7	68.7	52.0	46.7	99.0
		Buland (C)	86.3	126.3	110.0	79.7	68.3	53.0	46.3	98.3
		Bio 9681 (C)	79.7	127.3	109.3	75.0	65.3	52.5	45.7	98.3
	250:80:100	GK 3118	82.7	123.7	113.3	76.0	68.7	51.0	47.0	95.3
		KH-3021	83.7	124.3	110.0	79.3	66.0	51.5	45.3	96.0
		KH-2192	83.0	129.0	109.7	76.0	66.7	52.0	47.7	97.3
		CP.999	85.0	132.0	110.0	79.0	68.3	52.5	48.3	98.7
		CP.333	80.3	129.0	109.0	80.0	67.7	51.0	47.0	95.3
		Rasi-864	84.7	130.7	113.7	79.3	68.0	51.5	45.7	97.7
		CP.111		129.7	110.0	79.3	67.7	51.5	47.3	97.0
		Rasi-950	84.0	127.7	112.3	79.7	68.0	53.0	46.0	
		CP.838	81.0	125.7	111.0	79.0	67.7	52.0	46.0	96.3
		KMH-1411	81.7	125.7	112.0	79.0	67.7	52.5	46.0	96.7
		DKC9161 (IM8222)	80.3	128.3	110.3	77.3	66.7	52.5	45.7	96.3
		GK-3155	82.7	126.7	111.3	76.3	67.7	52.5	45.7	94.7
		DMRH 1308	80.7	127.3	109.3	75.3	66.3	51.5	44.7	95.3
		HTMH-5108	84.0	128.3	112.7	76.7	67.7	52.5	45.0	94.3
		X35F880	85.3	127.3	109.3	79.7	68.3	51.0	191.7	95.3
		HTMH 5202	86.7	128.7	111.3	79.7	68.7	52.5	46.0	95.7
		Rasi-393	83.3	128.7	111.0	80.3	68.7	53.0	46.3	96.0
		Seedtech 2324 (C)	82.0	127.3	111.3	80.0	68.3	51.5	46.3	97.3
		Buland (C)	85.3	126.0	109.7	79.3	70.0	52.0	46.3	96.3
		Bio 9681 (C)	82.0	127.7	110.0	76.3	63.3	52.0	45.3	97.0
	Mean of location		83.2	126.8	111.4	77.5	67.7	52.1	48.0	96.3
	60x20 cm (Normal)		83.4	126.5	111.3	77.0	67.6	52.2	46.5	95.5
	60x15 cm (High)		83.1	127.1	111.4	78.1	67.7	52.1	49.5	97.1
	CD at 5%		NS	0.09	NS	0.24	NS	NS	NS	0.8
	CV (%)		7.5	0.13	1.3	0.55	1.54	1.67	55.0	1.5
	200:65:80		83.6	126.2	111.5	77.3	67.6	52.2	45.9	97.2
	250:80:100		82.9	127.4	111.3	77.8	67.7	52.1	50.1	95.4
	CD at 5%		NS	0.58	NS	NS	NS	NS	NS	0.1

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A-19

Density	Nutrient management	Genotypes	Days to 50% silking							
			Ludhlana	Bahraich	Dholl	Kalyani	Karim.	Dharwad	Vagarai	Banswara
CV (%)			2.6	1.27	1.4	1.69	2.04	1.99	60.1	0.4
GK 3118			82.0	124.1	112.2	75.5	68.7	52.5	46.9	96.0
KH-3021			83.3	122.7	111.4	77.3	66.6	51.9	45.2	96.3
KH-2192			84.8	127.8	110.3	76.6	66.3	52.5	47.1	96.7
CP.999			86.1	131.0	111.9	78.2	68.1	52.8	47.8	98.7
CP.333			81.8	128.3	110.3	78.5	67.6	52.0	46.9	95.3
Rasi-864			83.8	129.3	113.0	79.0	68.3	52.0	44.8	97.8
CP.111				127.8	111.3	78.4	68.0	51.8	47.3	97.1
Rasi-950			84.3	125.6	111.9	78.8	68.3	51.8	45.3	
CP.838			80.9	125.6	111.9	78.8	67.1	51.8	46.7	96.2
KMH-1411			82.4	125.8	111.7	78.1	67.8	52.1	46.5	96.7
DKC9161 (IM8222)			81.0	126.8	111.7	75.8	67.0	52.6	45.4	96.2
GK-3155			82.7	126.3	110.8	75.6	67.7	52.3	45.9	94.6
DMRH 1308			81.0	126.3	111.1	75.2	66.5	51.9	44.6	95.2
HTMH-5108			84.3	128.3	110.9	76.3	67.8	51.9	45.9	94.2
X35F880			84.7	125.7	111.0	78.8	68.5	51.6	83.2	95.2
HTMH 5202			85.0	127.9	112.8	78.4	68.3	52.3	45.7	95.9
Rasi-393			83.8	126.8	110.8	77.9	68.3	52.8	46.0	96.0
Seedtech 2324 (C)			82.4	127.0	112.0	78.3	68.5	52.1	46.6	97.3
Buland (C)			86.4	125.7	109.8	79.9	69.2	52.4	46.5	96.5
Bio 9681 (C)			81.1	127.0	110.8	75.1	64.6	52.1	45.6	97.3
CD at 5%			1.60	0.70	NS	0.74	0.89	NS	NS	0.7
CV (%)			2.39	0.68	2.3	1.19	1.64	1.81	59.3	1.0

Density	Nutrient management	Genotypes	Days to maturity		Test weight 100 seed					Bareness (%)
			Bahraich	Dholl	Bahraich	Kalyani	Karim.	Dharwad	Vagarai	
60x20 cm (Normal)	200:65:80	GK 3118	164.0	150.7	22.0	28.5	25.5	31.4	33.0	0.56
		KH-3021	164.0	152.7	23.8	28.8	25.9	27.5	36.3	0.37
		KH-2192	162.3	149.7	22.2	29.3	29.7	32.2	31.3	0.73
		CP.999	159.3	151.7	22.2	34.8	20.5	25.9	32.0	0.77
		CP.333	158.7	154.0	22.2	32.3	23.7	24.3	34.7	0.80
		Rasi-864	158.3	156.7	22.4	28.5	26.7	21.3	36.7	0.70
		CP.111	159.7	154.3	22.7	29.7	29.8	24.2	32.3	0.73
		Rasi-950	156.3	153.7	23.2	28.7	27.9	22.0	37.3	0.63
		CP.838	159.7	153.0	23.4	28.5	25.0	24.1	33.0	0.72
		KMH-1411	158.3	149.7	22.1	28.3	26.5	23.5	35.0	0.59
		DKC9161 (IM8222)	156.7	154.7	23.6	32.5	28.5	28.1	36.7	0.70
		GK-3155	156.0	150.3	22.1	29.9	25.4	24.0	36.7	0.80
		DMRH 1308	160.0	152.3	22.5	31.9	22.0	30.9	30.3	0.77
		HTMH-5108	161.7	150.3	22.3	27.5	27.7	27.5	36.0	0.77
		X35F880	159.0	154.3	22.0	36.5	33.6	30.0	38.3	0.70
HTMH 5202	160.7	155.0	21.9	28.8	29.4	27.5	33.3	0.73		
Rasi-393	157.7	155.7	21.9	28.8	23.7	23.2	36.7	0.70		

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Density	Nutrient management	Genotypes	Days to maturity		Test weight 100 seed					Bareness (%)
			Bahralch	Dholl	Bahralch	Kalyani	Karim.	Dharwad	Vagaral	Bahralch
60x15 cm (High)	250:80:100	Seedtech 2324 (C)	165.0	151.3	22.2	27.9	25.3	28.2	34.0	0.77
		Buland (C)	158.7	153.3	21.8	29.0	21.6	17.7	36.0	0.73
		Bio 9681 (C)	161.3	151.3	21.6	28.8	23.9	25.9	36.7	0.77
		GK 3118	165.7	156.0	22.4	29.0	25.5	30.8	35.0	0.33
		KH-3021	162.7	149.7	23.9	29.3	26.1	25.9	37.3	0.50
		KH-2192	163.7	154.7	22.9	30.0	29.1	31.4	34.0	0.77
		CP.999	161.0	153.0	22.7	35.6	23.5	25.3	29.7	0.90
		CP.333	161.7	155.7	22.7	31.4	24.5	27.6	32.3	0.73
		Rasi-864	160.7	153.0	22.8	29.2	28.1	23.7	36.7	0.73
		CP.111	161.3	154.7	23.0	29.9	29.0	21.9	39.0	0.77
		Rasi-950	159.3	152.0	23.6	28.9	26.1	19.5	41.3	0.67
		CP.838	159.0	152.3	23.2	29.2	22.6	26.0	38.7	0.72
		KMH-1411	162.0	152.3	22.8	28.4	25.1	21.9	35.7	0.40
		DKC9161 (IM8222)	162.3	153.0	23.7	34.7	26.7	23.8	40.0	0.73
		GK-3155	156.7	149.0	22.2	30.6	28.3	24.0	36.7	0.67
		DMRH 1308	161.0	149.0	22.6	33.4	20.9	23.5	37.3	0.77
		HTMH-5108	162.3	152.7	22.4	27.7	27.2	21.4	36.7	0.73
		X35F880	163.3	155.7	22.7	36.9	35.2	24.7	39.3	0.73
		HTMH 5202	162.3	152.7	22.3	29.5	29.2	26.1	40.0	0.77
		Rasi-393	161.0	152.3	22.5	29.3	23.5	19.6	30.3	0.77
		Seedtech 2324 (C)	164.3	152.7	22.7	28.3	25.0	26.1	37.3	0.73
		Buland (C)	160.0	152.0	22.1	29.3	25.9	15.2	30.3	0.73
		Bio 9681 (C)	162.7	153.7	21.7	29.2	21.9	21.0	39.3	0.73
		GK 3118	167.0	150.7	21.9	29.4	22.9	33.2	36.7	0.52
		KH-3021	166.3	153.0	23.6	29.6	21.3	30.6	30.7	0.57
		KH-2192	163.3	153.7	22.0	30.4	26.3	37.1	37.7	0.55
		CP.999	161.0	151.7	22.0	36.9	20.2	23.7	31.0	0.56
		CP.333	161.0	156.7	22.0	32.0	23.1	26.7	32.3	0.52
		Rasi-864	160.0	152.3	22.2	29.5	23.3	25.0	41.0	0.54
		CP.111	160.3	155.7	22.6	31.3	26.1	27.7	37.3	0.52
Rasi-950	158.7	155.7	23.1	28.4	23.1	20.0	40.7	0.54		
CP.838	161.7	150.0	23.1	29.5	22.4	22.4	36.7	0.68		
KMH-1411	160.3	150.3	21.9	28.9	21.1	25.8	28.7	0.67		
DKC9161 (IM8222)	158.7	150.0	23.4	35.5	25.5	33.8	29.7	0.52		
GK-3155	159.3	151.7	21.9	31.2	24.4	30.0	31.0	0.53		
DMRH 1308	162.3	149.0	22.3	33.5	24.1	34.0	29.7	0.53		
HTMH-5108	162.0	155.3	22.1	28.1	23.9	31.4	31.3	0.55		
X35F880	162.3	155.3	22.0	38.3	30.8	32.5	30.3	0.49		
HTMH 5202	163.3	156.0	21.8	30.0	28.6	31.6	33.7	0.52		
Rasi-393	160.3	151.0	21.7	29.8	26.8	25.8	36.7	0.52		
Seedtech 2324 (C)	162.7	152.7	22.1	28.8	26.1	33.1	31.0	0.53		
Buland (C)	161.0	150.0	21.7	29.7	21.1	14.4	26.0	0.52		

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Density	Nutrient management	Genotypes	Days to maturity		Test weight 100 seed					Bareness (%)
			Bahralch	Dholl	Bahralch	Kalyani	Karim.	Dharwad	Vagaral	Bahralch
		Bio 9681 (C)	163.0	154.7	21.4	29.8	24.2	26.0	27.7	0.53
	250:80:100	GK 3118	168.3	150.0	22.2	29.7	22.6	34.5	30.3	Cont...
		KH-3021	164.3	150.3	23.7	30.5	22.3	27.6	35.0	
		KH-2192	164.3	153.3	22.3	30.7	27.5	33.4	34.0	0.55
		CP.999	162.0	159.7	22.5	37.5	23.9	30.1	35.0	0.58
		CP.333	163.3	157.7	22.3	32.8	23.4	29.5	33.3	0.58
		Rasi-864	162.3	153.3	22.7	30.5	21.7	28.0	32.0	0.60
		CP.111	163.3	155.3	22.8	31.4	27.3	27.0	35.0	0.57
		Rasi-950	161.7	153.3	23.3	28.7	24.2	21.6	35.0	0.56
		CP.838	161.0	151.3	23.0	31.4	21.7	26.4	32.3	0.75
		KMH-1411	162.3	152.0	22.3	31.3	20.8	26.0	32.0	0.63
		DKC9161 (IM8222)	163.7	152.7	23.6	36.8	28.9	23.3	33.3	0.52
		GK-3155	160.3	153.0	22.1	30.8	24.5	27.2	35.7	0.51
		DMRH 1308	164.0	151.7	22.4	36.4	19.7	26.7	32.0	0.51
		HTMH-5108	164.7	153.7	22.3	28.3	24.3	25.0	36.0	0.54
		X35F880	165.3	156.0	22.5	40.3	31.5	23.7	34.0	0.47
		HTMH 5202	165.7	156.7	22.1	29.2	27.3	27.5	31.3	0.52
		Rasi-393	162.3	153.7	22.3	30.1	27.9	21.9	37.3	0.53
		Seedtech 2324 (C)	165.7	154.0	22.5	30.9	29.7	28.0	33.7	0.52
		Buland (C)	160.3	152.7	21.8	31.1	20.1	16.7	35.3	0.53
	Bio 9681 (C)	163.7	154.3	21.6	31.8	23.9	25.2	35.7	0.53	
Mean of location			161.7	153.0	22.5	30.9	25.3	26.1	34.5	0.62
60x20 cm (Normal)			160.8	152.8	22.6	30.2	26.1	24.9	35.6	0.70
60x15 cm (High)			162.6	153.3	22.4	31.5	24.5	27.3	33.5	0.55
CD at 5%			0.27	NS	0.04	0.67	0.72	NS	NS	NS
CV (%)			0.30	2.3	0.33	3.92	5.1	12.7	15.4	14.9
200:65:80			160.8	152.8	22.3	30.5	25.2	27.1	33.9	0.62
250:80:100			162.5	153.3	22.6	31.2	25.4	25.2	35.1	0.62
CD at 5%			1.51	NS	0.18	0.26	NS	1.4	NS	NS
CV (%)			2.61	2.3	2.19	2.35	15.0	7.99	45.0	16.9
GK 3118			166.3	151.8	22.1	29.2	24.1	32.5	33.8	0.45
KH-3021			164.3	151.4	23.7	29.6	23.9	27.9	34.8	0.53
KH-2192			163.4	152.8	22.3	30.1	28.2	33.5	34.3	0.65
CP.999			160.8	154.0	22.4	36.2	22.0	26.2	31.9	0.70
CP.333			161.2	156.0	22.3	32.1	23.7	27.0	33.2	0.66
Rasi-864			160.3	153.8	22.5	29.4	25.0	24.5	36.6	0.64
CP.111			161.2	155.0	22.8	30.6	28.1	25.2	35.9	0.65
Rasi-950			159.0	153.7	23.3	28.7	25.3	20.8	38.6	0.60
CP.838			160.3	151.7	23.2	29.6	22.9	24.7	35.2	0.72
KMH-1411			160.8	151.1	22.3	29.2	23.4	24.3	32.8	0.57
DKC9161 (IM8222)			160.3	152.6	23.6	34.9	27.4	27.2	34.9	0.62
GK-3155			158.1	151.0	22.1	30.6	25.7	26.3	35.0	0.63
DMRH 1308			161.8	150.5	22.4	33.8	21.7	28.8	32.3	0.64
HTMH-5108			162.7	153.0	22.3	27.9	25.8	26.3	35.0	0.65

A-22

Density	Nutrient management	Genotypes	Days to maturity		Test weight 100 seed					Bareness (%)
			Bahraich	Dholl	Bahraich	Kalyani	Karim.	Dharwad	Vagarai	Bahraich
X35F880			162.5	155.3	22.3	38.0	32.8	27.7	35.5	0.60
HTMH 5202			163.0	155.1	22.0	29.4	28.6	28.2	34.6	0.64
Rasi-393			160.3	153.2	22.1	29.5	25.5	22.6	35.3	Cont... 0.54
Seedtech 2324 (C)			164.4	152.7	22.3	29.0	26.5	28.8	34.0	
Buland (C)			160.0	152.0	21.9	29.8	22.2	16.0	31.9	0.63
Bio 9681 (C)			162.7	153.5	21.6	29.9	23.5	24.5	34.8	0.64
CD at 5%			0.96	2.0	1.10	0.80	2.30	2.1	NS	0.1
CV (%)			0.73	1.6	0.61	3.22	11.3	8.21	14.6	14.1

Density	Nutrient management	Genotypes	Net returns (Rs./ha)						
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai	
60x20 cm (Normal)	200:65:80	GK 3118	46834	53619	62996	13785	38209	41192	
		KH-3021	49356	66804	66543	46611	33949	46433	
		KH-2192	36074	58480	62031	47876	36286	35176	
		CP.999	30360	52523	88815	16707	38722	25613	
		CP.333	40604	54066	85709	14143	33826	39066	
		Rasi-864	39008	55926	60885	29543	37516	42032	
		CP.111		55650	59286	24100	36151	31134	
		Rasi-950	42715	59981	47290	3959	32062	38895	
		CP.838	56512	58382	73643	19969	37408	43467	
		KMH-1411	44671	49736	76946	18257	35281	30762	
		DKC9161	42355	52012	87023	77498	35182	41463	
		GK-3155	42149	52784	69996	14272	38143	40807	
		DMRH 1308	71802	53566	86392	19257	34681	32320	
		HTMH-5108	49408	53339	68426	38267	35527	29051	
		X35F880	47503	51350	89115	25383	33685	42023	
		HTMH 5202	38597	45320	63843	24887	38056	27043	
	Rasi-393	55740	44328	65641	-13867	36700	33160		
	Seedtech 2324 (C)	42972	45913	50009	9574	34669	25416		
	Buland (C)	41480	49912	71010	7793	22255	27931		
	Bio 9681 (C)	13898	47358	77009	15178	38152	34949		
		250:80:100	GK 3118	57012	63516	63893	7638	36182	22382
			KH-3021	50885	67808	82050	22204	33446	19212
			KH-2192	46509	56625	66074	33784	33575	30972
			CP.999	33639	60250	89803	-9888	33320	42618
			CP.333	41207	58387	85413	-298	35234	48901
			Rasi-864	39971	61540	53374	2245	35432	35076
			CP.111		62206	52574	-7622	33953	25661
			Rasi-950	45274	60904	52074	5792	35372	22887
	CP.838		58504	54871	71083	-3605	36056	34323	
	KMH-1411		47436	59408	80671	22660	33803	26689	
	DKC9161		49135	63428	87583	38932	32993	43835	
	GK-3155		42185	56024	70006	8086	33866	34280	
	DMRH 1308	74464	55239	86190	7470	35078	32131		
	HTMH-5108	53356	55256	68498	21084	35420	26501		
	X35F880	51966	60140	93466	46670	33323	60775		

A-23

Density	Nutrient management	Genotypes	Net returns (Rs./ha)					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x15 cm (High)		HTMH 5202	43781	55540	67888	16522	36914	22966
		Rasi-393	57990	52490	67407	-12357	35546	44342
		Seedtech 2324 (C)	47076	56068	49906	12085	35606	Cont...
		Buland (C)	44141	52463	72421	-11852	16721	32022
		Bio 9681 (C)	19739	50068	75023	12711	35639	26816
	200:65:80	GK 3118	49924	58452	83801	-10986	42829	57248
		KH-3021	50799	71234	86771	1326	39718	51346
		KH-2192	37929	59982	75283	29834	38968	54466
		CP.999	40039	55290	92205	-7687	40279	60670
		CP.333	51005	56843	87853	-9504	41338	47790
		Rasi-864	38032	58516	60642	-2661	38434	59541
		CP.111		57856	62118	-3544	37558	54978
		Rasi-950	60889	67319	62372	-14360	39172	51920
		CP.838	74944	64444	73361	-5767	39313	54851
		KMH-1411	72473	61696	84081	8596	40273	63006
		DKC9161	58006	57610	90954	13742	39526	30325
		GK-3155	55741	61447	80414	1586	37894	47278
		DMRH 1308	68148	60019	89099	32762	40231	53880
		HTMH-5108	58470	59035	71671	32970	41389	72570
		X35F880	56565	58856	95593	9271	41737	66182
		HTMH 5202	45702	53070	54870	19948	38824	48332
		Rasi-393	66604	52930	65641	4452	40999	47553
		Seedtech 2324 (C)	58212	51248	50009	13033	40693	72311
		Buland (C)	53939	53212	71010	-15062	22999	78419
		Bio 9681 (C)	24543	55679	77009	-16789	38599	65981
	250:80:100	GK 3118	60617	65881	96316	-21333	43064	59637
		KH-3021	54388	70199	93996	-3729	40790	47256
		KH-2192	53359	63415	88383	11734	43160	55428
		CP.999	57683	67628	100870	-22627	41627	62428
		CP.333	73127	65122	98483	2088	44129	46355
		Rasi-864	61596	67363	90573	-7502	42095	61125
		CP.111		66203	95413	-12698	40820	66541
		Rasi-950	74826	68543	95116	-26083	42632	45256
CP.838		75959	60125	93996	16224	40250	74722	
KMH-1411		81828	61897	95960	-1171	41882	54658	
DKC9161		69060	67532	100270	25052	41567	70098	
GK-3155		57683	65484	92156	-5621	42641	62686	
DMRH 1308		72510	62541	99808	8905	43256	49120	
HTMH-5108		65972	59965	91866	6537	42515	53223	
X35F880		69730	67207	101530	15427	42002	59637	
HTMH 5202		46357	62632	91083	6190	42725	41910	
Rasi-393		75856	58083	94613	-11865	41183	69857	
Seedtech 2324 (C)		63089	56068	89470	17582	44975	61803	
Buland (C)	61235	56051	97520	-22357	21368	76800		
Bio 9681 (C)	47902	55395	96911	-9258	42881	75186		
Mean of location			52382.2	58316.9	78338.7	8901.3	37378.4	46406.7
60x20 cm (Normal)			45692	55582	71200	16636	34598	34504
60x15 cm (High)			59072	61052	85477	1166	40158	58309
CD at 5%			5223	518.7	3197.6	7370.61	1991.7	17218.8

A-24

Density	Nutrient management	Genotypes	Net returns (Rs./ha)					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
CV (%)			17.5	1.60	7.35	149.1	2.65	66.8
200:65:80			48790	55895	73184	13359	37181	46164
250:80:100			55975	60739	83493	4444	37576	Cont...
CD at 5%			4949	4639.1	1681.2	NS	NS	NS
CV (%)			25.7	22.2	5.99	473.1	10.89	33.9
GK 3118			53597	60367	76752	-2724	40071	45115
KH-3021			51357	69011	82340	16603	36976	41062
KH-2192			43468	59625	72943	30807	37997	44011
CP.999			40430	58923	92923	-5874	38487	47832
CP.333			51486	58604	89365	1608	38632	45528
Rasi-864			44652	60837	66368	5406	38369	49443
CP.111				60479	67348	59	37121	44578
Rasi-950			55926	64187	64213	-7673	37310	39740
CP.838			66480	59456	78021	6705	38257	51841
KMH-1411			61602	58184	84414	12086	37810	43779
DKC9161 (IM8222)			54639	60146	91457	38806	37317	46430
GK-3155			49439	58935	78143	4581	38136	46263
DMRH 1308			71731	57841	90372	17098	38312	41862
HTMH-5108			56801	56899	75115	24714	38713	45336
X35F880			56441	59388	94926	24188	37687	57154
HTMH 5202			43609	54141	69421	16887	39130	35063
Rasi-393			64047	51958	73326	-8409	38607	48728
Seedtech 2324 (C)			52837	52324	59849	13068	38986	49844
Buland (C)			50199	52909	77990	-10369	20836	53793
Bio 9681 (C)			26521	52125	81488	460	38818	50733
CD at 5%			8214.4	2903.4	4776.5	13401.3	3070.6	NS
CV (%)			19.4	6.2	7.56	186.7	8.25	38.0

Density	Nutrient management	Genotypes	BC ratio					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x20 cm (Normal)	200:65:80	GK 3118	0.84	2.55	1.46	1.20	2.22	1.51
		KH-3021	0.89	2.94	1.54	1.70	2.08	1.58
		KH-2192	0.65	2.73	1.42	1.72	2.16	1.44
		CP.999	0.55	2.56	2.06	1.24	2.24	1.32
		CP.333	0.73	2.60	1.99	1.20	2.08	1.49
		Rasi-864	0.70	2.65	1.41	1.44	2.20	1.52
		CP.111		2.65	1.37	1.35	2.15	1.39
		Rasi-950	0.77	2.78	1.10	1.05	2.02	1.48
		CP.838	1.02	2.66	1.71	1.29	2.19	1.54
		KMH-1411	0.81	2.47	1.79	1.26	2.13	1.38
		DKC9161 (IM8222)	0.76	2.54	2.02	2.17	2.12	1.52
		GK-3155	0.76	2.53	1.61	1.20	2.22	1.51
		DMRH 1308	1.29	2.55	2.00	1.28	2.11	1.40
		HTMH-5108	0.89	2.55	1.58	1.57	2.13	1.36
		X35F880	0.86	2.52	2.07	1.37	2.08	1.52
		HTMH 5202	0.70	2.34	1.48	1.37	2.21	1.34
		Rasi-393	1.01	2.31	1.52	0.77	2.17	1.41
		Seedtech 2324 (C)	0.77	2.36	1.16	1.13	2.11	1.32
Buland (C)	0.75	2.45	1.65	1.10	1.71	1.35		

Cont...

A-25

Density	Nutrient management	Genotypes	BC ratio					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x15 cm (High)	250:80:100	Bio 9681 (C)	0.25	2.37	1.79	1.22	2.22	1.43
		GK 3118	1.01	2.80	1.41	1.10	2.09	1.27
		KH-3021	0.90	2.93	1.82	1.30	2.00	1.23
		KH-2192	0.82	2.61	1.47	1.47	2.01	1.38
		CP.999	0.59	2.68	1.99	0.84	2.00	1.52
		CP.333	0.73	2.63	1.90	0.98	2.06	1.59
		Rasi-864	0.71	2.72	1.18	1.02	2.06	1.43
		CP.111		2.73	1.16	0.88	2.02	1.31
		Rasi-950	0.80	2.70	1.15	1.07	2.06	1.28
		CP.838	1.03	2.59	1.58	0.93	2.08	1.42
		KMH-1411	0.84	2.66	1.79	1.31	2.02	1.32
		DKC9161 (IM8222)	0.87	2.77	1.94	1.55	1.99	1.53
		GK-3155	0.75	2.59	1.55	1.10	2.02	1.42
		DMRH 1308	1.32	2.57	1.92	1.09	2.05	1.39
		HTMH-5108	0.94	2.57	1.52	1.29	2.06	1.32
		X35F880	0.92	2.68	2.08	1.65	2.00	1.74
		HTMH 5202	0.77	2.55	1.25	1.22	2.11	1.28
		Rasi-393	1.02	2.47	1.50	0.81	2.07	1.54
		Seedtech 2324 (C)	0.83	2.57	1.10	1.16	2.07	1.48
	Buland (C)	0.78	2.50	1.61	0.82	1.50	1.39	
	Bio 9681 (C)	0.35	2.42	1.67	1.17	2.07	1.33	
	GK 3118	0.83	2.69	1.94	0.83	2.37	1.71	
	KH-3021	0.84	3.07	2.01	1.01	2.27	1.64	
	KH-2192	0.63	2.73	1.75	1.42	2.24	1.68	
	CP.999	0.66	2.64	2.14	0.87	2.29	1.75	
	CP.333	0.85	2.68	2.04	0.85	2.32	1.59	
	Rasi-864	0.63	2.73	1.41	0.95	2.23	1.74	
	CP.111		2.71	1.44	0.93	2.20	1.68	
	Rasi-950	1.01	3.00	1.45	0.78	2.25	1.65	
	CP.838	1.24	2.83	1.70	0.90	2.25	1.68	
	KMH-1411	1.20	2.83	1.95	1.11	2.29	1.78	
	DKC9161 (IM8222)	0.96	2.71	2.11	1.19	2.26	1.38	
	GK-3155	0.92	2.78	1.86	1.01	2.21	1.59	
DMRH 1308	1.13	2.74	2.06	1.46	2.28	1.67		
HTMH-5108	0.97	2.71	1.66	1.46	2.32	1.90		
X35F880	0.94	2.74	2.22	1.12	2.33	1.82		
HTMH 5202	0.76	2.57	1.27	1.27	2.24	1.60		
Rasi-393	1.10	2.56	1.52	1.05	2.31	1.59		
Seedtech 2324 (C)	0.97	2.52	1.16	1.17	2.30	1.90		
Buland (C)	0.89	2.54	1.65	0.77	1.73	1.97		
Bio 9681 (C)	0.41	2.52	1.79	0.74	2.23	1.82		
GK 3118	0.99	2.87	2.14	0.69	2.29	1.72		
KH-3021	0.89	3.00	2.17	0.93	2.22	1.57		
KH-2192	0.87	2.80	1.96	1.15	2.30	1.67		
CP.999	0.94	2.89	2.24	0.67	2.25	1.76		
CP.333	1.19	2.82	2.19	1.01	2.33	1.56		
Rasi-864	1.00	2.97	2.01	0.88	2.26	1.74		
CP.111		2.85	2.12	0.81	2.23	1.81		
Rasi-950	1.22	2.91	2.11	0.62	2.28	1.55		
CP.838	1.24	2.74	2.09	1.22	2.21	1.91		

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A-26

Density	Nutrient management	Genotypes	BC ratio					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
		KMH-1411	1.33	2.73	2.13	0.97	2.26	1.66
		DKC9161 (IM8222)	1.12	2.88	2.22	1.34	2.25	1.85
		GK-3155	0.94	2.86	2.05	0.91	2.28	1.76
		DMRH 1308	1.18	2.78	2.22	1.11	2.30	1.60
		HTMH-5108	1.07	2.70	2.04	1.08	2.28	1.65
		X35F880	1.13	2.88	2.26	1.20	2.26	1.72
		HTMH 5202	0.75	2.75	2.02	1.07	2.28	1.51
		Rasi-393	1.23	2.62	2.10	0.82	2.24	1.85
		Seedtech 2324 (C)	1.03	2.73	1.99	1.23	2.35	1.75
		Buland (C)	1.00	2.60	2.17	0.67	1.64	1.93
		Bio 9681 (C)	0.78	2.57	2.15	0.85	2.29	1.91
Mean of location			0.89	2.68	1.77	1.12	2.16	1.57
60x20 cm (Normal)			0.82	2.60	1.61	1.23	2.07	1.42
60x15 cm (High)			0.97	2.76	1.94	1.00	2.24	1.72
CD at 5%			0.10	0.0	7.2	0.10	0.05	0.21
CV (%)			18.9	0.43	0.05	16.0	1.23	24.4
200:65:80			0.84	2.64	1.70	1.19	2.19	1.57
250:80:100			0.94	2.72	1.85	1.05	2.13	1.57
CD at 5%			0.08	NS	0.0	NS	NS	NS
CV (%)			25.3	8.8	0.04	52.9	5.93	12.3
GK 3118			0.92	2.73	1.74	0.95	2.24	1.55
KH-3021			0.88	2.98	1.89	1.23	2.15	1.51
KH-2192			0.74	2.72	1.65	1.44	2.18	1.54
CP.999			0.69	2.69	2.11	0.91	2.19	1.59
CP.333			0.87	2.68	2.03	1.01	2.20	1.56
Rasi-864			0.76	2.77	1.50	1.07	2.19	1.61
CP.111				2.74	1.52	0.99	2.15	1.55
Rasi-950			0.95	2.85	1.45	0.88	2.15	1.49
CP.838			1.13	2.71	1.77	1.09	2.19	1.64
KMH-1411			1.04	2.67	1.91	1.16	2.17	1.54
DKC9161 (IM8222)			0.93	2.72	2.07	1.56	2.16	1.57
GK-3155			0.84	2.69	1.77	1.06	2.18	1.57
DMRH 1308			1.23	2.66	2.05	1.24	2.19	1.51
HTMH-5108			0.97	2.63	1.70	1.35	2.20	1.56
X35F880			0.96	2.71	2.16	1.34	2.17	1.70
HTMH 5202			0.75	2.56	1.51	1.23	2.21	1.43
Rasi-393			1.09	2.49	1.66	0.86	2.20	1.60
Seedtech 2324 (C)			0.90	2.54	1.35	1.17	2.21	1.61
Buland (C)			0.85	2.52	1.77	0.84	1.65	1.66
Bio 9681 (C)			0.45	2.47	1.85	1.00	2.20	1.62
CD at 5%			0.14	0.1	0.0	0.20	0.10	NS
CV (%)			19.5	3.0	0.10	21.9	4.44	13.8

