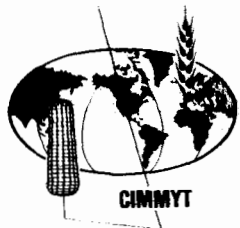


# Results of the Sixth International Barley Yield Trial (IBYT) 1983-84



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**CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO  
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER  
Lisboa 27, Apdo. Postal 6-641, 06600 México, D.F., México**



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**GLOSSARY OF ABBREVIATIONS AND UNITS OF MEASURE  
GLOSARIO DE ABREVIATURAS Y UNIDADES DE MEDICION  
GLOSSAIRE DES ABRÉVIATIONS ET UNITÉS DE MESURE**

Abbreviation	Scientific name	Variable name(scale)	Nombre de la variable (escala)	Nom de la variable (échelle)
AL TOL		Aluminum tolerance (0-9 scale)	Tolerancia al aluminio (escala 0-9)	Tolérance à l'aluminium (échelle 0-9)
ALT B	<i>Alternaria triticina</i>	Alternaria leaf blight (0-9 scale)	Tizón por alternaria (escala 0-9)	Alternaria (échelle 0-9)
ANT DMGE		Ant damage (percentage)	Porcentaje de daño por hormigas	Dégat du aux fourmis en pourcentage
APHD DMGE		Aphid damage (percentage)	Porcentaje de daño por áfidos	Dégat du aux pucerons en pourcentage
ARMY WORM		Army worm damage (percentage)	Porcentaje de daño por gusano cogollero	Dégat du aux noctuelles en pourcentage
BAC S	<i>Xanthomonas campestris</i>	Bacterial stripe (0-9 scale)	Rayado bacteriano y pajilla negra (escala 0-9)	Rayure bactérienne (échelle 0-9)
BAC B	<i>Pseudomonas syringae</i>	Bacterial blight (0-9 scale)	Tizón bacteriano de la hoja (escala 0-9)	Brulure bactérienne des feuilles (échelle 0-9)
BAR S	<i>Pyrenophora graminea</i> (syn. <i>Drechslera gramineum</i> , syn. <i>Helminthosporium gramineum</i> )	Barley stripe (0-9 scale)	Mancha estriada de la cebada	Taches brunes de l'orge ( <i>Helminthosporium gramineum</i> ) (échelle 0-9)
BIRD DMGE		Bird damage (percentage)	Porcentaje de daño por pájaros	Dégat du aux oiseaux en pourcentage
BW		Bread wheat	Trigo	Blé
BYDV		Barley yellow dwarf virus (0-9 scale)	Virus del enanismo amarillo de la cebada (escala 0-9)	Jaunisse nanisante de l'orge (échelle 0-9)
CHECK MARK		Selected for further investigation	Seleccionada para investigación adicional	Selectionnée pour recherche additionnelle
COVD SMUT	<i>Ustilago hordei (U. kolerii)</i>	Covered smut (percentage)	Porcentaje de carbón cubierto	Charbon couvert en pourcentage
EARS/M2		Ears per square meter	Espigas por metro cuadrado	Epis par mètre carré
FALL NO		Falling number (seconds)	Actividad alfa amilasa (segundos)	Activité de l'alpha amylase (en secondes)
FERT %		Fertility (percentage)	Porcentaje de fertilidad	Fertilité en pourcentage
FRST DMGE		Frost damage (percentage)	Porcentaje de daño por heladas	Dégat du au gel en pourcentage
FUS N	<i>Fusarium nivale</i> (syn. <i>Monographella nivalis</i> )	Fusarium leaf blotch (0-9 scale)	Mancha de la hoja y moho niveo (moho blanco) (escala 0-9)	Tache de la feuille ( <i>Fusarium nivale</i> ) (échelle 0-9)
GERM %		Germination (percentage)	Porcentaje de germinación	Germination en pourcentage
HAIL DMGE		Hail damage (percentage)	Porcentaje de daño por granizo	Dégat du à la grêle en pourcentage
HEAD DAYS		Number of days to heading	Número de días al espigamiento	Nombre de jours à l'épiaison
HEL SP	<i>Helminthosporium spp.</i>	Helminthosporium (0-9 scale)	Helminthosporium (escala 0-9)	Helminthosporium (échelle 0-9)
L FIRE		Leaf fire (0-9 scale)	Tizón foliar (escala 0-9)	Sécheresse des feuilles (échelle 0-9)
LEAF RUST	<i>Puccinia recondita</i>	Wheat leaf rust (Cobb scale)	Roya de la hoja-trigo (escala de Cobb)	Rouille brune du blé (échelle de Cobb)
LEAF RUST	<i>Puccinia hordei</i>	Barley leaf rust (Cobb scale)	Roya de la hoja-cebada (escala de Cobb)	Rouille brune de l'orge (échelle de Cobb)
LODG %		Lodging (percentage)	Porcentaje de acame (vuelco)	Verse en pourcentage
LSE SMUT	<i>Ustilago nuda (U. tritici)</i>	Loose smut (percentage)	Porcentaje de carbón volador	Charbon nu en pourcentage
MAT DAYS		Number of days to maturity	Número de días a la madurez	Nombre de jours à la maturation
MOIST %		Moisture (percentage)	Porcentaje de humedad	Humidité en pourcentage
NECK BRK		Neck breakage (percentage)	Porcentaje de rotura de cuello	Cassure du pédoncule en pourcentage
NET B	<i>Pyrenophora teres</i> (syn. <i>Drechslera teres</i> , syn. <i>Helminthosporium teres</i> )	Net blotch (0-9 scale)	Mancha reticulada (escala 0-9)	Helminthosporium de l'orge (échelle 0-9)
NOBS		Number of observations	Número de observaciones	Nombre d'observations
OFS		Free State Streak	Estriado del estado libre	Rayure Free State
PC		Percentage	Porcentaje	Pourcentage
PLNT DENS		Plant density (stems/m2)	Densidad de plantas (tallos/m2)	Population de plantes (tiges/m2)
PLNT HT		Plant height (cm)	Altura de planta (cm)	Hauteur (cm)
POW M	<i>Erysiphe graminis</i>	Powdery mildew (0-9 scale)	Oídio o cenicilla polvorienta (escala 0-9)	Oïdium (échelle 0-9)
PROT %		Protein (percentage)	Porcentaje de proteína	Protéine en pourcentage
SCAB %	<i>Fusarium spp.</i>	Head scab (percentage)	Porcentaje de roña	Fusarium de l'épi en pourcentage
SCLD	<i>Rhynchosporium secalis</i>	Scald (0-9 scale)	Escaldadura (escala 0-9)	Rhynchosporium (échelle 0-9)
SDMT INDX		Sedimentation index (cc)	Índice de sedimentación (cc)	Indice de sédimentation (cc)
SEP N	<i>Leptosphaeria nodorum</i> (syn. <i>Septoria nodorum</i> )	Septoria glume blotch (0-9 scale)	Tizón de la gluma (escala 0-9)	Septoria nodorum (échelle 0-9)
SEP S	<i>Septoria spp.</i>	Septoria glume/leaf blotch (0-9 scale)	Septoria (escala 0-9)	Septoria (échelle 0-9)
SEP T	<i>Mycosphaerella graminicola</i> (syn. <i>Septoria tritici</i> )	Septoria leaf blotch (0-9 scale)	Mancha foliar o tizón foliar (escala 0-9)	Septoria tritici (échelle 0-9)
SHTR %		Shattering, head (percentage)	Porcentaje de desgrane (espiga)	Egrenage en pourcentage
SL		Sea level	Nivel del mar	Niveau de la mer
SPT B	<i>Cochliobolus sativus</i> (syn. <i>Bipolaria sorokiniana</i> , syn. <i>Helminthosporium sativum</i> )	Spot blotch (0-9 scale)	Tizón foliar (escala 0-9)	Tache de la feuille ( <i>Helminthosporium sativum</i> ) (échelle 0-9)
STEM RUST	<i>Puccinia graminis</i>	Stem rust (Cobb scale)	Roya del tallo (escala de Cobb)	Rouille noire (échelle de Cobb)
STRP RT.H	<i>Puccinia striiformis</i>	Stripe rust, head (percentage)	Porcentaje de roya amarilla (espiga)	Rouille jaune sur épi en pourcentage
STRP RT.L	<i>Puccinia striiformis</i>	Stripe rust, leaf (Cobb scale)	Roya amarilla-hoja (escala de Cobb)	Rouille jaune sur feuilles (échelle de Cobb)
STRP V		Barley stripe mosaic virus (scale 0-9)	Virus del mosaico lineal de la cebada (escala 0-9)	Mosaïque striée de l'orge (échelle 0-9)
TAN S	<i>Pyrenophora tritici-repentis</i> (syn. <i>Helminthosporium tritici-repentis</i> )	Tan spot (0-9 scale)	Mancha foliar amarilla (escala 0-9)	Helminthosporium tritici (échelle 0-9)
Tcl		Triticale	Triticale	Triticale
TEST WT		Test weight (kg/hl)	Peso hectolitrico (kg/hl)	Poids spécifique (kg/hl)
1000 G.W.		1000-grain weight (g)	Peso de 1000 granos (g)	Poids de 1000 grains (g)
VAR		Variety	Varietal	Variété
VTY		Variety	Varietal	Variété
YELL BERR		Yellow berry (percentage)	Porcentaje de panza blanca	Mitadinage en pourcentage
YIELD KG/HA		Yield (kg/ha)	Rendimiento (kg/ha)	Rendement (kg/ha)

# Introduction to the Sixth International Barley Yield Trial

## Methodology

The Sixth International Barley Yield Trial (IBYT) was distributed in 1983-84, to be grown by cooperators in their spring season of 1984. Fifty-two nurseries went to cooperators in 38 countries. The advanced lines and varieties included in the nursery had been chosen from among CIMMYT's best materials and nominations from plant breeders in different parts of the world. All had been grown and observed in a high-yield environment with pressure from major diseases on the CIANO Experiment Station in the Yaqui Valley in northwestern Mexico. The selected lines thus comprised a collection of the world's best lines or varieties which cooperators could compare under the specific conditions of their own sites. Seed for this international nursery was multiplied in plots on the CIANO Experiment Station; seed was cleaned and treated with insecticide and organic fungicide before shipment.

Instructions accompanied the mailing of seed to each cooperator, specifying plot sizes, replications and similar procedures. It is recommended that each plot should consist of six 3-m rows planted 30 cm apart and that each line should be grown in three replications. However, plot configuration may differ to conform to local equipment. A field book was sent with each nursery set, providing a format for recording data desired by CIMMYT.

Twenty-seven of the cooperators receiving the nursery returned field books reporting performance at their locations in time to be included in this report. In receiving and processing the data, CIMMYT assumes that instructions were carried out and that accurate results were reported. We cannot, however, attest to the rigor with which the trials were grown and results obtained.

The choice of variables measured and the data returned rests with the individual cooperator. We have included in this summary selected variables reported to us. Some are presented for which a limited number of observations were made. The user of these tables should be aware of the importance of the number of locations and the number of observations in interpreting data on a given variable; summary tables for regional and international results specify both for the guidance of the reader.

**Presentation of results**—So that data in this report will be of optimal use to the user, we present the results in the three forms:

1. All data provided from *each trial site* are reported in a single table for that site. The latitude and longitude coordinates are reported as supplied by the cooperator. With these, the reader can determine the exact location of the trial site and, if desired, relate to it environmental data from other sources.
2. *Regional summaries* have been computed by averaging data aggregated from individual sites in several countries grouped by geographic criteria. These should be especially useful to breeders in selecting improved germplasm that is adapted to their environments. Each regional table lists the names of all countries and locations from which site data were drawn for the table.
3. *Two international summaries* present a) the variables for which data were reported, for each trial site, and b) the means computed for all sites.

