IRRI
INTERNATIONAL RICE RESEARCH INSTITUTE

SUMMARY REPORT OF THE

Fourth International Temperate Rice Observational Nursery (4th IRTON) 2003

April 2007

International Network for Genetic Evaluation of Rice (INGER)

International Rice Research Institute
DAPO 7777, Metro Manila, Philippines

SUMMARY REPORT OF THE FOURTH INTERNATIONAL TEMPERATE RICE OBSERVATIONAL NURSERY (4th IRTON) 2003

No. of test entries	:	75 from 12 countries and from and IRRI and IRAT
International check varieties	:	IR50 (early-maturing), IR72 (early-maturing), and PSBRc2 (medium-maturing)
Experimental design	:	Augmented Randomized Complete Block Design with 5 blocks
No. of trials conducted	:	21 in 13 countries (Argentina, China, Egypt, India, Iran, Italy, Korea, Korea DPR, Myanmar, Mozambique, Pakistan, Philippines and Venezuela)
No. of data sets received	:	7 from 5 countries (China, Egypt, India, Italy, Korea)

Highlights of trial Results

General information about the 2003 IRTON test sites is given in Tables 1 and Tables 2a and 2b. Entry designation, cross, and country of origin are given in Table 3. The local checks used at individual sites are listed in Table 4.

Temperature patterns during the crop-growing season at different locations are shown in Figure 1. Data on average minimum temperature from Hangzhou (China) were not received. Thus, yield data at that site were excluded in overall mean computation. Based on patterns of cold stress (temperature < 20°C), test locations were grouped as follows:

Group	Location
1. Low temperature occurred throughout most of the crop season	Khudwani (E), Sakha (F), Yunnan (B) and Vercelli (G)
2. Low temperature occurred at vegetative and late reproductive stages	Suweon (C) and Hawalbagh (D)

Adjusted grain yields from seven test sites are given in Table 5. Yield ranges and frequencies when test entries were superior/inferior to international check varieties and local checks are summarized in Table 6.

Overall best entries

The best entries across locations were selected based on the number of sites where yields were significantly higher than or comparable with better local checks.

The overall best entries are as follows:

Entry No.	Designation	Origin	Total No. of Sites	No. of sites where Superior to	On par with	Inferior to
57	PSB RC92 (IR9202-25-1-3)	PHILIPPINES	5	0	5	0
54	PR27137-CR153	PHILIPPINES	6	0	5	1
65	SUWEON 287(TAEBAEGBYEO)	KOREA	6	0	5	1
26	HUA LIEN YU 202	TAIWAN	4	0	4	0
32	IR68333-R-R-B-22	IRRI	5	0	4	1
20	HEXI 5	CHINA	5	0	4	1
27	HURI 282	HUNGARY	6	0	4	2
51	PJ-2(NSICRC 104)	PHILIPPINES	6	0	4	2
53	PR26878-PJ13	PHILIPPINES	5	1	3	1
19	HEXI 2	CHINA	6	1	3	2
30	IR57893-76	IRRI	6	1	3	2

The agronomic traits and reactions to stresses of the overall highest yielders are given in Table 7**.** Percent yield advantages of the outstanding entries over the local check varieties are presented in Table 8. Entries superior to local checks at specific locations are given in Table 9**.** Those in top five yield ranks at individual sites are listed in Table 10.

Phenotypic acceptability

Phenotypic acceptability scores (PAcP) ratings of the 2003 IRTON entries are given in Table 10. PSB RC 96, Suweon 287 (Taebaegbyeo), and Hexi 2 showed good phenotypic acceptability in all of test sites. The following entries were given scores of 1 to 5 (excellent to fair) at five of six locations:

Entry No.	Designation	Entry No.	Designation
6	Alpe	54	PR27137-CR153
14	Doongara	56	PSB RC 46
27	Huri 282	76	IR 50
51	PJ – 2 (NSIC RC 104)	77	IR 72

The following entries had best phenotypic acceptability scores at specific test sites where low temperature (< 20°C) occurred:

Group	Trial Code	Location/ Country	PAcP	Entry
I. Low temperature throughout most of the crop season	E	Khudwani, India	1	24 entries (nos. 1, 3, 12, 14, 16, 19, 22, 23, 27, 30, 32, 36, 37, 40, 43, 46, 49-51, 54, 56, 58, 70, 75)
	F	Sakha, Egypt	3	17 entries (nos. 7, 19, 20, 26, 32, 39, 45, 48, 52, 53, 63-67, 71, 75)
	B	Yunnan, China	1	9 entries (nos. 25, 37, 38, 40, 48, 51, 55, 63, 78)
II. Low temperature occurred at vegetative and late reproductive stages	C	Suweon, Korea	3	20 entries (nos. 4, 14, 19-21, 23, 26, 27, 32, 37, 38, 44, 51, 56-59, 65, 76, 77)
	D	Hawalbagh, India	3	3 entries (nos. 51, 59, 65)

Seedling vigor

Scores for seedling vigor at individual test sites are given in Table 12. Across sites where low temperature occurred at vegetative stage, the following entries had vigorous to extra vigorous seedlings at three of five test sites:

Entry No.	Designation	Entry No.	Designation
1	7913-TR34-1-1	26	HUA LIEN YU 202
5	ALFA	27	HURI 282
6	ALPE	28	IR53236-139
12	CT6747-CA-1	33	IRAT 244
14	DOONGARA	36	IRAT 266
16	GIGANTE VERCELLI	38	JARRAH

Data on days to 50% flowering and plant height of nursery entries are given in Tables 13 and 14.

Reactions to biotic stresses

Varietal reactions to biotic stresses at particular test sites are given in Table 15. The entries given best ratings for resistance to site-specific biotic stresses are listed in Table 16. At Vercelli (Italy), 12 entries showed no symptoms (score of 1) for leaf blast. Some 26 entries at Hawalbagh, India showed no visible symptoms for panicle blast (score of 1). At Sakha (Egypt), 31 entries were rated good for resistance to stem borer.

The following entries received good resistance ratings for leaf blast at Vercelli, panicle blast at Hawalbagh, and stem borer at Sakha:

Entry No.	Designation
32	IR68333-R-R-B-22
46	NAMYANG 10
48	ONPO 6
51	PJ-2(NSICRC 104)
64	SUWEON 235(SANGPUNGBYEO)

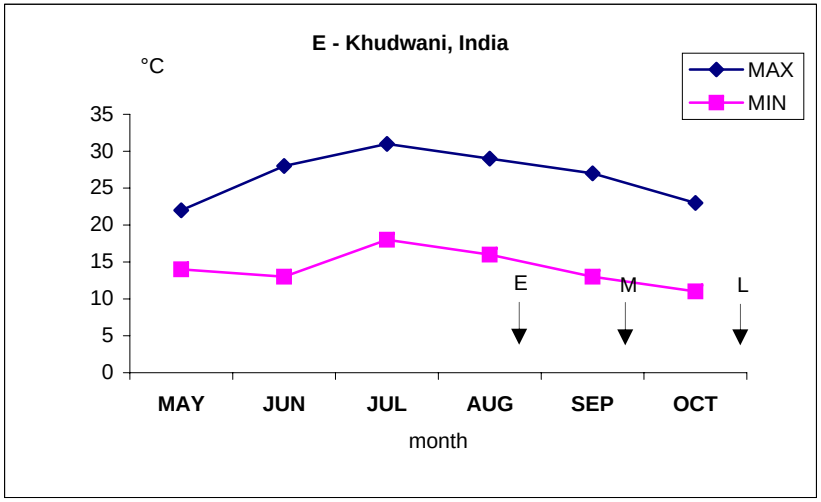
Utilization of nursery entries

For follow-up yield tests. Egypt evaluated 14 promising IRTON entries in advanced yield trials (Table 17).

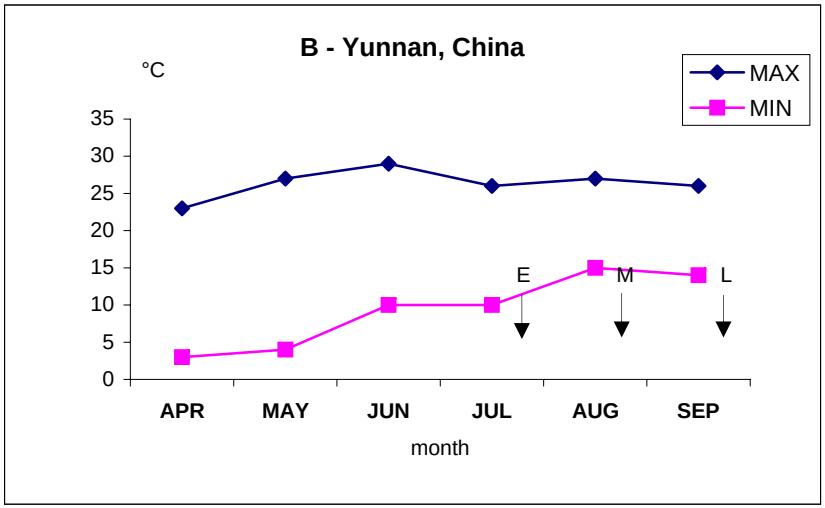
As parents in hybridization. Two NARS used 22 INGER entries 18 parents in their varietal improvement programs: China (13 entries), and Korea (9) (Table 18).

Temperature Regimes at each location sites, IRTON 2003.

Group I. Low temperature regime at all stages.



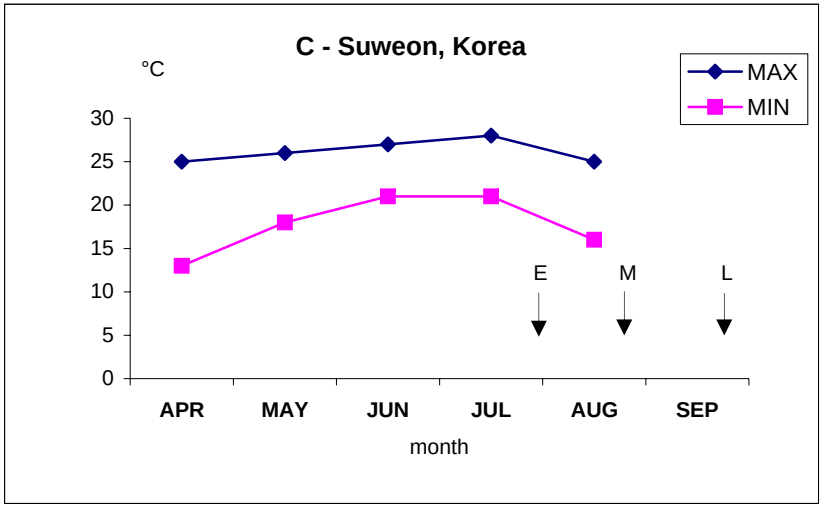
DATE SEEDED: May 31, 2003
FLOWERING:
E = EARLY : August 12, 2003
L = LATE : October 14, 2003
M = MEAN : September 12, 2003



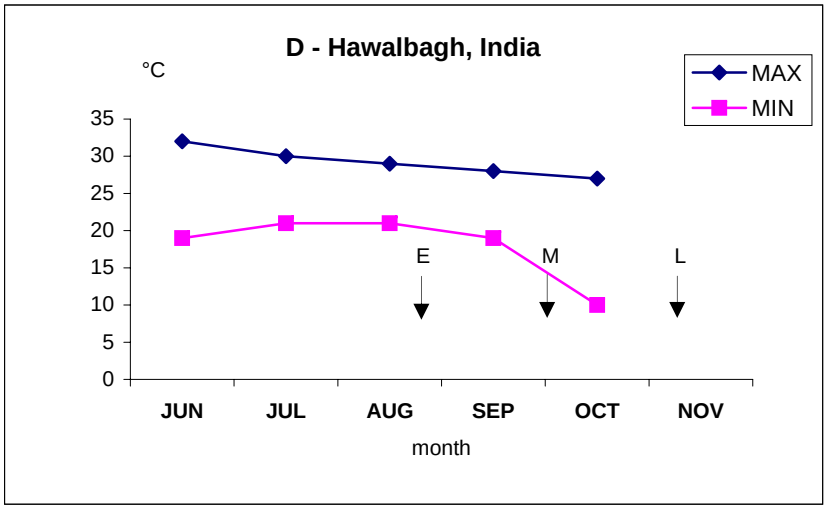
DATE SEEDED: April 2, 2003
FLOWERING:
E = EARLY : July 6, 2003
L = LATE : September 8, 2003
M = MEAN : August 7, 2003

Temperature Regimes at each location sites, IRTON 2003.