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A-27

Density	Nutrient management	Genotypes	Ear height (cm)			Cob length (cm)			Cob girth (cm)
			Karimnagar	Ludhiana	Dholi	Dharwad	Karimnagar	Delhi	Karimnagar
60x20 cm (Normal)	200:65:80	GK 3118	112.0	74.3	73.7	17.4	16.9	15.1	14.3
		KH-3021	102.7	79.0	91.7	18.0	18.8	16.5	15.0
		KH-2192	99.7	74.3	64.0	18.4	17.4	15.3	15.6
		CP.999	96.7	75.7	62.7	16.4	19.5	16.2	14.3
		CP.333	105.7	75.3	73.7	16.0	17.6	17.0	15.7
		Rasi-864	94.7	74.3	87.3	16.4	17.1	15.4	15.3
		CP.111	111.7		76.7	15.5	17.2		14.7
		Rasi-950	111.3	88.3	61.7	15.8	16.4	15.7	14.9
		CP.838	103.3	85.0	63.0	15.9	16.1	15.6	15.4
		KMH-1411	110.0	77.7	78.3	15.2	17.9	16.4	15.7
		DKC9161 (IM8222)	96.3	81.7	62.0	18.2	19.7	16.9	15.9
		GK-3155	99.0	77.3	62.7	13.5	18.0	15.3	15.3
		DMRH 1308	109.0	69.3	80.7	15.9	17.1	16.0	14.3
		HTMH-5108	95.7	72.7	83.7	16.3	17.5	16.0	14.9
		X35F880	98.0	97.7	67.7	18.3	17.5	16.4	14.8
		HTMH 5202	97.3	84.0	56.7	17.9	17.1	15.8	15.8
		Rasi-393	105.0	82.3	73.7	15.4	14.7	15.3	15.3
	Seedtech 2324 (C)	106.0	66.7	88.7	15.9	16.7	15.0	14.6	
	Buland (C)	127.3	80.3	63.7	11.9	16.0	15.5	14.5	
	Bio 9681 (C)	92.7	82.7	67.3	14.9	16.8	14.9	15.2	
	250:80:100	GK 3118	106.7	79.0	76.7	16.9	16.9	16.3	15.0
		KH-3021	96.0	84.3	85.7	17.3	19.0	17.3	14.8
		KH-2192	92.0	79.0	75.0	14.4	18.1	15.0	15.5
		CP.999	92.7	82.0	59.3	18.0	18.1	15.8	13.5
		CP.333	93.0	83.7	83.7	16.9	16.7	15.5	16.0
		Rasi-864	89.0	81.0	85.3	15.9	16.5	15.8	14.5
		CP.111	104.3		58.0	15.1	16.9		14.7
		Rasi-950	105.3	88.7	65.0	15.5	16.3	15.6	14.8
		CP.838	97.7	94.7	75.0	16.8	16.7	16.7	15.8
		KMH-1411	109.0	82.7	62.0	14.3	17.0	15.7	14.9
		DKC9161 (IM8222)	90.3	83.0	81.0	16.0	17.5	16.5	14.7
		GK-3155	92.7	80.7	62.3	17.2	17.2	15.1	14.8
		DMRH 1308	97.7	82.0	86.0	14.2	16.9	15.6	14.1
HTMH-5108		99.3	79.3	90.3	15.5	18.1	15.6	15.3	
X35F880		98.7	93.7	76.7	16.4	18.7	15.5	15.3	
HTMH 5202		96.3	87.7	61.3	16.8	17.3	15.7	15.7	
Rasi-393	96.3	87.0	77.0	15.2	13.9	14.4	15.0		
Seedtech 2324 (C)	96.0	73.3	85.7	15.8	17.1	15.9	15.1		
Buland (C)	101.3	86.3	75.0	12.9	16.5	15.7	15.1		
Bio 9681 (C)	96.7	83.3	59.7	14.0	16.3	14.8	15.1		
60x1.5 cm (High)	200:65:80	GK 3118	119.7	79.7	68.0	19.2	16.4	15.0	13.7
		KH-3021	100.3	85.0	85.7	19.2	18.0	16.0	14.0
		KH-2192	97.7	79.3	90.3	18.6	16.5	16.3	15.3
		CP.999	96.0	86.0	76.7	17.9	16.6	15.3	14.7
		CP.333	110.0	85.0	61.3	16.4	16.7	15.4	14.7
		Rasi-864	97.0	84.0	76.7	17.4	15.6	15.4	13.7
		CP.111	109.0		85.3	16.8	16.4		14.3

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Density	Nutrient management	Genotypes	Ear height (cm)			Cob length (cm)			Cob girth (cm)
			Karimnagar	Ludhiana	Dholi	Dharwad	Karimnagar	Delhi	Karimnagar
		Rasi-950	97.3	89.3	75.3	17.7	16.2	17.1	13.4
		CP.838	108.0	96.0	59.3	17.0	15.1	14.9	14.6
		KMH-1411	107.3	80.0	83.7	15.7	15.7	17.3	15.0
		DKC9161 (IM8222)	91.7	85.7	82.0	19.5	18.2	17.1	Cont...
		GK-3155	103.3	82.7	57.7	13.4	16.5	14.8	
		DMRH 1308	111.0	73.0	64.7	18.1	16.8	16.2	14.9
		HTMH-5108	98.0	77.0	75.0	18.2	16.9	16.2	14.5
		X35F880	98.3	98.7	61.7	21.1	15.4	16.8	14.9
		HTMH 5202	108.3	84.7	80.7	20.8	17.3	14.5	15.6
		Rasi-393	107.3	87.3	62.3	16.1	16.5	14.3	15.5
		Seedtech 2324 (C)	107.7	78.0	86.0	19.5	16.5	16.1	14.8
		Buland (C)	113.7	91.7	90.3	13.5	15.7	15.5	14.7
		Bio 9681 (C)	106.3	91.7	76.7	16.0	14.7	15.2	13.8
	250:80:100	GK 3118	120.3	86.0	77.0	19.9	16.5	16.8	13.7
		KH-3021	98.0	86.7	61.7	18.6	16.8	15.9	14.4
		KH-2192	101.0	86.3	63.0	18.0	16.1	15.3	15.3
		CP.999	101.0	87.3	78.0	18.9	16.3	16.6	13.8
		CP.333	103.7	89.0	63.3	17.6	15.6	15.3	15.0
		Rasi-864	101.7	84.0	62.3	16.4	14.9	15.1	13.5
		CP.111	111.7		80.7	16.8	15.7		14.1
		Rasi-950	90.3	92.7	83.7	16.3	15.1	14.8	13.9
		CP.838	108.0	98.3	68.0	18.2	15.1	14.8	14.9
		KMH-1411	107.7	88.7	56.7	15.8	15.1	15.4	14.1
		DKC9161 (IM8222)	95.0	94.0	73.7	17.9	17.0	16.3	14.6
		GK-3155	90.0	87.3	91.7	17.5	15.6	15.0	14.0
		DMRH 1308	107.0	81.0	63.7	15.5	16.4	16.8	13.9
		HTMH-5108	102.7	83.3	63.7	17.6	17.6	16.1	14.4
		X35F880	108.7	102.7	73.3	17.2	16.4	16.0	14.7
		HTMH 5202	100.7	87.7	87.3	20.4	17.2	14.8	14.9
		Rasi-393	118.0	91.3	76.7	15.5	15.0	15.3	14.9
		Seedtech 2324 (C)	109.3	79.3	61.7	16.7	16.9	17.3	14.3
		Buland (C)	112.0	92.3	63.0	13.3	14.3	15.6	13.5
		Bio 9681 (C)	100.0	92.7	81.0	14.7	15.3	15.3	14.9
Mean of location			102.5	84.1	73.1	16.6	16.7	15.7	14.7
60x20 cm (Normal)			100.6	81.3	73.0	15.9	17.2	15.8	15.0
60x15 cm (High)			104.4	87.0	73.2	17.4	16.2	15.7	14.4
CD at 5%			NS	4.0	NS	NS	0.18	NS	0.41
CV (%)			7.8	8.2	3.2	9.45	1.90	1.2	5.03
200:65:80			104.1	81.9	73.5	16.9	16.8	15.8	14.8
250:80:100			100.9	86.4	72.8	16.4	16.5	15.7	14.7
CD at 5%			NS	1.6	NS	NS	NS	NS	NS
CV (%)			16.0	5.1	12.2	14.1	11.5	1.8	4.81
GK 3118			114.7	79.8	73.8	18.3	16.7	15.8	14.2
KH-3021			99.3	83.8	81.2	18.2	18.2	16.4	14.6
KH-2192			97.6	79.8	73.1	17.3	17.0	15.5	15.4
CP.999			96.6	82.8	69.2	17.8	17.6	16.0	14.1
CP.333			103.1	83.3	70.5	16.7	16.6	15.8	15.3
Rasi-864			95.6	80.8	77.9	16.5	16.1	15.4	14.2
CP.111			109.2		75.2	16.0	16.6		14.5
Rasi-950			101.1	89.8	71.4	16.3	16.0	15.8	14.2

A-29

Density	Nutrient management	Genotypes	Ear height (cm)			Cob length (cm)			Cob girth (cm)
			Karimnagar	Ludhiana	Dholi	Dharwad	Karimnagar	Delhi	Karimnagar
		CP.838	104.3	93.5	66.3	16.9	15.8	15.5	15.2
		KMH-1411	108.5	82.3	70.2	15.2	16.4	16.2	14.9
		DKC9161 (IM8222)	93.3	86.1	74.7	17.9	18.1	16.7	15.0
		GK-3155	96.3	82.0	68.6	15.4	16.8	15.0	Cont...
		DMRH 1308	106.2	76.3	73.8	15.9	16.8	16.1	14.3
		HTMH-5108	98.9	78.1	78.2	16.9	17.6	16.0	14.8
		X35F880	100.9	98.2	69.8	18.2	17.0	16.2	14.9
		HTMH 5202	100.7	86.0	71.5	19.0	17.2	15.2	15.5
		Rasi-393	106.7	87.0	72.4	15.5	15.0	14.8	15.2
		Seedtech 2324 (C)	104.8	74.3	80.5	17.0	16.8	16.1	14.7
		Buland (C)	113.6	87.7	73.0	12.9	15.6	15.6	14.5
		Bio 9681 (C)	98.9	87.6	71.2	14.9	15.8	15.0	14.8
		CD at 5%	7.35	4.3	8.2	1.8	0.78	0.9	0.55
		CV (%)	8.9	6.34	13.9	11.1	5.83	5.5	4.66

A-30

Table 2. Performance of pre release medium maturity genotype in *rab1* under varying planting density and Nutrient managements levels in different location.

Density	Nutrient management	Genotypes	Grain yield (kg/ha)								
			Delhi	Ludhiana	Bahraich	Dholl	Kalyani	Karimnagar	Dharwad	Vagarai	Banswara
60x20 cm (Normal)	200:65:80	BL 900	11539	8007	5613	7746	9675	6660	5525	10306	7111
		BL 147	11046	7581	5575	5766	10335	6813	5970	7974	7926
		IM8303			5641	8384	9302	6031	5560	8157	6741
		BL 798	10043	5915	5683	6332	9450	7440	4300	8955	10074
		DMRH 1301	9389	7119	5700	7511	9264	6331	3190	8807	7889
		KH-517	7532	6856	5720	6410	8227	6582	5900	7890	5815
		Bio 9637 (C)	4998	6378	5837	7228	9923	5887	5630	7749	5667
	250:80:100	BL 900	10091	8270	5938	8310	9963	7405	5725	10915	7296
		BL 147	10279	7519	5948	6376	10566	6910	6125	9492	8741
		IM8303			5992	9651	9176	6422	5615	8113	6926
		BL 798	10573	7641	5973	7293	9623	7530	4540	8727	10407
		DMRH 1301	10846	8511	6215	8897	10875	6902	3325	10064	8000
		KH-517	8220	7674	5938	6752	8465	7079	6145	10286	6296
		Bio 9637 (C)	6396	6581	5998	7809	10222	5962	5730	10286	6037
60x15 cm (High)	200:65:80	BL 900	10240	8804	6463	5864	11752	4958	6145	8901	7926
		BL 147	9445	8463	6418	6278	12817	5591	6435	8322	8704
		IM8303			6543	9627	9823	5860	5985	9296	8222
		BL 798	8644	8863	6392	7837	11378	6419	4565	8210	11370
		DMRH 1301	10763	9678	6458	6982	11990	6095	3760	8239	8815
		KH-517	7506	7919	6458	8567	12348	6492	6370	7753	6889
		Bio 9637 (C)	5061	7863	6110	6855	10717	5430	6180	7108	6607
	250:80:100	BL 900	12799	9170	6710	5980	11987	5082	6280	9842	8889
		BL 147	10930	8741	6843	9081	13840	6378	6710	8644	9074
		IM8303			6827	11306	11178	5996	6040	7665	7778
		BL 798	11091	9056	6989	8021	12875	7423	4850	8767	11711
		DMRH 1301	10928	9800	6870	7137	12536	6136	3685	8613	8915
		KH-517	8195	8485	6893	7993	13327	7008	6540	7308	7074
		Bio 9637 (C)	6315	8026	6945	5680	12186	5938	6205	7662	6956
Mean of location		9286.3	8038.3	6192	7559.9	10850.7	6384.2	5465.4	8716.0	7994.8	
60x20 cm (Normal)		9246	7338	5801	7462	9648	6711	5234	9123	7494.7	
60x15 cm (High)		9326	8739	6582	7658	12054	6058	5696	8309	8495.0	
CD at 5%		NS	600.3	50.1	153.8	348.9	NS	NS	791.9	NS	
CV (%)		29.3	7.4	0.92	2.2	3.4	17.1	3.4	9.7	27.1	
200:65:80		8851	7787	5974	7242	10500	6185	5394	8405	7840	
250:80:100		9722	8290	6409	7878	11201	6583	5537	9027	8150	
CD at 5%		NS	253.4	51.8	91.8	221.3	353.9	NS	NS	NS	
CV (%)		12.7	4.8	1.48	2.0	3.4	9.1	2.4	22.3	20.1	
BL 900		11167	8563	6181	6975	10844	6026	5919	9991	7806	
BL 147		10425	8076	6196	6875	11890	6423	6310	8608	8611	
IM8303				6251	9742	9870	6077	5800	8308	7417	
BL 798		10088	7869	6259	7371	10831	7203	4564	8665	10891	
DMRH 1301		10482	8777	6311	7632	11166	6366	3490	8931	8405	
KH-517		7863	7733	6253	7431	10592	6790	6239	8309	6519	
Bio 9637 (C)		5692	7212	6223	6893	10762	5804	5936	8201	6317	
CD at 5%		1046.3	375.4	50.0	114.0	645.0	555.8	302.0	NS	903.4	
CV (%)		10.8	5.7	0.99	1.8	7.2	10.6	5.4	18.0	13.8	

Cont...

A-31

Density	Nutrient management	Genotypes	Cob yield (kg/ha)			Stover yield (kg/ha)				
			Karimnagar	Delhi	Dholi	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x20 cm (Normal)	200:65:80	BL 900	7506	13194	12667	6497	11433	9394	7700	7949
		BL 147	7742	12778	9422	6518	12567	9091	8240	6945
		IM8303	6685		13778	6558	10853	9470	7480	7203
		BL 798	8090	11667	10311	6578	11250	9899	6405	8841
		DMRH 1301	7518	10694	12133	6565	11467	9899	4630	8301
		KH-517	7466	8750	10356	6527	10203	9699	8040	7293
		Bio 9637 (C)	6424	5833	11644	6573	11496	8748	7735	6700
	250:80:100	BL 900	7814	11528	13333	6560	11996	9899	7955	7955
		BL 147	8056	11944	10222	6565	12783	9939	8345	7923
		IM8303	7392		15556	6568	10989	9596	7545	7766
		BL 798	9440	12222	11778	6575	11380	10990	6445	7648
		DMRH 1301	7509	12361	14400	6557	12599	10060	4745	7869
		KH-517	7735	9444	10889	6516	10567	9698	8245	7911
		Bio 9637 (C)	7003	7639	12489	6780	12170	10774	7875	8599
60x15 cm (High)	200:65:80	BL 900	5551	12569	9511	7640	12733	8687	7925	7867
		BL 147	6399	11111	10222	7628	14900	9596	8330	6636
		IM8303	6522		15111	7672	11528	10616	7640	7050
		BL 798	7390	10139	12756	7680	12700	9707	6355	6526
		DMRH 1301	7007	12361	11200	7662	13767	9303	5155	6786
		KH-517	7202	8889	13956	7653	14073	8960	8240	6814
		Bio 9637 (C)	5991	5833	11111	7812	11823	9394	7935	6019
	250:80:100	BL 900	5605	14722	9556	7642	10923	9899	8040	7726
		BL 147	6760	12639	14667	7672	15067	10303	8655	6489
		IM8303	6729		18222	7675	12900	10161	7745	6668
		BL 798	8110	12847	12889	7650	14067	10626	6645	9136
		DMRH 1301	6824	12361	11556	7678	14083	9483	5300	7735
		KH-517	7707	9444	12889	7756	14300	9788	8430	7712
		Bio 9637 (C)	6424	7431	9167	7923	13913	9838	8080	6651
Mean of location			7164.4	10766.8	12206.7	7104	12447.6	9768.4	7352.1	7454.1
60x20 cm (Normal)			7599	10671	12070	6531	11554	9797	7242	7779
60x15 cm (High)			6730	10862	12344	7677	13341	9740	7258	7130
CD at 5%			182.9	NS	34.0	6.5	558.9	NS	NS	507.2
CV (%)			2.7	30.0	0.3	0.10	4.8	7.2	4.4	7.2
200:65:80			6964	10318	11727	7075	12200	9462	7272	7209
250:80:100			7365	11215	12687	7133	12696	10075	7432	7699
CD at 5%			184.8	NS	56.0	22.4	494.5	441.4	NS	442.5
CV (%)			4.3	13.9	0.8	0.56	6.6	7.5	2.9	9.8
BL 900			6619	13003	11267	7085	11772	9470	7905	7874
BL 147			7239	12118	11133	7096	13829	9732	8393	6998
IM8303			6832		15667	7118	11568	9961	7603	7172
BL 798			8258	11719	11933	7121	12349	10306	6463	8037
DMRH 1301			7215	11944	12322	7115	12979	9686	4958	7673
KH-517			7528	9132	12022	7113	12286	9536	8239	7433
Bio 9637 (C)			6460	6684	11103	7272	12351	9688	7906	6992
CD at 5%			517.1	1137.1	91.3	27.5	682.5	NS	322.2	NS
CV (%)			8.8	10.1	0.9	0.47	6.7	7.8	4.2	21.0

Cont...

A-32

Density	Nutrient management	Genotypes	Plants ('000/ha) 25 DAS		Plants ('000/ha) at harvest						
			Vagarai	Kalyani	Ludhiana	Bahraich	Dholi	Kalyani	Dharwad	Vagarai	Banswara
60x20 cm (Normal)	200:65:80	BL 900	80.8	83.0	79.3	82.4	67.8	82.8	77.8	76.7	75.9
		BL 147	76.7	82.9	79.3	82.4	73.1	82.9	76.4	65.8	81.5
		IM8303	76.7	83.2		82.5	96.1	83.1	74.3	65.3	79.6
		BL 798	78.3	83.1	79.3	82.4	59.2	83.1	75.7	72.8	79.6
		DMRH 1301	79.4	83.1	80.0	82.4	59.4	83.1	77.8	70.6	81.5
		KH-517	78.3	83.2	80.0	82.5	67.5	83.2	78.5	70.8	68.5
		Bio 9637 (C)	78.9	83.1	78.5	83.1	70.0	83.0	77.1	72.5	70.4
	250:80:100	BL 900	80.8	83.2	79.3	82.5	85.3	83.2	76.4	75.8	77.8
		BL 147	80.0	83.1	80.7	82.4	74.4	83.1	77.1	72.5	81.5
		IM8303	80.6	83.1		82.4	75.8	83.1	77.1	75.0	79.6
		BL 798	78.3	83.3	78.1	82.3	67.8	83.3	78.5	69.2	83.3
		DMRH 1301	81.4	83.3	80.0	82.6	73.1	83.3	76.4	75.0	79.6
		KH-517	78.6	83.2	80.0	82.8	68.1	83.1	78.5	71.7	79.6
		Bio 9637 (C)	79.2	83.2	78.1	83.2	67.2	82.4	76.4	72.2	70.4
60x15 cm (High)	200:65:80	BL 900	90.8	111.0	96.7	109.2	70.0	110.7	105.6	73.9	100.0
		BL 147	96.7	111.1	94.4	109.3	52.2	111.0	106.3	78.9	96.3
		IM8303	97.8	111.0		109.3	96.7	110.3	107.6	84.4	94.4
		BL 798	99.4	111.0	95.6	109.6	66.7	110.7	104.2	85.6	98.1
		DMRH 1301	88.1	111.1	96.3	109.6	60.0	110.7	105.6	76.9	96.3
		KH-517	88.9	111.1	95.6	109.7	48.1	110.7	105.6	76.1	94.4
		Bio 9637 (C)	93.6	111.0	95.6	100.5	63.6	110.3	106.3	82.2	94.4
	250:80:100	BL 900	88.9	111.0	95.9	109.2	62.2	110.0	106.9	77.2	98.1
		BL 147	89.4	111.1	94.4	109.8	58.6	110.3	104.9	73.9	98.1
		IM8303	90.3	111.0		109.4	75.6	110.3	104.9	78.3	96.3
		BL 798	88.3	111.0	93.7	109.6	70.3	110.0	102.8	71.4	98.1
		DMRH 1301	86.4	111.0	97.0	109.8	60.6	110.7	107.6	68.1	96.3
		KH-517	87.8	111.1	94.8	103.7	74.4	111.0	106.9	73.6	96.3
		Bio 9637 (C)	85.3	111.1	95.6	100.6	83.6	110.7	106.3	73.3	98.1
Mean of location		85.0	97.1	87.4	94.8	69.5	96.8	91.4	74.3	87.3	
60x20 cm (Normal)		79.1	83.1	79.4	82.6	71.8	83.0	77.0	71.8	77.8	
60x15 cm (High)		90.8	111.1	95.5	106.9	67.3	110.5	79.0	76.7	96.8	
CD at 5%		3.7	0.16	4.4	0.84	NS	0.42	1.9	NS	10.7	
CV (%)		4.6	0.18	5.0	1.01	45.7	0.46	0.6	11.9	13.0	
200:65:80		86.0	97.1	87.5	94.9	67.9	96.8	91.3	75.2	86.5	
250:80:100		83.9	97.1	87.3	94.6	71.2	96.7	91.5	73.4	88.1	
CD at 5%		NS	NS	NS	NS	NS	NS	NS	NS	NS	
CV (%)		4.6	0.29	1.1	0.92	18.8	0.82	2.1	8.0	9.3	
BL 900		85.3	97.1	87.8	95.8	71.3	96.7	91.7	75.9	88.0	
BL 147		85.7	97.0	87.2	96.0	64.6	96.8	91.1	72.8	89.4	
IM8303		86.3	97.1		95.9	86.0	96.7	91.0	75.8	87.5	
BL 798		86.1	97.1	86.7	96.0	66.0	96.8	90.3	74.7	89.8	
DMRH 1301		83.8	97.1	88.3	96.1	63.3	96.9	91.8	72.6	88.4	
KH-517		83.4	97.2	87.6	94.7	64.5	97.0	92.4	73.1	84.7	
Bio 9637 (C)		84.2	97.1	86.9	91.8	71.1	96.6	91.5	75.1	83.3	
CD at 5%		NS	NS	NS	0.74	13.9	NS	NS	NS	4.42	
CV (%)		5.0	0.15	2.8	0.95	24.3	0.35	2.6	8.4	6.17	

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A-33

Density	Nutrient management	Genotypes	Cobs ('000/ha)						
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Vagaral	Banswara
60x20 cm (Normal)	200:65:80	BL 900	98.6	78.9	81.3	74.7	82.8	66.7	62.2
		BL 147	81.9	80.7	81.3	61.1	82.8	60.0	74.8
		IM8303			81.3	74.7	83.1	55.3	71.1
		BL 798	80.6	80.7	81.6	57.5	83.1	67.5	80.7
		DMRH 1301	75.0	81.1	81.3	63.1	83.2	63.3	76.7
		KH-517	86.1	80.7	81.3	61.9	83.1	63.6	60.0
		Bio 9637 (C)	80.6	79.3	82.6	63.9	83.0	66.9	58.5
	250:80:100	BL 900	84.7	79.6	81.3	84.7	83.2	71.4	68.0
		BL 147	80.6	81.1	81.3	50.8	83.1	67.5	83.7
		IM8303			82.1	65.0	83.0	70.8	72.4
		BL 798	88.9	77.8	82.3	56.7	83.3	63.9	88.6
		DMRH 1301	80.6	80.4	81.3	63.9	83.3	71.7	74.3
		KH-517	81.9	80.7	81.7	58.6	83.1	63.1	70.5
		Bio 9637 (C)	84.7	78.5	82.9	58.6	82.4	65.3	62.9
60x15 cm (High)	200:65:80	BL 900	95.8	95.2	108.4	56.9	99.0	56.4	85.9
		BL 147	72.2	93.3	108.2	46.7	102.7	57.5	88.0
		IM8303			108.2	59.7	99.5	63.9	94.4
		BL 798	87.5	94.1	108.5	64.7	99.7	66.1	92.9
		DMRH 1301	88.9	95.2	108.4	56.4	99.5	56.7	86.7
		KH-517	81.9	94.4	108.5	41.4	99.7	60.8	83.7
		Bio 9637 (C)	80.6	94.4	100.2	59.7	99.7	60.0	82.6
	250:80:100	BL 900	113.9	95.2	108.1	61.9	99.8	61.9	86.7
		BL 147	86.1	93.7	108.5	65.0	106.7	58.1	89.8
		IM8303			108.3	65.8	100.2	61.9	91.5
		BL 798	87.5	92.2	108.4	65.3	103.2	61.7	92.9
		DMRH 1301	84.7	95.6	108.6	53.6	103.7	61.4	91.1
		KH-517	87.5	93.3	100.7	64.7	103.7	61.7	83.0
		Bio 9637 (C)	80.6	94.1	100.3	71.7	110.7	55.3	86.7
Mean of location			85.5	87.1	93.9	61.7	92.5	62.9	80.0
60x20 cm (Normal)			83.7	80.0	81.8	63.9	83.0	65.5	71.8
60x15 cm (High)			87.3	94.2	105.9	59.5	102.0	60.2	88.3
CD at 5%			NS	5.0	0.20	NS	1.84	NS	14.1
CV (%)			21.1	5.7	0.24	54.7	2.12	10.3	18.8
200:65:80			84.1	87.3	94.0	60.2	91.5	61.8	78.4
250:80:100			86.8	86.9	93.7	63.3	93.5	64.0	81.6
CD at 5%			NS	NS	0.15	NS	NS	NS	NS
CV (%)			4.0	3.6	0.28	20.1	4.52	18.4	10.4
BL 900			98.3	87.2	94.8	69.6	91.2	64.1	75.7
BL 147			80.2	87.2	94.8	55.9	93.8	60.8	84.1
IM8303					95.0	66.3	91.4	63.0	82.3
BL 798			86.1	86.2	95.2	61.0	92.3	64.8	88.8
DMRH 1301			82.3	88.1	94.9	59.2	92.4	63.3	82.2
KH-517			84.4	87.3	93.0	56.7	92.4	62.3	74.3
Bio 9637 (C)			81.6	86.6	91.5	63.5	93.9	61.9	72.7
CD at 5%			7.6	NS	0.19	NS	NS	NS	6.04
CV (%)			8.5	4.1	0.25	22.6	2.70	13.1	9.20

Cont...

