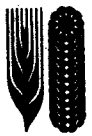




**Results of the Sixteenth  
International Triticale  
Screening Nursery (ITSN) 1984-85**





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# Contents

	Page
<b>Glossary</b>	iv
<b>Introduction</b>	
Methodology	1
<b>Table 1.</b> Locations from which data were reported, with the variables reported	3
<b>Table 2.</b> Summary of the means of all variables: Yield, agronomic and disease data	4
<b>Table 3.</b> Yield: top 20 lines based on 40 locations	24
<b>Table 4.</b> Seventeen lines selected by 32 locations	26
<b>Table 5.</b> Top 20 lines with the highest test weights based on 11 locations	28
<b>Table 6.</b> Top 15 lines that had a 1000 grain weight of 52 grams or more at two locations	30
<b>Table 7.</b> Top performance entries: <i>Septoria tritici</i>	32
<b>Table 8.</b> Top performance entries: <i>Septoria nodorum</i>	34
<b>Table 9.</b> Top performance entries: <i>Helminthosporium</i>	36
<b>Table 10.</b> Grain technology data	38
<b>Commentaries</b> on leaf rust and stripe rust	41

**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> pv. translucens	Bacterial leaf streak or stripe (0-9 scale)	Rayado bacteriano y pajilla negra (escala 0-9)	Rayure bactérienne (échelle 0-9)
BAC SP	—	Bacterial species	Especies bacterianas	Espices bactériennes
BAC B	<i>Pseudomonas syringae</i> pv. striafaciens	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</i> ( <i>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</i> spp.	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</i> ( <i>U. tritici</i> )	Loose smut (percentage)	Porcentaje de carbón volador	Charbon nu en pourcentage
MAT DAYS	—	Number of days to maturity	Número de días a la madurez	Nombre de jours à la maturation
MOIST %	—	Moisture (percentage)	Porcentaje de humedad	Humidité en pourcentage
NECK BRK	—	Neck breakage (percentage)	Porcentaje de rotura de cuello	Cassure du pédoncule en pourcentage
NET B	<i>Pyrenophora teres</i> (syn. <i>Drechslera teres</i> , syn. <i>Helminthosporium teres</i> )	Net blotch (0-9 scale)	Mancha reticulada (escala 0-9)	Helminthosporium de l'orge (échelle 0-9)
NOBS	—	Number of observations	Número de observaciones	Nombre d'observations
OFS	—	Free State Streak	Estriado del estado libre	Rayure Free State
PC	—	Percentage	Porcentaje	Pourcentage
PLNT DENS	—	Plant density (stems/m2)	Densidad de plantas (tallos/m2)	Population de plantes (tiges/m2)
PLNT HT	—	Plant height (cm)	Altura de planta (cm)	Hauteur (cm)
POW M	<i>Erysiphe graminis</i>	Powdery mildew (0-9 scale)	Oídio o cenicilla polvorienta (escala 0-9)	Oïdium (échelle 0-9)
PROT %	—	Protein (percentage)	Porcentaje de proteína	Protéine en pourcentage
SCAB %	<i>Fusarium</i> spp.	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 P	<i>Septoria passerinii</i> sacc.	Septoria leaf blotch (barley)	Mancha foliar (cebada)	Tache septorienne des feuilles de l'orge
SEP S	<i>Septoria</i> spp.	Septoria glume/leaf blotch (0-9 scale)	Septoria (escala 0-9)	Septoria (échelle 0-9)
SEP T	<i>Mycosphaeraella 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 hectolítrico (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	Variedad	Variété
VTY	—	Variety	Variedad	Variété
YELL BERR	—	Yellow berry (percentage)	Porcentaje de panza blanca	Mitadínage en pourcentage
YIELD KG/HA	—	Yield (kg/ha)	Rendimiento (kg/ha)	Rendement (kg/ha)

# Introduction to the Sixteenth International Triticale Screening Nursery

George Varughese, Tom Barker, and Maximino Alcalá<sup>1/</sup>

## Methodology

The Sixteenth International Triticale Screening Nursery (ITSN) was sent in September 1984 to be grown by cooperators in their spring season of 1985. One hundred and seventeen nurseries went to cooperators in 53 countries. The 250 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

<sup>1/</sup> Head, triticale program; postdoctoral fellow; and head, international nurseries

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	ALGERIA	CONSTANTINE	1 9 50
2	AFRICA	EGYPT	KAFR EL SHEIKH	7
3	AFRICA	MALAMI	CENTRAL PROV. (DEDIA DIST)	1 3 9
4	AFRICA	SOUTH AFRICA	CAPE PROVINCE-MELBOEVALLEN	3 7 9 50 62 63
5	AFRICA	TANZANIA	E AFRICA	1 3 9 50
6	AFRICA	TANZANIA	IRINGA	1 3 9 50
7	AFRICA	TANZANIA	MBEYA-U. A. C.	1 2 3 5 9 50 62
8	AFRICA	TUNISIA	TUNIS-BEJA	1
9	AFRICA	ZAMBIA	NORTHERN-KATITO	3 36 50 68 74
10	AFRICA	ZIMBABWE	HIGHVELD	1 3 9 10
11	ASIA	AFGHANISTAN	BALKH	1 3 9 50
12	ASIA	BANGLADESH	JESSORE (1ST. DATE)	1 3 9 50 68
13	ASIA	PAKISTAN	PUNJAB-ISLAMABAD	50
14	ASIA	PAKISTAN	PUNJAB-NIAB	3 9 50
15	ASIA	PHILIPPINES	LAGUNA	1 3 9 50
16	ASIA	REP. OF KOREA	SUMON GYEONGGI PROV.	1 2 3 7 9 50
17	ASIA	THAILAND	NAKHON RATCHSIMA	1 3 9 50
18	CENTRAL AMERICA	COSTA RICA	ALAJUELA-FABIO BAUDRIT	1 3 4 9 50
19	CENTRAL AMERICA	GUATEMALA	CHIMALTENANGO	1 3 9 63 68 71
20	EUROPE	GERMAN DEM. REP.	SCHMERIN	1 9 13
21	EUROPE	GREECE	THESSALONIKI	1 9 50
22	EUROPE	POLAND	KRAKOW	1 2 9 63
23	EUROPE	POLAND	RADOM	1 2 3 9 13 50 63 69
24	EUROPE	PORTUGAL	ELVAS	7 62
25	EUROPE	SPAIN	CADIZ	3 9
26	EUROPE	SPAIN	CORDOBA-OBISPO	1 3 50
27	EUROPE	SPAIN	LLEIDA	50
28	EUROPE	SPAIN	MADRID-ENCIN	1 2 9 50
29	EUROPE	SPAIN	VALLADOLID	1 3 4 9 50
30	MIDDLE EAST	CYPRUS	LAXIA	1 3 9 50
31	MIDDLE EAST	IRAN	GORGAN	1 3
32	MIDDLE EAST	ISRAEL	BET DAGAN-VOLCANI CTR.	50 77
33	MIDDLE EAST	JORDAN	IRBID-MARRON	1 3 9
34	MIDDLE EAST	JORDAN	KERAK	1 3 9
35	MIDDLE EAST	LEBANON	BEKA'A VALLEY-TEL AMARA	1 3 9
36	MIDDLE EAST	TURKEY	IZHIR-EGE RARI	1 2 3 9
37	NORTH AMERICA	CANADA	P. E. I	3 9 50 63
38	NORTH AMERICA	CANADA	SASKATCHEWAN-SWIFT	1 9
39	NORTH AMERICA	MEXICO	EL BATAN	1 2 3 4 7 9
40	NORTH AMERICA	MEXICO	SONORA-CIANG (1ST DATE)	1 2 3 4 7 9
41	NORTH AMERICA	MEXICO	TLAXCALA	1 2
42	NORTH AMERICA	MEXICO	TOLUCA	1 2 3 9
43	NORTH AMERICA	U. S. A.	CALIFORNIA	1 9
44	NORTH AMERICA	U. S. A.	CALIFORNIA-DAVIS	77
45	OCEANIA	NEW ZEALAND	HANAUITI	50 77
46	SOUTH AMERICA	BOLIVIA	COCHABAMBA	1 3 9 63
47	SOUTH AMERICA	BRAZIL	PARANA-CASCABEL	1 50
48	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-CRUZ ALTA	9 50
49	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	50
50	SOUTH AMERICA	BRAZIL	SAO PAULO-CAMPINAS	1 3 9 50
51	SOUTH AMERICA	CHILE	TEMUCO, CAUTIN	1 50
52	SOUTH AMERICA	COLOMBIA	CUNDINAMARCA	3 5 62
53	SOUTH AMERICA	ECUADOR	QUITO,PICHINCHA	3 50 77
54	SOUTH AMERICA	PARAGUAY	ITAPUA	7 9 50 62 63
55	SOUTH AMERICA	PERU	AYACUCHO	1 2 3 9
56	SOUTH AMERICA	PERU	CAJABARIBA	1 3 9
57	SOUTH AMERICA	PERU	CUSCO-TARAY	1 3 4 9 50 62 77

\*VARIABLE IDENTIFICATIONS

1	YIELD	KG/HA	2	TEST	WT	3	HEAD	DAYS	4	MAT	DAYS	5	STRP	RT. L
7	LEAF	RUST	9	PLNT	HT	10	LDGC	%	13	1000	6. H.	36	SCAB	%
50	CHECK	MARK	62	SEP T	0-9	63	SEP N	0-9	68	SPT B	0-9	69	SCLD	0-9
71	FUS N	0-9	74	BAC B	0-9	77	BYDV	0-9						

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

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	PLNT HT
NUMBER OF OBSERVATIONS:				( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
1	BGL"S"			4326.1	62.5	89.0	142.0	30.0	21.1	108.8
2	ERONGA 83			4259.5	67.5	89.3	140.0	32.0	17.4	111.1
3	WHALE"S" X33470-C-1Y-3M-2Y-2M-0Y			3679.8	70.5	89.3	136.2	0.5	15.3	105.5
4	FS1795-LNC"S" X24369-4A-1Y-1M-1Y-0M			3898.3	70.5	94.0	137.8	0.0	14.3	113.3
5	CIVET"S" B2658			4021.1	69.5	85.7	139.0	10.0	3.1	102.8
6	MUSKDX"S"(2) B2670			3211.9	69.3	90.0	136.4	10.5	8.6	104.2
7	(CML-PATO X KISS DWARF/BGL"S")BGL"S" B6823			3842.4	65.9	91.1	137.2	25.5	5.8	109.6
8	ZEBRA 225 B-2672			3441.3	69.5	90.7	136.8	10.5	6.3	112.9
9	MUS"S"-JLO"S" B-2659			3338.6	69.3	87.2	134.6	15.0	15.9	107.3
10	MUS"S" X DRIRA-KGR B-2658			4077.7	72.1	85.4	133.0	0.5	6.3	103.3
11	HARE 286 B-2700			3704.0	68.7	91.0	135.0	36.0	11.2	104.3
12	PANCHE 7287 B-2671-0Y-117			3771.3	68.0	91.8	141.8	0.5	5.6	111.4
13	NUTRIA 7272 B-2709-0Y-111			4025.8	67.9	91.0	141.2	20.0	8.0	109.3
14	MERINO"S"-JLO"S" B-2736-501-0M			3629.6	69.9	89.9	140.8	0.5	9.9	108.7
15	KHOBE 95			4023.5	66.8	90.8	141.2	31.0	20.6	113.1
16	FARO"S"			3942.5	68.5	92.6	142.6	2.0	3.0	108.0
17	NUTRIA401 B-2709-0Y-18			4199.8	68.4	89.6	140.4	1.0	2.3	108.5
18	MERINO"S"-JLO"S" B-2736-0Y-21			3783.2	69.8	90.3	140.8	11.0	9.1	108.7
19	MERINO"S"-JLO"S" B-2736-505			3950.7	70.8	91.1	141.6	16.0	4.8	110.1
20	MERINO"S"-JLO"S" B-2736-298			3813.6	70.4	90.6	140.2	1.5	12.5	108.6
21	CIVET"S" B-2658			4053.1	69.5	85.3	137.2	10.5	6.7	103.2
22	ZEBRA79 B-2672-7191-0Y			3622.3	73.2	88.5	136.4	0.5	7.1	109.0
23	MUS"S"-LYNX"S" B-3023-7251-0Y			3772.0	69.1	90.6	141.0	10.5	5.1	105.5
24	HARE 265 B-2700-291			4074.0	68.9	90.6	138.8	8.0	8.7	103.9
25	DF"S"-MERINO"S" B-2763-366			3443.8	69.9	87.6	134.6	26.5	15.6	99.8
26	DF"S"-MERINO"S" B-2763-457			3753.3	69.1	87.5	136.6	16.5	3.6	99.4
27	MUS"S"(2) B-2670-0Y			3642.8	68.7	90.8	137.6	20.5	4.0	105.4
28	RAM"S"-ERONGAB3 CT-1252-3Y-3M-0Y			3615.2	66.4	90.4	141.6	43.0	9.2	111.5



VTY	LODC %	1000 G.W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1 )	( 2 )	( 1 )	( 32 )	( 6 )	( 7 )	( 3 )	( 1 )	( 1 )	( 1 )	( 5 )
1	80.0	50.0	10.0	28.1	4.2	3.3	3.3	8.0	0.0	1.0	2.8
2	90.0	51.5	10.0	28.1	4.2	3.0	3.0	7.0	1.0	3.0	2.4
3	90.0	49.5	10.0	25.0	4.4	4.6	3.3	0.0	1.0	2.0	3.0
4	85.0	55.5	60.0	6.3	4.0	3.3	4.7	0.0	0.0	3.0	2.6
5	70.0	46.0	10.0	21.9	5.0	3.8	4.3	0.0	3.0	3.0	2.8
6	80.0	46.5	20.0	15.6	3.6	3.9	4.0	5.0	3.0	3.0	3.2
7	95.0	52.5	10.0	31.3	5.0	4.0	3.0	0.0	0.0	1.0	3.0
8	70.0	51.5	40.0	12.5	4.0	4.0	2.7	0.0	1.0	1.0	3.6
9	75.0	53.5	50.0	15.6	4.5	3.5	4.0	5.0	1.0	3.0	3.4
10	80.0	44.5	10.0	25.0	5.3	4.3	4.3	3.0	3.0	3.0	3.6
11	80.0	45.0	10.0	40.6	4.7	2.8	3.0	0.0	3.0	2.0	3.0
12	95.0	51.0	10.0	9.4	4.3	2.7	3.7	0.0	1.0	2.0	2.8
13	95.0	49.0	30.0	12.5	4.4	3.0	4.0	0.0	1.0	4.0	2.8
14	85.0	51.0	10.0	18.8	5.3	3.2	3.7	0.0	3.0	3.0	3.4
15	80.0	53.0	20.0	15.6	4.7	2.7	4.0	0.0	1.0	3.0	3.6
16	65.0	49.5	40.0	31.3	4.2	3.2	3.3	0.0	1.0	4.0	2.8
17	70.0	50.0	70.0	18.8	4.3	3.2	3.0	0.0	1.0	3.0	3.0
18	50.0	52.0	50.0	18.8	4.5	3.5	3.3	0.0	1.0	3.0	3.2
19	55.0	51.0	50.0	18.8	3.6	3.0	3.7	0.0	1.0	4.0	3.2
20	40.0	53.5	60.0	21.9	4.3	2.8	3.3	0.0	1.0	3.0	2.8
21	45.0	45.5	70.0	12.5	3.8	4.3	3.7	0.0	1.0	4.0	3.6
22	30.0	51.0	10.0	15.6	4.5	3.5	3.7	0.0	1.0	4.0	3.2
23	95.0	45.0	30.0	28.1	5.3	3.5	3.7	0.0	0.0	3.0	3.4
24	75.0	50.5	40.0	28.1	3.7	3.4	3.3	0.0	1.0	4.0	3.2
25	65.0	48.5	60.0	15.6	4.0	4.0	3.7	0.0	1.0	4.0	2.6
26	75.0	52.0	20.0	9.4	4.7	3.0	3.3	3.0	1.0	4.0	4.0
27	75.0	48.0	20.0	18.8	3.7	3.5	4.3	0.0	3.0	3.0	3.0
28	80.0	47.5	10.0	18.8	4.6	3.2	3.0	0.0	1.0	1.0	2.8

