

**PROGRESS REPORT
OF
EASTERN INDIA RAINFED LOWLAND
SHUTTLE BREEDING PROGRAMME**

KHARIF, 1995

RAINFED LOWLAND RICE RESEARCH CONSORTIUM ✓
(ICAR/IRRI COLLABORATIVE PROGRAMME)

**CENTRAL RICE RESEARCH INSTITUTE
CUTTACK - 753 006, (ORISSA)**

C O N T E N T S

<u>SUBJECT</u>	<u>PAGE NO</u>
1. Cooperators and Cooperating Centres	1
2. Major objectives	2
3. List of experiments conducted (Kharif 1995)	3
4. Experiment-1 : Evaluation of di-haploid lines and and somaclonal variants	4-11
5. Experiment-2 : Studies on Genotype x Environment interaction	12-26
6. Experiment-3 : Evaluation of Fixed cultures under direct seeding vs transplanting conditions	27-41
7. Experiment-4 : Maintenance of BLB differentials (ARBN)	42
8. Experiment-5 : Observational Nursery Trial	43-63
9. Experiment-6 : Evaluation of Breeding material	64-68
10. Experiment-7 : ON-FARM TRIAL	69-72
11. Environmental Data	73-76

C O N T E N T S

<u>SUBJECT</u>	<u>PAGE NO</u>
1. Cooperators and Cooperating Centres	1
2. Major objectives	2
3. List of experiments conducted (Kharif 1995)	3
4. Experiment-1 : Evaluation of di-haploid lines and and somaclonal variants	4-11
5. Experiment-2 : Studies on Genotype x Environment interaction	12-26
6. Experiment-3 : Evaluation of Fixed cultures under direct seeding vs transplanting conditions	27-41
7. Experiment-4 : Maintenance of BLB differentials (ARBN)	42
8. Experiment-5 : Observational Nursery Trial	43-63
9. Experiment-6 : Evaluation of Breeding material	64-68
10. Experiment-7 : ON-FARM TRIAL	69-72
11. Environmental Data	73-76

EASTERN INDIA RAINFED LOWLAND SHUTTLE BREEDING PROGRAMME

COOPERATORS AND COOPERATING CENTRES (KHARIF, 1995)

Director, CRRI, Cuttack : Dr. K.C. Mathur

Coordinators : 1. Dr. Surapong Sarkarung, IRRI
2. Dr. J.K. Roy, CRRI, Cuttack

Liaison : Dr. R.K. Singh,
IRRI Liaison Office, New Delhi

<u>STATE</u>	<u>CENTRE</u>	<u>COOPERATORS</u>
ASSAM	1. TITABAR	DR. T.AHMED
BIHAR	2. PUSA	DR. R. THAKUR DR. N.K.SINGH
	3. PATNA	DR. V.N.SAHAI
MADHYA PRADESH	4. RAIPUR	DR. R.K. SAHU
UTTAR PRADESH	5. MASODHA	DR. C.H.MISRA DR. O.N. SINGH DR. SANJAY SINGH
WEST BENGAL	6. CHINSURAH	DR. S.D.CHATTERJEE DR. S. MALLICK
ORISSA	7. RANITAL	DR. A.T.ROY
	8. CUTTACK (CRRI)	DR. J.K. ROY DR. J.N. REDDY MR. D. PANI (RESEARCH ASSOCIATE)

COORDINATING CENTRE : C.R.R.I., CUTTACK

ICAR-IRRI EASTERN INDIA SHUTTLE BREEDING PROGRAMME

For improving the genetic yield potential of the rainfed lowland rice varieties of Eastern-India (Assam, Bihar, Orissa, West Bengal, Eastern M.P. and Eastern U.P.), an ICAR-IRRI Collaborative Shuttle Breeding Programme was initiated from Kharif, 1992. The programme is funded by IRRI and jointly coordinated by CRRI, Cuttack and IRRI with the following major objectives:

- * *Making available diversified set of donors/improved breeding lines, suitable for rainfed lowlands, to the cooperating centres.*
- * *To provide segregating populations with broad genetic background to all the centres for effective selection under location specific environments.*
- * *To evaluate elite breeding lines, developed by the cooperating centres and IRRI specially for submergence tolerance, photoperiod sensitivity, thermoinsensitivity, yield potential and adaptability in Eastern India.*
- * *On-farm trial of promising cultures to study their adaptability and acceptability.*

Initially there were six centres with one in each of the above six states. The number of cooperating centres was raised to eight from Kharif, 1994 with the addition of Patna in Bihar and Ranital in Orissa.

The experiments conducted and the results obtained at the cooperating centres during Kharif, 1995 are presented in this report.

EXPERIMENTS SUGGESTED FOR KHARIF, 1995

The following experiments were suggested for conducting during Kharif, 1995 in different Cooperating Centres for the Shuttle Breeding Programme:

Expt. 1 : Evaluation of di-haploid (DH) lines and somaclonal variants for submergence tolerance

Locations : 3 : CRRRI (Cuttack), Masodha and Chinsurah

Expt. 2 : Studies on Genotype x Environment (G x E) interaction

Locations : All 8 Centres

Expt. 3 : Evaluation of fixed cultures/varieties under direct seeding vs. transplanting conditions

Locations : All 8 Centres

Expt. 4 : Maintenance of local popular varieties and differentials for collection of BLB pathogen population (linkage with ARBN)

Locations : All 8 Centres

Expt. 5 : Observational Nursery Trial

Locations : All 8 Centres.
Unreplicated screening nursery.

Expt. 6 : Evaluation of breeding materials selected at CRRRI, Masodha and Raipur

Locations : All 8 Centres
Material : Segregating F_2 - F_5 breeding lines.

Expt. 7 : On-farm evaluation

Locations : 5 (CRRRI, Masodha, Raipur, Chinsurah and Ranital)

Expt.1 Evaluation of di-haploid (DH) lines and somaclonal variants for submergence tolerance.

No. of entries - 140

Locations - 2
(CRRI & Masodha)

A set of 140 cultures consisting of di-haploid lines and somaclonal variants, received from Dr. S. Surapang(IRRI), were screened for their degree of submergence tolerance of CRRI, Cuttack and Masodha. Due to unusual heavy rainfall in May'95 at Cuttack, the experimental plots could not come to condition for direct seeding in time. Hence, the experiment was transplanted at Cuttack which, however got excess resistance stress at early vegetative stage, resulting in high mortality of plants. The mortality counts were taken 30 days after transplanting. At Masodha, mortality counts were taken 7 and 14 days after submergence. At Cuttack, the survival percentage ranged from 5 to 95% with resistance check FR.13A recording 68% survival whereas at Masodha survival percentage ranged from 10 to 82% which FR.13A recording 73% survival. Most of the entries seemed early for Cuttack situation.

From the results, it was seen that entries like IR.67709-AC.80-5, IR. 67709-AC 26-5 IR. 67709-AC.14-2 and IR.67709-AC.58-1 recorded higher survival percentage than FR.13 A. But they are of elongating types. Entries like IR.67709-AC44-7, IR.67709 AC.89 - 8 and two other sisterlines have elongated less than FR.13A But also recorded less survival than FR.13A.

Mortality percentage, extent of elongation and other associated characters of the experiment are presented in Table No.1.

EXPT.1 EVALUATION OF DIHAPLOID (DH) LINES AND SOMACLONAL VARIANTS FOR SUBMERGENCE TOLERANCE

TABLE 1. ANCILLARY CHARACTERS AND SURVIVAL PERCENTAGE

Sl. No.	Designation	MASODHA (U.P.)				CRRRI. (ORISSA)		
		Seedling ht.(cm) (B.S)	Seedling ht.(cm.) (A.S)	Seedling Elonga- tion (cm)	Survival %	Days to 50% fl.	Pl.ht. (cm)	Survival %
1	2	3	4	5	6	7	8	9
1.	IR 67709-AC1-1	25.4	73.7	48.3	25.8	101	131.4	25
2.	" AC2-3	23.4	67.6	44.2	27.8	107	125.0	30
3.	" AC4-1	21.9	70.9	49.0	41.2	113	139.0	35
4.	" AC4-2	24.8	68.7	43.9	39.2	110	144.0	28
5.	" AC4-3	22.9	75.6	52.7	39.5	112	133.0	30
6.	" AC4-4	32.6	78.0	45.4	39.7	109	143.0	33
7.	" AC4-7	22.1	74.5	52.4	32.2	107	133.0	50
8.	" AC4-8	22.4	67.0	44.6	44.1	109	145.0	50
9.	" AC4-9	28.4	78.3	49.9	42.1	108	146.0	38
10.	" AC4-10	28.9	78.9	50.0	38.3	106	142.0	50
11.	" AC5-3	28.6	80.7	52.1	51.8	115	146.0	55
12.	" AC5-6	25.4	79.5	54.1	55.5	114	114.0	38
13.	" AC6-3	29.8	75.2	45.4	60.4	109	117.0	20
14.	" AC11-2	28.8	82.5	53.7	61.3	104	134.0	40
15.	" AC13-3	25.8	73.0	47.2	73.4(6)	127	138.0	5
16.	" AC14-1	35.1	83.5	48.4	66.5(10)	97	144.0	43

contd.....

1	2	3	4	5	6	7	8	9
17.	IR 67709-AC14-2	43.8	83.2	39.4	75.3(3)	99	143.0	58
18.	" AC15-1	30.1	72.3	42.2	58.0	108	137.0	23
19.	" AC15-2	30.4	75.0	44.6	67.3(9)	109	135.0	20
20.	" AC15-4	34.5	73.6	39.1	62.1	112	141.0	20
21.	" AC19-1	24.2	67.7	43.5	69.9(8)	111	123.0	20
22.	" AC19-5	24.0	75.7	51.7	47.8	110	124.0	30
23.	" AC22-5	26.0	79.4	53.4	35.9	113	146.0	60
24.	" AC23-1	22.2	72.7	50.5	21.4	117	126.0	40
25.	" AC23-2	22.0	74.4	52.4	42.8	120	137.0	28
26.	" AC23-3	27.5	83.4	55.9	54.7	121	131.0	30
27.	" AC23-6	24.6	79.8	55.2	28.3	115	136.0	28
28.	" AC23-7	23.6	81.5	57.9	32.8	113	138.0	38
29.	" AC23-8	30.2	79.1	48.9	45.8	115	130.0	40
30.	" AC26-1	31.0	70.0	39.0	44.2	108	151.0	43
31.	" AC26-3	35.4	66.1	30.7	51.8	108	148.0	35
32.	" AC26-5	27.3	73.9	46.6	80.7(2)	109	154.0	30
33.	" AC26-6	25.5	73.7	48.2	56.4	106	155.6	35
34.	" AC26-7	28.8	67.5	38.7	42.2	107	152.4	38
35.	" AC27-1	24.5	81.7	57.1	37.1	112	133.0	50
36.	" AC27-2	29.7	80.0	50.3	42.6	119	125.1	25
37.	" AC27-3	28.4	75.6	47.2	37.6	119	133.7	35

Contd...

1	2	3	4	5	6	7	8	9
38.	IR 67709-AC27-5	23.2	81.4	58.2	25.6	117	136.5	46
39.	" AC28-1	21.9	75.6	53.7	34.8	116	128.0	23
40.	" AC30-1	26.5	70.2	43.7	15.0	127	131.0	5
41.	" AC30-2	28.1	70.8	42.7	32.5	120	143.8	40
42.	" AC32-1	33.0	75.7	42.7	16.9	116	141.4	43
43.	" AC32-2	24.4	74.1	49.7	27.5	117	134.8	60
44.	" AC32-3	31.2	75.3	44.2	21.8	115	133.3	53
45.	" AC32-4	27.2	73.2	46.0	25.6	116	138.7	50
46.	" AC32-5	20.6	70.9	50.3	28.5	112	144.9	55
47.	" AC32-6	32.2	87.6	55.4	27.2	115	143.2	38
48.	" AC32-7	28.5	70.8	42.3	27.9	117	131.4	33
49.	" AC33-13	27.0	82.6	55.6	36.3	125	147.0	30
50.	" AC35-2	23.2	57.6	34.4	26.8	105	118.8	22
51.	" AC35-3	28.0	96.1	68.1	60.5	100	127.8	48
52.	" AC35-4	34.6	90.9	56.3	38.3	107	127.0	30
53.	" AC35-5	29.9	95.9	66.0	53.7	109	125.8	25
54.	" AC35-6	31.9	94.1	62.2	59.8	117	148.0	20
55.	" AC35-7	29.7	84.2	54.5	43.5	128	147.0	33
56.	" AC35-8	20.5	74.8	54.3	30.2	128	155.8	10
57.	" AC35-11	28.7	69.9	41.2	38.2	111	123.0	10
58.	" AC37-1	35.4	80.5	45.1	72.7(7)	108	149.8	40

1	2	3	4	5	6	7	8	9
59.	IR 67709-AC37-2	27.0	79.8	52.8	47.0	112	151.5	33
60.	" AC37-3	33.2	81.0	47.8	55.5	113	152.7	30
61.	" AC37-4	31.6	80.3	48.7	55.0	108	148.5	40
62.	" AC35-5	29.5	82.1	52.6	29.1	107	142.3	35
63	" AC37-7	29.2	81.0	41.8	33.4	105	145.6	18
64	" AC37-8	39.0	78.3	39.3	40.1	118	154.3	18
65.	" AC38-2	25.9	89.5	63.6	47.3	105	138.0	28
66.	" AC38-8	36.2	91.9	55.7	58.7	107	132.2	40
67.	" AC38-16	31.0	89.7	58.7	47.0	128	156.2	33
68.	" AC39-1	27.3	73.3	46.0	55.7	117	153.9	23
69.	" AC39-2	23.2	73.9	50.7	54.8	112	165.2	35
70.	" AC39-3	30.4	80.7	50.3	26.4	125	157.7	25
71.	" AC39-4	26.5	73.9	47.4	47.1	115	114.6	35
72.	" AC39-6	29.5	75.4	45.9	27.1	117	109.3	50
73.	" AC39-7	25.1	77.8	52.7	47.8	123	119.0	70(5)
74.	" AC39-8	27.8	57.7	29.9	48.3	116	119.8	75(4)
75.	" AC39-9	23.3	75.9	52.6	47.6	122	121.5	50
76.	" AC30-10	21.0	74.4	53.4	45.9	113	84.2	45
77.	" AC41-1	23.2	73.4	50.2	36.5	110	82.0	80(3)
78.	" AC41-2	23.2	80.2	57.0	41.7	109	82.5	40
79.	" AC41-3	25.0	79.1	54.1	42.8	109	83.2	60'
80.	" AC41-4	30.0	75.9	45.9	49.3	115	74.7	35

Contd....