Group II. Low temperature regime at vegetative and late reproductive stages.



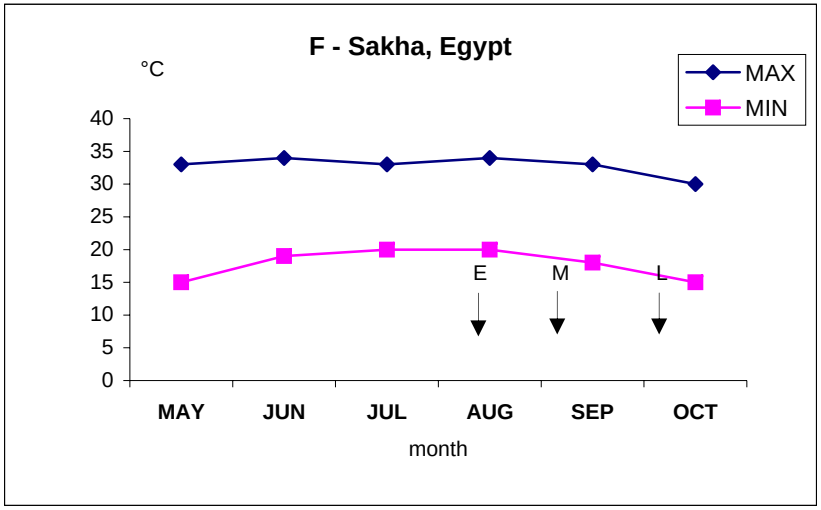
DATE SEEDED: April 25, 2003
FLOWERING:
E = EARLY : July 15, 2003
L = LATE : September 10, 2003
M = MEAN : August 12, 2003



DATE SEEDED: June 10, 2003
FLOWERING:
E = EARLY : August 7, 2003
L = LATE : October 24, 2003
M = MEAN : September 15, 2003

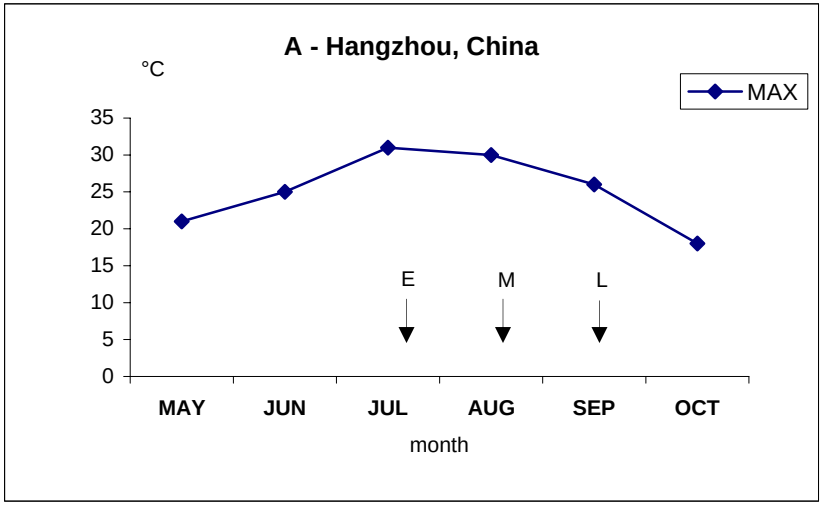
Temperature Regimes at each location sites, IRTON 2003.

Cont: Group II. Low temperature regime at vegetative and late reproductive stages.



DATE SEEDED: May 24, 2003
FLOWERING:
E = EARLY : July 28, 2003
L = LATE : September 18, 2003
M = MEAN : August 23, 2003

Group III. No low temperature regime.



DATE SEEDED: May 20, 2003
FLOWERING:
E = EARLY : July 4, 2003
L = LATE : September 2, 2003
M = MEAN : August 3, 2003

Table 1. Particulars of locations where the 4th IRTON (2003) tests were conducted.

TRIAL CODE	REGION/COUNTRY	LOCATION	STATION/COOPERATOR	LAT.	LONG.	ELEV.	DATE SEEDED	DATE TRANSPLANTED
	EAST ASIA							
A	CHINA	HANGZHOU, ZHEJIANG	CHINA NAT'L. RICE RES. INST./ YU HANYONG, WEI XINGHUA	30' 5'' N	119' 56''	9	5/20/2003	6/16/2003
B	CHINA	YU XI, YUNNAN	YUNNAN ACAD. OF AGRIC'L SCIENCE/ LU YI XUAN	24' 21''	102' 33''	1637	4/2/2003	5/12/2003
C	KOREA	SUWEON	NATIONAL INSTITUTE OF CROP SCIENCE/ YOUNG-SEOP SHIN, HUNG-GOO HWANG	37' 16''	126' 59''	37	4/25/2003	5/25/2003
	SOUTH ASIA							
D	INDIA	HAWALBAGH, U.P.	VIVEKANANDA PARVATIYA KRISHI ANUSANDHAN/ DR. RAJESH SINGH	28' 59''	79' 39''	1350	6/10/2003	7/9/2003
E	INDIA	KHUDWANI, ANANTNAG	REGIONAL RESEARCH STATION/ DR. G. A. PARRAY	32' 17''	73' 26''	1560	5/31/2003	6/17/2003
	W. ASIA/ N. AFRICA							
F	EGYPT	SAKHA	RICE RESEARCH AND TRAINING CENTER/ DR. TANTAWI BADAWI, DR. A.E. DRAZ	30' 5'' N	30' 5'' E	6	5/24/2003	6/20/2003
	EUROPE							
G	ITALY	VERCELLI	SAPISE SOC COOP/ DR. MASSIMO BILONI			-	4/28/2004	-

Table 2a. Trial information on the 4th IRTON (2003) tests.

TRIAL	CROP	DATE		WEATHER	RAIN		FERTILIZER (kg/ha)			DISEASE	INSECT
CODE	SEASON	SEEDED	TRANSPLANTED	CONDITION	DAYS	AMT. (mm.)	N	P	K	PROTECTION	PROTECTION
A	SUMMER	20-May-03	16-Jun-03	HIGHLY FAVORABLE	6	516	18	6	90	NONE	AS NEEDED
B	DRY	2-Apr-03	12-May-03	FAVORABLE	6	628	18	25	-	NONE	NONE
C	SUMMER	25-Apr-03	25-May-03	NOT FAVORABLE	7	1305	11	4	57	NONE	AS NEEDED
D	WET	10-Jun-03	9-Jul-03	FAVORABLE	5	740	5	6	40	NONE	NONE
E	WET	31-May-03	17-Jun-03	FAVORABLE	1	14	8	4	30	-	-
F	-	24-May-03	20-Jun-03	FAVORABLE	-	-	-	-	-	FULL	FULL
G	SUMMER	28-Apr-03	-	FAVORABLE	3	109	11	4	130	AS NEEDED	NONE

Table 2b. Data on atmospheric temperature during the crop season at the 4th IRTON (2003) tests.

TRIAL	DATE OF	MONTH 1*		MONTH 2		MONTH 3		MONTH 4		MONTH 5		MONTH 6		AVERAGE	
CODE	SOWING	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A	20-May-03	-	21	-	25	-	31	-	30	-	26	-	18	0	25
B	2-Apr-03	3	23	4	27	10	29	10	26	15	27	14	26	9	26
C	25-Apr-03	13	25	18	26	21	27	21	28	16	25	-	-	18	26
D	10-Jun-03	19	32	21	30	21	29	19	28	10	27	-	-	18	29
E	31-May-03	14	22	13	28	18	31	16	29	13	27	11	23	14	27
F	24-May-03	15	33	19	34	20	33	20	34	18	33	15	30	18	33
G	28-Apr-03	8	17	15	26	20	32	20	31	20	33	12	25	16	27

* Month corresponds to month of sowing.

Table 3. Particulars of entries in the 4th IRTON (2003).

ENTRY NO.	DESIGNATION	CROSS	ORIGIN
1	7913-TR34-1-1	BALDO/KOMSOMOLSKI	TURKEY
2	80007-TR210-14-1-1	BALDO/IR36	TURKEY
3	80023-TR166-2-1-4	RIBE/BALDO	TURKEY
4	AKIYUDAKA	OU 269/MAGARIKEI 17	KOREA
5	ALFA	-	ITALY
6	ALPE	-	ITALY
7	C732046	C591134/C662037//TN67/C662016-1	TAIWAN
8	CERVO	R BERSANI/ROMA	ITALY
9	CHUNJIANG 11	JIA 45/BING 1067	CHINA
10	CT6742-10-10-1-M-M-M	LEMONT/QUILLA 64117//QUILLA 65101	CHILE
11	CT6746-10-7-1-M-2-M	LEMONT/DIAMANTE//DIAMANTE	CHILE
12	CT6747-CA-1	LEMONT/QUILLA 64117//DIAMANTE	CHILE
13	CUIABANA	IAC 47/SR2041-50-1	BRAZIL
14	DOONGARA	CALROSE/BLUEBELLE//JJLA	AUSTRALIA
15	DOURADAO	IAC 25/63-83	BRAZIL
16	GIGANTE VERCELLI	-	ITALY
17	GIZELLA	M71 MUT./SZARVASI 70	HUNGARY
18	GUARANI	IAC 25/63-83	BRAZIL
19	HEXI 2	TODOROKIWASE/PUHONG NO. 1	CHINA
20	HEXI 5	TODOROKIWASE/YUENGENG 135	CHINA
21	HR5824-B-3-2-3	AKIYUDAKA/SUWEON	KOREA
22	HS-601	SPM-16/N*3M/VICA	HUNGARY
23	HSC14	-	HUNGARY
24	HSL447	-	HUNGARY
25	HU143	-	HUNGARY
26	HUA LIEN YU 202	TAITUNG 28/TAINUNG 67	TAIWAN
27	HURI 282	DUNGHAN SHALI MUTANT/ORYZELLA	HUNGARY
28	IR53236-139	IRAT 112/AZUCENA	IRRI
29	IR55411-50	B2997C-TB-60-3-3/UPL RI-5	IRRI
30	IR57893-76	CHIANAN 8/IRAT 104	IRRI
31	IR57924-9	UPL RI-5/BR319-1	IRRI
32	IR68333-R-R-B-22	JINMIBYEO/CHEOLWEON 46	IRRI
33	IRAT 244	IAC5100/.	BRAZIL
34	IRAT 251	PRATAO PRECOCE MUTANT	BRAZIL
35	IRAT 260	IRAT 112/IGUAPE CATETO	IVORY COAST
36	IRAT 266	IRAT 112/IRAT 13	IVORY COAST
37	IZ-160-2	NUCLEORIZA/KRASNODORSKY 424	TURKEY
38	JARRAH	M7*2/SOMEWAKE	AUSTRALIA
39	JOJO	-	KOREA
40	KUNMING 830	-	CHINA
41	LIDO	RINGO/HOKKAI 75	ITALY
42	LINE 26	-	CHINA

Table 3. Particulars of entries in the 4th IRTON (2003).

