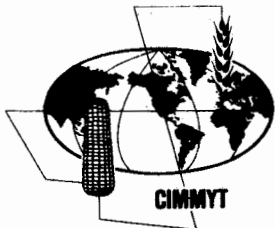


# Results of the Fifteenth International Triticale Screening Nursery (ITSN) 1983-84



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**CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO**  
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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. kollerii)</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)	Oidium (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	Variété	Variété
VTY	--	Variety	Variété	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 Fifteenth International Triticale Screening Nursery

## Methodology

The Fifteenth International Triticale Screening Nursery (ITSN) was sent in September 1983 to be grown by cooperators in their spring season of 1984. One hundred and seventeen nurseries went to cooperators in 53 countries. The 207 advanced lines and checks in the nursery had been chosen from among CIMMYT's best materials. All had been grown and observed by CIMMYT scientists under a high yield environment with pressure from major diseases on the CIANO Experiment Station in the Yaqui Valley in northwest Mexico. Here, too, seed for this international nursery was multiplied, cleaned and treated with insecticide and organic fungicide before shipment.

Instructions on nursery management accompanied the mailing of seeds to each cooperator. Enough seed from each line was provided for a double row, unreplicated, of at least 2 m in length. A field book was included with each nursery set, providing a standard format for recording data desired by CIMMYT. In receiving and processing the data returned by cooperators, CIMMYT assumes that the nursery was properly handled and that accurate results were reported. We cannot, however, attest to the rigor with which the trials were grown and results were obtained.

Fifty-five of the cooperators receiving the nursery returned field books with performance data at their locations in time to be included in this report. 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. The number of observations differs from variable to variable. The reader is urged to note the number of observations at the head of each variable column in the summary table (Table 2); this may be an important indicator of the level of credibility that should be inferred. The reader should also bear in mind that the yield reported is from a single plot, essentially grown for observation rather than as a rigorous, replicated yield trial.

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

1. One *international summary*, listing the sites from which data were returned, with notations of all variables recorded and reported.
2. A table reporting the *means of all observations* from sites with uniform and discrete data for each variable measured for each line in the nursery.

3. Selected tables reporting the *best performance by individual lines* on major variables, usually the top 5 to 10 percent. The table of contents lists all variables reported in this way.

Cooperators were asked to use agronomic and disease reporting methodology as described in the "Instructions for the Management and Reporting of Results for the CIMMYT Wheat Program International Nurseries." Data reported are simple means computed from those supplied by the cooperators. Data on rusts recorded by the modified Cobb scale were converted to average coefficients of infection (ACI) as explained below.

**Cooperator participation**—Feedback information of two kinds from cooperators 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, 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.

**Rust scoring**—Disease scores for stem, leaf and stripe rust infections recorded in the manner recommended by Dr. W.Q. Loegering (USDA International Spring Wheat Rust Nursery, 1959) are converted to a numeric coefficient of infection (CI) prior to being used in any calculations. Each original reading recorded in this manner consists of severity (percentage of rust infection on the plants) and response (kind of infection) scores. Severity is recorded as percent of infection according to the modified Cobb scale. If only a trace is visible, T or TR may be reported and is given the value of 1 percent.

Responses may be recorded by using one of the following codes. The numeric values assigned to these codes are shown at the right.

Response	Equivalent numeric value
VR	0.2
R	0.2
MR	0.4
M or X	0.6
MS	0.8
S	1.0
VS	1.0

Severity and response are recorded together, with severity first (for example, 5MR). The equivalent coefficient of infection is calculated by multiplying the numeric equivalents of each part. For example:

Disease score	Coefficient of Infection
5MR	$5(0.4) = 2.0$
TR	$1(0.2) = 0.2$
TRR	$1(0.2) = 0.2$
60S	$60(1.0) = 60.0$
0*	$(0)(0) = 0.0$

\* If there is no visible infection on the plant, only a zero is reported.

Reactions may be more variable than can be represented by a single severity and response reading. This variability may be recorded in two ways: 1) A comma or slash indicates plants have segregated into clear-cut classes. The first rating reported is included in the computations. 2) If a range of reactions is recorded, it is denoted by a dash. In these cases the coefficient of infection is the average of the two-scores. Examples of these situations are given below:

Disease score	Coefficient of infection
5R,40S	The first rating $5R = 5(0.2) = 1.0$ is used in all computations
40M/60S	The first rating $40M = 40(0.6) = 24.0$ is used in all computations
15R-5S	$[15(0.2) + 5(1.0)]/2 = 4.0$

A range may be reported for severity only or response only. In each of these cases the average severity or average response is calculated before multiplying the two together. For example:

Disease score	Coefficient of infection
10-20MS	$[(10 + 20)/2] (0.8) = 12.0$
40MR-MS	$40[(0.4 + 0.8)/2] = 24.0$
5-10MR-R	$[(5 + 10)/2][(0.4 + 0.2)/2] = 2.25$

In most tables only average coefficients of infection (ACI) are reported. However, in some tables the highest rust readings (HR) may be reported as severity/response scores.

Table 1. Locations from which data were reported, with the variables reported

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
1	AFRICA	CAMEROON	NSAOUNDERE	3 9 62
2	AFRICA	EGYPT	KALDBIA	3 7 9
3	AFRICA	KENYA	RIFT VALLEY-NJORO	3 50
4	AFRICA	MOROCCO	RABAT-MERCHOUGH	50
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE-MARITIMAL	1 3 9 10 50 62 63
6	AFRICA	UDAN	EASTERN	3 6 8 50
7	AFRICA	TANZANIA	IRINGA	3 9 10 50 64
8	AFRICA	TANZANIA	MBEYA-UYOLE	3 9 50 62
9	AFRICA	TUNISIA	TUNIS-BEJA	1 3 9 50
10	AFRICA	UPPER VOLTA (S. FASO)	BOUROU	1 3 4 13 45 50
11	AFRICA	ZIMBABWE	HARARE	1 3 9 50
12	ASIA	AFGHANISTAN	BALKH	1 3 4 9 50
13	ASIA	BANGLADESH	JOYDEBPUR-BARI	1 3 4 7 9 50 68
14	ASIA	BURMA	PYIN OAN	1 3 9 13 50
15	ASIA	PAKISTAN	PUNJAB-NIAB	3 4 9 50
16	ASIA	PHILIPPINES	LASUNA	1 3 9 50
17	ASIA	SRI LANKA	UPPER UVA	3 9 50
18	ASIA	THAILAND	CHIANGRAI	1 3 9 50
19	ASIA	THAILAND	NAKHON RATCHASIMA	3 9 50
20	EUROPE	GREECE	THERSSALONIKI	1 3 4 9 50
21	EUROPE	NORWAY	AAS	1 3 4 9 50 62
22	EUROPE	POLAND	RADOM	1 2 3 9 13 50 62
23	EUROPE	PORTUGAL	ELVAS	5 50
24	EUROPE	SPAIN	BADAJOS-LA ORDEN	1 3 4 9 50
25	EUROPE	SPAIN	CADIZ	3 9 10 50
26	EUROPE	SPAIN	CORDOBA-OBISPO	3 50
27	EUROPE	SPAIN	LLEIDA-PALAU D'ANLEFDLA	1 2 3 4 9 13 50
28	EUROPE	SPAIN	MADRID-ENCIN	1 2 3 4 9 50
29	EUROPE	SPAIN	SEVILLA	1 3 4 9 50
30	MIDDLE EAST	CYPRUS	ATHALASSA	3 50
31	MIDDLE EAST	ISRAEL	BET DAQAN	3 9 62
32	MIDDLE EAST	ISRAEL	BET DAQAN-VOLCANI CTR.	3 9 50
33	MIDDLE EAST	QATAR	BARADA	1 3 4 9 50
34	MIDDLE EAST	SYRIA	ALEPPD-BREDA	1 3 9 50
35	MIDDLE EAST	TURKEY	IZMIR-EGE RARI	2 3 9 50
36	NORTH AMERICA	CANADA	P. E. I.	50
37	NORTH AMERICA	MEXICO	EL BATAN-(1ST. DATE)	1 2 3 7 9 13 50 74
38	NORTH AMERICA	MEXICO	NUEVO LEON-NAVIDAD	1 2 4 9 13 50
39	NORTH AMERICA	MEXICO	BONORA-CIAND (1ST DATE)	1 2 4 7 9 50
40	NORTH AMERICA	MEXICO	TOLUCA	1 2 3 9 13 36 50
41	OCEANIA	NEW ZEALAND	CANTERRURY	9 50
42	SOUTH AMERICA	ARGENTINA	LA PAHFA	1 3 9 50 62
43	SOUTH AMERICA	ARGENTINA	BUENOS AIRES-BORDENAVE	1 50
44	SOUTH AMERICA	ARGENTINA	CORDOBA	9 50
45	SOUTH AMERICA	BOLIVIA	SANTA CRUZ-CORCEPAI	50
46	SOUTH AMERICA	BRAZIL	BRAZILIA D. F.	1 3 4 9
47	SOUTH AMERICA	BRAZIL	PARANA-CASCVEL	1 3 9 50
48	SOUTH AMERICA	BRAZIL	PARANA-LONDRINA	1 3 4 7 8 9 50 68
49	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-CRUZ ALTA	1 50
50	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	1 2 50 63
51	SOUTH AMERICA	BRAZIL	SAD PAULO-CAMPINAS	1 3 7 9 50
52	SOUTH AMERICA	CHILE	SANTIAGO-LA PLATINA	3 8 50
53	SOUTH AMERICA	CHILE	TEMUCO. CAUTIN	50
54	SOUTH AMERICA	ECUADOR	QUITO. PICHINCHA	3 50 71
55	SOUTH AMERICA	PERU	CUSCO-TARAY	3 9 50

\*VARIABLE IDENTIFICATIONS

1	YIELD	NO/HA	2	TEST	HT	3	HEAD	DAYS	4	MAT	DAYS	5	STRP	RT L
7	LEAF	RUST	8	STEM	RUST	9	PLNT	HT	10	LODG	X	13	1000	G.W.
36	SCAB	X	45	EARS	/M2	50	CHECK	MARK	62	BEP T	0-9	63	BEP N	0-9
64	BEP S	0-9	68	BPT S	0-9	71	FUB N	0-9	74	BAC S	0-9			

**Table 2. Summary of the means of all variables: Yield, agronomic and disease data**

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT I.	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
1	CANANEA79	5072.2	63.6	81.8	137.1	3.0	12.8	0.5
2	BEAGLE	4828.3	64.7	88.9	144.1	0.0	9.8	45.0
3	CABORCA79	4066.4	67.9	86.5	141.3	0.0	2.5	1.4
4	CHIVA"S"	3995.0	67.5	86.3	141.7	-----	0.0	2.1
5	MULA"S"	4639.3	67.5	92.2	147.0	0.2	15.9	24.1
6	ELK32	5006.0	67.9	83.0	138.7	0.2	0.4	2.7
7	CIVET"S"	5283.6	70.3	81.5	140.1	0.0	4.3	14.7
8	SETTER	4337.1	63.9	90.5	144.2	0.0	11.6	57.3
9	GUOKKA"S" X-39253-30Y-1M-2Y-502Y-502M-502Y 501B-0Y	2523.6	62.5	79.4	138.2	0.0	3.9	1.5
10	GUOKKA"S" X-39253-30Y-1M-2Y-502Y-502M-502Y 504B-0Y	2746.5	63.1	79.0	137.8	0.2	4.6	1.5
11	GUOKKA"S" X-39253-30Y-1M-2Y-502Y-502M-505Y 500B-0Y	2551.9	67.7	78.0	137.9	0.0	9.2	5.5
12	GUOKKA"S" X-39253-30Y-1M-3Y-501Y-502M-500Y 500B-0Y	2466.6	67.7	78.0	138.1	0.0	14.7	0.8
13	GUOKKA"S" X-39253-30Y-1M-3Y-501Y-502M-500Y 501B-0Y	2461.3	67.0	77.9	138.3	0.0	14.2	2.7
14	GUOKKA"S" X-39253-30Y-1M-3Y-501Y-501M-502Y 500B-0Y	2055.2	67.1	85.9	143.3	0.0	2.3	1.0
15	BTO"S"-PTR"S" X-49509-3Y-2Y-1M-2Y-1M-0Y	4001.1	69.7	85.4	143.7	0.0	1.1	1.4
16	BTO"S"-PTR"S" X-49509-3Y-2Y-1M-2Y-2M-0Y	3907.2	69.5	84.8	143.5	0.2	0.2	2.4
17	BTO"S"-PTR"S" X-49509-6Y-1Y-2M-1Y-2M-0Y	3882.6	69.2	84.4	141.5	0.0	1.6	0.7
18	GUOKKA"S"-ABN"S" X-50132-F-8Y-1Y-1M-1Y-1M-0Y	4431.1	68.2	84.8	142.0	0.2	14.0	0.7
19	IRA-ND66 X LMG"S"/PND"S"-CASTOR"S" X-61302-S-2M-5Y-2M-0Y	3929.3	67.8	85.9	141.9	2.0	3.2	0.8
20	(CDRM"S"-D67.3 X GTA"S"/SPY)GPR"S" X-65163-7Y-1M-0Y	3838.9	69.2	83.9	140.8	0.0	0.9	1.8
21	LMG"S"-F8477 X-61094-22Y-3M-0Y	4496.4	68.7	83.4	140.2	0.2	12.1	2.7
22	FAWN"S"-BSN"S" X-38864-43M-3Y-2Y-2M-2Y-4M-0Y	4270.4	71.5	80.2	138.1	0.0	0.9	2.1
23	PTR"S" X CML-FS1377/IA X CIN-FS658 X-5103B-D-4Y-3Y-5M-1Y-1M-0Y	4555.3	68.5	84.0	139.4	0.0	1.6	0.1
24	PTR"S" X CML-FS1377/IA X CIN-FS658 X-5103B-D-4Y-3Y-5M-1Y-3M-0Y	4397.5	67.9	84.1	140.4	0.2	0.4	0.7
25	RM"S"-IRA X FS477/IA X-4423B-2B-1Y-3M-1Y-1M-0Y	4097.8	70.1	85.8	142.1	0.2	6.4	1.5
26	TORD"S"-PND"S" X-52659-13Y-3M-1Y-1M-0Y	4290.8	71.0	85.6	141.6	1.0	0.1	2.1
27	(PTR"S"/RM"S"-IRA X FS477)WELSH-BGL" " X-53893-E-2Y-1M-1Y-3M-0Y	4476.5	70.0	85.0	140.7	4.0	6.9	6.7



