

**RESULTS OF THE  
NINTH ELITE DURUM YIELD TRIAL  
(EDYT)  
1978-1979**



**CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO  
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER  
Londres 40, Apdo. Postal 6-641, México 6, D.F. México**

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## **Ninth Elite Durum Yield Trial**

**(EDYT) 1978–1979**

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# RESULTS OF THE NINTH ELITE DURUM YIELD TRIAL (EDYT) 1978-1979

## INTRODUCTION

Fourteen sets of the Ninth EDYT were distributed and planted at 11 locations throughout the world. The trial was composed of 25 entries: 20 elite durum wheat lines—selected from high yielding materials evolving from a varied number of crosses and tested under excellent cropping conditions at CIANO Agricultural Experiment Station in the Yaqui Valley of the state of Sonora in northwest Mexico; 2 durums, 1 bread wheat and 1 triticale as checks; plus a local check cultivar to be selected at each location where the Ninth EDYT was planted.

Figures 1, 2 indicate the geographic regions, locations and description of growing conditions from which data were gathered. The summary on page 3 describes the entries included in this nursery. Eleven cooperators, from the same number of countries, returned data—which represents a 79 per cent return, only slightly lower than that received the previous year.

## RESULTS AND DISCUSSION

### Yield

Yield data for individual locations are presented in tables 1-11. The highest yielding location was Sonora, Mexico, with 9,000 kg/ha average, where durum line Eider“S” (variety 6) was at the top with 10,852 kg/ha, (table 11). The second highest was Sohag, Egypt, with 6,474 kg/ha, with the durum line Guillermo“S” (variety 7) at the top with 8,213 kg/ha, (table 2). In third place was Bekaa Valley, Lebanon, with 5,539 kg/ha; Yavaros“S” (variety 4) was at the top with 7,175 kg/ha (table 8).

The lowest yielding individual locations were; Madhya Pradesh, India, averaging 1,588 kg/ha—a range of 443-2,105 kg/ha; Laxia, Cyprus, 2,288 kg/ha—a range of 1,307-3,343 kg/ha; and Aleppo, Syria, 2,592 kg/ha—a range of 2,138-2,999 kg/ha. These low yields were consistent with the small amounts of rainfall received in those areas, reported as follow: Madhya Pradesh, 90mm; Laxia, 340mm; and Aleppo, less than normal but good distribution.

Yield data by geographic regions were scarce (tables B-E) the highest ranking was Region I, an average of 9,001 kg/ha and a range of 6,999 kg/ha for Winged“S” (variety 11) to 10,852 kg/ha for Eider (variety 6). Second was Region II, 4,735 kg/ha average and a range of 3,441 for the local check (variety 25) to 6,121 kg/ha for Mapache (triticale check variety 24). In third place, Region III had an average of 3,963 kg/ha with range of 3,163 kg/ha for BD 1543-Inrat 69 x Coot“S”/Gta“S” (variety 19) to 4,528 kg/ha for Widgeon“S” (variety 12).

The yield means over all locations are presented in table A. The mean yield of 4,363 kg/ha is 23 per cent higher than that of the Eighth EDYT and 13 per cent better than the average of the five previous EDYT nurseries. Durum lines Yavaros“S” (varieties 3 and 4) appeared at the top with 4,868 and 4,859 kg/ha average yields; Mexicali 75 (durum check variety 22) was last with an average of 3,981 kg/ha.

### Disease Resistance

Means for diseases over all locations indicate that resistance to stripe rust on leaves (*Puccinia striiformis*) and to leaf rust (*P. recondita*) is maintained at satisfactory levels; only scattered locations need increased resistance to those two rusts. Greater resistance to leaf rust is clearly needed in Madhya Pradesh, India, (table 5) where some lines reached 100 per cent susceptible. The same location in India reported reactions for stem rust as high as 100S, therefore interpretation and conclusions have to consider these data.

Reports on *Septoria tritici* and *Helminthosporium sativum* were received only from Rabat, Morocco, (table 3). Results there continue to show that much more resistance to those two diseases needs to be incorporated in durum materials.

### Agronomic Type

Lines included in the Ninth EDYT as a whole were 5 days later for flowering and 19 days later for maturity than those materials included in the Eighth EDYT; they still were 14 and 18 days earlier, respectively, for flowering and maturity than the average of the five previous EDYT nurseries.

Lines in this nursery averaged 5 cm taller and 11 per cent more lodging in comparison to the Eighth EDYT trial, showing increases of 4.4 cm and 7.6 per cent compared to the averages for the five previous years.

#### **Grain Quality**

Data on test weight indicate only slight improvement of 4 per cent and 2 per cent over those of the Eighth EDYT and the average of the last five EDYT nurseries, respectively. The 1000-kernel weight improved 22 per cent and 8 per cent, respectively, over the Eighth EDYT and last five EDYT nurseries. The percentage of grains showing yellow berry was reported from two locations (tables 3 and 11), and the mean for all locations was 16.4 per cent for this item related to quality.

### **CURRENT DEVELOPMENTS**

Incorporation of more resistance and tolerance to *Septoria tritici*, *Fusarium* spp, BYDV and *Helminthosporium sativum* is a continuous part of the durum program. Special emphasis is being placed on incorporating more resistance to stem rust (*Puccinia graminis*), by requesting resistant materials from heavily infected areas (such as Ethiopia and Kenya in East Africa) and from programs where durums are thoroughly tested and screened for stem rust resistance under controlled and field conditions. Hundreds of samples received for this purpose are further screened for other characteristics and later used in new crosses. Materials with resistance to stem rust under a wide range of environmental conditions and identified through extensive testing in international nurseries are: Gdo VZ 512-Cit''S'' x Ruff''S'' - Fg''S'' CD10549-H-5M-2Y-5M-OY, (Cr''S'' x 21563/61.130 - Leeds) Candéal II CD 3862, Waha''S'' CM-17904, lumillo, Reichenbachii, Rabi''S'' - 31810 CM10172-37M-OY-2Y, 68111/Rugby x Ward, 7175/Ward and Naimus-Lakota.

Also, during the last two seasons, emphasis has been given to identify solid and semisolid stem materials, especially among those received from the Mediterranean, North African and Middle East areas, to be utilized in crosses to incorporate resistance to sawfly, which causes damage to durum wheat plantings in many countries in those areas.

SUMMARY FOR ALL LOCATIONS

LOCATIONS INCLUDED IN THIS SUMMARY REPORT

TABLE	CONTINENT	COUNTRY	CITY	VARIABLES INCLUDED*												
1	AFRICA	ALGERIA	MAHDI BOUALEM	1	3	9										
35	AFRICA	TUNISIA	TUNIS	1	3	9										
105	MIDDLE EAST	LEBANON	BEKAA VALLEY	1	3	4	10									
132	NORTH AMERICA	MEXICO	SONORA	1	2	3	7	9	10	13	47					
178	AFRICA	EGYPT	SOHAG	1	3	4	9	13								
204	ASIA	INDIA	MADHYA PRADESH	1	2	3	4	7	8	9	13					
319	ASIA	PAKISTAN	ISLAMABAD	1	5	7										
327	MIDDLE EAST	CYPRUS	LAXIA	1	3	9										
358	AFRICA	MOROCCO	RABAT	1	3	7	9	15	41	47						
363	MIDDLE EAST	SYRIA	ALEPPO	1	2	3	4	9								
261	MIDDLE EAST	TURKEY	DIYARBAKIR	1	2	3	9									

\*VARIABLE IDENTIFICATIONS

1	Yield kg/ha	2	Test Wt	3	Flow Days	4	Mat Days	5	Strp Rt.L
7	Leaf rust	8	Stem rust	9	Plnt Ht	10	Lodg %	13	1000 G.W.
15	Sept Trit	41	Helm	47	Yell Berr				

Figure 1. Four geographic regions.