1	2	3	4	5	6	7	8	9
81.	IR 67709-AC41-5	30.7	77.9	47.2	35.9	111	82.0	45
82.	" AC41-6	29.3	80.6	51.3	22.8	111	111.5	30
83.	" AC44-1	25.5	81.6	56.1	26.6	125	113.7	30
84.	" AC44-2	27.3	58.7	31.4	24.2	125	110.4	45
85.	" AC44-3	22.9	55.4	32.5	43.9	125	99.5	25
86.	" AC44-4	21.1	53.5	34.4	37.4	125	109.0	25
87.	" AC44-6	25.4	64.4	39.0	45.7	129	109.3	10
88.	" AC44-7	28.5	56.7	28.2	34.4	130	99.1	40
89.	" AC44-8	28.8	69.8	41.0	33.7	108	77.3	50
90.	" AC45-1	22.9	76.6	49.7	20.6	-	-	-
91.	" AC45-2	26.3	67.9	41.6	20.8	108	75.3	10
92.	" AC45-4	21.4	79.4	58.0	21.9	107	83.2	10
93.	" AC45-6	23.0	70.8	47.8	22.2	109	66.2	10
94.	" AC45-7	23.6	74.6	51.0	18.7	107	89.0	20
95.	" AC45-10	23.5	69.5	46.0	16.2	125	97.6	11
96.	" AC48-1	19.2	75.4	56.2	17.8	125	101.5	11
97.	" AC48-2	16.4	68.7	52.3	11.3	131	101.0	8
98.	" AC48-3	19.5	74.0	54.5	11.5	131	99.2	8
99.	" AC48-4	19.6	75.3	55.7	21.9	126	107.1	13
100.	" AC48-5	20.8	74.8	54.0	26.0	118	100.0	3
101.	" AC48-6	17.9	61.8	43.9	34.2	108	63.0	3
102.	" AC50-1	22.3	69.2	46.9	35.0	107	68.0	8

Contd...

1	2	3	4	5	6	7	8	9
103.	IR 67709-AC50-2	23.0	71.2	48.2	52.4	115	66.2	5
104	" AC50-5	23.3	71.4	48.1	43.3	115	77.5	18
105	" AC50-6	25.6	70.6	45.0	58.5	109	68.4	33
106	" AC50-8	22.9	67.5	44.6	52.5	136	128.0	13
107.	" AC54-1	23.5	75.5	52.5	40.00	139	127.0	63(8)
108.	" AC56-4	27.3	72.1	44.8	35.6	115	107.0	70(5)
109.	" AC57-3	27.3	80.7	53.4	36.4	107	85.7	55
110.	" AC57-4	19.3	82.9	63.2	42.1	106	117.5	95(1)
111.	" AC58-1	33.1	94.9	61.8	73.7(4)	103	83.0	65(7)
112.	" AC58-3	26.0	84.0	58.0	46.6	103	84.0	63(8)
113.	" AC58-5	30.0	87.8	57.8	82.3(1)	116	68.5	25
114.	" AC59-4	16.8	62.8	46.0	34.3	101	103.0	70(5)
115	" AC61-1	24.5	76.8	52.3	54.4	103	112.5	50
116.	" AC61-2	24.4	76.9	52.5	43.3	102	100.7	50
117.	" AC61-3	26.9	77.7	50.8	40.6	100	110.0	45
118.	" AC61-4	25.7	77.5	51.8	62.7	103	99.6	43
119.	" AC61-6	27.3	82.0	54.7	62.7	105	98.1	35
120.	" AC61-7	24.0	76.1	52.1	62.8	104	98.5	53
121.	" AC61-8	26.0	72.6	46.6	62.3	104	104.5	48
122.	" AC64-6	25.2	83.4	58.2	56.9	130	103.0	60
123.	" AC64-8	21.7	80.0	58.3	47.2	131	118.7	75(4)
124.	" AC64-9	28.4	83.3	54.9	45.0	135	100.5	63(8)

Contd.... 10

1	2	3	4	5	6	7	8	9
125.	IR 67709-AC64-11	27.4	86.0	58.6	64.2	107	84.6	38
126.	" AC66-1	29.2	71.4	42.2	16.6	115	80.1	33
127.	" AC66-7	24.7	79.1	54.4	27.4	117	77.5	8
128.	" AC70-2	31.0	76.7	45.7	65.6	106	87.7	20
129.	" AC70-3	24.1	73.0	48.9	39.0	109	61.8	23
130.	" AC71-1	21.5	69.0	47.5	14.4	112	63.5	30
131.	" AC71-2	19.2	66.3	47.1	37.0	112	76.0	20
132.	" AC73-1	17.6	61.7	44.1	20.0	107	62.4	18
133.	" AC73-2	22.0	73.5	53.8	34.6	114	61.1	15
134.	" AC80-1	19.7	73.4	53.7	37.0	107	66.0	10
135.	" AC80-2	19.8	66.1	46.3	21.5	111	65.0	5
136.	" AC80-3	26.3	68.4	42.1	32.3	105	74.7	20
137.	" AC80-4	27.4	68.7	41.3	15.0	104	65.5	5
138.	" AC80-5	19.6	74.3	54.7	30.2	106	66.0	23
139.	" AC80-7	20.2	68.2	48.6	10.8	114	67.0	8
140.	" AC80-8	16.7	68.5	51.8	30.7	-	-	-
141.	FR-13A (Check)	47.3	80.8	33.5	73.5(5)	135	137.7	66(6)
142.	SABITA(Check)	37.6	104.9	67.3	61.7	136	148.0	83(2)
143.	MAHSURI(Check)	31.7	88.8	57.1	38.0	113	114.2	63(8)
144.	IR-42(Check)	25.9	77.5	51.6	40.2	101	89.0	28

D/S

3/6/95

D/P

7/7/95

B.S. - Before submergence A.S. - After Submergence

* - 14 days after submergence ** - One month after submergence

Expt. 2 : STUDIES ON GENOTYPE X ENVIRONMENT (G X E) INTERACTION

A set of 36 genotypes including 2 common checks (Sabita and Rajshree) were tested in a replicated trial at all the 8 locations of which 30 common entries were taken to study the genotype X environment interaction. At Chinsurah, none of the entries could survive due to heavy rains after sowing and hence no data are available from that centre. Out of the ~~other~~ 7 locations, the trial was transplanted at 2 locations (CRRI and Ranital) and direct seeded at the rest 5 locations. Again data from all the three replications were not available from Pusa. Hence, for pooled analysis data from 5 locations were only taken.

Observations on flowering duration, plant height, EBT/m² and grain yield were recorded for the entries. The number of the promising entries at each locations are presented at Table 3 and detailed data of the experiment are in Table Nos. 2 to 8.

The analysis of phenotypic stability of the 30 lowland cultures over 5 different locations in eastern India was done. Pooled analysis of variance revealed significant differences among genotype and environment. The genotypes interacted significantly with the environments stability parameters (b_i and $\bar{S}^2_{di}$) were estimated following Eberhart and Russel (1996) model.

Contd.....

--

From the data, it was seen that genotypes like CN 1035-61, CR 780-1937, Rajshree, Raipur No.29, RAU 493-60-2-2 and CR 758-137-13 and two more entries possessed stability for grain yield as revealed by non-significant S^2_d values. Amongst these only CN 1035-61, CR 780-1937 and Rajshree had high mean yield while the rest of the genotypes showed moderate mean performance.

The high mean yield, significant b value and non-significant S^2_d values for CN 1035-61, CR 780-1937 and Rajshree indicated that these genotypes could be recommended for the favourable environments in the states of Assam, Bihar, Orissa, Eastern U.P. and Eastern M.P.

Table 2. ESTIMATES OF MEAN ($\bar{x}$) REGRESSION CO-EFFICIENT (b) AND DEVIATION FROM REGRESSION (S^2_d) FOR GRAIN YIELD

Sl. No	Genotype	GRAIN YIELD (KG/HA)							Mean ($\bar{x}$)	(b)	(S^2_d)
		CRR	Manodha	Patna	Raipur	Patnaur	Patnaur	Patnaur			
1	2	3	4	5	6	7	8	9	10		
1.	CN 718-8-21-10	3799	653	3320	2014	2853	2528	1.15	519519**		
2.	CN 1035-59	3597	1363	3581	1805	2703	2610	0.76	675034**		
3.	CN 1035-61	3280	720	2799	3264	2603	2533	1.15**	-47300 NS		
4.	PSR 1305-6-3-5-2	3280	103	4102	3611	1922	2604	1.60**	593597**		
5.	PSR 1326-29-3-3-1	3815	320	3581	3343	1452	2502	1.54*	468181**		
6.	PSR 1314-14-11-3	2545	343	3190	3542	1571	2238	1.24	500641**		
7.	PSR 1314-108-10-6	2185	50	2409	3681	2052	2075	1.25	489984**		
8.	SR 3025-2-1-D-2-1	2786	293	2669	2510	2603	2172	1.11*	64413 NS		
9.	OR 1334-8	4254	1447	2344	2292	3754	2818	0.85	909318**		
10.	OR 1335-7	4540	510	1758	972	3333	2223	1.10	2365665**		
11.	OR 1352-RGA-DR-20	5011	3027	2018	1597	2372	2805	0.16	2302156**		
12.	OR 1356-RGA-DR-7	3254	1067	2018	1805	2853	2199	0.70	405999**		
13.	Raipur Entry No.2*	3325	487	2213	4167	2833	2605	1.37*	421436**		
14.	Raipur Entry No.4*	3275	1040	1758	4306	2362	2548	1.09	818648**		
15.	Raipur Entry No.21*	2590	493	2018	2847	1752	1940	0.97	16139 NS		
16.	Raipur Entry No.29*	3953	277	2278	3125	2202	2367	1.46**	95854 NS		
17.	Raipur Entry No.46*	786	403	3711	3056	1381	1867	0.76	2085181**		

Contd....

	3	4	5	6	7	8	9	10
18. RAU 79-2-14	2215	771	3841	3542	2502	2578	1.01	779250**
19. RAU 79-16-1-40	3664	130	2734	2778	1652	2190	1.44**	98688 NS
20. RAU 493-60-22	3772	120	2409	2778	2002	2216	1.44*	43457 NS
21. RAU-83-82-4	2312	717	3125	3194	1351	2140	0.95	533462**
22. CR 758-137-13	2915	547	2474	2917	2032	2177	1.07**	-42489 NS
23. CR 758-8	2261	43	2409	3299	1652	2013	1.30*	146512*
24. CR 662-2211	3071	1507	3581	2292	2703	2631	0.65	301651**
25. CR 780-1937	3625	597	2539	2847	2703	2462	1.21**	13611 NS
26. NDR 95001	1857	100	1563	2708	2503	1746	0.93	406389**
27. NDR 95002	2667	1683	1628	2674	2502	2231	0.38	153390*
28. NDR 95003	2315	107	1038	3333	2833	1925	1.09*	983637**
29. SABITA	3759	3603	2539	2916	2673	3098	-0.15	317631**
30. RAJSHREE	2542	1757	2604	2847	2543	2459	0.42*	-29880 NS
Experimental mean	3122	809	2608	2869	2342	2350	1.00	-
S.E.	458	20	301	419	247	390	0.43	-
*,** Significant at 5% and 1% respectively								
*(b) Significantly different from unity								
*(S ² d) Significantly different from zero								
NS Non-significant								

EXPT. 2. STUDIES ON GENOTYPE X ENVIRONMENT (GxE)
INTERACTION, KHARIF, 1995.

Table 3. LIST OF ENTRIES PROMISING AT MORE THAN
ONE LOCATION

Sl. No.	DESIGNATION	NO. OF CENTRES
1.	CN 718-8-21-10	5
2.	OR 1334-8	4
3.	CN 1035-59	4
4.	CR 662-2211	4
5.	PSR 1326-29-3-3-1	4
6.	CR 780-1937	3
7.	OR 1356-RGA-DR-7	3
8.	OR 1335-7	3
9.	RAU 79-2-14	3
10.	OR 1335-7	2
11.	OR 1352-RGA-DR-20-2	2
12.	PSR 1314-108-10-6	2
13.	NDR 95003	2
14.	RAU 83-82-14	2
15.	R 243-3223	2
16.	CR 758-8	2
17.	RAIPUR ENTRY NO.29	2
18.	SABITA	2
19.	RAJSHREE	2

EXPT.2. STUDIES ON GENOTYPE x ENVIRONMENT (GxE) INTERACTION,
KHARIF, 1995.

TABLE 4. CENTRE WISE MOST PROMISING IDENTIFIED ENTRIES

Sl. No.	C.R.R.I.	MASODHA	PATNA	PUSA	RAIPUR	RANITAL	TITABAR
1.	OR 1352-RGA-DR-20	SABITA	PSR 1305-6-3-5-2	PSR 1305-6-3-5-2	MAHAMAYA	CR 780-1937	OR 1334-8
2.	OR 1335-7	OR 1352-RGA-DR-20	CR 673-475-91	PSR 1314-14-11-3	R. 243-3223	RAIPUR NO.21 IET 6286 x Bd. 83	OR 1335-7
3.	OR 1334-8	RAJSHREE	RP 2151-40-1 x IET 6286	PSR 1314-108-10-6	CR 131-13-13	CR 662-2211	CN 718-8-21-10
4.	RAIPUR NO.29 (IET 6286 x Bd. 83)	NDR 95002	CN 1035-59	SBR 3025-2-1-B-2-1	PSR 1314-108-10-6	OR 1335-7	OR 1356-RGA-DR.7
5.	PSR 1326-29-3-3-1	CR 662-2211	PSR 1326-29-3-3-1	RAJSHREE	PSR 1305-6-3-5-2	CN 718-8-21-10	CR 131-13-13
6.	CN 718-8-21-10	OR 1334-8	CR 662-2211	OR 1356-RGA-DR-7	PSR 1314-14-11-3	RAU 79-2-14	NDR 95003
7.	RAU 493-60-20	CN 1035-59	CN 718-8-21-10	CN 718-8-21-10	RAU 79-2-14	RAU 83-82-4	MANOHARSALI
8.	SABITA	OR 1356-RGA-DR.7	PSR 1314-14-11-3	RAU 79-2-14	PSR 1326-29-3-3-1	OR 1374-8	CN 1035-59
9.	RAU 73-16-1-40	R 243-3223	RAU 83-82-4	PSR 1326-29-3-3-1	NDR 95003	CN 1035-59	CR 662-2211
10.	CR 780-1937	MADHUKAR	TCA 159	CR 758-8	CR 758-8	CN 1035-61	CR 780-1937

TABLE 5. GRAIN YIELD (KG/HA)

Sl. No.	Designation	CRR I	Masodha	Patna	Pusa	Raipur	Ranital	Titabar	Mean
1	2	3	4	5	6	7	8	9	10
1.	CN 718-B-21-10	1799 (6)	653	3320(5)	3332(6)	2014	2469(5)	2853(3)	2634(7)
2.	CN 1035-59	3597	1363 (7)	3581(4)	2929	1805	2254(8)	2703(6)	2590(10)
3.	CN 1035-61	3280	720	2799(8)	3027(10)	3264(10)	2254(8)	2603(4)	2563
4.	JOGEN	3193	320	2213	-	-	1791 ₁	2452	1993
5.	PSR 1305-6-3-5-2	3280	103	4102(1)	5077(1)	3611(5)	1450	1922	2792(2)
6.	PSR 1326-29-3-3-1	3815(5)	320	3581(4)	3320(8)	3343(7)	1883 ₁	1452	2530
7.	PSR 1314-14-11-3	2545	343	3190 (6)	5077(1)	3542(6)	957	1571	2460
8.	PSR 1314-108-10-6	2185	50	2409	4980(2)	3681(4)	1235	2052	2370
9.	SBR 3025-2-1-B-2-1	2786	293	2669 (10)	3906(3)	2510	2006	2603(8)	2396
10.	OR 1334-8	4254(3)	1447(6)	2344	3319(9)	2292	2407(7)	3754(1)	2831(1)
11.	OR 1335-7	4540(2)	510	1758	683	972	2624 (4)	3333(2)	2060
12.	OR 1352-RGA-DR-20	5011(1)	3027(2)	2018	-	1597	2222(9)	2372	2707(5)
13.	OR 1356-RGA-DR-7	3254	1067(8)	2018	3417(5)	1805	2069 ₁	2853(3)	2354
14.	Raipur No.2*	3325	487	2213	2636	4167(3)	1420 ₁	2833(4)	2440
15.	Raipur No.4*	3275	1040(9)	1758	2539	4306(2)	1513 ₁	2362	2399
16.	Raipur No 21*	2590	493	2018	2539	2847	2717(2)	1752	2136
17.	Raipur No.29*	3953(4)	277	2278	2143	3125	1450 ₁	2202	2204
18.	Raipur No.46*	786	403	3711(3)	2534	3056	524 ₁	1381	1770