ENTRY NO.	DESIGNATION	CROSS	ORIGIN
43	LUSITANO	-	RUSSIA
44	MARICA	M3/SHIMOKITA//684Y/SPM	HUNGARY
45	MILYANG 104	MILYANG 71/SEONAMBYEO	KOREA
46	NAMYANG 10	SUWEON 224/INABAWASE//CHULWEON 21	KOREA
47	NIPPONBARE	YAMABIKO/SACHIKAZE	JAPAN
48	ONPO 6	-	KOREA
49	PADANO	SELECTION FROM BAHIA	ITALY
50	PELDE (ACC65721)	CENTURY PATNA/CALROSE//BBLE	AUSTRALIA
51	PJ-2(NSICRC 104)	HOKURIKU 76*2/OSOK	PHILIPPINES
52	PR26391-692CRF	DIAN YU/IR24//2*DIAN YU///DIAN XUN 8	PHILIPPINES
53	PR26878-PJ13	-	PHILIPPINES
54	PR27137-CR153	-	PHILIPPINES
55	PSB RC44(IR59468-B-B-3-2)	-	PHILIPPINES
56	PSB RC46	JUMALI/IR 9129-159-3//KN-1B-361-1-8-6-9	PHILIPPINES
57	PSB RC92 (IR9202-25-1-3)	IR 2053-521-1-1-1/K 116//KN-1B-361-1-8-6-9-1	PHILIPPINES
58	PSB RC94	IR 44535-22-3-3-3/IR 8866-30-3-1-4-2	PHILIPPINES
59	PSB RC96	IR 32429-47-3-2-2//SUWEON 223/MOROBEREKAN	PHILIPPINES
60	RYONGSONG 12	-	KOREA
61	SANDORA	-	HUNGARY
62	SIM2 SUMADEL	-	PHILIPPINES
63	SOHAECHAL	-	KOREA
64	SUWEON 235(SANGPUNGBYEO)	JINHEUNG/SHIMOKITA	KOREA
65	SUWEON 287(TAEBAEGBYEO)	IR24*2/IR747B2-6-3	KOREA
66	SUWEON 355	SUWEON 295-SVZ/INABAWASE	KOREA
67	SUWEON 375	AICHI 37///WASETORAMOCHI/EESD7//CHEOLWEON 21	KOREA
68	TAINUNG YU 1537	TAICHUNG YU 284/TAINUNG 69	TAIWAN
69	THAIBONNET	-	ITALY
70	VENERIA	NANO/CARNAROLI	ITALY
71	YR5190-16-2-1-2	MILYANG 71/CHEOLWEON 35	KOREA
72	YUNLEN 7	-	CHINA
73	YUNLEN 9	-	CHINA
74	ZHAOTONMAXAIGU	-	CHINA
75	IR73691-14-1	SR18390-9-7-2-5/IR66160-5-2-3-2	IRRI
76	IR50	IR 2153-14-1-6-2/IR 28//IR 36	IRRI
77	IR72	IR 19661-9-2-3/IR 15795-199-3-3//IR 9129-209-2-2-2-1	IRRI
78	PSB RC2(IR32809-26-3-3)	IR 4215-301-2-2-6/BG90-2//IR 19661-131-1-2	IRRI
79	LOCAL CHECK 1 (SPECIFY NAME)	-	-
80	LOCAL CHECK 2 (SPECIFY NAME)	-	-

Table 4. Local checks used in the 4th IRTON (2003).

TRIAL CODE	LOCAL CHECK
A	SHANYOU 63, XIUSHUI 11
B	YUN FAN 6, YUN FAN 1
C	ODAEBYEO, HWASEONGBYEO
D	VIVEK DHAN - 82, VIVEK DHAN - 62
E	SKAU-23 & SKAU-27, KHUCH & MADEW
F	GIZA 177, GIZA 178
G	LOTO, BALILLA

Table 5. Adjusted grain yields of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	B	C	D	E	F	G	AVE.
1	7913-TR34-1-1	6.6	6.1 **b**	0.6 **b**	0.9	5.5 **b**	5.3	4.2
2	80007-TR210-14-1-1	5.6	5.1 **b**	0.1 **b**	0.3	3.3 **b**	3.9	3.1
3	80023-TR166-2-1-4	11.4 **a**		0.4 **b**	1.4		3.8	4.2
4	AKIYUDAKA	2.9	10.3		0.1 **b**	5.1 **b**		4.6
5	ALFA	3.8		0.4 **b**	0.7	5 **b**		2.5
6	ALPE	2.5 **b**	7.1	0.7 **b**	0.6	5.1 **b**	4.9	3.5
7	C732046	1.6 **b**		1.4 **b**	0.6			1.2
8	CERVO			0.7 **b**		5.5 **b**		3.1
9	CHUNJIANG 11			0.9 **b**				0.9
10	CT6742-10-10-1-M-M-M			1 **b**	0.6	5.3 **b**	2	2.2
11	CT6746-10-7-1-M-2-M	3.2	5.3 **b**	0.7 **b**	0.5	4.3 **b**	5	3.2
12	CT6747-CA-1	1.5 **b**	4.5 **b**	0.4 **b**	1.2	3.9 **b**	4.3	2.6
13	CUIABANA	6.4		0.7 **b**				3.5
14	DOONGARA	2.5 **b**	7.5	0.6 **b**	1.3	5.5 **b**	4.8	3.7
15	DOURADAO	2.7 **b**	3.7 **b**	0.7 **b**	0.9	2.9 **b**	3.5	2.4
16	GIGANTE VERCELLI	1.9 **b**		0.7 **b**	1.6		1.5 **b**	1.4
17	GIZELLA							
18	GUARANI	3.5	4.4 **b**	0.9 **b**	0.9	4.9 **b**	2.5	2.8
19	HEXI 2	7.4	8.1	0.5 **b**	1.6	4.9 **b**	5.4	4.6
20	HEXI 5	3.4	10.1	0.5 **b**		7.8	4.3	5.2
21	HR5824-B-3-2-3	1.5 **b**	8.6	0.4 **b**	0.3	3.5 **b**	2.5	2.8
22	HS-601	3.6		0.3 **b**	1.5			1.8
23	HSC14	2.4 **b**	4.9 **b**	0.5 **b**	1.4	3.5 **b**	3.8	2.7
24	HSL447	11.7 **a**	5.6 **b**			4.5 **b**	2.8	6.1
25	HU143	0.3 **b**		0.3 **b**	0.4	4.3 **b**	1.8	1.4
26	HUA LIEN YU 202	9.6 **a**	10.1	0.8 **b**	0.8		3	4.9
27	HURI 282	5.8	7.4	0.4 **b**	1		2.8	3.5
28	IR53236-139	2.3 **b**	4.7 **b**	1.2 **b**	0.4	3.5 **b**		2.4
29	IR55411-50		10.3	1.4 **b**			4.5	5.4
30	IR57893-76	4.1	7.7	1 **b**	1.4	4.1 **b**	2.8	3.5
31	IR57924-9	3.6	8.6	1.1 **b**				4.5
32	IR68333-R-R-B-22		10.6	1.8	1		5.5	4.7
33	IRAT 244	4.1	4.1 **b**	0.7 **b**	0.3		2	2.2
34	IRAT 251	2.3 **b**	5.9 **b**	0.8 **b**	0.4		2.5	2.4
35	IRAT 260	3.2	6.5 **b**	0.5 **b**	0.2		3.5	2.8
36	IRAT 266	1.6 **b**	5.8 **b**	0.5 **b**	1	4.1 **b**	3.9	2.8
37	IZ-160-2	0.9 **b**	4.6 **b**	0.4 **b**	1.1		2.9	2
38	JARRAH		7.8	0.8 **b**	0.5	3.3 **b**	3.9	3.2
39	JOJO	17.1 **a**		0.7 **b**	0.4	3.5 **b**		5.4
40	KUNMING 830	0.2 **b**		0.9 **b**	0.8			0.6
41	LIDO	4.4		0.4 **b**	0.7			1.8
42	LINE 26	3.8		0.9 **b**		4.1 **b**		2.9