Statistical coefficients<sup>1/</sup> accompany the trial site data to assist the reader in evaluating and interpreting the data. While we assume accuracy in the data supplied to us, we encourage users of this report to approach specific elements with reasonable caution.

**Cooperator participation**—Feedback information of two kinds is vital to the quality of this and other CIMMYT international nursery reports: first, the prompt return of carefully recorded data from each and every trial site; second, the identification of environmental and management factors (e.g., moisture problems, birds, etc.) that become part of our cooperator's station file. We ask for feedback of both kinds.

Nominations of lines or varieties for future nurseries are always welcomed from breeders. A sample of 200 g of seed will join 150 or more other nominations in PMI plots (*parcela multiplicación internacional*). Those showing favorable yield, agronomic and disease reaction characteristics will appear in a subsequent international yield nursery. Seed samples should be sent to:

International Wheat Nurseries-CIMMYT  
Lisboa 27, Apdo. Postal 6-641  
06600 Mexico, D.F., Mexico

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1/ Details of the statistical analyses (done by a computer program called NAP) may be obtained from the Computer Services unit at CIMMYT. The procedure was described in CIMMYT Information Bulletin 40, 13th IBWSN for 1976-77.

**Variety or cross and pedigree (including origin) of the 6th IBYT entries**

Entry No.	Variety or Cross and Pedigree	Origin
1	CENTINELA	Mexico
2	RUMOROSA	Mexico
3	UNA 80	Peru
4	GLENN	USA
5	BEECHER	USA
6	MOREX	USA
7	79W40785	USA
8	BONANZA	Canada
9	LIGNEE 527	France
10	CARINA	France
11	MENUET	France
12	EUROPA	Germany
13	TRUMPF	G.D. Republic
14	BEACON	USA
15	MAZURKA	Holland
16	H272	Israel
17	TROMPILLO CMB74A-432-25B-1Y-1B-1Y-OB	CIMMYT
18	PISTACHO CMB77A-1266-2B-1Y-1B-1Y-1B-0Y	CIMMYT
19	API-EB489.8.2.15.4 x Por-U.SASK1766/CEL-C13909.2 CMB78-884-F-2Y-2B-1Y-1B-2Y-OB	CIMMYT
20	API-EB489.8.2.15.4. x Por-U.SASK1766/CEL-C13909.2 CMB78-884-F-2Y-2B-1Y-1B-3Y-OB	CIMMYT
21	ALAMO"S" CMB77-1585-E-2Y-1B-1Y-1B-2Y-OB	CIMMYT
22	PRO-BEACON X MZQ-GVA CMB77A-1787-1B-1Y-1B-2Y-1B-0Y	CIMMYT
23	ARAMIR - COSSACK CMSWB77A-458-1H-1Y-1B-1Y-2B-0Y	CIMMYT
24	ARUPO"S" CMB79-1312-F-3Y-1B-2Y-1B-1Y-OB	CIMMYT
25	LOCAL CHECK	

Locations from which data were reported, with variables reported

TABLE	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED*														
1	AFRICA	CAMEROON	NGAOUNDERE	1	9	67												
2	AFRICA	EGYPT	KAFR EL SHEIKH	1	3	4	7											
3	AFRICA	KENYA	RIFT VALLEY-KENYA BREH.	1	7	9	66	68	69									
4	AFRICA	SOUTH AFRICA	CAPE PROVINCE-TYGERHOEK	1	7	9	66											
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE-WELGEVALLEN	1	3	7	9	10	66	68	69							
6	AFRICA	SOUTH AFRICA	ORANGE FREE STATE-BETHLEHEM	1	2	3	4	8	9	10	23							
7	AFRICA	ZIMBABWE	HARARE	1	2	3	4	9	10									
8	ASIA	BANGLADESH	ISHURDI-PABNA	1	3	4	7	9	66	68								
9	ASIA	PAKISTAN	BALUCHISTAN	1	4	9												
11	ASIA	PAKISTAN	PUNJAB-ISLAMABAD	1	2	3	4	5	9	68								
12	ASIA	PAKISTAN	PUNJAB-NIAB	1	3	4	9	67										
13	ASIA	REP. OF KOREA	SUMON GYEDONGGI PROV.	1	2	3	9	61	68									
14	ASIA	TAIWAN	TAICHUNG	1	2	3	4	9	10									
15	EUROPE	FRANCE	MONTPELLIER	1	3	9	61											
16	EUROPE	GERMAN DEM. REP.	MAGDEBURG-LANGENSTEIN	1	3	4	9	61	66									
17	EUROPE	GREECE	THESSALONIKI	1	3	8	9	61										
18	EUROPE	ITALY	FOGGIA	1	9	10	61											
19	EUROPE	PORTUGAL	ELVAS	1	3	4	9	61										
20	EUROPE	ROMANIA	CLUJ	1	3	4	9	10	61									
21	EUROPE	SPAIN	ZARAGOZA-MONTANANA	1	2	3	9											
22	EUROPE	YUGOSLAVIA	MACEDONIA	1	2	3	4	9										
23	MIDDLE EAST	CYPRUS	ATHALASSA	1	3	7	9	61	66	68	69							
25	MIDDLE EAST	QATAR	BARADA	1	3	4	9	10										
26	MIDDLE EAST	TURKEY	DIYARBAKIR	1	3	4	9											
27	NORTH AMERICA	MEXICO	B. C. NORTE-CAEMEXI	1	3	4	9	61										

\*VARIABLE IDENTIFICATIONS

1	YIELD	KG/HA	2	TEST	WT	3	HEAD	DAYS	4	MAT	DAYS	5	STRP	RT. L	7	LEAF	RUST	
8	STEM	RUST	9	PLNT	HT	10	LODG	%	23	HAIL	DMGE	61	POW	M	0-9	66	NET	B
67	BAR	B	0-9	68	SPT	B	0-9	69	SCLD	0-9								



## Summary for all locations: yield, agronomic and disease data

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST HT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	STEM RUST	PLNT HT	LODG %	HAIL DMGE	POW M 0-9	NET S 0-9	BAR S 0-9	SPT S 0-9	SCLD S 0-9
25	LOCAL CHECK		4649	69	104	137	0	28	15	85	42	10	3	4	7	4	6
24	ARUPO "S"		4174	64	103	134	0	19	1	63	27	10	3	3	8	4	6
23	ARAMIR - COBBACK		4061	67	104	139	1	41	12	84	19	0	4	3	5	4	0
18	PISTACHO		4033	59	100	133	40	21	14	91	62	13	6	4	7	3	1
12	EUROPA		4051	66	109	140	0	13	5	83	39	0	3	4	6	5	4
9	LIGNEE 527		3968	64	106	140	0	12	15	83	29	15	3	5	6	5	2
16	H272		3946	60	101	138	2	21	12	90	38	58	5	2	5	4	2
10	CARINA		3898	68	110	140	10	22	11	87	34	5	3	4	6	4	6
11	MENUET		3889	69	108	139	3	13	15	84	34	8	4	3	8	5	5
13	TRUMPF		3818	65	114	143	0	15	20	79	24	0	2	5	7	5	2
21	ALAMO "S"		3678	61	95	133	0	28	22	89	33	35	5	1	8	4	4
22	PRO-BEACON X M20-GVA		3657	58	98	131	0	30	3	84	32	5	6	2	6	4	2
15	MAZURKA		3628	67	107	139	0	16	10	91	45	6	2	3	5	5	7
20	API-EB489. B. 2. 15. 4 x Por-U. ....		3616	62	91	129	0	25	3	88	25	75	4	3	8	4	3
17	TROPILLO		3597	62	102	135	6	49	17	89	50	48	6	1	5	4	2
19	API-EB489. B. 2. 15. 4 x Por-U. ....		3593	62	93	129	0	40	3	89	26	68	5	2	5	4	1
2	RUMOROSA		3563	60	103	135	8	28	14	95	44	0	4	3	7	4	1
4	GLENN		3538	63	100	134	43	40	15	98	37	1	5	4	5	4	6
6	MOREX		3551	64	108	139	65	55	15	84	26	0	5	3	4	3	5
1	CENTINELA		3278	64	95	132	10	42	10	91	28	33	5	2	5	4	1
7	79W40785		3199	60	106	140	60	26	18	70	9	13	5	3	7	4	1
5	BEECHER		3090	58	104	139	53	42	10	91	42	50	6	4	5	4	2
3	UNA 80		2877	62	110	140	1	70	15	98	50	6	3	3	5	5	3
8	BONANZA		2857	62	102	135	53	44	9	103	36	10	6	3	5	3	7
14	BEACON		2773	60	103	134	45	36	9	98	27	5	5	4	5	4	4
SUMMARY MEANS OVER VARIETIES			3640.9	63.1	102.9	136.3	16.0	30.9	11.5	87.5	35.1	19.0	4.3	3.1	5.8	4.1	3.3
NUMBER OF LOCATIONS FOR EACH VARIABLE			25	7	20	15	1	6	2	24	7	1	9	6	2	6	3
NUMBER OF OBSERVATIONS FOR EACH VARIABLE			97	24	70	50	4	13	4	77	21	3	26	16	5	19	7

TABLE 1 AFRICA

CAMEROON

NGAOUNDERE

WASSANDE  
CEREAL STAFF

LATITUDE	7 05'N	DATE PLANTED	9/ 3/84	NITROGEN	APPLIED
LONGITUDE	14 03'E	DATE HARVESTED	1/--/85	PHOSPHORUS	APPLIED
ELEVATION	1400 M. ABOVE S.L.	AMOUNT OF MOISTURE	339 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
SERIOUS DISEASE INCIDENCE: NEGLIGIBLE INSECT DAMAGE.  
MODERATE WEED PROBLEM. NEGLIGIBLE BIRD DAMAGE.  
LOCAL CHECK: L35 81-82 CIMMYT

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	PLNT HT	BAR S 0-9
25	LOCAL CHECK		890	56	7
4	GLENN		695	59	7
20	API-EB489. B. 2. 15. 4 x Per-U. . . .		598	55	8
17	TROMPILLO		541	54	7
19	API-EB489. B. 2. 15. 4 x Per-U. . . .	***	539	51	8
24	ARUPO "S"		530	45	8
1	CENTINELA		495	53	7
16	H272		464	56	7
2	RUMOROSA		449	59	7
18	PISTACHO		373	54	7
8	BONANZA		270	69	5
11	MENJET		261	55	8
3	UNA 80		222	74	5
5	BEECHER		208	63	7
21	ALAMO "S"		207	48	8
6	MOREX		190	56	6
14	BEACON		161	55	7
7	79W40783		146	40	7
13	TRUMPF		132	58	7
22	PRO-BEACON X H2G-QVA		131	43	7
15	MAZURKA		117	60	7
23	ARAMIR - COBBACK		103	51	8
10	CARINA		78	64	8
9	LIGNEE 327		58	55	7
12	EUROPA		50	54	8

GRAND MEAN	319.4	55.4	6.9
STANDARD ERROR OF GRAND MEAN		0.6	
COEFFICIENT OF VARIATION AS PC		10.7	
LSD VARIETY MEANS 5 PC		8.3	

CORRELATIONS

YIELD KG/HA			
PLNT HT	-0.03		
BAR S 0-9	0.06	-0.60	

\*\*\* Duncan multiple range test

## SAKHA

## CEREAL STAFF

LATITUDE	031 07'N	DATE PLANTED	12/30/83	NITROGEN	APPLIED
LONGITUDE	030 57'E	DATE HARVESTED	5/24/84	PHOSPHORUS	APPLIED
ELEVATION	0006 M. ABOVE S. L.	AMOUNT OF MOISTURE	-- MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. MODERATE INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 SLIGHT BIRD DAMAGE. LOCAL CHECK: GIZA 121  
 WEATHER: WARM & DRY SEASON