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	PLNT HT
NUMBER OF OBSERVATIONS:				( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
29	MUS"S"-BTA"S" X-65985-3M-1Y-1M-0Y			3785.8	69.2	89.2	140.6	39.5	4.3	104.5
30	MUS"S"-BTA"S" X-65985-5M-1Y-1M-0Y			3849.9	67.7	91.4	141.6	48.0	16.9	105.7
31	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-2Y-0Y			3270.8	66.3	91.9	138.0	48.0	2.5	104.3
32	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-3Y-0Y			3426.7	67.2	90.5	137.2	48.0	3.2	104.3
33	JL0235 X BGL"S" EMS-Z176.3 B4565-1-2Y-0Y			3657.9	63.5	94.4	139.6	20.5	4.3	108.2
34	DF"S"-RAM"S" X-52913-23Y-3M-2Y-2M-1Y-0Y			3398.4	68.0	90.5	137.4	43.0	5.8	103.1
35	DF75 X OCTO BULK31-CIN"S" X-66906-1M-1Y-0M			3127.8	70.5	91.6	137.4	17.0	7.8	105.8
36	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-1M-1Y-1Y-0B			3176.5	66.4	93.1	138.6	40.0	3.3	101.3
37	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-1M-2Y-1Y-0B			3614.2	68.7	90.7	139.4	15.0	4.6	102.5
38	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-3Y-1Y-0B			3330.0	68.2	92.4	138.0	30.0	6.9	101.7
39	JL0235 X BGL"S"EMS-Z176.3 B-4565-1-2Y-1Y-0B			4025.1	64.7	94.4	142.2	0.5	3.0	108.1
40	(H277.69 X TOR"S"-TOB66/FS1029)MERIN "S" B-4605-3-1Y-2Y-0B			2737.9	69.6	91.4	139.6	10.0	1.2	98.3
41	MULA"S"-RAM"S" X-52913-42Y-1M-2Y-1M-2Y-2Y-0B			3779.6	67.5	87.8	136.2	10.0	6.4	97.2
42	ZILLINSKYBO/MUS"S" X BGL"S"-CIN B-7929-492-4Y-2Y-0M			3774.7	69.0	87.8	134.6	40.0	1.0	101.8
43	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-054-4Y-2Y-0M			4021.1	72.1	87.8	137.8	25.5	3.0	100.1
44	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-055-5Y-3Y-0M			4042.5	71.6	89.5	138.6	10.5	1.5	102.8
45	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-057-7Y-3Y-0M			3629.7	69.9	90.5	136.6	41.0	1.3	102.5
46	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-062-11Y-1Y-0M			4160.2	70.6	91.0	136.6	11.0	1.3	103.3
47	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-071-20Y-1Y-0M			4045.6	70.2	91.5	139.0	5.5	2.8	100.6
48	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-071-20Y-2Y-0M			3969.8	72.0	91.5	141.8	5.5	3.2	99.3
49	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-073-22Y-3Y-0M			3932.4	70.5	90.1	141.8	48.0	1.2	99.5
50	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-078-27Y-1Y-0M			4336.3	70.4	92.8	142.8	0.5	6.0	101.5
51	BCH"S"-SPY RYE X BGL"S"((IBB(S0N64- AN64 X NAD/JAR"S"))JWRC31)OCTO BULK- CIN"S") B-6712-159-2Y-2Y-0M			4135.7	70.8	92.3	142.0	30.5	3.6	100.6
52	BCH"S"-SPY RYE X BGL"S"((IBB(S0N64- AN64 X NAD/JAR"S"))JWRC31)OCTO BULK- CIN"S") B-6712-166-6Y-4Y-0M			3935.7	70.5	93.0	142.0	0.5	3.9	102.3

VTY	LODG %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	DVDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
29	55.0	51.0	10.0	12.5	4.3	3.0	3.0	3.0	0.0	1.0	3.6
30	55.0	55.5	10.0	21.9	4.7	3.4	3.3	0.0	1.0	2.0	3.0
31	50.0	55.5	10.0	9.4	4.5	4.0	4.3	0.0	0.0	3.0	3.0
32	85.0	53.5	20.0	12.5	4.7	3.9	4.0	0.0	1.0	1.0	3.0
33	95.0	53.0	10.0	21.9	4.2	3.0	2.7	0.0	1.0	3.0	3.2
34	95.0	46.5	10.0	21.9	2.8	3.2	3.0	4.0	1.0	2.0	3.2
35	80.0	50.5	10.0	12.5	4.0	4.0	3.7	0.0	3.0	4.0	3.6
36	75.0	51.0	10.0	9.4	3.2	3.5	2.3	0.0	0.0	1.0	3.0
37	85.0	51.5	10.0	25.0	4.5	3.8	2.7	0.0	1.0	1.0	2.8
38	95.0	54.0	0.0	15.6	4.0	3.7	3.0	0.0	0.0	3.0	3.0
39	85.0	51.0	10.0	40.6	4.2	3.0	3.3	0.0	----	3.0	3.8
40	95.0	46.5	30.0	18.8	4.4	3.5	2.7	0.0	0.0	3.0	3.4
41	90.0	49.5	20.0	12.5	4.6	4.0	3.0	0.0	1.0	4.0	2.4
42	80.0	51.0	20.0	15.6	4.4	3.5	3.7	0.0	1.0	3.0	3.0
43	80.0	48.0	10.0	34.4	4.5	3.0	3.7	0.0	0.0	1.0	2.4
44	90.0	47.0	0.0	37.5	3.8	3.0	3.3	0.0	0.0	1.0	2.8
45	85.0	51.0	0.0	18.8	4.3	3.5	2.7	0.0	1.0	3.0	3.0
46	70.0	47.5	0.0	25.0	3.8	3.0	2.3	0.0	1.0	1.0	3.0
47	70.0	46.0	0.0	25.0	4.7	3.2	2.3	0.0	1.0	2.0	2.8
48	70.0	45.0	0.0	25.0	4.5	3.0	3.0	0.0	1.0	2.0	2.2
49	65.0	47.0	0.0	28.1	4.2	3.2	3.3	3.0	3.0	3.0	2.6
50	70.0	47.5	0.0	37.5	4.5	2.8	2.3	0.0	3.0	2.0	2.2
51	75.0	48.0	10.0	43.8	4.2	2.8	2.7	0.0	1.0	2.0	3.2
52	90.0	48.0	0.0	28.1	4.2	2.8	2.7	0.0	----	1.0	3.0

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	PLNT HT
NUMBER OF OBSERVATIONS:				( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
53	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-167-7Y-1Y-OM			4123.8	70.0	92.9	142.6	1.0	3.2	101.0
54	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-168-8Y-2Y-OM			3947.4	70.8	92.1	141.6	1.5	2.5	100.9
55	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-170-10Y-2Y-OM			3923.2	71.7	92.0	141.2	1.0	2.8	102.2
56	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-170-10Y-3Y-OM			3987.2	72.3	92.5	141.4	26.0	16.5	101.8
57	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-171-11Y-1Y-OM			4029.3	71.6	92.4	141.4	20.5	1.8	101.3
58	BCH"S"-SPY RYE X BGL"S"((([BB(SON64-AN64 X NAD/JAR"S"))JWRC31)OCTO BULK-CIN"S") B-6712-171-11Y-4Y-OM			3781.7	71.1	92.7	141.6	0.5	2.1	101.7
59	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-246-4Y-2Y-OM			3989.2	71.5	91.9	140.8	0.5	2.3	103.8
60	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-251-9Y-3Y-OM			4049.0	70.6	93.8	141.0	1.0	1.0	105.1
61	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-262-19Y-2Y-OM			3826.0	72.0	93.9	141.6	48.0	2.3	104.0
62	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-270-27Y-3Y-OM			4016.2	72.4	91.9	141.4	1.0	5.5	101.5
63	PIPIT"S"-II58.57 X UC90(MUS"S"-MA/DRIRA-IA X BGL"S") B-5576-447-1Y-1Y-OM			3284.6	69.5	88.4	139.6	5.5	6.9	95.6
64	(BGL DERIV SEL BULK/MTZ TCL-TRIGO GO D SEED X BGL GOOD SEED)NUTRIA B-5644-777-1Y-1Y-OM			3665.2	69.8	95.2	141.0	30.5	10.3	107.4
65	(BGL DERIV SEL BULK/MTZ TCL-TRIGO GO D SEED X BGL GOOD SEED)NUTRIA B-5644-778-2Y-1Y-OM			3745.4	69.4	96.7	142.4	77.5	2.2	107.2
66	(BGL DERIV SEL BULK/MTZ TCL-TRIGO GO D SEED X BGL GOOD SEED)NUTRIA B-5644-778-2Y-3Y-OM			3898.0	69.3	96.3	141.8	35.0	10.8	107.1
67	KISS-UPSS#3310 X CASTOR"S"/M1A X-47102-B-2M-2Y-1Y-2M-2Y-1M-0Y			3242.4	68.3	89.2	135.2	25.5	4.7	91.2
68	PFT7717 X M2A-BN"S"/BOK"S"-LMG"S" CT5136-H-2M-3Y-OM			3275.5	68.4	86.8	134.6	0.0	7.8	79.2
69	SERI82			3536.3	70.8	91.7	131.8	10.0	20.7	73.9
70	CANANEA79			3531.4	64.5	86.9	131.8	4.0	1.0	91.5
71	ALAMOS83			3482.8	67.8	89.9	135.6	0.0	0.4	86.7
72	GENARD			3550.6	73.5	88.8	129.4	0.0	2.6	77.4
73	PIKA"S" X39597-4Y-2M-1Y-2Y-OM			3732.4	67.1	89.5	135.4	0.0	10.3	82.7
74	TESMO"S" X39860-2Y-7M-1Y-0Y			3575.3	67.3	85.0	135.4	1.0	1.1	80.3
75	TAPIR"S" X36471-22M-2Y-1M-2Y-2Y-OM			3264.2	69.9	85.9	133.8	0.0	0.8	84.1
76	ECHIDNA"S" X34824-501M-500Y-504B-500Y-501Y-OM			3466.7	69.0	89.9	134.8	0.5	0.7	84.1

VTY	LODG %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)	
53	90.0	46.5	20.0	40.6	4.2	3.7	2.7	0.0	1.0	2.0	2.8
54	70.0	46.0	20.0	28.1	4.0	4.3	2.7	0.0	0.0	1.0	2.8
55	65.0	46.5	0.0	21.9	3.6	3.0	2.3	0.0	0.0	2.0	3.0
56	60.0	47.5	0.0	21.9	4.0	3.2	1.7	0.0	1.0	2.0	2.6
57	60.0	45.0	0.0	25.0	4.0	3.3	2.3	0.0	1.0	1.0	2.6
58	90.0	46.0	0.0	31.3	4.2	3.6	2.7	0.0	1.0	2.0	2.8
59	90.0	46.0	0.0	18.8	4.0	3.6	3.3	0.0	3.0	3.0	3.2
60	90.0	46.0	10.0	37.5	4.5	3.3	3.0	0.0	3.0	2.0	3.0
61	90.0	47.0	10.0	31.3	4.0	2.8	3.0	0.0	3.0	3.0	2.8
62	95.0	45.0	0.0	37.5	4.0	3.9	3.0	0.0	1.0	3.0	2.8
63	95.0	52.0	40.0	18.8	3.0	4.4	3.0	0.0	3.0	3.0	3.2
64	75.0	44.5	10.0	28.1	4.0	3.8	2.7	0.0	1.0	3.0	2.6
65	70.0	43.0	0.0	25.0	4.8	4.0	2.7	0.0	1.0	2.0	2.4
66	65.0	43.0	0.0	18.8	3.4	3.4	3.0	0.0	1.0	1.0	3.0
67	80.0	42.0	30.0	12.5	5.2	4.7	4.7	0.0	3.0	1.0	4.2
68	80.0	35.5	70.0	15.6	5.8	4.0	5.0	0.0	5.0	1.0	3.8
69	80.0	36.0	0.0	15.6	5.0	5.0	4.3	0.0	1.0	1.0	4.0
70	90.0	47.5	10.0	6.3	5.3	4.3	3.7	0.0	3.0	2.0	4.2
71	90.0	44.5	10.0	9.4	5.8	4.0	3.3	0.0	3.0	2.0	4.2
72	100.0	43.5	10.0	15.6	4.8	4.8	4.7	0.0	3.0	2.0	3.8
73	95.0	47.0	10.0	37.5	5.0	4.0	4.7	0.0	3.0	2.0	5.0
74	90.0	44.5	20.0	9.4	3.8	5.0	5.0	0.0	5.0	1.0	4.0
75	85.0	47.0	40.0	15.6	4.3	4.3	5.3	0.0	3.0	3.0	3.4
76	95.0	46.0	20.0	28.1	5.2	4.9	4.7	0.0	5.0	3.0	3.6