A-34

Density	Nutrient management	Genotypes	Plant height (cm)								
			Delhi	Ludhiana	Bahraich	Dholi	Kalyani	Karimnagar	Dharwad	Vagarai	Banswara
60x20 cm (Normal)	200:65:80	BL 900	217.5	173.3	184.3	176.0	273.7	240.3	197.7	212.9	210.7
		BL 147	212.5	171.7	185.0	174.7	314.3	231.7	213.0	182.5	217.0
		IM8303			185.0	161.3	292.0	228.7	198.7	173.0	200.3
		BL 798	177.5	164.3	184.3	155.0	291.7	207.7	179.9	151.6	225.0
		DMRH 1301	190.0	168.3	185.3	175.0	266.0	221.0	160.6	166.1	233.3
		KH-517	175.0	164.0	185.0	152.7	280.3	245.3	208.6	166.6	236.7
		Bio 9637 (C)	180.0	152.7	186.7	190.2	299.7	190.0	200.4	168.2	218.7
	250:80:100	BL 900	197.5	178.7	185.3	166.7	306.7	243.3	203.0	186.5	212.7
		BL 147	187.5	184.7	185.7	176.7	313.0	226.0	217.8	173.2	219.0
		IM8303			185.0	160.0	305.3	208.3	204.4	189.5	205.3
		BL 798	162.5	169.3	185.0	161.0	299.3	238.7	181.9	172.8	226.0
		DMRH 1301	172.5	173.0	185.0	171.7	285.7	253.7	166.8	191.5	233.7
		KH-517	177.5	167.3	187.7	161.0	286.7	237.0	215.5	187.0	231.0
		Bio 9637 (C)	180.0	158.7	189.3	171.7	327.0	251.0	212.1	162.2	220.7
60x15 cm (High)	200:65:80	BL 900	180.0	179.3	182.7	184.7	289.7	239.0	206.3	184.7	215.7
		BL 147	195.0	186.0	183.0	178.0	314.0	232.7	216.5	169.2	219.7
		IM8303			183.0	161.0	299.0	243.7	209.0	160.5	205.7
		BL 798	160.0	170.0	183.0	165.7	287.3	242.3	177.1	149.9	227.3
		DMRH 1301	162.5	175.7	183.7	157.7	265.0	214.7	166.1	148.5	237.3
		KH-517	147.5	169.3	185.0	177.3	290.0	233.7	214.5	172.6	240.7
		Bio 9637 (C)	155.0	159.7	184.7	170.0	298.3	232.3	209.2	136.1	223.3
	250:80:100	BL 900	207.5	182.7	183.3	183.3	297.7	241.3	209.9	160.6	218.7
		BL 147	202.5	187.3	183.7	194.0	299.3	244.7	218.3	178.2	224.3
		IM8303			183.0	159.3	312.3	233.0	213.3	171.0	209.3
		BL 798	170.0	175.3	182.7	147.3	302.0	212.3	180.5	155.5	231.0
		DMRH 1301	185.0	180.7	185.0	168.3	284.3	232.7	174.3	177.0	239.0
		KH-517	182.5	170.7	189.7	165.7	302.0	218.0	217.2	160.1	243.3
		Bio 9637 (C)	170.0	164.3	187.3	183.3	302.3	254.7	215.6	160.9	227.3
Mean of location		181.1	172.0	185.5	169.6	295.9	232.1	199.6	170.3	223.3	
60x20 cm (Normal)		185.8	168.8	186.0	168.1	295.8	230.2	197.2	177.4	220.7	
60x15 cm (High)		176.5	175.1	185.0	171.1	296.0	233.9	197.8	163.2	225.9	
CD at 5%		2.7	NS	0.32	NS	NS	NS	3.6	NS	2.22	
CV (%)		0.4	6.1	0.20	3.1	15.6	17.4	0.5	24.3	1.06	
200:65:80		179.4	169.5	184.9	169.9	290.1	228.8	197.0	167.3	222.2	
250:80:100		182.9	174.4	186.1	169.3	301.7	235.3	202.2	173.3	224.4	
CD at 5%		NS	4.8	0.41	NS	NS	NS	NS	4.1	0.90	
CV (%)		5.4	4.3	0.39	6.2	9.7	10.3	2.3	3.9	0.66	
BL 900		200.6	178.5	183.9	177.7	291.9	241.0	204.2	186.2	214.4	
BL 147		199.4	182.4	184.3	180.8	310.2	233.8	216.4	175.8	220.0	
IM8303				184.0	160.4	302.2	228.4	206.4	173.5	205.2	
BL 798		167.5	169.8	183.8	157.3	295.1	225.3	179.9	157.5	227.3	
DMRH 1301		177.5	174.4	184.8	168.2	275.3	230.5	167.0	170.8	235.8	
KH-517		170.6	167.8	186.8	164.2	289.8	233.5	214.0	171.6	237.9	
Bio 9637 (C)		171.3	158.8	187.0	178.8	306.8	232.0	209.3	156.9	222.5	
CD at 5%		8.1	5.5	0.70	11.1	13.2	NS	5.8	12.42	3.27	
CV (%)		4.3	3.9	0.46	8.0	5.4	7.9	2.8	8.9	1.78	

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A-35

Density	Nutrient management	Genotypes	Days to 50% tasselling						Days to maturity	
			Ludhiana	Dholi	Kalyani	Karimnagar	Dharwad	Vagarai	Bahraich	Dholi
60x20 cm (Normal)	200:65:80	BL 900	77.7	103.3	71.7	61.7	49.5	38.7	149.3	132.7
		BL 147	80.3	104.0	73.0	63.3	50.0	38.3	149.0	136.0
		IM8303		99.7	73.0	64.3	49.5	38.7	148.3	135.3
		BL 798	82.7	102.3	71.3	61.7	49.0	38.7	149.3	133.7
		DMRH 1301	84.3	101.3	70.7	62.0	49.0	39.3	149.0	133.0
		KH-517	79.3	101.7	71.7	61.3	49.5	38.0	150.3	134.3
		Bio 9637 (C)	81.3	102.3	71.7	64.0	50.5	40.3	152.3	135.7
	250:80:100	BL 900	79.3	102.0	71.7	63.0	48.5	38.3	151.7	133.0
		BL 147	79.7	104.0	69.7	62.0	51.5	40.0	150.0	135.7
		IM8303		99.0	71.0	62.3	50.5	39.3	148.7	132.3
		BL 798	80.3	101.7	71.3	61.7	48.5	39.7	148.3	133.3
		DMRH 1301	81.3	100.7	70.3	61.7	48.5	38.7	149.7	132.0
		KH-517	79.3	103.0	70.0	62.0	48.5	38.7	153.3	134.3
		Bio 9637 (C)	79.7	102.7	70.3	62.7	53.0	37.7	150.7	134.7
60x15 cm (High)	200:65:80	BL 900	79.0	102.7	70.3	63.0	48.0	39.0	151.0	135.3
		BL 147	81.0	105.0	71.7	62.7	48.0	37.0	151.0	136.0
		IM8303		100.3	73.0	65.3	53.0	38.0	150.7	133.3
		BL 798	83.7	103.3	72.0	61.3	50.5	36.0	151.7	135.0
		DMRH 1301	84.0	103.3	70.0	63.0	48.5	38.7	151.3	132.7
		KH-517	79.7	99.7	71.0	62.0	48.0	37.3	152.0	137.7
		Bio 9637 (C)	81.0	103.0	71.7	63.3	48.0	38.7	150.3	136.0
	250:80:100	BL 900	80.0	104.7	71.7	63.0	49.0	37.3	153.3	135.7
		BL 147	80.7	103.7	71.0	62.0	50.5	38.0	152.0	135.3
		IM8303		100.7	71.0	63.0	49.5	38.0	151.7	132.0
		BL 798	80.0	104.0	71.3	64.0	49.0	37.7	153.0	133.7
		DMRH 1301	82.3	102.0	70.0	62.0	48.5	36.7	152.0	132.0
		KH-517	77.3	103.0	69.3	61.3	49.5	40.0	153.7	134.7
		Bio 9637 (C)	82.0	103.7	70.0	61.7	49.0	38.0	149.3	135.7
Mean of location			80.7	102.4	71.1	62.5	49.5	38.4	150.9	134.3
60x20 cm (Normal)			80.4	102.0	71.2	62.4	49.7	38.9	150.3	134.0
60x15 cm (High)			80.9	102.8	71.0	62.7	49.6	37.9	151.6	134.6
CD at 5%			NS	NS	NS	0.0	0.0	0.6	0.63	NS
CV (%)			3.0	1.6	3.19	0.0	0.0	1.7	0.47	0.6
200:65:80			81.2	102.3	71.6	62.8	49.4	38.3	150.5	134.8
250:80:100			80.2	102.5	70.6	62.3	49.6	38.4	151.4	133.9
CD at 5%			NS	NS	NS	NS	NS	NS	NS	NS
CV (%)			4.4	2.7	2.60	2.5	1.1	4.5	1.07	1.5
BL 900			79.0	103.2	71.3	62.7	48.8	38.3	151.3	134.2
BL 147			80.4	104.2	71.3	62.5	50.0	38.3	150.5	135.8
IM8303				99.9	72.0	63.8	50.6	38.5	149.8	133.3
BL 798			81.7	102.8	71.5	62.2	49.3	38.0	150.6	133.9
DMRH 1301			83.0	101.8	70.3	62.2	48.6	38.3	150.5	132.4
KH-517			78.9	101.8	70.5	61.7	48.9	38.5	152.3	135.3
Bio 9637 (C)			81.0	102.9	70.9	62.9	50.1	38.7	150.7	135.5
CD at 5%			1.5	1.6	NS	NS	1.1	NS	1.08	2.1
CV (%)			2.2	1.9	2.35	2.6	2.2	4.9	0.87	1.9

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A-36

Density	Nutrient management	Genotypes	Days to 50% silking							
			Ludhlana	Bahraich	Dholl	Karimnagar	Dharwad	Vagaral	Banswara	Kalyani
60x20 cm (Normal)	200:65:80	BL 900	79.7	121.0	106.7	65.0	53.5	44.3	92.3	74.7
		BL 147	82.0	120.3	107.7	66.3	54.0	42.0	90.7	76.0
		IM8303		121.7	104.0	67.7	54.0	42.7	89.0	75.7
		BL 798	85.0	122.7	106.7	65.3	53.5	42.7	88.7	73.7
		DMRH 1301	87.0	120.3	105.3	65.3	54.0	44.0	90.7	73.0
		KH-517	81.3	120.7	105.7	64.3	54.0	43.3	92.7	74.3
		Bio 9637 (C)	83.3	123.0	106.7	67.0	55.0	43.7	92.3	74.0
	250:80:100	BL 900	81.7	119.7	106.0	66.3	53.0	42.7	94.7	74.7
		BL 147	81.3	120.3	108.0	65.0	55.5	44.7	92.7	72.0
		IM8303		120.0	104.0	65.3	56.0	44.3	91.0	73.7
		BL 798	82.0	120.7	105.7	65.7	52.5	43.3	90.3	74.0
		DMRH 1301	83.3	120.7	105.0	65.3	53.0	43.0	92.7	72.3
		KH-517	81.0	123.3	106.3	65.3	53.0	44.0	94.0	72.0
		Bio 9637 (C)	81.7	121.7	107.0	66.0	57.0	42.7	93.3	72.3
60x15 cm (High)	200:65:80	BL 900	81.0	122.7	107.0	65.7	53.0	42.3	90.0	72.7
		BL 147	83.3	121.7	109.0	65.3	53.5	40.7	88.0	74.3
		IM8303		123.7	103.0	68.0	57.0	43.3	87.0	75.7
		BL 798	86.0	123.3	106.7	65.0	54.5	40.7	86.7	74.7
		DMRH 1301	86.0	122.3	107.7	66.7	52.5	43.0	88.7	74.3
		KH-517	81.7	123.7	104.3	65.0	52.5	42.0	90.0	73.7
		Bio 9637 (C)	82.7	124.7	107.0	66.3	53.5	44.3	90.3	74.3
	250:80:100	BL 900	81.7	122.3	109.0	66.0	53.0	41.7	92.0	73.7
		BL 147	82.7	122.0	107.7	65.3	54.0	42.3	91.0	73.0
		IM8303		122.0	102.7	66.0	54.0	42.0	89.0	73.3
		BL 798	82.0	122.7	108.0	66.7	54.0	42.3	89.3	73.3
		DMRH 1301	84.0	123.0	106.0	64.7	54.0	42.3	90.7	72.0
		KH-517	79.3	124.3	107.3	64.3	53.5	44.0	92.0	71.3
		Bio 9637 (C)	83.7	123.0	107.7	65.0	53.5	42.0	92.3	71.0
Mean of location			82.6	122.2	106.3	65.7	53.9	42.9	90.8	73.6
60x20 cm (Normal)			82.4	121.3	106.0	65.7	54.1	43.4	91.8	73.7
60x15 cm (High)			82.8	123.0	106.6	65.7	54.1	42.4	89.8	73.4
CD at 5%			NS	0.45	NS	NS	NS	0.7	0.53	NS
CV (%)			3.1	0.42	1.6	0.3	3.2	1.8	0.62	2.61
200:65:80			83.3	122.3	106.2	65.9	53.9	42.8	89.8	74.4
250:80:100			82.0	122.1	106.5	65.5	54.0	43.0	91.8	72.8
CD at 5%			NS	NS	NS	NS	NS	NS	0.63	1.26
CV (%)			4.1	0.52	1.8	2.0	1.8	4.4	1.15	2.83
BL 900			81.0	121.4	107.2	65.8	53.1	42.8	92.3	73.9
BL 147			82.3	121.1	108.1	65.5	54.3	42.4	90.6	73.8
IM8303				121.8	103.4	66.8	55.3	43.1	89.0	74.6
BL 798			83.8	122.3	106.8	65.7	53.6	42.3	88.8	73.9
DMRH 1301			85.1	121.6	106.0	65.5	53.4	43.1	90.7	72.9
KH-517			80.8	123.0	105.9	64.8	53.3	43.3	92.2	72.8
Bio 9637 (C)			82.8	123.1	107.1	66.1	54.8	43.2	92.1	72.9
CD at 5%			1.6	0.65	1.3	NS	1.1	NS	0.76	NS
CV (%)			2.3	0.66	1.5	2.1	2.0	4.7	1.01	2.17

Cont...

A-37

Density	Nutrient management	Genotypes	Test weight 100 seed					Bareness (%)
			Bahraich	Karimnagar	Dharwad	Vagarai	Kalyani	Bahraich
60x20 cm (Normal)	200:65:80	BL 900	223.7	271.3	25.5	38.0	29.3	0.88
		BL 147	222.0	264.7	29.9	33.3	35.0	0.84
		IM8303	224.0	238.0	26.3	38.7	27.7	1.51
		BL 798	223.3	275.3	20.5	33.3	32.0	0.83
		DMRH 1301	219.0	204.0	16.2	30.0	31.0	1.38
		KH-517	221.0	250.0	28.7	36.0	34.7	1.37
		Bio 9637 (C)	224.3	262.0	27.7	34.7	35.0	0.73
	250:80:100	BL 900	227.0	278.7	25.6	38.7	28.7	0.87
		BL 147	228.0	267.3	30.2	37.3	32.3	0.76
		IM8303	227.0	248.0	27.2	37.3	25.7	0.84
		BL 798	228.0	280.0	21.0	38.7	32.0	0.84
		DMRH 1301	226.0	256.7	14.6	37.3	32.7	1.37
		KH-517	224.3	253.3	30.0	39.3	32.0	1.40
		Bio 9637 (C)	226.3	267.3	28.2	38.7	32.3	0.87
60x15 cm (High)	200:65:80	BL 900	220.7	224.0	27.7	35.3	31.0	1.24
		BL 147	219.0	228.7	30.7	37.3	37.0	1.36
		IM8303	220.7	229.3	29.6	33.3	29.0	1.32
		BL 798	220.0	220.0	22.3	32.0	35.0	1.61
		DMRH 1301	219.3	224.7	17.3	33.3	33.7	1.67
		KH-517	218.7	265.3	29.5	36.7	31.0	1.74
		Bio 9637 (C)	219.3	258.0	30.1	36.7	36.0	1.86
	250:80:100	BL 900	224.0	248.7	27.7	34.7	32.0	1.24
		BL 147	222.7	242.7	31.2	37.3	40.0	1.26
		IM8303	223.7	241.3	28.8	38.7	29.7	1.63
		BL 798	223.0	262.0	22.7	36.7	35.0	1.40
		DMRH 1301	223.0	241.3	18.6	34.0	35.3	1.83
		KH-517	221.0	280.7	29.3	34.7	38.7	1.81
		Bio 9637 (C)	224.7	270.7	29.7	41.3	39.3	1.73
Mean of location			222.9	251.9	25.9	36.2	33.0	1.29
60x20 cm (Normal)			224.4	258.3	25.1	36.5	31.5	1.01
60x15 cm (High)			221.4	245.5	25.3	35.9	34.5	1.57
CD at 5%			1.19	NS	0.4	NS	NS	0.16
CV (%)			0.61	12.7	0.5	10.5	31.0	14.2
200:65:80			221.1	244.0	25.8	34.9	32.7	1.30
250:80:100			224.6	259.9	26.0	37.5	33.3	1.28
CD at 5%			0.88	19.7	NS	NS	NS	NS
CV (%)			0.69	7.2	5.5	13.9	14.6	17.0
BL 900			223.8	255.7	26.6	36.7	30.3	1.06
BL 147			222.9	250.8	30.5	36.3	36.1	1.05
IM8303			223.8	239.2	28.0	37.0	28.0	1.33
BL 798			223.6	259.3	21.6	35.2	33.5	1.17
DMRH 1301			221.8	231.7	16.7	33.7	33.2	1.56
KH-517			221.3	262.3	29.3	36.7	34.1	1.58
Bio 9637 (C)			223.7	264.5	28.9	37.8	35.7	1.30
CD at 5%			1.16	11.0	2.6	NS	3.18	0.18
CV (%)			0.64	9.5	9.7	11.9	11.7	16.7

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A-38

Density	Nutrient management	Genotypes	Net returns (Rs./ha)					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x20 cm (Normal)	200:65:80	BL 900	55843	51426	53759	28454	32962	81845
		BL 147	49922	50911	60361	32526	38092	45130
		IM8303		51875	50030	26416	33208	48008
		BL 798	26756	52489	51507	41668	18955	60573
		DMRH 1301	43487	52708	49647	31516	5902	58237
		KH-517	39832	52950	39274	31169	37216	43800
		Bio 9637 (C)	33191	54629	56240	13400	34117	41581
	250:80:100	BL 900	58350	53993	54703	40089	33305	89584
		BL 147	47899	54172	60733	28025	37859	67171
		IM8303		54782	46833	26606	31871	45462
		BL 798	49598	56362	51306	43198	19601	55131
		DMRH 1301	61696	57897	63826	25654	5459	76183
		KH-517	50062	53982	39706	29970	38015	79675
		Bio 9637 (C)	34875	55087	57290	18269	33311	79675
60x15 cm (High)	200:65:80	BL 900	62073	64470	71197	2894	39793	59725
		BL 147	57337	63819	85174	12978	43168	50598
		IM8303		65621	55240	19272	37894	65937
		BL 798	62897	63506	70764	25276	21787	48840
		DMRH 1301	74223	64418	76904	18279	12373	49295
		KH-517	49769	64413	80487	28425	42412	41647
		Bio 9637 (C)	48997	59692	54030	11963	40177	31488
	250:80:100	BL 900	66023	65912	74940	3411	39350	72694
		BL 147	60051	67808	93473	18552	44363	53814
		IM8303		67678	66853	19722	36581	38401
		BL 798	64427	69826	83820	42125	23069	55752
		DMRH 1301	74775	68188	80430	21273	9680	53328
		KH-517	56499	67593	88340	28664	42392	32775
		Bio 9637 (C)	50115	69483	76863	17652	38564	38357
Mean of location			53279.1	59150	64061.8	24551.6	31124.1	55882.2
60x20 cm (Normal)			45959	53196	52515	29783	28562	62290
60x15 cm (High)			60599	65103	75608	19320	29050	49475
CD at 5%			8344.6	967.8	4671	10346.9	NS	12472.3
CV (%)			15.4	1.86	7.8	44.9	7.0	23.8
200:65:80			50361	57059	61044	23160	31290	51907
250:80:100			56198	61241	67080	25944	30959	59857
CD at 5%			3521.6	373.4	1452	NS	NS	NS
CV (%)			10.1	1.11	3.7	34.2	4.9	54.7
BL 900			60572	58950	63650	18712	36353	75962
BL 147			53803	59178	74935	23020	40871	54178
IM8303				59989	54739	23004	34889	49452
BL 798			50920	60546	64349	38067	20853	55074
DMRH 1301			63545	60803	67702	24181	8354	59261
KH-517			49040	59735	61952	29557	40009	49474
Bio 9637 (C)			41794	59723	61106	15321	36542	47775
CD at 5%			5217.6	564.2	6828	5722.1	3430.9	NS
CV (%)			11.9	1.17	13.0	28.4	10.7	44.3

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A-39

Density	Nutrient management	Genotypes	BC ratio					
			Ludhiana	Bahraich	Kalyani	Karimnagar	Dharwad	Vagarai
60x20 cm (Normal)	200:65:80	BL 900	1.01	2.53	1.24	1.42	2.05	2.02
		BL 147	0.90	2.51	1.40	1.48	2.22	1.56
		IM8303		2.54	1.16	1.39	2.06	1.60
		BL 798	0.48	2.55	1.19	1.62	1.61	1.75
		DMRH 1301	0.78	2.56	1.15	1.47	1.19	1.72
		KH-517	0.72	2.57	0.91	1.46	2.19	1.54
		Bio 9637 (C)	0.60	2.62	1.30	1.19	2.09	1.52
	250:80:100	BL 900	1.03	2.51	1.21	1.56	2.00	2.09
		BL 147	0.85	2.51	1.35	1.39	2.14	1.82
		IM8303		2.53	1.04	1.37	1.96	1.55
		BL 798	0.88	2.58	1.14	1.60	1.59	1.67
		DMRH 1301	1.09	2.62	1.41	1.35	1.16	1.93
		KH-517	0.88	2.51	0.88	1.42	2.14	1.97
		Bio 9637 (C)	0.62	2.54	1.27	1.25	2.00	1.97
60x15 cm (High)	200:65:80	BL 900	1.03	2.91	1.65	1.03	2.27	1.74
		BL 147	0.95	2.89	1.98	1.17	2.38	1.63
		IM8303		2.94	1.26	1.26	2.21	1.82
		BL 798	1.04	2.88	1.62	1.35	1.70	1.61
		DMRH 1301	1.23	2.91	1.79	1.25	1.39	1.61
		KH-517	0.83	2.91	1.87	1.40	2.35	1.52
		Bio 9637 (C)	0.81	2.77	1.25	1.16	2.28	1.39
	250:80:100	BL 900	1.07	2.84	1.66	1.03	2.18	1.88
		BL 147	0.98	2.89	2.08	1.25	2.33	1.65
		IM8303		2.89	1.49	1.26	2.10	1.47
		BL 798	1.05	2.95	1.86	1.58	1.69	1.68
		DMRH 1301	1.22	2.91	1.79	1.29	1.29	1.65
		KH-517	0.92	2.92	1.93	1.39	2.27	1.40
		Bio 9637 (C)	0.82	2.94	1.70	1.24	2.16	1.47
Mean of location			0.91	2.70	1.45	1.34	1.96	1.69
60x20 cm (Normal)			0.82	2.53	1.19	1.43	1.88	1.76
60x15 cm (High)			1.00	2.87	1.71	1.26	1.90	1.61
CD at 5%			0.14	0.02	0.10	0.2	NS	0.2
CV (%)			15.4	0.89	7.7	12.7	3.4	9.6
200:65:80			0.87	2.69	1.41	1.33	2.00	1.65
250:80:100			0.95	2.71	1.49	1.36	1.93	1.73
CD at 5%			0.06	0.01	0.03	NS	0.1	NS
CV (%)			9.8	0.81	3.7	9.3	2.4	22.2
BL 900			1.04	2.70	1.44	1.26	2.13	1.93
BL 147			0.92	2.70	1.70	1.32	2.27	1.66
IM8303				2.73	1.24	1.32	2.08	1.61
BL 798			0.86	2.74	1.45	1.54	1.65	1.68
DMRH 1301			1.08	2.75	1.54	1.34	1.26	1.73
KH-517			0.84	2.73	1.40	1.42	2.24	1.61
Bio 9637 (C)			0.71	2.72	1.38	1.21	2.13	1.59
CD at 5%			0.09	0.02	0.16	0.1	0.1	NS
CV (%)			12.0	0.70	13.3	7.5	5.3	18.2

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A-40

Density	Nutrient management	Genotypes	Ear height (cm)			Cob length (cm)			Cob girth (cm)	
			Ludhiana	Karimnagar	Dholi	Dharwad	Karimnagar	Delhi	Karimnagar	Karimnagar
60x20 cm (Normal)	200:65:80	BL 900	88.3	116.0	72.0	15.4	17.7	17.0	14.9	15.3
		BL 147	85.0	107.7	75.0	18.4	17.3	15.6	15.5	17.2
		IM8303		95.7	61.0	16.0	16.5		15.1	14.9
		BL 798	77.7	97.0	61.0	14.7	16.1	14.6	14.9	16.4
		DMRH 1301	81.7	112.3	75.0	13.4	15.9	15.9	14.3	16.9
		KH-517	77.3	107.3	56.7	18.2	17.7	15.1	14.7	15.3
		Bio 9637 (C)	69.3	95.3	89.7	16.6	16.6	14.6	14.2	13.2
	250:80:100	BL 900	88.7	102.7	61.7	18.0	17.9	17.0	15.0	15.9
		BL 147	94.7	112.0	73.3	20.8	17.5	17.0	15.5	17.9
		IM8303		91.0	53.3	17.5	17.4		15.1	16.4
		BL 798	82.7	90.0	58.3	14.0	16.1	14.3	15.7	16.8
		DMRH 1301	83.0	106.7	66.3	14.1	16.0	16.6	15.4	17.6
		KH-517	80.7	101.0	75.0	16.0	17.7	15.9	15.0	15.7
		Bio 9637 (C)	82.0	117.3	76.7	16.3	16.4	15.0	14.9	14.1
60x15 cm (High)	200:65:80	BL 900	89.3	117.0	79.0	17.2	14.9	16.6	13.9	14.3
		BL 147	96.0	105.0	85.0	20.3	15.6	14.8	15.1	17.1
		IM8303		108.3	60.3	16.6	16.3		15.3	14.8
		BL 798	80.0	110.3	63.3	13.8	14.7	14.3	14.6	16.0
		DMRH 1301	85.7	82.0	62.3	13.0	15.1	16.3	14.1	16.5
		KH-517	82.7	108.0	73.3	17.0	17.5	15.9	14.3	14.0
		Bio 9637 (C)	73.0	105.7	81.7	16.0	15.5	14.1	14.0	14.5
	250:80:100	BL 900	92.7	113.7	71.7	19.5	15.3	17.2	13.7	15.5
		BL 147	98.3	101.0	81.7	20.8	17.3	16.4	15.0	17.2
		IM8303		97.3	55.3	19.6	16.5		15.1	15.9
		BL 798	88.7	100.3	60.0	16.6	15.6	15.3	15.3	16.4
		DMRH 1301	94.0	127.3	93.3	13.1	15.3	16.4	14.9	16.9
		KH-517	87.3	98.0	79.0	17.0	18.1	15.3	14.9	15.2
		Bio 9637 (C)	81.0	110.0	85.7	17.4	15.5	15.8	14.6	14.7
Mean of location			85.0	104.9	71.0	16.7	16.4	15.7	14.8	15.8
60x20 cm (Normal)			82.6	103.7	68.2	16.4	16.9	15.7	15.0	16.0
60x15 cm (High)			87.4	106.0	73.7	16.5	15.9	15.7	14.6	15.6
CD at 5%			NS	NS	NS	NS	NS	NS	NS	NS
CV (%)			12.1	10.0	12.4	6.4	7.6	1.2	7.4	6.3
200:65:80			82.2	104.8	71.1	16.2	16.2	15.4	14.6	15.5
250:80:100			87.8	104.9	70.8	17.2	16.6	16.0	15.0	16.1
CD at 5%			4.7	NS	NS	0.5	NS	NS	0.2	0.4
CV (%)			8.5	3.6	26.0	2.6	9.8	4.4	2.0	4.1
BL 900			89.8	112.3	71.1	17.5	16.5	16.9	14.4	15.2
BL 147			93.5	106.4	78.8	20.1	16.9	16.0	15.3	17.3
IM8303				98.1	57.5	17.4	16.7		15.2	15.5
BL 798			82.3	99.4	60.7	14.8	15.6	14.6	15.1	16.4
DMRH 1301			86.1	107.1	74.3	13.4	15.6	16.3	14.7	17.0
KH-517			82.0	103.6	71.0	17.0	17.7	15.6	14.7	15.1
Bio 9637 (C)			76.3	107.1	83.4	16.6	16.0	14.9	14.4	14.1
CD at 5%			4.0	8.4	12.0	1.8	1.0	0.8	0.5	0.7
CV (%)			5.6	9.8	20.6	10.6	7.2	5.0	4.2	5.6

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A-41

Density	Nutrient management	Genotypes	Grains rows/cob		Grains rows/cob			Moisture (%)
			Dharwad	Delhi	Dharwad	Karimnagar	Delhi	Dholi
60x20 cm (Normal)	200:65:80	BL 900	14.5	14.0	33.9	36.1	38.2	18.3
		BL 147	17.5	16.3	44.5	31.3	33.2	18.3
		IM8303	14.7		34.6	31.7		18.7
		BL 798	13.8	14.7	27.0	35.5	34.7	18.0
		DMRH 1301	12.5	16.0	22.8	32.9	36.2	17.3
		KH-517	16.5	13.7	39.7	30.7	33.8	17.3
		Bio 9637 (C)	15.5	13.3	37.0	27.7	31.0	17.1
	250:80:100	BL 900	15.8	13.3	34.5	36.5	41.7	16.8
		BL 147	17.8	17.0	45.4	32.0	35.3	16.7
		IM8303	15.8		36.6	35.6		17.1
		BL 798	14.8	14.7	27.5	35.5	34.8	17.3
		DMRH 1301	13.0	15.7	24.8	33.2	39.7	17.5
		KH-517	16.5	13.3	41.9	33.3	35.5	17.2
		Bio 9637 (C)	15.8	12.7	38.1	30.7	31.3	16.5
60x15 cm (High)	200:65:80	BL 900	15.8	13.0	35.5	30.6	38.8	17.7
		BL 147	17.0	16.3	46.0	29.1	32.7	18.0
		IM8303	15.2		36.7	32.3		15.0
		BL 798	14.0	14.0	28.3	32.0	33.8	18.0
		DMRH 1301	13.7	15.3	25.8	28.9	37.0	16.8
		KH-517	16.3	13.3	41.4	31.0	35.2	18.0
		Bio 9637 (C)	15.9	13.3	39.1	25.1	31.0	17.6
	250:80:100	BL 900	16.0	14.0	35.5	31.1	40.3	16.4
		BL 147	18.0	17.3	47.1	29.3	37.0	17.3
		IM8303	16.0		37.6	32.9		17.1
		BL 798	17.9	15.3	25.4	32.1	36.0	16.9
		DMRH 1301	13.7	15.3	26.2	31.7	38.0	17.5
		KH-517	16.0	13.7	42.9	33.7	34.5	17.2
		Bio 9637 (C)	16.8	13.3	39.3	26.1	32.3	17.2
Mean of location			15.6	14.5	35.5	31.7	35.5	17.3
60x20 cm (Normal)			15.3	14.6	34.9	33.1	35.4	17.4
60x15 cm (High)			15.4	14.5	35.0	30.4	35.6	17.2
CD at 5%			NS	NS	NS	2.4	NS	NS
CV (%)			6.2	2.0	4.7	8.0	0.8	10.6
200:65:80			15.2	14.4	35.1	31.1	34.6	17.6
250:80:100			16.0	14.6	35.9	32.4	36.4	17.0
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			16.6	6.9	7.8	9.4	6.3	9.2
BL 900			15.5	13.6	34.8	33.6	39.8	17.3
BL 147			17.6	16.8	45.7	30.4	34.5	17.6
IM8303			15.4		36.3	33.2		17.0
BL 798			15.1	14.7	27.0	33.8	34.8	17.6
DMRH 1301			13.2	15.6	24.9	31.7	37.7	17.3
KH-517			16.3	13.5	41.4	32.2	34.8	17.4
Bio 9637 (C)			16.0	13.2	38.4	27.4	31.4	17.1
CD at 5%			1.1	0.8	3.1	2.5	2.2	NS
CV (%)			6.6	5.2	8.4	9.6	6.0	6.9

Table 3: Nutrient management in maize-wheat-greengram cropping system under different tillage practices at Banswara.

Tillage practices	Nutrient management	Grain yield (kg/ha)
Zero tillage	100% RDF	4240
	SSNM	4804
	FFP	3856
Conventional tillage	100% RDF	4196
	SSNM	4631
	FFP	2500
Permanent bed	100% RDF	4306
	SSNM	4646
	FFP	2900

Location mean 4008.6
 C.D.(5%) AiBj-AiBk 595.1
 C.D.(5%) AiBk-AjBk 513.5
 F(5%) s

Zero tillage	4300
Conventional tillage	3775
Permanent bed	3950

C.D. (5%) Ai-Aj 169.6
 C.V. (%) Error A 3.2
 F (5%) s

100% RDF (120:60:40)	4247
SSNM (130:37:41)	4694
FFP (87:46)	3085

C.D. (5%) Bi-Bj 343.6
 C.V. (%) ErrorB 8.3
 F (5%) s

Table 4: Nutrient management in maize-wheat-green gram cropping system under different tillage practices at Pantnagar.

Tillage practices	Nutrient management	Wheat grain yield (kg/ha)	Stover yield (kg/ha)	Tillers/m ²	Plant height (cm)	1000-grain weight (g)	Cost of cultivation (Rs./ha)	Net returns (Rs./ha)	B:C ratio
Zero Tillage	FFP	3472	4694	223.3	78.3	41.3	27005	25946	0.96
	SSNM	3694	5417	243.3	83.3	41.7	27002	29338	1.09
	100% RDF	3750	5556	253.3	82.0	42.8	27732	29456	1.06
Conventional	FFP	4278	5722	316.7	87.8	41.4	28668	36568	1.28
	SSNM	4500	6278	343.3	91.7	42.6	28665	39960	1.39
	100% RDF	4667	6472	353.3	92.3	41.9	29395	41772	1.42
Permanent Beds	FFP	3651	5119	260.0	82.6	41.4	32205	23470	0.73
	SSNM	4048	5754	280.0	84.2	40.5	32202	29524	0.92
	100% RDF	4206	5675	286.7	85.5	40.2	32932	31215	0.95
Location mean		4029.5	5631.8	284.4	85.3	41.5	29534.0	31916.5	1.09
C.D.(5%) AiBj-AiBk		564.2	1045.7	35.2	5.4	3.1	0.6	8604.8	0.29
C.D.(5%) AiBk-AjBk		605.7	907.7	57.6	4.8	3.1	0.6	9236.9	0.30
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		3639	5222	240.0	81.2	41.9	27246	28247	1.04
Conventional tillage		4481	6157	337.8	90.6	42.0	28909	39433	1.36
Permanent beds		3968	5516	275.6	84.1	40.7	32446	28070	0.86
C.D. (5%) Ai-Aj		399.6	314.9	50.3	1.9	1.9	0.4	6093.6	0.19
C.V. (%) Error A		7.6	4.3	13.5	1.7	3.4	0.0	14.6	13.2
F (5%)		s	s	s	s	n.s.	s	s	s
FFP (116:64:32)		3800	5179	266.7	82.9	41.4	29293	28661	0.99
SSNM (110:15:64)		4081	5816	288.9	86.4	41.6	29290	32941	1.13
100% RDF (150:60:40)		4208	5901	297.8	86.6	41.7	30020	34147	1.14
C.D. (5%) Bi-Bj		325.8	603.7	20.3	3.1	1.8	0.3	4968.0	0.17
C.V. (%) ErrorB		7.9	10.4	6.9	3.6	4.1	0.0	15.2	15.0
F (5%)		s	s	s	s	n.s.	s	n.s.	n.s.