1	2	3	4	5	6	7	8	9	10
19.	RAU 79-2-14	2235	771	3841(2)	3327(7)	3542(6)	2439(6)	2502	2665(6)
20.	RAU 73-16-1-40	3664(9)	120	2734(9)	2631	2778	1883	1652	2208
21.	RAU 493-60-22	3772(7)	120	2409	1953	2778	2191(10)	2002	2175
22.	RAU 83-82-4	2312	717	3125(7)	1757	3194	2439(6)	1351	2127
23.	CR 758-137-13	2195	547	2474	1948	2917	1698	2032	2075
24.	CR 758-8	2661	43	2409	3320(8)	3299(9)	1913	1652	2185
25.	CR 673-475-91	2767	690	4102(1)	-	-	2130	2192	2376
26.	CR 662-2211	3071	1507(5)	3581(4)	2552	2292	2685(3)	2703(6)	2627(8)
27.	CR 780-1937	3625(10)	597	2539	1757	2847	2746(1)	2703(6)	2402
28.	TCA 159	2363	100	3125(7)	1464	2639	-	-	1938
29.	NDR 95001	1857	100	1563	1221	2708	-	2503(10)	1658
30.	NDR 95002	2667	1683(4)	1628	2148	2674	-	2502	2217
31.	NDR 95003	2315	107	1038	2148	3333(8)	-	2833(4)	1962
32.	NDR 94013	2026	431	2018	1221	2639	-	-	1669
33.	SABITA(Check)	3759(8)	3603(1)	2539	1366	2916	2222(9)	2673(7)	2725(4)
34.	RAJSHREE(Check)	2542	1757(3)	2604	3515(4)	2711	-	2543(9)	2612(9)

contd....

1	2	3	4	5	6	7	8	9	10
35.	Local Check (1)	3000	693	-	-	4583(1)	-	2713(5)	2747(3)
36.	Local Check(2)	2786	966(10)	-	-	3056	-	2202	2252
	Mean	3 050	763	2639	2703	2907	1985	2347	
	C.D.(5%)	894	192	579	659	794	-	743	
	C.V.(%)	18.32	15.71	13.71	11.93	17.04	-	19.53	
	D/S	27/6	-	22/6	7/6	24/6	21/6	13/7	
	D/P	12/8	-	-	-	-	12/8	-	
	Local check (1)	Mahsuri	Mahsuri	-	-	Mahamaya	-	Manoharsali	
	Local check(2)	Panidhan	Madhukar	-	-	Safri-17	-	Kogebardhan	

* No.2 CR 131-13-13

* No.4 R 243.3223

* No.21 IET 6286 x Bd 83

* No.29 IET 6286 x Bd 83

* No.46 RP 2151-40-1 x IET 6286

EXPT.2 STUDIES ON GENOTYPE X ENVIRONMENT (G X E) INTERACTION, KHARIF 1995 (POOLED DATA)
TABLE 6. DAYS TO 50% FLOWERING

Sl. No.	Designation	CRRI	Masodha	Patna	Pusa	Raipur	Ranital	Tilabar	Mean
1	2	3	4	5	6	7	8	9	10
1.	CH 718-8-21-10	125	104	150	117	125	132	108	123
2.	CN 1035-59	133	85	153	118	122	142	110	123
3.	CN 1035-61	135	95	160	111	118	130	106	122
4.	JOGEN	130	96	153	-	-	128	120	127
5.	PSR 1305-6-3-5-2	111	120	149	111	125	118	106	120
6.	PSR 1326-29-3-3-1	119	89	142	104	112	123	104	113
7.	PSR 1314-14-11-3	115	100	153	106	121	118	104	117
8.	PSR 1314-108-10-6	113	98	153	106	121	118	104	116
9.	SBR 3025-2-1-B-2-1	121	95	155	114	123	130	106	121
10.	OR 1334-8	132	95	153	114	124	128	107	122
11.	OR 1335-7	138	98	155	119	127	135	112	126
12.	OR 1352-RGA-DR-20	132	96	155	-	123	145	116	128
13.	OR 1356-RGA-DR-7	127	96	155	112	127	135	112	123
14.	Raipur No.2*	98	97	150	107	109	118	84	109
15.	Raipur No.4*	102	94	130	96	111	120	84	105
16.	Raipur No.21*	103	100	133	97	116	113	95	108

Contd....

1	2	3	4	5	6	7	8	9	10
17.	Raipur No.29*	114	118	129	107	121	120	101	116
18.	Raipur No.46*	95	105	150	87	106	104	76	103
19.	RAU 79-2-14	125	82	144	106	118	130	106	116
20.	RAU 73-16-1-40	121	107	149	101	111	128	97	116
21.	RAU 493-60-22	126	114	149	120	126	134	106	125
22.	RAU 83-82-4	127	98	151	109	116	132	101	119
23.	CR 758-137-13	110	104	153	109	115	125	104	117
24.	CR 758-8	108	107	155	109	119	120	104	117
25.	CR 673-475-91	126	116	161	-	-	130	119	130
26.	CR 662-2211	128	97	161	122	134	130	112	126
27.	CR 780-1937	126	100	161	118	129	135	112	126
28.	TCA 159	126	104	153	112	125	-	-	124
29.	NDR 95001	128	115	158	113	113	-	99	121
30.	NDR 95002	130	92	156	107	127	-	100	120
31.	NDR 95003	126	114	153	115	113	-	104	121
32.	NDR 94013	125	93	139	115	119	-	-	148
33.	SABITA(Check)	129	94	149	120	130	134	110	124
34.	RAJSHREE(Check)	126	98	142	113	118	-	104	118
35.	Local Check-1	125	106	-	-	102	-	111	111
36.	Local Check-2	143	83	-	-	121	-	111	115
Mean		119	72	150	110	119	128	104	

EXPT.2 STUDIES ON GENOTYPE X ENVIRONMENT (G X E) INTERACTION, KHARIF - 1995 (POOLED DATA)
TABLE 7. PLANT HEIGHT (CM.)

Sl. No.	Designation	CRRI	Masodha	Patna	Pusa	Raipur	Titabar	Mean
1	2	3	4	5	6	7	8	9
1.	CN 718-8-21-10	136.6	91.7	142.0	118.0	124.6	131.0	123.9
2.	CN 1035-59	116.7	108.6	105.0	90.0	94.6	117.0	105.3
3.	CN 1035-61	112.4	91.5	144.0	102.0	107.2	139.0	116.0
4.	JOGEN	99.1	98.5	155.0	-	-	124.0	119.1
5.	PSR 1305-6-3-5-2	129.3	82.9	134.0	135.0	141.0	132.0	125.7
6.	PSR 1326-29-3-3-1	134.9	89.6	139.0	158.0	125.1	147.0	132.2
7.	PSR 1314-14-11-3	132.4	88.1	146.0	109.0	138.0	153.0	127.7
8.	PSR 1314-108-10-6	137.7	81.4	135.0	142.0	156.4	138.0	131.7
9.	SRR 3025-2-1-B-2-1	117.9	96.8	105.0	102.0	109.0	122.0	108.7
10.	OR 1334-8	104.2	109.1	112.0	95.0	94.7	114.0	104.8
11.	OR 1335-7	114.0	86.2	148.0	82.0	97.0	112.0	106.5
12.	OR 1352-RGA-DR-20	116.9	90.5	95.0	-	98.5	118.0	103.7
13.	OR 1356-RGA-DR-7	143.3	103.5	110.0	105.0	125.5	140.0	121.2
14.	Raipur No.2*	114.8	101.2	127.0	79.0	109.6	117.0	108.1
15.	Raipur No.4*	112.1	96.8	132.0	110.0	106.3	104.0	110.2
16.	Raipur No.21*	136.0	89.4	144.0	112.0	131.0	145.0	126.2
17.	Raipur No.29*	132.6	93.4	120.0	110.0	134.0	144.0	122.3

Contd...

1	2	3	4	5	6	7	8	9
18.	RAIPUT No.46*	98.8	85.1	124.0	126.0	118.2	126.0	113.0
19.	RAU-79-2-14	98.1	93.5	125.0	93.0	109.2	122.0	106.8
20.	RAU-73-16-1-40	129.4	83.0	130.0	116.0	123.9	126.0	118.0
21.	RAU-493-60-22	143.5	92.8	139.0	119.0	142.9	146.0	130.5
22.	RAU-83-82-4	112.4	112.1	150.0	126.0	112.5	121.0	122.3
23.	CR-75B-137-13	126.0	98.4	154.0	110.0	122.4	127.0	122.9
24.	CR-758-8	123.9	107.6	111.0	132.0	120.7	132.0	121.6
25.	CR-673-475-91	132.3	101.0	132.0	-	-	118.0	120.8
26.	CR-662-2211	121.2	92.0	110.0	102.0	107.6	112.0	107.4
27.	CR-780-1937	109.3	91.2	100.0	106.0	100.8	111.0	102.8
28.	TCA-159	129.4	90.2	140.0	95.0	135.4	-	118.0
29.	NDR 95001	135.0	81.1	108.0	108.0	107.8	119.0	109.8
30.	DDR 95002	107.6	101.0	100.0	102.0	106.7	130.0	107.8
31.	NDR 95003	114.5	88.7	101.0	135.0	126.1	130.0	115.8
32.	NDR 94013	116.0	84.5	109.0	112.0	111.2	-	106.5
33.	SABITA	147.8	97.4	150.0	136.0	136.2	155.0	137.0
34.	RAJSHREE	114.9	94.9	127.0	121.0	114.4	120.0	116.3
35.	Local Check-1	122.1	86.3	-	-	98.9	160.0	116.8
36.	Local Check-2	133.1	130.7	-	-	144.4	141.0	137.3
	Mean	112.2	91.6	126.5	112.5	118.2	129.3	

TABLE 8. EBT/m²

Sl. No.	Designation	CRR1	Patna	Pusa	Raipur	Ranital	Titabar	Mean	Masodha* (Tiller/hill)
1	2	3	4	5	6	7	8	9	10
1.	CN 718-8-21-10	167	292	102	124	184	284	192	9.2
2.	CN 1035-59	181	300	46	178	292	250	208	9.5
3.	CN 1035-61	198	285	95	174	207	273	205	12.6
4.	JOGEN	201	290	-	-	277	211	245	10.6
5.	PSR 1305-6-3-5-2	205	340	126	189	218	258	223	12.8
6.	PSR 1326-29-3-3-1	211	321	164	150	229	187	210	12.8
7.	PSR 1314-14-11-3	205	302	175	165	186	253	214	12.0
8.	PSR 1314-108-10-6	206	300	180	185	186	191	208	10.3
9.	SBR 3025-2-1-B-2-1	200	295	136	142	184	266	204	12.2
10.	OR 1334-8	181	285	128	161	123	298	196	10.2
11.	OR 1335-7	164	286	78	163	280	289	210	9.1
12.	OR 1352-RGA-DR-20	159	270	-	149	185	343	221	9.6
13.	OR 1356-RGA-DR-7	191	260	108	133	182	217	182	11.8
14.	Raipur No. 2*	193	268	115	207	370	414	261	7.5
15.	Raipur No. 4*	188	287	87	175	277	351	228	12.6
16.	Raipur No. 21*	148	280	107	130	224	236	188	13.3
17.	Raipur No. 29*	189	286	126	162	234	339	223	11.3

Contd...

1	2	3	4	5	6	7	8	9	10
18.	Raipur No.46*	101	328	113	132	185	263	187	10.0
19.	RAU 79-2-14	121	332	126	200	243	375	233	11.6
20.	RAU 73-16-1-40	193	292	116	139	256	248	207	11.7
21.	RAU 493-60-22	141	299	156	165	171	208	190	9.4
22.	RAU 83-82-4	116	290	53	168	241	203	178	12.6
23.	CR 758-137-13	154	285	92	200	277	335	224	10.8
24.	CR 758-8	238	290	68	181	351	242	228	10.7
25.	CR 673-475-91	143	335	-	-	216	196	223	10.7
26.	CR 662-2211	166	310	82	100	190	153	167	12.8
27.	CR 780-1937	172	292	46	129	180	216	173	11.6
28.	TCA 159	160	290	42	152	-	-	161	11.4
29.	NDR 95001	180	280	52	167	-	157	167	10.7
30.	NDR 95002	189	288	76	141	-	214	182	10.9
31.	NDR 95003	164	290	67	150	-	208	176	10.0
32.	NDR 94013	191	286	56	168	-	-	175	13.1
33.	SABITA	204	305	116	156	172	193	191	12.3
34.	RAJSHREE	190	308	82	151	-	231	192	11.8
35.	Local Check-1	159	-	-	197	-	264	207	11.6
36.	Local Check-2	135	-	-	153	-	286	191	8.6
	Mean	170	295	101	160	226	244		

* Not taken for mean

**Expt.3- EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
Vs. TRANSPLANTING CONDITIONS.**

This experiment was conducted with 14 test entries, three national checks (Sabita, Rajshree, Mahsuri) and one local checks. Due to heavy rainfall during the month of May, direct seeding of the material could not be taken up at C.R.R.I (Cuttack) and Ranital. However, at Ranital the experiment was taken up under transplanting condition only. At Chinsurah no entries could survive after germination. No data has been received from Masodha. From the data it can be seen that most of the test entries could not show better yield performance than the checks under both direct seeding and transplanted conditions. However amongst the entries, only 4 cultures out yielded best check and appeared promising under direct seeding.

The mean yield in the trial ranged from 1163 to 3669 kg./ha. under direct seeding 2207 to 4260 kg/ha. under transplanting. The flowering duration ranged from 94 to 136 days under direct seeding and 100 to 135 days under transplanting. The detailed data are presented in table Nos. 9 to 21.