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	PLNT HT
NUMBER OF OBSERVATIONS:				( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
77	PTR"S"-PND"S" X39599-7Y-1M-1Y-2Y-0M			3537.5	69.9	88.8	133.6	10.0	10.2	82.4
78	DINGO"S" X41047-A-1Y-2M-1Y-2Y-0M			3168.6	70.9	85.4	132.2	15.0	6.7	84.2
79	PND"S"-CASTOR"S" X-35781-82H-1Y-1M-1Y-0H			3849.9	67.6	86.8	131.6	0.0	5.0	88.4
80	BTA"S"-YO"R" X M1A-M2A(2) X-41441-C-2Y-6M-1Y-0Y			3601.0	67.2	88.1	132.2	0.0	10.4	91.2
81	BCM"S" X IA-BUSH X-34590-9Y-1M-1Y-0Y			3797.7	66.5	89.4	132.0	0.5	15.2	84.5
82	(PG"S"-CENT. BULK X ABN"S"/IRA(2)) X M2A-FS326B X-53751-F-3Y-1M-6Y-0B			3361.1	67.3	84.3	131.4	1.0	17.7	87.8
83	PND"S"-CASTOR"S" X-35781-182H-1Y-2M-1Y-0Y			3633.3	69.9	89.2	132.6	1.0	25.7	94.0
84	URIREACO XR-770063-1R			3528.3	66.2	86.4	131.2	23.0	16.0	86.0
85	RASQUENO X-34530-230H-0R			3314.7	70.2	85.6	131.2	30.0	10.7	93.4
86	YURIRIO XR-770041-2R			3577.1	66.5	87.2	131.8	11.0	24.1	93.5
87	FAWN"S"-BSN"S" X-38864-43M-3Y-2Y-2M-2Y-4M-0Y			3275.7	69.7	83.6	132.8	0.0	11.0	80.6
88	PTR"S" X CML"S"-FS1377/IA X CIN"S"- FS658 X-51038-D-4Y-3Y-5M-1Y-1M-0Y			3669.2	68.1	87.2	133.6	5.0	8.2	80.5
89	(PTR"S"/RM"S"-IRA X FS477)WELSH-BGL" " X-53893-E-2Y-1M-1Y-5M-0Y			3497.8	68.8	87.3	132.0	30.0	0.7	83.2
90	PTR"S"-GZL"S" X PND"S"-ABN"S" X-61083-3M-2Y-1M-0Y			3566.3	68.9	86.9	132.4	20.5	0.8	84.1
91	BURA"S"-FAWN"S"/IA-ABN"S" X GPR"S" X-61650-C-1M-2Y-1M-0Y			3629.8	68.0	86.5	134.6	30.0	0.7	83.9
92	IA-M2A X GPR"S"(ABN"S" X OCTO BULK- ARS/PND"S"-CASTOR"S") X-62234-B-2M-4Y-1M-0Y			3179.1	68.0	84.4	135.0	5.5	1.2	81.3
93	(ABN"S" X M2A-IRA/PND"S"-CASTOR"S") 416-SPY X TED"S" X-63377-E-2Y-2M-0Y			3045.5	70.2	83.8	134.6	10.0	0.3	82.2
94	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-3M-0Y			3167.6	68.7	85.6	134.2	15.0	1.0	85.0
95	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-4M-0Y			3276.0	68.5	85.9	138.0	0.0	2.6	86.2
96	PND"S"-IRA(2) X MPE"S"-PTR"S" X-50973-B-12Y-1Y-1M-1Y-1M-0Y			3781.0	68.8	93.8	139.2	0.0	3.3	91.9
97	PTR"S"-YO"R" X PND"S" X-52202-2Y-4M-1Y-2M-0Y			3251.5	71.2	88.5	139.6	0.5	2.5	86.1
98	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-2M-0Y			3409.5	70.2	84.8	137.4	40.0	6.3	89.4
99	CASTOR"S" X M2A-ARM"S" X-44621-4Y-2Y-1M-1Y-5M-0Y			2961.5	68.0	91.9	138.0	15.0	36.9	87.5
100	OLT"S"-LNC"S" X-51800-6Y-2M-1Y-3M-0Y			3586.4	66.8	88.5	139.6	15.0	1.4	91.9
101	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-3M-0Y			3181.1	69.9	86.1	135.8	11.0	0.7	87.4
102	PTR"S"-PND"S" X-39599-7Y-1M-1Y-2Y-0H			3585.0	68.3	89.3	138.0	30.0	0.0	82.7
103	PND"S"-MPE"S" X GPR"S"-YAK"S" X-50408-B-5Y-2Y-1M-1Y-0B			3306.0	66.9	83.2	136.4	0.0	0.0	81.7

VTY	LODC %	1000 O W	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
77	95.0	43.5	40.0	18.8	4.0	4.3	5.7	0.0	6.0	3.0	4.2
78	95.0	44.0	40.0	18.8	4.2	5.0	4.7	0.0	5.0	2.0	4.0
79	90.0	39.0	20.0	28.1	3.3	4.5	6.0	0.0	5.0	3.0	3.6
80	60.0	45.0	10.0	21.9	3.8	4.2	4.0	0.0	3.0	3.0	4.0
81	75.0	44.0	10.0	18.8	4.8	4.3	5.0	0.0	3.0	3.0	3.8
82	70.0	44.0	40.0	12.5	4.0	4.7	4.3	0.0	5.0	3.0	3.8
83	65.0	44.5	10.0	25.0	3.8	4.7	4.0	0.0	5.0	2.0	3.8
84	60.0	41.5	10.0	25.0	4.3	5.4	4.7	0.0	6.0	1.0	2.8
85	60.0	40.0	10.0	9.4	4.6	5.2	5.0	0.0	5.0	3.0	3.6
86	65.0	49.5	10.0	15.6	4.2	4.2	4.0	0.0	5.0	0.0	3.8
87	60.0	37.0	30.0	15.6	4.4	4.7	5.0	0.0	-----	2.0	3.4
88	60.0	44.5	10.0	31.3	4.3	4.2	5.3	0.0	5.0	1.0	3.6
89	80.0	49.5	30.0	21.9	4.3	4.2	5.0	0.0	6.0	3.0	3.8
90	50.0	41.0	10.0	28.1	3.8	4.7	4.3	0.0	5.0	3.0	4.4
91	30.0	45.5	10.0	15.6	5.0	4.5	5.0	0.0	6.0	3.0	3.8
92	60.0	45.0	0.0	18.7	5.7	5.5	5.7	0.0	6.0	3.0	3.6
93	30.0	46.5	0.0	12.5	5.2	4.7	5.7	0.0	6.0	4.0	4.6
94	80.0	46.5	0.0	12.5	4.4	4.7	5.3	0.0	3.0	2.0	4.2
95	70.0	48.5	0.0	15.6	4.8	4.3	5.3	0.0	3.0	2.0	3.6
96	80.0	44.0	0.0	28.1	4.7	4.2	5.3	0.0	3.0	3.0	3.6
97	75.0	45.0	0.0	15.6	4.4	4.6	5.0	0.0	5.0	3.0	4.6
98	40.0	35.0	10.0	12.5	5.0	4.7	4.7	0.0	5.0	4.0	5.0
99	55.0	46.0	10.0	9.4	5.0	3.8	4.3	0.0	6.0	2.0	3.8
100	60.0	46.0	0.0	12.5	5.0	4.7	3.7	0.0	3.0	3.0	3.8
101	55.0	49.0	10.0	12.5	5.0	4.6	5.7	0.0	6.0	4.0	4.4
102	80.0	46.5	30.0	12.5	4.2	4.3	6.0	0.0	6.0	3.0	5.2
103	75.0	43.5	30.0	15.6	5.2	4.7	4.7	0.0	6.0	2.0	3.6

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	PLNT HT
NUMBER OF OBSERVATIONS:				( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
104	PTR"S" X M2A-FS1377/IA X CIN"S"-FS65 X-51038-D-4Y-3Y-5M-1Y-2M-0Y			3365.8	67.6	88.0	132.2	16.0	0.7	80.1
105	PTR"S" X M2A-FS1377/IA X CIN"S"-FS65 X-51038-D-4Y-3Y-5M-1Y-4M-0Y			3498.6	67.7	88.5	136.0	0.5	0.0	80.4
106	CABORCA79-PND"S" X-51500-59Y-1M-5Y-1M-0Y			3560.3	69.3	86.5	136.4	11.0	8.7	83.9
107	SONALIKA			2118.4	76.3	85.6	128.0	40.0	52.8	79.1
108	PND"S"-CASTOR"S" X IA-BUSH X-64420-1YP-1MP-0Y			3283.0	69.5	83.7	130.2	15.5	4.2	91.6
109	IRA X BB-CHA/INIA-TK X CMH73A.785 X-60557-1YP-2MP-2YP-2MP-0Y			2656.3	70.2	83.7	127.6	20.0	1.0	83.9
110	IRA X BB-CHA/INIA-TK X CMH73A.785 X-60557-1YP-2MP-5YP-1MP-0Y			2980.3	70.4	82.7	126.8	0.0	9.1	83.7
111	IRA X BB-CHA/INIA-TK X CMH73A.785 X-60557-1YP-2MP-5YP-4MP-0Y			2734.9	69.7	82.2	128.4	0.0	2.7	83.3
112	TCL E3-ARM"S" X IRA-M2A/PND6 X-63073-B-1YP-1MP-2YP-1MP-0Y			2931.3	68.1	83.5	127.6	0.0	2.7	82.8
113	(IRA X BB-CHA/INIA-TK X CMH73A.785) M1A-PI62 X-63166-E-1YP-1MP-5YP-2MP-0Y			3193.6	70.8	80.9	128.0	0.0	2.1	84.0
114	PND3-RAT"S" X-59586-4MP-1Y-1MP-1YP-1MP-0Y			3069.3	70.1	81.4	128.2	20.0	8.0	90.0
115	CIT"S"-SPY/INIA-TK X CMH73A.785 X-60529-2MP-7Y-1MP-9YP-2MP-0Y			3402.3	69.5	85.3	130.8	20.0	1.0	84.8
116	MN72130-RYE4 X M2A-IRA/POL"S" X-61595-A-1MP-1Y-1MP-4YP-2MP-0Y			2702.0	68.1	79.1	127.4	0.0	0.5	83.3
117	PND"S"-KLA"S"/USA IV S.718-SPY X OPR S" X-61678-D-1MP-4Y-1MP-5YP-3MP-0Y			2866.3	69.8	81.1	128.8	0.0	5.3	90.9
118	FS1018-PND"S" X-56733-1YP-1MP-1YP-2MP-2YP-0M			3113.1	70.1	80.3	129.8	0.5	8.6	90.3
119	FS1018-PND"S" X-56733-1YP-1MP-1YP-2MP-3YP-0M			3028.6	70.7	79.9	129.2	0.5	12.7	91.6
120	FS1018-PND"S" X-56733-1YP-3MP-1YP-2MP-1YP-0M			3054.8	69.0	79.5	129.4	0.0	3.8	93.6
121	FS1018-PND"S" X-56733-4YP-1MP-4YP-2MP-1YP-0M			2764.1	69.7	79.2	129.8	0.0	1.0	90.6
122	PND3-RAT"S" X-59586-4MP-1Y-1MP-1YP-2MP-4YP-0M			3076.1	69.5	81.9	130.4	25.5	24.3	88.9
123	PND"S"-ABN"S" X IA(2) X-60518-1MP-1Y-1MP-2YP-1MP-1YP-0M			3405.5	70.3	86.1	130.6	10.0	4.6	85.0
124	PND"S"-ABN"S" X IA(2) X-60518-1MP-1Y-1MP-2YP-1MP-2YP-0M			3475.6	69.1	86.2	130.6	20.0	12.4	82.0
125	PND"S"-ABN"S" X IA(2) X-60518-1MP-1Y-1MP-2YP-5MP-1YP-0M			3254.9	71.1	85.1	129.0	1.0	10.7	82.8
126	CIT"S"-SPY/INIA-TK X CMH73A.785 X-60529-2MP-7Y-1MP-9YP-2MP-2YP-0M			3076.7	70.6	85.4	130.6	0.5	1.7	84.4
127	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-1MP-4YP-0M			3003.3	70.6	82.4	129.2	0.5	6.3	88.7
128	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-3MP-1YP-0M			2956.7	71.0	82.3	130.0	0.5	16.3	86.4



VTY	LDDG %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
104	90.0	46.0	0.0	15.6	3.5	3.5	4.3	0.0	3.0	3.0	3.8
105	90.0	42.5	10.0	15.6	5.0	3.7	4.0	0.0	3.0	2.0	3.8
106	40.0	39.5	10.0	9.4	5.0	5.0	4.3	0.0	5.0	3.0	4.0
107	55.0	45.0	----	0.0	6.0	6.0	6.5	0.0	----	4.0	5.0
108	60.0	45.5	10.0	3.1	6.0	5.0	4.7	0.0	6.0	3.0	4.4
109	65.0	46.5	0.0	0.0	4.6	4.5	5.7	0.0	3.0	3.0	4.4
110	70.0	45.5	0.0	3.1	5.5	4.2	5.7	0.0	6.0	3.0	3.8
111	60.0	51.5	10.0	12.5	4.8	4.0	5.7	0.0	6.0	2.0	4.4
112	80.0	49.0	10.0	0.0	4.8	4.0	5.7	0.0	5.0	3.0	4.4
113	80.0	46.0	10.0	6.3	4.8	4.7	5.7	0.0	5.0	1.0	4.4
114	90.0	42.0	10.0	12.5	5.0	4.4	4.7	0.0	6.0	3.0	4.8
115	70.0	39.5	10.0	9.4	4.8	3.7	5.3	0.0	6.0	3.0	3.4
116	65.0	38.0	0.0	6.3	5.3	5.2	4.7	0.0	6.0	1.0	4.4
117	40.0	46.5	0.0	6.3	5.2	4.5	5.0	0.0	6.0	3.0	4.6
118	10.0	42.0	0.0	18.8	6.0	4.5	4.7	0.0	5.0	3.0	4.4
119	10.0	44.5	0.0	9.4	5.0	5.2	5.0	0.0	6.0	3.0	4.0
120	10.0	43.5	10.0	3.1	5.8	4.7	4.0	0.0	6.0	3.0	3.0
121	10.0	42.5	10.0	0.0	5.6	4.6	4.3	0.0	5.0	3.0	4.2
122	10.0	41.5	0.0	0.0	5.0	4.5	4.3	0.0	6.0	3.0	4.6
123	5.0	39.0	0.0	15.6	5.4	2.8	5.3	0.0	6.0	1.0	4.0
124	5.0	42.0	10.0	12.5	5.3	3.0	4.7	0.0	5.0	2.0	3.4
125	5.0	40.0	10.0	12.5	5.2	3.5	5.3	0.0	5.0	1.0	2.6
126	10.0	43.5	10.0	9.4	5.2	3.8	5.0	0.0	6.0	2.0	4.0
127	20.0	43.0	20.0	9.4	4.8	5.2	5.0	0.0	6.0	2.0	4.4
128	55.0	43.0	10.0	12.5	4.5	6.0	4.3	0.0	6.0	3.0	4.2