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	LEAF RUST	
10	CARINA		3533	86	124	808	
9	LIGNEE 527		3129	84	124	608	
1	CENTINELA		2966	75	118	708	
12	EUROPA		2891	84	121	708	
11	MENUET	***	2666	87	125	708	
13	TRUMPF		2475	91	125	708	
15	MAZURKA		2475	85	119	608	
5	BEECHER		2416	82	119	708	
25	LOCAL CHECK		2391	79	118	808	
18	PISTACHO		2358	82	120	708	
21	ALAMO "B"		2354	76	118	708	
16	H272		2350	81	121	608	
24	ARUPD "B"		2325	83	121	608	
2	RUMOROSA		2308	79	117	608	
22	PRO-BEACON X MZQ-GVA		2200	80	117	708	
19	API-EB489. B. 2. 15. 4 x Pot-U. . .		2191	75	116	708	
23	ARAMIR - COBSACK		2050	84	120	708	
7	79W40785		2041	81	120	708	
14	BEACON		1950	80	120	708	
20	API-EB489. B. 2. 15. 4 x Pot-U. . .		1875	74	115	708	
8	BONANZA		1858	82	118	708	
4	GLENN		1783	82	119	708	
17	TROMPILLO		1741	80	119	708	
3	UNA 80		1600	84	122	808	
6	MOREX		792	89	121	708	
			GRAND MEAN	2268.8	81.8	119.8	69.2
			STANDARD ERROR OF GRAND MEAN	53.7			
			COEFFICIENT OF VARIATION AS PC	23.7			
			LSD VARIETY MEANS 5 PC	756.8			

CORRELATIONS				
YIELD KG/HA	HEAD DAYS	MAT DAYS	LEAF RUST	
	0.00			
	0.32	0.78		
	-0.07	0.01	0.05	

\*\*\* Duncan multiple range test

KENYA BREWERIES EXP. FARM  
CEREAL STAFF

LATITUDE	000 40'S	DATE PLANTED	9/ 9/83	NITROGEN	APPLIED
LONGITUDE	035 36'E	DATE HARVESTED	3/ 9/84	PHOSPHORUS	APPLIED
ELEVATION	+02790 M. ABOVE S. L.	AMOUNT OF MOISTURE	416 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS. WEATHER NOT REPORTED.  
 LOCAL CHECK: PROCTOR

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	LEAF RUST	PLNT HT	NET B 0-9	SPT B 0-9	SCLD 0-9
2	RUMOROSA		3500	10MS	104	1	2	1
18	PISTACHO		3264	10MS	91	2	2	3
19	API-EB489. B. 2. 15. 4 x Pot-U....	***	2806	20MS	91	1	1	1
20	API-EB489. B. 2. 15. 4 x Pot-U....		2389	10MS	84	2	1	3
17	TROPILLO		2361	20MS	87	2	2	6
22	PRO-BEACON X MIZO-OVA		2209	20MS	75	2	1	2
16	H272		2181	10MS	88	2	2	3
5	BEECHER		2070	20MS	90	1	1	1
9	LIGNEE 527		2070	TMS	90	2	2	5
25	LOCAL CHECK		2042	10MS	94	2	2	5
3	UNA 80		1903	50S	110	2	1	4
23	ARAHIR - COSSACK		1875	30MS	81	1	1	1
7	79W40785		1861	15MS	62	1	3	2
1	CENTINELA		1833	30MS	89	1	1	1
21	ALAND "B"		1695	2MS	83	2	2	3
13	TRUMPF		1528	TMR	76	1	2	4
4	GLENN		1445	10MS	103	2	1	5
12	EUROPA		1333	2MS	77	1	1	5
11	MENUET		1278	TMS	80	2	3	4
15	MAZURKA		1250	5MS	88	1	2	6
24	ARUPO "B"		1167	0	50	0	3	6
10	CARINA		1153	0	86	2	2	4
14	BEACON		1014	30MS	99	2	1	4
8	BONANZA		986	20MS	113	2	2	5
6	NOREX		139	80VS	66	1	1	2
		GRAND MEAN	1814.0	21.5	86.2	1.5	1.5	3.3
		STANDARD ERROR OF GRAND MEAN	40.2		0.5			
		COEFFICIENT OF VARIATION AS PC	22.2		5.3			
		LSD VARIETY MEANS 5 PC	566.7		6.5			

YIELD KG/HA		CORRELATIONS					
LEAF RUST		-0.26					
PLNT HT		0.28	0.29				
NET B 0-9		0.11	0.06	0.51			
SPT B 0-9		-0.02	-0.31	-0.34	-0.04		
SCLD 0-9		-0.39	-0.31	0.03	0.22	0.39	

\*\*\* Duncan multiple range test

## TABLE 4 AFRICA

## SOUTH AFRICA

## CAPE PROVINCE-TYGERHOEK

TYGERHOEK E. S.

CEREAL STAFF

LATITUDE	34 9'S	DATE PLANTED	5/24/84	NITROGEN	---
LONGITUDE	19 34'E	DATE HARVESTED	11/15/84	PHOSPHORUS	---
ELEVATION	168 M. ABOVE S. L.	AMOUNT OF MOISTURE	157 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 SLIGHT DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. LOCAL CHECK: CLIPPER  
 WEATHER: VERY DRY SEASON

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	LEAF RUST	PLNT HT	NET B 0-9
24	ARUPD "B"		2278	108	30	0
11	MENUE		2130	0	40	6
23	ARAHIR - COSSACK		2060	38	35	2
25	LOCAL CHECK	***	2053	208	40	4
10	CARINA		2038	0	45	2
13	TRUMPF		1937	0	45	6
15	HATURKA		1924	5R	45	6
18	PISTACHO		1914	208	40	-
7	79W40785		1828	308	40	4
12	EUROPA		1756	0	40	4
14	H272		1595	108	45	4
22	PRO-BEACON X MZG-OVA		1448	508	35	2
19	API-EB489. B. 2. 15. 4 x Por-U....		1426	-	50	2
17	TROMPILLO		1380	508	55	2
8	BONANZA		1278	408	60	-
3	UNA 80		1260	808	45	2
20	API-EB489. B. 2. 15. 4 x Por-U....		1103	0	40	4
1	CENTINELA		986	-	40	2
5	BEECHER		960	108	45	2
9	LIGNEE 527		948	0	40	6
4	GLENN		891	308	40	4
21	ALAMO "B"		794	58	40	2
2	RUMOROSA		655	108	40	2
14	BEACON		646	0	50	0
6	MOREX		469	408	45	-

GRAND MEAN 1448.6 17.9 42.8 3.1  
 STANDARD ERROR OF GRAND MEAN  
 COEFFICIENT OF VARIATION AS PC  
 LSD VARIETY MEANS 5 PC

CORRELATIONS

YIELD KG/HA				
LEAF RUST	-0.20			
PLNT HT	-0.28	0.27		
NET B 0-9	0.26	-0.29	0.00	

\*\*\* Duncan multiple range test

MELGEBALLEN  
CEREAL STAFF

LATITUDE 033 52'S DATE PLANTED 5/ 6/84 NITROGEN APPLIED  
LONGITUDE 018 42'E DATE HARVESTED 11/14/84 PHOSPHORUS APPLIED  
ELEVATION 0152 M. ABOVE. S. L. AMOUNT OF MOISTURE 177 MM POTASSIUM --

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
SERIOUS DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS AND WEEDS. WEATHER NORMAL.  
LOCAL CHECK: CLIPPER

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	LEAF RUST	PLNT HT	LDDG %	NET 0-9	SPT 0-9	SCLD 0-9
16	H272		5674	107	10S	108	90	0	9	0
18	PISTACHO		5466	100	5MR	102	90	9	9	0
7	79M40785		5299	110	60MR	78	0	9	9	0
25	LOCAL CHECK	***	5005	110	60MS	81	0	9	9	9
12	EUROPA		4800	112	5R	92	50	9	9	0
4	GLENN		4611	109	100S	115	40	9	9	7
24	ARUFO "S"		4577	112	40MS	78	0	9	9	7
19	API-EB489. B. 2. 15. 4 x Per-U. ...		4527	100	80S	86	0	0	9	0
2	RUMORBA		4522	103	107	88	0	9	9	0
11	MENUET		4461	111	5MR	88	40	7	9	7
3	UNA 80		4272	112	100S	106	80	9	9	3
23	ARAHIR - COSSACK		4238	110	100S	97	0	9	9	0
22	PRO-BEACON X MZQ-OVA		4105	100	5MR	95	0	0	9	0
5	BEECHER		4100	107	100S	108	60	9	9	3
20	API-EB489. B. 2. 15. 4 x Per-U. ...		4088	98	60MS	80	0	7	9	0
21	ALAMO "S"		3866	97	60S	86	0	0	9	7
17	TROMPILLO		3827	107	80S	101	80	0	9	0
1	CENTINELA		3822	98	60S	92	10	7	9	0
10	CARINA		3789	112	60MS	97	0	9	9	7
13	TRUMPF		3750	117		85	10	9	9	0
9	LIGNEE 527		3605	110	0	92	0	9	9	0
15	MAZURKA		3561	109	10MS	108	60	0	9	9
8	BONANZA		3533	107	100S	113	30	9	9	9
6	MOREX		2961	112	100S	97	0	9	9	9
14	BEACON		2961	106	60S	122	20	9	9	1

GRAND MEAN 4225.6 106.7 50.7 96.6 26.4 6.6 9.0 3.1  
STANDARD ERROR OF GRAND MEAN 49.3  
COEFFICIENT OF VARIATION AS PC 11.7  
LSD VARIETY MEANS 5 PC 694.7

CORRELATIONS

YIELD KG/HA									
HEAD DAYS	-0.08								
LEAF RUST	-0.39	0.00							
PLNT HT	-0.23	-0.04	0.32						
LDDG %	0.33	0.07	-0.07	0.52					
NET 0-9	-0.05	0.43	0.20	0.02	-0.19				
SPT 0-9	-	-	-	-	-	-			
SCLD 0-9	-0.26	0.26	0.22	0.06	-0.08	0.08	-		

\*\*\* Duncan multiple range test

TABLE 6 AFRICA

SOUTH AFRICA

ORANGE FREE STATE-BETHLEHEM

## BETHLEHEM

## CEREAL STAFF

LATITUDE	028 10'S	DATE PLANTED	9/19/83	NITROGEN	APPLIED
LONGITUDE	028 18'E	DATE HARVESTED	1/27/84	PHOSPHORUS	APPLIED
ELEVATION	1631 M. ABOVE S. L.	AMOUNT OF MOISTURE	340 MM	POTASSIUM	APPLIED

LATE SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. SLIGHT INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS. MECHANICAL CONTROL OF WEEDS.  
 INSUFFICIENT RAIN DURING MATURE STAGES REDUCED YIELD.