Table 5. Adjusted grain yields of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	B		C		D		E		F		G		AVE.
43	LUSITANO					0.7	**b**	0.8		3.5	**b**			1.7
44	MARICA	3.1		6.2	**b**	0.2	**b**	0.5						2.5
45	MILYANG 104	9.6	**a**			0.7	**b**			6.9				5.7
46	NAMYANG 10	3.4				1.1	**b**	1.1		5.5	**b**			2.7
47	NIPPONBARE					0.1	**b**							0.1
48	ONPO 6	0.3	**b**			0.9	**b**	0.7						0.7
49	PADANO					0.3	**b**	0.8		5.7	**b**			2.3
50	PELDE (ACC65721)			4.1	**b**	1	**b**	0.7						1.9
51	PJ-2(NSICRC 104)	0.3	**b**	10.4		1.5	**b**	1		8.9	**a**	3.3		4.2
52	PR26391-692CRF	1.4	**b**			0.6	**b**	0.6		4.9	**b**	0.6	**b**	1.6
53	PR26878-PJ13	12	**a**	10.4		1.2	**b**	0.6		7.8		0.6	**b**	5.4
54	PR27137-CR153	5.4		9.8		1.9		0.9		4.5	**b**	2.6		4.2
55	PSB RC44(IR59468-B-B-3-2)	0.1	**b**	8.7		1.4	**b**							3.4
56	PSB RC46	5.4		7.7		1.1	**b**	1.1		5.7	**b**			4.2
57	PSB RC92 (IR9202-25-1-3)	4.4		7.2		1.9		0.4				5.4		3.9
58	PSB RC94	5.4		6.3	**b**	0.8	**b**	1				5.5		3.8
59	PSB RC96	2.1	**b**	9.2		1.9		0.2						3.4
60	RYONGSONG 12	6.6				1.2	**b**			5.7	**b**			4.5
61	SANDORA	10.4	**a**			0.9	**b**							5.7
62	SIM2 SUMADEL	4.3		10.4		1.4	**b**			3.7	**b**			4.9
63	SOHAECHAL	0.8	**b**			1	**b**	0.6		3.7	**b**			1.5
64	SUWEON 235(SANGPUNGBYEO)					0.5	**b**	0.5		6.8		0.5	**b**	2.1
65	SUWEON 287(TAEBAEGBYEO)	4.3		7.1		2		0.5		6.5	**b**	5.3		4.3
66	SUWEON 355	4.5				1	**b**	0.7		4.3	**b**			2.6
67	SUWEON 375	4.4				0.5	**b**	0.5		4.3	**b**			2.4
68	TAINUNG YU 1537	3.8				0.8	**b**							2.3
69	THAIBONNET	12.1	**a**			1.1	**b**			4.5	**b**			5.9
70	VENERIA	1.8	**b**			0.8	**b**	1.3				0.9	**b**	1.2
71	YR5190-16-2-1-2	6.9				0.6	**b**	0.6				0.8	**b**	2.2
72	YUNLEN 7	5		8.8		1.2	**b**	1.1		6.5	**b**			4.5
73	YUNLEN 9	5.4				0.8	**b**			4.8	**b**			3.7
74	ZHAOTONMAXAIGU	3.8		4.6	**b**	1.2	**b**					2.8		3.1
75	IR73691-14-1					1.3	**b**	1		2.6	**b**			1.6
76	IR50	4.3		10.3	**a**	1.7	**b**	0.5	**b**	4.1	**b**	1.6	**b**	3.7
77	IR72	3.6	**b**	7.7	**b**	1.1	**b**	0.5		5.7	**b**			3.7
78	PSB RC2(IR32809-26-3-3)	0.9	**b**	6.8	**b**	0.8	**b**			4.1	**b**	1.1	**b**	2.7
79	LOCAL CHECK 1 (SPECIFY NAME)	5.9		9.1		2.3		0.7		7.1	**b**	3.6		4.8
80	LOCAL CHECK 2 (SPECIFY NAME)	4.5		8.4		2.2		1.2		7.7		3.7		4.6
	SITE MEAN	4.4		7.4		0.9		0.8		4.9		3.2		
	LSD	3.1		2.1		0.7		1.3		1.2		2.3		

Table 6. Yield performance of test entries compared to local and international checks in the 4th IRTON (2003) trials.

ENTRY		YIELD		NO. OF	SUPERIOR TO					INFERIOR TO					ON PAR
NO.	DESIGNATION	Min	Max	TEST SITES	ck076	ck077	ck078	ck079	ck080	ck076	ck077	ck078	ck079	ck080	WITH MAX
1	7913-TR34-1-1	0.6	6.6	6	2	0	3	0	0	2	0	0	3	3	0
2	80007-TR210-14-1-1	0.1	5.6	6	1	0	2	0	0	2	3	0	3	3	0
3	80023-TR166-2-1-4	0.4	11.4	4	1	1	2	1	1	1	0	0	1	1	0
4	AKIYUDAKA	0.1	10.3	4	1	1	2	0	0	0	0	0	1	2	0
5	ALFA	0.4	5	4	0	0	0	0	0	1	1	0	2	2	0
6	ALPE	0.6	7.1	6	2	0	2	0	0	2	0	0	3	2	0
7	C732046	0.6	1.6	3	0	0	0	0	0	0	0	0	2	1	0
8	CERVO	0.7	5.5	2	1	0	1	0	0	1	0	0	2	2	0
9	CHUNJIANG 11	0.9	0.9	1	0	0	0	0	0	1	0	0	1	1	0
10	CT6742-10-10-1-M-M-M	0.6	5.3	4	1	0	1	0	0	1	0	0	2	2	0
11	CT6746-10-7-1-M-2-M	0.5	5.3	6	1	0	1	0	0	2	2	0	3	3	0
12	CT6747-CA-1	0.4	4.5	6	1	0	1	0	0	2	3	1	4	3	0
13	CUIABANA	0.7	6.4	2	0	0	1	0	0	1	0	0	1	1	0
14	DOONGARA	0.6	7.5	6	2	0	2	0	0	2	0	0	3	2	0
15	DOURADAO	0.7	3.7	6	0	0	1	0	0	3	2	2	4	3	0
16	GIGANTE VERCELLI	0.7	1.9	4	1	0	0	0	0	1	0	0	3	2	0
18	GUARANI	0.9	4.9	6	0	0	0	0	0	2	1	1	3	3	0
19	HEXI 2	0.5	8.1	6	3	1	2	0	0	2	0	0	2	2	0
20	HEXI 5	0.5	10.1	5	2	2	3	0	0	1	0	0	1	1	0
21	HR5824-B-3-2-3	0.3	8.6	6	0	0	0	0	0	1	1	0	3	2	0
22	HS-601	0.3	3.6	3	0	0	0	0	0	1	1	0	1	1	0
23	HSC14	0.5	4.9	6	0	0	1	0	0	2	2	0	4	3	0
24	HSL447	2.8	11.7	4	1	1	1	1	1	1	2	0	2	2	0
25	HU143	0.3	4.3	5	0	0	0	0	0	2	3	0	3	3	0
26	HUA LIEN YU 202	0.8	10.1	5	1	2	2	1	1	1	0	0	1	1	0
27	HURI 282	0.4	7.4	5	0	0	1	0	0	2	0	0	1	1	0
28	IR53236-139	0.4	4.7	5	0	0	0	0	0	1	2	1	4	3	0
29	IR55411-50	1.4	10.3	3	1	1	2	0	0	0	0	0	1	1	0
30	IR57893-76	1	7.7	6	0	0	1	0	0	2	1	0	2	2	0
31	IR57924-9	1.1	8.6	3	0	0	0	0	0	0	0	0	1	1	0
32	IR68333-R-R-B-22	1	10.6	4	1	2	3	0	1	0	0	0	0	0	1
33	IRAT 244	0.3	4.1	5	0	0	1	0	0	2	1	1	2	2	0
34	IRAT 251	0.4	5.9	5	0	0	0	0	0	2	0	0	3	2	0
35	IRAT 260	0.2	6.5	5	0	0	1	0	0	2	0	0	2	1	0
36	IRAT 266	0.5	5.8	6	1	0	1	0	0	2	1	0	4	3	0
37	IZ-160-2	0.4	4.6	5	0	0	0	0	0	3	2	1	3	3	0
38	JARRAH	0.5	7.8	5	1	0	1	0	0	2	1	0	2	2	0
39	JOJO	0.4	17.1	4	1	1	1	1	1	1	1	0	2	2	0
40	KUNMING 830	0.2	0.9	3	0	0	0	0	0	2	1	0	2	2	0
41	LIDO	0.4	4.4	3	0	0	1	0	0	1	1	0	1	1	0
42	LINE 26	0.9	4.1	3	0	0	0	0	0	1	1	0	2	2	0

Table 6. Yield performance of test entries compared to local and international checks in the 4th IRTON (2003) trials.

ENTRY		YIELD		NO. OF	SUPERIOR TO					INFERIOR TO					ON PAR
NO.	DESIGNATION	Min	Max	TEST SITES	ck076	ck077	ck078	ck079	ck080	ck076	ck077	ck078	ck079	ck080	WITH MAX
43	LUSITANO	0.7	3.5	3	0	0	0	0	0	1	1	0	2	2	0
44	MARICA	0.2	6.2	4	0	0	0	0	0	2	1	0	2	2	0
45	MILYANG 104	0.7	9.6	3	2	2	2	1	1	1	0	0	1	1	0
46	NAMYANG 10	1.1	5.5	4	1	0	1	0	0	0	0	0	2	2	0
47	NIPPONBARE	0.1	0.1	1	0	0	0	0	0	1	1	0	1	1	0
48	ONPO 6	0.3	0.9	3	0	0	0	0	0	2	1	0	2	2	0
49	PADANO	0.3	5.7	3	1	0	1	0	0	1	1	0	2	2	0
50	PELDE (ACC65721)	0.7	4.1	3	0	0	0	0	0	1	1	1	2	2	0
51	PJ-2(NSICRC 104)	0.3	10.4	6	1	2	3	1	1	1	1	0	2	1	0
52	PR26391-692CRF	0.6	4.9	5	0	0	0	0	0	1	0	0	4	3	0
53	PR26878-PJ13	0.6	12	6	2	3	3	1	1	0	0	0	2	2	0
54	PR27137-CR153	0.9	9.8	6	0	1	3	0	0	0	1	0	1	1	1
55	PSB RC44(IR59468-B-B-3-2)	0.1	8.7	3	0	0	0	0	0	1	1	0	2	2	0
56	PSB RC46	1.1	7.7	5	1	0	2	0	0	1	0	0	2	2	0
57	PSB RC92 (IR9202-25-1-3)	0.4	7.2	5	1	1	3	0	0	1	0	0	0	0	1
58	PSB RC94	0.8	6.3	5	1	0	2	0	0	2	0	0	2	2	0
59	PSB RC96	0.2	9.2	4	0	1	2	0	0	0	0	0	1	0	1
60	RYONGSONG 12	1.2	6.6	3	1	0	2	0	0	0	0	0	2	2	0
61	SANDORA	0.9	10.4	2	1	1	1	1	1	1	0	0	1	1	0
62	SIM2 SUMADEL	1.4	10.4	4	0	1	2	0	0	0	1	0	2	2	0
63	SOHAECHAL	0.6	3.7	4	0	0	0	0	0	2	1	0	3	3	0
64	SUWEON 235(SANGPUNGBYEO)	0.5	6.8	4	1	0	1	0	0	1	0	0	2	2	0
65	SUWEON 287(TAEBAEGBYEO)	0.5	7.1	6	2	1	4	0	0	1	0	0	0	1	1
66	SUWEON 355	0.7	4.5	4	0	0	1	0	0	0	1	0	2	2	0
67	SUWEON 375	0.5	4.4	4	0	0	1	0	0	1	1	0	2	2	0
68	TAINUNG YU 1537	0.8	3.8	2	0	0	0	0	0	1	0	0	1	1	0
69	THAIBONNET	1.1	12.1	3	1	1	1	1	1	0	1	0	2	2	0
70	VENERIA	0.8	1.8	4	0	0	0	0	0	1	0	0	3	2	0
71	YR5190-16-2-1-2	0.6	6.9	4	0	1	1	0	0	1	0	0	2	2	0
72	YUNLEN 7	1.1	8.8	5	1	0	2	0	0	0	0	0	1	2	0
73	YUNLEN 9	0.8	5.4	3	0	0	1	0	0	1	0	0	2	2	0
74	ZHAOTONMAXAIGU	1.2	4.6	4	0	0	0	0	0	1	1	1	2	2	0
75	IR73691-14-1	1	2.6	3	0	0	0	0	0	1	1	1	2	2	0
76	IR50	0.5	10.3	6	0	2	3	1	1	0	1	0	3	4	0
77	IR72	0.5	7.7	5	1	0	2	0	0	2	0	0	4	2	0
78	PSB RC2(IR32809-26-3-3)	0.8	6.8	5	0	0	0	0	0	3	2	0	5	5	0
79	LOCAL CHECK 1 (SPECIFY NAME)	0.7	9.1	6	3	4	5	0	0	1	0	0	0	1	0
80	LOCAL CHECK 2 (SPECIFY NAME)	1.2	8.4	6	4	2	5	1	0	1	0	0	0	0	1

Table 7. Agronomic traits and reactions to stresses of best entries in the 4th IRTON (2003) trials.