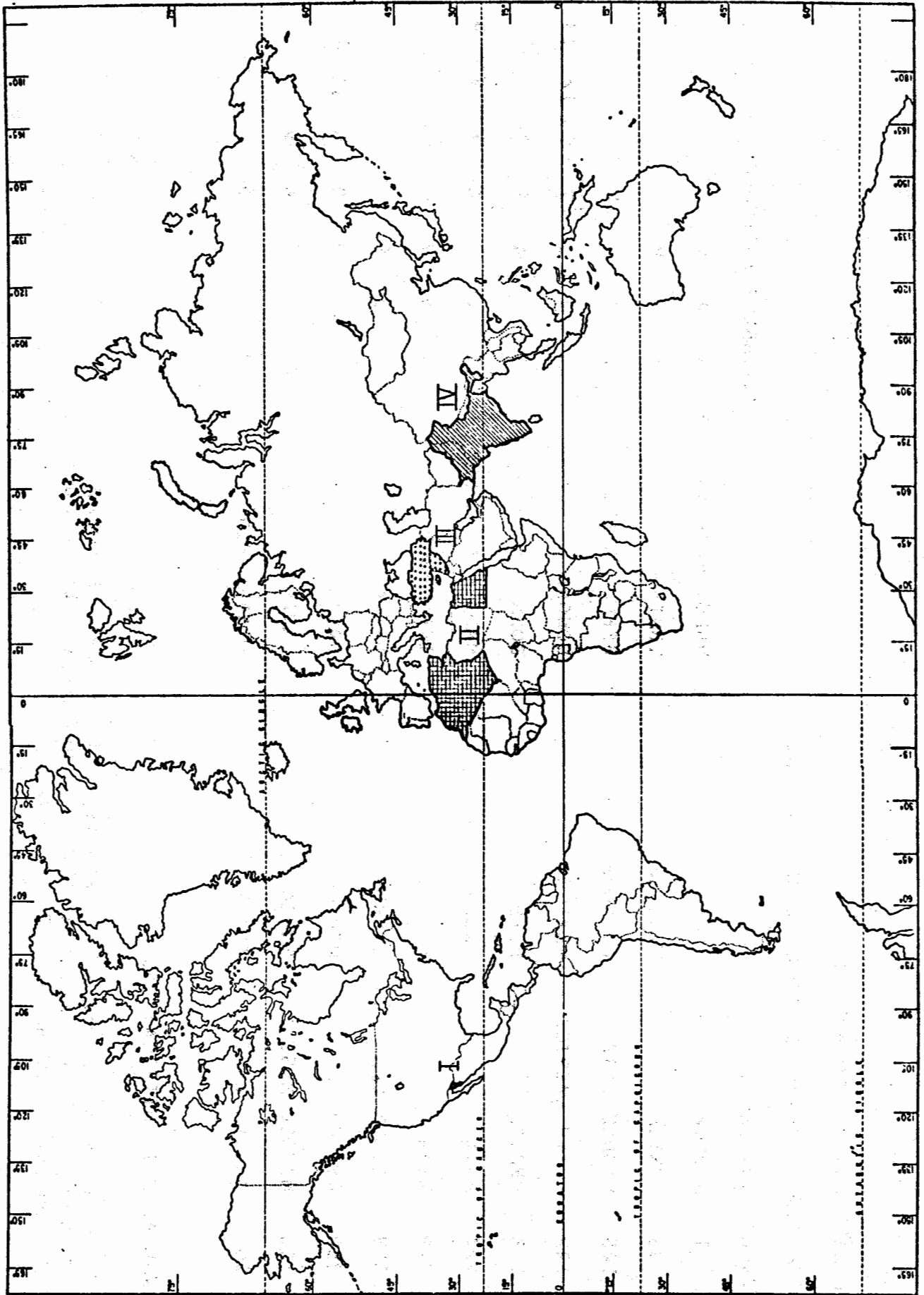


Figure 2. Eleven test locations.