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	PLNT HT	
		NUMBER OF OBSERVATIONS.			( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
129	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-3MP-4YP-OM			3050.7	71.4	81.9	129.0	0.0	19.3	87.3	
130	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-3MP-5YP-OM			3003.8	71.2	82.1	130.0	0.5	11.9	88.2	
131	PDL"S"-CABORCA79 X-59946-1MP-1Y-1MP-3YP-1MP-1YP-OM			2903.0	68.5	81.9	127.8	0.0	28.9	90.9	
132	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-2M-2Y-502Y-501M-502Y-502B-OY			3012.5	69.6	86.1	132.0	0.0	11.9	77.4	
133	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-2M-2Y-503Y-505M-501Y-504B-OY			2997.8	68.8	86.3	132.0	0.0	9.9	76.8	
134	FAWN"S"-ABN"S" X-38864-43M-3Y-2Y-2M-2Y-1M-OY			2938.2	69.9	84.1	131.0	0.0	6.4	78.4	
135	CABORCA79-PND"S" X-51500-59Y-1M-5Y-1M-OY			2987.4	69.2	85.3	131.6	10.0	9.5	84.6	
136	PTR"S"-GZL"S" X PND"S"-ABN"S" X-61083-3M-2Y-1M-OY			3291.6	68.2	86.4	130.8	5.5	1.0	81.8	
137	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-2M-2Y-505Y-504M-500Y-500B-OY			3092.3	68.0	87.1	131.6	0.5	13.9	76.4	
138	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-3M-1Y-501Y-503M-500Y-500B-OY			2582.5	68.0	84.6	130.6	0.5	16.1	70.4	
139	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-1M-OY			3198.0	71.2	85.5	133.0	25.5	1.8	82.4	
140	PTR"S"-YO"R" X PND"S" X-52202-2Y-5M-2Y-2M-OY			3161.9	70.1	87.9	132.6	0.5	0.4	85.8	
141	PND"B"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-8M-OY			2906.1	70.2	84.5	131.6	0.5	7.3	87.5	
142	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-1M-OY			3016.9	69.4	84.3	131.6	0.0	2.8	87.0	
143	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-4M-OY			3113.9	70.8	84.1	133.8	0.0	7.2	87.3	
144	BVA-PND"S" X-49029-8Y-3Y-3M-2Y-4M-OY			2857.1	66.3	86.2	134.4	0.5	1.1	84.8	
145	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-2M-OY			2680.1	69.2	86.1	131.8	5.0	1.8	89.3	
146	PND"S"-ABN"S" X IA(2) X-60518-1MP-1Y-1MP-OY			3086.7	70.8	85.9	131.6	10.5	1.5	91.8	
147	CANANEA79			2919.9	70.6	86.4	131.6	0.0	1.7	92.1	
148	ALAMOSB3			3040.2	68.5	85.3	132.0	5.5	0.9	87.3	
149	GENARD			3157.4	70.1	84.9	130.8	11.0	8.3	85.0	
150	CML"S"-KAL X LOBO"S"/PTR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-8M-OY			3429.9	63.9	86.4	131.4	17.0	1.4	89.7	
151	PTR"S"-BCH"S" X PND"S" X-51395-2M-3Y-4M-1Y-1M-1Y-4M-OY			3146.3	67.2	88.2	131.8	0.0	0.8	84.1	
152	BVA-PND"S" X-49029-8Y-3Y-3M-2Y-1M-OY			3435.8	72.7	87.6	128.4	40.0	18.5	77.5	
153	BTD"S"-PTR"S" X-49509-6Y-1Y-2M-1Y-2M-OY			2892.5	67.6	87.8	134.6	0.0	10.0	79.6	
154	KLA"S" X M2A-IRA/IRA-PND"S" X-41059-E-1Y-2M-2Y-502Y-501M-501Y-500B-OY			3045.6	68.8	85.8	130.2	0.0	3.7	77.8	
155	FAWN"S"-ABN"S" X-38864-43M-3Y-2Y-2M-1Y-1M-OY			3000.2	69.7	83.9	131.4	40.0	6.4	77.3	

VTY	LDG %	1000 G W	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1 )	( 2 )	( 1 )	( 32 )	( 6 )	( 7 )	( 3 )	( 1 )	( 1 )	( 1 )	( 5 )
129	40.0	41.0	20.0	21.9	3.8	5.5	4.3	0.0	6.0	2.0	3.8
130	40.0	44.5	10.0	12.5	4.2	5.5	4.7	0.0	6.0	2.0	4.4
131	35.0	44.0	10.0	6.3	3.8	5.8	5.0	0.0	5.0	2.0	5.6
132	75.0	39.0	0.0	3.1	4.7	5.2	5.7	0.0	5.0	1.0	3.8
133	75.0	43.0	0.0	6.3	4.2	4.8	5.7	0.0	6.0	1.0	3.8
134	65.0	42.0	0.0	21.9	4.0	5.1	4.3	0.0	5.0	2.0	2.8
135	55.0	41.0	0.0	9.4	4.7	5.0	4.3	0.0	6.0	2.0	4.4
136	75.0	39.0	0.0	21.9	2.8	4.3	4.7	0.0	6.0	3.0	4.8
137	60.0	40.5	10.0	9.4	3.8	4.4	5.3	0.0	6.0	1.0	4.2
138	75.0	42.0	10.0	6.3	4.3	5.0	5.7	0.0	5.0	5.0	4.0
139	75.0	41.0	0.0	18.8	4.8	4.7	4.7	0.0	6.0	2.0	4.0
140	65.0	36.5	0.0	21.9	4.2	4.1	4.0	0.0	6.0	3.0	3.2
141	45.0	34.5	0.0	9.4	4.8	4.0	4.7	0.0	6.0	1.0	4.4
142	40.0	35.0	0.0	12.5	4.2	3.7	4.3	0.0	5.0	1.0	4.0
143	20.0	43.0	10.0	6.3	4.4	3.8	4.7	0.0	5.0	1.0	4.2
144	65.0	46.5	0.0	9.4	4.7	3.2	4.7	0.0	3.0	2.0	3.8
145	80.0	39.5	0.0	3.1	4.6	3.8	4.3	0.0	3.0	3.0	4.4
146	70.0	39.0	20.0	9.4	4.3	4.0	5.0	0.0	3.0	1.0	4.6
147	80.0	41.0	10.0	12.5	2.8	3.8	5.0	0.0	5.0	1.0	4.0
148	95.0	45.5	20.0	3.1	4.5	3.7	5.3	0.0	5.0	2.0	4.0
149	90.0	43.5	10.0	6.3	5.8	3.3	4.3	0.0	5.0	1.0	3.8
150	75.0	43.0	0.0	6.3	4.5	3.2	4.3	2.0	5.0	4.0	4.0
151	75.0	42.5	10.0	12.5	5.0	3.3	5.3	0.0	1.0	2.0	3.6
152	65.0	41.5	10.0	6.3	4.2	4.3	4.3	0.0	1.0	3.0	3.8
153	65.0	41.0	0.0	3.1	3.6	3.8	4.7	0.0	6.0	3.0	4.0
154	45.0	39.5	0.0	9.4	5.3	4.0	5.0	0.0	5.0	1.0	3.8
155	35.0	42.0	0.0	12.5	3.8	4.8	4.7	0.0	5.0	3.0	4.8

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	PLNT HT	NUMBER OF OBSERVATIONS:								
											( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)		
156	CML"S"-PATD X LMG"S" X-59462-16M-2Y-1M-0Y			3095.3	68.4	84.2	131.4	20.0	0.7	81.9									
157	PTR"S"-YO"R" X PND"S" X-52202-3Y-3M-1Y-3M-0Y			3267.0	70.3	85.7	132.0	0.0	1.2	81.6									
158	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y			3475.0	69.5	88.0	132.0	1.0	0.0	83.6									
159	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-2M-0Y			3105.6	70.3	84.2	129.6	0.0	2.4	85.8									
160	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-3Y-2M-0Y			2927.6	69.6	84.1	130.0	10.0	2.0	87.6									
161	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-7M-0Y			3013.2	69.5	85.4	131.0	10.0	2.0	86.5									
162	M2A X CIN"S"-FS65B/IA-M2A X-50234-F-2Y-1Y-1M-2Y-0B			3278.8	65.2	85.7	130.6	10.0	0.3	87.9									
163	PTR"S" X M2A-FS1377/IA X CIN"S"-FS65 X-51038-D-4Y-3Y-5M-1Y-1M-0Y			3547.7	65.5	87.1	131.4	20.0	0.2	81.1									
164	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-5M-0Y			3272.3	69.1	85.9	131.2	40.0	0.2	84.4									
165	EDA"S"-CANANE479 CT-1824-4Y-4M-0Y			3479.9	68.5	88.2	131.6	0.0	1.2	77.3									
166	EDA"S"(E3-ARM"S" X M2A/ADX"S") CT-1829-1Y-2M-0Y			3341.9	67.2	87.4	131.6	10.0	0.0	82.0									
167	EDA"S"(E3-ARM"S" X M2A/ADX"S") CT-1829-9Y-4M-0Y			3079.3	68.7	89.5	132.8	0.0	2.3	84.6									
168	GRIZZLY"S" X PTR"S"-CASTOR"S" X-64399-4Y-1M-4Y-0Y			3166.5	71.0	90.7	131.6	10.0	9.3	90.5									
169	LMG"S" X CIT"S"-SPY/TED"S" X-63163-F-5Y-2M-1Y-0Y			3091.0	68.7	88.6	132.6	0.0	0.7	90.6									
170	(CIT"S"-SPY X M2A(2)/M2A-FS722)TORO" X-63164-I-2Y-1M-1Y-0Y			3229.2	69.4	83.9	132.4	10.0	0.2	86.2									
171	EDA"S" X M2A-ZA75 X-61039-6M-1Y-1M-1Y-0Y			3324.6	65.8	90.5	133.2	10.0	1.9	89.1									
172	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-1Y-0Y			3066.3	66.5	89.2	137.2	10.0	0.5	101.4									
173	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-2Y-0Y			3244.2	65.6	90.0	137.2	20.0	1.5	98.5									
174	PND"S"-SPD"S"(TGE"S"/PG"S"-CENT. BULK X ABN"S") X-62468-B-2M-2Y-4M-4Y-0Y			2700.7	68.4	87.1	133.8	0.0	0.3	82.6									
175	PND"S"-SPD"S"(TGE"S"/PG"S"-CENT. BULK X ABN"S") X-62468-B-2M-4Y-3M-3Y-0Y			2839.4	68.2	85.8	135.8	10.0	10.2	81.6									
176	PND"S"-ABN"S" X IA(2) X-60518-1MP-1Y-1MP-1YP-4MP-0Y			3084.6	68.8	85.3	129.6	3.0	4.4	82.6									
177	(KLA"S" X M2A-IRA/IRA X M2A-CML"S") PND"S"-MPE"S" X-66516-4M-6Y-0M			2869.6	68.3	90.8	135.2	2.5	0.3	88.4									
178	PND"S"-YE75/CHA-SPY X YE75 X-66587-4M-4Y-0M			2791.7	67.4	87.3	131.8	5.0	0.7	88.0									
179	PND"S"-YE75/PG"S"-CENT BULK X ABN"S" X-66588-4M-4Y-0M			3077.2	66.9	86.5	130.6	10.5	0.3	85.7									
180	PND"S"-CASTOR"S" X BSN"S" X-59787-9M-3Y-2M-2Y-1Y-0B			3101.5	67.9	89.9	132.6	1.0	0.2	86.1									
181	PND"S"-CASTOR"S" X SPD"S" X-59873-2M-4Y-5M-1Y-1Y-0B			2838.8	70.0	84.1	128.2	6.0	25.3	80.6									
182	IA-KLA"S" X CAL/SPD"S" X-61014-1M-2Y-1M-2Y-1Y-0B			2921.8	67.7	83.0	129.2	5.0	3.2	80.8									

VTY	LODG %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
156	35.0	40.5	0.0	9.4	4.8	3.7	4.7	0.0	6.0	2.0	4.6
157	60.0	38.5	0.0	12.5	5.4	4.0	5.3	0.0	6.0	3.0	4.0
158	55.0	35.5	10.0	21.9	3.8	3.0	4.3	0.0	6.0	3.0	3.0
159	45.0	33.0	0.0	6.3	3.6	3.7	5.7	0.0	6.0	3.0	5.2
160	35.0	36.0	0.0	9.4	4.2	3.8	5.3	0.0	3.0	1.0	5.0
161	45.0	43.0	0.0	3.1	3.2	4.3	5.3	0.0	3.0	3.0	4.0
162	60.0	43.0	0.0	9.4	4.0	4.0	5.3	0.0	6.0	3.0	3.6
163	65.0	43.5	0.0	21.9	4.0	3.7	6.0	0.0	6.0	3.0	4.2
164	60.0	43.0	0.0	15.6	4.2	4.4	6.7	0.0	6.0	4.0	4.2
165	65.0	40.0	0.0	18.8	4.0	4.3	5.7	0.0	5.0	2.0	3.8
166	50.0	43.5	10.0	12.5	4.2	4.4	6.0	0.0	5.0	3.0	3.6
167	55.0	39.0	0.0	6.3	3.8	3.8	4.7	0.0	5.0	2.0	3.8
168	20.0	38.0	0.0	9.4	3.8	4.7	4.7	0.0	6.0	3.0	4.8
169	10.0	46.0	10.0	9.4	4.4	4.5	5.7	0.0	5.0	2.0	4.8
170	10.0	44.0	0.0	18.8	4.6	3.8	4.7	0.0	5.0	3.0	3.8
171	60.0	45.5	10.0	28.1	3.0	3.3	5.0	0.0	6.0	2.0	4.8
172	20.0	49.5	20.0	12.5	3.2	3.3	4.3	0.0	6.0	3.0	4.6
173	10.0	55.0	10.0	15.6	2.8	4.3	4.0	0.0	6.0	3.0	4.8
174	55.0	38.5	10.0	9.4	4.0	4.0	5.0	0.0	6.0	3.0	4.0
175	55.0	42.0	0.0	9.4	4.0	4.3	5.0	0.0	5.0	3.0	4.4
176	45.0	41.0	20.0	9.4	4.5	4.0	5.0	0.0	6.0	3.0	4.2
177	60.0	46.5	0.0	12.5	4.0	3.5	4.7	0.0	6.0	3.0	4.4
178	75.0	36.0	10.0	6.3	4.2	4.3	4.3	0.0	6.0	3.0	5.0
179	80.0	41.5	0.0	6.3	4.2	4.6	5.7	0.0	6.0	3.0	4.0
180	65.0	43.5	10.0	9.4	4.2	4.0	4.3	0.0	5.0	3.0	4.8
181	20.0	38.5	40.0	6.3	3.6	4.3	5.0	0.0	5.0	3.0	4.6
182	10.0	42.5	20.0	9.4	4.8	4.2	4.7	0.0	6.0	4.0	4.6

Table 2 (continued)