VTY	PLNT HT	LDDG %	1000 O. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
1	97.2	-----	36.2	-----	858.0	25.5	5.6	4.0	7.0	6.0	-----	-----
2	112.6	90.0	39.3	-----	-----	33.3	4.4	2.0	7.0	6.0	-----	-----
3	93.4	50.0	34.0	-----	-----	25.5	4.4	2.0	7.0	5.0	-----	-----
4	93.1	65.0	34.6	-----	-----	19.6	4.6	3.0	8.0	5.0	-----	-----
5	106.0	90.0	41.9	-----	-----	25.5	4.3	2.0	8.0	5.5	-----	-----
6	107.8	70.0	40.9	-----	-----	25.5	5.4	3.0	8.0	6.0	-----	-----
7	104.6	90.0	42.8	-----	-----	21.6	5.1	4.0	8.0	5.0	-----	-----
8	96.5	90.0	34.3	-----	-----	21.6	4.6	6.0	9.0	5.0	8.0	-----
9	61.2	55.0	30.1	80.0	-----	3.9	6.4	8.0	9.0	5.0	9.0	-----
10	62.6	30.0	30.4	80.0	-----	3.9	6.7	8.5	9.0	6.0	9.0	-----
11	59.3	30.0	30.6	80.0	-----	5.9	7.1	8.5	9.0	6.0	9.0	-----
12	58.0	30.0	29.2	80.0	-----	7.8	7.1	8.5	9.0	6.5	9.0	-----
13	58.1	30.0	29.4	80.0	-----	5.9	7.1	8.5	9.0	7.5	9.0	-----
14	59.5	30.0	31.4	80.0	-----	0.0	7.1	7.5	9.0	7.5	9.0	7.0
15	80.3	-----	35.3	30.0	-----	27.5	4.9	4.0	9.0	6.0	-----	-----
16	80.6	-----	35.3	30.0	-----	31.4	4.6	3.5	9.0	6.0	5.0	-----
17	84.8	20.0	34.2	30.0	-----	23.5	4.9	3.0	8.0	6.0	4.0	-----
18	89.4	-----	34.9	80.0	-----	17.6	5.6	6.0	8.0	5.0	4.0	-----
19	83.9	20.0	29.5	60.0	-----	19.6	5.1	5.0	8.0	6.5	7.0	-----
20	86.5	20.0	31.3	80.0	-----	13.7	5.4	3.0	8.0	6.0	6.0	-----
21	86.0	-----	29.4	80.0	-----	25.5	5.7	4.0	8.0	6.5	5.0	-----
22	84.3	-----	33.6	60.0	-----	19.6	6.6	5.0	8.0	4.0	9.0	-----
23	84.4	30.0	37.3	60.0	-----	23.5	5.6	3.5	9.0	5.0	4.0	-----
24	84.7	30.0	36.4	60.0	-----	25.5	5.4	3.5	9.0	6.0	5.0	-----
25	90.4	32.5	36.7	60.0	-----	23.5	4.9	3.0	9.0	4.5	6.0	-----
26	87.5	30.0	32.2	70.0	-----	23.5	4.7	3.0	9.0	6.0	6.0	-----
27	89.1	30.0	36.1	60.0	-----	25.5	4.3	2.5	9.0	4.0	4.0	3.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30 )	( 9 )	( 43 )	( 16 )	( 1 )	( 6 )	( 3 )
28	(M2A X HEXA FROM OCTO-HEXA/RM"S"-IRA X FS477)MSF"B"-TRR"S" X BTO"S" X-54029-C-1Y-2M-1Y-2M-0Y	4493.9	70.3	84.9	140.5	0.0	8.4	1.7
29	PTR"S"-GZL"S" X PND"S"-ABN"S" X-61083-3M-2Y-1M-0Y	4549.6	68.8	83.3	137.9	0.0	0.2	2.7
30	BURA"S"-FAWN"S"/IA-ABN"S" X GPR"S" X-61650-C-1M-2Y-1M-0Y	4858.6	68.7	82.8	139.7	0.2	8.5	6.1
31	GPR"S"-PTR"S"/BURA"S" X M2A-IA X-62033-E-1M-2Y-2M-0Y	4417.8	69.1	84.9	141.3	1.0	3.5	2.8
32	IA-M2A X GPR"S"(ABN"S" X OCTO BULK-ARS/PND"S"-CASTOR"S") X-62234-B-2M-4Y-1M-0Y	4480.2	66.8	81.2	138.7	0.2	3.4	3.7
33	PTR"S"-BSN"S" X PND"S"-MPE"S" X-61053-BY-2M-0Y	4501.3	71.3	81.3	140.1	0.2	6.3	0.7
34	BTA"S" X PND"S"-YE75 X-64871-4Y-2M-0Y	4271.7	68.5	79.6	140.9	0.0	10.7	23.0
35	RABI"S"-RYE9 X PND"S"-MPE"S" X-65156-1Y-2M-0Y	4132.6	66.4	85.8	141.1	0.0	0.1	21.6
36	(ABN"S" X M2A-IRA/PND"S"-CASTOR"S") 416-SPY X TED"S" X-63377-F-2Y-2M-0Y	4226.5	71.6	79.8	140.3	0.0	0.8	1.3
37	RM"S"-PTR"S" X RAT"S"/LMO"S" X MSF"S -IRA X-63735-B-1Y-2M-0Y	4639.5	68.5	81.0	137.6	0.0	7.4	0.7
38	RM"S"-PTR"S" X RAT"S"/LMO"S" X MSF"S -IRA X-63735-F-3Y-2M-0Y	4010.8	68.7	82.4	141.3	0.2	4.6	1.4
39	RM"S"-PTR"S" X RAT"S"/LMO"S" X MSF"S -IRA X-63735-F-3Y-3M-0Y	4494.8	69.0	81.2	138.3	0.2	1.4	1.5
40	MPE"S"-DOUGGA74 X IGA X-51381-2M-3Y-1B-5Y-1M-1Y-1M-0Y	3942.9	68.7	88.2	142.8	0.2	2.7	2.4
41	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-2M-2Y-505Y-504M-500Y-504B-0Y	4467.1	69.9	84.0	138.9	0.0	8.9	1.1
42	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-3M-1Y-502Y-502M-501Y-500B-0Y	4127.3	68.0	82.4	142.5	0.0	3.3	4.3
43	KISS-IRA X CASTOR"S" X-44602-9M-2Y-3Y-1M-1Y-2M-0Y	3944.0	69.6	84.2	140.0	0.0	4.5	1.6
44	PTR"S"/RM"S"-IRA X FS477 X-48675-7Y-3Y-3M-1Y-3M-0Y	4561.3	68.2	81.8	138.8	0.0	7.4	6.7
45	PTR"S"/RM"S"-IRA X FS477 X-48675-7Y-3Y-3M-1Y-4M-0Y	4563.6	70.1	81.4	136.1	0.0	2.8	1.3
46	PTR"S"/RM"S"-IRA X FS477 X-48675-7Y-3Y-3M-1Y-5M-0Y	4612.4	69.5	83.5	138.9	0.0	0.2	6.7
47	M2A(2)-IRA X M2A-TI71 X-49274-5Y-1Y-1M-1Y-1M-0Y	4084.9	70.2	87.4	140.5	0.0	4.1	0.7
48	WELSH-GPR"S" X IA-M2A X-50267-B-1Y-1Y-2M-1Y-1M-0Y	4526.1	69.5	82.8	140.5	0.2	1.1	0.1
49	WELSH-GPR"S" X IA-M2A X-50267-B-1Y-1Y-3M-1Y-1M-0Y	4232.4	68.9	84.3	140.9	0.0	3.6	1.5
50	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-3M-0Y	3975.7	70.4	81.5	140.0	0.0	4.2	0.7
51	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-4M-0Y	4017.3	70.2	81.5	139.8	0.0	4.0	0.1

VTY	PLNT HT	LODG %	1000 G. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT S 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
28	88.7	45.0	36.6	80.0	-----	15.7	5.4	4.5	9.0	4.5	5.0	-----
29	91.2	50.0	34.1	60.0	-----	21.6	5.4	4.0	9.0	5.5	6.0	-----
30	87.2	50.0	37.4	80.0	-----	25.5	5.1	4.5	8.0	4.0	8.0	-----
31	83.3	90.0	35.6	80.0	-----	17.6	4.6	2.5	9.0	4.0	6.0	-----
32	86.3	65.0	37.2	60.0	-----	19.6	5.4	4.0	9.0	5.0	9.0	-----
33	85.9	40.0	33.4	80.0	-----	15.7	5.6	4.5	9.0	6.5	9.0	5.0
34	89.0	80.0	38.9	80.0	-----	17.6	5.4	4.5	8.0	4.5	4.0	6.0
35	86.6	80.0	34.7	30.0	-----	9.8	5.3	2.5	7.0	6.0	9.0	-----
36	88.3	40.0	39.5	60.0	-----	13.7	6.0	3.0	8.0	5.0	9.0	1.0
37	90.4	80.0	36.3	60.0	619.0	31.4	5.3	5.5	8.0	5.0	8.0	-----
38	84.3	40.0	34.6	60.0	-----	7.8	5.1	4.5	8.0	5.0	8.0	-----
39	86.9	30.0	35.2	60.0	549.0	25.5	5.0	3.0	8.0	5.5	9.0	3.0
40	87.1	40.0	32.2	60.0	-----	13.7	4.1	3.5	7.0	5.0	8.0	-----
41	83.8	30.0	35.0	80.0	658.0	19.6	5.6	6.0	8.0	6.5	4.0	-----
42	79.5	60.0	35.4	80.0	-----	9.8	4.7	5.0	8.0	5.5	9.0	-----
43	91.9	70.0	36.3	70.0	666.0	15.7	5.0	3.5	7.0	4.5	8.0	-----
44	85.3	70.0	37.4	30.0	-----	21.6	5.0	4.0	7.0	4.0	8.0	-----
45	86.0	70.0	37.4	80.0	555.0	21.6	5.0	4.0	7.0	6.0	8.0	-----
46	87.2	60.0	37.0	80.0	-----	27.5	4.7	3.0	8.0	5.0	8.0	1.0
47	91.6	45.0	35.5	60.0	-----	27.5	4.7	2.5	7.0	6.0	9.0	-----
48	89.6	60.0	34.0	80.0	-----	15.7	5.0	4.5	7.0	6.0	9.0	-----
49	91.4	90.0	34.0	80.0	-----	19.6	5.1	5.0	7.0	6.5	9.0	-----
50	90.2	90.0	36.8	30.0	-----	21.6	5.4	5.5	8.0	6.5	9.0	-----
51	90.1	100.0	38.5	80.0	-----	17.6	5.1	4.0	8.0	5.5	9.0	-----

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	NUMBER OF OBSERVATIONS:						
		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
52	IRA-CML X PTR"S"(BCM"S"/PG"S"-CENT. B LK X ABN"S") X-50900-E-1Y-3Y-1M-2Y-1M-0Y	4117.2	68.1	92.0	143.4	0.0	0.0	0.1
53	PND"S"-IRA(2) X MPE"S"-PTR"S" X-50973-B-12Y-1Y-1M-1Y-1M-0Y	4409.4	67.7	92.1	143.0	0.2	0.1	2.7
54	PND"S"-IRA(2) X MPE"S"-PTR"S" X-50973-B-12Y-1Y-1M-1Y-2M-0Y	4137.0	67.6	92.1	143.7	0.4	3.4	0.7
55	PND"S"-IRA(2) X MPE"S"-PTR"S" X-50973-B-12Y-1Y-1M-1Y-4M-0Y	4136.0	69.2	92.5	143.6	0.0	3.7	1.3
56	CHIVA"S"	4274.3	66.2	85.9	142.5	0.0	3.2	1.8
57	PTR"S"-YD"R" X PND"S" X-52202-2Y-4M-1Y-2M-0Y	4092.0	71.7	83.7	141.8	0.0	0.1	1.5
58	PTR"S"-YD"R" X PND"S" X-52202-2Y-5M-2Y-2M-0Y	4611.3	69.1	85.0	141.9	0.0	5.0	0.8
59	PTR"S"-YD"R" X PND"S" X-52202-2Y-5M-2Y-3M-0Y	4614.8	72.3	86.2	144.3	0.0	1.3	1.3
60	LMG"S"-MPE"S" X-49421-15Y-2M-1Y-1M-0Y	4641.4	67.2	86.8	143.1	0.0	3.7	0.8
61	FS477-TRR"S" X CASTOR"S"/IRA(2)-BVA X-53985-I-2Y-2M-3Y-1M-0Y	3889.8	68.6	86.5	142.4	0.0	5.9	1.2
62	ECHIDNA"S" X M2A-ZA75 X-61039-6M-1Y-1M-0Y	4387.6	69.0	85.5	141.4	0.4	6.0	0.1
63	CML-PATO X LMG"S" X-59462-16M-2Y-1M-0Y	3901.5	69.1	79.8	139.7	0.0	0.0	1.3
64	ECHIDNA"S" X PND"S"-RM"S" X-61079-4M-1Y-1M-0Y	4467.9	69.7	85.3	140.7	0.2	0.2	3.3
65	MPE"S"-LMG"S" X PND1 X-61311-C-4M-1Y-3M-0Y	4069.7	68.8	85.2	140.6	0.0	0.1	0.0
66	PTR"S"-CASTOR"S" X RAM"S" X-60837-1Y-2M-0Y	4065.7	69.0	84.6	141.2	0.2	2.2	1.0
67	PND"S"-YE75 X IA-BUSH X-64981-8Y-2M-0Y	3965.9	66.4	82.3	141.6	0.0	8.9	0.3
68	ECHIDNA"S" X-34824-501M-500Y-506Y-501Y-508Y 501M-500Y-509B-0Y	4327.2	68.1	82.1	141.7	0.0	5.3	0.1
69	BGL"S"-M1A X MISI-IA X-53641-A-502Y-504M-500Y-500B-0Y	4907.1	69.2	87.2	139.7	0.0	0.1	1.1
70	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y	5024.6	68.8	82.8	137.1	0.0	4.5	0.2
71	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-2M-0Y	4133.3	69.2	81.7	138.5	0.2	5.6	0.4
72	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-1M-0Y	4290.8	70.4	79.0	136.4	0.0	6.4	1.7
73	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-2M-0Y	4089.8	71.2	79.4	136.7	0.0	1.5	2.3
74	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-3M-0Y	4081.6	70.7	79.1	136.9	0.0	4.6	1.3
75	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-4M-0Y	4126.4	71.5	79.0	137.0	0.4	3.2	0.8
76	CANANEA79	4424.8	64.9	83.3	139.4	0.0	7.5	0.7
77	BEAGLE	4235.6	66.0	89.5	145.7	0.0	7.4	29.3
78	GENAROB1	4048.6	77.8	93.2	141.5	70.0	19.2	0.7