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES
UNDER DIRECT SEEDING VS. TRANSPLANTING
CONDITIONS, KHARIF, 1995

TABLE 9. NO. OF ENTRIES WITH SIGNIFICANTLY HIGHER
YIELDS THAN THE BEST CHECK

Sl. No.	CENTRE	DIRECT SEEDING		TRANSPLANTING	
		Best checks	No.of entries	Best Checks	No.of entries
1	2	3	4	5	6
1.	PATNA (BIHAR)	SABITA	1	RAJSHREE	6
2.	PUSA (BIHAR)	RAJSHREE	3	RAJSHREE	1
3.	RAIPUR (M.P.)	SABITA RAJSHREE	Nil	SABITA	2
4.	TITABAR (ASSAM)	SABITA	1	MANOHARSALI	5
5.	RANITAL (ORISSA)	-	-	SABITA	1

Table 10. GRAIN YIELD AND ANCILLARY CHARACTERS (POOLED DATA)

Sl. NO.	Designation	Days to 50% fl.	Plant ht. (cm)	EBT/m ²	Grain yield (kg/ha)						Mean
					Direct Trans- seeding planting	Direct Transpl- seeding anting	Direct Trans- seeding plant- ing	Direct Transpl- seeding anting	Direct Trans- seeding plant- ing	Direct Transpl- seeding anting	
1	2	3	4	5	6	7	8	9	10	11	
1.	RAU-73-16-1-40	99	113	121.4	127.8	249	202	2480	3202(5)	2841(8)	
2.	RAU 83-82-4	102	118	110.2	113.5	236	204	2754	3001(8)	2878(7)	
3.	OR 1301-29-1	112	119	104.6	108.3	285	209	2628	3178(6)	2903(5)	
4.	OR 1206-19-2	116	127	110.3	112.5	251	190	3510(2)	3056(7)	3283(3)	
5.	PSR 1119-13-3	116	125	117.3	119.9	256	207	3669(1)	3617(2)	3643(1)	
6.	SBR 3025-2-B-2-1-115	122	127	115.5	115.5	251	203	3117(4)	3272(4)	3195(4)	
7.	CN 1035-57	122	131	113.0	119.0	283	206	3257(3)	2501	2879(6)	
8.	CN 1035-18	122	134	114.6	119.3	269	208	2933(8)	2429	2681	
9.	R 570-5	94	106	117.5	130.1	218	222	2166	2294	2230	
10.	R 656-592	95	100	90.8	91.6	207	208	1894	2658	2276	
11.	CR 766-5-3	107	135	110.5	112.0	269	238	1163	3280(3)	2222	
12.	CR 683-195	136	122	116.0	122.0	257	303	3014(6)	4260(1)	3637(2)	
13.	NDR 95004	118	114	117.1	112.3	255	198	2753(10)	2865(9)	2809(9)	
14.	NDR 95005	111	112	109.6	114.9	236	192	2969(7)	2575	2772(10)	
15.	SABITA	118	126	139.4	147.1	185	196	2611	2373	2492	
16.	RAJSHREE	109	115	118.0	117.6	249	216	2761(9)	2615	2688	
17.	MAHSURI	114	122	120.6	119.6	260	205	2593	2671(10)	2632	
18.	Local Check-1	115	116	145.7	150.5	199	189	3043(5)	2207	2625	
	Mean	112	120	115.9	119.6	245	211	2740	2892	2816	

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
V.S. TRANSPLANTING CONDITIONS, KHARIF, 1995.

TABLE 11. GRAIN YIELD (kg/ha) AND DAYS TO 50% FLOWERING
(DIRECT SEEDING CONDITION)

S. NO.	DESIGNATION	GRAIN YIELD (kg/ha)			TITABAR MEAN	DAYS TO 50% FLOWERING				
		PATNA	PUSA	RAIPUR		PATNA	PUSA	RAIPUR	TITABAR	
1.	RAU 73-16-1-40	1716	2154	3077	2972	2480	100	104	98	95
2.	RAU 83-82-4	2010	4199	2115	2692	2754	100	108	103	97
3.	OR 1301-29-1	833	5078	2308	2291	2628	123	119	109	97
4.	OR 1206-19-2	3873	4492	2308	3366	3510	124	121	113	105
5.	PSR 1119-13-3	2794	6543	2115	3222	3667	125	118	116	104
6.	SDR 3025-2-B-2-1	1765	5664	1923	-	3117	115	115	115	-
7.	CN 1035-57	2647	4296	-	2829	3257	130	129	-	107
8.	CN 1035-18	2647	2930	-	3222	2933	130	129	-	107
9.	R 570-5	735	1613	3846	2470	2166	94	91	111	81
10.	R 658-592	343	2263	3750	1218	1894	94	93	113	80
11.	CR 766-5-3	392	NF	-	1934	1163	94	NF	-	119
12.	CR 633-195	3235	NF	-	2793	3014	154	NF	-	110
13.	NDR 95004	343	4785	3269	2614	2753	154	123	103	92
14.	NDR 95005	735	5957	2500	2685	2969	123	122	107	92
15.	SABITA	3039	1465	3077	2864	2611	118	123	119	110
16.	RAJSHREE	1912	3906	3077	2148	2761	113	113	112	97
17.	MAHSURI	2255	3418	2692	2005	2593	117	116	119	104
18.	LOCAL CHECK-1	-	3906	2500	2721	3042	-	122	114	110
MEAN		1840	3917	2754	2591	-	118	115	111	100

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
VS. TRANSPLANTING CONDITIONS, KHARIF, 1995

TABLE 12. PLANT HEIGHT (cm) AND EBT/m² (DIRECT SEEDING CONDITION)

SL. NO.	DESIGNATION	PLANT HEIGHT (CM)					EBT/m ²				
		PATNA	PUSA	RAIPUR	TITABAR	MEAN	PATNA	PUSA	RAIPUR	TITABAR	MEAN
1	2	3	4	5	6	7	8	9	10	11	12
1.	RAU 73-16-1-40	124	115	121	126	121	245	262	112	379	249
2.	RAU 83-82-4	117	110	102	112	110	270	257	176	241	236
3.	OR 1301-29-1	101	108	105	104	105	350	265	135	390	285
4.	OR 1206-19-2	89	110	113	129	110	375	210	141	280	251
5.	PSR 1119-13-3	106	135	112	116	117	310	320	130	266	256
6.	SBR 3025-2-B-2-1	105	124	118	-	116	300	328	125	-	251
7.	CN 1035-57	110	108	-	121	113	360	242	-	248	283
8.	CN 1035-18	106	113	-	125	115	270	265	-	274	269
9.	R 570-5	110	108	121	131	118	260	195	140	277	218
10.	R 656-592	52	101	97	113	91	190	187	161	290	207
11.	CR 766-5-3	101	-	-	120	110	250	-	-	288	269
12.	CR 683-195	109	-	-	123	116	270	-	-	245	257
13.	NDR 95004	116	128	114	110	117	190	292	162	379	255
14.	NDR 95005	100	121	106	111	110	195	234	149	368	236
15.	SABITA	140	127	133	156	139	240	192	136	175	185
16.	RAJSHREE	121	120	106	125	118	326	268	122	282	249
17.	MAHSURI	116	126	117	124	121	305	202	128	407	260
18.	LOCAL CHECK-1	-	148	140	149	146	-	190	160	248	199
	MEAN	107	119	115	123		277	244	141	296	

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING VS. TRANSPLANTING
CONDITIONS, KHARIF-1995

TRANSPLANTING CONDITION

Table 13. GRAIN YIELD KG/HA

Sl. No.	Designation	Patna	Pusa	Raipur	Ranital	Titabar	Mean
1	2	3	4	5	6	7	8
1.	RAU 73-16-1-40	4630	2619	1923	1759	3634	2913
2.	RAU-83-82-4	4594	1993	3077	1852	2339	2771
3.	OR 1301-29-1	4309	2571	2115	1450	3718	2833
4.	OR 1206-19-2	4630	1619	1923	1328	4052	2710
5.	PSR 1119-13-3	5840	3237	1923	1574	3467	3208
6.	SNR 1025-2-B-2-1	5128	2381	2308	1728	-	2886
7.	CN 1035-57	3632	1238	-	296	2632	2107
8.	CN 1035-18	3348	1476	-	1574	2464	2216
9.	R 570-5	1495	1193	3269	648	3217	1964
10.	R 656-592	1353	1905	3654	494	3718	2225
11.	CR 766-5-3	4345	-	-	1111	2214	2557
12.	CR 683-195	4843	-	-	2439	3676	3653

contd...

1	2	3	4	5	6	7	8
13.	GOR 95004	4096	2142	1923	-	3300	2865
14.	NDR 95005	3704	1499	1923	-	3175	2575
15.	GADITA	3561	1381	2212	2376	2339	2374
16.	RAJSHREE	3846	2618	1923	-	2072	2615
17.	MAHSURI	4701	1928	1923	-	2130	2671
18.	Local check-1	-	1690	1923	-	3008	2207
	Mean	4003	1968	2287	1481	3009	
	CD (5%)	693	246	956	-	518	
	C.V.	10.81	7.48	-	-	10.76	
	D/S	28/6	13/6	23/6	23/6	13/7	
	D/P	29/7	12/7	-	13/8	14/8	
	Local check-1	-	Vaidehi	Safri-17	-	Monoharasil	

EXPT. 3 EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING VS. TRANSPLANTING
CONDITIONS - KHARIF, 1995.

TRANSPLANTING CONDITION.

Table 14. DAYS TO 50% FLOWERING

Sl. No.	Designation	Patna	Pusa	Raipur	Ranital	Titabar	Mean
1.	RAU 73-16-1-40	113	111	104	128	107	113
2.	RAU 83-82-4	131	112	110	132	107	118
3.	OR 1301-29-1	111	123	117	132	113	119
4.	OR, 1206-19-2	131	130	117	141	118	127
5.	PSR 1119-13-3	131	126	118	131	118	125
6.	SBR 3025-2-B-2-1	131	128	118	130	-	127
7.	CN 1035-57	141	132	-	140	112	131
8.	CN 1035-18	141	132	-	140	124	134
9.	R 570-5	102	94	118	120	98	106
10.	R 656-592	92	93	117	110	90	100
11.	CR 766-5-3	141	-	-	146	119	135
12.	CR 683-195	107	-	-	140	118	122
13.	NDR 95004	107	125	109	-	115	114
14.	NDR 95005	107	122	110	-	110	112
15.	SABITA	141	128	119	130	110	126
16.	RAJSHREE	131	113	108	-	106	115
17.	MAHSURI	131	115	119	-	121	122
18.	Local check-1	-	124	115	-	110	116
	Mean	123	119	114	132	112	120

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
VS. TRANSPLANTING CONDITIONS, KHARIF, 1995 (POOLED DATA)

TABLE 15. PLANT HEIGHT (cm) (TRANSPLANTING CONDITION)

Sl. No.	DESIGNATION	PATNA			FUSA		RAIPUR		TITABAR		MEAN
		1	2	3	4	5	6	7	8	9	
1.	RAU 73-16-1-40	135	135	135	135	110.2	131	127.8			
2.	RAU 83-82-4	128	115	115	115	82.2	119	113.5			
3.	OR 1301-29-1	120	112	112	112	97.2	104	108.3			
4.	OR 1206-19-2	119	115	115	115	102.0	114	112.5			
5.	PSR 1119-13-3	131	120	120	120	105.8	123	119.9			
6.	SBR 3025-2-B-2-1	126	122	122	122	98.6	-	115.5			
7.	CN 1035-57	121	119	119	119	-	117	119.0			
8.	CN 1035-18	125	110	110	110	-	123	119.3			
9.	R 570-5	131	150	150	150	113.4	126	130.1			
10.	R 656-592	80	105	105	105	86.4	95	91.6			
11.	CR 766-5-3	128	-	-	-	-	96	112.0			
12.	CR 683-195	124	-	-	-	-	120	122.0			
13.	NDR 95004	125	110	110	110	99.4	115	112.3			
14.	NDR 95005	110	118	118	118	108.6	123	114.9			
15.	SABITA	142	158	158	158	135.4	153	147.1			
16.	RAJSHREE	125	122	122	122	107.4	116	117.6			
17.	MAHSURI	122	126	126	126	101.6	129	119.6			
18.	LOCAL CHECK-1	-	170	170	170	128.6	153	150.5			
	MEAN	124	125	125	125	105	121	-			

EXPT. 3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
VS. TRANSPLANTING CONDITIONS, KHARIF, 1995 (FOOLED DATA)

TABLE 16. ENT/m^2 (TRANSPLANTING CONDITION)

Sl. No.	DESIGNATION	PATNA	PUSA	RAIPUR	RANITAL	TITABAR	MEAN
2		3	4	5	6	7	8
1.	RAU 73-16-1-40	289	161	101	234	224	202
2.	RAU 83-82-4	350	142	157	190	182	204
3.	OR 1301-29-1	342	168	131	159	247	209
4.	OR 1206-19-2	320	142	107	126	253	190
5.	PSR 1119-13-3	300	162	140	196	236	207
6.	SBR 3025-2-B-2-1	322	152	147	192	-	203
7.	CN 1035-57	318	144	-	174	186	206
8.	CN 1035-18	280	165	-	169	218	208
9.	R 570-5	250	165	167	170	307	222
10.	R 656-592	237	146	153	206	298	208
11.	CR 766-5-3	305	-	-	192	218	238
12.	CR 683-195	326	-	-	335	249	303
13.	NDR 95004	298	149	151	-	195	198
14.	NDR 95005	275	156	159	-	179	192
15.	SABITA	284	165	129	302	202	196
16.	RAJSHREE	292	188	102	-	280	216
17.	MAHSURI	310	172	157	-	182	205
18.	LOCAL CHECK-1	-	159	147	-	262	189
	MEAN	300	159	139	196	230	

PATNA (BIHAR)

TABLE 17. GRAIN YIELD AND ANCILLARY CHARACTERS

Sl. No.	Designation	Days to 50 Fl.		Plant Ht. (cm)		BBT/m ²		Grain yield (kg/ha)		
		D.S. 3	T.P. 4	D.S. 5	T.P. 6	D.S. 7	T.P. 8	D.S. 9	T.P. 10	Mean 11
1.	RAU 73-16-1-40	100	113	124	135	245	289	1716	4630(5)	3173
2.	RAU 83-82-4	100	131	117	138	270	350	2010	4594	3302
3.	OR 1301-29-1	123	111	101	120	350	342	833	4309	2571
4.	OR 1206-19-2	124	131	89	119	375	320	3873(1)	4630(5)	4252(2)
5.	PSR 119-13-3	125	131	106	131	310	300	2794(4)	5840(1)	4317(1)
6.	SBR 3025-2-B-2-1	115	131	105	126	300	322	1765	5128(2)	3447(5)
7.	CN 1035-57	130	141	110	121	360	318	2647(5)	3632	3140
8.	CN 1035-18	130	141	106	125	270	280	2647(5)	3348	2998
9.	R 570-5	94	102	110	131	260	250	735	1495	1115
10.	R 656-592	94	92	52	80	190	237	1343	1353	848
11.	CR 766-5-3	94	141	101	128	250	305	392	4345	2369
12.	CR 683-195	154	107	109	124	270	326	3235(2)	4843(3)	4039(3)
13.	NDR 95004	154	107	116	125	190	298	343	4096	2220
14.	NDR 95005	123	107	100	110	195	275	735	3704	2220
15.	SABITA	118	141	140	142	240	284	3039(3)	3561	3300
16.	RAJSHREE	113	131	121	125	326	292	1912	3846	2879
17.	MAHSURI	117	131	116	122	305	310	2255	4701(4)	3478(4)
	MEAN	118	123	107	124	277	300	1840	4003	2922
	D.S. Direct Seeding		T.P.	Trans Planting						

EXPT.3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
VS. TRANSPLANTING CONDITIONS, KHARIF, 1995 (CENTRE WISE)

PUSA (BIHAR)

TABLE 18. GRAIN YIELD AND ANCILLARY CHARACTERS D.S. : Direct seeding
T.P. : Transplanting

Sl. No.	Designation	Days to 50% Fl.		Plant ht. (cm)		EBT/m ²		Grain yield (kg/ha)	
		D.S.	T.P.	D.S.	T.P.	D.S.	T.P.	D.S.	T.P.
1	2	3	4	5	6	7	8	9	10
									Mean
1.	RAU 73-16-1-40	104	111	115	135	262	161	2154	2619(2)
2.	RAU 83-82-4	108	112	110	115	257	142	4199	1993
3.	OR 1301-29-1	119	123	108	112	265	168	5078(4)	2571(4)
4.	OR 1206-19-2	121	130	110	115	210	142	4492	1619
5.	PSR 1119-13-3	118	126	135	120	320	162	6534(1)	3237(1)
6.	SBR 3025-2-B-2-1	115	128	124	122	328	152	5664(3)	2381(5)
7.	CN 1035-57	129	132	108	119	242	144	4296	1238
8.	CN 1035-18	129	132	113	110	265	165	2930	1476
9.	R 570-5	91	94	108	150	195	165	1613	1193
10.	K 656-592	93	93	101	105	187	146	2263	1905
11.	CR 766-5-3	NF	-	-	-	-	-	-	-
12.	CR 683-195	NF	-	-	-	-	-	-	-
13.	NDR 95004	123	125	128	110	192	149	4785(5)	2142
14.	NDR 95005	122	122	121	118	234	156	5957(2)	1499
15.	SABITA	123	128	127	158	192	165	1465	1381
16.	RAJSHREE	113	113	120	122	268	188	3906	2618(3)
17.	MAHSURI	116	115	126	126	202	172	3418	1928
18.	VAIDEHI (LOCAL CHECK)	122	124	148	170	190	159	3906	1690
	MEAN	115	119	119	125	244	159	3917	1968
									2942

Buttard, J. : 1911.
 Direct seeding
 of rice.