VTY NO	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT L	LEAF RUST	PLNT HT	NUMBER OF OBSERVATIONS:						
											( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
183	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-1Y-2Y-0B			3144.1	64.7	88.7	137.0	0.0	0.2	96.6							
184	RAT"S"-LMC"S" X-59454-12M-2Y-3M-2Y-2Y-0B			3050.1	67.5	87.3	128.6	0.5	0.2	74.2							
185	FS3B1-FS477 X TORO"S"/TQE"S" X-61270-B-1M-1Y-1M-1Y-2Y-0B			3331.3	66.5	90.0	132.8	5.5	0.0	88.0							
186	FS3B1-FS477 X TORO"S"/TQE"S" X-61270-B-1M-2Y-1M-1Y-1Y-0B			3469.2	67.2	89.4	133.0	1.5	1.0	86.5							
187	POL"S"-ALAMOS83 X-64677-24Y-2M-2Y-3M-1Y-0B			3005.2	68.5	84.6	130.4	5.0	9.9	80.8							
188	PTR"S"-YO"S" X PND"S" X-52202-3Y-3M-1Y-4M-1Y-2Y-0B			3101.2	69.2	86.6	130.4	5.0	0.0	82.2							
189	RM"S" X M2A-IRA720(H277.69-UMX2/RM"S -IRA X FS477) X-53627-D-5Y-1M-3Y-2M-1Y-1Y-0B			3393.3	65.9	90.2	133.0	15.5	0.1	90.3							
190	RM"S" X M2A-IRA720(H277.69-UMX2/RM"S -IRA X FS477) X-53627-D-5Y-1M-3Y-2M-1Y-2Y-0B			3369.0	65.9	90.5	134.2	5.0	0.3	89.1							
191	RM"S" X M2A-IRA720(H277.69-UMX2/RM"S -IRA X FS477) X-53627-D-5Y-1M-5Y-2M-2Y-1Y-0B			3367.0	66.8	90.2	138.2	0.5	2.3	88.3							
192	(PTR"S"/RM"S"-IRA X FS477)WELSH-BGL" " X-53893-E-2Y-1M-1Y-1M-1Y-1Y-0B			3308.0	69.1	87.5	132.0	5.5	0.0	83.2							
193	(PTR"S"/RM"S"-IRA X FS477)WELSH-BGL" " X-53893-E-2Y-1M-1Y-1M-1Y-2Y-0B			3617.0	68.9	88.1	132.2	0.0	5.7	82.1							
194	(PTR"S"/M2A-LNC"S" X M2A)LMC"S"-TED" " CT5160-J-3M-1Y-0M			3217.1	69.5	84.5	133.0	0.0	0.9	81.9							
195	BTA"S" X PND"S"-YE75[(E3-ARM"S" X M2A/ADX"S")NV"S"-BGL"S"] CT5229-A-1M-2Y-0M			2902.7	66.8	86.7	131.8	0.5	4.8	74.4							
196	[(RM"S" X BGL"S"-M2A/BCH"S")PND"S"- ABN"S"JEDA"S"-PND 6 CT5247-G-3M-2Y-0M			3428.0	67.5	84.8	131.6	10.0	3.7	82.6							
197	IA-M2A/YE75 X IRA-CML"S" CT-591-7Y-3M-2Y-0M			3361.4	68.7	82.3	131.0	1.5	0.6	90.2							
198	M2A-CML"S" X GPR"S"/TQE"S" CT-1014-3Y-3M-1Y-0M			3311.2	68.7	85.7	131.2	0.0	2.0	85.5							
199	TAPIR"S"-POL"S" CT-1817-12Y-5M-1Y-0M			3064.4	67.8	92.7	138.2	10.0	0.2	97.3							
200	TAPIR-POL"S" CT-1817-12Y-5M-3Y-0M			3037.2	66.0	91.7	138.2	10.0	10.0	95.0							
201	TAPIR"S"-BOK"S" CT-1818-5Y-1M-1Y-0M			3250.0	68.6	84.6	130.6	1.5	1.2	86.9							
202	TAPIR"S"-GRIZZLY"S" CT-1822-25Y-1M-1Y-0M			3317.1	69.9	86.3	130.2	10.5	18.7	88.5							
203	TAPIR"S"-GRIZZLY"S" CT-1822-25Y-6M-3Y-0M			3321.7	70.5	87.4	131.8	2.5	0.0	90.1							
204	TAPIR"S"(E3-ARM"S" X M2A/ADX"S") CT-1829-9Y-1M-1Y-0M			3242.6	66.5	88.9	136.8	5.0	0.3	78.3							
205	PND"S"-ABN"S" X IGA-IRA X-47171-F-4M-7Y-1Y-2M-2Y-9M-0Y			3806.6	68.5	91.1	137.0	5.0	0.4	83.2							
206	TAPIR"S"-BDA"S" CT-1830-4Y-3M-3Y-0M			3186.1	68.4	87.1	134.8	0.0	0.8	84.5							
207	TAPIR"S" X PND"S"-RM"S" CT-1833-12Y-4M-1Y-0M			3651.8	69.1	89.7	134.6	0.0	0.0	84.4							
208	TAPIR"S" X PND"S"-RM"S" CT-1833-14Y-3M-1Y-0M			3361.1	70.3	87.7	134.6	0.0	0.0	74.4							

VTY	LDDG %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
183	10.0	52.0	0.0	31.3	4.0	3.9	5.0	0.0	6.0	4.0	5.6
184	5.0	39.5	0.0	6.3	3.8	3.5	5.7	0.0	6.0	4.0	4.0
185	20.0	46.0	10.0	15.6	4.4	4.2	4.7	0.0	6.0	4.0	3.6
186	30.0	45.5	10.0	18.8	4.0	3.8	4.7	0.0	6.0	2.0	3.6
187	20.0	35.5	10.0	3.1	3.6	4.7	5.7	0.0	6.0	3.0	4.4
188	40.0	40.0	10.0	12.5	4.6	4.3	5.3	0.0	5.0	3.0	3.2
189	30.0	46.0	10.0	18.8	3.7	4.1	3.3	0.0	6.0	3.0	3.8
190	20.0	47.0	0.0	18.8	4.5	3.7	3.3	0.0	6.0	4.0	4.4
191	20.0	45.5	10.0	12.5	4.2	4.3	4.0	0.0	6.0	3.0	3.2
192	25.0	47.5	10.0	12.5	4.4	4.6	5.3	0.0	6.0	5.0	4.0
193	5.0	51.0	0.0	21.9	4.3	4.3	5.3	0.0	6.0	6.0	4.6
194	5.0	40.0	0.0	12.5	4.8	4.3	5.7	0.0	6.0	3.0	4.0
195	5.0	39.5	10.0	6.3	5.0	4.8	5.7	0.0	5.0	3.0	4.0
196	20.0	40.0	0.0	12.5	3.8	4.5	6.0	0.0	5.0	1.0	4.0
197	10.0	42.0	0.0	12.5	4.2	4.2	5.0	0.0	6.0	3.0	4.4
198	20.0	42.0	0.0	9.4	4.6	4.4	5.0	0.0	3.0	3.0	4.0
199	75.0	44.5	0.0	15.6	4.5	4.2	4.3	0.0	3.0	3.0	4.6
200	80.0	45.0	10.0	12.5	3.8	3.7	5.3	0.0	3.0	2.0	4.0
201	90.0	48.5	0.0	6.3	4.2	3.8	4.7	0.0	6.0	1.0	3.4
202	90.0	47.0	10.0	12.5	4.8	3.7	5.0	0.0	6.0	2.0	3.6
203	80.0	43.5	0.0	15.6	4.4	4.0	4.7	0.0	6.0	3.0	3.6
204	85.0	44.0	10.0	25.0	3.0	4.3	4.0	0.0	6.0	1.0	2.4
205	90.0	44.0	0.0	18.8	4.8	4.0	3.7	0.0	5.0	1.0	3.0
206	90.0	42.0	0.0	12.5	3.4	5.0	4.7	0.0	6.0	2.0	4.0
207	90.0	44.0	0.0	18.8	4.8	4.9	4.7	0.0	6.0	1.0	3.8
208	90.0	37.0	0.0	9.4	3.2	4.5	6.0	0.0	6.0	1.0	4.2

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	PLNT HT	
		NUMBER OF OBSERVATIONS:			( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
209	TAPIR"S" X PND"S"-RM"S" CT-1833-15Y-1M-2Y-0M			3340.4	69.0	85.9	134.6	5.0	0.2	76.8	
210	LT33B.75-OPR"S" X PTR"S" X-65662-1Y-1M-2Y-0M			3188.4	69.1	84.5	133.8	10.0	0.6	83.6	
211	YE75 X IRA-CML"S"/TGE"S" X-66340-6Y-1M-2Y-0M			3683.9	67.5	87.0	135.2	10.0	18.9	86.8	
212	YE75 X IRA-CML"S"/TGE"S" X-66340-8Y-5M-2Y-0M			3695.3	69.1	84.1	133.8	0.0	4.2	87.3	
213	YE75 X IRA-CML"S"/PND 6 X-66346-11Y-1M-1Y-0M			3074.9	68.4	86.7	135.0	2.5	12.6	79.6	
214	NV"S"-BGL"S" X SPD"S"-PTR"S" CT-2276-A-4Y-2M-2Y-0M			2831.0	67.1	82.6	131.0	0.0	13.4	78.3	
215	CABORCA79-PTR"S" X LMG"S"-TORO"S" CT-2500-C-1Y-1M-1Y-0M			4100.9	68.5	86.8	131.0	2.5	1.5	91.7	
216	PND"S"-YE75 X PTR"S"/LMG"S"-TORO"S" CT-2695-F-1Y-2M-2Y-0M			3040.9	69.4	84.8	130.6	0.5	0.7	79.2	
217	PND"S"-YE75 X PTR"S"/LMG"S"-TORO"S" CT-2695-F-1Y-2M-8Y-0M			2956.0	70.1	84.2	130.6	15.0	0.0	79.0	
218	PTR"S"-CASTOR"S"/T107.18-M2A X MPE"S" X-58773-2Y-3M-2Y-1Y-0M			3489.9	69.5	90.4	138.0	2.5	1.6	92.8	
219	LMG"S"-PDL"S" X-64270-9Y-4M-2Y-2Y-0M			3379.0	68.3	86.9	131.6	15.0	6.3	86.9	
220	CANANEA79			3543.8	62.8	87.5	132.6	29.0	0.5	91.1	
221	ALAMOS83			3258.6	65.5	90.0	137.0	0.5	0.8	86.7	
222	GENARO			3273.3	72.8	89.9	131.6	25.0	15.0	75.6	
223	PND"S"-YE75 X FS381-FS477 X-64743-2Y-1M-6Y-1Y-0M			2879.7	68.6	81.5	130.0	8.5	15.1	74.0	
224	(IA(2)/CMH74.1211-BGL"S" X CMH74.121 )RM"S"-CASTOR"S" X-63153-B-1Y-1M-4Y-3Y-0M			3091.1	67.2	88.8	135.2	2.5	0.2	79.6	
225	(IA(2)/CMH74.1211-BGL"S" X CMH74.121 )RM"S"-CASTOR"S" X-63153-B-1Y-2M-3Y-3Y-0M			3007.9	68.0	89.1	135.8	0.0	15.3	79.9	
226	(IA(2)/CMH74.1211-BGL"S" X CMH74.121 )RM"S"-CASTOR"S" X-63153-B-1Y-2M-4Y-4Y-0M			3362.3	70.0	83.4	135.4	0.0	15.6	80.4	
227	LMG"S"(CIT"S"-SPY X M2A(2)/RM"S"- CASTOR"S") X-63181-C-1Y-6M-15Y-5Y-0M			3401.1	70.5	83.1	129.8	0.0	0.7	87.0	
228	LMG"S"(CIT"S"-SPY X M2A(2)/RM"S"- CASTOR"S") X-63181-C-2Y-1M-3Y-2Y-0M			3122.8	69.0	82.9	129.8	15.0	0.0	84.0	
229	LMG"S"(CIT"S"-SPY X M2A(2)/RM"S"- CASTOR"S") X-63181-D-4Y-2M-3Y-5Y-0M			3423.1	69.7	86.1	136.0	0.0	0.0	88.1	
230	ABN"S" X M2A-IRA(PND"S"-CASTOR"S"/ 416-SPY X TED"S") X-63377-C-1Y-2M-1Y-1Y-0M			2997.3	70.6	80.7	132.8	5.5	0.0	79.4	
231	CABORCA79 X PTR"S"-CASTOR"S" X-63844-1M-3Y-1M-2Y-0M			3515.3	70.0	81.9	138.4	10.0	10.7	84.5	
232	CABORCA79 X PTR"S"-CASTOR"S" X-63844-8M-1Y-4M-2Y-0M			3323.9	67.7	84.5	136.2	10.0	14.9	93.7	
233	PND"S"-CASTOR"S" X SPD"S" X-64422-3M-1Y-1M-4Y-0M			3254.0	70.8	86.7	138.4	15.0	0.3	95.0	
234	PND"S"-CASTOR"S" X SPD"S" X-64422-3M-6Y-1M-5Y-0M			3061.1	69.2	83.1	136.4	5.5	2.7	91.4	
235	PDL"S" X RM"S"-PTR"S" X-64675-3M-4Y-4M-2Y-0M			3668.8	69.3	81.1	136.4	0.0	3.0	85.7	