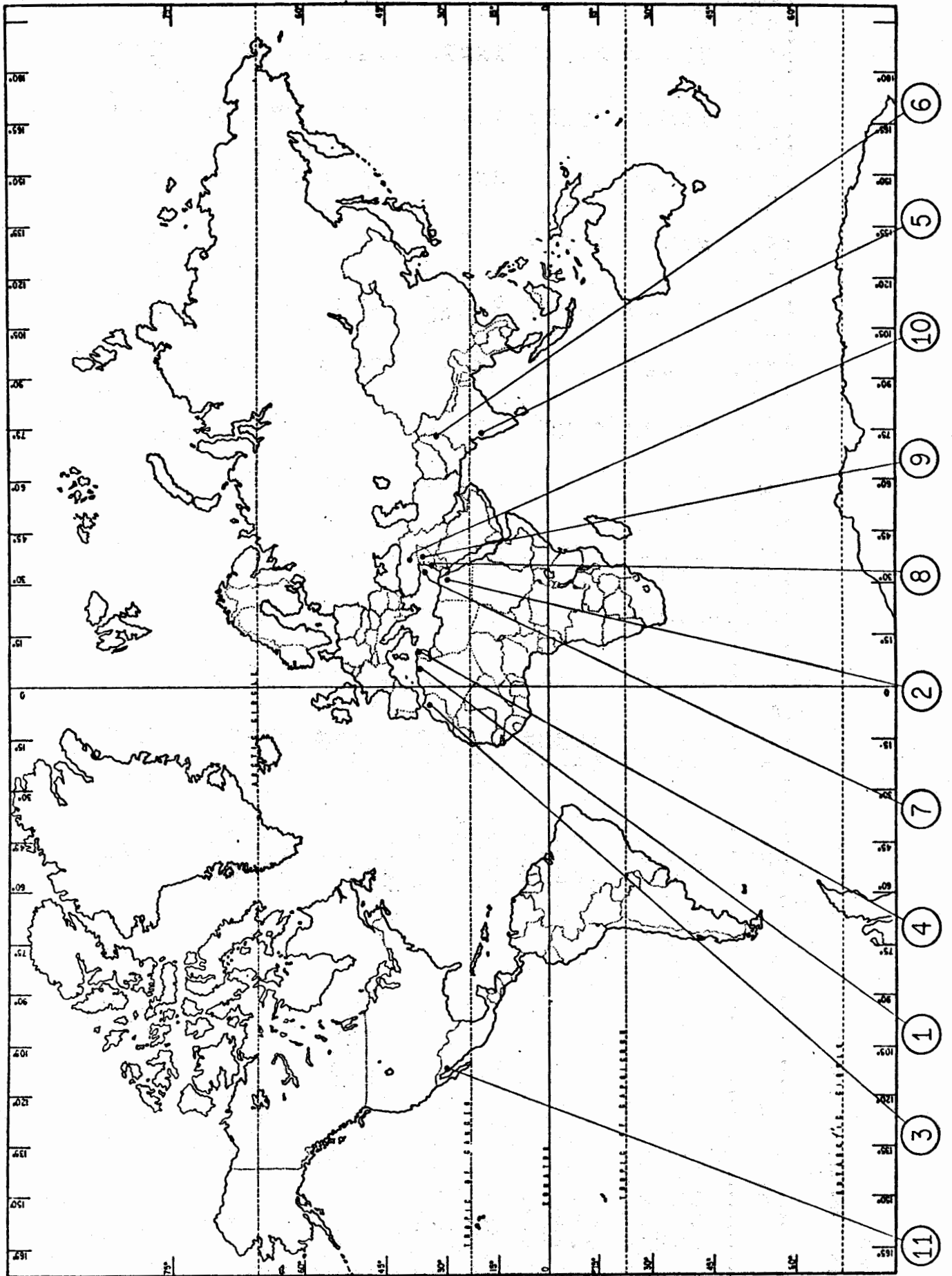




Table A

SUMMARY FOR ALL LOCATIONS

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	STRP RT.L	LEAF RUST	STEM RUST	PLNT HT	LODG %	1000 G.W.	SEPT TRIT	HELM	YELL BERR
3	YAV"S"	MEXICO	4868	82	100	154	4	10	12	85	35	53	50	62	7
4	YAV"S"	MEXICO	4859	82	99	153	2	10	12	83	10	53	45	50	7
24	MAPACHE	MEXICO	4823	68	92	154	0	0	40	102	35	41	44	39	3
13	BOYEROS"S"	MEXICO	4754	80	99	155	2	8	100	87	9	53	39	73	38
9	SHOV"S"	MEXICO	4667	80	99	155	8	19	10	83	50	55	62	73	12
7	GUIL"S"	MEXICO	4507	80	103	156	4	6	-	85	45	48	62	73	11
12	WID"S"	MEXICO	4502	79	102	155	2	24	80	77	-	48	62	73	19
23	PAVON 76	MEXICO	4456	81	98	153	8	15	4	88	45	41	50	56	2
6	EID"S"	MEXICO	4428	79	105	158	2	27	4	86	5	45	28	50	28
2	ROK"S"	MEXICO	4398	80	97	153	8	2	0	86	50	52	56	78	22
1	SKIM"S"	MEXICO	4382	79	102	155	2	3	-	82	90	48	39	56	14
8	CHI"S"	MEXICO	4352	80	97	154	8	22	100	84	-	51	67	56	48
15	KOL"S"	MEXICO	4341	75	102	155	8	3	-	85	8	51	33	73	14
10	GTA"S"-MEXI"S"	MEXICO	4296	80	96	153	4	20	-	83	28	54	78	56	10
11	WIN"S"	MEXICO	4263	78	97	155	8	24	40	84	-	52	78	62	3
21	COCORIT 71	MEXICO	4258	80	93	153	4	6	0	84	20	50	84	73	21
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	4257	79	99	153	4	3	1	100	95	51	67	67	14
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	4176	81	98	153	2	6	4	88	44	51	50	67	15
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	4160	80	100	155	4	4	-	90	-	58	56	67	10
5	GOOSE"S"	MEXICO	4120	80	105	156	2	17	60	87	55	46	56	61	28
18	SWAN"S"	MEXICO	4078	81	103	155	4	21	-	89	30	49	67	50	15
14	JO"S"-AA"S"XMEXI"S"	MEXICO	4075	77	95	153	2	6	-	82	8	54	56	61	21
25	LOCAL CHECK		4068	80	104	156	4	13	12	93	10	48	44	78	30
20	ENTE"S"-MARIO"S"	MEXICO	4014	79	99	154	4	23	30	82	10	59	61	62	6
22	MEXICALI 75	MEXICO	3981	80	90	153	8	19	0	84	45	54	89	34	20
SUMMARY MEANS OVER VARIETIES			4363.3	79.1	99.0	154.2	4.3	12.4	28.3	86.4	34.5	50.6	56.9	62.0	16.4
NUMBER OF LOCATIONS FOR EACH VARIABLE			11	4	10	4	1	4	1	9	2	3	1	1	2
NUMBER OF OBSERVATIONS FOR EACH VARIABLE			36	10	23	5	1	8	1	20	5	8	2	2	5



Table C

## SUMMARY FOR REGION II

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	MAT DAYS	LEAF RUST	PLNT HT	1000 G.W.	SEPT TRIT	HELM	YELL BERR
24	MAPACHE	MEXICO	6121	71	133	0	101	38	44	39	5
3	YAV"S"	MEXICO	5280	82	135	1	85	51	50	62	9
7	GUIL"S"	MEXICO	5276	86	139	1	83	45	62	73	21
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	5184	81	133	1	102	50	67	67	18
23	PAVON 76	MEXICO	5176	79	136	0	92	38	50	56	2
4	YAV"S"	MEXICO	5130	81	135	0	83	48	45	50	3
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	4930	81	135	1	89	47	50	67	19
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	4927	83	134	5	90	55	56	67	14
6	EID"S"	MEXICO	4905	87	143	0	87	42	28	50	36
13	BOYEROS"S"	MEXICO	4901	81	136	1	85	50	39	73	60
9	SHOV"S"	MEXICO	4852	82	135	3	85	54	62	73	22
10	GTA"S"-MEXI"S"	MEXICO	4744	77	133	37	85	54	78	56	9
15	KOL"S"	MEXICO	4733	86	138	0	86	52	33	73	22
12	WID"S"	MEXICO	4707	85	135	3	78	44	62	73	33
20	ENTE"S"-MARIO"S"	MEXICO	4701	79	137	1	82	56	61	62	7
2	ROK"S"	MEXICO	4665	78	136	0	84	49	56	78	38
1	SKIM"S"	MEXICO	4642	84	139	3	81	46	39	56	26
11	WIN"S"	MEXICO	4591	79	134	4	82	50	78	62	4
18	SWAN"S"	MEXICO	4488	86	135	54	90	48	67	50	15
21	COCORIT 71	MEXICO	4365	73	132	8	81	48	84	73	31
8	CHI"S"	MEXICO	4277	79	137	1	88	48	67	56	65
5	GOOSE"S"	MEXICO	4181	89	140	1	89	41	56	61	41
22	MEXICALI 75	MEXICO	4141	71	130	45	82	53	89	34	29
14	JO"S"-AA"S"XMEXI"S"	MEXICO	4052	76	135	10	83	52	56	61	41
25	LOCAL CHECK	MEXICO	3441	90	137	1	95	39	44	78	49

SUMMARY MEANS OVER VARIETIES	4734.7	81.0	135.7	7.2	86.7	47.9	56.9	62.0	24.8
NUMBER OF LOCATIONS FOR EACH VARIABLE	4	4	1	1	4	1	1	1	1
NUMBER OF OBSERVATIONS FOR EACH VARIABLE	16	11	1	2	10	3	2	2	4