VTY	PLNT HT	LODC %	1000 G. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
52	91.2	80.0	31.5	80.0	-----	17.6	4.7	2.5	8.0	5.0	9.0	-----
53	95.6	80.0	34.6	60.0	-----	21.6	4.1	2.5	7.0	4.0	9.0	-----
54	97.7	80.0	36.7	60.0	-----	25.5	4.4	2.5	7.0	5.0	9.0	-----
55	97.4	80.0	33.3	60.0	-----	11.8	5.0	3.5	7.0	5.0	7.0	-----
56	92.8	80.0	34.8	30.0	-----	21.6	5.0	4.5	7.0	6.0	9.0	-----
57	89.6	80.0	34.6	80.0	-----	13.7	5.7	5.0	8.0	6.5	9.0	-----
58	91.8	80.0	34.3	60.0	-----	21.6	5.3	3.5	8.0	4.5	9.0	-----
59	91.2	55.0	30.7	60.0	-----	17.6	5.0	3.0	8.0	6.0	9.0	0.0
60	93.5	80.0	35.0	30.0	-----	11.8	5.1	5.0	7.0	6.0	7.0	-----
61	89.9	90.0	32.1	30.0	-----	9.8	5.3	6.0	8.0	5.0	7.0	-----
62	90.9	90.0	37.2	30.0	-----	27.5	6.0	4.0	8.0	6.5	9.0	-----
63	87.8	60.0	37.4	60.0	-----	7.8	5.6	5.0	9.0	4.5	9.0	-----
64	92.9	38.3	37.4	30.0	-----	13.7	6.0	2.5	7.0	6.5	7.0	-----
65	92.6	90.0	31.4	80.0	-----	15.7	5.4	4.0	7.0	6.0	7.0	-----
66	93.5	90.0	35.9	60.0	-----	9.8	5.6	6.0	8.0	5.5	7.0	-----
67	91.4	90.0	33.2	70.0	-----	7.8	6.1	4.5	8.0	6.0	9.0	-----
68	88.9	90.0	34.9	60.0	-----	15.7	6.0	5.5	8.0	3.0	7.0	-----
69	89.2	90.0	33.5	60.0	944.0	31.4	5.4	2.5	7.0	4.5	5.0	-----
70	89.8	90.0	30.2	60.0	947.0	31.4	4.6	4.0	7.0	3.5	4.0	3.0
71	87.8	100.0	31.5	30.0	-----	23.5	4.9	4.0	7.0	3.5	4.0	-----
72	91.4	60.0	32.0	30.0	-----	13.7	6.1	7.0	8.0	3.5	7.0	3.0
73	92.3	60.0	31.0	30.0	-----	11.8	5.6	7.0	8.0	6.0	8.0	-----
74	92.4	90.0	30.9	20.0	-----	13.7	5.4	7.5	8.0	5.0	9.0	-----
75	92.3	90.0	31.9	30.0	-----	7.8	5.6	7.5	8.0	7.0	9.0	3.0
76	95.8	100.0	38.9	-----	-----	11.8	5.6	4.0	8.0	5.5	9.0	-----
77	109.7	52.5	45.3	-----	535.0	23.5	5.3	2.5	7.0	6.0	5.0	-----
78	79.0	100.0	32.4	-----	-----	13.7	5.6	7.5	7.0	4.5	8.0	-----

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RI L	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
79	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-2M-0Y	4371.8	71.6	79.7	138.4	0.0	5.1	3.0
80	CASTOR"S" X M2A-ARM"S" X-44621-4Y-2Y-1M-1Y-1M-0Y	4231.2	70.6	88.0	143.8	0.0	16.3	0.7
81	CASTOR"S" X M2A-ARM"S" X-44621-4Y-2Y-1M-1Y-2M-0Y	3963.0	67.3	89.6	143.9	0.0	12.7	0.0
82	CASTOR"S" X M2A-ARM"S" X-44621-4Y-2Y-1M-1Y-3M-0Y	3975.7	69.9	88.7	142.7	0.0	23.3	1.3
83	CASTOR"S" X M2A-ARM"S" X-44621-4Y-2Y-1M-1Y-5M-0Y	3900.5	68.1	88.2	142.1	2.0	14.0	0.7
84	CASTOR"S" X M2A-ARM"S" X-44621-4Y-3Y-1M-1Y-1M-0Y	4167.5	69.0	88.7	142.7	0.0	12.5	0.7
85	CASTOR"S" X M2A-ARM"S" X-44621-4Y-3Y-1M-1Y-3M-0Y	4121.3	68.1	89.0	143.0	0.4	8.4	1.3
86	GUOKKA"S"-ABN"S" X-50132-F-8Y-1Y-1M-1Y-2M-0Y	4253.5	67.7	85.0	141.2	0.0	4.5	1.3
87	BSN"S" X CIN-FS658/IA-M2A X-50234-F-4Y-2Y-3M-1Y-1M-0Y	4485.8	68.2	80.5	136.7	0.0	4.6	0.7
88	DLT"S"-LNC"S" X-51800-6Y-2M-1Y-3M-0Y	4391.4	69.1	84.4	143.5	0.0	1.7	13.3
89	DLT"S"-LNC"S" X-51800-6Y-2M-2Y-1M-0Y	4143.3	68.3	85.4	143.1	0.0	5.6	13.3
90	PND"S"[M2A-CIN X IRA(BGL"S" X UM940" "-ARM"S"/IRA)] X-52136-7Y-1M-1Y-1M-0Y	4082.0	69.6	86.0	141.3	0.0	0.5	1.3
91	M1A-ABN"S" X M2A-ZA75 X-59138-3M-2Y-1M-0Y	4698.0	66.8	83.0	138.4	2.0	5.5	10.7
92	M1A-ABN"S" X M2A-ZA75 X-59138-6M-4Y-1M-0Y	4249.7	66.2	86.7	141.7	0.2	4.2	0.1
93	PND"S"-YE75 X MPE"S" X-59862-3M-2Y-1M-0Y	4172.1	67.4	90.4	143.1	4.0	25.8	1.4
94	RAT"B"-PND"B"/ABN"S" X M2A-IRA X-63188-G-1Y-6M-0Y	4226.1	68.5	90.6	143.7	0.2	3.7	2.7
95	IA-M2A X FS477 X-45225-5M-2Y-2Y-1M-1Y-2M-0Y	4098.9	69.3	85.3	141.7	0.2	2.9	2.7
96	IA-M2A X FS477 X-45225-5M-2Y-2Y-1M-1Y-4M-0Y	4185.7	67.6	85.7	141.9	0.2	4.4	1.4
97	BGL"B"-IGA X PND"S" X-45574-10M-1Y-3Y-1M-1Y-2M-0Y	4111.3	69.2	86.1	139.1	0.4	3.5	1.3
98	BGL"S"-IGA X PND"S" X-45574-10M-1Y-3Y-1M-1Y-5M-0Y	4140.0	69.0	86.8	141.3	0.0	3.9	0.7
99	H515.71A-CIN X CML"S"-KAL X-44734-9Y-2Y-1M-1Y-2M-0Y	4116.5	67.2	87.7	141.4	0.0	6.8	0.7
100	MPE"S"-PTR"S"/CIN"S"-M2A X CASTOR"S" X-50893-B-3Y-3Y-1M-1Y-1M-0Y	3615.1	69.0	88.0	142.9	4.0	4.9	0.0
101	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-3M-0Y	3882.5	70.8	80.3	138.3	0.2	3.5	0.0
102	FS381-FS477 X TORO"S"/M2A-M1A X-61270-B-1M-1Y-2M-0Y	4338.4	70.0	86.7	141.8	0.0	6.5	0.0
103	IRA(2) X MSF"S"-IRA/PND"S"-ABN"S" X LMA"S" X-62433-J-1M-1Y-2M-0Y	4098.1	68.2	85.6	139.7	0.0	5.7	1.4
104	CIN-FS579 X FS1897/TRR"S" X-52471-11Y-1M-1Y-6M-0Y	4281.0	69.8	85.0	142.9	0.0	6.7	0.7

VTY	PLNT HT	LODG %	1000 O. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	REP N 0-9	SEP S 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
79	93.7	90.0	32.5	30.0	611.0	13.7	5.4	7.5	8.0	4.5	9.0	----
80	93.3	90.0	40.1	30.0	----	15.7	5.3	6.0	9.0	5.5	7.0	----
81	93.9	60.0	36.0	30.0	----	19.6	4.7	5.0	9.0	4.5	7.0	----
82	92.2	60.0	38.0	30.0	----	7.8	5.1	5.5	9.0	6.5	5.0	----
83	93.1	90.0	38.0	30.0	----	9.8	5.3	5.0	9.0	5.0	5.0	----
84	92.8	90.0	37.0	60.0	----	11.8	4.9	5.0	9.0	5.5	7.0	----
85	91.5	60.0	34.4	60.0	----	5.9	4.6	5.0	9.0	5.5	5.0	1.0
86	90.9	90.0	36.8	60.0	----	3.9	6.0	5.5	9.0	6.5	7.0	----
87	93.6	90.0	36.0	30.0	----	21.6	6.6	4.5	9.0	6.0	7.0	----
88	94.7	90.0	36.1	60.0	----	25.5	6.1	3.5	7.0	6.0	7.0	6.0
89	94.2	90.0	32.9	60.0	----	31.4	5.6	4.0	7.0	6.0	7.0	7.0
90	98.9	90.0	40.5	20.0	----	3.9	5.7	4.5	7.0	6.5	5.0	----
91	91.2	90.0	33.5	20.0	615.0	23.5	5.7	3.5	8.0	6.5	8.0	5.0
92	93.8	90.0	34.6	60.0	----	17.6	5.9	3.5	7.0	5.5	5.0	1.0
93	101.0	90.0	38.7	30.0	----	13.7	5.4	2.5	7.0	4.0	7.0	1.0
94	93.1	90.0	35.9	80.0	----	25.5	5.1	5.0	7.0	6.0	9.0	----
95	101.0	52.5	37.6	30.0	----	7.8	5.0	4.5	8.0	6.0	7.0	1.0
96	99.9	90.0	36.5	30.0	----	11.8	5.4	4.0	8.0	5.0	5.0	1.0
97	96.5	90.0	33.6	30.0	678.0	11.8	6.0	4.5	7.0	5.5	5.0	----
98	100.4	90.0	34.0	30.0	----	7.8	6.0	5.0	7.0	5.5	6.0	1.0
99	97.1	65.0	35.9	20.0	620.0	13.7	5.9	3.5	7.0	5.0	6.0	1.0
100	92.8	100.0	34.8	20.0	----	2.0	5.1	5.0	8.0	6.5	8.0	1.0
101	90.9	90.0	35.7	60.0	----	9.8	5.4	4.5	8.0	5.0	7.0	----
102	96.3	100.0	36.8	30.0	----	17.6	5.0	3.0	7.0	6.5	7.0	1.0
103	95.9	55.0	37.6	20.0	511.0	21.6	4.7	3.0	8.0	7.0	5.0	1.0
104	95.8	90.0	32.0	20.0	----	21.6	5.1	3.0	8.0	7.0	7.0	1.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
105	OCTO BULK31-CIN"R" X CABORCA79 X-52650-19Y-1M-3Y-1M-0Y	4488.3	68.4	85.3	139.7	0.2	1.7	9.3
106	BSN"S"-MAYA74 X-58439-9Y-2M-2Y-3M-0Y	4818.4	68.0	81.4	141.9	6.0	2.9	5.3
107	BURA"S"-SKA X-58454-7Y-2M-1Y-1M-0Y	4162.6	68.3	84.0	140.9	2.0	0.2	3.4
108	SPD"S"-PVN76 X-54268-5Y-2M-1Y-2M-0Y	4202.7	68.3	83.9	142.9	0.0	3.9	6.4
109	SPD"S"-PVN76 X-54268-7Y-1M-1Y-1M-0Y	4170.4	68.4	83.9	142.9	0.0	3.2	2.4
110	DURUM WHEAT-BALBO X DF"S"/BSN"S" X-53436-D-501Y-505M-503Y-500B-0Y	4017.9	68.2	89.0	142.5	0.0	1.8	0.7
111	DURUM WHEAT-BALBO X DF"S"/BSN"S" X-53436-D-501Y-505M-503Y-501B-0Y	4174.1	68.7	89.0	141.1	0.0	3.6	0.7
112	DURUM WHEAT-BALBO X DF"S"/BSN"S" X-53436-D-502Y-504M-500Y-502B-0Y	3681.1	67.1	89.0	143.5	0.2	0.0	0.7
113	BSN"S" X M2A-IRA X-48491-11Y-2Y-2M-1Y-3M-0Y	3993.4	70.3	82.2	140.6	0.2	1.7	0.7
114	DRIRA-IRA X PND"S" X-39236-25Y-1Y-1M-1Y-3M-0Y	3901.8	72.3	88.1	140.8	0.0	1.6	0.7
115	M2A-CASTOR"S" X M2A-PTR"S" X-50444-0-6Y-3Y-1M-1Y-2M-0Y	4471.3	69.6	80.3	137.1	0.0	0.1	0.7
116	(PND"S"/M2A-CIN X DACH)M2A(2)-ABN"S" X-50996-B-2Y-2Y-2M-1Y-1M-0Y	4335.4	64.6	82.8	138.9	0.4	0.8	5.3
117	RM"S" X M2A-IRA(H277.69-UMX2(2)/RM"S" -IRA X FS477) X-53627-D-5Y-1M-5Y-2M-0Y	4378.7	68.2	84.3	140.1	0.0	4.1	0.7
118	RM"S" X M2A-IRA(H277.69-UMX2(2)/RM"S" -IRA X FS477) X-53627-D-5Y-1M-6Y-2M-0Y	4459.3	69.6	84.3	140.3	1.0	6.8	0.1
119	RM"S" X M2A-IRA(H277.69-UMX2(2)/RM"S" -IRA X FS477) X-53627-D-5Y-1M-6Y-5M-0Y	4225.6	67.0	84.3	142.0	0.0	0.2	1.7
120	DRIRA-IA75(IA-M2A X PI62/BGL"S") X-59065-5M-1Y-2M-0Y	4243.1	67.7	82.4	141.7	0.0	2.7	0.9
121	BGL"S"-RAM"S" X-44265-4KE-1Y-500B-0Y	4921.4	65.3	88.0	145.0	0.0	4.5	25.3
122	TOPD X PUPPY-BGL"S" B-3361-0Y-33	3835.5	66.2	94.7	150.6	0.0	4.6	65.3
123	FARD"S" B-2264-0Y-103	4765.0	68.6	94.2	150.3	0.0	2.3	1.7
124	NUTRIA401 B-2709-0Y-18	4996.3	69.8	88.0	145.1	0.0	5.5	1.3
125	MERIND"S"-JLD"S" B-2736-0Y-21	5328.7	72.3	88.3	147.4	0.0	6.6	1.4
126	BGL"S"-CIN X MUS"S" B-2686-0Y-61	4588.7	71.6	92.2	147.8	0.0	0.6	0.8
127	PANCHE7287 B-2671-0Y-117	4378.3	69.7	94.1	147.0	0.0	0.2	55.3
128	PANCHE312 B-2671-0Y-10	4447.6	69.9	90.2	144.8	2.0	1.6	59.3
129	NUTRIA7272 B-2709-0Y	4985.2	69.4	90.7	144.5	0.2	1.8	10.7
130	PANCHE408 B-2671-2183	4644.5	71.5	89.8	149.9	0.2	0.7	12.0