VTY	LDDB %	1000 G. W.	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1 )	( 2 )	( 1 )	( 32 )	( 6 )	( 7 )	( 3 )	( 1 )	( 1 )	( 1 )	( 5 )
209	95.0	37.0	0.0	12.5	2.8	4.2	5.7	0.0	6.0	1.0	3.4
210	80.0	48.0	0.0	6.3	4.0	4.3	5.3	0.0	6.0	4.0	3.2
211	60.0	42.0	0.0	12.5	2.6	3.8	5.0	0.0	6.0	2.0	3.2
212	65.0	39.0	0.0	9.4	4.0	4.7	5.0	0.0	6.0	2.0	3.0
213	75.0	34.0	0.0	3.1	4.2	5.3	4.7	0.0	5.0	4.0	3.6
214	80.0	47.5	0.0	3.1	4.0	5.3	5.3	0.0	5.0	2.0	4.0
215	80.0	44.0	0.0	31.3	4.8	3.8	4.3	0.0	5.0	4.0	3.4
216	80.0	37.0	0.0	6.3	5.2	4.3	5.0	0.0	3.0	3.0	3.6
217	80.0	38.0	0.0	15.6	4.6	4.8	5.3	0.0	3.0	5.0	3.4
218	70.0	41.0	0.0	12.5	3.7	4.2	4.7	0.0	5.0	1.0	3.2
219	30.0	40.0	0.0	12.5	4.8	4.0	4.3	0.0	5.0	3.0	3.6
220	20.0	45.5	0.0	9.4	4.6	3.3	3.7	0.0	3.0	3.0	3.8
221	30.0	42.0	0.0	12.5	5.0	3.5	3.3	0.0	6.0	3.0	3.8
222	25.0	41.5	10.0	12.5	5.2	4.2	4.7	0.0	3.0	2.0	3.6
223	20.0	38.5	0.0	9.4	3.3	5.4	5.0	0.0	6.0	3.0	4.4
224	80.0	39.5	10.0	3.1	4.8	4.7	5.3	0.0	3.0	2.0	4.2
225	90.0	41.5	10.0	21.9	4.7	4.7	5.0	0.0	5.0	3.0	2.8
226	90.0	42.5	20.0	15.6	4.8	3.8	5.0	0.0	3.0	3.0	3.8
227	85.0	42.0	10.0	12.5	5.3	4.5	5.0	0.0	3.0	3.0	5.0
228	75.0	41.5	10.0	9.4	5.0	5.0	3.7	0.0	3.0	3.0	4.2
229	80.0	49.0	0.0	3.1	4.6	4.2	3.7	0.0	5.0	1.0	3.8
230	75.0	49.5	0.0	0.0	6.0	4.5	4.3	0.0	5.0	3.0	3.0
231	75.0	38.5	0.0	9.4	5.5	5.1	4.0	0.0	3.0	2.0	3.4
232	80.0	47.5	0.0	18.8	4.3	4.5	3.7	0.0	5.0	3.0	3.4
233	60.0	44.0	0.0	9.4	5.5	4.3	3.0	0.0	5.0	3.0	5.0
234	60.0	42.5	0.0	6.3	6.0	5.3	3.7	0.0	5.0	2.0	3.4
235	65.0	42.5	0.0	12.5	4.4	3.8	4.0	0.0	5.0	2.0	4.3

Table 2 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	YIELD KG/HA	TEST WT	HEAD DAYS	MAT DAYS	STRP RT. L	LEAF RUST	PLNT HT
		NUMBER OF OBSERVATIONS:		( 40)	( 11)	( 36)	( 5)	( 2)	( 7)	( 40)
236	M2A-IA/YE75 X IRA-CML"S" X-65473-5M-1Y-1M-2Y-OM			3246.8	67.5	82.9	137.8	5.0	2.1	80.6
237	PTR"S" X PND"S"-CASTOR"S" X-65642-4M-2Y-1M-1Y-OM			3760.2	67.4	88.5	139.6	0.0	4.4	85.3
238	PND"S"-MSF"S" X TGE"S" X-66216-4M-3Y-1M-3Y-OM			3136.2	67.0	87.1	140.6	2.5	23.2	87.8
239	RM"S" X KAL-BB/SPD"S" X-66160-1M-3Y-2M-2Y-OM			2966.2	70.1	80.6	136.0	10.0	0.0	82.3
240	PND"S"-MSF"S" X TGE"S" X-66216-4M-1Y-4M-2Y-OM			3082.9	69.7	83.4	138.4	0.0	0.0	82.4
241	PND"S"-MSF"S" X TGE"S" X-66216-4M-2Y-2M-2Y-OM			3186.8	71.8	84.7	136.6	0.0	4.3	81.5
242	PND"S"-MSF"S" X TGE"S" X-66216-4M-7Y-1M-6Y-OM			3440.5	68.6	85.7	135.4	0.5	0.2	85.9
243	PND"S"-MSF"S" X TGE"S" X-66229-2M-1Y-1M-1Y-OM			3424.6	69.5	79.3	131.2	10.0	15.1	81.4
244	PND"S"-MSF"S" X TGE"S" X-66229-2M-1Y-1M-2Y-OM			3304.9	69.1	79.8	130.2	0.0	4.5	82.5
245	(KLA"S" X M2A-IRA/IRA X M2A-CML)PND" "-MPE"S" X-66516-4M-2Y-2M-1Y-OM			3303.2	67.5	86.9	138.0	11.0	3.5	87.3
246	(KLA"S" X M2A-IRA/IRA X M2A-CML)PND" "-MPE"S" X-66516-4M-2Y-4M-2Y-OM			3179.5	66.6	88.1	138.6	5.0	1.5	87.8
247	PND1-LMC"S"/PTR"S"-CASTOR"S" X CABOR A79 X-67515-A-1M-3Y-1M-2Y-OM			2949.3	67.6	79.3	129.0	0.0	0.0	88.9
248	PND1-LMC"S"/PTR"S"-CASTOR"S" X CABOR A79 X-67515-I-1M-2Y-3M-1Y-OM			2801.8	68.0	85.0	133.2	0.5	0.2	81.4
249	(PND"S"-ABN"S"/TOB-CND"S" X M2A)IRA- CML"S" X M2A(2) X-67798-A-1M-2Y-4M-3Y-OM			3181.5	68.7	81.2	130.2	10.5	0.0	81.9
250	LNC"S"-ABN"S" X TED"S" X-66075-4M-3Y-2M-2Y-OM			3401.7	69.4	82.1	135.8	10.5	2.6	92.7

VTY	LODG %	1000 G W	SCAB %	CHECK MARK	SEP T 0-9	SEP N 0-9	SPT B 0-9	SCLD 0-9	FUS N 0-9	BAC S 0-9	BYDV 0-9
	( 1)	( 2)	( 1)	( 32)	( 6)	( 7)	( 3)	( 1)	( 1)	( 1)	( 5)
236	70.0	41.5	0.0	9.4	3.8	3.5	4.0	0.0	3.0	2.0	4.2
237	70.0	48.5	0.0	9.4	4.5	3.7	4.3	0.0	1.0	3.0	5.4
238	70.0	42.0	0.0	9.4	5.0	4.6	4.3	0.0	1.0	2.0	4.2
239	65.0	44.0	30.0	15.6	4.8	3.7	5.7	0.0	3.0	2.0	3.6
240	75.0	43.0	10.0	9.4	5.3	3.7	5.7	0.0	3.0	2.0	3.8
241	95.0	34.5	20.0	0.0	5.6	4.6	6.0	0.0	3.0	2.0	3.4
242	90.0	40.5	30.0	15.6	5.2	4.2	4.3	0.0	3.0	4.0	4.2
243	60.0	37.5	20.0	6.3	5.3	4.3	5.3	0.0	3.0	3.0	4.0
244	70.0	37.0	20.0	15.6	5.2	4.3	6.0	0.0	1.0	3.0	3.6
245	80.0	43.5	40.0	9.4	4.7	4.1	4.0	0.0	1.0	3.0	3.6
246	85.0	43.5	20.0	9.4	4.2	3.2	4.0	0.0	1.0	3.0	4.0
247	50.0	42.5	20.0	3.1	4.4	4.0	4.7	0.0	1.0	4.0	4.8
248	65.0	42.0	20.0	12.5	4.7	4.4	4.7	0.0	3.0	2.0	3.8
249	45.0	49.0	10.0	9.4	4.0	3.8	4.0	0.0	3.0	2.0	4.2
250	50.0	44.5	0.0	21.9	4.2	3.7	3.7	0.0	1.0	1.0	3.8

**Table 3. Yield: top 20 lines based on 40 locations.**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
1	AFRICA	ALGERIA	CONSTANTINE	1
3	AFRICA	MALAWI	CENTRAL PROV. (DEDZA DIST)	1
5	AFRICA	TANZANIA	E. AFRICA	1
6	AFRICA	TANZANIA	IRINGA	1
7	AFRICA	TANZANIA	MBEYA-U. A. C.	1
8	AFRICA	TUNISIA	TUNIS-BEJA	1
10	AFRICA	ZIMBABWE	HIGHVELD	1
11	ASIA	AFGHANISTAN	BALKH	1
12	ASIA	BANGLADESH	JESSORE (1ST. DATE)	1
15	ASIA	PHILIPPINES	LAGUNA	1
16	ASIA	REP. OF KOREA	SUWON GYEEONGGI PROV.	1
17	ASIA	THAILAND	NAKHON RATCHSIMA	1
18	CENTRAL AMERICA	COSTA RICA	ALAJUELA-FABIO BAUDRIT	1
19	CENTRAL AMERICA	GUATEMALA	CHIMALTENANGO	1
20	EUROPE	GERMAN DEM. REP.	SCHWERIN	1
21	EUROPE	GREECE	THESSALONIKI	1
22	EUROPE	POLAND	KRAKOW	1
23	EUROPE	POLAND	RADOM	1
26	EUROPE	SPAIN	CORDOBA-OBISPO	1
28	EUROPE	SPAIN	MADRID-ENCIN	1
29	EUROPE	SPAIN	VALLADOLID	1
30	MIDDLE EAST	CYPRUS	LAXIA	1
31	MIDDLE EAST	IRAN	GORGAN	1
33	MIDDLE EAST	JORDAN	IRBID-MARROW	1
34	MIDDLE EAST	JORDAN	KERAK	1
35	MIDDLE EAST	LEBANON	BEKA A VALLEY-TEL AMARA	1
36	MIDDLE EAST	TURKEY	IZMIR-EGE RARI	1
38	NORTH AMERICA	CANADA	SASWATCHEWAN-SWIFT	1
39	NORTH AMERICA	MEXICO	EL BATAN	1
40	NORTH AMERICA	MEXICO	SONORA-CIANG (1ST DATE)	1
41	NORTH AMERICA	MEXICO	TLAXCALA	1
42	NORTH AMERICA	MEXICO	TOLUCA	1
43	NORTH AMERICA	U. S. A.	CALIFORNIA	1
46	SOUTH AMERICA	BOLIVIA	COCHABAMBA	1
47	SOUTH AMERICA	BRAZIL	PARANA-CASCAVEL	1
50	SOUTH AMERICA	BRAZIL	SAO PAULO-CAMPINAS	1
51	SOUTH AMERICA	CHILE	TENUCO, CAUTIN	1
55	SOUTH AMERICA	PERU	AYACUCHO	1
56	SOUTH AMERICA	PERU	CAJABARIBA	1
57	SOUTH AMERICA	PERU	CUSCO-TARAY	1

\*VARIABLE IDENTIFICATIONS  
1 YIELD KG/HA

### Commentary on Yield

Forty locations reported yield data. Yield data from small unreplicated plots is subject to large deviations. Hence, the ranking by average performance should be viewed with caution. The top twenty lines are listed in Table 3. This nursery consisted of 66 complete

triticales, 179 substitute triticales and five bread wheats. It is worth noting that forty-four of the top fifty yielders were complete triticales. Crosses B-6912, B-6712, B-6811, Nutria, Hare and Civet were outstanding.

Table 3 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	Locations (40)	MEAN
50	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-078-27Y-1Y-OM		4336.3
1	BGL"S"		4326.1
2	ERONGA 83		4259.5
17	NUTRIA401 B-2709-0Y-18		4199.8
46	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-062-11Y-1Y-OM		4160.2
51	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-159-2Y-2Y-OM		4135.7
53	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-167-7Y-1Y-OM		4123.8
215	CABORCA79-PTR"S" X LMG"S"-TORO"S" CT-2500-C-1Y-1M-1Y-OM		4100.9
10	MUS"S" X DRIRA-KGR B-2658		4077.7
24	HARE 265 B-2700-291		4074.0
21	CIVET"S" B-2658		4053.1
60	OCTO NV-HARE X BCH"S"-SPY RY B-6811-251-9Y-3Y-OM		4049.0
47	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-071-20Y-1Y-OM		4045.6
44	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-055-5Y-3Y-OM		4042.5
57	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-171-11Y-1Y-OM		4029.3
13	NUTRIA 7272 B-2709-0Y-111		4025.8
39	JL0235 X BGL"S"EMS-2176.3 B-4565-1-2Y-1Y-08		4025.1
15	KHOBE 95		4023.5
5	CIVET"S" B2658		4021.1
43	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-054-4Y-2Y-OM		4021.1

**Table 4. Seventeen lines selected by 32 locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
1	AFRICA	ALGERIA	CONSTANTINE	50
4	AFRICA	SOUTH AFRICA	CAPE PROVINCE-WELGEVALLEN	50
5	AFRICA	TANZANIA	E. AFRICA	50
6	AFRICA	TANZANIA	IRINGA	50
7	AFRICA	TANZANIA	MBEYA-U. A. C.	50
9	AFRICA	ZAMBIA	NORTHERN-KATITO	50
11	ASIA	AFGHANISTAN	BALKH	50
12	ASIA	BANGLADESH	JESSORE (1ST. DATE)	50
13	ASIA	PAKISTAN	PUNJAB-ISLAMABAD	50
14	ASIA	PAKISTAN	PUNJAB-NIAB	50
15	ASIA	PHILIPPINES	LAGUNA	50
16	ASIA	REP. OF KOREA	SUWON GYEEONGGI PROV.	50
17	ASIA	THAILAND	NAKHON RATCHSIMA	50
18	CENTRAL AMERICA	COSTA RICA	ALAJUELA-FABIO BAUDRIT	50
21	EUROPE	GREECE	THESSALONIKI	50
23	EUROPE	POLAND	RADOM	50
26	EUROPE	SPAIN	CORDOBA-OBISPO	50
27	EUROPE	SPAIN	LLEIDA	50
28	EUROPE	SPAIN	MADRID-ENCIN	50
29	EUROPE	SPAIN	VALLADOLID	50
30	MIDDLE EAST	CYPRUS	LAXIA	50
32	MIDDLE EAST	ISRAEL	BET DAGAN-VOLCANI CTR.	50
37	NORTH AMERICA	CANADA	P. E. I.	50
45	OCEANIA	NEW ZEALAND	MANAWATU	50
47	SOUTH AMERICA	BRAZIL	PARANA-CASCAVEL	50
48	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-CRUZ ALTA	50
49	SOUTH AMERICA	BRAZIL	RIO GRANDE DO SUL-EMBRAPA	50
50	SOUTH AMERICA	BRAZIL	SAO PAULO-CAMPINAS	50
51	SOUTH AMERICA	CHILE	TEMUCO, CAUTIN	50
53	SOUTH AMERICA	ECUADOR	QUITO, PICHINCHA	50
54	SOUTH AMERICA	PARAGUAY	ITAPUA	50
57	SOUTH AMERICA	PERU	CUSCO-TARAY	50

\*VARIABLE IDENTIFICATIONS  
50 CHECK MARK

### Commentary on Check Mark

Thirty two locations indicated which lines they retained for further evaluation. This is an indication of the lines' adaptation to a given environment. Forty-one entries were selected by at least 25 percent of the reporting locations. Seventy percent of these selected lines were complete triticales. Seven lines were not selected by

any cooperator. Seventeen lines were selected by more than 30 percent of the reporting locations and are listed in Table 4. It is worth noting that the highest yielding crosses B-6712, B-6811, B-6912 and Hare are present in this group also.