TABLE 17. GRAIN YIELD AND AUXILIARY CHARACTERS

Sl. No.	Designation	Days to 50% Fl.			Plant Ht. (cm)			EBT/m ²		Grain yield (kg/ha)			
		D.S.		T.P.	D.S.		T.P.	D.S.	T.P.	D.S.		T.P.	Mean
		3	4	5	6	7	8	9	10	11			
1.	RAU 73-16-1-40	98	104	120.6	110.2	112	101	3077(4)	1923	2500(5)			
2.	RAU 83-82-4	103	110	102.0	82.2	176	157	2115	3077(3)	2596(4)			
3.	CR 1301-29-1	109	117	105.4	97.2	135	131	2308	2115	2212			
4.	OR 1206-19-2	113	117	113.4	102.0	141	107	2308	1923	2116			
5.	PSR 1119-13-3	116	118	112.2	105.8	130	140	2115	1923	2019			
6.	SEB 3025-2-B-2-1	115	118	117.6	98.6	125	147	1923	2308(4)	2116			
7.	CN 1035-57	-	-	-	-	-	-	-	-	-			
8.	CN 1035-18	-	-	-	-	-	-	-	-	-			
9.	R 570-5	111	118	121.0	113.4	140	167	3846(1)	3269(2)	3558(2)			
10.	R 656-592	113	117	97.2	86.4	161	153	3750(2)	3654(1)	3702(1)			
11.	CR 766-5-3	-	-	-	-	-	-	-	-	-			
12.	CR 683-195	-	-	-	-	-	-	-	-	-			
13.	NDR 95004	103	109	114.4	94.4	162	151	3269(3)	1923	2596(4)			
14.	NDR 95005	107	110	106.4	108.6	149	159	2500	1923	2212			
15.	SABITA	119	119	133.2	135.4	136	129	3077(4)	2212(5)	2645(3)			
16.	RAJSHREE	112	108	106.0	107.4	122	102	3077(4)	1923	2500			
17.	MAHSURI	119	119	116.6	101.6	128	157	2692(5)	1923	2308			
18.	SAFRI-17(Local Check)	114	115	140.2	128.6	160	147	2500	1923	2212			
	MEAN	111	114	114.7	105.0	141	139	2754	2287	2521			

EXPT. 3. EVALUATION OF FIXED CULTURES/VARIETIES UNDER DIRECT SEEDING
VS. TRANSPLANTING CONDITIONS, KHARIF, 1995 (CENTRE WISE)

TITABAR (ASSAM)

TABLE 20 GRAIN YIELD AND ANCILLARY CHARACTERS D.S. : Direct seeded
T.P. : Transplanting

Sl. No.	Designation	Days to 50% Fl.		Plant ht. (cm)		EBT/m ²		Grain yield (kg/ha)		
		D.S.	T.P.	D.S.	T.P.	D.S.	T.P.	D.S.	T.P.	
1	2	3	4	5	6	7	8	9	10	11
1.	RAU 73-16-1-40	95	107	126	131	379	224	2972 (3)	3634 (4)	3303 (3)
2.	RAU 83-82-4	97	107	112	119	241	182	2692	2339	2516
3.	OR 1301-29-1	97	113	104	104	390	247	2291	3718 (2)	3004 (5)
4.	OR 1206-19-2	105	118	129	114	280	253	3366 (1)	4052 (1)	3709 (1)
5.	PSR 1119-13-3	104	118	116	123	266	236	3222 (2)	3467 (5)	3345 (2)
6.	SBR 3025-2-B-2-1	-	-	-	-	-	-	-	-	-
7.	CN 1035-57	107	112	121	117	248	186	2829 (5)	2632	2731
8.	CN 1035-18	107	124	125	123	274	218	3222 (2)	2464	2843
9.	R 570-5	81	98	131	126	277	307	2470	3217	2844
10.	R 656-592	80	90	113	95	290	298	1218	3718 (2)	2468
11.	CR 766-5-3	119	119	120	96	288	218	1934	2214	2074
12.	CR 683-195	118	118	123	120	245	249	2793	3676 (3)	3235 (4)
13.	NDR 95004	92	115	110	115	379	195	2614	3300	2957
14.	NDR 95005	92	110	111	123	368	179	2685	3175	2930
15.	SABITA	110	110	156	153	175	202	2864 (4)	2339	2602
16.	RAJSHREE	97	106	125	116	282	280	2148	2072	2110
17.	MAHSURI	104	121	124	129	407	182	2005	2130	2068
18.	MANOHARSALI (LOCAL CHECK)	110	110	149	153	248	262	2721	3008	2865
	MEAN	100	112	123	121	296	230	2591	3009	2800

EXPT. 3. EVALUATION OF FIXED CULTURES/VARIETIES -
UNDER DIRECT SEEDING VS. TRANSPLANTING
CONDITIONS, KHARIP, 1995 (CENTRE WISE)

RANITAL (ORISSA)

TABLE 21. GRAIN YIELD AND ANCILLARY CHARACTERS
(TRANSPLANTING CONDITION)

Sl. No.	Designation	Days to 50% Flowering	EBT/m ²	Grain Yield (kg/ha)
1	2	3	4	5
1.	RAU 73-16-1-40	128	234	1759(4)
2.	RAU 83-82-4	132	190	1852(3)
3.	OR 1301-29-1	132	159	1450
4.	OR 1206-19-2	141	126	1328
5.	PSR 1119-13-3	131	196	1574
6.	SBR 3025-2-B-2-1	130	192	1728(5)
7.	CN 1035-57	140	174	926
8.	CN 1035-18	140	169	1574
9.	R 570-5	120	170	648
10.	R 656-592	110	206	494
11.	CR 766-5-3	146	192	1111
12.	CR 683-195	140	335	2439(1)
13.	NDR 95004	-	-	-
14.	NDR 95005	-	-	-
15.	SABITA	130	202	2376(2)
16.	RAJSHREE	-	-	-
17.	MAHSURI	-	-	-
	MEAN	132	196	1481

EXPT.4 MAINTENANCE OF DIFFERENTIAL VARIETIES FOR COLLECTION
OF BLB PATHOGEN POPULATION (LINKAGE WITH ARBN) KHARIF, 1995

Table 22. BLB DISEASE SCORE

Sl. No.	Designation	CRRI*	Masodha	Patna
1	2	3	4	5
1.	KARUNA	S	-	9
2.	MAHSURI	S	3	5
3.	IR 24	S	9	5
4.	IRBB-1	S	7	3
5.	IRBB-3	S	9	3
6.	IRBB-4	S	9	7
7.	IRBB-5	S	9	7
8.	IRBB-7	S	9	7
9.	IRBB-8	S	7	7
10.	IRBB-10	S	9	5
11.	IRBB-11	S	9	7
12.	IRBB-13	S	9	5
13.	IRBB-14	S	9	7
14.	IRBB-21	S	9	7
15.	O.minuta	R	7	5
16.	M.sung-sung	R	9	3
17.	DV 85	R	9	3
18.	IET 8585	S	1	3
	D/S	22/6	-	-
	D/P	7/8	-	-

* Against Race IAXO-34

Expt. 5: OBSERVATIONAL NURSERY TRIAL

No. of entries : 85 No. of test locations : 8
Replication : 1

A total of 85 elite cultures developed at the test locations from eastern India were screened for their adaptability, flowering duration and grain yield etc. at all the 8 locations. At Chinsurah no entry could survive due to heavy rains after germination. No data also have been received from Pusa for this trial. The flowering duration of the entries varied widely as per the details given in Table 23. From the list of nominations it was seen that centres like Raipur and Masodha had more entries flowering by 2nd week of October while centres like CRRI and Pusa have entries which are required to flower by last week of October or even by mid November. Hence, it is desirable to develop two sets of materials (flowering group) for eastern India. Among the different test entries, the following were found promising at more than one location.

Sl.No.	Most promising entries	No. of Centres
1.	CR 691-48	4
2.	BR 4974-2-1-1-3-1-1	4
3.	CR 691-1	2
4.	NDR 95012	2
5.	NDR 95027	2
6.	IR 53947-13-B-1-3	2
7.	IR 53945-35-B-3-2	2
8.	BR 4974-2-1-3-6-6-2	2
9.	Sabita	2

TABLE 23. DURATION WISE NO. OF ENTRIES FROM DIFFERENT CENTRES FOR OBSERVATIONAL NURSERY
(KHARIF'95)

Sl. No.	Nominating centre	Flowering Time (Week)								Total
		Sept. 4th	Oct. 1st	Oct. 2nd	Oct. 3rd	Oct. 4th	Nov. 1st	Nov. 2nd	Dead	
1.	Pusa(Bihar)	-	-	-	-	3	-	-	3	6
2.	Chinshurah(W.B)	-	-	-	-	7	-	-	10	17
3.	Raipur (M.P.)	6	1	3	1	1	-	1	-	12
4.	Mosodha (U.P.)	3	7	5	2	8	-	-	-	25
5.	CRRI(Orissa)	1	2	-	-	11	6	4	-	25
Total		10	10	8	4	30	6	4	13	85

EXPT.5 OBSERVATIONAL NURSERY TRIAL, KHARIF - 1995

Table 24. CENTRE WISE MOST PROMISING IDENTIFIED ENTRIES

Sl.	CRRI	MASODHA	PATNA	RAIPUR	RANITAL	TITABAR
1.	BR 4974-2-1-3-6-6-2	SABITA	BR 4974-2-1-1-3-1-1	CN 845-80-7-1	BR 4974-2-1-1-3-1-1	BR 4974-2-1-1-3-1-1
2.	NDR 95011	PSR 1306-16-1-2-1-1	CN 573-221-7-1	CR 691-1	BR 4974-3-4-1-1-2	CR 691-48
3.	CR 691-48	PSR 1305-2-1	Mahsuri	IR 42342	IR 64334-4-2	NDR 95013
4.	NDR 95010	Madhukar	IR 64334-4-1	Kranti	BR 4974-2-1-3-6-6-2	IR 53945-35-B-3-2
5.	IR 53506-B-2-8-2-2-1	CR 691-48	NDR 95027	R 816-93-304	BR 5462-18-5-2-2	CN 1035-60
6.	BR 4974-2-1-1-3-1-1	Rajshree	CR 691-48	NDR 95027	IR 63943-39-B-3-1	NDR 95012
7.	CN 1035-52	CN 1035-36	IR 53945-35-B-3-2	CR 691-52	BR 4974-3-6-3-2	PSR 1314-59-13-7-3-1
8.	NDR 95012	CR 716-43-R-3-127	IR 53947-13-B-1-3	Chepti Gurmatia	CR 609-7-6	CN 1035-62
9.	CR 333-10	SNR 3019-29-29-1-2-1	CR 313-1B	NDR 95022	IR 53519-11-211-2-1-2	BR 4974 2-1-1-6-6-3
10.	SABITA	CR 691-1	CN 847-5-5-N-7	NDR 95009	R 7711	IR 53947-13-B-1-3

EXPT. 5. OBSERVATIONAL NURSERY TRIAL, KHARIF, 1995

TABLE 2nd. GRAIN YIELD (kg/ha)

Sl. No.	DESIGNATION	CRR	MASODHA	PATNA	RAIPUR	RANITAL	TITABAR	MEAN
1	2	3	4	5	6	7	8	9
1.	PSR 1305-2-1	-	3083(2)	2885(9)	-	1852	1754	2393
2.	PSR 1306-16-1-2-1-1	-	3083(2)	962	-	2315(8)	1579	1984
3.	PSR 1314-59-13-7-3-1	333	1283	3365(8)	-	1667	3509(6)	2031
4.	PSR 1317-18-12-6-2-1	667	1417	2163	-	1204	1754	1441
5.	SBR 3015-29-29-1-2-1	1389	2183(8)	1442	-	1481	2193	1737
6.	SBR 3015-35-35-3-2-B-1	-	1250	721	-	1296	-	1089
7.	CN 842-15-5	-	1266	3365(8)	-	2315(8)	2281	2306
8.	CN 845-80-7-1	-	1367	1442	5729(1)	1481	3421(7)	2688
9.	CN 846-30-3-1	-	900	962	-	2315(8)	2632	1702
10.	CN 847-5-5-N-7	-	1567	3846(6)	-	2407(7)	2807	2656
11.	CN 847-27-9-5	-	1583	1202	-	1852	2368	1751
12.	CN 848-5-5-3	-	350	3365(8)	-	926	4211	2213
13.	CN 1113-23-7-1	-	166	2404	-	1852	2982(8)	1851
14.	CN 573-221-7-1	-	500	4808(2)	-	2130(9)	1667	2276
15.	SF 432	389	1833(10)	2885(9)	-	1852	2632	1918
16.	CN 1035-15	-	83	1923	-	1389	1842	1309
17.	CN 1035-16	-	67	2885(9)	-	2130(9)	3246(8)	2082 ⁴⁶
18.	CN 1035-36	1472	2417(6)	2644(10)	-	2315(8)	2456	2260
19.	CN 1035-37	3722	367	1202	-	1296	1754	1668

contd...