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Tillage practices	Nutrient management	N uptake (kg/ha)		P uptake (kg/ha)		K uptake (kg/ha)		Total uptake (kg/ha) (Grain + stover)		
		Grain	Stover	Grain	Stover	Grain	Stover	N	P	K
Zero tillage	FFP	47.0	13.3	8.0	5.5	14.3	53.4	60.3	13.4	67.8
	SSNM	50.6	16.9	8.5	6.1	15.9	68.8	67.5	14.6	84.7
	100% RDF	52.7	17.3	9.0	6.6	15.6	67.7	70.0	15.6	83.4
Conventional	FFP	61.5	17.7	10.1	6.9	17.7	69.0	79.2	17.0	86.7
	SSNM	67.3	21.8	10.9	7.4	19.9	85.8	89.2	18.3	105.7
	100% RDF	70.6	24.7	11.5	8.5	20.0	82.5	95.3	20.1	102.5
Permanent beds	FFP	52.1	15.2	8.4	6.1	15.0	63.7	67.2	14.6	78.7
	SSNM	61.0	20.1	9.5	6.7	18.0	73.9	81.2	16.1	91.9
	100% RDF	63.9	20.5	10.0	7.1	17.7	70.3	84.4	17.0	87.9
Location mean		58.5	18.6	9.6	6.8	17.1	70.6	77.1	16.3	87.7
C.D.(5%) AiBj-AiBk		9.7	5.2	2.1	1.2	4.1	22.0	11.2	2.4	21.4
C.D.(5%) AiBk-AjBk		8.9	5.6	1.9	1.6	3.5	20.6	9.9	2.5	20.1
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		50.1	15.8	8.5	6.0	15.3	63.3	65.9	14.5	78.6
Conventional tillage		66.5	21.4	10.9	7.6	19.2	79.1	87.9	18.5	98.3
Permanent beds		59.0	18.6	9.3	6.6	16.9	69.3	77.6	15.9	86.2
C.D. (5%) Ai-Aj		4.1	3.7	0.7	1.3	1.2	10.3	3.8	1.5	10.0
C.V. (%) Error A		5.3	15.0	5.7	14.3	5.2	11.1	3.8	7.0	8.8
F (5%)		s	s	s	n.s.	s	s	s	s	s
FFP (116:64:32)		53.5	15.4	8.9	6.2	15.7	62.0	68.9	15.0	77.7
SSNM (110:15:64)		59.6	19.6	9.6	6.7	17.9	76.2	79.3	16.4	94.1
100% RDF (150:60:40)		62.4	20.8	10.2	7.4	17.8	73.5	83.2	17.6	91.3
C.D. (5%) Bi-Bj		5.6	3.0	1.2	0.7	2.3	12.7	6.5	1.4	12.4
C.V. (%) ErrorB		9.4	15.7	12.6	9.6	13.3	17.5	8.2	8.3	13.7
F (5%)		s	s	n.s.	s	n.s.	n.s.	s	s	s

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Tillage practices	Nutrient management	Cowpea Grain yield (kg/ha)	Pod yield (kg/ha)	Green fodder yield (kg/ha)	100 grain weight (g)	Cost of cultivation (Rs./ha)	Net returns (Rs./ha)
Zero Tillage	FFP	79.4	458.3	14833	6.3	22784	-17223
	SSNM	38.9	430.6	14611	6.2	22784	-20062
	100% RDF	40.6	347.2	13833	6.6	22784	-19945
Conventional	FFP	65.6	416.7	14056	6.4	26047	-21458
	SSNM	33.9	444.4	14000	6.5	26047	-23675
	100% RDF	60.6	430.6	14222	5.8	26047	-21808
Permanent Beds	FFP	68.3	634.9	13810	6.1	25584	-20806
	SSNM	85.7	456.3	13333	6.0	25584	-19584
	100% RDF	65.9	456.3	12778	6.5	25584	-20973

Location mean	59.9	452.8	13941.8	6.3	24805.0	-20614.9
C.D.(5%) AiBj-AiBk	37.2	167.1	2637.4	1.4	0.6	2602.7
C.D.(5%) AiBk-AjBk	34.8	146.8	2896.2	1.6	0.6	2433.2
F(5%)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Zero tillage	53.0	412.0	14426	6.4	22784	-19077
Conventional tillage	53.3	430.6	14093	6.2	26047	-22314
Permanent beds	73.3	515.9	13307	6.2	25584	-20454

C.D. (5%) Ai-Aj	17.3	55.2	1967.0	1.1	0.4	1208.6
C.V. (%) Error A	22.0	9.3	10.8	13.5	0.0	-4.5
F (5%)	s	s	n.s.	n.s.	s	s

FFP (116:64:32)	71.1	503.3	14233	6.3	24805	-19829
SSNM (110:15:64)	52.8	443.8	13981	6.2	24805	-21107
100% RDF (150:60:40)	55.7	411.4	13611	6.3	24805	-20909

C.D. (5%) Bi-Bj	21.5	96.5	1522.7	0.8	0.3	1502.7
C.V. (%) ErrorB	34.9	20.7	10.6	12.4	0.0	-7.1
F (5%)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

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Tillage practices	Nutrient management	N uptake (kg/ha)		P uptake (kg/ha)		K uptake (kg/ha)		Total uptake (kg/ha) (Grain + stover)		
		Grain	Stover	Grain	Stover	Grain	Stover	N	P	K
Zero tillage	FFP	2.23	24.2	0.265	3.86	0.740	45.7	26.5	4.12	46.4
	SSNM	1.08	24.6	0.112	3.79	0.384	48.4	25.7	3.90	48.8
	100% RDF	1.09	24.7	0.134	3.32	0.400	42.8	25.8	3.45	43.2
Conventional	FFP	1.89	24.9	0.183	3.89	0.595	42.8	26.8	4.07	43.4
	SSNM	0.94	23.7	0.107	3.22	0.333	44.2	24.6	3.32	44.6
	100% RDF	1.69	23.2	0.170	4.06	0.554	49.3	24.9	4.23	49.8
Permanent beds	FFP	1.90	23.8	0.208	4.07	0.660	44.9	25.7	4.28	45.5
	SSNM	2.42	22.0	0.261	4.05	0.839	42.7	24.4	4.31	43.6
	100% RDF	1.77	20.9	0.190	3.39	0.610	41.2	22.7	3.58	41.8
Location mean		1.67	23.6	0.181	3.74	0.568	44.7	25.2	3.92	45.2
C.D.(5%) AiBj-AiBk		1.08	6.9	0.140	1.65	0.423	11.4	6.7	1.67	11.4
C.D.(5%) AiBk-AjBk		0.98	8.9	0.135	1.67	0.380	13.1	8.8	1.71	13.1
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		1.47	24.5	0.171	3.65	0.508	45.6	26.0	3.82	46.1
Conventional tillage		1.51	24.0	0.153	3.72	0.494	45.4	25.5	3.87	45.9
Permanent beds		2.03	22.2	0.220	3.84	0.703	42.9	24.3	4.06	43.6
C.D. (5%) Ai-Aj		0.43	6.9	0.072	1.01	0.162	9.3	7.0	1.05	9.3
C.V. (%) Error A		19.8	22.5	30.4	20.5	21.8	16.0	21.0	20.4	15.7
F (5%)		s	n.s.	n.s.	n.s.	s	n.s.	n.s.	n.s.	n.s.
FFP (116:64:32)		2.01	24.3	0.219	3.94	0.665	44.4	26.3	4.16	45.1
SSNM (110:15:64)		1.48	23.4	0.160	3.68	0.519	45.1	24.9	3.84	45.6
100% RDF (150:60:40)		1.52	23.0	0.165	3.59	0.522	44.4	24.5	3.75	44.9
C.D. (5%) Bi-Bj		0.63	4.0	0.081	0.95	0.244	6.6	3.9	0.96	6.6
C.V. (%) ErrorB		36.6	16.6	43.6	24.8	41.8	14.4	14.9	23.9	14.2
F (5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

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Tillage practices	Nutrient management	MEY of maize-wheat-cowpea cropping system	Total cost of cultivation of maize-wheat-cowpea cropping system	Net return of system	B:C ratio of system	Residual available (kg/ha)			Organic carbon (%)	Soil pH	Bulk density (Mg/m ³) at 0-15 cm depth
						N	P	K			
Zero Tillage	FFP	11139	66138	81460	1.23	248.0	26.9	233.0	0.81	7.03	1.45
	SSNM	11793	65483	90780	1.39	256.0	18.5	245.0	0.84	7.07	1.42
	100% RDF	12044	68612	90972	1.33	273.0	25.5	228.0	0.88	7.03	1.43
Conventional	FFP	11303	79206	70565	0.89	200.0	23.4	215.0	0.64	7.20	1.36
	SSNM	12446	78551	86361	1.10	206.0	15.9	239.0	0.66	7.17	1.37
	100% RDF	13454	81680	96583	1.18	221.0	23.1	236.0	0.71	7.20	1.39
Permanent Beds	FFP	10694	76073	65622	0.86	235.0	25.1	219.0	0.79	7.00	1.40
	SSNM	12093	75418	84821	1.12	243.0	18.6	241.0	0.81	7.03	1.44
	100% RDF	12632	78547	88829	1.13	259.0	24.9	223.0	0.88	7.07	1.43
Location mean		11955.6	74412.0	83999.2	1.14	237.9	22.4	231.0	0.78	7.09	1.41
C.D.(5%) AiBj-AiBk		995.4	0.6	13188.4	0.19	21.0	3.9	39.0	0.12	0.30	0.08
C.D.(5%) AiBk-AjBk		979.1	0.6	12972.5	0.18	29.1	3.6	36.4	0.16	0.29	0.11
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		11659	66744	87737	1.31	259.0	23.6	235.3	0.84	7.04	1.43
Conventional tillage		12401	79812	84503	1.06	209.0	20.8	230.0	0.67	7.19	1.37
Permanent beds		11807	76679	79757	1.04	245.7	22.9	227.7	0.83	7.03	1.42
C.D. (5%) Ai-Aj		556.0	0.4	7367.3	0.10	23.8	1.6	17.9	0.12	0.16	0.09
C.V. (%) Error A		3.6	0.0	6.7	6.8	7.7	5.3	5.9	12.1	1.8	4.7
F (5%)		s	s	n.s.	s	s	s	n.s.	s	n.s.	n.s.
FFP (116:64:32)		11046	73806	72549	1.00	227.7	25.1	222.3	0.75	7.08	1.40
SSNM (110:15:64)		12111	73151	87321	1.20	235.0	17.7	241.7	0.77	7.09	1.41
100% RDF (150:60:40)		12710	76280	92128	1.21	251.0	24.5	229.0	0.82	7.10	1.42
C.D. (5%) Bi-Bj		574.7	0.3	7614.3	0.11	12.1	2.3	22.5	0.07	0.18	0.05
C.V. (%) ErrorB		4.7	0.0	8.8	9.2	5.0	9.9	9.5	8.9	2.4	3.3
F (5%)		s	s	s	s	s	s	n.s.	n.s.	n.s.	n.s.

Table 5: Nutrient management in maize - wheat - green gram cropping system under different tillage practices at Dholi.

Tillage practices	Nutrient management	Wheat grain yield (kg/ha)	Plants/m ²	Tillers (m ²)	Plant height (cm)	Days of flowering	Days of maturity
Zero tillage	RDF	4076	34.3	346.7	70.9	97.7	122.7
	SSNM	4109	38.7	346.0	69.3	96.7	121.3
	FFP	4108	38.0	362.7	67.4	98.3	121.0
Conventional Till	RDF	4015	48.3	364.7	69.7	96.7	121.0
	SSNM	3965	41.3	367.0	69.0	97.7	120.7
	FFP	3937	42.3	339.7	67.1	97.0	120.7
Permanent Bed	RDF	4236	25.7	352.0	69.2	98.3	122.3
	SSNM	4207	34.3	357.0	66.8	99.3	122.0
	FFP	4451	33.3	348.3	67.9	98.3	122.3
Location mean		4122.5	37.4	353.8	68.6	97.8	121.6
C.D.(5%) AiBj-AiBk		7.0	7.9	39.4	3.5	1.6	1.2
C.D.(5%) AiBk-AjBk		19.5	7.2	47.1	3.7	2.5	1.6
F(5%)		s	n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		4097	37.0	351.8	69.2	97.6	121.7
Conventional tillage		3972	44.0	357.1	68.6	97.1	120.8
Permanent beds		4298	31.1	352.4	67.9	98.7	122.2
C.D. (5%) Ai-Aj		18.7	3.2	34.8	2.4	2.2	1.2
C.V. (%) Error A		0.3	6.6	7.5	2.6	1.7	0.8
F (5%)		s	s	n.s.	n.s.	n.s.	n.s.
RDF (120:60:40)		4109	36.1	354.4	69.9	97.6	122.0
SSNM (159:34.5:75)		4094	38.1	356.7	68.3	97.9	121.3
FFP (170:90:60)		4165	37.9	350.2	67.5	97.9	121.3
C.D. (5%) Bi-Bj		4.1	4.5	22.8	2.0	0.9	0.7
C.V. (%) ErrorB		0.1	11.8	6.3	2.9	0.9	0.6
F (5%)		s	n.s.	n.s.	n.s.	n.s.	n.s.

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Tillage practices	Nutrient management	Spikelet's/ear	Spike length (cm)	1000 grain weight (g)	Grain wt. gm/m ²	Moisture (%)
Zero tillage	RDF	52.0	10.3	40.3	407.6	14.8
	SSNM	57.7	10.7	40.5	410.9	15.1
	FFP	53.7	11.4	42.3	410.8	14.2
Conventional Till	RDF	55.7	10.9	42.7	401.5	14.3
	SSNM	52.0	10.8	43.7	396.5	14.8
	FFP	51.7	10.6	42.3	393.7	14.8
Permanent Bed	RDF	49.7	11.0	36.3	423.6	14.5
	SSNM	55.7	10.6	35.9	420.8	14.8
	FFP	53.7	10.6	36.7	445.1	15.3

Location mean	53.5	10.8	40.1	412.3	14.7
C.D.(5%) AiBj-AiBk	7.0	1.8	3.1	43.3	1.8
C.D.(5%) AiBk-AjBk	7.3	1.7	3.9	38.0	1.8
F(5%)	n.s.	n.s.	n.s.	n.s.	n.s.

Zero tillage	54.4	10.8	41.0	409.8	14.7
Conventional tillage	53.1	10.8	42.9	397.2	14.6
Permanent beds	53.0	10.7	36.3	429.8	14.9

C.D. (5%) Ai-Aj	4.7	0.9	3.0	14.1	1.0
C.V. (%) Error A	6.6	6.3	5.8	2.6	2.8
F (5%)	n.s.	n.s.	s	s	n.s.

RDF (120:60:40)	52.4	10.7	39.8	410.9	14.5
SSNM (159:34.5:75)	55.1	10.7	40.0	409.4	14.9
FFP (170:90:60)	53.0	10.8	40.5	416.5	14.8

C.D. (5%) Bi-Bj	4.1	1.0	1.8	25.0	1.0
C.V. (%) ErrorB	7.4	9.3	4.3	5.9	5.1
F (5%)	n.s.	n.s.	n.s.	n.s.	n.s.

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Table 6: Nutrient management in Rice- Maize cropping system under different tillage practices at Dholi.

Tillage	Nutrient	Grain yield (kg/ha)	Cob yield (kg/ha)	Plants ('000/ha)	Cobs ('000/ha)	Plant height (cm)
Zero tillage	RDF	8415	9717	87.3	87.3	141.7
	SSNM	8842	10150	86.5	87.5	140.0
	FFP	7985	9058	86.9	87.5	140.3
Conventional Till	RDF	8544	9735	86.5	87.1	141.3
	SSNM	8736	10075	87.3	87.7	148.3
	FFP	7320	8298	88.2	88.6	148.0
Permanent Bed	RDF	8388	9548	83.3	84.3	140.0
	SSNM	8931	10187	84.3	84.7	151.0
	FFP	8237	9453	83.7	84.5	148.3
Location mean		8377.6	9580.0	86.0	86.6	144.3
C.D.(5%) AiBj-AiBk		732.7	682.3	1.3	2.2	8.2
C.D.(5%) AiBk-AjBk		777.3	837.4	1.3	2.2	11.6
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		8414	9642	86.9	87.4	140.7
Conventional tillage		8200	9369	87.3	87.8	145.9
Permanent beds		8518	9729	83.8	84.5	146.4
C.D. (5%) Ai-Aj		504.4	633.4	0.8	1.3	9.6
C.V. (%) Error A		4.6	5.1	0.7	1.1	5.1
F (5%)		n.s.	s	s	n.s.	n.s.
RDF (120:60:40)		8449	9667	85.7	86.2	141.0
SSNM (159:34.5:75)		8836	10137	86.0	86.6	146.4
FFP (170:90:60)		7848	8936	86.3	86.9	145.6
C.D. (5%) Bi-Bj		423.0	393.9	0.7	1.3	4.7
C.V. (%) ErrorB		4.9	4.0	0.8	1.4	3.2
F (5%)		s	s	n.s.	n.s.	n.s.

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Tillage practices	Nutrient management	Ear height (cm)	Days of 50% tasseling	Days of 50% silking	Days of maturity	Moisture (%)
Zero tillage	RDF	76.7	125.0	129.3	153.7	17.8
	SSNM	76.7	123.7	128.0	154.7	17.4
	FFP	73.3	125.0	129.7	153.7	16.3
Conventional Till	RDF	51.7	117.7	122.3	159.0	16.7
	SSNM	60.0	116.7	121.3	157.7	17.7
	FFP	58.3	117.3	121.7	158.7	16.3
Permanent Bed	RDF	58.3	117.7	122.3	160.0	16.7
	SSNM	55.0	117.7	122.3	159.7	16.8
	FFP	53.3	117.3	121.7	158.3	17.3
Location mean		62.6	119.8	124.3	157.3	17.0
C.D.(5%) AiBj-AiBk		11.4	2.8	2.9	1.4	1.9
C.D.(5%) AiBk-AjBk		10.5	2.9	2.7	1.5	1.7
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.
Zero tillage		75.6	124.6	129.0	154.0	17.2
Conventional tillage		56.7	117.2	121.8	158.4	16.9
Permanent beds		55.6	117.6	122.1	159.3	16.9
C.D. (5%) Ai-Aj		5.0	1.7	1.1	1.0	0.6
C.V. (%) Error A		6.1	1.1	0.7	0.5	2.5
F (5%)		s	s	s	s	n.s.
RDF (120:60:40)		62.2	120.1	124.7	157.6	17.1
SSNM (159:34.5:75)		63.9	119.3	123.9	157.3	17.3
FFP (170:90:60)		61.7	119.9	124.3	156.9	16.6
C.D. (5%) Bi-Bj		6.6	1.6	1.7	0.8	1.1
C.V. (%) ErrorB		10.2	1.3	1.3	0.5	6.4
F (5%)		n.s.	n.s.	n.s.	n.s.	n.s.

Table 7: Nutrient management in maize-mustard cropping systems under different tillage practices at Chhindwara.

Tillage practices	Nutrient management	Density	Seed yield (kg/ha)	Plants ('000/ha)	Branch/plant	Plant height (cm)	Pods/plant
Zero tillage	60:30:20	60x20 cm	475.5	240.1	5.1	110.7	100.5
		50x20 cm	469.9	238.2	4.5	107.7	93.9
	120:60:40	60x20 cm	564.1	238.2	5.4	113.6	108.6
		50x20 cm	542.4	238.2	5.3	111.4	110.6
	140:34:71	60x20 cm	658.3	243.1	5.5	115.3	133.7
		50x20 cm	624.6	246.1	5.5	115.3	120.7
Conventional tillage	60:30:20	60x20 cm	635.8	246.8	5.9	117.4	140.8
		50x20 cm	599.0	243.4	5.9	117.2	140.0
	120:60:40	60x20 cm	704.5	252.8	6.3	119.5	127.8
		50x20 cm	676.0	253.6	6.1	117.5	121.7
	140:34:71	60x20 cm	1079.1	258.8	6.4	120.9	148.5
		50x20 cm	961.6	269.0	6.3	120.8	149.7
Permanent tillage	60:30:20	60x20 cm	702.6	249.8	6.5	121.9	149.9
		50x20 cm	686.9	250.9	6.5	121.2	152.3
	120:60:40	60x20 cm	749.2	247.2	6.5	122.1	178.8
		50x20 cm	727.4	247.9	6.7	123.8	177.6
	140:34:71	60x20 cm	1099.4	260.3	7.8	129.4	181.4
		50x20 cm	1081.0	262.2	7.7	123.9	165.5
Mean of location			724.3	249.3	6.1	118.3	139.0
Zero tillage			555.8	240.6	5.2	112.3	111.3
Conventional tillage			776.0	254.1	6.2	118.9	138.1
Permanent tillage			841.1	253.1	7.0	123.7	167.6
CD at 5%			88.2	NS	0.8	NS	14.8
CV (%)			13.2	5.6	14.0	5.0	11.5
60:30:20			595.0	244.9	5.8	116.0	129.6
120:60:40			660.6	246.3	6.1	118.0	137.5
140:34:71			917.3	256.6	6.5	120.9	149.9
CD at 5%			69.0	6.8	0.4	NS	14.7
CV (%)			13.1	3.8	8.4	4.5	14.6
60x20 cm			740.9	248.6	6.2	119.0	141.1
50x20 cm			707.6	249.9	6.1	117.6	136.9
CD at 5%			22.2	NS	NS	NS	NS
CV (%)			5.4	3.3	12.3	4.6	13.3

Table 8: Nutrient management in maize-based cropping systems under different tillage practices at Delhi.

Tillage practices	Nutrient management	System productivity of maize-mustard cropping system in terms of MEY	System productivity of maize-chickpea cropping system in terms of MEY	Maize equivalent yield of mustard	Maize equivalent yield of chickpea
Zero tillage	Control	4628	3904	2080	1171
	100% RDF	8647	6457	4480	2060
	SSNM	8691	5566	4506	1680
	50% RDF	7630	6051	4000	1578
Permanent bed	Control	4905	3822	2053	1196
	100% RDF	7654	5402	4054	2035
	SSNM	7717	5372	4213	1858
	50% RDF	7418	5125	3733	1654
Conventional tillage	Control	4144	3302	1574	1069
	100% RDF	8022	5514	4000	1985
	SSNM	7623	5470	3734	1756
	50% RDF	6735	4784	3386	1807
Location mean		6984.4	5064.2	3484.4	1654.0
C.D.(5%) AiBj-AiBk		1222.8	860.5	1011.9	347.6
C.D.(5%) AiBk-AjBk		1148.8	876.3	910.8	422.3
F(5%)		n.s.	n.s.	n.s.	n.s.
Zero tillage		7399	5494	3767	1622
Permanent bed		6923	4930	3513	1686
Conventional tillage		6631	4768	3173	1654
C.D. (5%) Ai-Aj		457.7	472.5	255.7	301.8
C.V. (%) Error A		5.8	8.2	6.5	16.1
F (5%)		s	s	s	n.s.
Control		4559	3676	1902	1145
100% RDF		8108	5791	4178	2027
SSNM		8010	5469	4151	1765
50% RDF + CR @2.5 t/ha		7261	5320	3706	1679
C.D. (5%) Bi-Bj		706.0	496.8	584.2	200.7
C.V. (%) ErrorB		10.2	9.9	16.9	12.3
F (5%)		s	s	s	s

Table 9: Nutrient management for maize genotypes under different cropping systems under maize-mustard relay in *rab*/season at Chhindwara.

Hybrids	Nutrient management	Seed yield (kg/ha)	Plants ('000/ha)	Branches/plant	Plant height (cm)	Pods /plant
PMH-1	60:30:20	1029	352.1	5.3	117.5	120.3
	120:60:40	1435	369.9	6.5	122.5	180.1
	140:34:71	1595	387.6	7.5	129.7	231.6
PMH-3	60:30:20	938	357.1	4.7	114.0	97.6
	120:60:40	1464	386.0	5.9	120.6	148.4
	140:34:71	1562	384.8	7.2	129.7	218.5
HQPM-1	60:30:20	978	364.9	5.8	118.4	129.3
	120:60:40	1381	380.4	6.1	122.2	148.0
	140:34:71	1503	386.0	6.0	126.2	195.5
CMH-08-350	60:30:20	1067	357.6	5.6	120.5	148.1
	120:60:40	1367	386.0	6.3	122.3	151.7
	140:34:71	1463	383.2	6.0	126.3	190.3
CMH-08-292	60:30:20	973	373.2	5.6	119.4	128.8
	120:60:40	1422	374.9	6.4	122.5	167.7
	140:34:71	1556	386.0	6.9	124.2	199.7
Location mean		1315.5	375.3	6.1	122.4	163.7
C.D.(5%) AiBj-AiBk		161.5	18.0	1.8	12.3	64.8
C.D.(5%) AiBk-AjBk		207.7	16.9	1.8	12.7	63.4
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.
PMH-1		1353	369.9	6.4	123.2	177.3
PMH-3		1321	376.0	5.9	121.4	154.8
HQPM-1		1287	377.1	6.0	122.3	157.6
CMH-08-350		1299	375.6	6.0	123.0	163.4
CMH-08-292		1317	378.0	6.3	122.0	165.4
C.D. (5%) Ai-Aj		160.7	8.4	0.9	7.9	35.1
C.V. (%) Error A		11.2	2.1	14.1	5.9	19.7
F (5%)		n.s.	n.s.	n.s.	n.s.	n.s.
60:30:20		997	361.0	5.4	117.9	124.8
120:60:40		1414	379.4	6.2	122.0	159.2
140:34:71		1536	385.5	6.7	127.2	207.1
C.D. (5%) Bi-Bj		72.2	8.1	0.8	5.5	29.0
C.V. (%) ErrorB		7.2	2.8	17.7	5.9	23.2
F (5%)		s	s	s	s	s

Table 10: Effect of planting density and nutrient management practices on the performance of hybrids in *rabi* season at Banswara.

Hybrids	Density	Nutrient management	Grain yield (kg/ha)
BIO-9682	60x20 cm	RDF	7444
		SSNM	8667
		STCR	8833
	50x20 cm	RDF	8509
		SSNM	9917
		STCR	10611
HQPM-1	60x20 cm	RDF	6404
		SSNM	7788
		STCR	7985
	50x20 cm	RDF	7235
		SSNM	8717
		STCR	8885

Mean of location 8416.2

BIO-9682	8997
HQPM-1	7836

CD at 5% 662.8

CV (%) 5.5

60x20 cm	7854
50x20 cm	8979

CD at 5% 563.0

CV (%) 7.2

RDF (150:60:40)	7398
SSNM (208:59:66)	8772
STCR (234:119:64)	9079

CD at 5% 478.8

CV (%) 6.6

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Table 11: Effect of planting density and nutrient management practices on the performance of mustard in *rabi* season at Chhindwara.

Hybrids	Density	Nutrient management	Seed yield (kg/ha)	Plants ('000/ha)	Pods/plant	Branch/plant	Plant height (cm)
DKC 7074	60x20 cm (Low)	60:30:20	656.8	241.7	101.5	6.0	111.1
		120:60:40	856.1	254.1	101.9	5.8	111.5
		140:34:71	1004.4	253.7	192.8	8.7	129.4
	50x20 cm (High)	60:30:20	573.9	251.5	91.2	5.9	109.7
		120:60:40	875.3	248.5	100.1	6.1	114.7
		140:34:71	997.3	258.6	174.1	7.7	123.9
DKC 8101	60x20 cm (Low)	60:30:20	519.1	291.3	73.3	4.8	102.7
		120:60:40	888.4	257.1	105.3	6.2	113.9
		140:34:71	1019.4	259.0	160.7	7.0	121.0
	50x20 cm (High)	60:30:20	555.9	257.5	94.3	5.8	107.9
		120:60:40	950.0	250.0	158.3	6.6	117.9
		140:34:71	963.5	248.8	110.4	6.4	122.2
Mean of location			821.7	256.0	122.0	6.4	115.5
DKC 7074			827.3	251.3	126.9	6.7	116.7
DKC 8101			816.0	260.6	117.1	6.1	114.3
CD at 5%			10.6	NS	NS	NS	NS
CV (%)			0.9	5.0	11.9	12.1	6.9
60x20 cm			824.0	259.5	122.6	6.4	114.9
50x20 cm			819.3	252.5	121.4	6.4	116.1
CD at 5%			NS	NS	NS	NS	NS
CV (%)			13.7	5.0	16.9	19.2	3.3
60:30:20			576.4	260.5	90.1	5.6	107.9
120:60:40			892.4	252.4	116.4	6.2	114.5
140:34:71			996.1	255.0	159.5	7.5	124.1
CD at 5%			34.2	NS	20.7	0.9	4.3
CV (%)			4.8	4.6	19.6	16.6	4.3

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Table 12: Effect of planting density and nutrient management practices on performance of Full season hybrids in Rabi 2015-16 at Karimnagar.

Hybrids	Density	Nutrient management	Grain yield (kg/ha)	Cob yield (kg/ha)	Stalk yield (kg/ha)	Plant height (cm)	Ear height (cm)	Days to 50% tasseling	Days to 50% silking
NK-6240	60x20 cm	SSNM	7028	8647	10202	232.0	95.0	57.7	60.7
		STCR	7907	9653	11616	234.3	103.0	57.3	60.7
		RDF	7326	8859	11414	231.3	96.7	58.7	61.7
		150% RDF	7858	9640	11313	233.7	99.7	57.3	60.3
	50x20 cm	SSNM	5745	6876	11515	239.0	106.3	59.3	62.0
		STCR	6708	8003	12222	237.7	103.3	58.7	61.3
		RDF	6337	7561	11970	238.0	101.3	59.3	62.0
		150% RDF	7121	8624	12121	227.0	99.3	59.3	62.0
K-3110	60x20 cm	SSNM	7208	8470	9495	228.0	102.7	58.3	61.3
		STCR	7807	9338	10303	229.3	96.0	56.7	59.7
		RDF	7540	9273	10000	225.0	85.3	57.7	60.3
		150% RDF	7930	9532	10606	235.7	107.3	57.7	60.0
	50x20 cm	SSNM	6822	8088	9596	235.3	92.0	57.7	61.0
		STCR	7407	8828	10202	238.3	92.3	57.7	60.3
		RDF	7267	8655	10101	224.3	87.7	57.3	60.7
		150% RDF	7669	9097	10505	234.7	90.3	57.3	60.7
Mean of location			7230.1	8696.6	10823.9	232.7	97.4	58.0	60.9
NK-6240			7004	8483	11547	234.1	100.6	58.5	61.3
K-3110			7456	8910	10101	231.3	94.2	57.5	60.5
CD at 5%			NS	NS	NS	NS	1.6	NS	0.2
CV (%)			9.5	12.8	20.5	5.5	1.3	1.5	0.2
60x20 cm			7576	9177	10619	231.2	98.2	57.7	60.6
50x20 cm			6885	8217	11029	234.3	96.6	58.3	61.3
CD at 5%			NS	927.4	NS	NS	NS	NS	NS
CV (%)			14.5	13.3	11.0	5.3	2.9	3.6	3.3
SSNM (190:84:143)			6701	8020	10202	233.6	99.0	58.3	61.3
STCR (260:94:61)			7457	8955	11086	234.9	98.7	57.6	60.5
RDF (200:60:50)			7117	8587	10871	229.7	92.8	58.3	61.2
150% RDF (300:90:75)			7645	9223	11136	232.8	99.2	57.9	60.8
CD at 5%			423.9	521.0	NS	NS	NS	NS	NS
CV (%)			7.0	7.1	8.7	6.7	7.5	2.9	2.8

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Hybrids	Density	Nutrient management	Cob length (cm)	Cob girth (cm)	Grain rows/cob	Grains/row	1000 grain weight (g)	Net returns (Rs./ha)	B:C Ratio
NK-6240	60x20 cm	SSNM	17.7	15.2	15.1	31.8	318.0	46887	1.75
		STCR	18.1	14.9	14.9	36.5	331.3	53257	1.83
		RDF	17.8	14.9	14.7	33.0	294.7	50512	1.82
		150% RDF	17.7	14.6	15.1	28.3	321.3	56855	1.87
	50x20 cm	SSNM	17.7	14.7	14.8	32.6	266.7	22517	1.36
		STCR	18.0	15.1	14.9	31.5	308.7	34359	1.53
		RDF	17.7	15.4	14.5	35.3	315.3	27558	1.44
		150% RDF	18.1	15.5	15.2	32.3	322.7	40951	1.62
K-3110	60x20 cm	SSNM	17.6	16.3	14.9	34.1	314.0	47098	1.75
		STCR	19.2	15.0	14.5	39.4	306.7	50728	1.79
		RDF	18.3	14.3	14.7	34.7	303.3	51877	1.84
		150% RDF	18.9	15.3	14.7	38.1	312.0	51613	1.79
	50x20 cm	SSNM	17.1	15.2	13.6	37.7	274.7	41455	1.65
		STCR	17.7	14.4	14.1	33.5	278.0	48857	1.75
		RDF	17.3	14.9	14.4	33.8	272.7	47912	1.76
		150% RDF	18.7	14.7	14.4	36.1	278.7	49720	1.75
Mean of location			18.0	15.0	14.7	34.3	301.2	45134.8	1.71
NK-6240			17.9	15.0	14.9	32.7	309.8	41612	1.65
K-3110			18.1	15.0	14.4	35.9	292.5	48657	1.76
CD at 5%			NS	NS	NS	3.3	NS	NS	NS
CV (%)			4.3	2.5	6.5	7.6	6.3	20.5	8.2
60x20 cm			18.2	15.1	14.8	34.5	312.7	51103	1.81
50x20 cm			17.8	15.0	14.5	34.1	289.7	39166	1.61
CD at 5%			NS	NS	NS	NS	NS	9090.6	0.1
CV (%)			4.6	4.5	7.1	12.4	15.9	25.1	10.5
SSNM (190:84:143)			17.5	15.3	14.6	34.1	293.3	39489	1.63
STCR (260:94:61)			18.3	14.9	14.6	35.2	306.2	46800	1.72
RDF (200:60:50)			17.8	14.9	14.6	34.2	296.5	44465	1.72
150% RDF (300:90:75)			18.4	15.0	14.9	33.7	308.7	49785	1.76
CD at 5%			NS	NS	NS	NS	NS	4708.5	0.1
CV (%)			7.2	4.2	4.7	11.4	6.7	12.4	5.1

Table 13: Effect of planting density and nutrient management practices on the performance of hybrids in *rabi* season at Pantnagar.