	PSB RC92 (IR9202-25-1-3)	PR27137-CR153	SUWEON 287 (TAEBAEGBYEO)	HUA LIEN YU 202	IR68333-R-R-B-22	HEXI 5	HURI 282	PJ-2(NSIC RC 104)	PR26878-PJ13	HEXI 2	IR57893-76
Entry No.	57	54	65	26	32	20	27	51	53	19	30
Yield (t/ha)											
Range	0.4 -7.2	0.9 -9.8	0.5 -7.1	0.8 -10.1	1 -10.6	0.5 -10.1	0.4 -7.4	0.3 -10.4	0.6 -10.4	0.5 -8.1	1 -7.7
Mean	3.9	4.2	4.3	4.9	4.7	5.2	3.5	4.2	5.4	4.6	3.5
Frequency superior/inferior to local check											
IR50 (VERY EARLY DURATION)	1 (1)	0 (0)	2 (1)	1 (1)	1 (0)	2 (1)	0 (2)	1 (1)	2 (0)	3 (2)	0 (2)
IR 72 (EARLY DURATION)	1 (0)	1 (1)	1 (0)	2 (0)	2 (0)	2 (0)	0 (0)	2 (1)	3 (0)	1 (0)	0 (0)
PSBRC2 (MEDIUM DURATION)	3 (0)	3 (0)	4 (0)	2 (0)	3 (0)	3 (0)	1 (0)	3 (0)	3 (0)	2 (0)	1 (0)
LOCAL CHECK 1 (EARLY DURATION)	0 (0)	0 (1)	0 (0)	1 (1)	0 (0)	0 (1)	0 (1)	1 (2)	1 (2)	0 (2)	0 (2)
LOCAL CHECK 2 (MEDIUM DURATION)	0 (0)	0 (1)	0 (1)	1 (1)	1 (0)	0 (1)	0 (1)	1 (1)	1 (2)	0 (2)	0 (2)
Frequency of phen. accp £ 5	4	5	6	5	4	4	5	5	4	5	3
Days to 50% flowering											
Range	78 -126	80 -124	76 -113	91 -144	83 -108	82 -119	78 -116	94 -159	77 -130	73 -127	88 -126
Mean	106	98	91	106	92	99	90	113	103	102	107
Plant height (cm)											
Range	93 -150	88 -110	75 -105	79 -118	85 -114	82 -113	70 -112	66 -128	84 -116	82 -103	86 -142
Mean	118	98	92	99	99	100	90	97	99	90	111
Reaction score to stresses:											
Leaf Blast (BL)											
G - Vercelli, Italy	2		4	9	1	8	1	2			2
Panicle Blast (PB)											
D - Hawalbagh, U.P., Italy	1	1	1	1	1	1	3	1	1	1	3
StemBorer (SB)											
F - Sakha, Egypt	7	3	3	3	3	3	7	3	3	3	7

Table 8. Percent yield advantages of the highest yielding entries by location in the 4th IRTON (2003) trials.

TRIAL	LOCATION,	PSB RC92 (IR9202-25-1-3)		PR27137-CR153		SUWEON 287 (TAEBAEGBYEO)		HUA LIEN YU 202		IR68333-R-R-B-22		HEXI 5		HURI 282		PJ-2(NSICRC 104)		PR26878-PJ13		HEXI 2		IR57893-76	
CODE	COUNTRY	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2	LC1	LC2
B	YUNNAN, CHINA	-25.4	-2.2	-8.5	20	-27.1	-4.4	62.7	113.3	.	.	-42.4	-24.4	-1.7	28.9	-94.9	-93.3	103.4	167	25.4	64.4	-30.5	-8.9
C	SUWEON, KOREA	-20.9	-14.3	7.7	16.7	-22.0	-15.5	11.0	20.2	16.5	26.2	11.0	20.2	-18.7	-11.9	14.3	23.8	14.3	23.8	-11.0	-3.6	-15.4	-8.3
D	HAWALBAGH, INDIA	-17.4	-13.6	-17.4	-14	-13.0	-9.1	-65.2	-63.6	-21.7	-18.2	-78.3	-77.3	-82.6	-81.8	-34.8	-31.8	-47.8	-46	-78.3	-77	-56.5	-55
E	KHUDWANI, INDIA	-42.9	-66.7	28.6	-25	-28.6	-58.3	14.3	-33.3	42.9	-16.7	.	.	42.9	-16.7	42.9	-16.7	-14.3	-50	128.6	33.3	100.0	16.7
F	SAKHA, EGYPT	.	.	-36.6	-42	-8.5	-15.6	.	.	.	.	9.9	1.3	.	.	25.4	15.6	9.9	1.3	-31.0	-36	-42.3	-47
G	VERCELLI, ITALY	50.0	45.9	-27.8	-30	47.2	43.2	-16.7	-18.9	52.8	48.6	19.4	16.2	-22.2	-24.3	-8.3	-10.8	-83.3	-84	50.0	45.9	-22.2	-24

Table 9. Entries superior to local checks at test sites in the 4th IRTON (2003) trials.

	Local Check1		Entries superior to local check1			Local Check2		Entries superior to local check2		
Trial code - location, country	Name	Days to 50% flowering	Entry no.	Designation	Days to 50% flowering	Name	Days to 50% flowering	Entry no.	Designation	Days to 50% flowering
A - HANGZHOU, CHINA	SHANYOU 63	87				XIUSHUI 11	104	79	SHANYOU 63	87
								27	HURI 282	80
B - YUNNAN, CHINA	YUN FAN 6	128	39	JOJO	150	YUN FAN 1	131	39	JOJO	150
			69	THAIBONNET	128			69	THAIBONNET	128
			53	PR26878-PJ13	130			53	PR26878-PJ13	130
			24	HSL447	115			24	HSL447	115
			3	80023-TR166-2-1-4	119			3	80023-TR166-2-1-4	119
			61	SANDORA	118			61	SANDORA	118
			26	HUA LIEN YU 202	144			26	HUA LIEN YU 202	144
			45	MILYANG 104	113			45	MILYANG 104	113
			19	HEXI 2	127			19	HEXI 2	127
			71	YR5190-16-2-1-2	124			71	YR5190-16-2-1-2	124
			1	7913-TR34-1-1	138			1	7913-TR34-1-1	138
			60	RYONGSONG 12	149			60	RYONGSONG 12	149
			13	CUIABANA	122			13	CUIABANA	122
								79	YUN FAN 6	128
								27	HURI 282	116
								2	80007-TR210-14-1-1	115
								54	PR27137-CR153	124
								56	PSB RC46	129
								58	PSB RC94	128
								73	YUNLEN 9	117
								72	YUNLEN 7	124
C - SUWEON, KOREA	ODAEBYEO	104	32	IR68333-R-R-B-22	108	HWASEONGBYEO	113	32	IR68333-R-R-B-22	108
			51	PJ-2(NSICRC 104)	109			51	PJ-2(NSICRC 104)	109
			53	PR26878-PJ13	109			53	PR26878-PJ13	109
			62	SIM2 SUMADEL	124			62	SIM2 SUMADEL	124
			4	AKIYUDAKA	126			4	AKIYUDAKA	126
			29	IR55411-50	117			29	IR55411-50	117
			76	IR50	111			76	IR50	111
			20	HEXI 5	106			20	HEXI 5	106
			26	HUA LIEN YU 202	113			26	HUA LIEN YU 202	113
			54	PR27137-CR153	105			54	PR27137-CR153	105
			59	PSB RC96	112			59	PSB RC96	112
								79	ODAEBYEO	104
								72	YUNLEN 7	123
								55	PSB RC44(IR59468-B-B-3-2)	123
								21	HR5824-B-3-2-3	96
								31	IR57924-9	131

Table 9. Entries superior to local checks at test sites in the 4th IRTON (2003) trials.

	Local Check1		Entries superior to local check1			Local Check2		Entries superior to local check2		
Trial code - location, country	Name	Days to 50% flowering	Entry no.	Designation	Days to 50% flowering	Name	Days to 50% flowering	Entry no.	Designation	Days to 50% flowering
D - HAWALBAGH, INDIA	VIVEK DHAN - 82	130				VIVEK DHAN - 62	121	79	VIVEK DHAN - 82	130
E - KHUDWANI, INDIA	SKAU-23 & SKAU-27	111	16	GIGANTE VERCELLI	.	KHUCH & MADEW	115	16	GIGANTE VERCELLI	.
			19	HEXI 2	124			19	HEXI 2	124
			22	HS-601	116			22	HS-601	116
			3	80023-TR166-2-1-4	105			3	80023-TR166-2-1-4	105
			23	HSC14	101			23	HSC14	101
			30	IR57893-76	112			30	IR57893-76	112
			14	DOONGARA	109			14	DOONGARA	109
			70	VENERIA	85			70	VENERIA	85
			12	CT6747-CA-1	102					
			80	KHUCH & MADEW	115					
			37	IZ-160-2	81					
			46	NAMYANG 10	80					
			56	PSB RC46	111					
			72	YUNLEN 7	116					
			27	HURI 282	93					
			32	IR68333-R-R-B-22	91					
			36	IRAT 266	91					
			51	PJ-2(NSICRC 104)	97					
			58	PSB RC94	79					
			75	IR73691-14-1	94					
			1	7913-TR34-1-1	107					
			15	DOURADAO	112					
E - KHUDWANI, INDIA	SKAU-23 & SKAU-27	111	18	GUARANI	111					
			54	PR27137-CR153	99					
			26	HUA LIEN YU 202	101					
			40	KUNMING 830	119					
			43	LUSITANO	101					
			49	PADANO	102					
F - SAKHA, EGYPT	GIZA 177	89	51	PJ-2(NSICRC 104)	94	GIZA 178	96	51	PJ-2(NSICRC 104)	94
			20	HEXI 5	82			20	HEXI 5	82
			53	PR26878-PJ13	85			53	PR26878-PJ13	85
			80	GIZA 178	96					

Table 10. Entries in top five ranks for yield at specific locations in the 4th IRTON (2003) trials