**Table 4 (continued)**

VTY NO.	VARIETY OR CROSS AND PEDIGREE	Locations (32)	MEAN
51	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-159-2Y-2Y-OM		43.8
53	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-167-7Y-1Y-OM		40.6
39	JLO235 X BGL"S"EMS-2176.3 B-4565-1-2Y-1Y-OB		40.6
11	HARE 286 B-2700		40.6
73	PIKA"S" X39597-4Y-2M-1Y-2Y-OM		37.5
62	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-270-27Y-3Y-OM		37.5
60	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-251-9Y-3Y-OM		37.5
50	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-078-27Y-1Y-OM		37.5
44	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-055-5Y-3Y-OM		37.5
43	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-054-4Y-2Y-OM		34.4
215	CABORCA79-PTR"S" X LMG"S"-TORO"S" CT-2500-C-1Y-1M-1Y-OM		31.3
183	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-1Y-2Y-OB		31.3
88	PTR"S" X CML"S"-FS1377/1A X CIN"S"- FS65B X-51038-D-4Y-3Y-5M-1Y-1M-0Y		31.3
61	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-262-19Y-2Y-OM		31.3
58	BCH"S"-SPY RYE X BGL"S"[[[BB(SON64-AN64 X NAD/JAR"S") ]WRC31]OCTO BULK-CIN"S"] B-6712-171-11Y-4Y-OM		31.3
16	FARO"S"		31.3
7	(CML-PATO X KISS DWARF/BGL"S")BGL"S" B6823		31.3

**Table 5. Top 20 lines with the highest test weights based on 11 locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
7	AFRICA	TANZANIA	MBEYA-U. A. C.	2
16	ASIA	REP. OF KOREA	SUNON GYEDNGGI PROV.	2
22	EUROPE	POLAND	KRAKOW	2
23	EUROPE	POLAND	RADOM	2
28	EUROPE	SPAIN	MADRID-ENCIN	2
36	MIDDLE EAST	TURKEY	IZMIR-EGE RARI	2
39	NORTH AMERICA	MEXICO	EL BATAN	2
40	NORTH AMERICA	MEXICO	SONORA-CIAND (1ST DATE)	2
41	NORTH AMERICA	MEXICO	TLAXCALA	2
42	NORTH AMERICA	MEXICO	TOLUCA	2
55	SOUTH AMERICA	PERU	AYACUCHO	2

\*VARIABLE IDENTIFICATIONS  
2 TEST WT

### Commentary on Test Weight

Improving test weight is a major objective of almost all the triticale programs. Changes in the test weight over the years have been steady but not dramatic. The top twenty lines with the highest test weights based on eleven reporting locations are presented in Table 5. The bread wheat variety Sonalika had the highest test

weight (76.3). The test weight of Zebra 79 (73.2) was almost the same as the bread wheat variety Genaro (73.5). The best yielders B-6912, B-6712, B-6811 and Civet (Cross B-2658) were also present in the top test weight group.



Table 5 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS											MEAN
		7	16	22	23	28	36	39	40	41	42	55	
107	SONALIKA	77	---	---	---	80	78	71	81	75	72	---	76.3
72	GENARO	77	74	58	66	81	78	76	81	76	72	70	73.5
22	ZEBRA79 B-2672-7191-0Y	76	68	65	70	78	78	74	78	69	65	84	73.2
222	GENARO	76	69	55	66	79	78	76	81	76	72	---	72.8
152	BVA-PND"S" X-49029-BY-3Y-3M-2Y-1M-0Y	74	---	56	66	80	71	70	80	75	74	81	72.7
62	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-270-27Y-3Y-0M	75	66	70	70	76	77	74	75	66	70	77	72.4
56	BCH"S"-SPY RYE X BGL"S"({IBB(SON64- AN64 X NAD/JAR"S")}JWRC31)OCTO BULK- CIN"S"} B-6712-170-10Y-3Y-0M	73	66	70	70	77	78	74	76	64	68	79	72.3
10	MUS"S" X DRIRA-KGR B-2658	73	70	65	67	76	74	73	75	68	63	89	72.1
43	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-054-4Y-2Y-0M	71	65	66	70	77	76	72	76	71	70	79	72.1
48	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-071-20Y-2Y-0M	73	64	63	70	77	76	74	75	66	64	90	72.0
61	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-262-19Y-2Y-0M	72	63	70	71	75	79	74	75	65	69	79	72.0
241	PND"S"-MSF"S" X TCE"S" X-66216-4M-2Y-2M-2Y-0M	77	72	62	65	77	77	75	79	70	64	72	71.8
55	BCH"S"-SPY RYE X BGL"S"({IBB(SON64- AN64 X NAD/JAR"S")}JWRC31)OCTO BULK- CIN"S"} B-6712-170-10Y-2Y-0M	75	65	68	68	78	77	73	76	65	66	78	71.7
44	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-055-5Y-3Y-0M	74	60	67	70	77	75	74	77	68	70	76	71.6
57	BCH"S"-SPY RYE X BGL"S"({IBB(SON64- AN64 X NAD/JAR"S")}JWRC31)OCTO BULK- CIN"S"} B-6712-171-11Y-1Y-0M	73	65	69	70	76	74	73	76	64	67	81	71.6
59	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-246-4Y-2Y-0M	72	61	68	70	76	74	74	77	66	68	80	71.5
129	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-3MP-4YP- 0M	73	70	64	64	76	76	72	78	72	70	70	71.4
97	PTR"S"-YD"R" X PND"S" X-52202-2Y-4M-1Y-2M-0Y	74	68	65	65	77	77	73	78	68	63	75	71.2
130	RABI"S"-RYE9 X PND"S" X-57093-1MP-5Y-2MP-11YP-3MP-5YP- 0M	72	68	63	64	75	76	72	78	72	70	73	71.2
139	CML"S"-KAL X LOBO"S"/GPR"S"-RM"S" X-50598-A-1Y-1Y-1M-1Y-1M-0Y	73	82	63	67	73	76	70	76	68	56	79	71.2

**Table 6. Top 15 lines that had a 1000 grain weight of 52 grams or more at two locations**

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
20	EUROPE	GERMAN DEM. REP.	SCHMERIN	13
23	EUROPE	POLAND	RADOM	13
*VARIABLE IDENTIFICATIONS				
13	1000	g. w.		

### Commentary on 1000 Grain Weight

Two locations reported thousand grain weight. The mean ranged from 55.5 to 33.0 grams. The top 15

lines weighing 52 grams or more are reported in Table 6.

Table 6 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS		MEAN
		20	23	
4	FS1795-LNC"S" X24369-4A-1Y-1M-1Y-0M	58	53	55.5
30	MUS"S"-BTA"S" X-65985-3M-1Y-1M-0Y	57	54	55.5
31	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-2Y-0Y	57	54	55.5
173	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-2Y-0Y	57	53	55.0
38	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-3Y-1Y-0B	55	53	54.0
9	MUS"S"-JLO"S" B-2659	54	53	53.5
20	MERINO"S"-JLO"S" B-2736-298	54	53	53.5
32	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-3M-3Y-0Y	54	53	53.5
15	KHOBE 95	53	53	53.0
33	JLO235 X BQL"B" EMS-Z176.3 B4565-1-2Y-0Y	55	51	53.0
7	(CML-PATO X KISS DWARF/BQL"S")BQL"S" B6823	55	50	52.5
18	MERINO"S"-JLO"S" B-2736-0Y-21	51	53	52.0
26	DF"S"-MERINO"S" B-2763-457	---	52	52.0
63	PIPIT"S"-I158.57 X UC90(MUS"S"-MA/ DRIRA-IA X BQL"S") B-5576-447-1Y-1Y-0M	55	49	52.0
183	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-1Y-2Y-0B	54	50	52.0

**Table 7. Top performance entries: *Septoria tritici***

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
4	AFRICA	SOUTH AFRICA	CAPE PROVINCE-WELQEVALLLEN	62
7	AFRICA	TANZANIA	MBEYA-U. A. C.	62
24	EUROPE	PORTUGAL	ELVAS	62
52	SOUTH AMERICA	COLOMBIA	CUNDINAMARCA	62
54	SOUTH AMERICA	PARAGUAY	ITAPUA	62
57	SOUTH AMERICA	PERU	CUSCO-TARAY	62

\*VARIABLE IDENTIFICATIONS  
62 SEP T 0-9

### **Commentary on *Septoria tritici***

Six locations reported *Septoria tritici* ratings. Infection levels ranged from 2.6 to 6.0. Eighteen lines having infection levels below 3.5 are reported in Table 7. There

are some differences in the infection levels between locations. This may indicate differences in the *Septoria* population at each of these locations.

Table 7 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS						MEAN
		4	7	24	52	54	57	
211	YE75 X IRA-CML"S"/TQE"S" X-66340-6Y-1M-2Y-0M	6	4	0	3	---	0	2.6
34	DF"S"-RAM"S" X-52913-23Y-3M-2Y-2M-1Y-0Y	6	2	---	3	---	0	2.8
136	PTR"S"-GZL"S" X PND"S"-ABN"S" X-61083-3M-2Y-1M-0Y	4	3	---	4	---	0	2.8
147	CANANEA79	5	3	3	3	---	0	2.8
173	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-2Y-0Y	5	4	3	2	---	0	2.8
209	TAPIR"S" X PND"S"-RM"S" CT-1833-15Y-1M-2Y-0M	6	5	0	3	---	0	2.8
63	PIPIIT"S"-II58.57 X UC90(MUS"S"-MA/ DRIRA-IA X BGL"S") B-5576-447-1Y-1Y-0M	5	4	3	3	---	0	3.0
171	EDA"S" X M2A-2A75 X-61039-6M-1Y-1M-1Y-0Y	5	4	3	3	---	0	3.0
204	TAPIR"S"(E3-ARM"S" X M2A/ADX"S") CT-1829-9Y-1M-1Y-0M	6	4	0	2	6	0	3.0
36	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-1M-1Y-1Y-0B	5	5	4	2	---	0	3.2
161	BSN"S"-PTR"S" X-48516-6B-3Y-1M-1Y-7M-0Y	6	3	4	3	---	0	3.2
172	PTR"S"-M2A(2) X PUMA"S" X-61140-1M-3Y-3M-1Y-0Y	5	4	3	2	---	2	3.2
208	TAPIR"S" X PND"S"-RM"S" CT-1833-14Y-3M-1Y-0M	6	3	0	3	7	0	3.2
79	PND"S"-CASTOR"S" X-35781-82H-1Y-1M-1Y-1Y-0M	6	3	4	---	---	0	3.3
223	PND"S"-YE75 X FS381-FS477 X-64743-2Y-1M-6Y-1Y-0M	7	3	---	3	---	0	3.3
66	(BGL DERIV SEL BULK/MTZ TCL-TRIGD GD D SEED X BGL GOOD SEED)NUTRIA B-5644-77B-2Y-3Y-0M	4	3	6	4	---	0	3.4
206	TAPIR"S"-BOA"S" CT-1830-4Y-3M-3Y-0M	5	6	3	3	---	0	3.4
104	PTR"S" X M2A-FS1377/IA X CIN"S"-FS65 X-51038-D-4Y-3Y-5M-1Y-2M-0Y	5	3	3	4	4	2	3.5

**Table 8. Top performance entries: *Septoria nodorum***

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
4	AFRICA	SOUTH AFRICA	CAPE PROVINCE-WELGEVALLEN	63
19	CENTRAL AMERICA	GUATEMALA	CHIMALTENANGO	63
22	EUROPE	POLAND	KRAKOW	63
23	EUROPE	POLAND	RADDM	63
37	NORTH AMERICA	CANADA	P. E. I.	63
46	SOUTH AMERICA	BOLIVIA	COCHABAMBA	63
54	SOUTH AMERICA	PARAGUAY	ITAPUA	63

\*VARIABLE IDENTIFICATIONS  
63 SEP N 0-9

**Commentary on *Septoria nodorum***

Seven locations reported *Septoria nodorum* infection ratings. The average infection levels ranged from 2.7 to

6.0. Twenty three lines had infection levels of 3 or less and are reported in Table 8.

Table 8 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	LOCATIONS							MEAN
		4	19	22	23	37	46	54	
12	PANCHE 7287 B-2671-0Y-117	3	1	2	3	5	2	---	2.7
15	KHOBE 95	3	1	3	3	5	1	---	2.7
11	HARE 286 B-2700	3	1	4	2	5	2	---	2.8
20	MERIND"S"-JLD"S" B-2736-298	3	1	2	4	5	2	---	2.8
50	OCTO NV X DRIRA-BQL"S"/BCH"S"-SPY RY B-6912-07B-27Y-1Y-OM	4	1	4	2	5	1	---	2.8
51	BCH"S"-SPY RYE X BQL"S"{{IBB(S0N64-AN64 X NAD/JAR"S")}JWRC31}OCTO BULK-CIN"S" B-6712-159-2Y-2Y-OM	4	1	4	3	4	1	---	2.8
52	BCH"S"-SPY RYE X BQL"S"{{IBB(S0N64-AN64 X NAD/JAR"S")}JWRC31}OCTO BULK-CIN"S" B-6712-166-6Y-4Y-OM	4	1	3	2	4	---	---	2.8
61	OCTO NV-HARE X BCH"S"-SPY RYE B-6811-262-19Y-2Y-OM	3	2	3	3	5	1	---	2.8
123	PND"S"-ABN"S" X IA(2) X-6051B-1MP-1Y-1MP-2YP-1MP-1YP-OM	4	2	3	2	5	1	---	2.8
2	ERONGA 83	2	1	2	---	5	1	7	3.0
13	NUTRIA 7272 B-2709-0Y-111	3	1	3	4	6	1	---	3.0
19	MERIND"S"-JLD"S" B-2736-505	3	1	3	4	5	2	---	3.0
26	DF"S"-MERIND"S" B-2763-457	5	1	3	3	5	1	---	3.0
29	MUS"S"-BTA"S" X-65985-3M-1Y-1M-0Y	4	1	2	4	4	---	---	3.0
33	JLD235 X BQL"S" EMS-Z176.3 B4565-1-2Y-0Y	3	1	2	5	5	2	---	3.0
39	JLD235 X BQL"S"EMS-Z176.3 B-4565-1-2Y-1Y-0B	3	1	4	4	4	2	---	3.0
43	OCTO NV X DRIRA-BQL"S"/BCH"S"-SPY RY B-6912-054-4Y-2Y-OM	5	1	4	3	4	1	---	3.0
44	OCTO NV X DRIRA-BQL"S"/BCH"S"-SPY RY B-6912-055-5Y-3Y-OM	4	1	4	3	5	1	---	3.0
46	OCTO NV X DRIRA-BQL"S"/BCH"S"-SPY RY B-6912-062-11Y-1Y-OM	3	1	5	3	5	1	---	3.0
48	OCTO NV X DRIRA-BQL"S"/BCH"S"-SPY RY B-6912-071-20Y-2Y-OM	3	1	4	2	5	---	---	3.0
55	BCH"S"-SPY RYE X BQL"S"{{IBB(S0N64-AN64 X NAD/JAR"S")}JWRC31}OCTO BULK-CIN"S" B-6712-170-10Y-2Y-OM	4	1	3	3	4	---	---	3.0
124	PND"S"-ABN"S" X IA(2) X-6051B-1MP-1Y-1MP-2YP-1MP-2YP-OM	4	2	3	2	5	2	---	3.0
158	PTR"S"-M2A(2) X-44650-12M-1Y-1Y-2M-2Y-1M-0Y	4	4	3	2	4	1	---	3.0

**Table 9. Top performance entries: *Helminthosporium***

LOCATIONS	CONTINENT	COUNTRY	AREA	VARIABLES INCLUDED
9	AFRICA	ZAMBIA	NORTHERN-KATITO	68
12	ASIA	BANGLADESH	JESSORE (1ST. DATE)	68
19	CENTRAL AMERICA	GUATEMALA	CHIMALTENANGO	68

\*VARIABLE IDENTIFICATIONS  
68 SPT B 0-9

### **Commentary on *Helminthosporium***

In the humid hot environments, *Helminthosporium* spot blotch is a major problem limiting the production of small grain winter cereals. One location each from Zambia, Bangladesh and Guatemala reported good levels of *Helminthosporium* infection. On a 0-9 scale the average infection ranged from 1.7 to 6.7, the low number being more resistant. Nineteen lines had an

average infection level of 2.7 or less and are reported in Table 9. Cross B-6712 was the best and all the eight sisters of this cross included in this nursery were present in the top group of 19. The second best was cross B-6912 with four sisters showing up in the top group. Also, it is interesting to note that the lines with best tolerance to *Helminthosporium* are all complete types.