Hybrids	Density	Nutrient management	Wheat Grain yield (kg/ha)	Stover yield (kg/ha)	Tillers/m ²	Plant height (cm)	1000-grain weight (g)
4212 (Rasi seeds)	67.5x20 cm	100% RDF	5281	7493	326.7	91.8	40.5
		STCR	4989	7401	343.3	93.1	41.1
		SSNM	5336	7273	313.3	90.7	43.1
	67.5x15 cm	100% RDF	5245	7219	306.7	89.8	40.8
		STCR	5336	7456	346.7	90.4	40.3
		SSNM	5099	6780	310.0	89.6	40.5
P-3377 (Pioneer)	67.5x20 cm	100% RDF	4989	6670	340.0	86.9	40.9
		STCR	5044	7091	336.7	87.9	41.4
		SSNM	5154	6944	320.0	88.6	42.6
	67.5x15 cm	100% RDF	4861	6798	326.7	86.1	43.0
		STCR	5062	6853	320.0	87.9	43.0
		SSNM	4825	6725	323.3	88.9	42.8
Mean of location			5101.7	7058.7	326.1	89.3	41.7
4212 (Rasi seeds)			5214	7270	324.4	90.9	41.1
P-3377 (Pioneer)			4989	6847	327.8	87.7	42.3
CD at 5%			NS	NS	NS	NS	NS
CV (%)			6.9	7.6	4.9	5.2	4.6
67.5x20 cm			5132	7145	330.0	89.8	41.6
67.5x15 cm			5071	6972	322.2	88.8	41.7
CD at 5%			NS	NS	NS	NS	NS
CV (%)			10.3	13.8	5.8	4.9	4.6
100% RDF (120:60:40)			5094	7045	325.0	88.7	41.3
STCR (212:106:87)			5108	7200	336.7	89.8	41.5
SSNM (120:30:46)			5103	6931	316.7	89.4	42.3
CD at 5%			NS	NS	NS	NS	NS
CV (%)			8.9	5.0	11.1	4.2	3.4

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Hybrids	Density	Nutrient management	Net return (Rs./ha)	B:C ratio	MEY (kg/ha) of maize-wheat cropping system	Net return (Rs./ha) of system	B:C ratio of system
4212 (Rasi seeds)	67.5x20 cm	100% RDF	51147	1.74	11820	100780	1.81
		STCR	46688	1.59	11739	94852	1.56
		SSNM	51983	1.77	11994	104599	1.93
	67.5x15 cm	100% RDF	50589	1.72	12756	112789	2.01
		STCR	51983	1.77	13672	120057	1.97
		SSNM	48360	1.65	12500	110908	2.03
P-3377 (Pioneer)	67.5x20 cm	100% RDF	46688	1.59	12426	108810	1.95
		STCR	47524	1.62	14064	125652	2.07
		SSNM	49196	1.67	12634	113081	2.08
	67.5x15 cm	100% RDF	44737	1.52	13198	118641	2.11
		STCR	47803	1.63	14424	130024	2.13
		SSNM	44180	1.50	13121	119129	2.18
Mean of location			48406.4	1.65	12862.4	113276.9	2.0
4212 (Rasi seeds)			50125	1.71	12414	107331	1.88
P-3377 (Pioneer)			46688	1.59	13311	119223	2.09
CD at 5%			NS	NS	734.5	9732.5	0.2
CV (%)			11.2	11.2	4.0	6.0	5.9
67.5x20 cm			48871	1.66	12446	107962	1.90
67.5x15 cm			47942	1.66	13279	118591	2.07
CD at 5%			NS	NS	NS	NS	NS
CV (%)			16.6	16.6	7.0	10.6	10.6
100% RDF (120:60:40)			48290	1.64	12550	110255	1.97
STCR (212:106:87)			48499	1.65	13475	117646	1.93
SSNM (120:30:46)			48430	1.65	12562	111929	2.05
CD at 5%			NS	NS	767.4	NS	NS
CV (%)			14.2	14.2	6.9	10.4	10.4

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Hybrids	Density	Nutrient management	N uptake (kg/ha)		Total N uptake (kg/ ha)	P uptake (kg/ha)		Total P uptake (kg/ ha)	K uptake (kg/ha)		Total K uptake (kg/ ha)
			Grain	Stover		Grain	Stover		Grain	Stover	
4212 (Rasi seeds)	67.5 x 20 cm	100% RDF	68.6	29.1	97.8	12.2	10.2	22.5	26.1	106.2	132.2
		STCR	71.7	30.1	101.8	12.0	10.0	22.0	24.7	102.7	127.5
		SSNM	71.5	30.5	102.0	12.4	9.8	22.2	30.8	97.4	128.1
	67.5 x 15 cm	100% RDF	74.7	33.9	108.7	11.9	9.5	21.4	26.4	103.0	129.3
		STCR	76.5	28.8	105.3	12.2	10.2	22.4	30.0	102.5	132.4
		SSNM	71.9	31.7	103.6	12.1	8.7	20.8	25.9	88.6	114.5
P-3377 (Pioneer)	67.5 x 20 cm	100% RDF	70.3	29.2	99.5	11.9	8.6	20.4	26.5	93.6	120.1
		STCR	72.0	29.0	101.0	12.6	9.8	22.4	24.3	103.4	127.7
		SSNM	70.8	32.4	103.2	12.9	9.2	22.1	22.1	96.7	118.8
	67.5 x 15 cm	100% RDF	63.3	29.5	92.8	11.9	9.2	21.0	21.0	93.4	114.3
		STCR	67.5	29.8	97.3	12.2	8.9	21.1	25.6	93.1	118.7
		SSNM	65.8	25.4	91.2	12.1	8.1	20.2	19.4	97.1	116.5
Mean of location			70.4	30.0	100.3	12.2	9.3	21.5	25.2	98.1	123.3
4212 (Rasi seeds)			72.5	30.7	103.2	12.1	9.7	21.9	27.3	100.0	127.3
P-3377 (Pioneer)			68.3	29.2	97.5	12.3	9.0	21.2	23.1	96.2	119.3
CD at 5%			NS	NS	NS	NS	0.5	NS	NS	NS	NS
CV (%)			12.7	22.5	14.4	3.4	3.5	2.3	42.2	24.3	24.0
67.5x20 cm			70.8	30.1	100.9	12.3	9.6	21.9	25.7	100.0	125.7
67.5x15 cm			70.0	29.9	99.8	12.1	9.1	21.2	24.7	96.3	121.0
CD at 5%			NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)			11.6	32.8	11.4	12.8	12.7	9.7	20.6	17.0	13.9
100% RDF (120:60:40)			69.2	30.4	99.7	12.0	9.4	21.3	25.0	99.0	124.0
STCR (212:106:87)			71.9	29.4	101.4	12.2	9.7	22.0	26.2	100.4	126.6
SSNM (120:30:46)			70.0	30.0	100.0	12.4	8.9	21.3	24.5	94.9	119.5
CD at 5%			NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)			10.9	20.8	9.8	11.6	19.8	11.6	29.8	13.6	12.6

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Hybrids	Density	Nutrient management	Residual available (kg/ha)			Organic carbon (%)	Soil pH	Bulk density (Mg/m ³) at 0-15 cm depth
			N	P	K			
4212 (Rasi seeds)	67.5x20 cm	100% RDF	240.3	19.8	215.0	0.687	7.20	1.38
		STCR	246.3	22.6	226.0	0.707	7.20	1.37
		SSNM	249.3	19.5	223.7	0.700	7.20	1.37
	67.5x15 cm	100% RDF	242.0	20.0	221.3	0.707	7.13	1.39
		STCR	247.0	23.5	218.0	0.727	7.07	1.38
		SSNM	246.0	19.3	230.7	0.663	7.07	1.39
P-3377 (Pioneer)	67.5x20 cm	100% RDF	241.0	20.1	228.3	0.720	7.17	1.35
		STCR	241.0	23.7	219.7	0.687	6.97	1.37
		SSNM	249.3	19.1	221.3	0.710	7.17	1.36
	67.5x15 cm	100% RDF	243.3	19.9	220.3	0.717	7.23	1.38
		STCR	242.3	23.5	225.3	0.723	7.10	1.36
		SSNM	246.0	19.3	233.0	0.690	7.13	1.38
Mean of location			244.5	20.9	223.6	0.703	7.14	1.37
4212 (Rasi seeds)			245.2	20.8	222.4	0.698	7.14	1.38
P-3377 (Pioneer)			243.8	20.9	224.7	0.708	7.13	1.37
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			9.2	1.0	2.4	9.5	1.1	4.2
67.5x20 cm			244.6	20.8	222.3	0.702	7.15	1.37
67.5x15 cm			244.4	20.9	224.8	0.704	7.12	1.38
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			5.3	2.8	11.0	8.4	2.2	3.2
100% RDF (120:60:40)			241.7	19.9	221.3	0.708	7.18	1.37
STCR (212:106:87)			244.2	23.3	222.3	0.711	7.08	1.37
SSNM (120:30:46)			247.7	19.3	227.2	0.691	7.14	1.37
CD at 5%			NS	0.9	NS	NS	NS	NS
CV (%)			6.2	5.1	9.1	7.6	1.8	1.9

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Table 14: Effect of planting density and nutrient management practices on the performance of hybrids in *rab*/season in Vagarai.

Hybrids	Density	Nutrient management	Grain yield (kg/ha)	Stover yield (kg/ha)	Cob yield (kg/ha)	Plants ('000/ha)	Cobs ('000/ha)	Plant height (cm)	Days to 50% tasseling
Co-6	60x20 cm (Normal)	RDF	6520	6328	7760	72.2	70.0	157.3	50.0
		STCR	5404	5499	6590	71.3	58.6	150.9	48.3
		SSNM	5522	5286	6397	73.1	58.7	154.9	48.3
	50x20 cm (High)	RDF	5862	6192	6872	73.6	61.9	157.3	48.0
		STCR	6058	6162	6984	70.9	60.4	147.9	47.0
		SSNM	6845	6522	7791	80.7	72.6	156.3	48.0
S-6668	60x20 cm (Normal)	RDF	7273	6701	9537	73.6	75.2	177.8	53.3
		STCR	7023	6442	8259	71.1	70.2	173.1	51.3
		SSNM	7946	7128	9385	75.8	73.6	171.5	51.3
	50x20 cm (High)	RDF	5879	5892	7119	82.0	69.8	169.5	50.0
		STCR	6519	5842	7806	79.3	70.3	155.3	51.0
		SSNM	6389	6224	7290	75.6	67.5	170.3	52.3
Mean of location			6436.6	6184.8	7649.2	74.9	67.4	161.9	49.9
NK-6240			6035	5998	7066	73.6	63.7	154.1	48.3
K-3110			6838	6372	8233	76.2	71.1	169.6	51.6
CD at 5%			NS	NS	1071.7	NS	3.3	NS	1.6
CV (%)			10.2	5.4	9.8	4.4	3.4	8.7	2.2
60x20 cm			6614	6231	7988	72.9	67.7	164.3	50.4
50x20 cm			6259	6139	7310	77.0	67.1	159.4	49.4
CD at 5%			NS	NS	NS	NS	NS	NS	NS
CV (%)			19.3	21.0	19.7	8.0	11.4	5.0	2.5
SSNM			6383	6278	7822	75.3	69.2	165.5	50.3
STCR			6251	5986	7410	73.2	64.9	156.8	49.4
RDF			6676	6290	7716	76.3	68.1	163.3	50.0
CD at 5%			NS	NS	NS	NS	NS	NS	NS
CV (%)			10.3	15.5	9.4	8.4	6.1	7.0	3.1

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Hybrids	Density	Nutrient management	Days to 50% silking	100 grain weight (g)	Shelling (%)	Gross return (Rs./ha)	Net return (Rs./ha)	BC ratio
Co-6	60x20 cm (Normal)	RDF	53.3	39.3	84.4	102691	46311	1.82
		STCR	52.7	39.7	82.5	85108	32968	1.63
		SSNM	52.3	39.0	86.4	86965	32562	1.60
	50x20 cm (High)	RDF	52.7	40.3	85.4	92321	35941	1.64
		STCR	51.0	46.0	86.6	95414	43274	1.83
		SSNM	52.3	36.7	87.7	107814	53411	1.98
S-6668	60x20 cm (Normal)	RDF	56.3	39.3	76.2	114542	53962	1.89
		STCR	55.7	37.7	85.1	110607	54264	1.96
		SSNM	55.7	40.3	84.3	125151	66548	2.14
	50x20 cm (High)	RDF	54.7	37.3	82.8	92590	32010	1.53
		STCR	54.7	39.3	83.5	102675	46332	1.82
		SSNM	56.7	38.3	87.6	100633	42030	1.72
Mean of location			54.0	39.4	84.4	101375.9	44967.8	1.80
NK-6240			52.4	40.2	85.5	95052	40745	1.75
K-3110			55.6	38.7	83.3	107700	49191	1.84
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			4.5	13.6	3.1	10.2	22.9	10.0
60x20 cm			54.3	39.2	83.1	104177	47769	1.84
50x20 cm			53.7	39.7	85.6	98574	42166	1.75
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			2.5	16.3	5.2	19.3	43.5	19.7
SSNM			54.3	39.1	82.2	100536	42056	1.72
STCR			53.5	40.7	84.4	98451	44209	1.81
RDF			54.3	38.6	86.5	105141	48638	1.86
CD at 5%			NS	NS	2.6	NS	NS	NS
CV (%)			3.7	12.6	3.5	10.3	23.2	10.4

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Table 15: Effect of plant density and nutrient management practices on performance of hybrids in *rab*/at Dholi.

Hybrid	Density	Nutrient management	Grain yield (kg/ha)	Tillers (m ²)	Plant height (cm)	Days of flowering	Days of maturity
Syngenta NK 7720	60x20 cm	RDF	3981	324.3	97.8	92.0	128.7
		STCR	4227	326.7	99.6	93.0	124.0
		SSNM	4099	321.7	99.2	92.7	124.3
	50x20 cm	RDF	4005	324.3	95.9	92.7	124.7
		STCR	4276	325.0	97.0	93.7	127.3
		SSNM	4234	335.0	99.7	92.0	129.0
Poiner 3396	60x20 cm	RDF	4070	335.7	95.5	93.7	129.7
		STCR	4152	318.7	101.1	92.0	127.3
		SSNM	4082	325.0	99.3	93.0	123.7
	50x20 cm	RDF	4079	318.3	97.6	93.0	124.3
		STCR	4189	321.0	95.5	92.7	125.3
		SSNM	4157	330.3	97.5	92.3	128.0
Mean of location			4129.2	325.5	98.0	92.7	126.4
Syngenta NK 7720			4137	326.2	98.2	92.7	126.3
Poiner 3396			4122	324.8	97.8	92.8	126.4
CD at 5%			1.5	NS	NS	NS	NS
CV (%)			0.0	2.1	3.9	0.5	1.5
60x20 cm			4102	325.3	98.8	92.7	126.3
50x20 cm			4157	325.7	97.2	92.7	126.4
CD at 5%			2.6	NS	1.5	NS	NS
CV (%)			0.1	4.4	1.6	1.4	1.2
RDF			4034	325.7	96.7	92.8	126.8
STCR			4211	322.8	98.3	92.8	126.0
SSNM			4143	328.0	98.9	92.5	126.3
CD at 5%			3.7	NS	NS	NS	NS
CV (%)			0.1	3.9	4.6	1.2	1.2

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Table 16: Effect of planting density and nutrient management practices on the performance of hybrid maize during *rab*/season at Bahraich.

Density	Nutrient management	Hybrids	Seed yield (kg/ha)	Stover yield (kg/ha)	Plants ('000 /ha)	Cobs ('000 /ha)	Plant height (cm)	Days to maturity	Cob length (cm)	Grains row/cobs	Grains /row
60x20 cm	200:60:60	H-9682	6252	6893	83.1	82.7	195.3	157.7	16.7	17.2	28.3
		Dekalb 900	6562	7210	83.1	83.0	187.7	156.7	17.2	18.7	30.0
50x20 cm		H-9682	6177	6855	99.7	99.2	193.0	158.0	15.8	14.7	25.3
		Dekalb 900	6673	7323	99.3	98.9	186.3	158.0	15.8	16.3	27.3
60x20 cm	250:50:50	H-9682	6437	7177	83.1	82.8	198.3	160.0	17.7	17.7	30.3
		Dekalb 900	7007	7700	83.3	83.0	194.0	158.3	18.2	19.7	32.7
50x20 cm		H-9682	6329	6917	92.6	99.1	196.0	156.7	16.5	17.3	26.7
		Dekalb 900	6781	7627	99.6	99.4	189.7	161.0	17.3	17.7	29.0
60x20 cm	225:60:80	H-9682	6750	7463	83.1	86.2	196.0	157.0	17.1	17.3	28.3
		Dekalb 900	7152	7903	58.2	82.9	191.7	157.0	16.7	18.7	30.7
50x20 cm		H-9682	6538	7113	99.5	99.2	193.7	154.7	16.0	14.3	27.7
		Dekalb 900	6648	7413	99.4	99.1	187.0	160.0	16.7	16.7	27.7
Mean of location			6609	7300	88.7	91.3	192.4	157.9	16.8	17.2	28.7
60x20 cm			6693	7391	79.0	83.4	193.8	157.8	17.3	18.2	30.1
50x20 cm			6525	7208	98.4	99.1	190.9	158.1	16.4	16.2	27.3
CD at 5%			22.1	151.4	13.0	2.50	0.48	NS	0.44	0.76	0.24
CV (%)			0.23	1.45	10.2	1.91	0.17	0.94	1.84	3.07	0.58
200:60:60			6416	7070	91.3	90.9	190.6	157.6	16.4	16.7	27.8
250:50:50			6638	7355	89.7	91.1	194.5	159.0	17.4	18.1	29.7
225:60:80			6772	7473	85.1	91.9	192.1	157.2	16.6	16.7	28.6
CD at 5%			27.3	36.4	NS	NS	0.57	0.7	0.16	0.30	0.73
CV (%)			0.44	0.53	14.6	1.80	0.31	0.49	0.99	1.85	2.70
H-9682			6414	7070	90.2	91.5	195.4	157.3	16.6	16.4	27.8
Dekalb 900			6804	7529	87.2	91.1	189.4	158.5	17.0	17.9	29.6
CD at 5%			20.1	24.7	NS	NS	0.66	0.6	0.14	0.49	0.44
CV (%)			0.42	0.47	14.6	1.86	0.47	0.52	1.18	3.90	2.10

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Density	Nutrient management	Hybrids	1000 seed weight (g)	Net Return (Rs./ha)	B:C ratio	Barrenness (%)	Grain uptake (kg/ha)		
							N	P	K
60x20 cm	200:60:60	H-9682	226.3	61643	2.88	0.40	146.9	31.3	78.0
		Dekalb 900	232.0	66313	3.02	0.22	154.2	32.8	82.0
50x20 cm		H-9682	225.0	60568	2.84	0.22	145.2	30.9	77.5
		Dekalb 900	227.0	67990	3.07	0.20	156.8	33.4	83.5
60x20 cm	250:50:50	H-9682	228.0	64567	2.97	0.37	151.3	32.2	80.5
		Dekalb 900	234.7	73068	3.23	0.13	164.7	35.0	87.6
50x20 cm		H-9682	224.0	62802	2.91	0.50	148.7	31.6	79.1
		Dekalb 900	230.3	69836	3.13	0.14	159.3	33.9	84.8
60x20 cm	225:60:80	H-9682	227.0	88186	3.01	0.15	158.6	33.8	84.4
		Dekalb 900	231.0	74160	3.19	0.12	168.1	35.8	89.4
50x20 cm		H-9682	221.3	64873	2.92	0.65	153.6	32.7	81.7
		Dekalb 900	228.7	66713	2.97	0.17	156.2	33.2	85.1
Mean of location			227.9	68393	3.01	0.27	155.3	33.0	82.8
60x20 cm			229.8	71323	3.05	0.23	157.3	33.5	83.6
50x20 cm			226.1	65464	2.97	0.31	153.3	32.6	82.0
CD at 5%			1.04	NS	0.02	NS	0.53	0.11	1.23
CV (%)			0.32	7.5	0.36	29.1	0.24	0.23	1.03
200:60:60			227.6	64129	2.95	0.26	150.8	32.1	80.3
250:50:50			229.3	67568	3.06	0.28	156.0	33.2	83.0
225:60:80			227.0	73483	3.02	0.27	159.1	33.9	85.1
CD at 5%			0.99	4753.7	0.02	NS	0.65	0.14	0.90
CV (%)			0.46	7.4	0.54	35.9	0.44	0.44	1.15
H-9682			225.3	67107	2.92	0.38	150.7	32.1	80.2
Dekalb 900			230.6	69680	3.10	0.16	159.9	34.0	85.4
CD at 5%			0.77	NS	0.01	0.1	0.47	0.10	0.75
CV (%)			0.46	7.4	0.44	29.0	0.42	0.42	1.24

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Table 17: Effect of planting density and nutrient management practices on the performance of hybrids in *rabi* season in Coimbatore.

Hybrids	Density	Nutrient management	Grain yield (kg/ha)	Stover yield (kg/ha)	Plants ('000/ha)	Cobs ('000/ha)	Plant height (cm)	Days 50% tasselling	Days 50% silking
CO H 6	60x20 cm	RDF	7024	11954	81.9	79.2	264.7	53.7	57.7
		STCR	6687	11488	78.6	76.9	260.5	53.3	57.3
		SSNM	5263	9147	78.8	76.2	250.7	51.3	56.3
	50x 20 cm	RDF	7796	13191	96.5	94.1	266.2	53.3	57.3
		STCR	7423	12664	95.2	95.0	263.3	52.7	57.0
		SSNM	5841	10069	96.2	94.5	254.6	51.0	55.0
CO H 7	60x20 cm	RDF	7433	12725	80.9	79.5	268.7	54.7	58.7
		STCR	7076	12249	78.3	77.2	265.1	54.3	58.3
		SSNM	5567	9736	80.7	78.3	256.2	52.7	56.3
	50x 20 cm	RDF	8251	14035	96.9	94.5	270.1	54.0	58.0
		STCR	7854	13501	94.8	93.1	267.1	53.7	57.7
		SSNM	6178	10731	97.0	95.0	258.7	51.7	55.7
Mean of location			6866.1	11790.8	88.0	86.1	262.2	53.0	57.1
CO H 6			6672	11419	87.9	86.0	260.0	52.6	56.8
CO H 7			7060	12163	88.1	86.3	264.3	53.5	57.4
CD at 5%			222.8	NS	NS	NS	NS	0.5	NS
CV (%)			2.3	13.1	2.7	2.7	3.5	0.6	1.0
60x20 cm			6508	11217	79.9	77.9	261.0	53.3	57.4
50x20 cm			7224	12365	96.1	94.3	263.3	52.7	56.8
CD at 5%			601.5	NS	1.8	0.5	NS	NS	NS
CV (%)			9.5	14.7	2.2	0.7	1.7	3.1	2.9
RDF (250:75:75)			7626	12976	89.1	86.8	267.4	53.9	57.9
STCR (207:87:37.5)			7260	12475	86.7	85.5	264.0	53.5	57.6
SSNM (110:61:90)			5712	9921	88.2	86.0	255.1	51.7	55.8
CD at 5%			786.9	1300.9	NS	NS	3.6	0.8	1.0
CV (%)			13.2	12.7	2.5	2.6	1.6	1.8	2.1

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Hybrids	Density	Nutrient management	100-seed weight (g)	Net returns (Rs. /ha)	B:C ratio	Cob length (cm)	Cob girth (cm)	Grain rows/cob	Grains/row
CO H 6	60x20 cm	RDF	37.0	52671	2.04	19.5	15.8	14.9	35.2
		STCR	36.4	48842	1.98	18.9	15.6	14.7	34.7
		SSNM	35.4	28903	1.59	16.2	14.8	12.4	31.7
	50x 20 cm	RDF	36.3	61259	2.15	18.6	15.3	14.7	34.2
		STCR	35.9	56901	2.09	18.1	15.1	14.3	33.9
		SSNM	35.0	34654	1.67	15.2	14.1	12.3	31.7
CO H 7	60x20 cm	RDF	38.3	58763	2.16	20.5	16.1	15.2	36.1
		STCR	38.0	54660	2.10	19.7	15.8	14.9	35.2
		SSNM	37.3	33440	1.69	16.7	14.9	12.3	34.1
	50x 20 cm	RDF	37.7	68018	2.28	19.4	15.6	14.9	35.2
		STCR	37.3	63341	2.21	18.7	15.3	14.7	34.7
		SSNM	36.7	39697	1.77	16.1	14.1	12.3	33.0
Mean of location			36.8	50095.7	1.98	18.1	15.2	14.0	34.2
CO H 6			36.0	47205	1.92	17.7	15.1	13.9	33.6
CO H 7			37.6	52986	2.04	18.5	15.3	14.0	34.7
CD at 5%			NS	1321.5	0.0	0.5	NS	NS	NS
CV (%)			3.6	1.8	0.9	2.0	4.1	1.9	7.9
60x20 cm			37.1	46213	1.93	18.6	15.5	14.1	34.5
50x20 cm			36.5	53978	2.03	17.7	14.9	13.8	33.8
CD at 5%			0.5	7738.2	NS	NS	NS	NS	NS
CV (%)			1.4	16.7	8.4	6.3	4.3	4.8	2.6
RDF (250:75:75)			37.3	60178	2.16	19.5	15.7	14.9	35.2
STCR (207:87:37.5)			36.9	55936	2.10	18.8	15.5	14.6	34.7
SSNM (110:61:90)			36.1	34173	1.68	16.1	14.5	12.3	32.7
CD at 5%			0.4	9891.5	0.2	1.0	1.0	0.6	1.4
CV (%)			1.3	22.8	11.2	6.1	7.3	5.1	4.6

A-71

Table 18: Effect of planting density and nutrient management practices on the performance of hybrids in *rabi* season at Dharwad.

Hybrids	Density	Nutrient management	Grain yield (kg/ha)	Stover yield (kg/ha)	Plant height (cm)	Days to 50% tasseling	Days to 50% silking	Cob length (cm)
Ranger SMH-1188	60x20 cm	RDF	6747	8430	188.7	48.7	52.0	14.6
		STCR	7120	8867	196.2	48.7	52.0	17.3
		SSNM	7643	9353	204.6	48.7	51.7	20.7
	50x20 cm	RDF	7190	8573	191.2	49.3	52.7	16.1
		STCR	7620	9143	200.9	49.3	52.3	18.9
		SSNM	8067	9790	210.5	48.0	51.7	22.0
Parmeshwar	60x20 cm	RDF	6523	7927	180.3	48.7	51.7	12.6
		STCR	7073	8420	189.6	49.0	52.3	14.4
		SSNM	7113	8820	201.8	49.0	52.0	17.6
	50x20 cm	RDF	6747	8130	185.7	49.7	52.7	13.6
		STCR	7150	8647	195.2	48.7	51.7	17.0
		SSNM	7443	9057	205.3	49.3	52.7	18.4
Mean of location			7203.1	8763.1	195.8	48.9	52.1	16.9
Ranger SMH-1188			7398	9026	198.7	48.8	52.1	18.3
Parmeshwar			7008	8500	193.0	49.1	52.2	15.6
CD at 5%			200.4	506.7	5.1	NS	NS	2.3
CV (%)			1.9	4.0	1.8	0.7	0.8	9.4
60x20 cm			7037	8636	193.5	48.8	51.9	16.2
50x20 cm			7369	8890	198.1	49.1	52.3	17.7
CD at 5%			311.4	115.8	2.1	NS	NS	0.7
CV (%)			4.7	1.4	1.2	1.1	1.8	4.6
RDF			6802	8265	186.5	49.1	52.3	14.2
STCR			7241	8769	195.5	48.9	52.1	16.9
SSNM			7567	9255	205.6	48.8	52.0	19.7
CD at 5%			229.0	214.1	2.4	NS	NS	1.0
CV (%)			3.7	2.8	1.4	1.9	1.8	7.0

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Hybrids	Density	Nutrient management	Cob girth (mm)	Grains/row	100 grain weight (g)	Gross return (INR)	Net return (INR)	BC ratio
Ranger SMH-1188	60x20 cm	RDF	42.1	29.1	26.2	78222	50589	2.8
		STCR	45.0	33.3	29.7	82516	44879	2.2
		SSNM	47.7	36.6	32.6	88460	39689	1.8
	50x20 cm	RDF	43.2	31.3	27.5	83096	55463	3.0
		STCR	46.9	34.2	30.4	88082	50445	2.3
		SSNM	48.7	38.7	34.8	93440	44669	1.9
Parmeshwar	60x20 cm	RDF	39.8	25.5	24.8	75508	47875	2.7
		STCR	41.2	30.7	26.4	81744	44107	2.2
		SSNM	44.6	34.4	30.8	82416	33645	1.7
	50x20 cm	RDF	41.2	27.6	25.5	78042	50409	2.8
		STCR	43.5	32.7	28.6	82708	45071	2.2
		SSNM	46.6	35.1	31.0	86122	37351	1.8
Mean of location			44.2	32.4	29.0	83363.0	45349.3	2.3
Ranger SMH-1188			45.6	33.9	30.2	85636	47622	2.4
Parmeshwar			42.8	31.0	27.9	81090	43076	2.2
CD at 5%			2.4	2.9	2.1	2149.7	2149.7	0.1
CV (%)			3.7	6.1	5.0	1.8	3.3	2.0
60x20 cm			43.4	31.6	28.4	81478	43464	2.2
50x20 cm			45.0	33.3	29.7	85248	47235	2.3
CD at 5%			1.4	1.6	NS	3308.7	3308.7	NS
CV (%)			3.4	5.2	10.2	4.3	7.9	4.9
RDF			41.6	28.4	26.0	78717	51084	2.8
STCR			44.1	32.7	28.8	83763	46126	2.2
SSNM			46.9	36.2	32.3	87610	38839	1.8
CD at 5%			1.5	2.1	1.2	2470.0	2470.0	0.1
CV (%)			3.9	7.3	4.6	3.4	6.3	3.4

A-73

Table 19: Effect of plant density and Nutrient management practices on performance of hybrids in *rab*/season at Dholi.

Hybrid	Density	Nutrient management	Grain Yield (kg/ha)	Cob yield (kg/ha)	Plants ('000/ha)	Cobs ('000/ha)	Plant Height (cm)
Syngenta NK 7720	60x20 cm	RDF	8756	11264	79.1	118.7	156.0
		STCR	8970	11507	79.8	119.6	155.0
		SSNM	10207	13176	80.4	120.4	162.3
	50x20 cm	RDF	8510	11042	90.0	134.9	160.0
		STCR	9672	12399	94.0	140.9	154.7
		SSNM	10060	12976	93.8	140.7	158.3
Pioneer 3396	60x20 cm	RDF	9009	11553	80.9	121.1	149.0
		STCR	9204	11773	80.9	121.1	156.7
		SSNM	9790	12687	79.1	118.4	156.0
	50x20 cm	RDF	8585	11151	94.2	141.1	160.0
		STCR	9139	11667	91.6	137.1	164.7
		SSNM	10109	12887	93.1	139.6	164.3
Mean of location			9334.3	12006.8	86.4	129.5	158.1
Syngenta NK 7720			9363	12061	86.2	129.2	157.7
Pioneer 3396			9306	11953	86.6	129.7	158.4
CD at 5%			NS	NS	NS	NS	NS
CV (%)			2.6	3.4	4.1	4.0	3.7
60x20 cm			9323	11993	80.0	119.9	155.8
50x20 cm			9346	12020	92.8	139.0	160.3
CD at 5%			NS	NS	2.5	3.9	NS
CV (%)			5.0	5.2	3.2	3.2	9.9
RDF			8715	11253	86.1	128.9	156.3
STCR			9246	11836	86.6	129.7	157.8
SSNM			10042	12931	86.6	129.8	160.3
CD at 5%			137.3	42.1	NS	NS	NS
CV (%)			1.7	0.4	2.5	2.5	5.2

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Hybrid	Density	Nutrient management	Ear height (cm)	Days of 50% tasseling	Days of 50% silking	Days of maturity	Moisture (%)
Syngenta NK 7720	60x20 cm	RDF	65.0	112.3	116.3	162.0	16.9
		STCR	61.7	111.7	115.7	160.7	16.7
		SSNM	61.0	112.0	116.0	158.7	17.3
	50x20 cm	RDF	52.7	112.3	116.3	156.7	17.7
		STCR	52.7	113.0	116.7	155.0	16.7
		SSNM	54.3	112.3	116.0	156.0	17.2
Pioneer 3396	60x20 cm	RDF	55.0	111.0	115.0	159.0	16.7
		STCR	58.3	112.3	115.7	156.7	16.5
		SSNM	55.0	110.3	114.7	157.3	17.5
	50x20 cm	RDF	52.7	110.7	114.7	154.0	17.8
		STCR	58.3	109.7	114.3	159.3	16.3
		SSNM	51.3	111.0	115.3	154.0	16.2
Mean of location			56.5	111.6	115.6	157.4	17.0
Syngenta NK 7720			57.9	112.3	116.2	158.2	17.1
Pioneer 3396			55.1	110.8	114.9	156.7	16.8
CD at 5%			NS	1.0	0.6	NS	NS
CV (%)			14.6	0.7	0.4	2.9	7.1
60x20 cm			59.3	111.6	115.6	159.1	16.9
50x20 cm			53.7	111.5	115.6	155.8	17.0
CD at 5%			NS	NS	NS	2.9	NS
CV (%)			22.1	1.5	0.9	2.0	8.4
RDF			56.3	111.6	115.6	157.9	17.3
STCR			57.8	111.7	115.6	157.9	16.6
SSNM			55.4	111.4	115.5	156.5	17.0
CD at 5%			NS	NS	NS	NS	NS
CV (%)			12.0	1.2	0.8	2.9	7.7

A-75

Table 20: Long - term trial on integrated nutrient management in maize-wheat cropping system at Pantnagar.