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STEM RUST	PLNT HT	LODG %	HAIL DMGE
12	EUROPA		4127	62	74	118	108	88	18	0
6	MOREX		4087	63	73	122	58	81	0	0
10	CARINA		3834	63	74	120	208	85	6	5
17	TROPILLO		3686	55	69	113	108	86	0	48
4	GLENN	***	3415	60	71	114	308	98	6	1
13	TRUMPF		3406	65	74	122	208	83	5	0
3	UNA 80		3322	58	74	121	108	96	14	6
8	BONANZA		3294	60	73	112	108	100	6	10
11	MENJET		3247	64	73	119	508	86	5	8
15	HAZURKA		3208	63	72	113	58	86	5	6
19	API-EB489. 8.2.15.4 x Por-U....		3147	53	65	104	58	72	15	68
16	H272		3090	54	65	112	108	74	5	58
20	API-EB489. 8.2.15.4 x Por-U....		2930	57	65	101	58	74	8	75
9	LIGNEE 527		2925	63	71	123	20VS	78	0	15
2	RUMOROSA		2905	53	71	113	208	82	45	0
18	PISTACHO		2846	55	68	107	208	82	8	13
23	ARAHIR - COSSACK		2599	62	70	116	108	77	5	8
21	ALAMO "8"		2533	56	67	112	408	83	8	35
1	CENTINELA		2391	57	67	111	208	76	4	33
7	79W40785		2347	57	74	125	58	66	3	13
24	ARUPD "8"		2271	59	66	97	0	55	0	10
5	BEECHER		2103	51	66	110	108	85	1	50
25	LOCAL CHECK		1971	61	72	114	208	78	6	10
22	PRO-BEACON X HZG-GVA		1877	55	66	102	TS	68	0	5
14	BEACON		1750	54	70	110	308	91	6	5

GRAND MEAN	2932.4	58.4	69.8	113.1	15.6	81.0	7.1	18.9
STANDARD ERROR OF GRAND MEAN	35.3	0.2				0.4		
COEFFICIENT OF VARIATION AS PC	12.0	3.2				4.8		
LSD VARIETY MEANS 5 PC	496.9	2.6				5.5		

## CORRELATIONS

YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STEM RUST	PLNT HT	LODG %	HAIL DMGE						
	0.47												
		0.47	0.69										
			0.44	0.54	0.83								
				-0.05	0.00	0.05	0.27						
					0.43	0.17	0.51	0.40	0.21				
						0.15	-0.25	0.13	0.01	0.03	0.18		
							-0.09	-0.57	-0.75	-0.45	0.01	-0.26	-0.11

\*\*\* Duncan multiple range test

TABLE 7 AFRICA

ZIMBABWE

HARARE

## ONEBI

## CEREAL STAFF

LATITUDE	017 41'S	DATE PLANTED	5/20/84	NITROGEN	APPLIED
LONGITUDE	030 52'E	DATE HARVESTED	10/18/84	PHOSPHORUS	APPLIED
ELEVATION	1448 M. ABOVE S.L.	AMOUNT OF MOISTURE	378 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 NEGLIGIBLE DISEASE DEVELOPMENT. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS. HAND WEEDING.  
 WEATHER NORMAL. LOCAL CHECK: KYLE

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	PLNT HT	LODG %
24	ARUPO "8"	***	6338	65	77	129	99	50
25	LOCAL CHECK		5775	68	95	139	96	70
17	TROMPILLO		5513	60	83	128	118	84
7	79W40785		5475	58	97	137	98	45
13	TRUMPF		5288	64	114	145	109	81
22	PRO-BEACON X MZB-GVA		5213	60	73	126	109	66
23	ARAHIR - COSSACK		5050	66	88	138	120	37
6	MOREK		5038	64	100	138	116	88
9	LIGNEE 527		4850	63	88	136	118	83
20	API-EB489. 8. 2. 15. 4 x Por-U. . . .		4813	63	67	117	121	35
21	ALAMO "8"		4713	61	73	128	115	54
16	H272		4650	58	76	130	118	76
12	EUROPA		4613	65	97	135	119	73
11	MENUET		4413	66	93	134	111	73
10	CARINA		4163	66	98	136	114	80
3	UNA 80		3900	60	93	136	120	96
19	API-EB489. 8. 2. 15. 4 x Por-U. . . .		3850	62	68	120	120	57
1	CENTINELA		3775	63	70	119	111	61
4	GLENN		3675	62	79	125	124	75
18	PISTACHO		3113	57	81	127	118	91
8	BONANZA		2900	60	81	123	135	56
2	RUMOROBA		2675	59	85	129	118	90
5	BEECHER		-	-	-	-	-	-
14	BEACON		-	-	-	-	-	-
15	MAZURKA		-	-	-	-	-	-
		GRAND MEAN	4535.8	62.3	85.0	130.5	114.7	71.6
		STANDARD ERROR OF GRAND MEAN	118.7	0.3				0.6
		COEFFICIENT OF VARIATION AS PC	24.6	3.8				5.1
		LSD VARIETY MEANS 5 PC	1573.6	3.4				8.3

## CORRELATIONS

YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	PLNT HT	LODG %
	0.41				
	0.22	0.34			
	0.41	0.36	0.91		
	-0.68	-0.29	-0.26	-0.39	
	-0.31	-0.19	0.41	0.34	0.13

\*\*\* Duncan multiple range test



ISHARDI REG. AG. RES. STN.  
CEREAL STAFF

LATITUDE 24 25'N DATE PLANTED 12/25/83 NITROGEN APPLIED  
LONGITUDE 80 4'E DATE HARVESTED 4/16/84 PHOSPHORUS APPLIED  
ELEVATION 8 M. ABOVE S.L. AMOUNT OF MOISTURE 70 MM POTASSIUM APPLIED

SOIL MOIST AT SOWING. GERMINATION GOOD. SLIGHT DISEASE INCIDENCE.  
NEGLECTIBLE INSECT DAMAGE. SLIGHT WEED PROBLEM.  
NEGLECTIBLE BIRD DAMAGE. HAND WEEDING. LOCAL CHECK NAME NOT REPORTED.  
WEATHER NOT REPORTED.

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	LEAF RUST	PLNT HT	NET B 0-9	SPT B 0-9
1	CENTINELA		3889	60	90	0	79	1	1
20	API-EB489. 8. 2. 15. 4 x Pot-U....		3716	59	86	0	86	2	2
2	RUMOROSA		3611	71	96	5MS	80	2	3
25	LOCAL CHECK		3507	57	87	10MS	88	2	1
21	ALAMO "8"		3172	66	96	0	73	2	1
14	BEACON		2778	68	93	5S-MS	100	3	1
24	ARUPO "8"		2743	73	98	TMS	58	3	2
6	MOREX		2639	73	97	5MS	73	2	2
4	GLENN		2616	68	94	20MR	89	2	2
19	API-EB489. 8. 2. 15. 4 x Pot-U....	***	2570	59	85	0	87	1	1
5	BEECHER		2350	76	104	TMS	78	4	4
16	H272		2188	73	107	0	69	3	2
13	TRUMPF		2141	85	110	0	63	3	2
15	HAZURKA		2118	76	103	0	77	3	2
22	PRO-BEACON X MZG-OVA		2107	67	95	TMS	62	2	2
8	BONANZA		2014	69	96	0	86	2	1
17	TROPILLO		1945	71	97	5MS	75	1	2
11	MENJET		1921	77	103	0	63	2	2
10	CARINA		1910	79	107	0	74	2	3
12	EUROPA		1887	79	107	0	60	2	2
18	PISTACHO		1887	72	96	0	66	1	1
7	79M40785		1539	73	108	0	55	2	2
23	ARAMIR - COSSACK		1528	72	108	30S-MS	66	2	2
9	LIONEE 527		1215	77	113	0	71	4	2
3	UNA 80		660	85	113	30S-MS	86	3	3
GRAND MEAN			2346.0	71.3	99.5	2.4	74.5	2.2	1.8
STANDARD ERROR OF GRAND MEAN			77.7				0.9		
COEFFICIENT OF VARIATION AS PC			33.1				11.9		
LSD VARIETY MEANS 5 PC			1094.7				12.5		

## CORRELATIONS

YIELD KG/HA	HEAD DAYS	MAT DAYS	LEAF RUST	PLNT HT	NET B 0-9	SPT B 0-9
	-0.73					
	-0.79	0.91				
	-0.36	0.17	0.23			
	0.37	-0.44	-0.52	0.30		
	-0.29	0.32	0.38	0.07	-0.01	
	-0.34	0.68	0.63	0.16	-0.19	0.60

\*\*\* Duncan multiple range test

TABLE 9 ASIA

PAKISTAN

BALUCHISTAN

SARIAS GUETTA A. R. I.

CEREAL STAFF

LATITUDE 30 11'N

DATE PLANTED 11/19/83

11/19/83

NITROGEN

APPLIED

LONGITUDE 64 57'E

DATE HARVESTED 5/14/84

5/14/84

PHOSPHORUS

APPLIED

ELEVATION +01730 M. ABOVE S. L.

AMOUNT OF MOISTURE -- MM

-- MM

POTASSIUM

--

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.

MODERATE WEEB PROBLEM. MODERATE BIRD DAMAGE. HAND WEEDING.

LOCAL CHECK: VB

WEATHER: VERY DRY

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	MAT DAYS	PLNT HT
2	RUMOROSA		3403	152	64
6	MOREX		3264	160	81
4	GLENN		3091	155	65
24	ARUPO "S"		3021	150	82
13	TRUMPF		2986	151	73
9	LIGNEE 527		2986	155	65
23	ARUHIR - COSSACK		2986	160	59
1	CENTINELA		2986	155	78
14	BEACON		2952	158	68
18	PISTACHO		2952	154	84
17	TROPILLO		2917	155	77
19	API-EB489. S. 2. 15. 4 x Per-U...		2917	160	73
3	UNA 80		2882	153	70
20	API-EB489. S. 2. 15. 4 x Per-U...		2882	159	83
8	BONANZA		2847	156	75
25	LOCAL CHECK		2847	150	87
22	PRO-BEACON X H2G-OVA	***	2813	152	66
5	BEECHER		2813	160	68
21	ALAMO "S"		2813	157	90
11	MENJET		2778	155	84
12	EUROPA		2743	157	80
7	79W40785		2743	155	84
15	HAZURKA		2709	160	72
16	H272		2709	158	59
10	CARINA		2709	158	62

GRAND MEAN	2910.0	155.8	74.0
STANDARD ERROR OF GRAND MEAN	33.3		
COEFFICIENT OF VARIATION AS PC	11.5		
LSD VARIETY MEANS 5 PC	469.8		

CORRELATIONS			
YIELD KG/HA			
MAT DAYS	-0.22		
PLNT HT	-0.11	-0.21	

\*\*\* Duncan multiple range test

TABLE 10 ASIA

PAKISTAN

N. W. FRONTIER PROV-TARNAB

TARNAB, PEBHAWAR

CEREAL STAFF

LATITUDE	032 33'N	DATE PLANTED	10/22/83	NITROGEN	APPLIED
LONGITUDE	068 00'E	DATE HARVESTED	4/22/84	PHOSPHORUS	APPLIED
ELEVATION	0340 M. ABOVE S. L.	AMOUNT OF MOISTURE	163 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 SERIOUS DISEASE INCIDENCE. SERIOUS INSECT DAMAGE. SERIOUS WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS AND WEEDS.  
 LOCAL CHECK NAME NOT REPORTED. WEATHER NORMAL.