1	2	3	4	5	6	7	8	9
20.	CN 1035-42	3333	1500	2404	-	1481	2807	2305
21.	CN 1035-52	5333(6)	1617	2163	-	1389	3070(9)	2714
22.	CN 1035-60	3333	216	2404	-	1296	3684(4)	2186
23.	CN 1035-62	2722	150	962	-	1574	3509(6)	1783
24.	Raipur No.1*	1888	150	962	3021	463	2719	1533
25.	Raipur No.2*	2027	367	1683	2188	1019	1754	1506
26.	Raipur No.3*	3777	650	2163	2113	1204	1053	1826
27.	Raipur No.4*	3444	400	1923	-	2685(4)	2193	2129
28.	Raipur No.5*	1111	1100	2404	2917	556	2807	1815
29.	Raipur No.6*	2166	1933(9)	721	3438	1574	2193	2004
30.	Raipur No.7*	2388	617	3365(8)	1979	1852	2807	2168
31.	Raipur No.8*	1000	617	-	4792(4)	-	1579	1997
32.	Raipur No.9*	1611	600	481	3438	1111	877	1353
33.	Raipur No.10*	500	317	721	3229	2500(6)	3070(9)	1722
34.	Raipur No.11*	1611	517	481	3542	2315(8)	2193	1776
35.	Raipur No.12*	3500	617	962	3958(9)	1481	2193	2118
36.	NDR 95006	2222	983	1923	4063(8)	-	1754	2189
37.	NDR 95007	2722	1167	-	3646	-	1053	2147 ⁴⁷
38.	NDR 95008	3500	1100	-	-	-	2368	2322
39.	NDR 95009	4000	1167	1442	4583(6)	-	1491	2536
40.	NDR 95010	6555(3)	617	2404	2917	-	2193	2937(10)

contd...

1	2	3	4	5	6	7	8	9
41.	NDR 95011	6944(1)	1033	3365(8)	-	-	2807	3537(6)
42.	NDR 95012	5166(7)	150	962	2500	-	3596(5)	2474
43.	NDR 95013	4000	467	2163	-	-	4298(2)	2732
44.	NDR 95014	1500	1183	-	3125	-	789	1649
45.	NDR 95015	2388	867	-	-	-	2193	1816
46.	NDR 95016	2277	1083	-	-	-	2807	2855
47.	NDR 95017	3194	1733	-	3438	-	1316	2420
48.	NDR 95018	2388	1367	-	3958(9)	-	439	2038
49.	NDR 95019	611	1550	-	4063(8)	-	3070(9)	2323
50.	NDR 95020	1888	617	-	-	-	1316	1273
51.	NDR 95021	3277	200	-	-	-	2193	1890
52.	NDR 95022	1472	867	2404	4688(5)	-	965	2079
53.	NDR 95023	3388	183	1923	-	-	1404	1724
54.	NDR 95024	833	1167	2644(10)	2708	-	1754	1821
55.	NDR 95025	2333	567	3365(8)	1875	-	1316	1819
56.	NDR 95026	3111	767	-	3646(10)	-	1930	2363
57.	NDR 95027	1277	150	4327(4)	4896(4)	-	1316	2393
58.	NDR 95028	1555	283	-	2396	-	2193	1606
59.	NDR 95029	555	650	1923	2708	-	1053	1377
60.	NDR 95030	3111	233	-	2396	-	2193	1983
61.	CR 333-10	5000(8)	67	-	-	1389	2632	2272
62.	CR 691-52	2833	1000	2163	4792(4)	741	794	2053
63.	CR 333-18	833	1667	4087(5)	4479(7)	648	439	2025

Contd..

1	2	3	4	5	6	7	8	9
64.	CR 691-48	6666(2)	2533(4)	4327(4)	-	2593(5)	4386(1)	4101(1)
65.	CR 691-1	2888	2183(8)	-	5417(2)	2130(9)	1316	2786
66.	BR 4974-3-4-1-1-2	4444	133	721	-	2870(2)	3070(9)	2247
67.	BR 4974-2-1-3-6-6-3	2388	867	962	-	2593(5)	3509(6)	2063
68.	IR 53945-35-B-3-2	2333	233	4327(4)	-	2037(10)	3772(3)	2540
69.	IR 53506-B-2-8-2-2-1	6444(4)	-	3846(6)	-	2315(8)	3070(9)	3918(4)
70.	IR 53506-B-2-24-2-2-1	3250	1417	1442	-	1852	2807	1813
71.	IR 64334-4-2	1722	1267	-	-	2778(3)	2368	2033
72.	BR 4974-2-1-3-6-6-2	6944(1)	200	3365(8)	-	2778(3)	3421(7)	3341
73.	BR 5462-18-5-2-2	3000	750	1923	-	2778(3)	2807	2251
74.	R 7711	3444	1400	962	-	2685(4)	2895(10)	2277
75.	IR 63943-39-B-3-1	3444	1300	3365(8)	-	2778(3)	2632	2703
76.	BR 4974-3-6-3-2	2555	300	1683	-	2778(3)	3070(9)	2077
77.	IR 64334-4-1	3000	1283	4567(3)	3333	2037(10)	2193	2735
78.	BR 4974-2-1-1-3-1-1	5666(5)	1633	5770(1)	-	2963(1)	4386(1)	4082(2)
79.	IR 64334-6-1	2083	950	1923	3542	1389	2807	2115
80.	IR 53947-13-B-1-3	4222	1000	4327(4)	-	2315(8)	3509(6)	3074(8)
81.	CR 625-18-1	2694	83	2163	-	2315(8)	2193	1889
82.	CR 626-7-3	4000	33	3365(8)	-	2315(8)	1316	2205
83.	CR 716-6-R-4-1	2055	283	3606(7)	-	1759	877	1716
84.	CR 716-43-R-3-127	4111	2283(7)	-	-	-	1316	2570
85.	CR 609-7-6	1111	350	2404	-	2778(3)	1316	1591

contd...

1	2	3	4	5	6	7	8	9
86.	Local Check-1	4733 (9)	2980 (3)	4808 (2)	5000 (3)	-	2632	4030 (3)
87.	Local Check-2	4406 (10)	1036	-	3333	-	-	2925
88.	Local Check-3	3722	2500 (5)	-	4792 (4)	-	-	3671 (5)
89.	Local Check-4	3025	3793 (1)	-	5417 (2)	-	-	2938 (9)
	Date of sowing	3/6	-	20/6	20/6	24/6	16/7	
	Date of planting	19/7	-	-	-	13/8	-	
	Local Check-1	Sabita	Madhukar	Mahsuri	Kranti	-	Manoharsali	
	Local Check-2	Rajshree	Mahsuri	-	Rajshree	-	-	
	Local Check-3	Mahsuri	Rajshree	-	Chepti- Gurmatia	-	-	
	Local Check-4	Tulasi	Sabita	-	IR 42342	-	-	

* No.1.P₄/Surekha CR 944-744

*No.2. Surekha/ud 6-1 CR 646-17-1

*No.3 IR 54977-UUN-6-13-3-3

*No.4 IR 53539-U-211-2-1-2

* No.5 IR 63429-21-3-3

* No.6 IR 57575-39-3-1-3

* No.7. IR 57502-25-21-2

* No.8 R 816-93-304

* No.9 IR 52523-91-2-1-2-1-U-2

* No.10 IR 60270-PM-1-10-1-3

* No.11 Surekha/S.17//R 586-93-889/S 17

* No.12 Samridhi/IR 86-08-998/R 844-114-1

EXPT. 5. OBSERVATIONAL NURSERY TRIAL, KHARIF, 1995 (POOLED DATA)

TABLE 26. DAYS TO 50% FLOWERING

SL. No.	DESIGNATION	CERRI	MASODHA	PATNA	RAIPUR	RANITAL	TITABAR	MEAN
1	2	3	4	5	6	7	8	9
1.	PSR 1305-2-1	-	90	124	101	127	91	107
2.	PSR 1306-16-1-2-1-1	-	91	124	101	127	101	109
3.	PSR 1314-59-13-7-3-1	129	89	113	101	121	101	111
4.	PSR 1317-18-12-6-2-1	132	86	119	106	122	101	111
5.	SBR 3015-29-29-1-2-1	130	90	119	118	124	96	113
6.	SBR 3015-35-35-3-2-B-1	-	92	93	118	124	-	107
7.	CN 842-15-5	-	99	119	106	129	80	107
8.	CN 845-80-7-1	-	88	124	93	124	104	107
9.	CN 846-30-3-1	-	97	124	104	132	107	113
10.	CN 847-5-5-N-7	-	97	124	96	131	96	109
11.	CN 847-27-9-5	-	103	124	-	135	115	119
12.	CN 848-5-5-3	-	107	136	110	129	106	118
13.	CN 1113-23-7-1	-	112	119	-	130	104	116
14.	CN 573-221-7-1	-	110	124	-	130	115	120
15.	SF 432	127	98	113	-	130	109	115
16.	CN 1035-15	-	114	136	-	143	108	125
17.	CN 1035-16	-	117	129	-	143	109	125
18.	CN 1035-36	127	92	129	106	133	101	117

contd...

1	2	3	4	5	6	7	8	9
19.	CN 1035-37	128	102	129	-	142	107	122
20.	CN 1035-42	130	107	129	111	141	104	120
21.	CN 1035-52	129	92	129	108	141	103	115
22.	CN 1035-60	125	114	119	-	142	103	121
23.	CN 1035-62	126	113	100	108	132	101	113
24.	Raipur No. 1*	99	89	124	102	110	88	102
25.	Raipur No. 2*	102	91	119	97	114	87	102
26.	Raipur No. 3*	112	89	100	99	126	88	102
27.	Raipur No. 4*	126	102	119	109	129	96	114
28.	Raipur No. 5*	129	89	119	96	109	85	105
29.	Raipur No. 6*	117	89	124	106	117	82	106
30.	Raipur No. 7*	120	97	114	106	117	95	108
31.	Raipur No. 8*	101	82	-	94	105	87	94
32.	Raipur No. 9*	104	80	124	85	109	87	98
33.	Raipur No. 10*	102	97	119	104	139	99	110
34.	Raipur No. 11*	102	90	119	94	120	91	103
35.	Raipur No. 12*	100	101	119	96	120	85	104
36.	NDR 95006	102	87	124	93	-	83	98
37.	NDR 95007	102	85	-	92	-	81	90
38.	NDR 95008	131	100	-	109	-	81	105
39.	NDR 95009	103	92	119	93	-	86	99
40.	NDR 95010	127	98	119	109	-	87	108

contd...

1	2	3	4	5	6	7	8	9
41.	NDR 95011	126	97	124	-	-	106	113
42.	NDR 95012	121	111	124	104	-	102	112
43.	NDR 95013	125	107	124	110	-	104	114
44.	NDR 95014	131	75	-	87	-	105	100
45.	NDR 95015	114	101	-	106	-	101	106
46.	NDR 95016	111	97	-	98	-	106	103
47.	NDR 95017	113	81	-	96	-	103	98
48.	NDR 95018	101	75	-	87	-	81	86
49.	NDR 95019	108	92	-	96	-	87	96
50.	NDR 95020	106	93	-	107	-	102	102
51.	NDR 95021	132	97	-	115	-	107	113
52.	NDR 95022	103	88	124	96	-	106	103
53.	NDR 95023	126	107	119	110	-	105	113
54.	NDR 95024	114	88	119	111	-	105	107
55.	NDR 95025	105	88	119	90	-	87	98
56.	NDR 95026	112	96	-	96	-	93	99
57.	NDR 95027	107	98	124	101	-	87	103
58.	NDR 95028	107	93	-	102	-	87	97
59.	NDR 95029	127	97	124	106	-	101	111
60.	NDR 95030	119	102	-	104	-	101	107
61.	CR 333-10	132	111	-	-	140	101	121 ⁵
62.	CR 691-52	107	89	129	90	120	78	102
63.	CR 333-18	102	75	124	79	107	67	92

contd..

1	2	3	4	5	6	7	8	9
64.	CR 691-48	134	89	124	-	135	115	119
65.	CR 691-1	105	97	-	92	115	80	98
66.	BR 4974-3-4-1-1-2	127	113	129	106	129	88	115
67.	BR 4974-2-1-3-6-6-3	150	100	129	-	146	118	129
68.	IR 53945-35-B-3-2	136	113	124	-	134	115	124
69.	IR 53506-B-2-8-2-2-1	149	-	129	-	146	118	136
70.	IR 53506-B-2-24-2-2-1	123	98	129	106	129	92	113
71.	IR 64334-4-2	130	103	-	110	134	97	115
72.	BR 4974-2-1-3-6-6-2	150	113	129	-	146	120	132
73.	BR 5462-18-5-2-2	134	107	129	-	135	120	125
74.	R 7711	131	107	124	-	142	118	124
75.	IR 63943-39-B-3-1	128	105	124	-	134	118	122
76.	BR 4974-3-6-3-2	146	113	129	-	146	97	126
77.	IR 64334-4-1	125	105	124	110	132	97	116
78.	BR 4974-2-1-1-3-1-1	128	101	129	-	136	115	122
79.	IR 64334-6-1	130	108	124	110	132	101	118
80.	IR 53947-13-B-1-3	127	107	124	-	143	118	124
81.	CR 625-18-1	127	111	124	-	143	119	125
82.	CR 626-7-3	137	112	129	-	142	121	128
83.	CR 716-6-R-4-1	136	108	129	-	136	118	125

1	2	3	4	5	6	7	8	9
84.	CR 716-43-R-3-127	131	100	-	-	-	108	113
85.	CR 609-7-6	140	111	107	-	141	109	122
86.	Local Check-1	130	80	109	96	-	107	104
87.	Local Check-2	126	99	-	-	-	-	113
88.	Local Check-3	122	98	-	-	-	-	110
89.	Local Check-4	121	97	-	-	-	-	109

EXPT. 5. OBSERVATIONAL NURSERY TRIAL, KHARIF, 1995
(POOLED DATA)

TABLE 27. PLANT HEIGHT (CM)

Sl. No.	Designation	CRR I	Masodha	Patna	Titabar	Mean
1	2	3	4	5	6	7
1.	PSR 1305-2-1	-	137.5	134.0	135.0	135.5
2.	PSR 1306-16-1-2-1-1	-	119.5	138.0	123.0	126.8
3.	PSR 1314-59-13-7-3-1	125.5	133.7	144.0	155.0	139.5
4.	PSR 1317-18-12-6-2-1	146.0	130.3	138.0	144.0	139.5
5.	SBR 3015-29-29-1-2-1	127.0	127.3	132.0	148.0	133.5
6.	SBR 3015-35-35-3-2B- 1	-	96.5	125.0	-	110.7
7.	CN 842-15-5	-	90.6	110.0	132.0	110.8
8.	CN 845-80-7-1	-	86.4	122.0	131.0	113.1
9.	CN 846-30-3-1	-	100.1	100.0	117.0	105.7
10.	CN 847-5-5-N-7	-	93.2	99.0	117.0	103.0
11.	CN 847-27-9-5	-	67.2	96.0	107.0	90.0
12.	CN 848-5-5-3	-	71.3	110.0	96.0	92.4
13.	CN 1113-23-7-1	-	91.0	135.0	119.0	115.0
14.	CN 573-221-7-1	-	99.6	142.0	145.0	128.8
15.	SF 432	153.4	126.1	134.0	142.0	138.8
16.	CN 1035-15	-	88.8	140.0	119.0	115.9
17.	CN 1035-16	-	81.1	100.0	116.0	99.0
18.	CN 1035-36	128.4	105.0	140.0	123.0	124.1
19.	CN 1035-37	114.2	94.9	80.0	116.0	101.2
20.	CN 1035-42	139.0	90.6	96.0	109.0	108.6
21.	CN 1035-52	134.0	103.3	98.0	115.0	112.5
22.	CN 1035-60	123.2	84.4	108.0	124.0	109.9
23.	CN 1035-62	123.6	92.0	125.0	125.0	116.4
24.	Raipur No.1*	141.6	92.0	70.0	145.0	112.1
25.	Raipur No.2*	136.4	106.0	95.0	147.0	121.1
26.	Raipur No.3*	120.8	91.1	98.0	106.0	103.9