VTY	PLNT HT	LDDG %	1000 G. W.	BCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP B 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
105	98.5	55.0	37.5	20.0	589.0	25.5	5.9	2.5	7.0	6.0	5.0	1.0
106	96.7	90.0	37.0	20.0	-----	23.5	5.4	2.5	7.0	6.5	9.0	6.0
107	98.0	55.0	35.5	30.0	591.0	23.5	6.1	2.5	7.0	6.5	4.0	1.0
108	96.1	90.0	33.0	15.0	-----	25.5	5.6	4.5	7.0	6.5	5.0	-----
109	94.6	100.0	34.3	20.0	-----	17.6	5.7	4.0	8.0	6.5	3.0	7.0
110	101.7	65.0	38.1	10.0	-----	19.6	4.7	2.5	7.0	5.0	8.0	0.0
111	102.6	75.0	38.4	10.0	444.0	29.4	4.3	2.0	7.0	4.0	3.0	0.0
112	97.3	75.0	39.1	20.0	-----	11.8	4.7	2.5	8.0	5.0	4.0	1.0
113	94.6	75.0	34.9	20.0	-----	17.6	6.0	4.5	9.0	5.5	6.0	-----
114	101.6	90.0	35.2	20.0	-----	9.8	5.0	4.0	8.0	6.0	2.0	5.0
115	99.9	90.0	39.2	20.0	-----	17.6	5.6	5.0	9.0	3.5	6.0	1.0
116	98.1	57.5	35.2	30.0	-----	11.8	5.4	3.0	8.0	3.5	3.0	1.0
117	98.4	80.0	38.4	20.0	-----	21.6	5.7	3.0	8.0	4.0	4.0	-----
118	101.3	80.0	39.2	10.0	-----	17.6	5.1	4.5	8.0	3.5	5.0	1.0
119	100.0	60.0	37.0	30.0	-----	9.8	4.7	4.0	7.0	4.0	3.0	1.0
120	99.1	55.0	34.5	20.0	-----	13.7	5.7	4.0	7.0	4.0	0.0	0.0
121	114.2	100.0	42.1	15.0	-----	27.5	4.7	2.0	7.0	6.0	2.0	1.0
122	112.3	80.0	34.8	30.0	-----	23.5	3.6	2.5	7.0	4.0	4.0	0.0
123	110.3	100.0	35.5	20.0	-----	29.4	3.6	3.0	7.0	6.0	2.0	1.0
124	115.6	100.0	41.0	30.0	-----	29.4	4.1	1.0	7.0	6.0	3.0	1.0
125	114.4	100.0	39.6	20.0	-----	29.4	3.4	2.0	7.0	5.0	2.0	3.0
126	115.4	100.0	37.6	15.0	-----	17.6	3.9	1.5	7.0	5.5	2.0	1.0
127	118.7	100.0	43.3	10.0	-----	19.6	4.0	2.0	7.0	6.0	2.0	3.0
128	113.9	100.0	40.5	30.0	-----	25.5	4.4	2.5	7.0	6.0	2.0	0.0
129	115.2	60.0	43.6	25.0	-----	15.7	4.1	2.5	7.0	6.0	2.0	0.0
130	114.3	100.0	44.6	30.0	-----	31.4	4.3	1.5	7.0	4.0	2.0	0.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
131	BOL."S"-CIN X MUS"S" B-2686-2147	4671.9	72.6	92.1	150.6	32.0	0.1	0.2
132	MERINO"S"-JLO"S" B-2736-505	5287.0	72.8	87.8	144.1	4.0	2.7	21.5
133	MERINO"S"-JLO"S" B-2736-298	4866.0	70.8	86.8	145.9	0.4	9.2	13.5
134	NUTRIA440 B-2709-2634	5162.1	70.4	86.9	145.6	0.2	9.2	24.0
135	LMG"S" X-33208-I-500Y-500M-500Y-503B- 503Y-0Y	4534.4	67.8	86.2	143.9	0.0	5.3	2.4
136	ECHIDNA"S" X-34824-501M-500Y-501B-503Y-507Y OM	4185.1	67.4	82.2	143.3	0.4	2.0	2.7
137	PND"S"-CASTOR"S" X-35781-121H-3Y-1M-3Y-2Y-0H	4534.7	68.9	84.7	139.9	0.2	4.6	6.8
138	PTR"S"-PND"S" X-39599-7Y-1M-1Y-2Y-0H	4168.8	69.0	84.4	139.4	0.0	0.3	1.3
139	TESMO"S" X-39860-7Y-1M-1Y-3Y-1M-1Y-0B	3887.0	68.9	77.3	138.4	0.0	2.6	0.7
140	TESMO"S" X-39860-7Y-1M-1Y-5Y-1M-1Y-0B	4030.1	70.4	81.3	140.3	0.0	1.8	1.3
141	TESMO"S" X-39860-7Y-1M-3Y-0Y	4134.2	69.4	79.8	140.1	0.0	7.6	0.7
142	TESMO"S" X-39860-7Y-1M-3Y-2Y-0H	4336.7	65.1	81.2	140.2	0.0	0.1	0.0
143	PTR"S" X IGA-IRA X-39862-3Y-1M-1Y-1Y-0H	4180.6	69.0	84.4	140.9	0.0	8.4	0.7
144	M2A(2)-IA X MPE"S"-M2A X-41033-K-2Y-2M-1Y-0Y	4190.9	66.4	81.6	138.8	0.4	11.2	0.0
145	DINGO"S" X-41047-A-1Y-2M-1Y-1Y-2M-0Y	3970.2	71.0	79.6	138.3	0.0	7.0	2.8
146	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-1M-1Y-0B	4163.0	72.5	80.1	140.1	0.2	6.9	2.1
147	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-1M-2Y-0B	3900.7	72.4	80.2	140.0	0.0	0.0	3.5
148	PANCHE 7248 B-2671-0Y	4996.5	69.6	91.1	146.7	0.2	1.4	45.3
149	ZEBRA 7249 B-2672-0Y	3452.5	72.9	81.3	142.8	0.0	0.1	2.0
150	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-2M-0Y	4149.5	72.0	81.3	140.6	0.2	0.1	1.5
151	CANANEA79	3991.4	64.3	83.3	140.0	0.0	1.8	0.7
152	BEAGLE	4073.6	65.9	89.9	146.9	0.2	0.0	49.3
153	CLENSON81	3953.3	79.4	93.2	141.3	0.0	25.2	27.4
154	IRA(2) X M2A-CML/IA-TRR"S" X-41312-H-1Y-1M-1Y-2Y-1M-0Y	4398.1	67.7	83.6	139.6	0.0	9.3	0.1
155	M2A-IRA(2) X-48524-3Y-2Y-1M-0Y	4608.7	69.5	84.1	138.5	0.0	2.7	1.5
156	M2A X CIN-FS658/IA-M2A X-50234-F-2Y-1Y-1M-2Y-0B	4348.7	68.7	81.6	137.7	2.0	3.1	0.0
157	M2A X CIN-FS658/IA-M2A X-50234-F-4Y-2Y-3M-0Y	4362.6	69.5	80.1	136.8	0.0	0.1	1.5

VTY	PLNT HT	LOAD %	1000 G. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
131	112.6	100.0	40.4	20.0	-----	19.6	4.0	1.0	7.0	5.5	2.0	6.0
132	115.2	100.0	41.0	15.0	-----	21.6	4.1	2.0	7.0	6.0	2.0	3.0
133	112.2	57.5	42.5	20.0	-----	19.6	4.4	1.5	7.0	6.0	2.0	-----
134	115.0	57.5	46.6	20.0	-----	27.5	4.6	2.0	7.0	6.0	2.0	3.0
135	94.3	35.0	36.5	30.0	-----	21.6	5.3	3.5	8.0	7.0	4.0	0.0
136	96.3	31.7	37.5	30.0	-----	13.7	5.7	2.5	8.0	6.0	7.0	0.0
137	94.4	10.0	30.9	80.0	-----	15.7	5.4	5.5	8.0	3.5	4.0	1.0
138	88.6	-----	34.8	30.0	822.0	13.7	5.3	7.0	8.0	5.0	7.0	1.0
139	83.7	10.0	34.4	30.0	-----	13.7	6.1	8.0	8.0	4.5	6.0	1.0
140	79.7	50.0	29.1	60.0	-----	17.6	6.1	6.5	8.0	6.0	8.0	1.0
141	83.5	50.0	35.2	80.0	-----	13.7	6.6	6.5	8.0	5.5	8.0	3.0
142	83.5	-----	32.5	60.0	-----	15.7	6.0	6.0	9.0	5.0	8.0	1.0
143	88.0	50.0	36.0	60.0	-----	2.0	5.7	6.0	9.0	5.0	7.0	0.0
144	83.9	35.0	32.8	60.0	-----	7.8	6.6	7.0	9.0	5.5	8.0	-----
145	85.1	50.0	34.0	60.0	-----	5.9	5.7	5.5	9.0	5.5	2.0	7.0
146	88.8	45.0	37.7	30.0	-----	7.8	5.6	5.5	8.0	6.0	2.0	1.0
147	91.2	46.7	38.0	30.0	-----	9.8	5.4	5.5	8.0	4.0	2.0	6.0
148	115.5	50.0	43.9	30.0	-----	25.5	3.7	4.0	7.0	5.0	2.0	1.0
149	92.2	50.0	35.8	30.0	-----	19.6	5.1	6.0	8.0	5.0	2.0	1.0
150	90.1	60.0	37.5	30.0	-----	13.7	5.6	5.5	8.0	5.5	4.0	7.0
151	96.9	60.0	37.4	-----	-----	7.8	5.9	5.5	8.0	5.0	6.0	-----
152	111.1	50.0	42.3	-----	-----	15.7	4.7	2.0	7.0	6.0	4.0	-----
153	84.8	70.0	36.8	-----	-----	7.8	6.4	8.5	7.0	3.5	2.0	-----
154	86.7	-----	33.8	30.0	-----	17.6	5.3	5.5	8.0	6.0	4.0	3.0
155	90.4	10.0	36.0	30.0	-----	13.7	5.7	5.0	8.0	3.5	8.0	1.0
156	93.8	30.0	33.4	30.0	-----	21.6	6.1	3.5	8.0	4.5	9.0	6.0
157	91.9	10.0	36.9	30.0	-----	17.6	5.4	5.5	8.0	5.5	9.0	1.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	STEM RUST
NUMBER OF OBSERVATIONS:		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
158	PND"S"-MPE"S" X QPR"S"-YAK"S" X-50408-B-5Y-2Y-1M-1Y-0B	4033.9	69.4	79.5	137.1	0.2	4.8	1.5
159	PTR"S" X M2A-IRA/RAM"S" X IRA-CAL X-53782-D-2Y-3M-1Y-0B	4205.4	69.4	80.4	139.4	0.2	4.6	1.5
160	SRL"S" X M2A-CALI(BUEY-BGL"S" X MSF" "/IA-IRA)ADX"S"] X-54032-B-1Y-2M-2Y-0B	4193.4	69.4	84.2	141.3	0.0	2.3	1.3
161	CIVET"S" B-2658	4855.6	69.9	81.7	142.0	0.0	0.1	1.3
162	MUS658	4473.8	70.3	86.0	145.8	4.0	3.1	18.3
163	WHALE"S" X-33470-C-1Y-3M-2Y-2M-0Y	4698.7	71.7	87.6	146.1	0.0	9.0	0.0
164	MULA"S" X-18330-3M-2Y-2M-1Y-2M-0Y	4448.1	66.9	92.7	146.9	0.0	11.7	8.0
165	PIKA"S" X-39597-4Y-2M-1Y-2Y-0H	4428.7	69.6	86.1	143.6	0.0	1.1	2.7
166	TESMO"S" X-39860-7Y-2M-2Y-0Y	4552.7	66.5	84.1	143.3	0.0	0.0	5.3
167	MUS"S"(2) B-2670-7190-0Y	4792.6	71.9	87.7	148.6	0.0	1.2	1.7
168	ZEBRA79 B-2672-7191-0Y	4928.0	74.3	86.4	148.5	0.0	1.3	2.3
169	MUS"S"-LYNX"S" B-3023-7251-0Y	4593.7	71.9	89.0	146.5	1.0	3.8	16.7
170	M2A(2)-IRA X M2A-TI72 X-49274-5Y-1Y-1M-1Y-3M-0Y	3936.5	69.9	88.0	144.2	0.0	3.9	2.7
171	PTR"S" X M2A-FS1377/IA X CIN-FS658 X-51038-D-4Y-3Y-3M-1Y-2M-0Y	4053.7	68.5	84.8	140.1	0.0	0.0	0.0
172	PTR"S" X M2A-FS1377/IA X CIN-FS658 X-51038-D-4Y-3Y-3M-1Y-4M-0Y	4389.6	69.6	85.2	140.0	0.0	1.5	0.0
173	CABORCA79-PND"S" X-51500-59Y-1M-5Y-1M-0Y	4464.2	70.4	82.0	141.6	0.0	5.4	0.7
174	(CR"S" X WLLS-65150/TETRAPLOIDE)BVA X-50020-5Y-3M-1Y-3M-0Y	4544.7	66.3	86.6	143.1	4.0	0.1	0.7
175	(M2A X HEXA FROM OCTO-HEXA/RM"S"- IRA X FS477)MSF"S"-TRR"S" X BTO"S" X-54029-C-1Y-2M-1Y-2M-0Y	4156.7	69.8	85.6	140.2	0.0	5.3	0.8
176	SRL"S" X M2A-CALI(BUEY-BGL"S" X MSF" "/IA-IRA)ADX"S"] X-54032-B-2Y-1M-1Y-1M-0Y	4134.3	70.1	84.3	141.5	0.0	0.3	4.2
177	FS381-FS477 X TORO"S"/M2A-M1A X-61270-B-1M-1Y-1M-0Y	4317.8	69.5	85.9	140.0	0.0	5.6	2.1
178	FS381-FS477 X TORO"S"/M2A-M1A X-61270-B-1M-1Y-4M-0Y	4396.9	69.2	85.9	140.7	0.0	0.2	6.0
179	PTR"S"-BSN"S" X PND"S"-MPE"S" X-61053-36Y-1M-0Y	4055.7	70.8	82.8	139.3	0.2	0.1	11.5
180	RABI"S"-RYE9 X PND"S"-MPE"S" X-65156-1Y-2M-0Y	4281.2	67.9	85.1	141.9	0.0	0.1	2.1
181	(CORM"S"-D67.3 X QTA"S"/SPY)QPR"S" X-65163-7Y-1M-0Y	3975.5	66.6	84.1	141.8	0.0	0.9	13.3
182	CIT"S"-SPY X M2A(2)/TIGRE"S" X-60542-8Y-1M-0Y	4549.3	68.8	82.0	139.6	0.0	6.4	1.7
183	CIT"S"-SPY X M2A(2)/TIGRE"S" X-60542-17Y-1M-0Y	4491.5	68.4	80.5	140.4	0.0	6.6	0.7