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	STRP RT. L	PLNT HT	LODG X
11	MENJET		3422	142	166	5MR	90	50
21	ALAND "B"		3355	126	152	5MR	116	55
23	ARAMIR - COSSACK		3311	142	169	5MR	107	-
22	PRO-BEACON X HZG-GVA		3266	138	163	10MR	103	15
9	LIGNEE 927		3195	136	161	OR	93	5
18	PISTACHO		3133	156	177	20S	114	93
6	NDREX		3044	142	167	20S	97	37
16	H272		2933	146	169	5MR	102	54
17	TROMPILLO		2866	138	164	40S	94	10
15	HAZURKA		2822	150	180	5MR	105	10
8	BONANZA		2795	130	158	20S	103	53
25	LOCAL CHECK		2600	148	170	40S	83	2
7	79W40783		2578	142	167	20S	84	-
20	API-EB489. 8. 2. 15. 4 x Por-U....		2378	110	129	40S	105	5
5	BEECHER		2311	137	162	20MS-8	105	70
24	ARUPO "B"		2289	142	169	30S	83	5
4	GLENN		2244	126	157	30S	103	80
10	CARINA		2111	148	170	60S	105	-
1	CENTINELA		1933	97	122	40S	96	32
2	RUMOROSA		1911	147	170	40S	103	53
13	TRUMPF		1733	156	182	5MR	95	-
19	API-EB489. 8. 2. 15. 4 x Por-U....		1622	125	150	10MR	96	5
12	EUROPA		1533	150	179	5MR	100	90
14	BEACON	***	1467	157	183	20S	117	90
3	UNA 80		1289	150	179	20S	86	57
GRAND MEAN			2482.4	139.0	164.4	19.8	99.4	47.8
STANDARD ERROR OF GRAND MEAN			109.6				0.0	
COEFFICIENT OF VARIATION AS PC			44.1				0.3	
LSD VARIETY MEANS 5 PC			1544.4				0.5	

## CORRELATIONS

YIELD KG/HA	HEAD DAYS	MAT DAYS	STRP RT. L	PLNT HT	LODG X
	-0.06				
	-0.09	0.99			
	-0.30	-0.23	-0.27		
	0.13	0.00	-0.02	-0.11	
	-0.24	0.35	0.38	-0.05	0.54

\*\*\* Duncan multiple range test

NATIONAL AGRIC. RES. CENTER ISLAMABAD  
CEREAL STAFF

LATITUDE 033 39'N DATE PLANTED 11/ 3/83 NITROGEN APPLIED  
 LONGITUDE 073 5'E DATE HARVESTED 4/27/84 PHOSPHORUS APPLIED  
 ELEVATION +00683 M. ABOVE S. L. AMOUNT OF MOISTURE 347 MM POTASSIUM —

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 SLIGHT DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. HAND WEEDING. LOCAL CHECK: PAK-81 (WHEAT VARIETY)  
 LACK OF MOISTURE AT SOWING TIME AND NO PRECIPITATION FROM NOVEMBER TO FEB

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	PLNT HT	SPT 8 0-9
17	TROPILLO		4625	61	122	172	5MS-S	88	4
16	H272		4300	60	126	171	THR	101	4
9	LIGNEE 527		4266	60	124	172	0	77	4
24	ARUFO "8"		4225	62	128	172	0	57	2
18	PISTACHO		4175	59	123	170	30S	95	3
25	LOCAL CHECK		4125	77	132	180	0	96	0
15	HAZURKA		4108	65	118	170	0	84	3
23	ARAHIR - COSSACK		4016	64	117	176	THR	77	3
13	TRUMPF		3991	63	137	180	0	71	7
5	BEECHER		3916	58	135	174	50S	104	5
2	RUMORBA		3875	60	122	170	10NR	101	4
11	MENUT		3791	67	127	175	THS	81	5
10	CARINA		3775	66	135	174	10MS-S	76	0
4	GLENN	***	3500	60	107	165	40S	103	0
3	UNA 80		3458	59	134	172	0	102	5
20	API-EB489. 8. 2. 15. 4 x Per-U....		3425	62	105	165	0	90	8
6	MOREX		3351	59	128	175	70S	78	3
22	PRO-BEACON X M20-OVA		3350	57	103	165	0	102	5
19	API-EB489. 8. 2. 15. 4 x Per-U....		3341	61	99	165	TR	84	8
21	ALAND "8"		3308	59	113	170	0	101	7
7	79M407B3		3241	57	126	172	70S	56	5
1	CENTINELA		3233	63	84	168	10MS-S	93	4
8	BONANZA		2891	61	114	170	50S	90	4
12	EUROPA		2825	64	134	177	0	75	5
14	BEACON		2633	60	113	170	40S	90	4

GRAND MEAN 3669.7 61.7 120.1 171.5 15.9 86.7 4.3  
 STANDARD ERROR OF GRAND MEAN 58.2 0.2  
 COEFFICIENT OF VARIATION AS PC 15.8 3.0  
 LSD VARIETY MEANS 5 PC 819.9 2.6

## CORRELATIONS

YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	PLNT HT	SPT 8 0-9
	0.23					
	0.36	0.20				
	0.28	0.55	0.80			
	-0.36	-0.41	0.05	-0.06		
	-0.04	-0.11	-0.29	-0.39	-0.01	
	-0.29	-0.42	-0.23	-0.23	-0.20	0.02

\*\*\* Duncan multiple range test

TABLE 12 ASIA

PAKISTAN

PUNJAB-NIAS

N I A S. FAISALABAD

CEREAL STAFF

LATITUDE 031 30'N

DATE PLANTED 11/25/83

NITROGEN APPLIED

LONGITUDE 073 10'E

DATE HARVESTED 4/14/84

PHOSPHORUS APPLIED

ELEVATION +00213 M. ABOVE S. L.

AMOUNT OF MOISTURE 110 MM

POTASSIUM ---

LATE SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 NEGLIGIBLE DISEASE DEVELOPMENT. SLIGHT INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. HAND WEEDING. LOCAL CHECK: JAU-83  
 WEATHER: CROP SEASON REMAINED DRY

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	BAR S 0-9
25	LOCAL CHECK		5445	101	130	99	-
18	PISTACHO		5014	102	126	113	-
1	CENTINELA		4653	94	126	120	2
4	GLENN		4639	101	128	123	2
24	ARUPD "S"		4625	103	129	79	-
7	79W40785		4598	108	134	77	-
21	ALAND "S"		4500	98	129	125	-
9	LIGNEE 527		4417	109	136	104	4
20	API-EB489. S. 2. 15. 4 x Pot-U....		4320	54	126	119	-
17	TROPILLO	***	4292	107	131	103	2
23	ARAMIR - COSSACK		4292	103	133	100	2
19	API-EB489. S. 2. 15. 4 x Pot-U....		4236	95	126	119	2
15	HAZURKA		4223	107	131	110	3
2	RUNDROBA		4195	107	130	117	-
11	MENJET		4098	108	130	102	8
6	MOREX		4021	109	133	99	1
10	CARINA		3820	113	135	105	4
12	EUROPA		3813	110	134	92	3
16	H272		3799	102	129	119	2
3	UNA 80		3667	110	132	127	4
5	BEECHER		3598	107	132	124	2
8	BONANZA		3445	103	127	135	-
22	PRO-BEACON X HZG-GVA		3306	99	126	103	4
14	BEACON		3271	103	129	137	3
13	TRUMPF		3181	114	137	82	6

GRAND MEAN	4138.7	102.7	130.2	109.2	3.2
STANDARD ERROR OF GRAND MEAN	68.3			1.1	
COEFFICIENT OF VARIATION AS PC	16.5			9.6	
LSD VARIETY MEANS 5 PC	962.6			14.8	

## CORRELATIONS

YIELD KG/HA				
HEAD DAYS	-0.22			
MAT DAYS	-0.13	0.58		
PLNT HT	-0.20	-0.29	-0.58	
BAR S 0-9	-0.27	0.22	0.27	-0.31

\*\*\* Duncan multiple range test

WHEAT & BARLEY RES. INST.  
CEREAL STAFF

LATITUDE	036 17'N	DATE PLANTED	10/29/83	NITROGEN	APPLIED
LONGITUDE	126 59'E	DATE HARVESTED	6/15/84	PHOSPHORUS	APPLIED
ELEVATION	+00039 M. ABOVE S.L.	AMOUNT OF MOISTURE	311 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
NEGLIGIBLE INSECT DAMAGE. SLIGHT WEED PROBLEM. NEGLIGIBLE BIRD DAMAGE.  
CHEMICAL CONTROL OF WEEDS. HAND WEEDING. LOCAL CHECK: OLSORI  
HEADING DAYS WAS LATE DUE TO COLD AND DROUGHT DAMAGE IN WINTER SEASON

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	PLNT HT	POW M 0-9	SPT B 0-9
25	LOCAL CHECK		8326	63	185	80	6	4
9	LIGNEE 527	***	6385	57	193	74	1	4
1	CENTINELA		6124	62	190	84	5	7
6	MOREX		5962	61	192	78	5	2
17	TROMPILLO		5475	56	194	81	8	0
22	PRO-BEACON X NZG-OVA		5184	49	187	69	9	1
4	GLENN		5057	59	191	91	6	4
24	ARUPO "S"		4688	59	188	49	1	4
23	ARAMIR - COSSACK		4617	60	193	73	1	7
18	PISTACHO		4409	55	188	72	8	1
15	HAZURKA		4368	62	198	81	1	8
21	ALAMO "S"		4032	56	185	73	8	3
8	BONANZA		3948	57	191	94	7	2
19	API-EB489. 8. 2. 15. 4 x Pot-U....		3891	57	188	78	7	3
16	H272		3818	55	188	69	7	1
7	79M40785		3811	57	196	63	7	3
13	TRUMPF		3759	59	200	73	1	7
11	MENJET		3224	64	199	81	1	6
12	EUROPA		3211	56	201	79	1	6
20	API-EB489. 8. 2. 15. 4 x Pot-U....		3202	55	188	74	6	4
14	BEACON		3176	58	192	93	7	1
5	BEECHER		3137	54	192	83	8	5
10	CARINA		3058	60	200	84	1	5
2	RUMOROSA		2367	54	199	91	5	3
3	UNA 80		1625	54	203	93	2	3
		GRAND MEAN	4274.1	57.5	192.7	78.3	4.6	3.7
		STANDARD ERROR OF GRAND MEAN	84.2	0.3		0.4		
		COEFFICIENT OF VARIATION AS PC	19.7	6.0		5.2		
		LSD VARIETY MEANS 5 PC	1187.4	4.9		5.8		

## CORRELATIONS

YIELD KG/HA	TEST WT	HEAD DAYS	PLNT HT	POW M 0-9	SPT B 0-9
		0.38			
		-0.55	0.13		
		-0.23	0.07	0.35	
		0.13	-0.51	-0.65	0.08
		-0.02	0.58	0.41	-0.73

\*\*\* Duncan multiple range test

TABLE 14 ASIA

TAIWAN

TAICHUNG

## TAICHUNG DISTRICT AGRIC. IMPROVEMENT STATION

## CEREAL STAFF

LATITUDE	026 37'N	DATE PLANTED	11/23/83	NITROGEN	APPLIED
LONGITUDE	120 32'E	DATE HARVESTED	3/--/84	PHOSPHORUS	APPLIED
ELEVATION	+00015 M. ABOVE S.L.	AMOUNT OF MOISTURE	107 MM	POTASSIUM	APPLIED

LATE SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 SLIGHT DISEASE INCIDENCE. SLIGHT INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 SLIGHT BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS AND WEEDS. WEATHER NORMAL.  
 LOCAL CHECK: CHUNG-SHING NO. 2