Table D

## SUMMARY FOR REGION III

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	PLNT HT	LODG %
12	WID"S"	MEXICO	4528	78	131	185	74	-
13	BOYEROS"S"	MEXICO	4477	79	130	184	86	10
4	YAV"S"	MEXICO	4424	80	128	183	82	-
9	SHOV"S"	MEXICO	4390	78	127	186	79	50
3	YAV"S"	MEXICO	4327	80	128	184	84	30
11	WIN"S"	MEXICO	4155	78	127	184	85	-
21	COCORIT 71	MEXICO	4105	79	125	183	84	20
15	KOL"S"	MEXICO	4019	77	131	185	84	10
1	SKIM"S"	MEXICO	3882	79	131	183	80	90
2	ROK"S"	MEXICO	3854	78	129	182	87	20
8	CHI"S"	MEXICO	3752	79	127	184	83	-
14	JO"S"-AA"S"XMEXI"S"	MEXICO	3616	76	127	184	80	10
5	GOOSE"S"	MEXICO	3600	79	133	185	86	-
6	EID"S"	MEXICO	3581	79	132	185	81	-
24	MAPACHE	MEXICO	3522	66	124	186	95	10
25	LOCAL CHECK		3499	79	128	184	95	-
22	MEXICALI 75	MEXICO	3495	79	123	184	85	40
10	GTA"S"-MEXI"S"	MEXICO	3491	79	127	184	79	20
7	GUIL"S"	MEXICO	3485	78	131	185	84	-
23	PAVON 76	MEXICO	3449	79	128	183	77	30
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	3398	79	128	183	89	-
18	SWAN"S"	MEXICO	3357	80	131	185	84	30
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	3334	80	130	184	86	60
20	ENTE"S"-MARIO"S"	MEXICO	3173	78	130	183	79	-
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	3165	79	129	184	95	100

SUMMARY MEANS OVER VARIETIES	3763.0	78.0	128.5	183.9	84.2	35.3
NUMBER OF LOCATIONS FOR EACH VARIABLE	4	2	4	2	3	1
NUMBER OF OBSERVATIONS FOR EACH VARIABLE	8	2	7	3	5	1

Table E

SUMMARY FOR REGION IV

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	STRP RT.L	LEAF RUST	STEM RUST	PLNT HT	1000 G.W.
23	PAVON 76	MEXICO	3356	84	71	111	8	3	4	95	41
25	LOCAL CHECK		3070	81	73	118	4	25	12	90	47
24	MAPACHE	MEXICO	2954	73	69	113	0	0	40	110	38
8	CHI"S"	MEXICO	2813	83	69	110	8	44	100	70	44
10	GTA"S"-MEXI"S"	MEXICO	2799	82	70	110	4	19	-	80	45
3	YAV"S"	MEXICO	2781	84	72	111	4	19	12	85	49
13	BOYEROS"S"	MEXICO	2724	83	71	116	2	16	100	90	46
7	GUIL"S"	MEXICO	2673	83	73	116	4	12	-	90	44
21	COCORIT 71	MEXICO	2619	83	70	113	4	6	0	95	45
22	MEXICALI 75	MEXICO	2589	82	64	115	8	14	0	80	46
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	2522	80	70	112	4	5	1	100	46
4	YAV"S"	MEXICO	2516	85	72	110	2	19	12	80	49
11	WIN"S"	MEXICO	2457	79	70	117	8	46	40	80	42
9	SHOV"S"	MEXICO	2429	82	70	111	8	36	10	80	47
14	JO"S"-AA"S"XMEXI"S"	MEXICO	2428	77	70	110	2	8	-	80	43
2	ROK"S"	MEXICO	2410	83	71	111	8	5	0	85	45
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	2337	81	71	118	4	8	-	90	48
5	GOOSE"S"	MEXICO	2309	80	78	113	2	34	60	80	38
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	2253	82	65	110	2	11	4	90	41
18	SWAN"S"	MEXICO	2163	81	73	116	4	8	-	95	37
20	ENTE"S"-MARIO"S"	MEXICO	2093	82	71	113	4	45	30	80	49
1	SKIM"S"	MEXICO	2033	80	75	116	2	4	-	90	41
12	WID"S"	MEXICO	1997	81	71	117	2	46	80	80	41
15	KOL"S"	MEXICO	1972	68	71	111	8	8	-	85	31
6	EID"S"	MEXICO	1955	79	78	117	2	54	4	95	38

SUMMARY MEANS OVER VARIETIES	2489.9	80.7	71.1	113.4	4.3	19.7	28.3	87.0	43.2
NUMBER OF LOCATIONS FOR EACH VARIABLE	2	1	1	1	1	2	1	1	1
NUMBER OF OBSERVATIONS FOR EACH VARIABLE	8	4	1	1	1	2	1	1	1

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9TH EDYT

TABLE 1 AFRICA ALGERIA MAHDI BOUALEM

QUED SMAR  
CEREAL PROJECT

LATITUDE	35 26'N	DATE PLANTED	11/ 7/78	NITROGEN	APPLIED
LONGITUDE	1 40'E	DATE HARVESTED	6/17/79	PHOSPHORUS	APPLIED
ELEVATION	M.ABOVE S.L.	AMOUNT OF MOISTURE	628 MM	POTASSIUM	--

EARLY SOWING DATE. SOIL DRY AT SOWING. GERMINATION & NOT REPORTED.  
WEATHER NORMAL. SLIGHT DISEASE INCIDENCE. INSECT, WEED AND BIRD PROBLEMS NOT REPORTED.  
LOCAL CHECK BIDI 17

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	PLNT HT
24	MAPACHE	MEXICO	7483	43	100
6	EID"S"	MEXICO	*** 6333	68	95
3	YAV"S"	MEXICO	5899	61	90
23	PAVON 76	MEXICO	5799	51	95
9	SHOV"S"	MEXICO	5683	64	90
4	YAV"S"	MEXICO	5583	55	85
1	SKIM"S"	MEXICO	5541	61	88
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	5258	64	100
8	CHI"S"	MEXICO	5191	52	95
2	ROK"S"	MEXICO	5108	43	88
13	BOYEROS"S"	MEXICO	4958	57	93
15	KOL"S"	MEXICO	4916	66	95
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	4775	61	88
5	GOOSE"S"	MEXICO	4741	68	95
7	GUIL"S"	MEXICO	4608	66	90
12	WID"S"	MEXICO	4225	62	83
10	GTA"S"-MEXI"S"	MEXICO	4166	48	90
14	JO"S"-AA"S"XMEXI"S"	MEXICO	4150	48	85
18	SWAN"S"	MEXICO	4008	62	95
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	4000	61	88
21	COCORIT 71	MEXICO	3833	44	80
20	ENTE"S"-MARIO"S"	MEXICO	3816	53	85
11	WIN"S"	MEXICO	3616	52	83
22	MEXICALI 75	MEXICO	3091	42	80
25	LOCAL CHECK		-	103	130

GRAND MEAN	4865.8	58.0	91.3
STANDARD ERROR OF GRAND MEAN	40.0		
COEFFICIENT OF VARIATION AS PC	8.1		
LSD VARIETY MEANS 5 PC	553.0		

CORRELATIONS

YIELD KG/HA		
FLOW DAYS	0.11	
PLNT HT	0.38	0.74

9TH EDYT

TABLE 2 AFRICA

EGYPT

SOHAG

SHANDAWEEL  
M. M. SADEK

LATITUDE	026 36'N	DATE PLANTED	12/ 2/78	NITROGEN	--
LONGITUDE	031 40'E	DATE HARVESTED	5/11/79	PHOSPHORUS	--
ELEVATION	0021 M.ABOVE S.L.	AMOUNT OF MOISTURE	-- MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
WEATHER NORMAL. NEGLIGIBLE DISEASE DEVELOPMENT. CHEMICAL CONTROL OF INSECTS.  
HAND WEEDING. LOCAL CHECK: GIZA 157