VTY	PLNT HT	LODG %	1000 Q. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT B 0-9	FUS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
158	88.4	20.0	34.9	60.0	----	7.8	6.1	6.0	8.0	5.0	7.0	1.0
159	88.7	----	35.1	80.0	----	17.6	6.6	5.0	8.0	5.0	6.0	1.0
160	87.2	----	37.5	30.0	----	25.5	4.6	3.5	9.0	3.5	4.0	1.0
161	104.8	----	41.2	30.0	----	25.5	5.0	3.5	9.0	3.5	4.0	1.0
162	107.5	10.0	41.1	25.0	----	11.8	4.4	3.0	9.0	5.0	3.0	1.0
163	108.5	----	41.5	20.0	----	29.4	3.7	3.5	7.0	6.0	5.0	5.0
164	106.1	----	40.9	30.0	----	27.5	3.9	2.0	7.0	7.0	2.0	3.0
165	89.8	----	36.0	30.0	----	23.5	4.7	7.0	9.0	5.0	6.0	1.0
166	86.6	----	32.5	60.0	----	7.8	5.4	7.5	9.0	6.0	8.0	0.0
167	107.8	27.5	41.5	15.0	----	23.5	4.6	2.5	7.0	6.0	6.0	3.0
168	115.0	30.0	44.5	25.0	----	23.5	3.6	2.0	7.0	6.0	6.0	1.0
169	107.1	40.0	42.0	20.0	----	33.3	4.0	2.5	7.0	5.0	3.0	5.0
170	93.1	40.0	34.1	30.0	----	15.7	4.1	3.0	9.0	6.0	3.0	5.0
171	85.7	----	38.1	80.0	----	19.6	4.9	5.0	9.0	5.0	4.0	1.0
172	89.7	60.0	38.5	30.0	----	21.6	5.6	4.5	9.0	4.5	4.0	1.0
173	93.3	----	37.4	60.0	----	19.6	6.0	6.0	8.0	5.5	6.0	1.0
174	96.2	40.0	35.0	20.0	----	17.6	4.9	3.5	7.0	6.0	4.0	1.0
175	89.7	----	35.5	80.0	----	11.8	5.6	5.0	8.0	5.0	4.0	1.0
176	87.4	----	39.2	30.0	----	21.6	5.6	4.0	8.0	4.0	4.0	1.0
177	93.5	17.5	33.7	80.0	----	11.8	5.6	3.5	7.0	6.0	6.0	0.0
178	93.5	----	33.6	30.0	----	21.6	5.7	3.5	7.0	5.0	7.0	1.0
179	85.9	40.0	32.3	80.0	----	9.8	6.9	5.5	8.0	6.0	9.0	8.0
180	85.9	----	32.2	30.0	----	11.8	5.9	5.5	8.0	5.0	9.0	3.0
181	87.3	30.0	32.2	30.0	----	3.9	5.0	4.0	8.0	3.5	7.0	1.0
182	88.9	50.0	32.8	30.0	558.0	19.6	5.6	5.0	8.0	3.5	4.0	3.0
183	93.1	----	38.2	25.0	----	23.5	5.9	5.5	8.0	4.0	5.0	5.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	NUMBER OF OBSERVATIONS:						
		( 30)	( 9)	( 43)	( 16)	( 1)	( 6)	( 3)
184	RM"S"-PTR"S" X RAT"S"/LMQ"S" X MSF"S -IRA X-63735-F-3Y-3M-0Y	3904.0	68.9	81.4	139.7	0.0	0.4	1.3
185	PTR"S"-YD"R" X PND"S" X-52202-3Y-3M-1Y-5M-0Y	4236.3	71.8	82.4	138.7	4.0	4.8	4.0
186	SPD"S"-PVN76 X-54268-3Y-2M-1Y-5M-0Y	4332.1	67.2	83.1	141.5	0.0	0.2	6.8
187	SPD"S"-PVN76 X-54268-7Y-1M-1Y-6M-0Y	4249.9	68.1	83.4	142.0	0.2	4.0	4.7
188	SONALIKA	2213.0	76.5	82.7	137.8	-----	43.4	36.0
189	BCM"S"(INIA-TK X H616.71/FS477) X-58617-4YP-2MP-0Y	3930.3	65.9	76.3	135.5	0.0	5.5	3.5
190	PND4 X PND"S"-MPE"S"[(H277.69 X TOR" "-TOB66/FS1029)TED"S"] X-63722-A-1YP-1MP-0Y	3459.2	70.0	76.3	135.6	0.0	11.4	1.1
191	FS1018-PND"S" X-56733-1YP-3MP-0Y	4162.0	70.9	76.0	135.3	0.0	4.6	6.3
192	FS1018-PND"S" X-56733-3YP-1MP-0Y	3603.8	69.8	75.2	134.8	0.0	7.7	0.8
193	LMQ"S"-SPD"S"(BQL"S"-MUS"S" X FS477/ BTA"S") X-63773-D-1YP-1MP-0Y	3220.8	68.2	75.3	134.9	0.0	3.3	26.9
194	TED"S" X M1A-BCM"S" X-60904-1MP-3Y-1MP-0Y	3658.6	70.2	75.1	136.4	0.0	3.6	13.4
195	RAT"S" X MSF"S"-IRA X-61178-4MP-1Y-1MP-0Y	3798.4	68.7	74.5	135.8	12.0	1.5	13.6
196	TCL E3-ARM"S" X IRA-M2A/PND6 X-63073-901M-1YP-1MP-0Y	3832.6	70.3	75.3	135.7	0.0	35.7	2.1
197	PND6 X PTR"S"-CASTOR"S" X-64363-3YP-2MP-0Y	3251.2	70.8	77.3	136.9	0.4	0.7	5.4
198	PND"S"-CASTOR"S" X IA-BUSH X-64420-1YP-1MP-0Y	3652.1	69.3	77.8	137.9	0.0	10.0	4.7
199	ZRA"S"-POL"S" X-65078-2YP-1MP-0Y	4022.0	67.8	79.9	140.0	0.0	17.9	13.3
200	CIT"S"-SPY/INIA-TK X CMH73A.785 X-60529-7YP-1MP-0Y	3032.0	69.9	75.9	136.6	4.0	3.9	21.3
201	RABI"S"-RYE9 X PND"S"/USA IV S.718- SPY X BTA"S" X-63638-A-1YP-1MP-0Y	3853.8	69.6	77.7	135.5	-----	0.6	13.6
202	RABI"S"-RYE9 X PND"S"/USA IV S.718- SPY X BTA"S" X-63638-A-1YP-2MP-0Y	3724.3	69.8	77.0	136.1	0.0	2.9	13.3
203	JUPPA"S"-MPE"S" X GPR"S"-CML"S" X-63507-901M-1YP-1MP-0Y	3700.4	68.8	76.5	135.5	20.0	20.7	14.7
204	MN72130-RYE4 X M2A-IRA/POL"S" X-61595-A-1MP-1Y-2MP-0Y	3109.2	68.9	75.3	134.7	0.0	8.4	5.5
205	[(IA-M2A X PI62/BQL"S")INIA-TK X H61 .71/FS477]PND"S"-CASTOR"S" X MPE"S" X-61834-0-1MP-1Y-1MP-0Y	3714.9	68.3	77.6	135.3	0.0	2.5	5.4
206	TED"S" X M1A-BCM"S" X-60904-1MP-3Y-1MP-3YP-0M	4009.1	69.0	78.5	135.1	0.2	0.7	11.0
207	POL"S"-CABORCA79 X-59946-1MP-1Y-1M-5YP-0M	4461.2	68.8	78.0	134.8	0.0	9.6	16.7

VTY	PLNT HT	LODC %	1000 Q. W.	SCAB %	EARS /M2	CHECK MARK	SEP T 0-9	SEP N 0-9	SEP S 0-9	SPT B 0-9	FLS N 0-9	BAC S 0-9
	( 40)	( 3)	( 7)	( 1)	( 1)	( 51)	( 7)	( 2)	( 1)	( 2)	( 1)	( 1)
184	87.0	-----	34.6	60.0	-----	5.9	5.9	6.0	8.0	4.5	6.0	3.0
185	89.4	10.0	33.1	60.0	-----	17.6	5.9	6.0	8.0	4.0	3.0	1.0
186	94.2	10.0	32.3	20.0	-----	15.7	5.4	3.5	7.0	6.0	3.0	1.0
187	93.2	15.0	32.5	30.0	-----	19.6	5.4	4.0	7.0	6.0	-----	6.0
188	84.4	56.7	43.6	-----	-----	3.9	6.5	8.0	9.0	4.0	6.0	-----
189	88.0	50.0	33.5	80.0	-----	7.8	6.7	6.5	9.0	5.0	8.0	-----
190	89.9	35.0	38.7	80.0	-----	5.9	6.6	7.0	9.0	4.0	6.0	5.0
191	98.7	45.0	36.4	60.0	-----	7.8	6.6	5.5	9.0	6.0	6.0	8.0
192	90.7	55.0	35.0	80.0	-----	3.9	6.6	6.0	9.0	5.0	6.0	8.0
193	81.0	45.0	34.9	80.0	-----	5.9	6.6	7.5	9.0	6.0	4.0	5.0
194	94.5	40.0	37.6	60.0	-----	2.0	6.3	6.5	9.0	5.5	6.0	3.0
195	92.9	50.0	40.5	60.0	-----	5.9	6.6	6.0	9.0	5.0	3.0	5.0
196	99.6	50.0	41.8	60.0	-----	2.0	6.1	7.0	9.0	6.0	4.0	5.0
197	98.7	45.0	34.5	30.0	-----	2.0	5.9	7.0	9.0	6.0	8.0	7.0
198	98.6	45.0	35.3	60.0	-----	7.8	6.1	5.5	9.0	4.0	8.0	5.0
199	95.1	30.0	40.5	60.0	-----	9.8	5.0	6.0	9.0	5.0	8.0	1.0
200	88.4	40.0	38.1	30.0	-----	3.9	6.6	7.0	9.0	6.0	7.0	3.0
201	84.8	45.0	42.0	20.0	-----	9.8	6.3	6.5	9.0	5.5	4.0	1.0
202	84.4	45.0	38.0	20.0	-----	3.9	6.0	6.0	9.0	6.0	2.0	7.0
203	94.3	40.0	39.0	30.0	-----	7.8	5.9	6.5	9.0	4.0	4.0	5.0
204	93.5	40.0	37.9	30.0	-----	7.8	6.4	8.0	9.0	6.0	3.0	1.0
205	89.4	20.0	43.2	30.0	-----	13.7	6.7	7.5	9.0	5.5	6.0	3.0
206	91.8	60.0	38.0	30.0	-----	9.8	6.6	7.0	8.0	5.0	4.0	1.0
207	96.6	60.0	38.2	60.0	718.0	11.8	6.1	8.0	8.0	5.0	6.0	5.0

**Table 3. Yield: Entries with means yields (kg/ha) greater than that of Beagle (entry 2), based on 30 locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE--MARIENTAL	1
9	AFRICA	TUNISIA	TUNIS-BEJA	1
10	AFRICA	UPPER VOLTA (B.FASO)	SOUROU	1
11	AFRICA	ZIMBABWE	HARARE	1
12	ASIA	AFGHANISTAN	BALKH	1
13	ASIA	BANGLADESH	JOYDEBPUR--BARI	1
14	ASIA	BURMA	PYINMANA	1
16	ASIA	PHILIPPINES	LAGUNA	1
18	ASIA	THAILAND	CHIANGRAI	1
20	EUROPE	GREECE	THESSALONIKI	1
21	EUROPE	NORWAY	AAS	1
22	EUROPE	POLAND	RADOM	1
24	EUROPE	SPAIN	BADAJOZ--LA ORDEN	1
27	EUROPE	SPAIN	LLEIDA--PALAU D'ANGLEFOLA	1
28	EUROPE	SPAIN	MADRID--ENCIN	1
29	EUROPE	SPAIN	SEVILLA	1
33	MIDDLE EAST	QATAR	BARADA	1
34	MIDDLE EAST	SYRIA	ALEPPO--BREDI	1
37	NORTH AMERICA	MEXICO	EL BATAN--(1ST. DATE)	1
38	NORTH AMERICA	MEXICO	NUEVO LEON--NAVIDAD	1
39	NORTH AMERICA	MEXICO	SONORA--CIANO (1ST DATE)	1
40	NORTH AMERICA	MEXICO	TOLUCA	1
42	SOUTH AMERICA	ARGENTINA	LA PAMPA	1
43	SOUTH AMERICA	ARGENTINA	BUENOS AIRES--BORDENAVE	1
46	SOUTH AMERICA	BRAZIL	BRAZILIA D. F.	1
47	SOUTH AMERICA	BRAZIL	PARANA--CASCAVEL	1
48	SOUTH AMERICA	BRAZIL	PARANA--LONDRINA	1
49	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL--CRUZ ALTA	1
50	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL--EMBRAPA	1
51	SOUTH AMERICA	BRAZIL	SAO PAULO--CAMPINAS	1

\*VARIABLE IDENTIFICATIONS  
1 YIELD KG/HA

### Commentary

Thirty locations provided yield data. Some provided data on all entries in the nursery while others included only the selected and harvested lines. This reduces the reliability of the yield averages because extremely high and/or low yields will be included for some entries and

not for others; in addition, yield data from small unreplicated plots is subject to large deviations. Consequently, the rankings by average performance should be viewed with caution. Those lines that had yields greater than that of Beagle are listed in Table 3.