Treatment	Wheat grain yield (kg/ha)	Wheat straw yield (kg/ha)	Plant height (cm)	Spike length (cm)	Effective tillers/ m ²	Grains/ spike	100 grain weight (g)	MEY of wheat (kg/ha)	Maize grain yield 2015 (kg/ha)
T ₁	3333	5956	95.7	7.7	50.7	37.6	3.8	3836	3262
T ₂	4978	9444	99.9	8.5	70.0	53.9	4.4	5729	5315
T ₃	4789	9289	99.4	8.4	67.7	50.3	4.3	5512	4828
T ₄	4422	8578	98.8	8.0	66.3	48.6	4.0	5090	4382
T ₅	3867	8422	96.0	8.4	51.3	42.5	4.1	4450	3932
T ₆	3700	7689	95.4	8.7	55.7	38.2	4.0	4258	4174
T ₇	5256	9578	101.5	8.9	74.0	56.4	4.7	6049	5648
T ₈	4600	8955	100.4	8.1	68.7	50.3	4.3	5294	4990
T ₉	5044	9200	100.9	8.7	66.3	54.9	4.5	5806	5416
T ₁₀	3600	7067	97.8	7.9	54.0	40.8	3.8	4143	3802
Mean	4358.9	8417.7	98.6	8.3	62.5	47.4	4.2	5016.8	4574.8
CD	203.6	595.3	2.9	0.4	4.6	4.5	0.5	234.3	167.5
CV (%)	2.7	4.1	1.7	3.0	4.3	5.6	6.7	2.7	2.1
Significance	S	S	S	S	S	S	S	S	S

Treatment details:

- T₁ Unmanured
- T₂ 100% RDF
- T₃ 75% RDF
- T₄ 50% RDF
- T₅ FYM 10t/ha + Azotobacter
- T₆ Maize + cowpea with FYM 10 t/ha + Azotobacter
- T₇ 100% RDF + 5 t/ha FYM
- T₈ 50% RDF + 5 t/ha FYM
- T₉ 100% RDF + 5 kg Zn/ha
- T₁₀ FYM 5 t/ha (state practice)

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A-76

Treatment	MEY of maize-wheat system (kg/ha)	Cost of cultivation of wheat (Rs./ha)	Gross return of wheat Rs./ha	Net return of wheat Rs./ha	B:C ratio of wheat	Cost of cultivation of maize-wheat system (Rs./ha)	Gross return of maize-wheat system (Rs./ha)
T ₁	7098	20300	50833	30533	1.50	39050	94023
T ₂	11044	31270	75911	44641	1.43	56453	146098
T ₃	10340	31270	73031	41761	1.34	54845	136631
T ₄	9472	31270	67437	36167	1.16	53237	125377
T ₅	8382	20300	58967	38667	1.90	46550	110919
T ₆	8433	20300	56425	36125	1.78	48050	155640
T ₇	11697	31270	80147	48877	1.56	60203	154811
T ₈	10284	31270	70150	38880	1.24	55112	136165
T ₉	11222	31270	76928	45658	1.46	57203	148605
T ₁₀	7945	20300	54900	34600	1.70	42800	105111
Mean	9591.7	26882.0	66473.0	39591.0	1.51	51350.3	131337.9
CD	327.3	0.5	3104.6	3104.6	0.13	0.5	5199.5
CV (%)	2.0	0.0	2.7	4.6	5.0	0.0	2.3
Significance	S	S	S	S	S	S	S

Treatment	Net return of maize-wheat system (Rs./ha)	B:C ratio of maize-wheat system	Soil pH	Electrical conductivity (dS/m)	Organic carbon (%)
T ₁	54973	1.41	7.13	0.180	0.745
T ₂	89645	1.59	7.23	0.270	0.947
T ₃	81786	1.49	7.19	0.265	0.895
T ₄	72140	1.36	7.14	0.220	0.845
T ₅	64369	1.38	7.06	0.165	1.070
T ₆	107590	2.24	7.02	0.190	1.125
T ₇	94608	1.57	7.17	0.245	1.183
T ₈	81053	1.47	7.08	0.210	0.985
T ₉	91402	1.60	7.13	0.187	0.995
T ₁₀	62311	1.46	7.08	0.185	0.930
Mean	79987.6	1.56	7.12	0.212	0.972
CD	5199.5	0.11	0.08	0.033	0.089
CV (%)	3.8	4.0	0.7	9.1	5.4
Significance	S	S	S	S	S

A-77

Table 21: Weed management in maize systems at Banswara.

Treatments	Grain yield (kg/ha) of maize	Grain yield (kg/ha) of wheat
T ₁ : Control (weedy check)	2378	2791
T ₂ : Weed free	6694	5626
T ₃ : Atrazine @ 1.5* kg a.i./ha as pre-emergence	3794	3607
T ₄ : Atrazine (750 g a.i./ha) + Pendimethalin (750 ml a.i./ha) as pre-emergence	3716	3813
T ₅ : Atrazine (750 g a.i./ha) + 2,4-D Amine (500 ml a.i./ha) at 25 DAS as PoE	4267	4139
T ₆ : Halosulfuron @ 60 g/ha at 25 DAS	2797	3698
T ₇ : Atrazine (1.5 kg a.i./ha) pre-emergence fb Halosulfuron (60 g/ha) at 25 DAS as PoE	3655	3813
T ₈ : Tembotrione (120 ml a.i./ha) at 25 DAS as PoE	5157	4750
T ₉ : Pendimethalin (1000 ml a.i./ha) pre-emergence fb Atrazine (750 g a.i. /ha) + 2,4-D Amine (500 ml a.i./ha) at 25 DAS as PoE	4601	4478
T ₁₀ : Atrazine (1.5 kg a.i./ha) pre-emergence fb Tembotrione (120 ml a.i./ha) at 25 DAS as PoE	6415	5350
Mean	4347.3	4206.5
CD	928.8	940.4
CV (%)	12.5	13.0
Significance	S	S

A-78

Table 22: Weed management in maize systems at Pantnagar.

Treatments	Wheat Grain yield (kg/ha)	Stover yield (kg/ha)	Tillers/m ²	Plant height (cm)	1000-grain weight (g)	Net return (Rs./ha)	B:C ratio	MEY (kg/ha) of maize-wheat cropping system	Net return (Rs./ha) of system	B:C ratio of system
T ₁	4304	5952	320.0	87.6	41.5	36241	1.23	8917	67263	1.32
T ₂	4231	5916	303.3	84.3	40.8	35124	1.19	11563	88404	1.36
T ₃	4286	5824	336.7	87.2	40.6	35962	1.22	10256	83337	1.59
T ₄	4029	5531	303.3	89.8	41.1	32052	1.09	10063	80604	1.53
T ₅	4542	6154	313.3	89.2	42.0	39872	1.36	11310	97198	1.85
T ₆	4084	5806	350.0	86.5	41.9	32890	1.12	9869	76333	1.40
T ₇	4341	6227	350.0	88.2	41.5	36800	1.25	10585	84147	1.50
T ₈	4652	6667	320.0	88.8	41.9	41548	1.41	10661	85908	1.55
T ₉	4341	5971	330.0	85.5	40.9	36800	1.25	11186	94528	1.76
T ₁₀	4542	5952	353.3	88.1	41.2	39872	1.36	11774	98983	1.74
Mean	4335.2	6000.0	328.0	87.5	41.3	36716.3	1.25	10618.4	85670.6	1.56
CD	630.4	883.6	60.5	6.4	2.3	9613.8	0.33	1216.2	16114.5	0.30
CV (%)	8.5	8.6	10.8	4.2	3.2	15.3	15.3	6.7	11.0	11.1
Significance	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	S	S	S

Treatment details:

- T₁ Control (weedy check)
- T₂ Weed free
- T₃ Atrazine @ 1.5* kg a.i./ha as pre-emergence
- T₄ Atrazine (750 g a.i./ha) + Pendimethalin (750 ml a.i./ha) as pre-emergence
- T₅ Atrazine (750 g a.i./ha) + 2,4-D Amine (500 ml a.i./ha) at 25 DAS as PoE
- T₆ Halosulfuron @ 60 g/ha at 25 DAS
- T₇ Atrazine (1.5 kg a.i./ha) pre-emergence fb Halosulfuron (60 g/ha) at 25 DAS as PoE
- T₈ Tembotrione (120 ml a.i./ha) at 25 DAS as PoE
- T₉ Pendimethalin (1000 ml a.i./ha) pre-emergence fb Atrazine (750 g a.i. /ha) + 2,4-D Amine (500 ml a.i./ha) at 25 DAS as PoE
- T₁₀ Atrazine (1.5 kg a.i./ha) pre-emergence fb Tembotrione (120 ml a.i./ha) at 25 DAS as PoE

Cont....

A-79

Treatments	MEY (kg/ha) of maize-wheat cropping system	Total cost of cultivation (Rs./ha) of maize -wheat system	Net return (Rs./ha) of system	B:C ratio of system
T ₁	8917	50889	67263	1.32
T ₂	11563	64809	88404	1.36
T ₃	10256	52553	83337	1.59
T ₄	10063	52728	80604	1.53
T ₅	11310	52658	97198	1.85
T ₆	9869	54436	76333	1.40
T ₇	10585	56100	84147	1.50
T ₈	10661	55353	85908	1.55
T ₉	11186	53690	94528	1.76
T ₁₀	11774	57017	98983	1.74
Mean	10618.4	55023.3	85670.6	1.56
CD	1216.2	0.5	16114.5	0.30
CV (%)	6.7	0.0	11.0	11.1
Significance	S	S	S	S

A-80

Table 23: Weed Management in Maize Systems at Dholi.

Treatment	Grain yield (kg/ha)	Tillers (m ²)	Plant height (cm)	Days of flowering	Days of maturity	Spikelet's/ ear	Spike length (cm)	1000 grain weight (g)	Moisture (%)
T ₁	3485	326.7	73.2	87.3	127.3	39.3	11.4	37.1	14.7
T ₂	3840	354.3	71.3	85.7	127.7	42.0	11.5	37.1	14.6
T ₃	3735	363.3	71.8	86.0	127.0	38.0	11.7	36.7	14.4
T ₄	3764	379.7	71.4	87.3	127.3	40.7	11.4	37.8	14.6
T ₅	3950	357.0	70.9	87.3	128.7	44.0	11.1	38.1	14.5
T ₆	3525	357.3	73.3	89.3	127.7	39.3	11.2	36.8	14.1
T ₇	3710	315.0	71.7	88.0	126.3	36.0	11.4	37.4	14.5
T ₈	3760	349.0	72.0	87.3	125.7	38.3	11.5	37.3	15.0
T ₉	3930	330.3	73.9	86.7	127.0	41.0	11.1	36.5	14.8
T ₁₀	3860	334.3	74.0	87.7	127.0	40.7	11.8	35.8	14.8
Mean	3755.7	346.7	72.3	87.3	127.2	39.9	11.4	37.1	14.6
CD	334.3	68.0	3.8	2.2	2.1	5.6	0.5	4.3	1.1
CV (%)	5.2	11.4	3.0	1.5	0.9	8.2	2.5	6.7	4.5
Significance	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

Treatment details:

- T₁** Control (weedy check)
- T₂** Weed free
- T₃** Atrazine @ 1.5* kg/ha pre-emergence
- T₄** Atrazine (750 g /ha) + Pendemathalin (750 ml/ha) pre-emergence
- T₅** Atrazine (750 g/ha) + 2,4-D Amine (75%) at 25 DAS as PoE
- T₆** Halosulfuron 60 g/ha at 25 DAS
- T₇** Atrazine @ 1.5 kg/ha pre-emergence fb Halosulfuron 60 g/ha 25 DAS
- T₈** Tembotrione (Laudis) 120 g/ha PoE at 25 DAS
- T₉** Pendemathalin (1000 ml/ha) pre-emergence fb Atrazine (750 g/ha) + 2,4-D Amine (75%) at 25 DAS as PoE
- T₁₀** Atrazine @ 1.5 kg/ha pre-emergence fb Tembotryn (Laudis) 120 g/ha PoE at 25 DAS

Table 24: Enhancing water use efficiency in rainfed maize at Dholi: Effect on succeeding wheat crop performance.

Tillage practices	Hydrogel (kg/ha)	Grain yield (kg/ha)	Tillers (m ²)	Plant height (cm)	Days of flowering	Days of maturity
Conventional	Control	4595	43.7	299.3	73.0	87.0
	Hydrogel 2.5	4534	43.3	301.7	73.7	86.0
	Hydrogel 5	4134	45.7	301.3	75.7	88.3
Conventional + Mulching	Control	4215	40.0	280.0	72.0	87.3
	Hydrogel 2.5	4347	40.7	292.3	74.3	88.0
	Hydrogel 5	4074	35.3	301.7	74.3	87.0
Zero till	Control	4228	38.3	312.7	75.7	87.0
	Hydrogel 2.5	4385	43.0	299.0	72.3	86.7
	Hydrogel 5	4419	42.0	309.3	75.3	87.0
Zero till + Mulching	Control	4283	40.3	279.7	73.7	88.7
	Hydrogel 2.5	4164	41.7	292.0	75.0	86.7
	Hydrogel 5	4232	43.0	322.7	75.0	87.0
Location mean		4300.9	41.4	299.3	74.2	87.2
C.D.(5%) AiBj-AiBk		107.7	4.8	35.2	4.1	1.9
C.D.(5%) AiBk-AjBk		108.4	6.7	45.0	3.8	2.1
F(5%)		n.s.	n.s.	n.s.	n.s.	n.s.
Conventional		4421	44.2	300.8	74.1	87.1
Conventional + Mulching		4212	38.7	291.3	73.6	87.4
Zero till		4344	41.1	307.0	74.4	86.9
Zero till + Mulching		4226	41.7	298.1	74.6	87.4
C.D. (5%) Ai-Aj		185.7	5.4	34.8	2.0	1.5
C.V. (%) Error A		12.0	11.4	10.1	2.3	1.4
F (5%)		n.s.	n.s.	n.s.	n.s.	n.s.
Control		4330	40.6	292.9	73.6	87.5
Hydrogel 2.5 (kg/ha)		4358	42.2	296.3	73.8	86.8
Hydrogel 5 (kg/ha)		4215	41.5	308.8	75.1	87.3
C.D. (5%) Bi-Bj		203.8	2.4	17.6	2.0	0.9
C.V. (%) ErrorB		10.0	6.7	6.8	3.2	1.23
F (5%)		n.s.	n.s.	n.s.	n.s.	n.s.

Cont....

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Tillage practices	Hydrogel (kg/ha)	Spikelet's/ear	Spike length (cm)	1000 grain weight (g)	Grain wt. gm/plot	Moisture (%)
Conventional	Control	126.0	13.3	11.4	43.1	459.5
	Hydrogel 2.5	125.7	16.7	11.8	41.2	453.4
	Hydrogel 5	125.7	13.7	11.3	41.8	413.4
Conventional + Mulching	Control	127.0	16.7	11.6	44.0	421.5
	Hydrogel 2.5	128.0	13.3	11.1	42.1	434.7
	Hydrogel 5	127.3	14.7	11.3	40.5	407.4
Zero till	Control	126.3	16.0	11.2	45.3	422.8
	Hydrogel 2.5	125.7	16.0	11.5	43.4	438.5
	Hydrogel 5	126.3	16.0	11.1	41.8	441.9
Zero till + Mulching	Control	127.0	15.7	11.3	40.9	428.3
	Hydrogel 2.5	126.3	15.3	11.1	39.9	416.4
	Hydrogel 5	125.0	16.7	11.3	40.9	423.2

Location mean	126.4	15.3	11.3	42.1	430.1
C.D.(5%) AiBj-AiBk	2.3	3.6	0.5	2.3	0.8
C.D.(5%) AiBk-AjBk	2.2	5.1	0.5	3.8	0.8
F(5%)	n.s.	n.s.	n.s.	n.s.	s

Conventional	125.8	14.6	11.5	42.0	442.1
Conventional + Mulching	127.4	14.9	11.3	42.2	421.2
Zero till	126.1	16.0	11.3	43.5	434.4
Zero till + Mulching	126.1	15.9	11.2	40.5	422.6

C.D. (5%) Ai-Aj	1.2	4.1	0.3	3.3	0.6
C.V. (%) Error A	0.82	23.3	2.5	6.9	0.12
F (5%)	n.s.	n.s.	n.s.	n.s.	s

Control	126.6	15.4	11.4	43.3	433.0
Hydrogel 2.5 (kg/ha)	126.4	15.3	11.4	41.6	435.8
Hydrogel 5 (kg/ha)	126.1	15.3	11.3	41.2	421.5

C.D. (5%) Bi-Bj	1.1	1.8	0.3	1.2	0.4
C.V. (%) ErrorB	1.03	13.6	2.6	3.2	0.10
F (5%)	n.s.	n.s.	n.s.	s	s

Table 25: Nutrient management in rice-maize cropping systems under different tillage practices 2015-16.

Tillage practices	Nutrient management	Maize grain yield (ka/ha)	Rice grain yield (kg/ha)	Fodder yield (kg/ha)	Plants ('000 ha)	Cobs ('000 ha)	Plant height (cm)	Days to 50% silking
CT in both rice and maize	100%RDF	7300	6195	7713	65.5	59.5	238.0	66.2
	SSNM	6757	5757	7277	63.9	58.4	219.7	63.2
	FP	7035	5854	7573	65.6	59.8	235.7	63.9
	50%RDF	5130	4267	5723	58.4	54.1	171.7	60.4
CT in rice and ZT in maize	100%RDF	7590	6332	8197	66.1	63.7	236.0	67.5
	SSNM	7010	5750	7340	64.5	61.7	219.7	63.3
	FP	7391	5937	7903	65.5	62.1	234.3	66.3
	50%RDF	5363	4795	5780	57.3	55.4	164.3	60.5
ZT in both rice and maize	100%RDF	6487	5430	6897	63.2	60.3	208.7	65.3
	SSNM	6183	4701	6630	63.9	57.0	203.3	63.4
	FP	6278	5117	6740	60.3	58.5	200.3	62.9
	50%RDF	5113	3901	5827	54.5	52.1	159.3	58.3

Location mean	6469.8	5336.2	6966.7	62.4	58.6	207.6	63.4
C.D.(5%) AiBj-AiBk	448.8	294.3	701.9	2.5	2.3	10.9	2.2
C.D.(5%) AiBk-AjBk	502.6	450.4	626.1	4.2	2.7	12.2	2.5
F(5%)	n.s.	n.s.	n.s.	n.s.	n.s.	s	n.s.

CT in both rice and maize	6555	5518	7072	63.3	57.9	216.3	63.4
CT in rice and ZT in maize	6839	5703	7305	63.4	60.7	213.6	64.4
ZT in both rice and maize	6015	4787	6523	60.5	57.0	192.9	62.5

C.D. (5%) Ai-Aj	325.5	376.4	154.2	3.6	1.9	7.9	1.6
C.V. (%) Error A	4.4	6.2	2.0	5.1	2.8	3.4	2.3
F (5%)	s	s	s	n.s.	s	s	n.s.

100% RDF	7126	5986	7602	64.9	61.2	227.6	66.3
SSNM	6650	5402	7082	64.1	59.0	214.2	63.3
Farmer practice	6901	5636	7406	63.8	60.2	223.4	64.4
50% RDF	5202	4321	5777	56.8	53.8	165.1	59.7

C.D. (5%) Bi-Bj	259.1	169.9	405.3	1.4	1.3	6.3	1.3
C.V. (%) ErrorB	4.0	3.2	5.9	2.3	2.3	3.1	2.0
F (5%)	s	s	s	s	s	s	s

Treatments details:**Main plots (Tillage practices) (3)**

1. Conventional tillage in both rice and maize
2. Conventional tillage in rice and Zero-tillage in maize
3. Zero-tillage in both rice and maize

RDF: Rice: 160-50-40 kg N-P₂O₅-K₂O ha⁻¹

Maize : 240-80-80 kg N-P₂O₅-K₂O ha⁻¹

Sub-plots Nutrient management (4)

1. 100% RDF 240-80-80 kg N-P₂O₅-K₂O ha⁻¹
2. SSNM based on nutrient expert
(Maize: 140-47-56 kg N-P₂O₅-K₂O ha⁻¹)
3. Farmer practice (214-50-40kg N-P₂O₅-K₂O ha⁻¹)
4. 50%RDF (120-40-40 N-P₂O₅-K₂O ha⁻¹)

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Tillage practices	Nutrient management	Cob length (cm)	Cob width (cm)	Grain Rows/cob	Grains/row	100 Seed weight (g)	Maize Equivalent yield of Rice (ka/ha)	System productivity (ka/ha)	B:C Ratio	Net Returns (Rs/ha)
CT in both rice and maize	100%RDF	17.5	15.3	16.3	32.7	31.0	6434	13734	2.40	53960
	SSNM	16.4	14.8	14.7	29.3	30.7	5978	12735	1.87	40400
	FP	16.9	15.0	15.7	31.3	29.0	6079	13114	1.34	22133
	50%RDF	13.7	13.2	13.3	23.3	20.7	4431	9561	3.52	47380
CT in rice and ZT in maize	100%RDF	18.7	15.9	15.3	32.7	29.5	6575	14165	2.23	54483
	SSNM	17.0	15.6	14.7	28.7	29.5	5971	12981	1.85	41317
	FP	18.0	15.0	15.0	29.3	27.5	6165	13556	1.29	21833
	50%RDF	13.7	13.1	12.7	21.3	19.2	4979	10343	3.40	47700
ZT in both rice and maize	100%RDF	16.3	14.7	14.0	26.7	25.8	5639	12126	1.62	32833
	SSNM	15.5	14.5	13.3	24.7	22.9	4881	11065	1.58	29600
	FP	15.8	14.3	13.7	25.0	24.3	5313	11592	1.38	22867
	50%RDF	12.8	12.5	12.0	20.0	17.2	4051	9164	2.06	33500

Location mean	16.0	14.5	14.2	27.1	25.6	5541.4	12011.2	2.05	37333.9
C.D.(5%) AiBj-AiBk	1.1	0.5	2.2	2.4	3.0	305.6	467.7	0.61	1929.3
C.D.(5%) AiBk-AjBk	1.3	1.0	2.2	3.3	3.6	467.7	754.0	0.58	2022.0
F(5%)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	s	s	s

CT in both rice and maize	16.1	14.6	15.0	29.2	27.9	5730	12286	2.28	40968
CT in rice and ZT in maize	16.9	14.9	14.4	28.0	26.4	5923	12761	2.19	41333
ZT in both rice and maize	15.1	14.0	13.3	24.1	22.5	4971	10987	1.66	29700

C.D. (5%) Ai-Aj	0.9	0.9	1.2	2.6	2.6	390.8	643.8	0.24	1166.0
C.V. (%) Error A	5.1	5.5	7.3	8.4	8.9	6.2	4.7	10.4	2.8
F (5%)	s	n.s.	s	s	s	s	s	s	s

100% RDF	17.5	15.3	15.2	30.7	28.8	6216	13341	2.09	47092
SSNM	16.3	15.0	14.2	27.6	27.7	5610	12260	1.77	37106
Farmer practice	16.9	14.8	14.8	28.6	26.9	5853	12754	1.34	22278
50% RDF	13.4	12.9	12.7	21.6	19.0	4487	9689	2.99	42860

C.D. (5%) Bi-Bj	0.6	0.3	1.3	1.4	1.7	176.4	270.0	0.35	1113.9
C.V. (%) ErrorB	4.0	2.1	9.0	5.1	6.9	3.2	2.3	17.4	3.0
F (5%)	s	s	s	s	s	s	s	s	s

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Tillage practices	Nutrient management	Nutrient uptake (kg/ha)			Soil Available nutrients (kg/ha)		
		N	P	K	N	P ₂ O ₅	K ₂ O
CT in both rice and maize	100%RDF	126.0	35.7	149.3	177.7	62.7	600.0
	SSNM	115.3	28.9	141.3	169.6	60.1	584.0
	FP	111.7	30.5	142.7	170.1	62.5	610.7
	50%RDF	98.0	25.2	90.8	162.0	59.2	503.3
CT in rice and ZT in maize	100%RDF	126.0	36.5	150.2	208.0	63.8	611.7
	SSNM	114.3	30.5	142.0	199.0	61.1	590.3
	FP	112.0	30.6	144.9	210.7	63.0	617.0
	50%RDF	97.0	25.4	131.0	184.7	59.5	510.0
ZT in both rice and maize	100%RDF	112.7	30.2	148.7	211.0	64.7	626.7
	SSNM	107.7	27.2	142.0	210.0	62.2	610.0
	FP	102.7	29.3	151.0	216.3	64.5	635.7
	50%RDF	90.3	23.4	138.7	188.3	60.8	530.0

Location mean	109.5	29.5	139.4	192.3	62.0	585.8
C.D.(5%) AiBj-AiBk	5.3	1.9	33.0	9.8	1.6	42.1
C.D.(5%) AiBk-AjBk	5.5	1.9	36.6	8.8	1.6	37.1
F(5%)	n.s.	s	n.s.	n.s.	n.s.	n.s.

CT in both rice and maize	112.8	30.1	131.0	169.8	61.1	574.5
CT in rice and ZT in maize	112.3	30.8	142.0	200.6	61.9	582.3
ZT in both rice and maize	103.3	27.5	145.1	206.4	63.1	600.6

C.D. (5%) Ai-Aj	3.2	1.0	23.4	2.4	0.8	7.0
C.V. (%) Error A	2.5	3.0	14.8	1.1	1.2	1.0
F (5%)	s	s	n.s.	s	s	s

100% RDF	121.6	34.2	149.4	198.9	63.7	612.8
SSNM	112.4	28.9	141.8	192.9	61.2	594.8
Farmer practice	108.8	30.1	146.2	199.0	63.3	621.1
50% RDF	95.1	24.7	120.2	178.3	59.8	514.4

C.D. (5%) Bi-Bj	3.1	1.1	19.1	5.7	0.9	24.3
C.V. (%) ErrorB	2.8	3.8	13.8	3.0	1.5	4.2
F (5%)	s	s	s	s	s	s

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Table 26: Optimization of plant geometry and nutrient management for *rab*/zero-tillage maize 2015-16.

Method	Nutrient Mange.	Density	Grain Yield (kg/ha)	Stover yield (kg/ha)	Plants (000/ha)	Cobs (000/ha)	Plant Height (cm)	Test weight (g) (1000)
Farmer practice	Farmers practice	60x20	8805	10555	76.6	71.9	249.0	29.3
		50x20	8155	9707	85.2	80.7	231.0	30.6
		45x20	7694	8922	93.9	84.5	229.0	28.4
	STCR	60x20	9450	9878	77.1	74.1	256.0	33.2
		50x20	8349	8987	85.1	83.6	240.0	30.7
		45x20	7908	8390	93.2	89.6	234.7	28.5
	RDF	60x20	8952	9292	75.3	73.6	254.7	31.2
		50x20	8218	8408	83.9	80.6	232.0	30.7
		45x20	7820	8298	92.0	84.4	230.0	27.3
Improved practice	Farmers practice	60x20	8876	10064	75.3	73.1	249.7	30.9
		50x20	8227	9302	82.4	83.1	232.3	30.6
		45x20	8043	8747	91.3	87.3	224.3	27.8
	STCR	60x20	9655	10340	76.3	72.2	251.3	32.6
		50x20	8420	9303	86.0	79.1	237.3	29.7
		45x20	7752	8582	92.6	85.9	232.0	28.2
	RDF	60x20	9041	9190	75.2	70.4	256.3	31.0
		50x20	8236	8560	84.3	77.2	238.0	30.1
		45x20	7927	8370	92.2	82.3	229.3	27.3
Mean of location			8418.2	9160.8	84.3	79.7	239.3	29.9
Farmer practice			8372	9160	84.7	80.3	239.6	30.0
Improved practice			8464	9162	83.9	79.0	239.0	29.8
CD at 5%			NS	NS	NS	NS	NS	NS
CV (%)			1.9	0.8	5.3	1.8	2.5	9.8
FFP			8300	9549	84.1	80.1	235.9	29.6
STCR			8589	9247	85.1	80.8	241.9	30.5
RDF			8366	8686	83.8	78.1	240.1	29.6
CD at 5%			183.1	340.3	NS	1.2	NS	NS
CV (%)			2.8	4.8	3.5	2.0	2.7	5.3
60x20 cm			9130	9887	76.0	72.6	252.8	31.4
50x20 cm			8267	9044	84.5	80.7	235.1	30.4
45x20 cm			7857	8552	92.5	85.7	229.9	27.9
CD at 5%			162.9	329.2	1.6	1.4	3.5	0.8
CV (%)			2.8	5.2	2.7	2.6	2.1	4.1

Treatments details:

Main-plot: Method of nutrient application

1. Farmer practice
2. Improved practice

Sub-sub plot: Planting density

1. 60 x 20 cm
2. 50 x 20 cm
3. 45 x 20 cm

Sub-plot: Nutrient management

1. Farmers practice
2. STCR
3. RDF



PATHOLOGY

**ICAR- INDIAN INSTITUTE OF MAIZE RESEARCH PAU
CAMPUS, LUDHIANA-141004, PUNJAB**

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Abbreviations used:

1. DHAR	Dharwad	4. LUDH	Ludhiana
2. DHOL	Dholi	5. MAND	Mandya
3. HYDE	Hyderabad		
1. C. rot	Charcoal rot	8. SDM	Sorghum downy mildew
2. C. rust	Common rust	9. TLB	Turcicum leaf blight

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ :** Peninsular Zone

1. MPT	Maize Pathology Trial	5. MS	Moderately Susceptible
2. R	Resistant	6. S	Susceptible
3. MR	Moderately Resistant	7. HS	Highly Susceptible

Executive Summary

A total of 127 genotypes were evaluated (Table 1 to 5) during *Rabi* 2015-16 against major diseases of maize under artificially created epiphytotics at various hot spot locations i.e. sorghum downy mildew (SDM) at Mandya; charcoal rot (C. Rot) at Dharwad, Ludhiana and Hyderabad; Turcicum leaf blight (TLB) at Dholi and Mandya. Promising hybrids are mentioned below:

MPT 1. Evaluation of maize genotypes in NIVT Late maturity for various maize diseases during *Rabi* 2015-16

A total of 35 genotypes out of 41 tested were exhibited resistant/ moderately resistant reaction to diseases in different zones (Table 1). Promising ones are given below:

S.No.	Genotype	Resistant			Moderately Resistant	
		NEPZ	PZ	NWPZ	NEPZ	PZ
1	KMH-2852	-	-	-	TLB	TLB, C.ROT, SDM
2	MFH 14-9	TLB	-	-	-	C.ROT
3	DKC9170(IQ8579)	-	-	-	TLB	TLB, C.ROT
4	AMH-3436	-	-	-	TLB	C.ROT
5	CCH 9241	-	-	-	TLB	TLB, C.ROT
6	CP.808	-	C.ROT	C.ROT	-	SDM
7	PM15205L	-	-	-	TLB	TLB
8	GK 3196	-	-	C.ROT	-	C.ROT
9	Proline 999	-	-	C.ROT	TLB	C.ROT
10	ADV 0990293	-	-	C.ROT	-	TLB, C.ROT, SDM
11	PM15206L	-	-	C.ROT	TLB	TLB, C.ROT
12	DKC9175 (IP8514)	-	-	C.ROT	-	C.ROT
13	PM15203L	TLB	-	C.ROT	-	TLB, C.ROT
14	MM2222	-	-	C.ROT	-	TLB, C.ROT
15	KMH-3981	-	-	C.ROT	TLB	TLB, C.ROT
16	MM2323	TLB	-	-	-	-
17	DKC9177 (IP8572)	-	-	C.ROT	-	TLB, C.ROT
18	IMH 1544	-	-	C.ROT	-	TLB
19	GK 3197	-	-	C.ROT	TLB	TLB, C.ROT, SDM
20	PM15201L	-	C.ROT	-	-	TLB, SDM
21	PM15204L	-	-	C.ROT	-	TLB, C.ROT
22	HT 15046	-	-	C.ROT	-	TLB
23	115-08-01	-	-	-	TLB	C.ROT
24	BH 412065	-	-	C.ROT	-	TLB, C.ROT, SDM
25	HKH 425	-	-	C.ROT	TLB	TLB, C.ROT
26	MFH 14-11	-	-	-	-	TLB, C.ROT
27	ADV 7037	-	-	C.ROT	TLB	C.ROT, SDM