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	PLNT HT	LODG %
17	TROMPILLO		5349	66	80	143	98	68
18	PISTACHO		4996	62	82	145	95	93
22	PRO-BEACON X MZS-OVA		4938	62	80	143	84	30
8	BONANZA		4879	66	81	143	112	28
21	ALANO "B"	***	4648	65	76	139	94	36
4	GLENN		4643	68	80	142	112	28
12	EUROPA		4617	71	89	151	85	18
6	MOREX		4315	65	88	152	87	3
11	HENUET		4311	76	86	149	87	0
2	RUMROSA		4290	65	84	145	106	35
23	ARAMIR - COSSACK		4237	73	86	149	91	4
10	CARINA		4118	77	88	151	98	0
20	API-EB489. S. 2. 13. 4 x Pot-U....		4061	67	70	132	86	30
19	API-EB489. S. 2. 13. 4 x Pot-U....		4035	67	70	133	87	18
1	CENTINELA		4033	70	75	139	91	23
5	BEECHER		3938	61	89	151	101	28
16	H272		3849	61	88	151	96	68
14	BEACON		3832	67	81	144	106	23
9	LIONEE 527		3658	73	86	149	91	0
25	LOCAL CHECK		3492	77	75	137	94	39
7	79M40785		3438	63	83	145	71	0
3	UNA 80		3415	68	99	160	112	19
13	TRUMPF		3048	70	103	166	78	6
24	ARUPD "B"		2933	63	91	153	65	35
15	HAZURKA		2762	70	87	150	101	70
GRAND MEAN			4082.2	67.7	83.8	146.4	93.0	27.9
STANDARD ERROR OF GRAND MEAN			49.7	0.2			0.4	
COEFFICIENT OF VARIATION AS PC			12.2	3.0			4.1	
LSD VARIETY MEANS 5 PC			700.1	2.8			5.4	

## CORRELATIONS

YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	PLNT HT	LODG %
		-0.18			
		-0.41	0.04		
		-0.40	0.05	0.99	
		0.29	0.06	-0.06	-0.09
		0.21	-0.45	-0.20	-0.20
					0.26

\*\*\* Duncan multiple range test

STATION D'AMELIORATION DES PLANTES  
CEREAL STAFF

LATITUDE	043 35'N	DATE PLANTED	11/26/83	NITROGEN	APPLIED
LONGITUDE	003 54'E	DATE HARVESTED	7/ 2/84	PHOSPHORUS	APPLIED
ELEVATION	0018 M. ABOVE S. L.	AMOUNT OF MOISTURE	465 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
SLIGHT DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS.  
LOCAL CHECK: BARBEROUSSE

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	PLNT HT	POW M 0-9
23	ARAMIR - COSSACK		6439	130	90	6
12	EUROPA		6202	132	75	3
13	TRUMPF		5937	136	75	1
24	ARUPD "S"		5793	128	60	4
15	MAZURKA		5725	130	90	1
10	CARINA		5643	133	88	3
11	MENUET		5521	132	73	7
25	LOCAL CHECK		5471	130	93	5
18	PISTACHO		5338	121	93	6
6	MOREX	***	4976	135	93	7
2	RUMOROSA		4883	129	90	3
4	GLENN		4815	125	100	6
16	H272		4797	123	103	5
7	79W40785		4736	133	83	3
17	TROMPILLO		4628	127	90	7
19	API-EB489. S. 2. 15. 4 x Por-U. . . .		4528	119	90	5
9	LIONEE 927		4417	130	90	3
21	ALAMO "8"		4367	119	93	4
22	PRO-BEACON X MZG-GVA		4280	126	83	3
1	CENTINELA		4220	126	98	6
20	API-EB489. S. 2. 15. 4 x Por-U. . . .		4166	119	90	4
3	UNA 80		3979	131	90	3
5	BEECHER		3954	126	95	7
8	BONANZA		3531	127	110	8
14	BEACON		3327	129	93	3

GRAND MEAN	4866.9	127.6	88.9	4.5
STANDARD ERROR OF GRAND MEAN	68.9		0.6	
COEFFICIENT OF VARIATION AS PC	12.3		5.0	
LSD VARIETY MEANS 5 PC	979.1		9.2	

## CORRELATIONS

YIELD	KG/HA			
HEAD	DAYS	0.41		
PLNT	HT	-0.55	-0.38	
POW M	0-9	-0.21	-0.27	0.41

\*\*\* Duncan multiple range test



SAATZUCHTSTATION LANGENSTEIN  
CEREAL STAFF

LATITUDE	51 42'N	DATE PLANTED	3/30/84	NITROGEN	---
LONGITUDE	11 0'E	DATE HARVESTED	8/15/84	PHOSPHORUS	APPLIED
ELEVATION	202 M. ABOVE S. L.	AMOUNT OF MOISTURE	277 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEEB PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. LOCAL CHECK: SALOME  
 WEATHER: COOL AND MOIST

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	POW M 0-9	NET S 0-9
25	LOCAL CHECK		6155	40	88	79	1	3
12	EUROPA		6016	38	88	84	3	2
13	TRUMPF		5393	40	89	83	1	3
2	RUMORBA	***	5241	34	83	90	5	2
11	MENUET		5173	37	88	87	3	2
9	LIONEE 527		5171	34	88	82	4	1
23	ARAMIR - COSSACK		4618	31	89	81	6	2
15	MAZURKA		4546	35	88	92	2	1
17	TROMPILLO		4535	35	85	78	6	1
6	MOREX		4259	34	83	80	8	1
4	GLENN		4248	30	82	94	6	1
10	CARINA		4109	37	87	84	3	3
1	CENTINELA		4025	30	82	84	4	1
20	API-EB489. B. 2. 15. 4 x Pot-U. ....		4014	28	77	80	4	1
3	UNA 80		3986	35	86	88	2	1
18	PISTACHO		3829	30	78	77	8	1
8	BONANZA		3715	31	85	97	8	1
21	ALAMO "S"		3509	25	78	72	6	1
22	PRO-BEACON X MZG-GVA		3458	29	77	76	9	1
19	API-EB489. B. 2. 15. 4 x Pot-U. ....		3435	29	77	83	4	1
16	MZ72		3088	24	87	68	7	1
24	ARUPD "S"		2984	27	77	49	5	1
5	BEECHER		2731	26	84	77	8	1
7	79W40785		2606	37	88	60	6	1
14	BEACON		2440	30	81	93	7	2
GRAND MEAN			4131.4	32.2	83.6	80.8	4.9	1.3
STANDARD ERROR OF GRAND MEAN			55.4			0.4		
COEFFICIENT OF VARIATION AS PC			13.4			4.9		
LSD VARIETY MEANS 5 PC			781.4			5.5		

CORRELATIONS						
YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	POW M 0-9	NET S 0-9	
	0.68					
	0.50	0.67				
	0.38	0.29	0.24			
	-0.64	-0.64	-0.46	-0.19		
	0.76	0.87	0.68	0.34	-0.77	

\*\*\* Duncan multiple range test

P. B. I.

CEREAL STAFF

LATITUDE	040 38'N	DATE PLANTED	12/28/--	NITROGEN	--
LONGITUDE	022 57'E	DATE HARVESTED	--/--/--	PHOSPHORUS	--
ELEVATION	0010 M. ABOVE S. L.	AMOUNT OF MOISTURE	220 MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. MODERATE WEED PROBLEM.  
 SLIGHT BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS. WEATHER NORMAL.  
 LOCAL CHECK: GEORGIE

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	STEM RUST	PLNT HT	POW M 0-9
23	LOCAL CHECK		7173	126	0	97	2
24	ARUPO "S"		6298	123	0	69	3
16	H272		6240	118	0	119	6
11	MENJET	***	5932	127	25MR	103	3
23	ARANIR - COSSACK		5923	126	40MR	102	4
9	LIGNEE 527		5702	127	25MR	107	2
20	API-EB489. B. 2. 15. 4 x Por-U....		5586	117	0	114	5
21	ALAND "S"		5500	116	0	114	6
12	EUROPA		5356	128	0	97	1
18	PISTACHO		5336	122	0	118	6
15	MAZURKA		5327	128	25MR	110	2
10	CARINA		5307	130	25MR	101	5
4	GLENN		5106	124	40MR	127	6
13	TRUMPF		4856	130	25MR	98	2
22	PRO-BEACON X MZG-OVA		4750	123	0	113	7
17	TROMPILLO		4750	125	25MR	107	5
19	API-EB489. B. 2. 15. 4 x Por-U....		4673	118	0	106	5
14	BEACON		4461	127	0	125	4
6	MOREX		3481	129	40MR	96	5
5	BEECHER		3471	124	25MR	120	5
2	RUMOROSA		3423	126	25MR	118	4
3	UNA 80		3423	128	40MR	121	3
8	BONANZA		3346	126	25MR	131	7
1	CENTINELA		2740	124	0	120	4
7	79W40785		2096	128	65MR	83	5
GRAND MEAN			4810.2	124.6	7.2	108.4	4.2
STANDARD ERROR OF GRAND MEAN			74.3			0.7	
COEFFICIENT OF VARIATION AS PC			15.4			6.1	
LSD VARIETY MEANS 5 PC			1047.0			9.3	

## CORRELATIONS

YIELD KG/HA	HEAD DAYS	STEM RUST	PLNT HT	POW M 0-9
	-0.26	0.58	-0.13	0.44
		-0.47	-0.24	-0.01
			-0.24	-0.01
				-0.27

\*\*\* Duncan multiple range test

ISTITUTO Sperimentale per la Cerealicoltura  
CEREAL STAFF

LATITUDE	041 27'N	DATE PLANTED	11/12/83	NITROGEN	APPLIED
LONGITUDE	003 02	DATE HARVESTED	6/25/84	PHOSPHORUS	APPLIED
ELEVATION	+00076 M. ABOVE S. L.	AMOUNT OF MOISTURE	405 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION POOR.  
SERIOUS DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE.  
NO WEEB PROBLEM. NEGLIGIBLE BIRD DAMAGE.  
LOCAL CHECK: MICUCCIO

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	PLNT HT	LODG %	POW M 0-9
24	ARUPO "S"		5063	71	90	6
12	EUROPA		4746	105	68	5
18	PISTACHO		4587	110	90	8
16	H272		4562	109	80	7
13	TRUMPF		4454	86	55	6
9	LIGNEE 527		4403	109	80	6
19	API-EB489. 8. 2. 15. 4 x Per-U. . . .		4403	118	73	7
22	PRO-BEACON X M20-GVA		4277	110	85	8
25	LOCAL CHECK		4270	121	85	6
10	CARINA	***	4200	101	85	5
15	HAZURKA		4200	106	68	5
20	API-EB489. 8. 2. 15. 4 x Per-U. . . .		4105	110	73	7
7	79W40785		4004	83	13	6
11	HENNET		3894	100	85	6
5	BEECHER		3832	116	88	7
1	CENTINELA		3712	113	63	7
21	ALAMO "S"		3629	106	85	7
4	GLENN		3591	119	80	7
23	ARAHIR - COSSACK		3579	98	75	7
14	BEACON		3312	114	83	8
6	MOREX		3090	106	78	7
2	RUMOROSA		3039	120	63	6
3	UNA 80		2995	114	70	5
8	BONANZA		2094	118	73	8
17	TROPILLO		1999	105	58	7

GRAND MEAN	3841.8	106.7	73.6	6.4
STANDARD ERROR OF GRAND MEAN	50.3	0.3		
COEFFICIENT OF VARIATION AS PC	13.1	2.6		
LSD VARIETY MEANS 5 PC	709.3	3.9		

CORRELATIONS					
YIELD KG/HA	PLNT HT				
		-0.38			
	LODG %	0.19	0.31		
	POW M 0-9	-0.31	0.33	0.27	

\*\*\* Duncan multiple range test

TABLE 19 EUROPE

PORTUGAL

ELVAS

PBS ALENTEJO

CEREAL STAFF

LATITUDE	038 54'N	DATE PLANTED	12/ 2/83	NITROGEN	APPLIED
LONGITUDE	007 09'W	DATE HARVESTED	6/28/84	PHOSPHORUS	APPLIED
ELEVATION	0208 M. ABOVE S. L.	AMOUNT OF MOISTURE	327 MM	POTASSIUM	APPLIED