1	2	3	4	5	6	7
27.	Raipur No.4*	107.2	80.5	105.0	126.0	104.6
28.	Raipur No.5*	114.2	103.2	98.0	124.0	109.8
29.	Raipur No.6*	105.6	81.8	105.0	134.0	105.6
30.	Raipur No.7*	126.2	85.4	84.0	114.0	102.4
31.	Raipur No.8*	96.8	73.0	-	107.0	92.2
32.	Raipur No.9*	108.0	77.2	114.0	104.0	100.8
33.	Raipur No.10*	128.0	81.6	127.0	129.0	116.4
34.	Raipur No.11*	129.4	105.7	120.0	138.0	123.2
35.	Raipur No.12*	114.6	81.2	88.0	122.0	101.4
36.	NDR 95006	118.0	90.5	114.0	120.0	110.6
37.	NDR 95007	114.4	93.8	-	119.0	109.0
38.	NDR 95008	120.4	70.6	-	111.0	100.6
39.	NDR 95009	111.0	81.1	90.0	126.0	102.0
40.	NDR 95010	106.0	76.3	92.0	107.0	95.3
41.	NDR 95011	118.8	84.5	91.0	110.0	101.0
42.	NDR 95012	119.2	88.7	109.0	131.0	111.9
43.	NDR 95013	117.0	71.7	138.0	115.0	110.4
44.	NDR 95014	133.2	99.7	-	143.0	125.3
45.	NDR 95015	158.8	112.4	-	176.0	149.0
46.	NDR 95016	114.8	93.5	-	124.0	110.7
47.	NDR 95017	118.2	85.4	-	123.0	108.8
48.	NDR 95018	130.4	108.3	-	136.0	124.9
49.	NDR 95019	120.0	101.1	-	134.0	118.3
50.	NDR 95020	138.4	98.7	-	128.0	121.7
51.	NDR 95021	168.2	92.4	-	159.0	139.8
52.	NDR 95022	137.0	113.5	127.0	149.0	131.6
53.	NDR 95023	142.0	112.5	138.0	158.0	137.6
54.	NDR 95024	114.8	99.3	122.0	155.0	122.7
55.	NDR 95025	111.0	100.4	126.0	143.0	121.3
56.	NDR 95026	113.0	85.5	-	127.0	108.5
57.	NDR 95027	105.0	73.9	123.0	118.0	106.2
58.	NDR 95028	142.6	85.8	-	119.0	115.8

contd.

1	2	3	4	5	6	7
59.	NDR 95029	143.0	88.9	113.0	132.0	119.2
60.	NDR 95030	140.0	91.8	-	130.0	120.6
61.	CR 333-10	133.0	65.8	-	117.0	104.9
62.	CR 691-52	112.0	83.3	86.0	112.0	98.3
63.	CR 333-18	107.4	90.4	111.0	83.0	99.2
64.	CR 691-48	137.0	97.4	90.0	119.0	110.8
65.	CR 691-1	103.0	83.7	-	117.0	101.2
66.	BR 4974-3-4-1-1-2	117.0	105.1	122.0	108.0	113.0
67.	BR 4974-2-1-3-6-6-3	157.0	92.0	140.0	137.0	131.5
68.	IR 53945-35-B-3-2	131.0	98.5	114.0	143.0	121.6
69.	IR 53506-B-2-3-2-2-1	152.0	-	128.0	147.0	142.3
70.	IR 53506-B-2-24-2-2-1	117.5	86.2	150.0	119.0	118.1
71.	IR 64334-4-2	106.0	78.9	-	120.0	101.6
72.	BR 4974-2-1-3-6-6-2	154.0	99.7	122.0	141.0	129.1
73.	BR 5462-18-5-2-2	146.2	93.6	122.0	123.0	122.9
74.	R 7711	125.0	77.6	111.0	115.0	106.2
75.	IR 63943-39-B-3-1	122.0	70.6	115.0	117.0	106.1
76.	BR 4974-3-6-3-2	148.8	100.2	155.0	152.0	139.0
77.	IR 64334-4-1	125.3	76.8	140.0	101.0	110.7
78.	BR 4974-2-1-1-3-1-1	149.6	105.1	145.0	161.0	140.1
79.	IR 64334-6-1	127.0	77.3	110.0	109.0	105.8
80.	IR 53947-13-B-1-3	132.0	77.2	140.0	110.0	114.8
81.	CR 625-18-1	140.0	99.2	119.0	140.0	124.5
82.	CR 626-7-3	134.0	85.4	122.0	143.0	122.3
83.	CR 716-6-R-4-1	133.6	104.4	100.0	155.0	124.5
84.	CR 716-43-R-3-127	120.0	88.9	-	112.0	106.9
85.	CR 609-7-6	135.0	108.0	126.0	134.0	125.7
86.	Local Check-1	155.2	118.2	130.0	143.0	137.8
87.	Local Check-2	134.0	84.9	-	-	109.4
88.	Local Check-3	129.0	89.6	-	-	109.3
89.	Local Check-4	124.6	102.1	-	-	113.3

EXPT. 5. OBSERVATIONAL NURSERY TRIAL, KHARIF, 1995 (POOLED DATA)

TABLE 28. EBT/m²

Sl. No.	Designation	Pattern					Mean	CRRT* EBT/ hill	Masodha* Tiller/hill
		2	3	4	5	6			
1.	PSR 1305-2-1		270	255	250	258	-	-	8.2
2.	PSR 1306-16-1-2-1-1		-	260	180	220	-	-	8.8
3.	PSR 1314-59-13-7-3-1		285	162	267	238	10.0		7.0
4.	PSR 1317-18-12-6-2-1		250	281	169	233	8.0		7.2
5.	SBR 3015-29-29-1-2-1		260	215	185	220	7.0		7.8
6.	SBR 3015-35-35-3-2B-1		-	178	-	178	-	-	5.6
7.	CN 842-15-5		292	280	178	250	-	-	9.2
8.	CN 845-80-7-1		-	220	362	291	-	-	5.2
9.	CN 846-30-3-1		-	255	287	271	-	-	6.8
10.	CN 847-5-5-N-7		320	287	383	330	-	-	7.4
11.	CN 847-27-9-5		-	210	200	205	-	-	6.6
12.	CN 848-5-5-3		315	175	352	281	-	-	5.4
13.	CN 1113-23-7-1		300	206	461	323	-	-	6.8
14.	CN 573-221-7-1		355	261	254	290	-	-	7.0
15.	SF 432		296	218	261	258	9.5		4.8
16.	CN 1035-15		244	250	300	265	-	-	9.8
17.	CN 1035-16		286	208	430	308	-	-	7.6

1	2	3	4	5	6	7	8
18.	CN 1035-36	280	222	310	271	6.0	7.2
19.	CN 1035-37	-	231	189	210	8.0	6.6
20.	CN 1035-42	276	246	244	255	11.0	9.0
21.	CN 1035-52	260	202	222	227	11.0	8.0
22.	CN 1035-60	265	198	381	281	6.6	8.4
23.	CN 1035-62	-	235	231	233	6.4	11.2
24.	Raipur No.1*	-	180	229	205	4.6	9.0
25.	Raipur No.2*	255	245	215	238	5.8	9.4
26.	Raipur No.3*	260	198	236	231	5.6	9.4
27.	Raipur No.4*	265	310	322	299	12.0	15.6
28.	Raipur No.5*	222	166	193	194	10.6	11.0
29.	Raipur No.6*	-	175	322	249	9.2	8.2
30.	Raipur No.7*	285	230	223	246	11.2	9.8
31.	Raipur No.8*	-	278	246	262	6.4	9.4
32.	Raipur No.9*	-	103	465	284	14.2	10.4
33.	Raipur No.10*	-	185	259	222	11.8	11.0
34.	Raipur No.11*	-	140	277	209	14.8	11.2
35.	Raipur No.12*	-	240	241	241	12.8	10.4
36.	NDR 95006	-	-	153	153	7.0	10.0
37.	NDR 95007	-	-	235	235	8.6	16.2
38.	NDR 95008	-	-	236	236	14.4	6.4
39.	NDR 95009	230	-	266	248	13.4	12.6
40.	NDR 95010	245	-	331	288	10.8	12.2

contd..

1	2	3	4	5	6	7	8
41.	NDR 95011	292	-	251	272	9.4	10.8
42.	NDR 95012	-	-	166	166	9.0	10.2
43.	NDR 95013	276	-	224	250	9.4	8.4
44.	NDR 95014	-	-	191	191	11.4	9.6
45.	NDR 95015	-	-	213	213	6.4	6.8
46.	NDR 95016	-	-	230	230	6.2	7.4
47.	NDR 95017	-	-	167	167	9.0	6.2
48.	NDR 95018	-	-	220	220	9.6	6.0
49.	NDR 95019	-	-	250	250	3.6	6.2
50.	NDR 95020	-	-	450	450	2.0	8.8
51.	NDR 95021	-	-	462	462	4.2	4.8
52.	NDR 95022	246	-	203	225	8.1	9.6
53.	NDR 95023	240	-	103	222	9.4	9.4
54.	NDR 95024	259	-	140	200	8.0	5.8
55.	NDR 95025	299	-	227	263	12.0	10.0
56.	NDR 95026	-	-	140	140	11.2	5.6
57.	NDR 95027	355	-	211	283	9.0	6.0
58.	NDR 95028	-	-	207	207	11.4	4.8
59.	NDR 95029	245	-	300	273	7.4	5.4
60.	NDR 95030	-	-	201	201	7.6	10.8
61.	CR 333-10	-	205	184	195	12.8	5.2
62.	CR 691-52	256	216	351	274	12.0	8.8

1	2	3	4	5	6	7	8
63.	CR 333-18	302	80	277	203	7.8	6.6
64.	CR 691-48	305	334	219	286	7.4	11.4
65.	CR 691-1	-	254	251	253	8.8	8.2
66.	BR 4974-3-4-1-1-2	-	342	236	239	6.8	8.2
67.	BR 4974-2-1-3-6-6-3	-	120	219	170	7.8	7.4
68.	IR 53945-35-B-3-2	310	282	255	282	6.4	6.0
69.	IR 53506-B-2-B -2-2-1	296	231	156	228	8.2	-
70.	IR 53506-B-2-24-2-2-1	225	180	266	224	10.6	8.4
71.	IR 64334-4-2	-	158	167	163	7.8	5.6
72.	BR 4974-2-1-3-6-6-2	280	188	205	224	8.2	6.2
73.	BR 5462-18-5-2-2	239	190	154	194	10.0	6.6
74.	R 7711	230	235	255	240	11.2	8.2
75.	IR 63943-39-B-3-1	291	171	362	275	16.0	6.0
76.	BR 4974-3-6-3-2	245	203	160	203	8.6	5.0
77.	IR 64334-4-1	319	117	177	204	7.4	6.4
78.	BR 4974-2-1-1-3-1-1	365	144	200	219	8.6	5.2
79.	IR 64334-6-1	270	160	180	203	7.4	5.4
80.	IR 53947-13-B-1-3	301	211	155	222	12.6	3.8
81.	CR 625-18-1	272	190	175	212	8.2	6.8
82.	CR 626-7-3	278	203	144	208	10.4	7.0
83.	CR 716-6-R-4-1	302	185	122	203	7.2	7.4

contd..

1	2	3	4	5	6	7	8
84.	CR 716-43-R-3-127	-	-	153	153	6.0	7.2
85.	CR 609-7-6	255	227	108	197	7.4	10.6
86.	Local Check-1	309	-	178	243	9.6	4.4
87.	Local Check-2	-	-	-	-	12.6	5.9
88.	Local Check-3	-	-	-	-	8.5	6.2
89.	Local Check-4	-	-	-	-	9.6	4.7

* Not taken for mean

EXPT. 6. EVALUATION OF BREEDING MATERIALS

A total of 1878 segregating and fixed breeding lines from around 300 cross combinations consisting of selection from CRRI during Kharif, 1994 and material received from Dr. S. Surapong were evaluated at CRRI, Cuttack and Pusa during Kharif, 1996. During flowering and maturity a total of 7111 single plants were selected at these three Centres on the basis of crop stand under lowland condition, flowering duration, grain and panicle characters. The details of number of lines of segregating populations have been given in Table 29.

Besides the above breeding material around 600 single plants were also selected from 960 segregating/ fixed breeding lines evaluated at Raipur during Kharif, 1995.

From the CRRI material based on their uniformity and panicle type 65 single plant selections made from F_4 and F_5 generations (Table 30) have been sent to Dr. S. Surapong for off season multiplication in Thailand for taking up on-farm programme during Kharif, 1996 in India.

At CRRI, 19 fixed lines selected from last year trials were also put for seed multiplication for on-farm programme.

TABLE 29. LIST OF SHUTTLE BREEDING SECREGATING MATERIAL EVALUATED, KHARIF '95

GENERATION	EVALUATED				SINGLE PLANTS SELECTED			
	No. of crosses		Lines					
	CRR I	Mosodha	Pusa	CRR I	Pusa	CRR I	Mosodha	Pusa
F ₂	24	-	18	294	-	258	-	450
F ₃	24	83	9	255	181	162	885	1810
F ₄	103	36	-	970	-	1068	2340	-
F ₅	16	1	-	151	-	64	9	-
F ₆	-	4	-	-	-	-	65	-
Total	167	124	27	1670	181	1552	3299	2260

TABLE NO. 30. LIST OF SINGLE PLANTS SELECTED AND SENT TO
THAILAND FOR OFF-SEASON MULTIPLICATION IN
RABI'96

F₄ : 59
F₅ : 6
Total : 65

Packet No.	Pedigree	Generation	No. of plants selected	Date of 50% fl.	Plant ht. (cm)
1	2	3	4	5	6
1.	IR 67623-2-3-1	F ₄	1	28 Oct.	105
2.	IR 67623-2-3-2	"	1	5 Nov.	119
3.	IR 67623-4-1-2	"	1	29 Oct.	120
4.	IR 67623-4-4-1	"	1	5 Nov.	110
5.	IR 67623-4-4-2	"	1	5 Nov.	109
6.	IR 67623-5-1-1	"	1	5 Nov.	125
7.	IR 67623-5-1-2	"	1	5 Nov.	115
8.	IR 67623-5-2-1	"	1	10 Nov.	121
9.	IR 67623-5-3-3	"	1	16 Oct.	131
10.	IR 67623-5-5-1	"	1	29 Oct.	121
11.	IR 67623-6-3-1	"	1	24 Oct.	123
12.	IR 67623-9-1-3	"	1	27 Oct.	106
13.	IR 67623-10-4-1	"	1	21 Oct.	130
14.	IR 67623-18-5-2	"	1	28 Oct.	120
15.	IR 67623-24-6-1	"	1	29 Oct.	113
16.	IR 67623-24-6-2	"	1	1 Nov.	115
17.	IR 67623-24-1-1	"	1	29 Oct.	119
18.	IR 67623-26-1-1	"	1	27 Oct.	116
19.	IR 67623-31-2-2	"	1	28 Oct.	116
20.	IR 67623-34-3-2	"	1	24 Oct.	131
21.	IR 67623-34-4-1	"	1	23 Oct.	115
22.	IR 67626-16-1-3	"	1	26 Oct.	128

contd..