Table 3 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS															
		5	9	10	11	12	13	14	16	18	20	21	22	24	27	28	29
125	MERINO"8"-JLD"8" B-2736-0Y-21	2840	4904	---	14240	4333	9133	1192	1613	1240	5692	6845	7900	3867	12745	5759	1800
132	MERINO"8"-JLD"8" B-2736-505	1735	8600	---	9600	3359	4433	1405	---	1626	5845	8204	6800	3333	13880	6631	1600
7	CIVET"8"	1885	6168	---	15760	4199	4208	1017	1587	1800	6230	6153	8200	2933	12964	6727	1300
134	NUTRIA440 B-2709-2634	2810	7848	---	11120	4613	4333	1704	1331	1506	5692	7320	8300	4000	14038	5850	1400
1	CANANEA79	2310	5688	12933	11440	4653	4266	1864	1227	1746	3076	4640	5000	1866	10828	6075	1700
70	PTR"8"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y	2135	6136	14285	8880	3173	4491	1921	---	2200	5076	6563	6300	3200	13356	7193	500
6	ELK32	2165	7224	---	16000	3226	4271	1098	2280	2453	6307	3051	7200	3200	10942	4684	1300
148	PANCHE 7248 B-2671-0Y	2460	8800	---	9920	3133	4516	706	1784	1200	3384	8679	10000	4533	13594	5936	1500
124	NUTRIA401 B-2709-0Y-18	2260	5808	---	12880	3973	4333	1007	983	800	4922	6717	9200	2667	9777	6433	1400
129	NUTRIA7272 B-2709-0Y	1990	9144	---	10720	3733	3749	968	740	1026	4999	5281	9100	3467	12705	6182	1500
168	ZEBRA79 B-2672-7191-0Y	2365	4720	---	13280	3119	4908	1366	1707	1680	5538	5858	7300	2933	9824	5551	1400
121	BGL"8"-RAM"8" X-44265-4KE-1Y-500B-0Y	2695	5960	---	11440	4386	3533	352	1992	533	5307	7486	7800	3067	13494	5925	800
69	BGL"8"-M1A X M1B-IA X-53641-A-502Y-504M-500Y-500B-0Y	2370	7280	14022	12160	3853	4249	1013	1292	2146	4307	5653	7000	3200	11697	6481	1900
133	MERINO"8"-JLD"8" B-2736-298	1945	7360	---	11360	4559	2249	1372	1191	946	6307	7563	7900	2933	12951	6187	1600
30	BURA"8"-FAMN"8"/IA-ABN"8" X GPR"8" X-61650-C-1M-2Y-1M-0Y	2510	2880	---	13920	4706	4781	1853	1707	2066	4538	4704	6400	2933	11176	7449	1700
161	CIVET"8" B-2658	2160	---	---	11440	6306	4108	433	1600	506	5384	7666	6100	3333	11777	7364	600
2	BEAGLE	2280	6384	---	15360	4413	3777	491	1986	2093	4538	4794	8000	3067	8368	4946	1000

Table 3 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS														MEAN
		33	34	37	38	39	40	42	43	46	47	48	49	50	51	
125	MERIND"S"-JLD"S" B-2736-0Y-21	6640	2500	5806	8667	6722	5556	4787	---	6200	---	4375	---	3233	3998	5328.7
132	MERIND"S"-JLD"S" B-2736-505	5440	2600	6343	7400	8389	4731	3213	4788	8616	---	3250	---	2567	3074	5287.0
7	CIVET"S"	6240	2033	7130	7667	8472	6694	---	---	5266	---	2875	---	2083	2500	5283.6
134	NUTRIA440 B-2709-2634	7200	2700	7102	6667	9445	4491	2400	---	7200	1333	3375	---	2108	3490	5162.1
1	CANANEA79	8320	1866	6160	8800	7361	4819	2480	---	8583	---	3750	---	3000	2499	5072.2
70	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y	4640	2066	4926	8533	8056	3639	3240	---	5550	2296	3750	---	2458	1100	5024.6
6	ELK32	5520	1633	5417	8800	7806	4324	5040	---	5333	---	4375	---	3667	2841	5006.0
148	PANCHE 7248 B-2671-0Y	4800	2533	5056	8133	7917	6139	2707	---	5816	---	2375	1827	3250	4207	4996.5
124	NUTRIA401 B-2709-0Y-18	6000	2333	6426	7933	8778	5778	4530	---	4500	---	5000	---	2542	2924	4996.3
129	NUTRIA7272 B-2709-0Y	7360	2800	5981	7667	9084	4991	2920	---	5216	---	3625	---	1417	3249	4985.2
168	ZEBRA79 B-2672-7191-0Y	5200	1266	6074	8200	7861	5602	5120	---	8566	---	4000	---	2958	1733	4928.0
121	BQL"S"-RAM"S" X-44265-4KE-1Y-500B-0Y	---	2633	6833	8000	8361	4093	3520	---	8566	2073	3125	---	2917	3065	4921.4
69	BQL"S"-MIA X MIBI-IA X-53641-A-502Y-504M-500Y-500B-0Y	3360	1900	4176	7000	6722	4231	2347	---	5166	---	2625	---	3650	2691	4907.1
133	MERIND"S"-JLD"S" B-2736-298	5600	2633	6176	7867	---	5324	2920	---	6416	---	3125	---	2108	3057	4866.0
30	BURA"S"-FAMN"S"/IA-ABN"S" X OPR"S" X-61650-C-1M-2Y-1M-0Y	8160	1800	7052	8667	7889	3907	---	---	5783	2518	1875	---	3375	1974	4858.6
161	CIVET"S" B-2658	3520	1766	7213	8533	9445	5694	3067	---	5316	---	4125	---	2375	1558	4855.6
2	BEAGLE	5120	3000	3963	9267	8750	5120	2736	---	6500	---	3000	---	2750	3832	4828.3

**Table 4. Test weight: Entries with the highest mean test weights (kg/hl), based on nine locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
22	EUROPE	POLAND	RADOM	2
27	EUROPE	SPAIN	LLEIDA-PALUAU D'ANGLEFOLA	2
28	EUROPE	SPAIN	MADRID-ENCIN	2
35	MIDDLE EAST	TURKEY	IZMIR-EGE RARI	2
37	NORTH AMERICA	MEXICO	EL BATAN-(1ST. DATE)	2
38	NORTH AMERICA	MEXICO	NUEVO LEON-NAVIDAD	2
39	NORTH AMERICA	MEXICO	SONORA-CIAND (1ST DATE)	2
40	NORTH AMERICA	MEXICO	TOLUCA	2
50	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	2

\*VARIABLE IDENTIFICATIONS  
2 TEST WT

### Commentary

Improving test weight is a major goal of the triticale program. In Table 4 the three bread wheat checks had the best test weights, with an average of 78.1 kg/hl. The top ten percent (or 21) of the triticale lines in the nursery averaged only 72.1 kg/hl. Of these, the triticale Zebra 79 was the highest with 74.3 kg/hl. In the top

group of 21 triticales, Dingo was represented three times and six other lines were represented by sister selections. Among the parents of entries with high test weights, Panda, Merino and Muskox were the most common.

Table 4 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS								MEAN	
		22	27	28	35	37	38	39	40		50
153	GLENSONB1	72	85	81	83	---	74	82	---	---	79.5
78	GENAROB1	71	83	79	81	---	72	82	---	---	78.0
188	SONALIKA	70	81	78	---	---	---	78	---	---	76.8
168	ZEBRA79 B-2672-7191-0Y	73	80	76	77	75	71	77	72	68	74.3
132	MERINO"S"-JLO"S" B-2736-505	66	79	77	77	73	69	75	68	72	72.9
149	ZEBRA 7249 B-2672-0Y	70	80	73	77	75	65	---	71	72	72.9
131	BGL"S"-CIN X MUS"S" B-2686-2147	71	78	74	75	70	70	75	69	72	72.7
146	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-1M-1Y-0B	68	80	72	76	75	66	75	71	70	72.6
147	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-1M-2Y-0B	68	79	73	75	75	67	75	70	71	72.6
114	DRIRA-IRA X PND"S" X-39236-25Y-1Y-1M-1Y-3M-0Y	71	78	75	76	71	65	75	68	---	72.4
59	PTR"S"-YQ"R" X PND"S" X-52202-2Y-5M-2Y-3M-0Y	71	77	74	76	73	61	75	67	77	72.3
125	MERINO"S"-JLO"S" B-2736-0Y-21	67	77	74	77	73	70	76	65	72	72.3
150	DINGO"S" X-41047-A-1Y-2M-1Y-2Y-2M-0Y	69	73	74	77	75	66	75	70	70	72.1
167	MUS"S"(2) B-2670-7190-0Y	71	79	74	74	73	69	75	68	65	72.0
169	MUS"S"-LYNX"S" B-3023-7251-0Y	71	77	74	76	72	68	73	69	68	72.0
185	PTR"S"-YQ"R" X PND"S" X-52202-3Y-3M-1Y-3M-0Y	72	79	76	78	72	61	74	66	70	72.0
36	(ABN"S" X M2A-IRA/PND"S"-CASTOR"S") 416-SPY X TED"S" X-63377-F-2Y-2M-0Y	72	79	73	75	72	64	75	66	70	71.8
57	PTR"S"-YQ"R" X PND"S" X-52202-2Y-4M-1Y-2M-0Y	64	80	74	78	76	67	76	63	68	71.8
22	FAWN"S"-BSN"S" X-38864-43M-3Y-2Y-2M-2Y-4M-0Y	72	80	73	76	72	61	75	68	68	71.7
126	BGL"S"-CIN X MUS"S" B-2686-0Y-61	70	76	74	74	70	68	74	69	70	71.7
163	WHALE"S" X-33470-C-1Y-3M-2Y-2M-0Y	72	75	74	77	71	68	71	68	69	71.7
79	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-2M-0Y	66	79	72	76	73	67	76	65	70	71.6
75	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-4M-0Y	67	78	70	77	72	65	76	67	71	71.4
130	PANCHE40B B-2671-2183	68	77	73	75	70	70	75	65	70	71.4

**Table 5. *Septoria tritici* resistance: Entries with an average score (0-9 scale) of 4.3 or less at seven locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
1	AFRICA	CAMERON	NGAOUNDERE	62
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE-MARIENTAL	62
8	AFRICA	TANZANIA	MBEYA-UYOLE	62
21	EUROPE	NORWAY	AAS	62
22	EUROPE	POLAND	RADOM	62
31	MIDDLE EAST	ISRAEL	BET DAGAN	62
42	SOUTH AMERICA	ARGENTINA	LA PAMPA	62

\*VARIABLE IDENTIFICATIONS  
62 SEP T 0-9

### Commentary

Ten locations reported *septoria tritici* blight, but the severity levels at three sites were so low that the reactions of the resistant and susceptible entries were essentially the same. There appear to be considerable differences in response at different locations, suggesting

that there are major differences, or even races, among the pathogen populations. Those lines with an average score of 4.3 or less are listed in Table 5. The bread wheat checks were more susceptible than the triticales.

Table 5 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS						MEAN	
		1	5	8	21	22	31		42
125	MERINO"S"-JLO"S" B-2736-0Y-21	3	4	4	0	3	6	4	3.4
122	TOPO X PUPPY-BGL"S" B-3361-0Y-33	3	4	2	0	3	7	6	3.6
123	FARO"S" B-2264-0Y-103	3	5	2	0	2	8	5	3.6
168	ZEBRA79 B-2672-7191-0Y	3	3	5	0	3	8	3	3.6
148	PANCHE 7248 B-2671-0Y	3	2	4	0	2	7	8	3.7
163	WHALE"S" X-33470-C-1Y-3M-2Y-2M-0Y	4	4	4	1	4	4	5	3.7
126	BGL"S"-CIN X MUS"S" B-2686-0Y-61	4	4	4	1	3	6	5	3.9
164	MULA"S" X-18330-3M-2Y-2M-1Y-2M-0Y	4	5	4	0	3	7	4	3.9
127	PANCHE7287 B-2671-0Y-117	4	4	3	0	2	7	8	4.0
131	BGL"S"-CIN X MUS"S" B-2686-2147	4	4	3	0	2	7	8	4.0
169	MUS"S"-LYNX"S" B-3023-7251-0Y	3	4	5	3	3	7	3	4.0
40	MPE"S"-DDU06A74 X IGA X-51381-2M-3Y-1B-5Y-1M-1Y-1M-0Y	6	7	3	2	1	7	3	4.1
53	PND"S"-IRA(2) X MPE"S"-PTR"S" X-30973-B-12Y-1Y-1M-1Y-1M-0Y	6	4	6	0	3	4	6	4.1
124	NUTRIA401 B-2709-0Y-18	3	5	3	0	3	8	7	4.1
129	NUTRIA7272 B-2709-0Y	4	4	4	0	2	7	8	4.1
132	MERINO"S"-JLO"S" B-2736-505	4	5	4	0	2	7	7	4.1
170	M2A(2)-IRA X M2A-T172 X-49274-5Y-1Y-1M-1Y-3M-0Y	3	5	5	1	3	8	4	4.1
5	MULA"S"	8	4	3	0	2	7	6	4.3
27	(PTR"S"/RM"S"-IRA X FS477)WELSH-BGL" X-53893-E-2Y-1M-1Y-5M-0Y	8	4	3	4	3	2	6	4.3
111	DURUM WHEAT-BALBO X DF"S"/BSN"S" X-33436-D-301Y-503M-503Y-501B-0Y	4	4	3	0	3	8	8	4.3
130	PANCHE408 B-2671-2183	4	4	5	1	2	7	7	4.3

**Table 6. *Septoria nodorum* resistance: Entries with an average score (0-9 scale) of 2.0 or less at two locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE-MARIENTAL	63
50	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	63

\*VARIABLE IDENTIFICATIONS  
63 SEP N 0-9

### Commentary

Three locations reported data on septoria nodorum blight but only two had sufficient disease development for screening purposes. The bread wheat checks were

more susceptible than the triticales. Those entries which had an average score of 2.0 or less are listed in Table 6.