Temperature Pattern	Trial Code	Location, Country	Site yield (t/ha) Range	Site yield (t/ha) Mean	Entry no.	Designation
Group I	E	Khudwani, India	0.1 - 1.6	0.8	16	GIGANTE VERCELLI
					19	HEXI 2
					22	HS-601
					3	80023-TR166-2-1-4
					23	HSC14
	B	Yunnan, China	0.1 - 17.1	4.4	39	JOJO
					69	THAIBONNET
					53	PR26878-PJ13
					24	HSL447
					3	80023-TR166-2-1-4
Group II	C	Suweon, Korea	3.7 - 10.6	7.4	32	IR68333-R-R-B-22
					51	PJ-2(NSICRC 104)
					53	PR26878-PJ13
					62	SIM2 SUMADEL
					4	AKIYUDAKA
	D	Hawalbagh, India	0.1 - 2.3	0.9	79	VIVEK DHAN - 82
					80	VIVEK DHAN - 62
					65	SUWEON 287(TAEBAEGBYEO)
					54	PR27137-CR153
					57	PSB RC92 (IR9202-25-1-3)
	F	Sakha, Egypt	2.6 - 8.9	5.0	51	PJ-2(NSICRC 104)
					20	HEXI 5
					53	PR26878-PJ13
					80	GIZA 178
					79	GIZA 177
	G	Vercelli, Italy	0.5 - 5.5	3.2	32	IR68333-R-R-B-22
					58	PSB RC94
					19	HEXI 2
					57	PSB RC92 (IR9202-25-1-3)
					1	7913-TR34-1-1
Group III	A	Hangzhou, China	1.2 - 7.4	4.0	79	SHANYOU 63
					27	HURI 282
					11	CT6746-10-7-1-M-2-M
					80	XIUSHUI 11
					4	AKIYUDAKA

Table 11. Phenotypic acceptability scores of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	PHEN. ACCEP. SCORES AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	AVE
1	7913-TR34-1-1	7	2	5	7	1	5	5
2	80007-TR210-14-1-1	5	2	5	9	7	5	6
3	80023-TR166-2-1-4	5	2	.	9	1	7	5
4	AKIYUDAKA	4	2	3	5	7	7	5
5	ALFA	.	2	.	7	3	5	4
6	ALPE	5	2	5	7	5	5	5
7	C732046	.	2	.	5	5	3	4
8	CERVO	.	.	.	7	.	7	7
9	CHUNJIANG 11	.	.	.	5	.	5	5
10	CT6742-10-10-1-M-M-M	.	.	.	5	5	5	5
11	CT6746-10-7-1-M-2-M	4	2	7	7	5	5	5
12	CT6747-CA-1	7	2	5	9	1	5	5
13	CUIABANA	.	2	.	7	.	.	5
14	DOONGARA	5	2	3	9	1	5	4
15	DOURADAO	7	2	7	7	5	5	6
16	GIGANTE VERCELLI	.	2	.	7	1	5	4
17	GIZELLA	.	.	.	.	.	.	
18	GUARANI	7	2	7	7	3	7	6
19	HEXI 2	.	2	3	5	1	3	3
20	HEXI 5	.	2	3	5	.	3	3
21	HR5824-B-3-2-3	.	2	3	9	5	5	5
22	HS-601	.	2	.	7	1	.	3
23	HSC14	7	2	3	9	1	5	5
24	HSL447	9	2	5	.	.	5	5
25	HU143	.	1	.	9	5	7	6
26	HUA LIEN YU 202	5	2	3	7	3	3	4
27	HURI 282	4	2	3	7	1	5	4
28	IR53236-139	7	2	7	5	5	7	6
29	IR55411-50	5	.	7	5	.	5	6
30	IR57893-76	7	2	7	5	1	7	5
31	IR57924-9	7	2	5	7	.	7	6
32	IR68333-R-R-B-22	.	.	3	5	1	3	3
33	IRAT 244	5	2	7	5	7	5	5
34	IRAT 251	7	2	7	7	5	5	6
35	IRAT 260	5	2	5	7	3	.	4
36	IRAT 266	7	2	5	7	1	7	5
37	IZ-160-2	9	1	3	9	1	5	5
38	JARRAH	.	1	3	9	3	7	5
39	JOJO	.	2	.	7	5	3	4
40	KUNMING 830	.	1	.	7	1	.	3
41	LIDO	.	2	.	7	3	.	4
42	LINE 26	.	2	.	7	.	5	5

Table 11. Phenotypic acceptability scores of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	PHEN. ACCEP. SCORES AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	AVE
43	LUSITANO	.	.	.	7	1	5	4
44	MARICA	.	2	3	9	3	.	4
45	MILYANG 104	.	2	.	7	.	3	4
46	NAMYANG 10	7	2	.	7	1	5	4
47	NIPPONBARE	.	.	.	9	.	.	9
48	ONPO 6	.	1	.	5	3	3	3
49	PADANO	.	.	.	7	1	5	4
50	PELDE (ACC65721)	.	.	7	7	1	5	5
51	PJ-2(NSICRC 104)	.	1	3	3	1	5	3
52	PR26391-692CRF	.	2	.	5	5	3	4
53	PR26878-PJ13	5	2	7	7	5	3	5
54	PR27137-CR153	5	2	5	5	1	7	4
55	PSB RC44(IR59468-B-B-3-2)	5	1	7	5	.	5	5
56	PSB RC46	5	2	3	7	1	5	4
57	PSB RC92 (IR9202-25-1-3)	7	2	3	5	5	7	5
58	PSB RC94	5	2	3	7	1	5	4
59	PSB RC96	5	2	3	3	5	5	4
60	RYONGSONG 12	.	2	.	7	.	5	5
61	SANDORA	.	2	.	9	.	.	6
62	SIM2 SUMADEL	7	2	7	7	.	7	6
63	SOHAECHAL	.	1	.	9	3	3	4
64	SUWEON 235(SANGPUNGBYEO)	.	.	.	5	3	3	4
65	SUWEON 287(TAEBAEGBYEO)	5	2	3	3	5	3	4
66	SUWEON 355	7	2	.	7	3	3	4
67	SUWEON 375	7	2	.	7	5	3	5
68	TAINUNG YU 1537	.	2	.	5	.	.	4
69	THAIBONNET	.	2	.	7	.	5	5
70	VENERIA	.	2	.	7	1	7	4
71	YR5190-16-2-1-2	.	2	.	7	5	3	4
72	YUNLEN 7	7	2	7	5	1	5	5
73	YUNLEN 9	.	2	.	9	.	5	5
74	ZHAOTONMAXAIGU	7	2	7	5	.	5	5
75	IR73691-14-1	.	.	.	5	1	3	3
76	IR50	5	2	3	5	4	6	4
77	IR72	5	2	3	5	5	7	5
78	PSB RC2(IR32809-26-3-3)	5	1	7	8	4	7	5
79	LOCAL CHECK 1 (SPECIFY NAME)	1	2	3	3	2	3	2
80	LOCAL CHECK 2 (SPECIFY NAME)	3	2	3	3	.	3	3
	SITE MEAN	5.8	1.9	4.7	6.5	3.0	4.9	

* TRIAL CODES IDENTIFIED IN TABLE 1.

Table 12. Seedling vigor scores of entries in the 4th IRTON (2003) trials.

ENTRY		SEEDLING VIGOR SCORES AT SPECIFIED TRIAL CODE*						
NO.	DESIGNATION	A	B	C	D	E	G	AVE
1	7913-TR34-1-1	1	1	3	7	1	2	3
2	80007-TR210-14-1-1	3	1	3	7	1	3	3
3	80023-TR166-2-1-4	3	1	.	7	1	3	3
4	AKIYUDAKA	1	1	3	5	1	3	2
5	ALFA	.	1	.	5	1	2	2
6	ALPE	3	1	3	7	1	2	3
7	C732046	.	1	.	5	1	.	2
8	CERVO	.	.	.	5	1	.	3
9	CHUNJIANG 11	.	.	.	5	.	1	3
10	CT6742-10-10-1-M-M-M	.	.	.	5	5	1	4
11	CT6746-10-7-1-M-2-M	3	1	3	5	1	3	3
12	CT6747-CA-1	5	1	3	7	1	2	3
13	CUIABANA	.	1	.	5	.	.	3
14	DOONGARA	5	1	5	5	1	2	3
15	DOURADAO	7	1	5	5	5	3	4
16	GIGANTE VERCELLI	.	1	.	5	1	1	2
17	GIZELLA	.	.	.	.	.	.	
18	GUARANI	5	1	5	5	5	1	4
19	HEXI 2	.	1	5	5	1	3	3
20	HEXI 5	.	1	3	3	5	1	3
21	HR5824-B-3-2-3	.	1	3	7	5	1	3
22	HS-601	.	1	.	5	3	.	3
23	HSC14	5	1	3	5	1	3	3
24	HSL447	5	1	3	.	.	2	3
25	HU143	.	1	.	7	5	1	4
26	HUA LIEN YU 202	5	1	3	5	1	2	3
27	HURI 282	3	1	3	5	1	1	2
28	IR53236-139	7	1	5	5	1	1	3
29	IR55411-50	3	.	3	3	1	2	2
30	IR57893-76	7	1	5	5	1	3	4
31	IR57924-9	1	1	5	5	.	3	3
32	IR68333-R-R-B-22	.	.	3	5	1	3	3
33	IRAT 244	5	1	3	5	1	2	3
34	IRAT 251	7	1	5	5	3	2	4
35	IRAT 260	7	1	5	7	3	1	4
36	IRAT 266	7	1	5	7	1	2	4
37	IZ-160-2	5	1	3	7	1	3	3
38	JARRAH	.	1	3	5	1	1	2
39	JOJO	.	1	.	7	3	.	4
40	KUNMING 830	.	1	.	5	1	.	2
41	LIDO	.	1	.	5	5	.	4
42	LINE 26	.	1	.	5	.	.	3

Table 12. Seedling vigor scores of entries in the 4th IRTON (2003) trials.