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. SLIGHT INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 SLIGHT BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS. HAND WEEDING.  
 WEATHER NORMAL. LOCAL CHECK: TAGIDE

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	POW M 0-9
9	LIGNEE 527		7384	128	177	102	6
24	ARUPD "S"		7303	126	175	79	4
25	LOCAL CHECK		6869	129	176	106	4
12	EUROPA		6349	128	175	99	6
20	API-EB489. 8. 2. 15. 4 x Por-U....		6153	119	174	98	8
23	ARAMIR - COSSACK		6119	128	178	105	6
10	CARINA		6090	131	177	111	6
6	MOREX		5930	129	176	99	7
19	API-EB489. 8. 2. 15. 4 x Por-U....		5749	114	172	105	7
2	RUMROSA		5533	125	175	110	7
21	ALAMO "S"		5519	118	173	105	7
16	H272	***	5430	129	178	107	5
13	TRUMPF		5333	129	178	103	6
11	MENUET		5296	128	177	103	6
22	PRO-BEACON X MZG-GVA		5200	124	173	103	8
1	CENTINELA		5088	122	172	115	8
18	PISTACHO		5070	121	173	101	8
5	BEECHER		5055	125	175	115	8
14	BEACON		4710	127	173	109	7
4	GLENN		4647	122	174	120	5
8	BONANZA		4595	126	174	115	8
15	MAZURKA		4391	124	173	111	6
17	TROMPILLO		3946	124	176	103	8
7	79W40785		3853	126	178	87	6
3	UNA 80		3349	127	173	118	6

GRAND MEAN	5398.5	125.1	174.9	105.1	6.3
STANDARD ERROR OF GRAND MEAN	115.6			0.7	
COEFFICIENT OF VARIATION AS PC	21.4			6.6	
LSD VARIETY MEANS 5 PC	1630.2			9.8	

## CORRELATIONS

YIELD KG/HA					
HEAD DAYS	0.15				
MAT DAYS	0.25	0.71			
PLNT HT	-0.42	-0.04	-0.33		
POW M 0-9	-0.37	-0.45	-0.43	0.24	

\*\*\* Duncan multiple range test

TABLE 20 EUROPE

ROMANIA

CLUJ

TURDA

CEREAL STAFF

LATITUDE 046 35'N

DATE PLANTED

3/28/84

NITROGEN

APPLIED

LONGITUDE 023 48'E

DATE HARVESTED

7/30/84

PHOSPHORUS

APPLIED

ELEVATION 0428 M. ABOVE S. L.

AMOUNT OF MOISTURE

326 MM

POTASSIUM

—

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.

MODERATE DISEASE INCIDENCE. SLIGHT INSECT DAMAGE. MODERATE WEED PROBLEM.

NEGLECTIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS AND WEEDS.

MECHANICAL CONTROL OF WEEDS. LOCAL CHECK: ELGINA

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	LODG %	POW M 0-9
9	LIGNEE 527		7157	58	105	81	38	2
11	MEUET		7132	58	105	88	38	2
10	CARINA		7023	60	106	96	50	0
12	EUROPA		6973	59	106	89	45	1
23	ARAMIR - COSSACK		6969	54	105	79	10	4
23	LOCAL CHECK		6787	58	105	100	50	0
4	GLENN		6763	55	103	99	33	3
6	MOREX		6758	61	107	84	13	4
2	RUMOROSA		6750	61	104	96	43	3
22	PRO-BEACON X MZG-OVA		6665	52	96	81	28	6
21	ALAMO "B"		6551	49	96	82	35	3
15	HAZURKA		6429	58	105	88	35	0
13	TRUMPF		6407	62	108	85	8	0
16	H272		6155	46	103	73	45	3
24	ARUPO "B"		6046	49	96	46	13	3
18	PISTACHO		5965	54	103	89	33	4
8	BONANZA	***	5645	56	105	109	28	4
20	API-EB489. 8.2.15.4 x Por-U....		5408	51	96	88	28	2
19	API-EB489. 8.2.15.4 x Por-U....		5232	51	96	84	20	3
17	TROMPILLO		5158	58	105	82	33	4
3	UNA 80		4875	61	105	104	55	2
14	BEACON		4593	55	104	93	30	4
1	CENTINELA		4341	58	103	90	38	3
7	79M40785		4321	58	108	65	3	4
5	BEECHER		3441	49	102	83	45	5
		GRAND MEAN	5980.9	55.6	103.0	86.0	31.6	2.7
		STANDARD ERROR OF GRAND MEAN	72.8			0.5		
		COEFFICIENT OF VARIATION AS PC	12.2			6.3		
		LSD VARIETY MEANS 5 PC	1025.7			7.7		

## CORRELATIONS

YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	LODG %	POW M 0-9
	0.22				
	0.10	0.76			
	0.07	0.46	0.31		
	0.05	0.06	0.05	0.54	
	-0.40	-0.43	-0.31	-0.24	-0.29

\*\*\* Duncan multiple range test

## MONTANANA

## CEREAL STAFF

LATITUDE	041 43'N	DATE PLANTED	12/ 6/83	NITROGEN	APPLIED
LONGITUDE	000 50'W	DATE HARVESTED	6/26/84	PHOSPHORUS	APPLIED
ELEVATION	+00010 M. ABOVE S. L.	AMOUNT OF MOISTURE	272 MM	POTASSIUM	APPLIED

LATE SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 BLIGHT DISEASE INCIDENCE. SLIGHT INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK: ALPHA  
 WEATHER: DRY, EXCEPT THE MONTH OF MAY WHICH WAS RAINY & COLD

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	PLNT HT
24	ARUPD "S"		2786	70	113	56
22	PRO-BEACON X MIZG-OVA		2715	65	111	81
23	ARAHIR - COSSACK		2699	72	115	80
18	PISTACHO		2674	65	107	83
13	TRUMPF		2658	72	119	74
25	LOCAL CHECK		2529	70	117	83
12	EUROPA		2495	71	118	71
9	LIGNEE 527		2365	68	115	76
15	MAZURKA		2344	72	117	87
19	API-EB489. B. 2. 15. 4 x Pot-U. . . .	***	2320	69	103	77
21	ALAMO "S"		2283	67	105	80
11	MENUET		2275	72	116	82
2	RUMOROSA		2245	67	114	88
6	MOREX		2234	69	116	77
4	GLENN		2205	69	112	92
20	API-EB489. B. 2. 15. 4 x Pot-U. . . .		2186	68	103	77
10	CARINA		2166	75	118	83
16	H272		2039	67	111	88
3	UNA 80		2003	68	118	96
7	79W40785		1866	68	117	64
17	TROMPILLO		1758	68	112	78
1	CENTINELA		1611	67	109	80
14	BEACON		1596	61	113	88
5	BEECHER		1369	64	114	85
8	BONANZA		1308	67	112	97
GRAND MEAN			2189.1	68.3	112.9	80.9
STANDARD ERROR OF GRAND MEAN			27.0			0.5
COEFFICIENT OF VARIATION AS PC			12.3			6.2
LSD VARIETY MEANS 5 PC			381.0			7.0

## CORRELATIONS

YIELD KG/HA				
TEST WT	0.47			
HEAD DAYS	0.06	0.46		
PLNT HT	-0.44	-0.26	0.00	

\*\*\* Duncan multiple range test

TABLE 22 EUROPE

YUGOSLAVIA

MACEDONIA

INST. ZA POLJODJELSTVO I GRADINARSTVO

CEREAL STAFF

LATITUDE	043 00'N	DATE PLANTED	11/ 8/83	NITROGEN	APPLIED
LONGITUDE	022 00'E	DATE HARVESTED	7/ 7/84	PHOSPHORUS	APPLIED
ELEVATION	0250 M. ABOVE S. L.	AMOUNT OF MOISTURE	500 MM	POTASSIUM	APPLIED

LATE SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 SLIGHT DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. HAND WEEDING. WEATHER NORMAL.  
 LOCAL CHECK: MAKEDO

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	PLNT HT
12	EUROPA		6499	70	191	223	92
9	LIGNEE 527		6416	65	190	222	86
10	CARINA		6249	72	193	224	93
25	LOCAL CHECK		6249	69	178	220	50
13	TRUMPF		5666	65	196	220	88
11	MENJET		5583	71	195	223	101
23	ARAMIR - COSSACK		5499	71	194	219	98
19	API-EB489. B. 2. 15. 4 x Per-U....		5416	64	174	218	103
20	API-EB489. B. 2. 15. 4 x Per-U....		5333	65	174	217	104
21	ALAND "S"		5249	65	176	220	109
18	PISTACHO	***	5000	59	175	218	105
4	GLENN		5000	64	180	220	118
6	MOREX		4583	65	179	222	98
17	TROPILLO		4583	65	187	219	108
2	RUMOROSA		4416	63	185	223	110
22	PRO-BEACON X MZG-OVA		4416	61	178	217	100
24	ARUPO "S"		4333	68	178	222	47
15	HAZURKA		4083	69	191	224	118
16	H272		3916	63	175	222	105
1	CENTINELA		3666	65	179	222	103
14	BEACON		3666	62	189	219	125
8	BONANZA		3333	65	187	220	119
5	BEECHER		3333	61	179	223	106
3	UNA 80		2083	66	191	224	111
7	79W40785		1833	59	187	224	85

GRAND MEAN	4656.2	65.4	184.1	221.2	99.2
STANDARD ERROR OF GRAND MEAN	89.0	0.0			
COEFFICIENT OF VARIATION AS PC	19.1	0.0			
LSD VARIETY MEANS 5 PC	1254.7	0.0			

		CORRELATIONS			
YIELD	KG/HA				
TEST	WT	0.54			
HEAD	DAYS	0.09	0.51		
MAT	DAYS	-0.17	0.37	0.49	
PLNT	HT	-0.31	-0.29	0.09	-0.11

\*\*\* Duncan multiple range test

A. R. I.

CEREAL STAFF

LATITUDE 35 08'N DATE PLANTED 11/10/83 NITROGEN APPLIED  
 LONGITUDE 33 84'E DATE HARVESTED 5/16/84 PHOSPHORUS APPLIED  
 ELEVATION 142 M. ABOVE S.L. AMOUNT OF MOISTURE 306 MM POTASSIUM —

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK: KANTARA  
 WEATHER: VERY DRY DURING FEBRUARY-MARCH, 50 MM RAIN CAME AFTER MATURITY