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS		MEAN
		5	50	
124	NUTRIA401 B-2709-0Y-18	1	1	1.0
131	BQL"S"-CIN X MUS"S" B-2686-2147	1	1	1.0
126	BQL"S"-CIN X MUS"S" B-2686-0Y-61	2	1	1.5
130	PANCHE408 B-2671-2183	2	1	1.5
133	MERINO"S"-JLD"S" B-2736-298	2	1	1.5
2	BEAGLE	3	1	2.0
3	CABVORCA79	3	1	2.0
5	MULA"S"	3	1	2.0
111	DURUM WHEAT-BALBO X DF"S"/BGN"S" X-53436-D-501Y-505M-503Y-501B-0Y	2	2	2.0
121	BQL"S"-RAM"S" X-44265-4KE-1Y-500B-0Y	2	2	2.0
125	MERINO"S"-JLD"S" B-2736-0Y-21	2	2	2.0
127	PANCHE7287 B-2671-0Y-117	2	2	2.0
132	MERINO"S"-JLD"S" B-2736-305	3	1	2.0
134	NUTRIA440 B-2709-2634	3	1	2.0
152	BEAGLE	2	2	2.0
164	MULA"S" X-18330-3M-2Y-2M-1Y-2M-0Y	2	2	2.0
168	ZEBRA79 B-2672-7191-0Y	2	2	2.0

Table 7. Frequency of selection for further investigation (check mark): the 20 entries most frequently selected at 51 locations

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
3	AFRICA	KENYA	RIFT VALLEY-NJORD	50
4	AFRICA	MOROCCO	RABAT-MERCHDOUH	50
5	AFRICA	SOUTH AFRICA	CAPE PROVINCE-MARIENTAL	50
6	AFRICA	SUDAN	EASTERN	50
7	AFRICA	TANZANIA	IRINGA	50
8	AFRICA	TANZANIA	MBEYA-UYOLE	50
9	AFRICA	TUNISIA	TUNIS-BEJA	50
10	AFRICA	UPPER VOLTA (B.FASO)	SOUROU	50
11	AFRICA	ZIMBABWE	HARARE	50
12	ASIA	AFGHANISTAN	BALKH	50
13	ASIA	BANGLADESH	JOYDEBPUR-BARI	50
14	ASIA	BURMA	PYINMANA	50
15	ASIA	PAKISTAN	PUNJAB-NIAB	50
16	ASIA	PHILIPPINES	LAGUNA	50
17	ASIA	SRI LANKA	UPPER UVA	50
18	ASIA	THAILAND	CHIANGRAI	50
19	ASIA	THAILAND	NAKHON RATCHSIMA	50
20	EUROPE	GREECE	THESSALONIKI	50
21	EUROPE	NORWAY	AAS	50
22	EUROPE	POLAND	RADOM	50
23	EUROPE	PORTUGAL	ELVAS	50
24	EUROPE	SPAIN	BADAJOZ-LA ORDEN	50
25	EUROPE	SPAIN	CADIZ	50
26	EUROPE	SPAIN	CORDOBA-OBISPO	50
27	EUROPE	SPAIN	LLEIDA-PALUAU D'ANGLEFOLA	50
28	EUROPE	SPAIN	MADRID-ENCIN	50
29	EUROPE	SPAIN	SEVILLA	50
30	MIDDLE EAST	CYPRUS	ATHALASSA	50
32	MIDDLE EAST	ISRAEL	BET DAGAN-VOLCANI CTR.	50
33	MIDDLE EAST	QATAR	BARADA	50
34	MIDDLE EAST	SYRIA	ALEPPO-BREDA	50
35	MIDDLE EAST	TURKEY	IZMIR-EGE RARI	50
36	NORTH AMERICA	CANADA	P. E. I.	50
37	NORTH AMERICA	MEXICO	EL BATAN-(1ST. DATE)	50
38	NORTH AMERICA	MEXICO	NUEVO LEON-NAVIDAD	50
39	NORTH AMERICA	MEXICO	SONORA-CIAND (1ST DATE)	50
40	NORTH AMERICA	MEXICO	TOLUCA	50
41	OCEANIA	NEW ZEALAND	CANTERBURY	50
42	SOUTH AMERICA	ARGENTINA	LA PAMPA	50



**Table 7 (continued)**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
43	SOUTH AMERICA	ARGENTINA	BUENOS AIRES-BORDENAVE	50
44	SOUTH AMERICA	ARGENTINA	CORDOBA	50
45	SOUTH AMERICA	BOLIVIA	SANTA CRUZ-CORCEPAI	50
47	SOUTH AMERICA	BRAZIL	PARANA-CASCADEL	50
48	SOUTH AMERICA	BRAZIL	PARANA-LONDRINA	50
49	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-CRUZ ALTA	50
50	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	50
51	SOUTH AMERICA	BRAZIL	SAD PAULO-CAMPINAS	50
52	SOUTH AMERICA	CHILE	SANTIAGO-LA PLATINA	50
53	SOUTH AMERICA	CHILE	TEMUCO, CAUTIN	50
54	SOUTH AMERICA	ECUADOR	QUITO, PICHINCHA	50
55	SOUTH AMERICA	PERU	CUSCO-TARAY	50

\*VARIABLE IDENTIFICATIONS  
50 CHECK MARK

### Commentary

The selection of an entry as being worthy of further investigation indicates that the entry is at least minimally adapted to the location where it is growing. The selection of an entry by a number of cooperators at different locations suggests that it has a certain degree of wide adaptability; thus the frequency of selection (percentage of cooperators selecting an entry) is a way

of measuring breadth of adaptability. In the 15th ITSN, 51 cooperators indicated their preferences; 38 entries were selected by more than 25% of the cooperators, of which the top 20 are listed in Table 7. The most frequently selected entry was chosen by a third of the cooperators, but all except one line were selected at least once.

Table 7 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	CHECK MARK
NUMBER OF OBSERVATIONS:		( 51)
169	MUS"S"-LYNX"S" B-3023-7251-0Y	33.3
2	BEAGLE	33.3
89	DLT"S"-LNC"S" X-51800-6Y-2M-2Y-1M-0Y	31.4
16	BTO"S"-PTR"S" X-49509-3Y-2Y-1M-2Y-2M-0Y	31.4
37	RM"S"-PTR"S" X RAT"S"/LMQ"S" X MSF"S" -IRA X-63735-B-1Y-2M-0Y	31.4
70	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y	31.4
130	PANCHE40B B-2671-2183	31.4
69	BOL"S"-M1A X MISI-IA X-53641-A-502Y-504M-500Y-500B-0Y	31.4
125	MERIND"S"-JLD"S" B-2736-0Y-21	29.4
111	DURUM WHEAT-BALBO X DF"S"/BSN"S" X-53436-D-501Y-505M-503Y-501B-0Y	29.4
123	FARO"S" B-2264-0Y-103	29.4
124	NUTRIA401 B-2709-0Y-1B	29.4
163	WHALE"S" X-33470-C-1Y-3M-2Y-2M-0Y	29.4
164	MULA"S" X-18330-3M-2Y-2M-1Y-2M-0Y	27.5
15	BTO"S"-PTR"S" X-49509-3Y-2Y-1M-2Y-1M-0Y	27.5
46	PTR"S"/RM"S"-IRA X FS477 X-48675-7Y-3Y-3M-1Y-5M-0Y	27.5
47	M2A(2)-IRA X M2A-TI71 X-49274-5Y-1Y-1M-1Y-1M-0Y	27.5
121	BGL"S"-RAM"S" X-44265-4KE-1Y-500B-0Y	27.5
62	ECHIDNA"S" X M2A-ZA75 X-61039-6M-1Y-1M-0Y	27.5
134	NUTRIA440 B-2709-2634	27.5

**Table 8. Grain technology data for all entries in the 15th ITSN, based on samples produced at CIANO, Mexico, in 1982-83.**

Entry number	Kg/hl	Pearling Index %	Flour Yield %	Falling No. (acc) Grain	Flour Protein %	Sedimentation c.c.	Mixing Time min	Loaf Vol. c.c.	Baking H <sub>2</sub> O Abs. %	Cookie Overall Rating
S- 1	69.4	60.0	69.3	94	8.3	16	0:50	690	54.0	G
2	68.1	57.0	66.4	242	8.1	16	0:45	510	52.0	F
3	69.9	61.0	67.4	105	8.4	16	0:45	625	52.0	VG
4	75.0	69.5	64.7	237	8.8	17	0:40	575	52.0	G
5	69.8	54.5	69.2	289	7.5	16	0:45	390	52.0	F
6	70.9	55.5	64.0	289	8.9	28	0:45	620	53.0	P
7	74.2	52.5	67.4	315	8.8	22	0:50	490	53.0	F
8	72.5	69.5	67.4	85	9.1	16	0:45	670	52.0	G
9	75.8	65.0	64.0	127	9.7	21	0:50	645	54.0	F
10	75.1	63.5	65.4	121	9.6	19	0:50	620	53.0	F
11	75.5	61.5	65.9	300	10.3	19	0:50	640	54.0	F
12	75.6	63.0	67.1	309	10.2	25	1:00	735	54.0	VG
13	75.9	63.5	68.1	104	10.2	27	1:00	710	54.0	P
14	74.4	56.0	66.5	73	9.2	27	0:50	675	54.0	P
15	76.9	57.0	64.8	156	8.0	15	0:50	490	53.0	P
16	77.1	58.5	64.3	185	8.1	14	0:50	450	53.0	F
17	76.4	57.0	61.1	75	7.8	14	0:50	455	53.0	F
18	76.2	64.0	66.5	138	8.0	12	0:40	465	52.0	VG
19	76.2	57.0	64.9	220	7.9	14	1:00	520	52.0	G
20	75.3	61.0	64.8	131	8.9	19	0:45	520	53.0	F
21	76.1	37.0	63.6	524	7.6	25	1:00	550	54.0	P
22	76.3	60.0	69.6	151	9.5	18	0:45	640	53.0	F
23	74.2	63.5	67.7	132	8.4	18	1:00	615	52.0	F
24	75.0	59.0	66.4	105	9.2	19	0:40	665	53.0	F
25	75.3	66.0	70.0	150	7.2	14	1:00	565	52.0	VG
26	78.4	59.0	67.2	270	8.2	18	0:50	570	53.0	G
27	74.7	56.5	58.7	80	8.1	14	0:50	410	52.0	F
28	75.4	56.0	68.8	203	8.8	16	0:45	520	54.0	P
29	77.1	56.0	63.2	295	8.0	21	1:00	610	54.0	G
30	74.0	62.5	67.9	108	9.8	20	1:00	555	52.0	VG
31	76.0	68.0	68.0	122	9.2	21	1:00	755	53.0	P
32	74.8	57.0	64.1	62	9.4	25	0:50	590	53.0	P
33	77.0	50.0	69.5	227	8.7	23	1:00	640	53.0	F
34	75.3	64.5	68.6	207	8.8	12	0:45	500	52.0	F
35	74.9	61.0	69.4	124	8.5	21	1:00	605	53.0	F
36	75.4	64.5	69.5	75	9.7	20	1:00	680	54.0	F
37	73.0	64.0	66.8	77	8.5	17	1:00	625	53.0	F
38	74.9	64.0	69.1	205	8.3	20	0:50	585	54.0	P
39	74.6	65.5	66.1	102	9.7	18	0:50	565	53.0	G
40	75.7	49.0	65.5	96	7.6	12	0:50	360	53.0	F
41	76.7	44.5	60.3	235	8.5	16	1:00	365	54.9	P
42	75.5	57.5	64.7	99	9.2	13	0:40	470	54.0	G
43	76.0	72.0	72.2	178	9.0	14	0:40	550	54.1	F
44	76.8	57.0	67.8	299	9.9	13	0:45	435	53.0	F
45	76.8	59.0	68.3	268	8.5	13	0:50	425	52.0	G
46	77.3	59.5	68.3	311	9.2	14	0:45	450	52.0	G
47	75.5	62.0	68.5	182	8.6	18	1:00	565	53.0	G
48	76.3	58.0	63.9	183	9.2	19	1:00	550	53.0	F
49	76.9	61.5	68.1	132	8.6	20	1:00	520	52.0	F
50	75.8	55.0	64.5	281	9.5	24	1:00	640	54.0	F
51	76.1	56.0	66.6	272	8.9	23	0:50	640	54.0	F
52	75.7	56.0	63.6	112	8.7	19	1:00	410	53.0	G
53	76.3	56.0	67.9	176	8.2	16	1:00	430	53.0	G
54	77.2	55.5	65.7	158	8.1	16	1:00	440	54.0	F
55	76.8	55.0	67.5	207	8.1	14	1:00	390	54.0	F
56	76.4	66.0	66.3	239	8.1	16	0:45	550	53.0	F
57	79.4	64.5	68.5	166	9.0	16	0:45	525	53.0	F
58	77.5	63.5	69.3	307	9.1	18	1:00	610	54.0	G
59	77.8	58.5	69.9	225	8.5	16	0:45	500	53.0	F
60	72.3	65.5	69.9	89	8.9	15	0:40	550	53.0	F
61	75.4	61.0	69.1	108	8.9	16	0:30	555	53.0	VG
62	76.0	53.5	68.6	209	8.7	24	0:50	650	54.0	F
63	76.2	67.0	68.3	164	10.2	19	1:00	635	54.0	G
64	75.5	64.0	68.7	225	8.1	18	0:50	655	52.0	F
65	74.9	66.5	71.7	144	8.6	12	0:55	440	52.0	G
66	74.8	62.5	66.6	93	8.2	13	0:40	460	52.0	P
67	74.9	62.5	64.2	68	8.2	19	0:35	575	52.0	F
68	75.6	64.0	63.0	298	8.5	15	0:40	520	52.0	G
69	75.0	67.5	68.6	233	8.2	19	0:50	605	53.0	F
70	76.1	63.0	67.4	325	8.5	24	1:00	735	54.0	F