ENTRY		SEEDLING VIGOR SCORES AT SPECIFIED TRIAL CODE*						
NO.	DESIGNATION	A	B	C	D	E	G	AVE
43	LUSITANO	.	.	.	7	3	1	4
44	MARICA	.	1	3	7	3	1	3
45	MILYANG 104	.	1	.	7	.	1	3
46	NAMYANG 10	3	1	.	5	1	2	2
47	NIPPONBARE	.	.	.	5	.	.	5
48	ONPO 6	.	1	.	7	3	2	3
49	PADANO	.	.	.	5	1	2	3
50	PELDE (ACC65721)	.	.	3	3	1	1	2
51	PJ-2(NSICRC 104)	.	1	5	5	1	2	3
52	PR26391-692CRF	.	1	.	5	3	1	3
53	PR26878-PJ13	5	1	3	5	1	.	3
54	PR27137-CR153	3	1	3	5	1	1	2
55	PSB RC44(IR59468-B-B-3-2)	3	1	3	5	.	3	3
56	PSB RC46	3	1	3	3	1	2	2
57	PSB RC92 (IR9202-25-1-3)	1	1	3	5	3	3	3
58	PSB RC94	1	1	5	5	1	2	3
59	PSB RC96	3	1	5	5	5	3	4
60	RYONGSONG 12	.	1	.	7	.	2	3
61	SANDORA	.	1	.	7	.	.	4
62	SIM2 SUMADEL	3	1	3	3	.	3	3
63	SOHAECHAL	.	1	.	7	1	.	3
64	SUWEON 235(SANGPUNGBYEO)	.	.	.	5	1	2	3
65	SUWEON 287(TAEBAEGBYEO)	3	1	5	3	1	1	2
66	SUWEON 355	3	1	.	7	5	.	4
67	SUWEON 375	3	1	.	5	1	1	2
68	TAINUNG YU 1537	.	1	.	5	.	3	3
69	THAIBONNET	.	1	.	5	.	.	3
70	VENERIA	.	1	.	3	1	.	2
71	YR5190-16-2-1-2	.	1	.	5	3	1	3
72	YUNLEN 7	1	1	3	3	1	1	2
73	YUNLEN 9	.	1	.	5	.	.	3
74	ZHAOTONMAXAIGU	7	1	1	5	.	1	3
75	IR73691-14-1	.	.	.	5	5	.	5
76	IR50	3	1	5	5	2	2	3
77	IR72	3	1	5	5	1	3	3
78	PSB RC2(IR32809-26-3-3)	2	1	4	5	.	1	3
79	LOCAL CHECK 1 (SPECIFY NAME)	1	1	5	5	2	2	3
80	LOCAL CHECK 2 (SPECIFY NAME)	3	1	5	5	2	2	3
	SITE MEAN	3.7	1.0	3.8	5.3	2.0	1.9	

*TRIAL CODES IDENTIFIED IN TABLE 1

Table 13. Days to 50% flowering of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	DAYS TO 50% FLOWERING AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	AVG.
1	7913-TR34-1-1	94	138	99	90	107	78	101
2	80007-TR210-14-1-1	79	115	95	84	102	74	92
3	80023-TR166-2-1-4	76	119	.	62	105	78	88
4	AKIYUDAKA	95	140	126	90	77	107	106
5	ALFA	.	152	.	65	80	78	94
6	ALPE	65	116	97	82	93	74	88
7	C732046	.	130	.	90	103	97	105
8	CERVO	.	.	.	75	81	78	78
9	CHUNJIANG 11	.	.	.	78	.	107	93
10	CT6742-10-10-1-M-M-M	.	.	.	103	107	87	99
11	CT6746-10-7-1-M-2-M	80	113	106	93	103	87	97
12	CT6747-CA-1	73	125	100	83	102	82	94
13	CUIABANA	.	122	.	125	83	.	110
14	DOONGARA	81	127	109	86	109	90	100
15	DOURADAO	89	125	109	101	112	82	103
16	GIGANTE VERCELLI	.	142	.	109	.	84	112
17	GIZELLA	.	.	.	.	.	.	.
18	GUARANI	78	116	109	120	111	94	105
19	HEXI 2	.	127	105	73	124	82	102
20	HEXI 5	.	119	106	85	105	82	99
21	HR5824-B-3-2-3	.	159	96	58	89	70	94
22	HS-601	.	121	.	100	116	.	112
23	HSC14	59	107	87	79	101	73	84
24	HSL447	64	115	92	.	119	72	92
25	HU143	.	110	.	73	120	65	92
26	HUA LIEN YU 202	92	144	113	91	101	95	106
27	HURI 282	80	116	90	83	93	78	90
28	IR53236-139	88	139	101	136	113	94	112
29	IR55411-50	84	.	117	114	.	101	104
30	IR57893-76	88	126	108	118	112	91	107
31	IR57924-9	99	154	131	104	.	110	120
32	IR68333-R-R-B-22	.	.	108	83	91	85	92
33	IRAT 244	88	150	111	114	106	97	111
34	IRAT 251	92	145	112	114	110	98	112
35	IRAT 260	84	122	109	88	97	.	100
36	IRAT 266	87	97	108	86	91	92	94
37	IZ-160-2	45	101	81	63	81	85	76
38	JARRAH	.	159	97	60	81	78	95
39	JOJO	.	150	.	73	95	82	100
40	KUNMING 830	.	157	.	129	119	.	135
41	LIDO	.	152	.	77	84	.	104
42	LINE 26	.	142	.	79	.	114	112

Table 13. Days to 50% flowering of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	DAYS TO 50% FLOWERING AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	AVG.
43	LUSITANO	.	.	.	77	101	65	81
44	MARICA	.	116	99	82	90	.	97
45	MILYANG 104	.	113	.	70	.	86	90
46	NAMYANG 10	70	121	.	64	80	78	83
47	NIPPONBARE	.	.	.	80	.	.	80
48	ONPO 6	.	159	.	75	84	74	98
49	PADANO	.	.	.	82	102	82	89
50	PELDE (ACC65721)	.	.	108	113	114	91	107
51	PJ-2(NSICRC 104)	.	159	109	107	97	94	113
52	PR26391-692CRF	.	125	.	83	87	89	96
53	PR26878-PJ13	77	130	109	97	119	85	103
54	PR27137-CR153	80	124	105	83	99	94	98
55	PSB RC44(IR59468-B-B-3-2)	82	159	123	104	.	103	114
56	PSB RC46	97	129	115	116	111	95	111
57	PSB RC92 (IR9202-25-1-3)	78	119	109	126	109	95	106
58	PSB RC94	81	128	108	84	79	95	96
59	PSB RC96	83	117	112	98	136	95	107
60	RYONGSONG 12	.	149	.	72	.	82	101
61	SANDORA	.	118	.	74	.	.	96
62	SIM2 SUMADEL	101	135	124	99	.	107	113
63	SOHAECHAL	.	95	.	79	81	76	83
64	SUWEON 235(SANGPUNGBYEO)	.	.	.	74	85	88	82
65	SUWEON 287(TAEBAEGBYEO)	78	113	107	76	80	91	91
66	SUWEON 355	78	118	.	64	127	80	93
67	SUWEON 375	70	131	.	80	94	76	90
68	TAINUNG YU 1537	.	123	.	98	.	.	111
69	THAIBONNET	.	128	.	77	.	92	99
70	VENERIA	.	148	.	85	85	79	99
71	YR5190-16-2-1-2	.	124	.	70	78	82	89
72	YUNLEN 7	88	124	123	114	116	96	110
73	YUNLEN 9	.	117	.	123	.	98	113
74	ZHAOTONMAXAIGU	87	143	117	136	.	98	116
75	IR73691-14-1	.	.	.	82	94	85	87
76	IR50	80	122	111	73	77	93	93
77	IR72	94	142	119	75	73	107	102
78	PSB RC2(IR32809-26-3-3)	105	140	138	64	.	117	113
79	LOCAL CHECK 1 (SPECIFY NAME)	87	128	104	130	111	89	108
80	LOCAL CHECK 2 (SPECIFY NAME)	104	131	113	121	115	96	113
	SITE MEAN	82.9	129.7	108.2	90.0	99.2	88.2	

* TRIAL CODES IDENTIFIED IN TABLE 1.

Table 14. Plant height (cm) of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	PLANT HEIGHT (cm) AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	G	AVG
1	7913-TR34-1-1	133	102	114	79	80	109	89	101
2	80007-TR210-14-1-1	108	94	108	75	76	120	87	95
3	80023-TR166-2-1-4	109	101	.	76	80	125	80	95
4	AKIYUDAKA	118	70	103	91	85	118	102	98
5	ALFA	.	73	.	79	78	96	81	81
6	ALPE	95	77	94	77	73	104	83	86
7	C732046	.	63	.	92	103	105	.	91
8	CERVO	.	.	.	78	73	98	.	83
9	CHUNJIANG 11	.	.	.	94	.	106	102	101
10	CT6742-10-10-1-M-M-M	.	.	.	84	86	109	91	93
11	CT6746-10-7-1-M-2-M	111	82	117	82	78	116	102	98
12	CT6747-CA-1	96	80	109	78	78	99	90	90
13	CUIABANA	.	70	.	101	.	.	.	86
14	DOONGARA	105	74	91	87	94	95	104	93
15	DOURADAO	125	98	121	90	95	129	87	106
16	GIGANTE VERCELLI	.	105	.	76	78	136	85	96
17	GIZELLA	.	.	.	.	.	.	.	.
18	GUARANI	129	90	130	92	95	138	89	109
19	HEXI 2	.	103	89	82	84	91	89	90
20	HEXI 5	.	108	113	82	94	110	90	100
21	HR5824-B-3-2-3	.	61	95	64	73	92	85	78
22	HS-601	.	62	.	76	93	.	.	77
23	HSC14	92	79	99	70	72	112	69	85
24	HSL447	98	105	111	.	94	126	69	101
25	HU143	.	53	.	64	69	89	69	69
26	HUA LIEN YU 202	107	79	103	91	89	118	104	99
27	HURI 282	107	77	109	70	73	112	80	90
28	IR53236-139	133	101	125	89	99	126	114	112
29	IR55411-50	139	.	131	99	.	130	114	123
30	IR57893-76	125	96	134	91	100	142	86	111
31	IR57924-9	135	77	115	97	.	126	112	110
32	IR68333-R-R-B-22	.	.	100	85	94	100	114	99
33	IRAT 244	129	110	136	97	103	90	104	110
34	IRAT 251	135	94	138	95	103	144	102	116
35	IRAT 260	107	79	104	93	99	.	89	95
36	IRAT 266	101	70	103	89	101	113	87	95
37	IZ-160-2	67	60	90	63	68	90	69	72
38	JARRAH	.	57	92	70	71	73	104	78
39	JOJO	.	103	.	70	76	96	.	86
40	KUNMING 830	.	66	.	82	95	.	.	81
41	LIDO	.	106	.	78	98	.	.	94
42	LINE 26	.	78	.	93	.	115	.	95

Table 14. Plant height (cm) of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	PLANT HEIGHT (cm) AT SPECIFIED TRIAL CODE* A	B	C	D	E	F	G	AVG
43	LUSITANO	.	.	.	66	71	103	87	82
44	MARICA	.	80	107	68	73	.	92	84
45	MILYANG 104	.	103	.	78	.	92	104	94
46	NAMYANG 10	74	84	.	74	90	83	104	85
47	NIPPONBARE	.	.	.	85	.	.	.	85
48	ONPO 6	.	60	.	74	72	105	89	80
49	PADANO	.	.	.	80	95	100	83	90
50	PELDE (ACC65721)	.	.	118	89	94	128	114	109
51	PJ-2(NSICRC 104)	.	66	103	89	94	128	102	97
52	PR26391-692CRF	.	80	.	86	95	97	89	89
53	PR26878-PJ13	92	103	116	84	94	112	92	99
54	PR27137-CR153	95	88	106	89	94	110	104	98
55	PSB RC44(IR59468-B-B-3-2)	130	87	129	100	.	130	114	115
56	PSB RC46	121	96	120	99	103	149	123	116
57	PSB RC92 (IR9202-25-1-3)	150	97	136	93	99	137	114	118
58	PSB RC94	113	77	94	91	96	113	119	100
59	PSB RC96	112	70	105	91	103	124	122	104
60	RYONGSONG 12	.	64	.	75	.	75	102	79
61	SANDORA	.	82	.	73	.	.	.	78
62	SIM2 SUMADEL	138	94	128	113	.	140	91	117
63	SOHAECHAL	.	65	.	76	90	102	.	83
64	SUWEON 235(SANGPUNGBYEO)	.	.	.	80	94	103	104	95
65	SUWEON 287(TAEBAEGBYEO)	105	75	82	89	96	97	98	92
66	SUWEON 355	82	65	.	75	92	88	.	80
67	SUWEON 375	76	76	.	102	80	110	106	92
68	TAINUNG YU 1537	.	84	.	91	.	.	106	94
69	THAIBONNET	.	104	.	84	103	96	.	97
70	VENERIA	.	73	.	77	75	98	83	81
71	YR5190-16-2-1-2	.	76	.	76	95	97	83	85
72	YUNLEN 7	125	100	137	87	94	141	92	111
73	YUNLEN 9	.	116	.	90	.	149	.	118
74	ZHAOTONMAXAIGU	187	151	196	92	.	162	102	148
75	IR73691-14-1	.	.	.	80	92	91	.	88
76	IR50	94	65	89	89	94	89	112	90
77	IR72	95	66	86	98	95	96	117	93
78	PSB RC2(IR32809-26-3-3)	114	68	90	116	.	92	119	100
79	LOCAL CHECK 1 (SPECIFY NAME)	123	93	94	84	97	103	80	96
80	LOCAL CHECK 2 (SPECIFY NAME)	99	101	97	93	91	100	89	96
	SITE MEAN	112.6	84.0	111.0	84.6	88.5	110.5	96.2	

*TRIAL CODES IDENTIFIED IN TABLE 1.