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	MAT DAYS	PLNT HT.	1000 G.W.
7	GUIL"S"	MEXICO	8213	90	139	95	45
11	WIN"S"	MEXICO	7513	85	134	92	50
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	7263	89	134	98	55
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	7250	89	135	97	47
21	COCORIT 71	MEXICO	7175	86	132	97	48
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	7038	87	133	115	50
20	ENTE"S"-MARIO"S"	MEXICO	6963	85	137	93	56
9	SHOV"S"	MEXICO	6950	86	135	92	54
10	GTA"S"-MEXI"S"	MEXICO	6938	83	133	87	54
12	WID"S"	MEXICO	6900	90	135	80	44
22	MEXICALI 75	MEXICO	6788	83	130	90	53
4	YAV"S"	MEXICO	6725	86	135	87	48
13	BOYEROS"S"	MEXICO	6700	86	136	88	50
3	YAV"S"	MEXICO	6525	86	135	90	51
15	KOL"S"	MEXICO	6325	92	138	93	52
14	JO"S"-AA"S"XMEXI"S"	MEXICO	6288	86	135	87	52
2	ROK"S"	MEXICO	6256	88	136	92	49
18	SWAN"S"	MEXICO	6081	91	135	92	48
6	EID"S"	MEXICO	5850	88	143	88	42
24	MAPACHE	MEXICO	5813	86	133	100	38
23	PAVON 76	MEXICO	5688	91	136	93	38
5	GOOSE"S"	MEXICO	*** 5313	94	140	90	41
1	SKIM"S"	MEXICO	5300	89	139	88	46
8	CHI"S"	MEXICO	5200	88	137	92	48
25	LOCAL CHECK		4800	88	137	102	39

GRAND MEAN	6474.0	87.7	135.7	92.7	47.9
STANDARD ERROR OF GRAND MEAN	152.7			0.6	0.4
COEFFICIENT OF VARIATION AS PC	23.6			5.2	7.2
LSD VARIETY MEANS 5 PC	2152.8			7.9	5.7

CORRELATIONS

YIELD KG/HA					
FLOW DAYS	-0.33				
MAT DAYS	-0.39	0.60			
PLNT HT	0.06	0.01	-0.23		
1000 G.W.	0.54	-0.50	-0.38	-0.09	

9TH EDYT

TABLE 3 APRICA MOROCCO RABAT

RABAT-GUICH

OUASSOU ABDALLAH

LATITUDE 33 59'N DATE PLANTED 12/12/78 NITROGEN APPLIED  
 LONGITUDE 6 52'W DATE HARVESTED --/--/-- PHOSPHORUS APPLIED  
 ELEVATION 25 M.ABOVE S.L. AMOUNT OF MOISTURE 600 MM POTASSIUM APPLIED

LATE SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 WEATHER NORMAL. MODERATE DISEASE INCIDENCE. MODERATE BIRD DAMAGE.  
 NEITHER INSECT NOR WEED PROBLEMS. LOCAL CHECK: HADJ MOULINE (D.W.)

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	LEAF RUST	PLNT HT	SEPT TRIT	HELM	YELL BERR
24	MAPACHE	MEXICO	4880	79	0	99	44	39	5
23	PAVON 76	MEXICO	4380	91	0	84	50	56	2
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	3972	98	10MR-R	85	56	67	14
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	*** 3695	92	TRMR	93	67	67	18
3	YAV"S"	MEXICO	3616	96	TRMR	76	50	62	9
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	3591	90	TRMS	80	50	67	19
15	KOL"S"	MEXICO	3342	98	TRMR	70	33	73	22
20	ENTE"S"-MARIO"S"	MEXICO	3324	95	TMR-MS	66	61	62	7
13	BOYEROS"S"	MEXICO	3274	96	TRMR	75	39	73	60
9	SHOV"S"	MEXICO	3265	93	SMS-MR	71	62	73	22
7	GUIL"S"	MEXICO	3172	99	TRMR	68	62	73	21
10	GTA"S"-MEXI"S"	MEXICO	3049	94	SMR	73	78	56	9
11	WIN"S"	MEXICO	2906	98	5MR-MS	69	78	62	4
4	YAV"S"	MEXICO	2870	98	TRMR	76	45	50	3
18	SWAN"S"	MEXICO	2850	99	40S-MS	76	67	50	15
6	EID"S"	MEXICO	2815	100	TRMR	80	28	50	36
5	GOOSE"S"	MEXICO	2730	99	TRMR	80	56	61	41
2	ROK"S"	MEXICO	2722	98	TRMR	71	56	78	38
21	COCORIT 71	MEXICO	2685	84	20MR-MS	61	84	73	31
12	WID"S"	MEXICO	2597	99	TRMR	68	62	73	33
1	SKIM"S"	MEXICO	2430	99	TRMR	69	39	56	26
8	CHI"S"	MEXICO	2273	93	TRMR	75	67	56	65
22	MEXICALI 75	MEXICO	2271	82	40S-MS	73	89	34	29
14	JO"S"-AA"S"XMEXI"S"	MEXICO	2027	87	5MS-MR	73	56	61	41
25	LOCAL CHECK		1759	93	TRMR-MS	66	44	78	49

GRAND MEAN 3059.9 93.9 7.2 75.0 56.8 61.7 24.0  
 STANDARD ERROR OF GRAND MEAN 71.9 0.7  
 COEFFICIENT OF VARIATION AS PC 23.5 9.2  
 LSD VARIETY MEANS 5 PC 1014.8 9.7

CORRELATIONS

YIELD KG/HA	FLOW DAYS	LEAF RUST	PLNT HT	SEPT TRIT	HELM	YELL BERR
		-0.18				
		-0.23	-0.17			
		0.69	-0.27	-0.09		
		-0.21	-0.33	0.55	-0.25	
		-0.13	0.37	-0.47	-0.44	-0.11
		-0.61	0.04	-0.12	-0.26	-0.11
						0.30



9TH EDYT

TABLE 4 AFRICA TUNISIA TUNIS

BEJA  
 ACP/INRAT  
 LATITUDE 036 44'N DATE PLANTED 11/18/78 NITROGEN APPLIED  
 LONGITUDE 009 08'E DATE HARVESTED 6/11/79 PHOSPHORUS APPLIED  
 ELEVATION 0150 M.ABOVE S.L. AMOUNT OF MOISTURE 526 MM POTASSIUM --

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION & NOT REPORTED.  
 ABNORMAL WEATHER CAUSING BAD TILLERING AND SHRIVELING  
 NEGLIGIBLE DISEASE DEVELOPMENT. INSECT, WEED AND BIRD PROBLEMS NOT REPORTED.  
 LOCAL CHECK MAGHREBI 72

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	PLNT HT
24	MAPACHE	MEXICO	6306	77	105
4	YAV"S"	MEXICO	5340	84	85
1	SKIM"S"	MEXICO	5295	86	80
7	GUIL"S"	MEXICO	*** 5112	90	80
12	WID"S"	MEXICO	5107	89	80
3	YAV"S"	MEXICO	5081	84	85
18	SWAN"S"	MEXICO	5012	91	95
23	PAVON 76	MEXICO	4836	84	95
10	GTA"S"-MEXI"S"	MEXICO	4821	81	90
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	4746	81	100
20	ENTE"S"-MARIO"S"	MEXICO	4699	83	85
13	BOYEROS"S"	MEXICO	4672	85	85
6	EID"S"	MEXICO	4623	93	85
2	ROK"S"	MEXICO	4574	81	85
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S" MEXICO	MEXICO	4473	83	90
8	CHI"S"	MEXICO	4443	81	90
15	KOL"S"	MEXICO	4347	89	85
11	WIN"S"	MEXICO	4329	82	85
22	MEXICALI 75	MEXICO	4254	75	85
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S" MEXICO	MEXICO	4103	85	90
5	GOOSE"S"	MEXICO	3941	94	90
21	COCORIT 71	MEXICO	3767	79	85
25	LOCAL CHECK		3764	77	80
14	JO"S"-AA"S"XMEXI"S"	MEXICO	3742	82	85
9	SHOV"S"	MEXICO	3508	86	85