**Table 8 (continued)**

Entry number	Kg/hl	Pearling Index %	Flour Yield %	Falling No. Grain (sec)	Flour Protein %	Sedimentation c.c.	Mixing Time min	Baking		Cookie Overall Rating
								Loaf Vol.c.c.	H <sub>2</sub> O Abs.%	
S- 71	76.9	59.5	65.0	134	8.9	21	1:00	625	54.0	G
72	77.7	59.0	68.9	126	9.9	18	1:00	580	56.0	F
73	77.1	53.5	65.6	109	9.4	19	1:00	545	54.0	F
74	77.5	54.5	66.8	135	9.0	16	1:00	460	54.0	P
75	77.1	52.0	64.5	105	9.2	18	1:00	450	54.0	P
76	69.5	64.5	69.2	136	7.3	12	0:45	555	52.0	G
77	68.1	60.5	66.4	278	8.0	16	1:00	480	53.0	F
78	81.5	41.0	72.9	676	11.6	30	1:15	800	64.7	P
79	77.5	54.5	66.9	125	8.8	19	1:00	490	56.0	F
80	77.6	64.0	66.6	170	9.5	19	1:00	605	56.0	F
81	77.4	63.0	71.5	197	8.1	16	1:00	575	54.0	F
82	78.1	65.5	71.4	242	7.7	15	1:00	505	54.0	F
83	77.5	62.0	69.6	105	8.2	14	1:00	540	54.0	F
84	77.2	62.5	70.4	203	7.3	13	1:00	475	53.0	F
85	77.3	61.5	68.0	173	7.9	15	1:00	530	54.0	G
86	75.3	59.5	66.5	188	9.0	14	0:40	500	54.0	F
87	75.5	63.5	66.8	89	9.3	22	0:50	615	54.0	F
88	75.7	63.5	66.8	89	8.0	18	0:30	610	55.0	G
89	76.3	57.5	66.5	69	7.9	17	0:40	605	54.0	G
90	74.6	68.0	68.2	168	8.5	19	0:45	525	54.0	F
91	75.3	65.5	67.9	161	9.1	19	0:40	510	55.0	G
92	75.0	67.0	67.7	168	8.0	19	0:45	560	54.0	F
93	74.5	66.5	72.5	210	7.6	15	0:40	575	53.0	F
94	75.6	64.5	68.6	284	8.0	15	0:40	470	53.0	G
95	75.8	59.0	64.8	125	8.8	12	0:45	460	54.0	F
96	75.9	60.5	64.4	124	9.0	11	0:45	450	54.0	F
97	76.4	61.5	67.9	320	7.4	12	0:50	390	52.0	F
98	76.0	62.5	67.5	322	8.0	14	0:45	475	53.0	F
99	74.7	56.0	62.8	346	9.1	27	1:00	645	56.0	F
100	74.8	62.0	68.3	161	7.1	15	0:45	495	53.0	G
101	74.8	66.0	67.9	299	9.2	12	1:00	495	54.0	G
102	76.5	65.0	67.4	102	9.2	21	0:40	635	54.0	F
103	74.8	67.0	69.4	111	8.8	14	1:00	565	54.0	F
104	75.1	66.5	68.5	138	8.4	15	0:50	610	53.0	G
105	76.2	70.0	66.4	184	8.4	20	1:00	610	53.0	G
106	75.3	68.0	66.6	94	8.7	19	1:00	625	53.0	P
107	75.6	60.5	64.4	69	7.6	16	1:00	610	53.0	G
108	74.6	60.5	65.6	121	8.6	24	1:00	660	54.0	G
109	74.6	61.5	62.6	118	9.3	24	1:00	610	54.0	F
110	76.7	66.5	67.5	222	7.7	13	1:00	520	52.0	F
111	76.8	70.0	71.1	181	7.8	11	0:45	520	52.0	VG
112	75.0	61.0	67.7	324	7.8	16	0:50	565	53.0	VG
113	76.1	65.5	66.2	90	8.7	16	0:50	560	53.0	F
114	77.2	58.0	67.8	104	9.9	18	0:45	645	56.0	F
115	74.6	64.0	65.8	73	8.4	9	0:45	390	52.0	G
116	75.8	65.0	66.6	124	9.0	18	1:00	645	54.0	F
117	75.7	63.5	67.9	122	8.5	19	0:40	575	54.0	F
118	75.6	63.0	67.9	197	8.4	18	0:45	545	55.0	P
119	76.2	64.0	70.3	124	7.8	16	1:00	500	53.0	F
120	74.7	67.0	67.6	105	8.7	23	0:40	565	54.0	G
121	75.1	70.0	67.6	240	9.4	20	1:00	590	54.0	F
122	73.6	55.0	70.2	238	8.4	21	0:40	565	54.0	P
123	75.9	55.0	72.9	258	6.3	13	0:40	380	52.0	P
124	74.8	60.5	71.1	246	7.0	19	1:00	545	53.0	P
125	77.3	56.5	69.3	169	7.8	13	1:00	440	54.0	P
126	76.9	58.0	69.0	95	7.2	16	1:00	400	51.9	F
127	76.1	57.5	69.5	275	7.1	18	1:00	465	56.6	P
128	75.7	50.5	67.5	143	8.5	24	1:00	590	56.0	P
129	75.9	60.5	72.4	170	7.3	18	0:45	630	54.0	F
130	77.6	51.5	71.4	192	7.9	16	0:45	470	54.0	F
131	77.5	50.0	70.7	104	8.2	19	0:50	520	54.0	P
132	76.8	54.0	69.1	172	8.3	16	0:45	455	54.0	F
133	76.6	56.5	70.0	298	7.9	14	0:40	440	53.0	F
134	75.6	49.0	68.7	125	8.3	21	0:50	425	54.0	P
135	75.4	66.0	65.3	230	8.4	25	0:45	520	54.0	P
136	76.9	52.0	67.8	283	8.7	25	0:45	710	54.0	F
137	76.5	57.5	67.2	92	9.0	19	1:00	585	54.0	P
138	76.9	51.0	64.2	62	9.0	12	0:55	410	53.0	F
139	77.0	57.5	66.8	89	9.3	18	0:50	625	53.0	F
140	77.7	59.5	66.6	133	8.3	17	1:00	645	52.0	G

Table 8 (continued)

Entry number	Kg/hl	Pearling Index %	Flour Yield %	Falling No. (sec) Grain	Flour Protein %	Sedimentation c.c.	Mixing Time min	Baking		Cookie Overall Rating
								Loaf Vol.c.c.	H <sub>2</sub> O Abs.%	
S-141	76.3	59.5	67.3	161	8.4	18	1:00	650	52.0	F
142	74.7	57.5	66.5	115	8.7	18	1:10	640	52.0	P
143	77.7	60.0	67.9	196	8.6	15	1:00	525	52.0	P
144	75.2	55.5	63.8	142	9.9	20	1:00	710	54.0	P
145	77.0	57.0	67.6	98	9.4	17	1:00	600	53.0	F
146	78.3	60.5	69.1	147	9.1	16	0:40	530	53.0	F
147	78.0	60.0	67.8	182	9.8	15	0:40	490	53.0	P
148	76.7	53.5	70.9	187	8.5	16	0:50	425	53.0	F
149	77.7	59.0	69.1	122	9.3	15	0:50	505	54.0	F
150	77.7	58.5	70.2	245	9.8	18	0:45	510	53.0	P
153	82.6	45.0	75.3	480	11.7	34	1:30	855	62.7	P
154	75.6	55.0	64.1	64	8.3	16	1:00	545	53.0	F
155	76.3	58.5	68.4	134	8.0	11	0:40	500	53.0	F
156	76.2	62.0	64.9	92	8.8	19	0:40	635	54.0	P
157	76.6	63.0	66.9	291	9.3	19	1:00	625	54.0	F
158	75.6	64.5	67.2	62	9.4	24	0:50	750	54.0	F
159	77.8	68.5	69.1	98	8.4	13	0:50	490	52.0	P
160	76.6	47.5	60.9	387	9.1	20	1:00	610	58.4	G
161	73.0	66.0	70.0	329	6.4	16	0:40	450	52.0	F
162	74.0	64.0	69.4	75	7.2	20	1:00	510	53.0	F
163	73.4	68.5	71.3	89	6.1	14	1:00	390	52.0	F
164	69.3	66.5	70.0	140	4.9	10	0:50	380	52.0	G
165	76.2	66.0	68.1	75	7.4	13	0:40	580	52.0	G
166	74.7	59.0	65.3	101	6.6	13	0:40	510	52.0	P
167	77.6	52.5	66.1	79	7.8	19	1:00	435	53.0	P
168	79.5	54.0	72.7	114	8.4	19	0:45	510	53.0	F
169	73.9	66.5	70.3	211	6.0	14	0:40	415	52.0	G
170	74.5	67.5	69.9	269	7.4	16	0:45	575	52.0	F
171	76.0	67.0	67.8	126	7.5	16	0:45	575	52.0	G
172	74.5	68.0	67.3	153	6.8	13	0:30	560	52.0	F
173	76.2	63.0	68.1	200	6.8	16	0:50	565	63.0	F
174	73.9	68.0	65.7	130	7.4	18	0:50	580	53.0	P
175	75.5	60.5	67.9	370	7.7	15	1:00	460	53.0	F
176	75.9	64.0	67.8	301	8.2	15	1:00	560	53.0	F
177	75.4	64.0	65.8	168	8.2	20	1:00	625	53.0	G
178	75.6	66.5	68.2	186	8.1	19	1:00	630	53.0	F
179	77.0	59.0	67.7	112	8.3	20	1:15	655	53.0	P
180	74.9	62.5	69.8	116	8.4	21	1:00	590	53.0	P
181	75.7	58.5	67.5	89	8.6	19	1:00	550	53.0	F
182	75.2	68.5	69.0	199	8.0	17	0:45	565	53.0	F
183	75.5	63.5	68.7	89	8.5	19	1:00	590	53.0	F
184	75.5	68.5	69.0	187	8.3	16	0:45	580	53.0	P
185	75.8	54.0	70.3	238	7.3	15	1:00	475	52.0	P
186	74.3	56.5	66.7	152	6.8	16	1:00	550	53.0	G
187	74.6	60.0	63.0	181	6.6	15	0:45	510	52.0	P
188	73.5	52.5	72.3	313	12.0	36	1:15	610	66.0	F
189	74.0	60.0	68.7	76	9.9	20	0:40	635	53.0	F
190	75.9	68.5	70.0	204	9.8	15	0:50	540	54.0	F
191	76.0	64.0	65.3	126	9.7	20	0:50	575	54.0	F
192	75.9	63.5	68.4	194	9.3	17	1:10	565	53.0	F
193	74.2	65.5	69.1	128	9.7	21	0:45	610	54.0	F
194	76.5	62.5	66.1	98	9.9	21	1:00	650	54.0	F
195	75.0	65.5	67.8	139	9.6	21	1:00	600	54.0	F
196	73.5	66.0	71.3	178	7.4	18	0:50	540	53.0	P
197	77.3	48.0	67.0	84	9.6	18	1:00	575	55.0	VG
198	75.5	59.5	66.1	76	9.3	22	0:45	625	54.0	F
199	73.8	69.0	69.2	95	9.0	19	0:40	615	54.0	G
200	76.0	66.0	69.5	78	10.1	17	0:45	655	54.0	G
201	75.0	63.0	68.6	297	8.9	21	0:35	625	54.0	G
202	75.4	58.0	61.2	230	8.5	20	0:40	580	54.0	F
203	74.4	63.5	64.6	116	9.9	20	0:50	660	54.0	F
204	74.8	60.5	68.9	192	9.4	18	1:00	455	54.0	F
205	75.1	58.0	64.7	80	10.2	22	1:00	670	57.0	P
206	76.9	58.0	64.3	278	9.2	18	1:00	500	54.0	P
207	76.0	56.5	68.5	125	8.0	19	1:00	560	56.0	P

G = Good  
 VG = Very Good  
 F = Fair  
 P = Poor

### **Commentary on spot blotch**

Only two locations reported on spot blotch. In Bangladesh disease development was moderately severe but the differences among entries were relatively small. In Brazil, the entries were clearly separated, but

numerous values were missing. The ranking of the two sites appears to have little meaning, so no separate table is presented; average disease scores for the individual lines are presented in Table 2.

### **Commentary on *Fusarium nivale***

Two locations reported on fusarium nivale leaf spot, but only at Quito, Ecuador, were the severity levels high enough to differentiate resistant and susceptible entries.

The performance of individual lines can be obtained from Table 2.

### **Commentary on leaf rust**

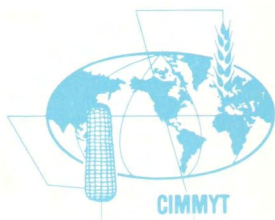
Six locations reported on leaf rust but the severity levels on triticale were low relative to the bread wheat checks. Sixty percent of the triticale entries had an ACI of 2.0 or less, and 49 entries had an ACI of less than 1.0, indicating a high degree of resistance to the leaf

rust populations present. The large number of highly resistant entries makes it pointless to feature the top performers in a special table; individual line performance can be obtained from Table 2.

### **Commentary on stem rust**

Three locations reported on stem rust but the virulence spectrum for triticale was limited. Eighty-seven triticale entries and the bread wheat Genaro 81 had an ACI of less than 2.0. However, notable virulence was reported on the bread wheats Glennson 81 and Sonalika, and on

the triticale Beagle. The number of triticales that can be considered resistant is too large to list in a separate table; individual entry performance can be obtained from Table 2.



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