Table 15. Reactions to stresses of entries in the 4th IRTON (2003) trials.

ENTRY NO.	DESIGNATION	Reaction scores to BL G	PB D	SB F
1	7913-TR34-1-1	.	5	5
2	80007-TR210-14-1-1	2	9	7
3	80023-TR166-2-1-4	1	5	7
4	AKIYUDAKA	.	1	5
5	ALFA	7	5	7
6	ALPE	7	5	3
7	C732046	.	1	3
8	CERVO	.	3	7
9	CHUNJIANG 11	.	1	3
10	CT6742-10-10-1-M-M-M	4	5	7
11	CT6746-10-7-1-M-2-M	2	3	7
12	CT6747-CA-1	3	7	3
13	CUIABANA	.	3	.
14	DOONGARA	.	7	7
15	DOURADAO	1	3	7
16	GIGANTE VERCELLI	1	3	7
17	GIZELLA	.	.	.
18	GUARANI	3	5	7
19	HEXI 2	.	1	3
20	HEXI 5	8	1	3
21	HR5824-B-3-2-3	5	3	3
22	HS-601	1	5	.
23	HSC14	.	5	7
24	HSL447	4	.	3
25	HU143	.	9	7
26	HUA LIEN YU 202	9	3	3
27	HURI 282	1	3	7
28	IR53236-139	1	1	7
29	IR55411-50	1	1	5
30	IR57893-76	2	3	7
31	IR57924-9	.	3	5
32	IR68333-R-R-B-22	1	1	3
33	IRAT 244	3	3	7
34	IRAT 251	2	3	7
35	IRAT 260	1	3	.
36	IRAT 266	4	3	7
37	IZ-160-2	4	9	5
38	JARRAH	5	7	5
39	JOJO	.	3	3
40	KUNMING 830	.	1	.
41	LIDO	.	3	.
42	LINE 26	.	1	5
43	LUSITANO	.	5	7
44	MARICA	5	5	.
45	MILYANG 104	.	3	3
46	NAMYANG 10	1	3	3
47	NIPPONBARE	.	5	.
48	ONPO 6	1	1	3
49	PADANO	7	5	3
50	PELDE (ACC65721)	3	5	5
51	PJ-2(NSICRC 104)	2	1	3
52	PR26391-692CRF	.	1	3
53	PR26878-PJ13	.	1	3
54	PR27137-CR153	.	1	3
55	PSB RC44(IR59468-B-B-3-2)	2	1	5
56	PSB RC46	.	1	5
57	PSB RC92 (IR9202-25-1-3)	2	1	7
58	PSB RC94	2	3	5
59	PSB RC96	4	1	7
60	RYONGSONG 12	8	1	5
61	SANDORA	.	7	.
62	SIM2 SUMADEL	4	3	3
63	SOHAECHAL	.	3	3
64	SUWEON 235(SANGPUNGBYEO)	1	3	3
65	SUWEON 287(TAEBAEGBYEO)	4	1	3
66	SUWEON 355	4	3	3
67	SUWEON 375	.	1	3
68	TAINUNG YU 1537	1	1	.
69	THAIBONNET	.	5	3
70	VENERIA	.	5	3
71	YR5190-16-2-1-2	4	3	3
72	YUNLEN 7	.	1	7
73	YUNLEN 9	.	1	5
74	ZHAOTONMAXAIGU	.	3	3
75	IR73691-14-1	.	3	3
76	IR50	1	4	4
77	IR72	2	3	4
78	PSB RC2(IR32809-26-3-3)	2	3	5
79	LOCAL CHECK 1 (SPECIFY NAME)	5	1	3
80	LOCAL CHECK 2 (SPECIFY NAME)	5	2	3
	SITE MEAN	3	4	5

Table 16. Entries best rating for resitance to biotic stresses at specific test sites, 2003 IRTON.

STRESS	LOCATION/ COUNTRY	REACTION SCORE	SITE MEAN	NO. OF ENTRIES	ENTRY NO.	DESIGNATION
Leaf blast	Vercelli, Italy	1	3	12	3	80023-TR166-2-1-4
					15	DOURADAO
					16	GIGANTE VERCELLI
					27	HURI 282
					29	IR55411-50
					32	IR68333-R-R-B-22
					35	IRAT 260
					45	MILYANG 104
					48	ONPO 6
					64	SUWEON 235(SANGPUNGBYEO)
					68	TAINUNG YU 1537
					76	IR50
Panicle blast	Hawalbagh, India	1	4	26	4	AKIYUDAKA
					7	C732046
					9	CHUNJIANG 11
					19	HEXI 2
					20	HEXI 5
					28	IR53236-139
					29	IR55411-50
					32	IR68333-R-R-B-22
					40	KUNMING 830
					42	LINE 26
					48	ONPO 6
					51	PJ-2(NSICRC 104)
					52	PR26391-692CRF
					53	PR26878-PJ13
					54	PR27137-CR153
					55	PSB RC44(IR59468-B-B-3-2)
					56	PSB RC46
					57	PSB RC92 (IR9202-25-1-3)
					59	PSB RC96
					60	RYONGSONG 12
					65	SUWEON 287(TAEBAEGBYEO)
					67	SUWEON 375
					68	TAINUNG YU 1537
					72	YUNLEN 7
					73	YUNLEN 9
					79	VIVEK DHAN - 82
Stem borer	Sakha, Egypt	3	5	31	6	ALPE
					7	C732046
					9	CHUNJIANG 11
					12	CT6747-CA-1
					19	HEXI 2
					20	HEXI 5

Table 16. Entries best rating for resitance to biotic stresses at specific test sites, 2003 IRTON.

STRESS	LOCATION/ COUNTRY	REACTION SCORE	SITE MEAN	NO. OF ENTRIES	ENTRY NO.	DESIGNATION
					21	HR5824-B-3-2-3
					24	HSL447
					26	HUA LIEN YU 202
					32	IR68333-R-R-B-22
					39	JOJO
					45	MILYANG 104
					46	NAMYANG 10
					48	ONPO 6
					49	PADANO
					51	PJ-2(NSICRC 104)
					52	PR26391-692CRF
					53	PR26878-PJ13
					54	PR27137-CR153
					62	SIM2 SUMADEL
					63	SOHAECHAL
					64	SUWEON 235(SANGPUNGBYEO)
					65	SUWEON 287(TAEBAEGBYEO)
					66	SUWEON 355
					67	SUWEON 375
					69	THAIBONNET
					70	VENERIA
					71	YR5190-16-2-1-2
					75	IR73691-14-1
					79	GIZA 177
					80	GIZA 178

Table 17. Entries from the 2003 IRTON selected by NARS for follow-up yield trials.

Country	Station	Designation	Origin
Egypt	Rice Research And Training Center	C732046	Taiwan
Egypt	Rice Research And Training Center	CHUNJIANG 11	China
Egypt	Rice Research And Training Center	HEXI 2	China
Egypt	Rice Research And Training Center	HEXI 5	China
Egypt	Rice Research And Training Center	HR5824-B-3-2-3	Korea
Egypt	Rice Research And Training Center	JOJO	Korea
Egypt	Rice Research And Training Center	MILYANG 104	Korea
Egypt	Rice Research And Training Center	NAMYANG 10	Korea
Egypt	Rice Research And Training Center	PR26391-692CRF	Philippines
Egypt	Rice Research And Training Center	PR26878-PJ13	Philippines
Egypt	Rice Research And Training Center	SOHAECHAL	Korea
Egypt	Rice Research And Training Center	SUWEON 287(TAEBAEGBYEO)	Korea
Egypt	Rice Research And Training Center	SUWEON 355	Korea
Egypt	Rice Research And Training Center	SUWEON 375	Korea

Table 18. List of 2003 IRTON entries used in Hybridization.

COUNTRY	LOCATION	DESIGNATION	ORIGIN
China	Yu Xi, Yunnan	80023-TR166-2-1-4	Turkey
China	Hangzhou, Zhejiang	AKIYUDAKA	Republic Of Korea
China	Hangzhou, Zhejiang	ALPE	Italy
China	Yu Xi, Yunnan	HSL447	Hungary
China	Yu Xi, Yunnan	HUA LIEN YU 202	Taiwan
China	Hangzhou, Zhejiang	HUA LIEN YU 202	Taiwan
China	Hangzhou, Zhejiang	HURI 282	Hungary
China	Yu Xi, Yunnan	JOJO	Republic Of Korea
China	Yu Xi, Yunnan	MILYANG 104	Republic Of Korea
China	Yu Xi, Yunnan	PR26878-PJ13	Philippines
China	Hangzhou, Zhejiang	PR26878-PJ13	Philippines
China	Hangzhou, Zhejiang	PR27137-CR153	Philippines
China	Yu Xi, Yunnan	SANDORA	Hungary
China	Hangzhou, Zhejiang	SUWEON 355	Republic Of Korea
China	Yu Xi, Yunnan	THAIBONNET	Italy
Republic Of Korea	Suweon	DOONGARA	Australia
Republic Of Korea	Suweon	HSC14	Hungary
Republic Of Korea	Suweon	IRAT 244	Brazil
Republic Of Korea	Suweon	IRAT 251	Brazil
Republic Of Korea	Suweon	IRAT 260	Ivory Coast
Republic Of Korea	Suweon	IRAT 266	Ivory Coast
Republic Of Korea	Suweon	IZ-160-2	Turkey
Republic Of Korea	Suweon	JARRAH	Australia
Republic Of Korea	Suweon	ZHAOTONMAXAIGU	China