28	DKC9176 (IQ8611)	-	C.ROT	C.ROT	TLB	TLB
29	DAS-MH-902	-	-	C.ROT	TLB	TLB
30	RCRMH 2 (HTMR2)	TLB	-	C.ROT	-	TLB, C.ROT
31	POLO Gold	-	-	-	TLB	TLB, C.ROT
32	Seedtech 2324 (C)		-	-	-	TLB, C.ROT
33	Buland(C)	-	-	-	TLB	TLB, C.ROT
34	Bio 9681 (C)	-	-	-	TLB	TLB, C.ROT
35	P3522 (C)	-	C.ROT	C.ROT	TLB	TLB

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

MPT 2. Evaluation of maize genotypes in NIVT Medium maturity for various maize diseases during Rabi 2015-16

A total of 28 genotypes out of 30 tested were exhibited resistant/ moderately resistant reaction to diseases in different zones (Table 2). Promising ones are given below:

S. No.	Genotype	Resistant			Moderately Resistant		
		NWPZ	NEPZ	PZ	NWPZ	NEPZ	PZ
1	WH 1019	-	-	-	-	-	C.ROT, SDM
2	WH 2127	-	-	-	C.ROT	-	TLB, C.ROT, SDM
3	DKC8171 (IP8204)	-	-	-	C.ROT	TLB	C.ROT
4	KNMH-4512	-	-	-	C.ROT	-	C.ROT
5	KDMH 03	-	-	-	C.ROT	TLB	C.ROT, SDM
6	MMH 14-5	-	-	-	C.ROT	TLB	TLB, SDM
7	KNMH-4511	-	TLB	-	-	-	C.ROT, SDM
8	HKH 350	-	TLB	-	C.ROT	-	TLB, C.ROT
9	KNMH-4510	-	TLB	-	C.ROT	-	C.ROT
10	K-88	-	-	-	C.ROT	-	C.ROT, SDM
11	IMH 1547	-	-	-	C.ROT	-	C.ROT
12	IMH 1545	-	-	-	-	TLB	C.ROT
13	VEH 15-1	-	TLB	-	C.ROT	-	TLB, C.ROT, SDM
14	KH-2001 Gold	-	-	-	C.ROT	-	C.ROT, SDM
15	WH 2140	-	-	-	C.ROT	-	C.ROT, SDM
16	KNMH-4503	C.ROT	-	-	-	TLB	C.ROT, SDM
17	BLH 109	-	-	C.ROT	C.ROT	-	SDM
18	HT 15066	-	-	-	C.ROT	-	C.ROT, SDM
19	DKC8172 (IQ8318)	-	-	-	-	-	TLB, C.ROT
20	KNMH-4509	-	-	-	C.ROT	TLB	C.ROT, SDM
21	BLH 110	-	-	-	C.ROT	-	C.ROT, SDM
22	MMH 14-7	-	-	-	C.ROT	-	C.ROT, SDM
23	WH 1010	-	TLB	C.ROT	C.ROT	-	-
24	IMH 1546	-	TLB	-	C.ROT	-	C.ROT
25	Bio 9637 (C)	-	-	-	C.ROT	-	TLB, C.ROT, SDM
26	Bio 9544 (C)	-	-	C.ROT	-	-	TLB, SDM
27	DHM 117 (C)	-	-	-	-	-	C.ROT, SDM
28	HM10 (C)	-	TLB	-	-	-	TLB, C.ROT

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

MPT 3. Evaluation of maize genotypes in AVT-I and AVT-II Late maturity for various maize diseases during *Rabi* 2015-16

A total of 29 genotypes out of 35 tested were exhibited resistant/ moderately resistant reaction to diseases in different zones (Table 3). Promising ones are given below:

S.No.	Genotype	Resistant			Moderately Resistant		
		NWPZ	NEPZ	PZ	NWPZ	NEPZ	PZ
AVT-II-LATE							
1	HTMH 5202	-	-	-	C.ROT	TLB	C.ROT
2	Rasi-950	-	-	C.ROT	C.ROT	-	TLB, SDM
3	GK 3155	-	-	-	C.ROT	TLB	C.ROT
4	KMH-1411	-	-	-	C.ROT	-	TLB, C.ROT
5	Rasi-393	-	-	-	C.ROT	-	C.ROT
6	KH-2192	-	-	-	C.ROT	-	C.ROT
7	KH-3021	-	-	-	C.ROT	TLB	C.ROT, SDM
8	CP.838	-	-	-	C.ROT	-	C.ROT
9	CP.333	-	-	-	C.ROT	TLB	C.ROT
10	GK 3118	-	-	-	C.ROT	-	C.ROT, SDM
11	X35F880	-	-	-	C.ROT	-	C.ROT
12	DKC9161 (IM8222)	-	-	-	C.ROT	-	C.ROT, SDM
13	CP.999	C.ROT	-	-	-	TLB	C.ROT
14	HTMH 5108	-	-	-	C.ROT	-	C.ROT, SDM
15	CP.111	-	-	-	C.ROT	TLB	C.ROT
AVT-I-LATE							
16	DKC9160 (IP8510)	-	-	C.ROT	C.ROT	TLB	-
17	PM14207L	-	-	-	C.ROT	-	C.ROT, SDM
18	SYN426702	-	-	-	C.ROT	-	TLB, C.ROT, SDM
19	PM14208L	-	-	-	C.ROT	TLB	C.ROT
20	GK 3153	-	-	-	-	TLB	C.ROT, SDM
21	HT 142107	-	TLB	-	-	-	C.ROT
22	PM14205L	-	-	-	C.ROT	-	C.ROT
23	DKC9165 (IM8119)	-	-	-	C.ROT	TLB	C.ROT
24	GK 3124	-	-	-	C.ROT	TLB	C.ROT
25	PM14203L	-	TLB	-	C.ROT	-	TLB, C.ROT
26	CP.444	C.ROT	-	-	-	-	TLB, C.ROT
27	Rasi-394	C.ROT	-	C.ROT	-	-	TLB
28	Seedtech 2324(C)	-	-	-	C.ROT	-	C.ROT
29	Bio 9681(C)	-	-	-	C.ROT	TLB	C.ROT, SDM

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

MPT 4. Evaluation of maize genotypes in AVT-II & AVT-I Medium maturity and QPM-I for various maize diseases during *Rabi* 2015-16

A total of 9 genotypes out of 21 tested were exhibited resistant/ moderately resistant reaction to diseases in different zones (Table 4). Promising ones are given below:

S.No.	Genotype	Resistant		Moderately Resistant		
		NEPZ	PZ	NWPZ	NEPZ	PZ
AVT-II-MEDIUM						
1	BL 147	-	C.ROT, SDM	C.ROT	-	-
2	IM8303	-	-	C.ROT	-	C.ROT
3	BL 900	-	-	-	-	C.ROT, SDM
4	BL 798	-	-	C.ROT	TLB	C.ROT
5	DMRH 1301	TLB	-	C.ROT	-	TLB, C.ROT, SDM
6	KH-517	-	-	C.ROT	-	C.ROT
AVT-I-MEDIUM						
7	HT 1412081	-	-	C.ROT	TLB	C.ROT, SDM
8	BLH 101	-	-	C.ROT	-	C.ROT
9	DMRH 1419	-	-	C.ROT	TLB	C.ROT, SDM
10	DKC9166 (IM8013)	-	-	-	TLB	C.ROT, SDM
11	BH 412044	-	-	C.ROT	-	TLB, C.ROT
12	CP.222	-	-	C.ROT	TLB	C.ROT
13	BH 412066	-	-	C.ROT	-	C.ROT
14	PM142096M	-	-	-	TLB	TLB, C.ROT
15	Bio 9637(C)	-	-	-	-	C.ROT, SDM
16	HM10 (C)	-	-	C.ROT	TLB	C.ROT
QPM-I						
17	MMHQPM 6-12-13	-	-	C.ROT	-	C.ROT
18	VEHQ 15-1	-	-	C.ROT	-	TLB, C.ROT
19	HQPM 1 (C)	TLB	-	C.ROT	-	TLB, C.ROT
20	HQPM 4 (C)	-	C.ROT	C.ROT	-	TLB

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

MPT 5. Survey & surveillance of maize diseases in northern Karnataka at Dharwad

Incidence of Turcicum leaf blight, Fusarium stalk rot and Common rust were low at Dharwad and Haveri. Charcoal stalk rot was moderate at Dharwad, Haveri and Kalaghatagi except Gokak and Bagalkot where it was observed from moderate to severe (Table 5).

MPT 6. Management of post flowering stalk rot at Dharwad

Pseudomonas fluorescens @ 0.5% as seed treatment and incubated FYM (1:50) recorded significantly lower disease severity of PFSR and higher yield followed by local strains of *Trichoderma harzianum* Dharwad 1 @ 0.5% as seed treatment and incubated FYM (1:50) & spray @ 0.5%. (Table 6)

Table 1: Evaluation of maize genotypes in NIVT Late maturity for major maize diseases during Rabi 2015-16

S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
1	KMH-2852	2.8	MR	2.5	MR
2	MFH 14-9	3.3	MS	2.0	R
3	DKC9170(IQ8579)	3.0	MR	2.5	MR
4	AMH-3436	3.3	MS	3.0	MR
5	CCH 9241	3.0	MR	3.0	MR
6	CP.808	3.8	MS	3.5	MS
7	PM15205L	3.0	MR	2.5	MR
8	DAS-MH-901	3.5	MS	3.5	MS
9	GK 3196	3.5	MS	4.0	MS
10	Proline 999	3.3	MS	3.0	MR
11	ADV 0990293	2.8	MR	3.5	MS
12	PM15202L	3.3	MS	4.0	MS
13	PM15206L	3.0	MR	2.5	MR
14	AH 1261	3.3	MS	4.0	MS
15	DKC9175 (IP8514)	3.5	MS	4.5	S
16	PM15203L	2.8	MR	1.5	R
17	MM2222	3.0	MR	4.0	MS
18	KMH-3981	2.8	MR	3.0	MR
19	MM2323	3.5	MS	2.0	R
20	DKC9177 (IP8572)	3.0	MR	4.0	MS
21	IMH 1544	2.8	MR	4.0	MS
22	GK 3197	2.8	MR	2.5	MR
23	PM15201L	2.8	MR	3.5	MS

Contd.

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S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
24	PM15204L	2.8	MR	3.5	MS
25	HT 15046	3.0	MR	4.0	MS
26	BH 412067	3.5	MS	5.0	S
27	115-08-01	3.3	MS	2.5	MR
28	BH 412065	2.8	MR	4.0	MS
29	HKH 425	3.0	MR	3.0	MR
30	MFH 14-11	3.0	MR	3.5	MS
31	CCH 167	3.8	MS	4.5	S
32	RCRMH 1 (HTMR1)	3.8	MS	5.0	S
33	ADV 7037	3.5	MS	3.0	MR
34	DKC9176 (IQ8611)	3.0	MR	3.0	MR
35	DAS-MH-902	3.0	MR	2.5	MR
36	RCRMH 2 (HTMR2)	3.0	MR	1.5	R
37	POLO Gold	3.0	MR	2.5	MR
38	Seedtech 2324 (C)	3.0	MR	4.0	MS
39	Buland(C)	3.0	MR	3.0	MR
40	Bio 9681 (C)	3.0	MR	2.5	MR
41	P3522 (C)	3.0	MR	2.5	MR
42	Resistant Check	1.8	R	-	-
43	Susceptible Check	4.0	MS	5.0	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Resistant Check:- TLB:-NAH 1137 (MANDYA);

Susceptible Check:- CM 202 (MANDYA); CML186 (DHOLI);

Contd.

S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		Av. Score	Reaction	NWPZ		PZ	
		HYD	DHAR			LUDH	Reaction	MAND	Reaction
1	KMH-2852	2.1	6.3	4.2	MR	5.8	MS	14.6	MR
2	MFH 14-9	2.3	6.5	4.4	MR	6.3	MS	93.8	S
3	DKC9170(IQ8579)	2.1	6.2	4.1	MR	5.9	MS	42.1	MS
4	AMH-3436	3.7	3.0	3.3	MR	5.2	MS	43.8	MS
5	CCH 9241	2.8	6.3	4.6	MR	5.6	MS	NG	-
6	CP.808	2.8	2.2	2.5	R	4.8	MR	20.3	MR
7	PM15205L	3.7	6.4	5.1	MS	6.0	MS	88.9	S
8	DAS-MH-901	3.0	6.8	4.9	MR	6.6	MS	96.6	S
9	GK 3196	2.9	5.9	4.4	MR	3.8	MR	88.1	S
10	Proline 999	3.3	6.2	4.7	MR	4.6	MR	100.0	S
11	ADV 0990293	2.5	6.2	4.4	MR	4.4	MR	19.1	MR
12	PM15202L	3.0	5.8	4.4	MR	5.4	MS	88.3	S
13	PM15206L	2.3	4.7	3.5	MR	4.8	MR	66.7	S
14	AH 1261	2.8	7.8	5.3	MS	7.4	S	35.9	MS
15	DKC9175 (IP8514)	2.1	4.5	3.3	MR	4.6	MR	78.7	S
16	PM15203L	3.3	6.3	4.8	MR	5.0	MR	NG	-
17	MM2222	2.2	7.0	4.6	MR	4.7	MR	63.3	S
18	KMH-3981	3.4	6.6	5.0	MR	4.5	MR	100.0	S
19	MM2323	4.1	6.8	5.4	MS	5.4	MS	77.5	S
20	DKC9177 (IP8572)	2.6	5.8	4.2	MR	4.3	MR	NG	-
21	IMH 1544	3.5	6.6	5.1	MS	4.9	MR	49.5	MS
22	GK 3197	3.1	4.1	3.6	MR	4.2	MR	22.6	MR
23	PM15201L	3.0	2.9	2.9	R	5.4	MS	16.2	MR

Contd.

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S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ				NWPZ		PZ	
		HYD	DHAR	Av. Score	Reaction	LUDH	Reaction	MAND	Reaction
24	PM15204L	3.2	5.5	4.4	MR	4.9	MR	53.5	S
25	HT 15046	4.4	5.8	5.1	MS	3.5	MR	87.5	S
26	BH 412067	3.6	5.8	4.7	MR	6.8	MS	37.0	MS
27	115-08-01	3.1	5.1	4.1	MR	5.2	MS	36.9	MS
28	BH 412065	3.5	5.9	4.7	MR	4.8	MR	25.0	MR
29	HKH 425	3.0	7.0	5.0	MR	4.6	MR	NG	-
30	MFH 14-11	2.6	6.5	4.5	MR	7.5	S	100.0	S
31	CCH 167	3.6	7.2	5.4	MS	6.1	MS	50.0	MS
32	RCRMH 1 (HTMR1)	3.4	6.9	5.1	MS	4.0	MR	53.9	S
33	ADV 7037	2.9	4.2	3.6	MR	3.3	MR	20.8	MR
34	DKC9176 (IQ8611)	2.6	2.8	2.7	R	3.8	MR	54.8	S
35	DAS-MH-902	3.5	7.1	5.3	MS	4.0	MR	60.3	S
36	RCRMH 2 (HTMR2)	3.2	6.8	5.0	MR	3.5	MR	53.6	S
37	POLO Gold	3.1	6.2	4.7	MR	6.7	MS	43.8	MS
38	Seedtech 2324 (C)	3.1	5.7	4.4	MR	6.5	MS	90.2	S
39	Buland(C)	2.6	7.5	5.0	MR	6.1	MS	25.4	MS
40	Bio 9681 (C)	3.6	6.3	5.0	MR	5.1	MS	50.0	MS
41	P3522 (C)	3.0	2.8	2.9	R	3.7	MR	45.0	MS
42	Resistant Check	-	-	-	-	-	-	5.9	R
43	Susceptible Check	2.6	8.0	5.3	MS	6.1	MS	82.9	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Susceptible Check:- C.ROT:- CM200 (HYDERABAD); G25 (DHARWAD); FR632H100 (LUDHIANA)

Table 2: Evaluation of maize genotypes in NIVT Medium maturity for various maize disease during *Rabi* 2015-16

S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
1	WH 1019	4.5	S	4.5	S
2	WH 1006	4.3	S	4.5	S
3	WH 2127	3.0	MR	4.0	MS
4	KDMH 01	3.0	MR	3.5	MS
5	DKC8171 (IP8204)	3.3	MS	3.0	MR
6	KNMH-4512	3.8	MS	3.5	MS
7	KDMH 03	3.3	MS	2.5	MR
8	MMH 14-5	3.0	MR	3.0	MR
9	KNMH-4511	3.3	MS	1.5	R
10	HKH 350	3.0	MR	1.5	R
11	KNMH-4510	3.8	MS	2.0	R
12	K-88	3.5	MS	3.5	MS
13	IMH 1547	3.5	MS	4.5	S
14	IMH 1545	3.3	MS	2.5	MR
15	VEH 15-1	3.0	MR	1.5	R
16	KH-2001 Gold	3.8	MS	3.5	MS
17	WH 2140	4.3	S	3.5	MS
18	KNMH-4503	3.3	MS	3.0	MR
19	BLH 109	3.3	MS	4.5	S
20	HT 15066	4.3	S	3.5	MS
21	DKC8172 (IQ8318)	3.0	MR	4.5	S
22	KNMH-4509	3.5	MS	2.5	MR
23	BLH 110	4.3	S	4.0	MS

Contd.

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S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
24	MMH 14-7	3.3	MS	4.0	MS
25	WH 1010	3.3	MS	2.0	R
26	IMH 1546	3.3	MS	1.5	R
27	Bio 9637 (C)	3.0	MR	4.0	MS
28	Bio 9544 (C)	3.0	MR	4.5	S
29	DHM 117 (C)	3.5	MS	3.5	MS
30	HM10 (C)	3.0	MR	2.0	R
31	Resistant Check	2.0	R	-	-
32	Susceptible Check	4.3	S	5.0	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Resistant Check:- TLB:-NAH 1137 (**MANDYA**);

Susceptible Check:- CM 202 (**MANDYA**); CML186 (DHOLI);

Contd.

S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		NWPZ		PZ		MAND	Reaction
		HYD	DHAR	Av. Score	Av. Score	LUDH	Av. Score		
1	WH 1019	2.8	6.8	4.8	MR	5.7	MS	23.4	MR
2	WH 1006	3.6	7.2	5.4	MS	8.0	S	51.9	S
3	WH 2127	2.5	4.8	3.7	MR	4.0	MR	18.3	MR
4	KDMH 01	3.4	7.3	5.4	MS	5.3	MS	40.8	MS
5	DKC8171 (IP8204)	3.2	6.8	5.0	MR	4.4	MR	51.7	S
6	KNMH-4512	2.6	7.0	4.8	MR	4.2	MR	56.4	S
7	KDMH 03	2.4	6.8	4.6	MR	5.0	MR	22.8	MR
8	MMH 14-5	3.3	7.0	5.2	MS	3.9	MR	10.2	MR
9	KNMH-4511	3.0	6.3	4.7	MR	6.5	MS	22.0	MR
10	HKH 350	2.3	5.9	4.1	MR	4.7	MR	83.2	S
11	KNMH-4510	3.2	6.8	5.0	MR	3.8	MR	25.3	MS
12	K-88	2.7	5.5	4.1	MR	4.7	MR	21.5	MR
13	IMH 1547	3.0	6.8	4.9	MR	4.4	MR	86.4	S
14	IMH 1545	2.8	4.5	3.6	MR	6.1	MS	89.5	S
15	VEH 15-1	2.7	6.5	4.6	MR	3.1	MR	22.6	MR
16	KH-2001 Gold	2.5	3.8	3.2	MR	4.5	MR	20.1	MR
17	WH 2140	3.0	6.3	4.7	MR	3.6	MR	11.9	MR
18	KNMH-4503	3.1	6.7	4.9	MR	2.9	R	19.6	MR
19	BLH 109	2.5	3.0	2.7	R	3.9	MR	19.6	MR
20	HT 15066	2.2	6.2	4.2	MR	3.3	MR	23.4	MR
21	DKC8172 (IQ8318)	2.6	6.2	4.4	MR	7.9	S	25.9	MS
22	KNMH-4509	2.5	6.0	4.2	MR	3.8	MR	23.5	MR
23	BLH 110	3.5	6.0	4.8	MR	4.2	MR	25.0	MR

Contd.

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S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		NWPZ		PZ		MAND	Reaction
		HYD	DHAR	Av. Score	Av. Score	LUDH	Av. Score		
24	MMH 14-7	2.5	6.5	4.5	MR	4.6	MR	20.2	MR
25	WH 1010	2.0	3.5	2.8	R	3.3	MR	51.0	S
26	IMH 1546	2.5	6.3	4.4	MR	3.5	MR	72.2	S
27	Bio 9637 (C)	2.9	6.5	4.7	MR	4.9	MR	20.3	MR
28	Bio 9544 (C)	2.3	3.0	2.6	R	6.9	MS	23.3	MR
29	DHM 117 (C)	2.6	7.0	4.8	MR	5.4	MS	24.7	MR
30	HM10 (C)	2.9	6.7	4.8	MR	5.7	MS	67.6	S
31	Resistant Check	-	-	-	-	-	-	3.6	R
32	Susceptible Check	2.7	8.0	5.4	MS	7.9	S	79.6	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Susceptible Check:- C.ROT:- CM200 (HYDERABAD); G25 (DHARWAD); FR632H100 (LUDHIANA)

Table 3: Evaluation of maize genotypes in AVT-II and AVT-I Late maturity for various maize diseases during *Rabi 2015-16*

S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
AVT-II-LATE					
1	Rasi-864	2.8	MR	3.5	MS
2	HTMH 5202	3.3	MS	3.0	MR
3	Rasi-950	3.0	MR	3.5	MS
4	GK 3155	3.8	MS	3.0	MR
5	KMH-1411	3.0	MR	4.0	MS
6	Rasi-393	3.5	MS	3.5	MS
7	KH-2192	3.5	MS	3.5	MS
8	KH-3021	3.5	MS	3.0	MR
9	CP.838	3.5	MS	3.5	MS
10	CP.333	3.8	MS	2.5	MR
11	GK 3118	3.3	MS	3.5	MS
12	DMRH 1308	4.0	MS	3.5	MS
13	X35F880	3.5	MS	3.5	MS
14	DKC9161 (IM8222)	3.5	MS	3.5	MS
15	CP.999	4.0	MS	3.0	MR
16	HTMH 5108	3.3	MS	3.5	MS
17	CP.111	3.3	MS	3.0	MR
AVT-I-LATE					
18	DKC9160 (IP8510)	4.3	S	2.5	MR
19	PM14207L	3.8	MS	4.0	MS
20	NMH-1290	3.5	MS	3.5	MS
21	SYN426702	3.0	MR	4.0	MS

Contd.

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S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
22	PM14208L	4.0	MS	2.5	MR
23	PM14206L	3.5	MS	3.5	MS
24	GK 3153	3.5	MS	2.5	MR
25	HT 142107	4.0	MS	2.0	R
26	KH-2977	3.8	MS	4.0	MS
27	PM14205L	3.3	MS	3.5	MS
28	DKC9165 (IM8119)	3.5	MS	3.0	MR
29	GK 3124	3.5	MS	2.5	MR
30	PM14203L	3.0	MR	2.0	R
31	CP.444	3.0	MR	4.0	MS
32	Rasi-394	3.0	MR	4.0	MS
33	Seedtech 2324(C)	-	-	3.5	MS
34	Buland (C)	-	-	4.0	MS
35	Bio 9681(C)	-	-	3.0	MR
36	Resistant Check	2.3	MR	-	-
37	Susceptible Check	3.8	MS	5.0	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Resistant Check:- TLB:-NAH 1137 (MANDYA);

Susceptible Check:- CM 202 (MANDYA); CML186 (DHOLI);

Contd.

S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		NWPZ		PZ			
		HYD	DHAR	Av. Score	Reaction	LUDH	Reaction	MAND	Reaction
AVT-II-LATE									
1	Rasi-864	3.0	7.5	5.3	MS	5.2	MS	48.0	MS
2	HTMH 5202	2.2	5.2	3.7	MR	4.4	MR	69.4	S
3	Rasi-950	2.9	3.0	2.9	R	4.3	MR	21.3	MR
4	GK 3155	2.7	7.0	4.8	MR	3.9	MR	25.4	MS
5	KMH-1411	2.3	5.6	3.9	MR	4.9	MR	47.1	MS
6	Rasi-393	2.5	6.6	4.6	MR	4.5	MR	45.3	MS
7	KH-2192	2.4	4.3	3.3	MR	4.7	MR	87.5	S
8	KH-3021	2.2	5.5	3.9	MR	4.4	MR	25.0	MR
9	CP.838	3.6	3.4	3.5	MR	4.8	MR	25.4	MS
10	CP.333	2.8	5.4	4.1	MR	4.2	MR	55.4	S
11	GK 3118	2.4	5.7	4.0	MR	4.8	MR	22.7	MR
12	DMRH 1308	2.6	5.8	4.2	MR	5.3	MS	30.7	MS
13	X35F880	2.6	5.6	4.1	MR	3.8	MR	88.6	S
14	DKC9161 (IM8222)	2.4	4.9	3.7	MR	4.4	MR	11.7	MR
15	CP.999	2.1	6.8	4.4	MR	3.0	R	43.5	MS
16	HTMH 5108	2.7	4.5	3.6	MR	4.9	MR	16.4	MR
17	CP.111	2.4	6.2	4.3	MR	4.0	MR	41.7	MS
AVT-I-LATE									
18	DKC9160 (IP8510)	2.8	3.3	3.0	R	4.7	MR	33.9	MS
19	PM14207L	2.4	6.7	4.5	MR	4.6	MR	23.0	MR
20	NMH-1290	2.8	6.5	4.6	MR	5.8	MS	68.0	S
21	SYN426702	3.1	4.7	3.9	MR	4.7	MR	20.2	MR

Contd.

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S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ				NWPZ		PZ	
		HYD	DHAR	Av. Score	Reaction	LUDH	Reaction	MAND	Reaction
22	PM14208L	2.8	5.2	4.0	MR	3.1	MR	78.6	S
23	PM14206L	2.5	4.5	3.5	MR	6.7	MS	85.7	S
24	GK 3153	2.7	5.8	4.3	MR	5.4	MS	22.9	MR
25	HT 142107	2.9	5.0	3.9	MR	5.2	MS	79.1	S
26	KH-2977	3.2	5.7	4.4	MR	5.2	MS	72.4	S
27	PM14205L	2.9	5.0	3.9	MR	3.9	MR	35.4	MS
28	DKC9165 (IM8119)	2.8	4.5	3.6	MR	4.2	MR	82.6	S
29	GK 3124	3.1	6.8	4.9	MR	4.8	MR	70.5	S
30	PM14203L	3.3	6.5	4.9	MR	4.0	MR	92.0	S
31	CP.444	2.6	5.8	4.2	MR	2.8	R	62.1	S
32	Rasi-394	2.5	2.5	2.5	R	3.0	R	70.6	S
33	Seedtech 2324(C)	3.6	4.8	4.2	MR	3.6	MR	85.5	S
34	Buland (C)	3.0	7.2	5.1	MS	3.8	MR	81.4	S
35	Bio 9681(C)	2.9	6.0	4.4	MR	5.0	MR	23.6	MR
36	Resistant Check	-	-	-	-	-	-	20.5	MR
37	Susceptible Check	2.5	8.0	5.3	MS	6.5	MS	81.9	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Susceptible Check:- C.ROT:- CM200 (HYDERABAD); G25 (DHARWAD); FR632H100 (LUDHIANA)

Table 4: Evaluation of maize genotypes in AVT-II and AVT-I Medium maturity for various maize disease during *Rabi-2015-16*

S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
AVT-II-MEDIUM					
1	BL 147	3.5	MS	3.5	MS
2	IM8303	3.8	MS	3.5	MS
3	BL 900	3.5	MS	4.0	MS
4	BL 798	3.8	MS	2.5	MR
5	DMRH 1301	3.0	MR	1.5	R
6	KH-517	3.5	MS	3.5	MS
AVT-I-MEDIUM					
7	HT 1412081	3.5	MS	3.0	MR
8	BLH 101	3.5	MS	4.0	MS
9	DMRH 1419	3.5	MS	3.0	MR
10	BLH 102	3.3	MS	3.5	MS
11	DKC9166 (IM8013)	3.3	MS	3.0	MR
12	BH 412044	3.0	MR	4.0	MS
13	CP.222	3.8	MS	3.0	MR
14	BH 412066	3.3	MS	3.5	MS
15	PM142096M	3.0	MR	2.5	MR
16	Bio 9637(C)	3.5	MS	3.5	MS
17	HM10 (C)	3.8	MS	2.5	MR
QPM-I					
18	MMHQPM 6-12-13	4.0	MS	3.5	MS
19	VEHQ 15-1	3.0	MR	4.0	MS
20	HQPM 1 (C)	3.0	MR	2.0	R

Contd.

P-14

S. No.	Genotype	TLB (1-5)			
		PZ		NEPZ	
		MAND	Reaction	DHOL	Reaction
21	HQPM 4 (C)	3.0	MR	4.0	MS
22	Resistant Check	2.5	MR	-	-
23	Susceptible Check	3.8	MS	4.5	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Resistant Check:- TLB:-NAH 1137 (**MANDYA**);

Susceptible Check:- CM 202 (**MANDYA**); CML186 (DHOLI);

Contd.

S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		Av. Score	Reactor	NWPZ		PZ	
		HYD	DHAR					LUDH	Reaction
AVT-II-MEDIUM									
1	BL 147	2.2	2.8	2.5	R	3.4	MR	6.3	R
2	IM8303	2.5	4.0	3.3	MR	4.0	MR	46.8	MS
3	BL 900	2.4	7.5	5.0	MR	6.2	MS	19.8	MR
4	BL 798	2.4	7.5	5.0	MR	4.7	MR	96.0	S
5	DMRH 1301	2.9	4.7	3.8	MR	4.1	MR	20.1	MR
6	KH-517	2.5	5.5	4.0	MR	4.9	MR	56.8	S
AVT-I-MEDIUM									
7	HT 1412081	2.6	6.3	4.5	MR	4.2	MR	18.2	MR
8	BLH 101	2.8	6.2	4.5	MR	4.9	MR	62.3	S
9	DMRH 1419	2.7	4.8	3.8	MR	4.2	MR	18.4	MR
10	BLH 102	2.2	5.6	3.9	MR	6.2	MS	38.6	MS
11	DKC9166 (IM8013)	2.5	6.0	4.3	MR	5.1	MS	18.1	MR
12	BH 412044	2.6	5.5	4.1	MR	4.9	MR	64.3	S
13	CP.222	2.5	5.3	3.9	MR	3.1	MR	74.6	S
14	BH 412066	2.8	6.7	4.7	MR	4.2	MR	70.3	S
15	PM142096M	2.9	6.2	4.5	MR	5.2	MS	46.1	MS
16	Bio 9637(C)	2.9	5.8	4.4	MR	5.6	MS	24.3	MR
17	HM10 (C)	2.5	6.8	4.7	MR	4.1	MR	64.6	S
QPM-I									
18	MMHQPM 6-12-13	2.3	5.7	4.0	MR	4.3	MR	57.5	S
19	VEHQ 15-1	2.4	6.5	4.4	MR	3.9	MR	40.2	MS
20	HQPM 1 (C)	2.5	5.8	4.2	MR	3.4	MR	48.1	MS

Contd.

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S. No.	Genotype	C. ROT (1-9)				SDM (%)			
		PZ		NWPZ		PZ			
		HYD	DHAR	Av. Score	Reactor	LUDH	Reaction	MAND	Reaction
21	HQPM 4 (C)	2.3	3.2	2.7	R	3.1	MR	50.0	MS
22	Resistant Check	-	-			-	-	10.9	MR
23	Susceptible Check	2.4	8.0	5.2	MS	6.5	MS	89.0	S

NWPZ: North Western Plain Zone; **NEPZ:** North East Plain Zone; **PZ:** Peninsular Zone

Susceptible Check:- C.ROT:- CM200 (HYDERABAD); G25 (DHARWAD); FR632H100 (LUDHIANA)

Table 5: Survey and surveillance of maize diseases in northern Karnataka in Dharwad

Centre : Dharwad.