GRAND MEAN 4595.8 84.1 87.4  
 STANDARD ERROR OF GRAND MEAN 69.4  
 COEFFICIENT OF VARIATION AS PC 15.1  
 LSD VARIETY MEANS 5 PC 978.7

CORRELATIONS

YIELD KG/HA  
 FLOW DAYS 0.03  
 PLNT HT 0.35 -0.18

9TH EDYT

TABLE 5

ASIA

INDIA

MADHYA PRADESH

INDORE

CEREAL STAFF

LATITUDE 022 37'N

DATE PLANTED 12/ 8/78

NITROGEN APPLIED

LONGITUDE 075 50'E

DATE HARVESTED 4/12/79

PHOSPHORUS APPLIED

ELEVATION 0600 M.ABOVE S.L.

AMOUNT OF MOISTURE 90 MM

POTASSIUM APPLIED

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

WEATHER NORMAL. MODERATE DISEASE INCIDENCE. HAND WEEDING.

NEGLECTIBLE INSECT DAMAGE. NEGLECTIBLE BIRD DAMAGE. LOCAL CHECK: RAJ 911

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	LEAF RUST	STEM RUST	PLNT HT	1000 G.W.
23	PAVON 76	MEXICO	2105	84	71	111	10MR	10MR	95	41
21	COCORIT 71	MEXICO	2046	83	70	113	10MR	0	95	45
4	YAV"S"	MEXICO	1948	85	72	110	30S	30MR	80	49
25	LOCAL CHECK		1914	81	73	118	30MS	30MR	90	47
3	YAV"S"	MEXICO	1895	84	72	111	30S	30MR	85	49
13	BOYEROS"S"	MEXICO	*** 1865	83	71	116	20S	100S	90	46
7	GUIL"S"	MEXICO	1751	83	73	116	15S	----	90	44
11	WIN"S"	MEXICO	1734	79	70	117	80S	40S	80	42
10	GTA"S"-MEXI"S"	MEXICO	1716	82	70	110	30S	----	80	45
24	MAPACHE	MEXICO	1681	73	69	113	0	40S	110	38
9	SHOV"S"	MEXICO	1644	82	70	111	60S	10S	80	47
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	1625	81	71	118	----	----	90	48
2	ROK"S"	MEXICO	1606	83	71	111	TS	0	85	45
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	1603	80	70	112	5MR	TMS	100	46
14	JO"S"-AA"S"XMEXI"S"	MEXICO	1594	77	70	110	----	----	80	43
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	1588	82	65	110	10S	10MR	90	41
8	CHI"S"	MEXICO	1566	83	69	110	80S	100S	70	44
22	MEXICALI 75	MEXICO	1546	82	64	115	20MS	0	80	46
12	WID"S"	MEXICO	1470	81	71	117	80S	80S	80	41
1	SKIM"S"	MEXICO	1447	80	75	116	----	----	90	41
18	SWAN"S"	MEXICO	1444	81	73	116	----	----	95	37
20	ENTE"S"-MARIO"S"	MEXICO	1269	82	71	113	50S	30S	80	49
6	EID"S"	MEXICO	1160	79	78	117	100S	10MR	95	38
5	GOOSE"S"	MEXICO	1045	80	78	113	60S	60S	80	38
15	KOL"S"	MEXICO	443	68	71	111	----	----	85	31

GRAND MEAN 1588.1 80.6 71.1 113.4 34.8 28.3 87.0 43.0  
STANDARD ERROR OF GRAND MEAN 13.9  
COEFFICIENT OF VARIATION AS PC 8.7  
LSD VARIETY MEANS 5 PC 195.4

## CORRELATIONS

YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	LEAF RUST	STEM RUST	PLNT HT	1000 G.W.
	0.67						
	-0.26	-0.04					
	-0.01	-0.02	0.33				
	-0.44	-0.08	0.44	0.30			
	-0.17	-0.07	0.13	0.20	0.45		
	0.17	-0.24	0.10	0.25	-0.58	-0.39	
	0.66	0.72	-0.25	-0.05	-0.20	-0.17	-0.26

9TH EDYT

TABLE 6 ASIA PAKISTAN ISLAMABAD

C.D.R.I.

HOMER HEPWORTH

LATITUDE 33 41'N DATE PLANTED 10/29/78 NITROGEN APPLIED  
 LONGITUDE 73 07'E DATE HARVESTED --/--/-- PHOSPHORUS APPLIED  
 ELEVATION 526 M.ABOVE S.L. AMOUNT OF MOISTURE -- MM POTASSIUM --

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 WEATHER NORMAL. MODERATE DISEASE INCIDENCE.  
 INSECT, WEED AND BIRD PROBLEMS NOT REPORTED. LOCAL CHECK: LVP 73

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	STRP RT.L	LEAF RUST
23	PAVON 76	MEXICO	4607	10MS	5R
24	MAPACHE	MEXICO	4226	0R	0R
25	LOCAL CHECK		4226	5MS	25S
8	CHI"S"	MEXICO	4060	10MS	10MS
10	GTA"S"-MEXI"S"	MEXICO	3881	10MR	10MS
3	YAV"S"	MEXICO	3667	10MR	10MS
22	MEXICALI 75	MEXICO	3631	10MS	15MS
7	GUIL"S"	MEXICO	3595	10MR	10MS
13	BOYEROS"S"	MEXICO	3583	10R	15MS
5	GOOSE"S"	MEXICO	3572	5MR	10MS
15	KOL"S"	MEXICO	*** 3500	10MS	10MS
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	3441	10MR	10MS
14	JO"S"-AA"S"XMEXI"S"	MEXICO	3262	10R	10MS
9	SHOV"S"	MEXICO	3214	10MS	15MS
2	ROK"S"	MEXICO	3214	10MS	10MS
21	COCORIT 71	MEXICO	3191	10MR	10MS
11	WIN"S"	MEXICO	3179	10MS	15MS
4	YAV"S"	MEXICO	3083	5MR	10MS
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	3048	10MR	10MS
20	ENTE"S"-MARIO"S"	MEXICO	2917	10MR	50MS
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	2917	10R	15MS
18	SWAN"S"	MEXICO	2881	10MR	10MS
6	EID"S"	MEXICO	2750	10R	10MS
1	SKIM"S"	MEXICO	2619	5MR	10MR
12	WID"S"	MEXICO	2524	5MR	15MS

GRAND MEAN 3391.5 4.3 10.2  
 STANDARD ERROR OF GRAND MEAN 65.7  
 COEFFICIENT OF VARIATION AS PC 19.4  
 LSD VARIETY MEANS 5 PC 926.5

CORRELATIONS

YIELD KG/HA  
 STRP RT.L 0.28  
 LEAF RUST -0.19 0.04

9TH EDYT

TABLE 7 MIDDLE EAST CYPRUS LAXIA

AGRIC. RES. INST.  
 A. HADJICHRISTODOULOU  
 LATITUDE 35 04'N DATE PLANTED 12/ 1/78 NITROGEN APPLIED  
 LONGITUDE 33 20'E DATE HARVESTED 6/14/79 PHOSPHORUS APPLIED  
 ELEVATION 150 M.ABOVE S.L. AMOUNT OF MOISTURE 340 MM POTASSIUM --