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	LEAF RUST	PLNT HT	POW M 0-9	NET B 0-9	SPT B 0-9	BCLD 0-9
25	LOCAL CHECK		4009	93	5MR	75	2	5	7	5
21	ALAMO "B"		3957	86	40MS	97	3	1	4	3
10	CARINA		3700	101	5MR	83	3	5	7	6
12	EUROPA		3652	102	5MR	78	3	7	7	6
16	H272		3652	94	25MS	98	4	4	4	4
9	LIGNEE 527		3519	100	10MR	73	3	6	7	1
11	MENJET		3400	101	5MR	77	2	1	4	5
2	RUMOROSA		3338	91	50S	92	3	1	4	1
17	TRONPILLO		3309	93	60S	98	4	1	4	1
18	PISTACHO		3220	94	25MS	82	4	6	4	1
15	HAZURKA		3209	97	30MS	95	2	6	7	6
24	ARUPO "B"		3157	100	25MS	63	3	3	4	6
19	API-EB489. 8. 2. 15. 4 x Pot-U. . . .	***	2795	82	30MS	80	4	5	4	1
23	ARAHIR - COBBACK		2695	100	40MS	77	2	3	4	0
3	UNA 80		2514	101	80S	92	3	3	6	1
20	API-EB489. 8. 2. 15. 4 x Pot-U. . . .		2500	82	30MS	72	4	3	1	5
4	GLENN		2433	91	30MS	97	4	4	7	5
13	TRUMPF		2395	105	10MS	75	2	6	4	2
1	CENTINELA		2071	88	60S	87	4	1	1	3
5	BEECHER		2062	99	30MS	82	4	4	1	3
22	PRO-BEACON X HZG-OVA		2009	94	30MS	75	4	3	4	3
14	BEACON		1971	95	30S	100	4	6	7	6
6	MOREX		1900	104	40S	73	4	1	1	3
8	BONANZA		1876	93	15MS	98	4	1	1	6
7	79M407B5		1176	98	25MS	55	4	3	4	1
GRAND MEAN			2820.8	95.4	24.7	82.9	3.2	3.4	4.1	3.2
STANDARD ERROR OF GRAND MEAN			65.2			1.1				
COEFFICIENT OF VARIATION AS PC						12.0				
LSD VARIETY MEANS 5 PC			927.5			16.3				

CORRELATIONS

YIELD KG/HA	HEAD DAYS	LEAF RUST	PLNT HT	POW M 0-9	NET B 0-9	SPT B 0-9	BCLD 0-9						
	-0.05												
		-0.28	-0.21										
			0.20	-0.30	0.35								
				0.47	-0.41	0.35	0.14						
					0.21	0.24	-0.50	-0.12	-0.18				
						0.48	0.24	-0.31	0.14	-0.39	0.67		
							0.14	0.03	-0.54	0.16	-0.05	0.19	0.21

\*\*\* Duncan multiple range test



## RANTHA

## CEREAL STAFF

LATITUDE	032 46	DATE PLANTED	11/ 6/83	NITROGEN	APPLIED
LONGITUDE	035 95	DATE HARVESTED	6/ 4/84	PHOSPHORUS	APPLIED
ELEVATION	+00520 M. ABOVE S. L.	AMOUNT OF MOISTURE	191 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 NEGLIGIBLE DISEASE DEVELOPMENT. NEGLIGIBLE INSECT DAMAGE. NO WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF WEEDS.  
 WEATHER NOT REPORTED. LOCAL CHECK NAME NOT REPORTED.

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT
19	API-EB489. 8. 2. 15. 4 x Per-U....		1132	128	172	46
2	RUMORDSA		1114	141	175	50
20	API-EB489. 8. 2. 15. 4 x Per-U....		1000	129	173	44
24	ARUPO "S"		949	138	171	35
21	ALAMO "S"		907	132	173	46
17	TROMPILLO		893	143	174	48
12	EUROPA		885	147	173	40
25	LOCAL CHECK		881	140	174	45
18	PISTACHO		868	139	174	46
16	H272		717	140	175	46
7	79M40785		681	149	178	34
4	GLENN		675	140	176	49
8	BONANZA	***	620	136	177	60
1	CENTINELA		613	135	175	41
9	LIGNEE 527		575	145	178	43
23	ARAHIR - COSSACK		560	143	173	39
22	PRO-BEACON X HZG-OVA		550	143	173	35
6	MOREX		530	145	176	43
13	TRUMPF		522	150	175	43
3	UNA 80		514	152	176	49
11	MENJET		514	145	174	39
14	BEACON		507	142	176	53
10	CARINA		500	145	177	49
5	BEECHER		360	142	177	48
15	MAZURKA		258	148	183	40

GRAND MEAN	693.0	141.4	175.1	44.3
STANDARD ERROR OF GRAND MEAN	29.3			0.4
COEFFICIENT OF VARIATION AS PC	42.3			9.4
LSD VARIETY MEANS 5 PC	413.3			5.9

## CORRELATIONS

YIELD KG/HA				
HEAD DAYS	-0.61			
MAT DAYS	-0.65	0.48		
PLNT HT	0.04	-0.23	0.19	

\*\*\* Duncan multiple range test

RANDAT HARNA  
CEREAL STAFF

LATITUDE	25 48'N	DATE PLANTED	11/15/83	NITROGEN	--
LONGITUDE	51 18'E	DATE HARVESTED	3/26/84	PHOSPHORUS	--
ELEVATION	50 M. ABOVE S. L.	AMOUNT OF MOISTURE	-- MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 MODERATE DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. NO WEEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. HAND WEEDING. WEATHER NORMAL.  
 LOCAL CHECK: GULF BARLEY (ARIVAT X ATHENAIS)

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	HAT DAYS	PLNT HT	LODG %
7	79M40785		6260	76	117	85	0
23	ARAMIR - COSSACK		6210	67	110	100	0
16	H272		6100	80	120	110	45
24	ARUPD "B"		6050	81	116	75	0
25	LOCAL CHECK		6040	77	118	90	45
12	EUROPA		5860	81	118	85	0
18	PISTACHO		5740	72	111	100	30
21	ALAMO "B"		5730	64	107	95	15
10	CARINA		5650	80	117	95	15
22	PRO-BEACON X MZG-OVA		5520	62	104	90	15
11	MENNET		5500	76	117	85	0
6	MOREX		5430	77	120	85	0
15	HAZURKA		5300	76	118	100	30
20	API-EB489. B. 2. 15. 4 x Per-U. . . .		5100	56	101	100	0
17	TROMPILLO		5100	68	107	105	30
13	TRUMPF		5090	87	122	80	0
19	API-EB489. B. 2. 15. 4 x Per-U. . . .		4890	56	94	95	0
5	BEECHER	***	4670	80	118	95	30
14	BEACON		4430	66	103	115	0
9	LIGNEE 527		4390	74	115	85	0
2	RUMOROSA		4320	67	107	95	30
4	GLENN		4055	67	105	85	0
3	UNA 80		4010	90	120	90	15
8	BONANZA		3520	69	111	110	30
1	CENTINELA		3010	52	99	80	0

GRAND MEAN	5119.0	71.9	111.7	93.2	13.2
STANDARD ERROR OF GRAND MEAN	91.5				
COEFFICIENT OF VARIATION AS PC	17.9				
LSD VARIETY MEANS 5 PC	1289.4				

CORRELATIONS					
YIELD KG/HA	HEAD DAYS	HAT DAYS	PLNT HT	LODG %	
	0.32				
	0.39	0.94			
	-0.04	-0.23	-0.23		
	0.09	0.19	0.24	0.50	

\*\*\* Duncan multiple range test

SOUTHEASTERN ANATOLIAN REG. A. R. I.

CEREAL STAFF

LATITUDE	37 55'N	DATE PLANTED	11/ 1/83	NITROGEN	APPLIED
LONGITUDE	40 12'E	DATE HARVESTED	7/10/84	PHOSPHORUS	APPLIED
ELEVATION	660 M. ABOVE S. L.	AMOUNT OF MOISTURE	335 MM	POTASSIUM	---

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 NEGLIGIBLE DISEASE DEVELOPMENT. NEGLIGIBLE INSECT DAMAGE. SLIGHT WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. CHEMICAL CONTROL OF INSECTS AND WEEDS.  
 WEATHER: DRY SEASON

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT
18	PISTACHO		5218	102	140	110
24	ARUPO "S"		5010	110	142	75
16	H272		4697	104	142	85
22	PRO-BEACON X MZG-GVA		4583	108	140	105
23	ARAMIR - COSSACK		4531	112	145	85
13	TRUMPF		4489	122	148	85
25	LOCAL CHECK	***	4291	120	147	85
11	MENNET		4228	115	146	90
10	CARINA		4093	116	147	80
12	EUROPA		3510	115	147	95
1	CENTINELA		3479	108	142	105
7	79W40785		3364	109	145	75
19	API-EB489. B. 2. 15. 4 x Por-U. . .		3333	103	139	95
6	MOREX		3260	112	143	75
9	LIGNEE 527		3249	112	145	75
17	TROMPILLO		3208	110	143	55
15	HAZURKA		3197	114	147	85
20	API-EB489. B. 2. 15. 4 x Por-U. . .		3177	104	139	105
4	GLENN		2885	106	143	80
5	BEECHER		2875	105	144	75
21	ALANO "S"		2781	104	141	75
8	BONANZA		2395	108	143	75
14	BEACON		2385	108	141	85
2	RUMOROSA		2239	113	146	95
3	UNA 80		885	117	146	85

GRAND MEAN	3494.4	110.3	143.6	85.4
STANDARD ERROR OF GRAND MEAN	53.9			
COEFFICIENT OF VARIATION AS PC	15.4			
LSD VARIETY MEANS 5 PC	760.0			

## CORRELATIONS

YIELD	KG/HA			
HEAD	DAYS	0.00		
MAT	DAYS	-0.07	0.87	
PLNT	HT	0.24	-0.17	-0.29

\*\*\* Duncan multiple range test

## CAEMEXI

## CEREAL STAFF

LATITUDE	032 31'N	DATE PLANTED	12/ 6/83	NITROGEN	APPLIED
LONGITUDE	115 26'W	DATE HARVESTED	5/ 8/84	PHOSPHORUS	APPLIED
ELEVATION	+00006 M. ABOVE S. L.	AMOUNT OF MOISTURE	600 MM	POTASSIUM	---

LATE SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 SLIGHT DISEASE INCIDENCE. NEGLIGIBLE INSECT DAMAGE. MODERATE WEED PROBLEM.  
 NEGLIGIBLE BIRD DAMAGE. LOCAL CHECK: SUNBAR BRAND 409  
 SHATTERING OF HEAD DUE TO WIND IN EARLY MATURITY VARIETIES

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEAD DAYS	MAT DAYS	PLNT HT	POW M 0-9
25	LOCAL CHECK		8517	111	146	80	0
24	ARUPD "S"		7809	103	135	73	0
16	H272		7092	100	140	104	1
23	ARAMIR - COSSACK	***	6592	103	139	88	0
18	PISTACHO		6575	96	134	94	2
5	BEECHER		5759	103	143	91	0
6	MOREX		5642	110	143	86	0
3	UNA 80		5625	110	141	98	0
15	MAZURKA		5500	103	140	95	1
7	79H40785		5467	103	143	63	1
10	CARINA		5250	110	143	85	1
13	TRUMPF		5150	116	150	76	0
12	EUROPA		4934	107	140	79	1
2	RUMORDSA		4925	97	134	98	0
11	MENUET		4700	105	141	80	2
22	PRO-BEACON X MZG-OVA		4650	96	135	83	1
9	LIONEE 527		4517	108	141	81	1
21	ALAMO "B"		4234	94	134	100	1
19	API-EB489. B. 2. 15. 4 x Pot-U....		3559	89	130	93	2
20	API-EB489. B. 2. 15. 4 x Pot-U....		3258	86	130	90	0
4	GLENN		3142	97	135	103	1
17	TROMPILLO		3100	95	134	94	1
1	CENTINELA		2808	86	133	93	1
14	BEACON		2575	99	134	104	0
8	BOMANZA		1933	98	135	108	2

GRAND MEAN	4932.6	100.7	138.0	89.3	0.8
STANDARD ERROR OF GRAND MEAN	99.7			0.7	
COEFFICIENT OF VARIATION AS PC	20.2			7.6	
LSD VARIETY MEANS 5 PC	1404.8			9.5	

## CORRELATIONS

YIELD KG/HA					
HEAD DAYS	0.53				
MAT DAYS	0.52	0.90			
PLNT HT	-0.44	-0.43	-0.49		
POW M 0-9	-0.33	-0.35	-0.30	0.15	

\*\*\* Duncan multiple range test





**CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO**  
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