Latitude : 15°56' North

Season : Rabi

Longitude: 75° 07' East

Year : 2015-16

Altitude : 678 msl

S. No.	State	Locations	Diseases	Severity
1	Karnataka	Dharwad, Gokak and Haveri	TLB and C. Rust	Low
2	Karnataka	Dharwad, Haveri and Kalaghatagi	Charcoal rot	Moderate
3	Karnataka	Gokak and Bagalkot	Charcoal rot	Moderate to Severe
4	Karnataka	Dharwad, Haveri and Kalaghatagi	Fusarium stalk rot	Low

Table 6: Efficacy of bioagents, fungicides and potash in control of post flowering stalk rot (PFSR) at Dharwad

Centre : Dharwad

Test Hybrid: 900 M Super

Year: 2015-2016

Row No. : 4

Season: *Rabi*

Row Length: 4 m

Replication: 4

Date of Observation: 19-04-2016

Date of Sowing: 11-12-2015

Date of Harvesting: 30-04-2016

	Treatments	Mean disease score	PDI	Disease control (%)	Grain yield	
					(q/ha)	Increase over control (%)
T ₁	TH-3 @ 0.5% as seed treatment and incubated FYM (1:50) and spray @ 0.5%	3.7	42.66 (40.74)	37.86	59.75	15.00
T ₂	<i>Pseudomonas fluorescens</i> @ 0.5% as seed treatment, bioagent-fortified FYM (1:50) and spray @ 0.5%	3.3	36.85 (37.35)	46.32	62.33	19.96
T ₃	Local strains of fungal antagonists: <i>Trichoderma harzianum</i> Dharwad 1 (Local strain) @ 0.5% as seed treatment bioagent-fortified and incubated FYM (1:50) and spray @ 0.5%	3.5	39.52 (38.94)	42.44	60.91	17.22
T ₄	Spraying of muriate of potash @ 2% at 30 days after planting	5.7	54.80 (47.75)	20.18	54.66	5.19
T ₅	Propiconazole @ 0.1% spray at 40 DAS	6.0	59.36 (50.36)	13.63	52.90	1.80
T ₆	Double dose of muriate of potash at 45 DAS	5.8	55.30 (48.04)	19.45	53.50	2.96
T ₇	Untreated check (water spray)	6.7	68.66 (55.92)	-	51.96	-
	SE.m±		2.16		1.74	
	CD (p=0.05)		6.52		5.18	
	CV (%)		14.33		21.66	

Figures in parenthesis are arc sine transformed values

Conclusion: *Pseudomonas fluorescens* @ 0.5% as seed treatment, bioagent-fortified FYM (1:50) and spray @ 0.5% found effective in suppressing the PFSR. This treatment recorded significantly lower disease severity (36.86%) and maximum grain yield (62.33 q/ha). The treatment recorded 46.32% disease control efficacy and resulted in 19.96% increase in grain yield over untreated check. Nevertheless the treatments *viz.*, T₃: Local strains of fungal antagonists: *Trichoderma harzianum* Dharwad 1 (Local strain) @ 0.5% as seed treatment bioagent-fortified and incubated FYM (1:50) and spray @ 0.5% and T₁: TH-3 @ 0.5% as seed treatment and incubated FYM (1:50) and spray @ 0.5% were also equally effective. Treatments *viz.*, T₁, T₂ and T₃ were statistically at par with respect to disease severity and grain yield.



ENTOMOLOGY

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Summary

Maize Entomology AICRP *rabi* experimental trials aims mainly at the resistance screening and management of pink stem borer *Sesamia inferens* and also of the spotted stem borer *Chilo partellus*, trials of which are otherwise conducted in *Kharif*. Post-screening, the genotypes are categorized as resistant, moderately resistant and susceptible based on Leaf Injury Rating (LIR). Out of 56 maize entries of late maturity group screened under artificial infestation against *C. partellus* at Kolhapur, two entries, KMH-1411 (2.98) and PM14207L (3.0) and none in medium maturity group were found to be resistant. The same medium maturity entries when screened against *S. inferens* at Hyderabad, Delhi and Karnal centres, the entry BL 900 was found to resistant across the centres. Under the late maturity group, ten entries showed resistance towards *S. inferens*.

The first year screening of 117 inbred lines against *S. inferens* at WNC, Hyderabad resulted in four entries CML 202 (2.85), CML 9 (2.9), V-353 (3) and HEY Pool -2011-5-4-1-2-1-1 (3.0) were found to be resistant. The second year screening of 35 inbred lines yielded three resistant inbred lines viz., EC440415 (2.4), IIMRSBTPOOL (2.67) and BCK/BC4 (2.71) at the centre against *S. inferens*. The infestation levels (LIR) of *S. inferens* and the yield data of fifteen cobs of each level has been generated for calculating the crop loss due to *S. inferens* at Karnal on three hybrids HQPM 1, DHM 117 and PMH 1 and on DHM 117 at Hyderabad and found that yield reduction is strongly correlated with leaf injury, varying from -0.882 in HQPM to -0.972 in DHM 117. The regression analysis reveals that as the injury level increases to one level, there will be average reductions of 13.9, 14.47 and 15.45 respectively for PMH 1, HQPM 1 and DHM 117 in Karnal and an average reduction 262 g per cob of DHM 117 at Hyderabad.

Evaluation of maize entries under artificial infestation against spotted stem borer, *Chilo partellus* for AVT I and II

Location: Kolhapur

Experimental details:

Trial Name	No. of entries / Repl.	Date of sowing	Date of germination	Date of infestation	Date of Observations
AVT –I-II (Late)	35/2	13/01/2016	20/01/2016	01/02/2016	01/03/2016
AVT –I-II (Medium)	21/2	13/01/2016	20/01/2016	01/02/2016	01/03/2016

Table 1: Mean LIR of AICRP maize entries against *C. partellus* under artificial infestation during Rabi 2015-16

i) Trial: AVT –I-II (Late)

E. No.	IIMR Code	Entry Name	Mean LIR(1-9 scale)	Category of infestation
1	IMR330	Rasi-864	8.50	S
2	IMR331	HTMH 5202	8.00	S
3	IMR332	Rasi-950	8.15	S
4	IMR333	GK 3155	4.86	MR
5	IMR334	KMH-1411	2.98	R
6	IMR335	Rasi-393	5.44	MR
7	IMR336	KH-2192	6.60	S
8	IMR337	KH-3021	5.45	MR
9	IMR338	CP.838	6.35	S
10	IMR339	CP.333	5.65	MR
11	IMR340	GK 3118	7.83	S
12	IMR341	DMRH 1308	3.89	MR
13	IMR342	X35F880	6.38	S
14	IMR343	DKC9161 (IM8222)	6.10	S

15	IMR344	CP.999	5.95	MR
16	IMR345	HTMH 5108	5.38	MR
17	IMR346	CP.111	6.15	S
18	IMR347	DKC9160 (IP8510)	6.44	S
19	IMR348	PM14207L	3.00	R
20	IMR349	NMH-1290	6.15	S
21	IMR350	SYN426702	5.30	MR
22	IMR351	PM14208L	6.83	S
23	IMR352	PM14206L	3.97	MR
24	IMR353	GK 3153	5.88	MR
25	IMR354	HT 142107	6.18	S
26	IMR355	KH-2977	7.23	S
27	IMR356	PM14205L	5.55	MR
28	IMR357	DKC9165 (IM8119)	6.02	S
29	IMR358	GK 3124	6.58	S
30	IMR359	PM14203L	7.85	S
31	IMR360	CP.444	8.45	S
32	IMR361	Rasi-394	8.23	S
33	IMR362	Seedtech 2324(C)	6.25	S
34	IMR363	Buland (C)	6.50	S
35	IMR364	Bio 9681(C)	5.95	MR

ii) Trial: AVT –I-II (Medium)

E. No.	IIMR Code	Entry Name	Mean LIR (1-9 scale)	Category of infestation
1	IMR430	BL 147	8.0	S
2	IMR431	IM8303	7.8	S
3	IMR432	BL 900	4.6	MR
4	IMR433	BL 798	8.3	S
5	IMR434	DMRH 1301	8.4	S
6	IMR435	KH-517	7.4	S
7	IMR436	HT 1412081	6.1	S
8	IMR437	BLH 101	5.4	MR
9	IMR438	DMRH 1419	7.3	S
10	IMR439	BLH 102	5.4	MR
11	IMR440	DKC9166 (IM8013)	6.9	S
12	IMR441	BH 412044	7.4	S
13	IMR442	CP.222	6.9	S
14	IMR443	BH 412066	7.3	S
15	IMR444	PM142096M	7.1	S
16	IMR445	Bio 9637(C)	8.4	S
17	IMR446	HM10 (C)	8.3	S
18	IMR447	MMHQPM 6-12-13	8.4	S
19	IMR448	VEHQ 15-1	8.0	S
20	IMR449	HQPM 1 (C)	5.9	MR
21	IMR450	HQPM 4 (C)	4.8	MR

R: Resistant (LIR 1-3), MR: Moderately Resistant (LIR >3-6), S: Susceptible (LIR >6-9)

Evaluation of Maize AICRP trials against pink borer, *Sesamia inferens* under artificial infestation (AVT I & AVT II)

Trial No: 11

Locations: Hyderabad, Delhi, Karnal

Table 2: Mean LIR of AICRP maize entries against *S. inferens* under artificial infestation during Rabi 2015-16

Trial 11 Medium Maturity :

S.No.	IMR Code	Entry Name	Mean LIR (1-9 scale)				Category of infestation
			Hyderabad	Delhi	Karnal	Mean	
1	IMR 430	BL 147	5.6	1.7	2.9	3.4	MR
2	IMR 431	IM8303	4.3	2.6	3.2	3.37	MR
3	IMR 432	BL 900	3.0	2.1	3.5	2.87	R
4	IMR 433	BL 798	5.0	2.6	4.2	3.93	MR
5	IMR 434	DMRH 1301	4.4	1.5	6.8	4.23	MR
6	IMR 435	KH-517	4.1	3.5	5.8	4.47	MR
7	IMR 436	HT 1412081	4.8	3.4	2.8	3.67	MR
8	IMR 437	BLH 101	3.6	2.5	4.4	3.50	MR
9	IMR 438	DMRH 1419	5.4	3.4	6.0	4.93	MR
10	IMR 439	BLH 102	5.3	2.5	4.8	4.20	MR
11	IMR 440	DKC9166 (IM8013)	4.0	2.8	4.6	3.80	MR
12	IMR 441	BH 412044	5.3	2.4	7.3	5.00	MR
13	IMR 442	CP.222	5.2	2.1	2.8	3.37	MR
14	IMR 443	BH 412066	4.5	2.2	6.6	4.43	MR
15	IMR 444	PM142096M	4.8	1.1	5.1	3.67	MR
16	IMR 445	Bio 9637(C)	4.7	2.6	4.2	3.83	MR
17	IMR 446	HM10 (C)	4.0	2.8	4.3	3.70	MR

18	IMR 447	MMHQPM 6-12-13	3.6	4.8	4.7	4.37	MR
19	IMR 448	VEHQ 15-1	4.6	5.3	4.9	4.93	MR
20	IMR 449	HQPM 1 (C)	4.9	2.8	5.3	4.33	MR
21	IMR 450	HQPM 4 (C)	5.2	2.2	2.9	3.43	MR
		SE(m)	0.562	0.721	0.0.676	-	
		CD at 5%:	NS	NS	1.99	-	

Trial 11 Late Maturity:

S.No	IIMR Code	Entry Name	Mean LIR (1-9 scale)			Category of infestation
			Delhi	Karnal	Mean	
1	IMR330	Rasi-864	3.3	4.3	3.8	MR
2	IMR331	HTMH 5202	3.4	3.2	3.3	R
3	IMR332	Rasi-950	2.2	2.8	2.5	R
4	IMR333	GK 3155	2.6	2.8	2.7	R
5	IMR334	KMH-1411	4.4	6.2	5.3	MR
6	IMR335	Rasi-393	1.8	2.8	2.3	R
7	IMR336	KH-2192	3.1	5.8	4.45	MR
8	IMR337	KH-3021	3.6	4.4	4.0	MR
9	IMR338	CP.838	2.8	3.7	3.25	MR
10	IMR339	CP.333	2.3	3.6	2.95	R
11	IMR340	GK 3118	1.5	4.7	3.1	MR
12	IMR341	DMRH 1308	1.6	5.8	3.7	MR
13	IMR342	X35F880	2.8	3.9	3.35	MR
14	IMR343	DKC9161 (IM8222)	2.4	3.9	3.15	MR

15	IMR344	CP.999	4.1	4.1	4.1	MR
16	IMR345	HTMH 5108	2.3	4.5	3.4	MR
17	IMR346	CP.111	2.6	7.0	4.8	MR
18	IMR347	DKC9160 (IP8510)	2.6	4.1	3.35	MR
19	IMR348	PM14207L	3.5	5.1	4.3	MR
20	IMR349	NMH-1290	2.6	4.6	3.6	MR
21	IMR350	SYN426702	1.2	4.0	2.6	R
22	IMR351	PM14208L	1.6	4.7	3.15	MR
23	IMR352	PM14206L	4.3	4.3	4.3	MR
24	IMR353	GK 3153	3.0	4.5	3.75	MR
25	IMR354	HT 142107	2.9	4.6	3.75	MR
26	IMR355	KH-2977	1.8	5.9	3.85	MR
27	IMR356	PM14205L	1.9	5.8	3.85	MR
28	IMR357	DKC9165 (IM8119)	2.3	5.0	3.65	MR
29	IMR358	GK 3124	2.2	5.5	3.85	MR
30	IMR359	PM14203L	2.5	4.8	3.65	MR
31	IMR360	CP.444	3.0	2.9	2.95	R
32	IMR361	Rasi-394	2.6	2.5	2.55	R
33	IMR362	Seedtech 2324(C)	2.9	2.6	2.75	R
34	IMR363	Buland (C)	2.8	2.7	2.75	R
35	IMR364	Bio 9681(C)	3.0	5.0	4.0	MR
		SE(m)	0.708	0.672		
		CD 5%	NS	1.93		

R: Resistant (LIR 1-3), MR: Moderately Resistant (LIR >3-6) , S: Susceptible (LIR >6-9)

Screening of maize genotypes to pink borer, *Sesamia inferens* Walker during rabi 2015-16

Table 3A. Mean LIR of early maize genotypes screened against *S. inferens* under artificial infestation during Rabi 2015-16 (1st Year)

Location: Maize Winter Nursery Centre, Hyderabad

S. No.	PEDIGREE	Mean LIR (1-9 Scale)	S. No.	PEDIGREE	Mean LIR (1-9 Scale)
1	CML 202□	2.85	60	HEY Pool -2011-38-2-1-1-1-1□	4.70
2	CML 9□	2.90	61	HEY Pool -2011-15-3-6-2-2-1□	4.74
3	V-353□	3.00	62	Indimyt 300A □	4.77
4	HEY Pool -2011-5-4-1-2-1-1□	3.00	63	HEY Pool -2011-30-4-1-2-1-1□	4.80
5	CML-73□	3.16	64	V-372□	4.85
6	HEY Pool -2011-25-6-1-3-1-1□	3.20	65	HEY Pool -2011-5-4-1-3-1□	4.85
7	EC-618176□	3.25	66	HEY Pool -2011-12-3-3-2-2-1□	4.88
8	CML-50□	3.33	67	HEY Pool -2011-12-3-4-1-1□	4.88
9	IC-656142□	3.33	68	HEY Pool -2011-12-3-7-2-3-1□	4.88
10	VQPM9-2-1-2-1□	3.50	69	HEY Pool -2011-19-1-1-1-3-1□	4.88
11	HEY Pool-2011-5-2-3-2-1-1□	3.55	70	HEY Pool -2011-21-2-1-1-1-1□	4.88
12	VQPM9-1-1-1-1□	3.60	71	HEY Pool -2011-30-4-1-2-3-1□	4.91
13	HEY Pool -2011-41-2-1-1-4-1□	3.60	72	PFSR-10109□	4.99
14	CM-13□	3.70	73	CML-224□	5.00
15	PFSR-10102□	3.75	74	CM-411□	5.00
16	HEY Pool -2011-5-6-1-2-2-1□	3.80	75	HEY Pool -2011-30-4-1-1-2-1□	5.00
17	HEY Pool -2011-15-3-6-1-3-1□	3.80	76	HEY Pool -2011-42-1-1-1-1□	5.09
18	CML-363□	3.88	77	HEY Pool -2011-42-1-1-1-3-1□	5.09
19	VH 9-1-2-1-1□	3.88	78	HEY Pool -2011-38-2-1-1-1-1□	5.10
20	HEY Pool -2011-5-4-1-1-2-1□	3.88	79	VQPM9-2-1-2-1□	5.11
21	IC639445-1-3-3-1□	3.90	80	HEY Pool -2011-12-3-4-2-1□	5.11
22	HEY Pool -2011-25-6-2-1-2-1□	3.90	81	HEY Pool -2011-19-1-1-1-1-1□	5.11

23	CML 292□	4.00	82	CML-421□	5.14
24	CM-501□	4.00	83	HEY Pool -2011-21-2-3-1-1□	5.20
25	CM-11□	4.00	84	HEY Pool -2011-5-6-1-2-1□	5.25
26	PFSR-10116□	4.00	85	HEY Pool -2011-12-3-5-2-3-1□	5.25
27	NAI-175□	4.00	86	HEY Pool -2011-12-1-2-1-1-1□	5.27
28	HEY POOL-2011-12-5SC-3-1-1□	4.00	87	HEY Pool -2011-19-1-1-2-1-1□	5.33
29	VQPM9-1-1-1-1	4.00	88	CML-482□	5.42
30	HEY Pool -2011-12-3-4-1-2-1□	4.00	89	HEY Pool -2011-15-1-3-2-1-1□	5.62
31	CM 123□	4.12	90	CML-342□	5.63
32	CM 140□	4.22	91	FH3583-1-1-1□	5.66
33	HEY Pool -2011-5-4-1-2-2-1□	4.22	92	HEY Pool -2011-41-2-1-2-1-1□	5.66
34	HEY Pool -2011-5-4-1-3-2-1□	4.22	93	VQPM9-1-2-1□	5.80
35	CML-470□	4.25	94	HEY Pool -2011-15-1-4-2-2-1□	5.88
36	HEY Pool -2011-38-2-1-2-1-1□	4.27	95	CML-182□	6.00
37	CM-137□	4.30	96	VQPM9-1-2-1□	6.00
38	VH 9-2-1-1-1□	4.36	97	HEY Pool -2011-5-4-1-3-3-1□	6.10
39	VH 9-3-2-1□	4.36	98	V 341□	6.12
40	HEY Pool -2011-15-3-7-3-4-1□	4.36	99	HEY Pool -2011-12-1-1-3-4-1□	6.12
41	HEY Pool -2011-15-1-4-3-1-1□	4.37	100	VQPM9-2-1-3-1□	6.14
42	HEY Pool -2011-15-6-1-2-2-1□	4.37	101	IC639445-1-3-1□	6.20
43	CML-425□	4.40	102	VQPM9-1-2-1-1□	6.20
44	CML-43□	4.44	103	HEY Pool -2011-15-3-6-2-1-1□	6.25
45	HEY Pool -2011-37-2-1-3-1-1□	4.44	104	CML-238□	6.42
46	CML-306□	4.45	105	VQPM9-1-2-1-1□	6.44
47	HEY POOL-2011-12-5SC-3-2-1□	4.50	106	HEY Pool -2011-19-1-1-1-2-1□	6.50
48	HEY Pool -2011-41-3-1-2-2-1□	4.50	107	HEY Pool -2011-12-3-1-1-2-1□	6.55
49	HEY Pool -2011-12-1-1-3-3-1□	4.54	108	HEY Pool -2011-15-3-6-1-2-1□	6.66
50	HEY Pool -2011-12-1-3-1-2-1□	4.54	109	HEY Pool -2011-38-2-1-2-3-1□	6.80
51	HEY Pool -2011-30-4-1-2-2-1□	4.55	110	HEY Pool -2011-15-3-2-1-1-1□	6.85
52	HEY Pool -2011-25-6-2-1-5-1□	4.57	111	HEY Pool -2011-15-8-1-1-4-1□	7.00
53	CM-212□	4.60	112	BASI LOCAL	7.20

54	BASILOCAL	6.55	113	DMRE 63	4.00
55	DMRE 63	3.50	114	VQPM9-2-1-3-1□	7.80
56	HEY Pool -2011-15-3-7-3-1-1□C	4.60	115	HEY Pool -2011-15-6-1-3-3-1□	8.33
57	HEY Pool -2011-12-3-3-3-1-1□C	4.62	116	CML-72□	9.00
58	NAI-147□C	4.66	117	PFSR-10104□	8.00
59	HEY Pool -2011-12-3-5-1-1-1□	4.70			

Table 3 B. Mean LIR of maize genotypes screened against *S. inferens* under artificial infestation during Rabi 2015-16 (2nd year)

S. No.	PEDIGREE	Mean LIR (1-9 Scale)	Category of infestation
1	EC440415	2.40	R
2	IIMRSBTPOOL	2.67	R
3	BCK/BC4	2.71	R
1	ACC584597	3.37	MR
2	IIMRPBTPOOL	3.40	MR
3	AEB(Y)C534-1-1	3.50	MR
4	BPT5	3.57	MR
5	IIMR PBT SYNTHETIC	3.78	MR
6	AEB(Y)C538-1-1	3.86	MR
7	ACC565880	3.87	MR
8	AEB(Y)C534-1-4	3.93	MR
9	WNZPBT 8	4.11	MR
10	AEB(Y)C534-1-2	4.17	MR
11	DMRE63	4.27	MR
12	EC656141	4.28	MR
13	ACC565881	4.32	MR
17	BPT10	4.40	MR
18	ACC584585	4.57	MR
19	EC598465	4.65	MR
20	EC440623	4.65	MR
21	CM 500	4.83	MR
22	EC442714	4.95	MR
23	EC440612	5.11	MR
24	ACC584588	5.23	MR
25	AEB(Y)C534-1-3	5.31	MR
26	DMRN1	5.47	MR
27	ACC584542	5.69	MR
28	ACC565895	5.95	MR
29	ACC573120	6.05	S
30	EC618222	6.38	S
31	EC646047	6.43	S

32	ACC581611	6.48	S
33	ACC584586	7.05	S
34	CM 300	7.39	S
35	ACC565877	7.94	S
	SE(m)	0.712	
	CD at 5%	2.04	

R: Resistant LIR 1-3), MR: Moderately Resistant (LIR >3-6) , S: Susceptible (LIR >6-9)

Table 4. Leaf Injury Rating vs Grain Yield relationship for *S. inferens* during rabi 2015-16

1. Location: Karnal

Maize hybrids: HQPM 1, DHM 117, PMH 1

Date of Sowing: 06.11.15 Date of infestation: 05.12.15

Leaf Injury rating on 1-9 scale	Mean grain wt. (gm)/plant at 14%		
	HQPM 1	DHM 117	PMH 1
1	147.90	163.78	142.74
2	152.33	159.39	142.59
3	147.79	155.84	134.66
4	141.06	143.68	130.07
5	129.77	135.42	117.82
6	128.93	130.15	112.08
7	93.75	99.69	87.01
8	78.33	75.60	71.41
9	16.29	26.29	15.81
Correlation Coefficients	-0.882	-0.923	-0.911
Regression mode l	$y = -14.47x + 187.5$ $R^2 = 0.777$	$y = -15.45x + 198.3$ $R^2 = 0.852$	$y = -13.90x + 175.5$ $R^2 = 0.831$

2. Location: Hyderabad

Maize hybrid: DHM 117

Date of sowing: 07-12-2015 Date of infestation: 28-12-2015

Leaf Injury rating on 1-9 scale	Grain yield of 15 cobs of 1-9 scale at 14% moisture (g)
1	2400
2	2020
3	1620

4	1520
5	1400
6	1330
7	973
8	472
9	0
Correlation Coefficient	-0.972
Regression model	$y = -262.0x + 2614.$ $R^2 = 0.943$

Table 5. Evaluation of inbred lines against Sorghum shoot fly under natural infestation during Spring 2016

1. Location: Delhi (3rd year)

Date of sowing : 26.2.16 Date of germination: 7.3.16

No.of entries: 66, Row length: 2.5 m , Spacing : 75 x 20 cm, Number of rows: 1

Plot no.	Pedigree	Mean %Dead Hearts	Plot no.	Pedigree	Mean %Dead Hearts
1	PFSR5106/1	8.33	34	CML491	36.36
2	97P65BBB26B	41.67	35	CML50	18.18
3	AEBY 1	41.67	36	CML55BB	66.67
4	AEB(Y)C534-1	41.67	37	CML73	66.67
5	BCK/BC2	33.33	38	EC4400414	33.33
6	BCK/BC8	41.67	39	EC598464	70.00
7	BML14	70.00	40	HKI-2-6-2-4(1-2)-4	30.00
8	CHINA8	58.33	41	EC672591	41.67
9	CLQRCWQ02B6	18.18	42	G18QC8-36	41.67
10	CLQRCYQ42	41.67	43	HKI1105	66.67
11	CLQRCYQ47B	50.00	44	HKI209	44.44
12	CM115	25.00	45	HKI287	66.67
13	CM117	16.67	46	HKI326-3	57.14
14	CM117-3-4-1	8.33	47	JCS789CH1	75.00
15	CM118	25.00	48	JCS796CH8	28.57
16	CM142	41.67	49	P390AM/CMLC4 F230B2-1-2-2BBB	50.00
17	CM501	66.67	50	P63C2BBB17B	33.33
18	CML162	77.78	51	PFSR/51016-1	50.00
19	CML23	33.33	52	S01slyqBBB13B	41.67
20	CML261	25.00	53	S87P66QBBB30	14.29
21	CML292	33.33	54	WS2	0.00
22	CML298	58.33	55	High Oil QPMc13 BB B66BB	36.36

23	CML312	33.33	56	HKI 164-3-2-1	33.33
24	CML336	50.00	57	HKI170(1+2)	71.43
25	CML338	63.64	58	CUBA378	33.33
26	CML420	33.33	59	DMSC28	33.33
27	CML481		60	HKI1831	9.09
28	CML485BBB	50.00	61	HKIPCBT3	60.00
29	AEBY(1)	11.11	62	WINPOP-8	8.33
30	BML7	50.00	63	AEBY(1)	11.11
31	CML49	50.00	64	BML7	28.57
32	CM500	62.50	65	CM140	83.33
33	CML49	50.00	66	CM500	36.36

2. Location: Ludhiana (3rd year)

Date of sowing : 17.2.16

Date of germination: 1.3.16

No.of entries: 66, Row length:3 m , Spacing : 60 x 20 cm

Plot no.	Pedigree	Incidence (%) of shoot fly after 21days of germination			
		Leaf injury	Dead hearts	Susceptibility Index (SI)	Category based on SI
1	PFSR 5106/1	42.86	21.43	1.07	R
2	97P65BBB26B	41.67	41.67	1.74	MR
3	AEB(Y)1	25.00	16.67	1.33	R
4	AEB(Y)C534-1	30.00	40.00	2.10	MR
5	BCK/BC2	NG			
6	BCK/BC8	18.18	54.55	2.41	MR
7	BML14	21.43	14.29	1.18	R
8	CHINA8	23.08	53.85	1.87	MR
9	CLQRCWQ02B6	41.67	50.00	1.78	MR
10	CLQRCYQ42	53.85	15.38	0.94	R
11	CLQRCYQ47B	58.33	33.33	1.50	MR
12	CM115	54.55	45.45	1.66	MR
13	CM117	8.33	66.67	2.24	MR
14	CM117-3-4-1	50.00	21.43	1.31	R
15	CM118	41.67	50.00	2.20	MR

16	CM142	25.00	66.67	2.46	MR
17	CM501	18.18	63.64	2.35	MR
18	CML162	9.09	72.73	2.91	S
19	CML23	46.67	13.33	0.99	R
20	CML261	16.67	75.00	2.72	S
21	CML292	46.67	53.33	2.17	MR
22	CML298	26.67	26.67	1.43	MR
23	CML312	33.33	60.00	1.79	MR
Plot no.	Pedigree	Incidence (%) of shoot fly after 21days of germination			
		Leaf injury	Dead hearts	Susceptibility Index (SI)	Category based on SI
25	CML338	41.67	41.67	2.19	MR
26	CML420	33.33	26.67	1.41	MR
27	CML481	27.27	63.64	1.90	MR
28	CML485BBB	13.33	53.33	2.09	MR
29	AEBYR (1)	42.86	28.57	1.37	R
30	BML 7	66.67	20.00	1.03	R
31	CML49	33.33	40.00	1.61	MR
32	CM 500 R	26.67	60.00	1.74	MR
33	CML49	6.67	80.00	3.22	S
34	CML491	25.00	75.00	3.03	S
35	CML50	33.33	26.67	1.51	MR
36	CML55BB	20.00	80.00	2.80	S
37	CML73	27.27	63.64	2.59	S
38	EC4400414	10.00	80.00	2.62	S
39	EC598464	30.00	70.00	2.50	MR
40	HKI2-6-2-4(1-2)-4	30.77	38.46	1.72	MR
41	EC672591	30.77	53.85	2.38	MR

42	G18QC8-36	46.67	53.33	1.70	MR
43	HKI1105	30.00	70.00	2.85	S
44	HKI209	14.29	78.57	2.82	S
45	HKI287	13.33	80.00	3.26	S
46	HKI326-3	18.18	72.73	2.31	MR
47	JCS789CH1	20.00	80.00	2.70	S
48	JCS796CH8	33.33	66.67	2.30	MR
49	P390AM/CMLC4 F230B2-1-2-2BBB	40.00	50.00	1.69	MR

Plot no.	Pedigree	Incidence (%) of shoot fly after 21 days of germination			
		Leaf injury	Dead hearts	Susceptibility Index (SI)	Category based on SI
51	PFSR/51016-1	23.08	76.92	2.61	S
52	S01slyqBBB13B	40.00	33.33	1.69	MR
53	S87P66QBBB30	46.15	30.77	1.42	MR
54	WS2	26.67	33.33	1.51	MR
55	High Oil QPMc13BBB66BB	40.00	50.00	2.11	MR
56	HKI164-3-(2-1)-1	38.46	23.08	1.34	R
57	HKI170(1+2)	15.38	76.92	2.96	S
58	CUBA378	14.29	78.57	2.72	S
59	DMSC28	42.86	35.71	1.47	MR
60	HKI 1831	26.67	20.00	1.30	R
61	HKIPCBT3	30.00	40.00	1.87	MR
62	WINPOP 8	41.67	16.67	1.14	R
63	AEBYR (1)	26.67	26.67	1.34	R
64	BML 7	27.27	45.45	1.78	MR
65	CM 140	27.27	36.36	1.60	MR
66	CM 500	25.00	33.33	1.70	MR
Mean susceptibility Index					1.97
Standard deviation					0.60
Range					1.37-2.57
	R				< 1.38
	MR				1.38-2.56
	S				>2.56

R: Resistant, MR: Moderately Resistant, S: Susceptible

3. Location: Delhi, Karnal (1st year)

S.No.	Pedigree	Mean % dead hearts	
		DELHI	KARNAL
1	AEB(Y)C534-1-1	8.35(12.05)	40.00(39.23)
2	AEB(Y)C534-1-2	43.35(40.45)	48.35(44.05)
3	AEB(Y)C538-1	58.32(50.55)	75.70(60.46)
4	BCK/BC4	16.65(17.60)	51.45(45.83)
5	BML 7	25.01(29.65)	77.80(61.89)
6	CM 500	54.19(37.85)	57.80(49.49)
7	DMR N1	37.50(37.50)	65.90(54.27)
8	DMR N3	52.25(46.30)	63.70(52.95)
9	WNZPBT 9	48.20(43.85)	34.85(36.18)
10	WNZPBT 8	31.10(33.25)	20.85(27.17)
11	EC440612	36.35(36.45)	59.30(50.36)
12	EC440623	63.89(53.45)	91.65(73.20)
13	EC598465	43.20(41.05)	52.20(46.26)
14	IIMR PBT POOL	33.35(34.50)	70.70(57.23)
15	IIMR PBT SYNTHETIC	12.50(15.00)	39.10(38.70)
16	IIMR SBT POOL	21.97(27.80)	45.00(42.13)
17	BPT 10	29.15(24.90)	55.05(47.90)
18	BPT 5	18.05(24.75)	36.50(37.17)
19	ACCNO.573120	48.85(44.25)	43.60(41.32)
20	ACCNO.571611	44.10(40.90)	59.05(50.21)
21	ACCNO.584542	31.10(33.25)	61.35(51.56)
22	ACCNO.584585	27.25(31.20)	58.50(49.89)
23	ACCNO.584586	12.50(15.00)	31.25(33.99)
24	ACCNO.584787	39.40(38.80)	63.55(52.86)

S.No.	Pedigree	Mean % dead hearts	
		DELHI	KARNAL
25	ACCNO.565877	62.50(60.00)	43.75(41.41)
26	ACCNO.565880	34.10(35.15)	55.55(48.19)
27	ACCNO.565888	55.35(51.50)	50.00(45.00)
28	ACCNO.565895	61.15(51.50)	48.10(43.91)
29	EC646047	44.16(40.05)	45.00(42.13)
30	EC440415	39.75(38.80)	79.95(63.40)
31	EC442714	41.65(40.20)	59.10(50.24)
32	EC656141	27.75(24.10)	38.55(41.41)
	SE(m)	15.96	4.23
	CD at 5%	NS	12.14