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 WEATHER NORMAL. NEGLIGIBLE DISEASE DEVELOPMENT.  
 INSECT, WEED AND BIRD PROBLEMS NOT REPORTED. LOCAL CHECK: ARANAS (DURUM)

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	PLNT HT
12	WID"S"	MEXICO	3343	100	75
11	WIN"S"	MEXICO	2846	97	95
7	GUIL"S"	MEXICO	2778	100	100
9	SHOV"S"	MEXICO	2764	96	80
4	YAV"S"	MEXICO	2686	98	94
3	YAV"S"	MEXICO	2674	96	94
15	KOL"S"	MEXICO	2660	100	85
6	EID"S"	MEXICO	2588	104	80
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S" MEXICO	***	2468	96	98
21	COCORIT 71	MEXICO	2468	94	80
13	BOYEROS"S"	MEXICO	2460	98	97
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S" MEXICO		2400	101	85
5	GOOSE"S"	MEXICO	2300	103	102
1	SKIM"S"	MEXICO	2250	103	80
18	SWAN"S"	MEXICO	2243	100	80
25	LOCAL CHECK		2178	96	94
2	ROK"S"	MEXICO	2153	100	98
24	MAPACHE	MEXICO	2131	93	93
14	JO"S"-AA"S"XMEXI"S"	MEXICO	2007	96	80
8	CHI"S"	MEXICO	1990	100	85
22	MEXICALI 75	MEXICO	1921	92	92
10	GTA"S"-MEXI"S"	MEXICO	1650	98	70
20	ENTE"S"-MARIO"S"	MEXICO	1524	101	80
19	BD1543-INRAT69XCOOT"S"/GTA"S" MEXICO		1414	99	98
23	PAVON 76	MEXICO	1307	104	70

GRAND MEAN 2288.2 98.3 87.4  
 STANDARD ERROR OF GRAND MEAN 49.3  
 COEFFICIENT OF VARIATION AS PC 15.3  
 LSD VARIETY MEANS 5 PC 720.3

CORRELATIONS

YIELD KG/HA  
 FLOW DAYS -0.10  
 PLNT HT 0.19 -0.25

9TH EDYT

TABLE 8 MIDDLE EAST LEBANON BEKAA VALLEY

TERBOL  
ICARDA

LATITUDE 33 55'N DATE PLANTED 11/30/78 NITROGEN APPLIED  
LONGITUDE 35 28'E DATE HARVESTED 6/28/79 PHOSPHORUS APPLIED  
ELEVATION 950 M.ABOVE S.L. AMOUNT OF MOISTURE -- MM POTASSIUM --

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
WEATHER NORMAL. DISEASE DEVELOPMENT NOT REPORTED.  
INSECT, WEED AND BIRD PROBLEMS NOT REPORTED. LOCAL CHECK: JORI

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	FLOW DAYS	MAT DAYS	LODG %
4	YAV"S"	MEXICO	7175	152	203	-
9	SHOV"S"	MEXICO	6943	152	206	50
13	BOYEROS"S"	MEXICO	6804	155	205	10
12	WID"S"	MEXICO	6758	155	204	-
3	YAV"S"	MEXICO	6619	153	206	30
24	MAPACHE	MEXICO	6527	154	209	10
11	WIN"S"	MEXICO	5879	152	206	-
21	COCORIT 71	MEXICO	5832	149	205	20
2	ROK"S"	MEXICO	5832	153	202	20
8	CHI"S"	MEXICO	5693	150	205	-
20	ENTE"S"-MARIO"S"	MEXICO	5416	152	204	-
15	KOL"S"	MEXICO	5369	153	207	10
10	GTA"S"-MEXI"S"	MEXICO	5323	152	205	20
1	SKIM"S"	MEXICO	5323	156	204	90
5	GOOSE"S"	MEXICO	5277	159	205	-
14	JO"S"-AA"S"XMEXI"S"	MEXICO	*** 5184	149	205	10
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S" MEXICO		5138	154	204	60
25	LOCAL CHECK		4906	156	205	-
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S" MEXICO		4860	151	204	-
18	SWAN"S"	MEXICO	4860	154	206	30
19	BD1543-INRAT69XCOOT"S"/GTA"S" MEXICO		4768	153	206	100
22	MEXICALI 75	MEXICO	4768	148	206	40
7	GUIL"S"	MEXICO	4629	157	207	-
6	EID"S"	MEXICO	4305	158	206	-
23	PAVON 76	MEXICO	4305	149	204	30

GRAND MEAN 5539.7 153.0 205.2 35.3  
STANDARD ERROR OF GRAND MEAN 114.1  
COEFFICIENT OF VARIATION AS PC 14.6  
LSD VARIETY MEANS 5 PC 1665.3

CORRELATIONS

YIELD	KG/HA			
LOW	DAYS	-0.04		
1	DAYS	-0.05	0.14	
3	%	-0.30	0.24	-0.19

9TH EDYT

TABLE 9 MIDDLE EAST SYRIA ALEPPO

ICARDA

J. P. SIRIVASTAVA

LATITUDE	36 09'N	DATE PLANTED	12/ 2/78	NITROGEN	APPLIED
LONGITUDE	36 04'E	DATE HARVESTED	6/ 7/79	PHOSPHORUS	APPLIED
ELEVATION	300 M. ABOVE S.L.	AMOUNT OF MOISTURE	-- MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL MOISTURE CONDITION AT SOWING NOT REPORTED. GERMINATION GOOD.  
 ABNORMAL WEATHER RAINFALL LESS THAN NORMAL BUT GOOD DISTRIBUTION  
 NEGLIGIBLE DISEASE DEVELOPMENT. NEGLIGIBLE BIRD DAMAGE.  
 LOCAL CHECK HAURINI 27

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	MAT DAYS	PLNT HT
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	2999	77	131	161	88
21	COCORIT 71	MEXICO	2972	76	128	161	83
11	WIN"S"	MEXICO	2916	75	130	162	75
8	CHI"S"	MEXICO	2907	77	132	163	75
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	2888	76	132	162	78
1	SKIM"S"	MEXICO	2870	76	134	162	78
23	PAVON 76	MEXICO	2787	77	132	161	73
5	GOOSE"S"	MEXICO	2759	76	137	165	73
22	MEXICALI 75	MEXICO	2685	76	127	161	73
9	SHOV"S"	MEXICO	2685	75	134	166	78
4	YAV"S"	MEXICO	2666	78	132	162	70
12	WID"S"	MEXICO	2657	74	137	165	68
3	YAV"S"	MEXICO	2620	78	134	162	75
6	EID"S"	MEXICO	2555	76	136	164	75
15	KOL"S"	MEXICO	2527	74	136	163	80
2	ROK"S"	MEXICO	2472	75	134	162	75
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	2462	78	133	164	78
25	LOCAL CHECK		2453	78	133	163	100
13	BOYEROS"S"	MEXICO	2435	77	136	163	75
10	GTA"S"-MEXI"S"	MEXICO	2407	75	131	162	78
14	JO"S"-AA"S"XMEXI"S"	MEXICO	2398	72	134	163	78
7	GUIL"S"	MEXICO	2240	75	136	163	73
24	MAPACHE	MEXICO	*** 2157	62	132	162	88
20	ENTE"S"-MARIO"S"	MEXICO	2148	75	134	162	78
18	SWAN"S"	MEXICO	2138	78	137	164	80