1	2	3	4	5	6
23.	IR 67627-3-4-1	F ₄	1	21 Oct.	118
24.	IR 67627-6-1-3	"	1	29 Oct.	93
25.	IR 67628-11-2-2	"	1	28 Oct.	123
26.	IR 67631-18-7-2	"	1	2 Nov.	132
27.	IR 67631-19-4-5	"	1	29 Oct.	118
28.	IR 67631-19-4-7	"	1	27 Oct.	123
29.	IR 67631-19-4-8	"	1	27 Oct.	112
30.	IR 67632-4-1-2	"	1	28 Oct.	111
31.	IR 67632-4-1-3	"	1	27 Oct.	103
32.	IR 67632-4-1-4	"	1	26 Oct.	103
33.	IR 67637-2-1-4	"	1	20 Oct.	113
34.	IR 67638-11-2-5	"	1	29 Oct.	134
35.	IR 67638-11-2-6	"	1	3 Nov.	141
36.	IR 67638-15-1-2	"	1	27 Oct.	115
37.	IR 67640-11-5-1	"	1	1 Nov.	117
38.	IR 67651-3-4-2	"	1	29 Oct.	120
39.	IR 67653-4-2-1	"	1	7 Nov.	107
40.	IR 67655-1-2-2	"	1	1 Nov.	120
41.	IR 67655-13-11-1	"	1	1 Nov.	123
42.	IR 67657-11-2-1	"	1	28 Oct.	119
43.	IR 67658-36-1-2	"	1	7 Nov.	137
44.	IR 67661-20-11-1	"	1	29 Oct.	131
45.	IR 67664-11-1-1	"	1	26 Oct.	117
46.	IR 67664-18-1-2	"	1	29 Oct.	109
47.	IR 67664-24-2-6	"	1	29 Oct.	115
48.	IR 67664-24-2-7	"	1	29 Oct.	105
49.	IR 68180-38-5-1	"	1	1 Nov.	124
50.	IR 68180-38-7-1	"	1	26 Oct.	149
51.	IR 67502-92-1	"	1	7 Nov.	122
52.	IR 68087-28-1	"	1	29 Oct.	103
53.	IR 68087-51-1	"	1	7 Nov.	121
54.	IR 68087-55-1	"	1	1 Nov.	126
55.	IR 68087-62-1	"	1	1 Nov.	110

contd..

1	2	3	4	5	6
56.	IR 68087-62-2	F ₄	1	28 Oct.	132
57.	IR 68087-64-1	"	1	28 Oct.	121
58.	IR 68087-78-1	"	1	29 Oct.	126
59.	IR 68087-117-2	"	1	7 Nov.	131
60	IR 66361-9-4-1	F ₅	1	1 Nov.	143
61.	IR 66361-9-7-1	"	1	29 Oct.	157
62.	IR 66361-9-1-1	"	1	27 Oct.	154
63.	IR 66361-26-2-1	"	1	24 Oct.	140
64.	IR 67058-10-15-1	"	1	1 Nov.	147
65.	IR 67058-14-6-1	"	1	7 Nov.	131
Total			65		

Total No. of breeding lines planted during kharif ,1995
at CRRI, Cuttack

F ₂	:	294	Seed increase - 19
F ₃	:	255	
F ₄	:	970	
F ₅	:	151	
Total		1670	

Expt. 7 : ON-FARM TRIAL

Location 1 : CRRRI (Cuttack)
2 : Raipur (M.P.)

A set of 25 fixed cultures, selected from the Shuttle Breeding Programme at Cuttack with 5 checks were tested in the farmers field during kharif, 1995 to study the adaptability and farmer's acceptance. The materials were direct seeded in a rainfed lowland area of the village Nagpura, in Tirtol block about 60 kms from Cuttack with only a basal fertilizer dose of 40:20:20 kg/ha of N P K. The entries varied in their flowering duration and 8 cultures which flowered early i.e. before 15th October, 1995 were damaged due to insects while those flowered in 1st week of November, performed well. The top five entries from the trial are :

Sl. No.	Culture No.	Flowering date	Yield (kg/ha)
1.	BR 5462-18-5-2-2	4th Nov.	4328
2.	BR 4974-2-1-1-3-1-1	5th Nov.	3884
3.	BR 4974-3-6-3-2	13th Nov.	3730
4.	IR 54112-B2-1-6-2-2-2	13th Nov.	3395
5.	Sabita (Check)	31st Oct.	1620

The detailed informations from CRRRI (Cuttack) and Raipur centres have been presented separately in Table 31 and 32 respectively.

EXPT.7 ON-FARM TRIAL, C.R.R.I (ORISSA)

LOCATION - VILL. NAGPURA (TIRTOL)

NAME OF THE FARMER - SRI GAJENDRA MOHANTY

Table 31. GRAIN YIELD AND ANCILLARY CHARACTERS

Sl. No.	Designation	Days to 50% flowering	Plant ht.(cm)	EBT/hill	Yield (kg/ha)	Remarks
1	2	3	4	5	6	7
1.	BR 4974-3-4-1-1-2	147	150.6	4.5	2341	
2.	BR 4974-2-1-3-6-6-4	147	154.3	4.6	2906(9)	
3.	BR 4974-2-1-3-6-6-3	147	152.6	5.3	3254(5)	
4.	IR 53945-35-35-B-3-2	147	151.4	5.1	2688	
5.	IR 53506-B ₂ -8-2-2-1	147	148.3	4.2	2675	
6.	IR 54109-B ₂ -1-2-2-1	114	111.4	5.7	1312	Insect damage
7.	IR 64334-4-2	115	106.0	4.5	1325	Insect damage
8.	BR 4974-2-1-3-6-6-2	147	151.2	4.9	2675	
9.	BR 5462-18-5-2-2	139	131.3	4.7	4328(1)	
10.	IR 64334-4-3	113	119.0	4.4	1505	Insect damage
11.	R 7711	139	130.0	5.5	3241(6)	
12.	IR 63943-39-B-3-1	137	119.1	6.1	2971(7)	
13.	BR 4974-3-6-3-2	147	152.4	4.8	3730(3)	
14.	IR 64334-4-1	113	107.5	4.2	1209	Insect damage
15.	BR 4974-2-1-1-3-1-1	138	152.4	4.9	3884(2)	

Contd....

1	2	3	4	5	6	7
16.	IR 54112-B ₂ -1-6-2-2-2	147	143.9	5.0	3395(4)	
17.	IR 64334-6-1	114	116.1	4.4	1325	Insect damage
18.	BR 5230-69-3-5-3	119	139.5	5.8	386	Insect damage
19.	IR 53947-13-B-1-3	138	110.4	5.2	2855(10)	
20.	BR 4974-23-1-3-4-1-2	134	146.9	5.9	2186	
21.	BR 4974-3-6-1-1	147	149.9	4.8	2368	
22.	IR 64382-22-2	113	125.0	5.5	1389	Insect damage
23.	IR 57491-42-2-2-3-3	118	126.4	4.8	335	Insect damage
24.	IR 53495-B ₂ -22-3-3-2	132	127.1	4.4	2135	
25.	IR 49745-CPA-42-B-1-5-1	134	112.8	5.0	2932(8)	
26.	SABITA (Check)	133	157.5	6.1	1620	
27.	MAHSURI (Check)	113	122.1	4.5	1081	Insect damage
28.	TCA 48 (Check)	124	157.6	5.0	759	
29.	FR-13A(Check)	133	150.4	4.4	1009	
30.	CR 581-9 (Check)	130	162.3	4.4	2238	
Mean						
		132	136.1	4.9	2203	
CD (5%)						
					961	
CV						
					21.33	
D/S - 5.6.1995						

STATE UNIFORM VARIETY TRIAL, KHARIF - 1995

RAIPUR (M.P.)

Table 32. GRAIN YIELD AND ANCILLARY CHARACTERS

Sl. No.	Designation	Days to 50% fl.	Plant ht.(cm)	Panicles/ Sq.mtr.	Yield kg/ha
1	2	3	4	5	6
1.	R 296-260	92	104.6	203	3067
2.	R 586-55	95	118.6	213	3283(8)
3.	MAHAMAYA	85	103.6	211	4715(2)
4.	IR 42221-45-2-3-2	82	112.6	256	4200(3)
5.	IR 54896-BB-139	95	96.3	242	3317(7)
6.	IR 54742-6-20-3-2-2-2	95	91.6	197	3733(4)
7.	IR 63429-23-1-3-3	91	101.4	122	2775
8.	EG 380-2	87	96.3	263	4800(1)
9.	CR 753-29-14	102	103.3	157	2950
10.	CR 1301-13	97	99.1	214	2733
11.	CR 1301-22	102	93.5	184	2242
12.	OR 1128-7-5-1	102	91.8	184	2483
13.	EKP 246	101	88.3	237	3167(9)
14.	EKP 264	103	91.8	228	3500(5)
15.	MAHSURI (check)	101	106.3	224	3100(10)
16.	SAFRI-17(Check)	111	123.4	185	3358(6)
	Mean	95	101	207	3339
	C.D.(5%)				725
	C.V.				13.05
	D/S - 21.6.95				

TABLE 33. Fortnightly mean temperature, relative humidity (RH) and sunshine hours at CRRI (Cuttack) during Kharif, 1995.

MONTH	TEMPERATURE (°C)		RELATIVE HUMIDITY (RH)	SUNSHINE HOURS
	MAXI-MUM	MINIMUM		
MAY	33.2	22.5	91	6.9
	34.9	27.1	93	9.7
JUNE	34.7	27.6	90	5.7
	33.2	26.3	93	3.4
JULY	32.5	25.8	95	3.9
	30.5	25.7	93	6.3
AUGUST	31.3	25.7	94	4.9
	32.1	26.4	94	4.5
SEPTEMBER	31.9	26.1	93	4.7
	30.9	25.5	95	5.1
OCTOBER	30.9	25.0	96	6.5
	29.9	22.8	94	7.7
NOVEMBER	28.8	20.9	92	7.7
	30.3	19.1	93	7.1
DECEMBER	27.9	15.1	95	9.2
	28.7	15.1	95	9.4

TABLE 34. Data on temperatures during flowering time at CRR I, Cuttack (Mean of 3 days)

DATE	TEMPERATURE (°C)	
	MAXIMUM	MINIMUM
3.10.95	33.2	26.0
6.10.95	32.8	25.6
9.10.95	29.7	24.3
12.10.95	28.4	24.1
15.10.95	30.1	24.9
18.10.95	30.9	23.8
21.10.95	30.4	24.3
24.10.95	30.4	23.3
27.10.95	29.2	20.6
30.10.95	29.6	21.7
3.11.95	28.6	22.3
6.11.95	29.1	19.9
9.11.95	28.7	22.0
12.11.95	28.8	21.4
15.11.95	29.2	19.9
18.11.95	28.6	22.4
21.11.95	27.5	21.4
24.11.95	28.0	20.3
27.11.95	26.7	17.5
30.11.95	28.0	14.2

Fig.1. HYDROLOGY FOR THE FIELD AT CRR1 CUTACK, KHARIF, 1995

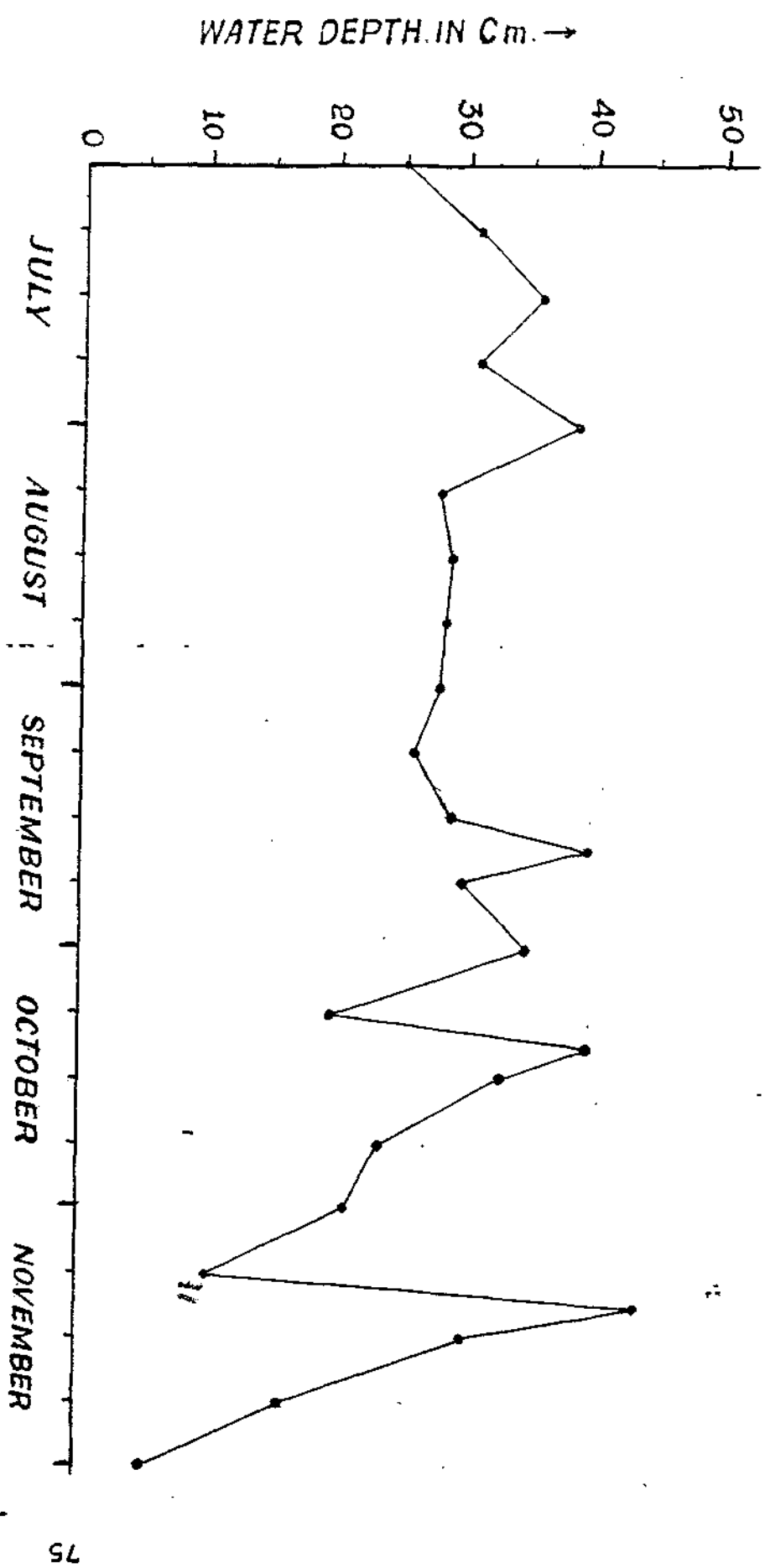


FIG.2. RAINFALL DURING KHARIF, 1995 : CRRI, CUTTACK