GRAND MEAN	2592.1	75.4	133.0	162.5	77.5
STANDARD ERROR OF GRAND MEAN	45.0				
COEFFICIENT OF VARIATION AS PC	12.3				
LSD VARIETY MEANS 5 PC	656.9				

CORRELATIONS

YIELD KG/HA					
TEST WT	0.35				
FLOW DAYS	-0.44	0.03			
MAT DAYS	-0.23	0.03	0.77		
PLNT HT	-0.13	-0.18	-0.20	-0.17	

9TH EDYT

TABLE 10

MIDDLE EAST

TURKEY

DIYARBAKIR

ERTUG FIRAT

LATITUDE	37 55'N	DATE PLANTED	11/ 8/78	NITROGEN	APPLIED
LONGITUDE	40 12'E	DATE HARVESTED	7/ 5/79	PHOSPHORUS	APPLIED
ELEVATION	660 M.ABOVE S.L.	AMOUNT OF MOISTURE	353 MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL DRY AT SOWING. GERMINATION GOOD.  
 RELATIVELY DRY SEASON DUE TO PRECIPITATION 150 MM LESS THAN AVERAGE.  
 NEGLIGIBLE DISEASE DEVELOPMENT. NEGLIGIBLE INSECT DAMAGE. HAND WEEDING.  
 NEGLIGIBLE BIRD DAMAGE. LOCAL CHECK: KARACADAG-1

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	PLNT HT
13	BOYEROS"S"	MEXICO	6209	81	130	85
15	KOL"S"	MEXICO	5521	80	133	88
3	YAV"S"	MEXICO	5396	82	128	83
23	PAVON 76	MEXICO	5396	81	127	88
12	WID"S"	MEXICO	5355	81	131	78
4	YAV"S"	MEXICO	5167	81	128	83
9	SHOV"S"	MEXICO	5167	81	127	80
21	COCORIT 71	MEXICO	5146	81	128	88
1	SKIM"S"	MEXICO	5084	81	130	83
11	WIN"S"	MEXICO	4980	81	130	85
2	ROK"S"	MEXICO	4959	80	129	88
14	JO"S"-AA"S"XMEXI"S"	MEXICO	4875	80	129	83
6	EID"S"	MEXICO	4875	81	131	88
22	MEXICALI 75	MEXICO	4605	81	124	90
10	GTA"S"-MEXI"S"	MEXICO	4584	82	127	90
25	LOCAL CHECK		4459	80	125	90
8	CHI"S"	MEXICO	4417	81	127	88
7	GUIL"S"	MEXICO	4292	81	131	80
18	SWAN"S"	MEXICO	4188	82	131	93
5	GOOSE"S"	MEXICO	4063	82	133	83
20	ENTE"S"-MARIO"S"	MEXICO	*** 3604	80	134	80
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	3479	80	132	98
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	3375	81	131	90
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	3334	81	130	95
24	MAPACHE	MEXICO	3271	70	117	105

GRAND MEAN	4632.0	80.5	128.8	87.0
STANDARD ERROR OF GRAND MEAN	126.7			0.6
COEFFICIENT OF VARIATION AS PC	19.3			4.8
LSD VARIETY MEANS 5 PC	1849.9			8.7

## CORRELATIONS

YIELD KG/HA				
TEST WT	0.37			
FLOW DAYS	0.07	0.66		
PLNT HT	-0.54	-0.59	-0.49	

9TH EDYT

TABLE 11 NORTH AMERICA MEXICO SONORA

CIANO (1ST DATE)

CIMMYT

LATITUDE	027 20'N	DATE PLANTED	11/15/78	NITROGEN	APPLIED
LONGITUDE	109 54'W	DATE HARVESTED	4/11/78	PHOSPHORUS	APPLIED
ELEVATION	0038 M.ABOVE S.L.	AMOUNT OF MOISTURE	-- MM	POTASSIUM	--

NORMAL SOWING DATE. SOIL MOIST AT SOWING. GERMINATION GOOD.  
 WEATHER NORMAL. NO INSECT, WEED OR BIRD PROBLEMS.  
 LOCAL CHECK: GUILLEMOT "S"

VAR NO.	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WT	FLOW DAYS	LEAF RUST	PLNT HT	LODG %	1000 G.W.	YELL BERR
6	EID"S"	MEXICO	10852	78	92	TR	90	5	54	20
25	LOCAL CHECK		10217	81	95	TR	89	10	57	10
4	YAV"S"	MEXICO	10207	82	84	0	89	10	61	10
8	CHI"S"	MEXICO	10134	80	78	TR	89	-	60	30
1	SKIM"S"	MEXICO	10040	78	87	5MS	81	-	58	1
5	GOOSE"S"	MEXICO	9582	81	87	TR	93	55	60	15
3	YAV"S"	MEXICO	9561	82	85	0	91	39	60	5
9	SHOV"S"	MEXICO	9509	80	83	TR	89	-	64	1
2	ROK"S"	MEXICO	9478	80	76	TR	88	80	63	5
13	BOYEROS"S"	MEXICO	*** 9332	80	79	0	91	8	64	15
14	JO"S"-AA"S"XMEXI"S"	MEXICO	9301	78	73	0	89	5	66	1
7	GUIL"S"	MEXICO	9186	81	89	0	89	45	56	1
18	SWAN"S"	MEXICO	9150	81	87	TR	94	-	62	15
15	KOL"S"	MEXICO	8801	79	82	0	88	5	70	5
10	GTA"S"-MEXI"S"	MEXICO	8717	80	79	TR	88	35	63	10
24	MAPACHE	MEXICO	8582	68	74	0	115	60	48	1
12	WID"S"	MEXICO	8582	79	88	TR	80	-	59	5
20	ENTE"S"-MARIO"S"	MEXICO	8478	80	82	TR	90	10	72	5
19	BD1543-INRAT69XCOOT"S"/GTA"S"	MEXICO	8384	80	77	0	110	89	58	10
16	GDO.VZ512-CIT"S"XRUFF"S"-FG"S"	MEXICO	8374	81	76	5MR	93	28	65	10
22	MEXICALI 75	MEXICO	8228	80	62	5MR	93	50	62	10
23	PAVON 76	MEXICO	7811	82	82	20S	95	60	45	1
17	BIT"S"-ADLER"S"XMEXI"S"/GTA"S"	MEXICO	7790	80	85	TR	91	-	71	5
21	COCORIT 71	MEXICO	7718	81	68	0	90	19	56	10
11	WIN"S"	MEXICO	6999	78	76	0	91	-	64	1

GRAND MEAN	9000.4	79.6	80.8	2.9	91.1	42.4	60.7	8.1
STANDARD ERROR OF GRAND MEAN	87.5	0.1					0.3	
COEFFICIENT OF VARIATION AS PC	9.7	1.2					5.4	
LS D VARIETY MEANS 5 PC	1234.1	1.4					4.7	

CORRELATIONS

YIELD	KG/HA							
TEST	WT	0.08						
FLOW	DAYS	0.53	0.21					
LEAF	RUST	-0.30	0.20	-0.03				
PLNT	HT	-0.26	-0.51	-0.32	0.09			
LODG	%	-0.32	-0.13	-0.28	0.28	0.59		
1000	G.W.	-0.11	0.26	-0.09	-0.53	-0.37	-0.45	
YELL	BERR	0.43	0.23	0.05	-0.20	-0.02	-0.19	0.00