Table 9 (continued)

VTY NO.	VARIETY OR CROSS AND PEDIGREE	GRAIN	ORIGIN	SPT B 0-9
		NUMBER OF OBSERVATIONS:		( 3)
56	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-170-10Y-3Y-OM			1.7
36	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-1M-1Y-1Y-OB			2.3
46	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-062-11Y-1Y-OM			2.3
47	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-071-20Y-1Y-OM			2.3
50	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-078-27Y-1Y-OM			2.3
55	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-170-10Y-2Y-OM			2.3
57	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-171-11Y-1Y-OM			2.3
8	ZEBRA 225 B-2672			2.7
33	JL0235 X BGL"S" EMS-Z176.3 B4565-1-2Y-0Y			2.7
37	PTR"S"-CASTOR"S" X BTA"S" X-60839-3M-1Y-1M-2Y-1Y-OB			2.7
40	(H277.69 X TOR"S"-TOB66/FS1029)MERIN "S" B-4605-3-1Y-2Y-OB			2.7
45	OCTO NV X DRIRA-BGL"S"/BCH"S"-SPY RY B-6912-057-7Y-3Y-OM			2.7
51	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-159-2Y-2Y-OM			2.7
52	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-166-6Y-4Y-OM			2.7
53	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-167-7Y-1Y-OM			2.7
54	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-168-8Y-2Y-OM			2.7
58	BCH"S"-SPY RYE X BGL"S"{{[BB(SON64-AN64 X NAD/JAR"S")]WRC31}OCTO BULK-CIN"S"} B-6712-171-11Y-4Y-OM			2.7
64	(BGL DERIV SEL BULK/MTZ TCL-TRIGO GO D SEED X BGL GOOD SEED)NUTRIA B-5644-777-1Y-1Y-OM			2.7
65	(BGL DERIV SEL BULK/MTZ TCL-TRIGO GO D SEED X BGL GOOD SEED)NUTRIA B-5644-778-2Y-1Y-OM			2.7

**Table 10. Grain technology data**

Entry Number	Kg/hl	Pearling Index %	Flour Yield %	Falling No. Grain (sec)	Flour Protein %	Sedimentation c.c.	Mixing Time min	Baking Loaf Vol.c.c.	H <sub>2</sub> O Abs.%	Cookte Overall Rating
S-1	68.9	49.5	70.0	162	9.8	19	1:15	550	58.0	F
2	72.6	47.5	70.9	212	9.2	23	2:05	660	58.4	P
3	74.7	44.5	68.6	78	9.4	23	2:00	645	58.7	P
4	74.9	48.0	69.8	79	9.9	20	1:10	590	59.0	P
5	75.3	50.5	68.1	284	9.6	23	1:25	570	58.7	P
6	75.5	45.0	68.2	88	9.2	22	1:25	585	58.4	P
7	71.6	57.5	69.2	208	9.2	19	1:20	540	57.4	P
8	75.1	50.0	70.3	109	8.9	22	1:40	615	58.1	P
9	77.3	49.0	67.5	231	8.9	25	2:25	610	59.1	P
10	74.3	50.5	69.0	392	9.3	23	1:20	520	58.4	F
11	76.1	57.0	72.1	231	9.4	16	0:55	575	57.7	G
12	74.2	49.5	70.6	130	9.1	21	1:45	565	58.4	P
13	74.7	53.5	69.3	148	9.0	25	1:45	685	58.1	F
14	77.6	50.0	68.8	125	8.9	17	1:00	535	57.1	P
15	73.2	48.0	70.2	112	8.9	26	2:00	615	59.1	P
16	74.1	54.5	67.7	103	8.4	20	2:00	570	58.6	P
17	74.9	52.0	68.9	151	9.1	24	1:40	640	58.4	P
18	75.9	47.5	67.8	80	9.1	17	1:00	560	58.4	P
19	76.9	46.5	69.1	166	8.8	18	1:00	550	58.1	P
20	76.3	48.5	67.1	141	9.1	16	1:00	490	58.4	P
21	73.9	47.5	68.6	293	9.2	23	1:25	560	58.4	P
22	77.3	47.5	70.8	192	8.7	19	1:45	575	57.9	P
23	75.6	48.0	67.3	83	8.5	21	2:10	615	57.9	P
24	73.3	48.5	67.4	234	10.1	24	1:15	685	59.3	P
25	73.2	41.5	69.1	152	10.0	23	1:25	640	59.3	P
26	72.8	42.5	67.6	119	10.1	23	1:30	660	59.3	P
27	71.1	38.0	64.8	84	11.3	24	2:10	505	61.4	P
28	72.3	52.5	70.1	272	8.7	23	2:00	640	57.9	F
29	75.4	49.0	69.3	96	8.6	24	1:45	620	57.9	P
30	73.9	49.0	67.4	88	8.7	22	1:25	600	57.9	P
31	74.3	52.5	61.4	69	9.1	24	1:45	700	59.4	P
32	73.4	47.5	66.9	64	9.4	24	1:35	690	59.7	P
33	74.2	49.0	67.5	205	10.3	25	1:30	675	59.3	P
34	72.6	53.5	69.7	115	9.5	26	1:30	630	60.2	P
35	75.5	46.0	70.3	76	10.2	24	1:30	705	59.3	P
36	74.4	49.5	69.8	104	8.4	23	2:40	665	59.6	P
37	75.3	47.5	67.7	94	8.5	24	2:45	650	57.9	P
38	74.0	49.0	69.0	82	9.3	21	1:45	625	58.4	P
39	73.1	50.0	68.8	162	8.8	21	1:45	625	58.1	F
41	72.3	49.5	67.6	110	8.5	18	1:25	465	57.9	P
42	74.4	49.5	70.4	64	9.1	21	1:15	580	58.4	P
43	76.5	53.0	68.2	228	8.5	14	1:00	515	57.9	F
44	76.4	52.0	71.0	324	8.2	14	1:00	500	57.6	F
45	76.1	51.5	70.4	326	8.8	15	0:55	510	58.1	F
46	75.4	52.5	70.2	380	8.6	15	0:55	560	57.9	F
47	75.6	53.5	68.7	322	8.4	13	0:50	530	57.6	F
48	78.0	51.0	72.0	363	8.5	13	0:55	495	57.9	-
49	75.1	54.0	68.0	267	8.7	12	0:40	520	57.9	G
50	75.0	52.5	70.8	312	8.9	15	0:55	545	58.1	F
51	76.4	52.0	71.0	128	9.1	12	0:50	475	58.4	F
52	75.8	53.0	71.7	307	8.5	13	0:50	540	57.9	G
53	76.2	54.5	72.9	223	8.4	13	0:50	525	57.6	VG
54	76.3	54.0	71.3	312	8.4	14	0:55	570	57.6	G
55	76.4	53.5	70.4	248	8.9	14	0:50	570	58.1	F
56	75.7	55.0	72.6	302	9.1	14	0:50	500	57.4	P
57	76.0	59.0	70.7	295	9.0	12	0:50	475	57.1	F
58	75.1	52.5	70.8	277	9.1	14	0:45	490	57.4	F
59	76.1	52.0	67.1	242	9.6	16	1:00	535	57.7	P
60	76.6	52.0	68.8	275	9.0	16	0:55	560	57.4	F
61	77.0	50.0	69.2	247	9.4	16	0:55	515	57.7	P
62	76.0	52.5	72.7	290	8.7	13	0:45	480	56.9	G
63	76.4	61.0	67.7	225	8.9	15	1:00	465	58.4	P
64	76.6	48.0	70.6	147	9.5	29	4:10	775	60.2	P
65	77.2	50.0	69.2	118	9.3	30	3:45	805	59.9	F
66	77.0	47.5	68.9	165	9.5	31	3:40	790	59.7	P
67	69.4	34.0	52.3	308	13.2	38	2:30	760	64.0	P
68	77.2	53.0	67.9	105	9.7	22	1:25	820	59.0	P
70	70.9	58.0	57.5	183	8.4	16	1:30	745	57.6	F
71	75.0	59.0	65.9	203	9.9	21	1:05	730	59.0	F
73	76.9	61.5	68.2	358	9.9	16	1:10	670	59.0	VG
74	74.0	60.0	68.6	268	8.9	16	1:15	600	58.1	G
75	76.3	52.5	67.7	279	9.1	15	1:10	605	58.4	G
76	76.8	60.5	69.2	342	9.8	28	2:35	760	59.0	F
77	76.9	49.0	71.2	222	9.4	12	1:00	450	57.0	F
78	77.7	56.0	69.4	167	9.7	18	1:25	625	58.5	F
79	74.6	57.0	70.3	134	9.4	17	1:15	690	58.0	F
80	73.9	55.0	70.2	98	9.9	22	1:20	750	59.0	G
81	75.8	52.5	67.4	147	9.3	16	1:05	600	58.0	F
82	76.2	55.5	66.5	68	10.1	19	1:10	620	58.0	F
83	77.8	56.5	65.2	71	10.4	19	1:10	720	58.0	F

Table 10 (continued)

Entry Number	Kg/hl	Pearling Index %	Flour Yield %	Falling No. Grain (sec)	Flour Protein %	Sedimentation c.c.	Mixing Time min	Baking Loaf Vol. c.c.	H <sub>2</sub> O Abs. %	Cookie Overall Rating
84	74.9	57.5	68.5	88	9.7	24	1:50	720	59.0	G
85	76.7	50.5	69.0	73	9.9	16	1:15	550	58.0	F
86	74.2	60.0	68.6	123	10.3	23	1:40	815	59.3	F
88	74.2	52.5	68.3	132	10.2	21	1:20	795	59.3	F
89	74.8	49.0	61.7	120	9.5	16	1:25	585	56.7	G
90	75.6	48.0	66.7	167	10.7	29	2:30	740	60.8	F
92	74.5	52.0	68.4	114	10.4	31	1:55	765	60.6	-
98	77.0	49.5	67.0	87	9.8	24	1:35	740	59.0	F
99	74.9	53.5	67.3	129	10.0	19	1:25	620	59.8	F
100	74.4	53.5	65.8	85	9.9	20	1:30	675	60.0	VG
101	76.1	59.0	67.0	225	10.0	13	1:00	585	62.3	F
102	76.2	45.0	62.5	72	9.8	12	0:50	470	62.0	F
103	74.0	55.5	69.8	62	8.8	30	1:45	860	57.6	F
104	74.8	53.5	67.4	194	8.8	17	1:45	720	58.1	G
105	74.8	53.5	67.0	259	8.6	19	1:40	720	57.9	G
106	75.7	54.0	67.9	142	9.1	19	1:50	710	58.4	F
108	74.8	53.0	68.8	135	8.9	20	1:55	725	59.8	F
109	77.9	56.5	67.9	145	8.8	19	1:45	735	59.6	F
110	77.0	52.5	68.8	145	9.2	23	1:45	715	59.4	F
111	76.3	52.5	67.5	202	9.3	25	1:50	765	60.4	F
112	77.3	52.5	70.0	134	9.5	21	1:30	800	58.7	F
113	74.3	58.5	67.2	138	9.9	17	1:00	715	57.0	G
114	76.5	52.0	68.2	68	9.6	16	1:00	570	58.7	F
115	75.7	60.0	70.1	122	9.5	19	1:15	690	57.2	VG
116	76.9	51.5	67.7	236	9.9	13	0:45	410	57.0	F
117	75.8	53.5	65.3	88	10.4	20	1:00	570	59.6	F
118	77.7	47.5	67.2	78	9.6	15	1:00	690	58.7	F
119	76.9	51.5	67.5	142	9.6	16	1:15	675	58.7	F
120	76.5	54.5	68.4	102	8.5	15	1:15	675	57.9	F
121	75.6	56.5	67.6	149	8.9	19	1:30	705	58.1	F
122	76.4	49.5	66.6	65	9.5	16	0:45	550	58.7	F
123	76.2	64.0	70.3	154	9.7	22	1:25	735	59.0	VG
124	76.0	65.5	68.1	132	9.6	19	1:15	795	58.7	VG
125	75.5	64.0	67.8	126	10.0	22	1:00	725	59.3	VG
126	76.4	62.0	67.9	100	9.5	18	1:00	735	58.7	VG
127	77.6	53.0	66.8	94	10.5	20	1:10	695	57.6	P
128	77.9	50.0	70.2	79	10.3	17	1:10	720	57.3	F
129	77.9	48.5	67.9	109	10.5	19	1:05	730	57.6	P
130	78.0	49.0	69.6	78	10.3	19	1:00	740	57.3	F
131	77.3	46.5	67.8	80	9.8	20	1:25	610	57.0	F
132	71.2	47.5	68.8	429	10.9	25	1:20	655	58.8	P
133	71.2	47.5	68.4	262	11.1	38	1:30	675	60.1	P
134	71.7	50.0	69.0	228	11.3	38	2:05	860	60.4	P
135	70.9	47.5	67.8	129	11.7	33	2:15	795	59.7	F
136	70.2	41.0	60.4	371	12.5	48	2:50	825	63.6	P
137	74.4	51.5	68.0	413	9.6	19	1:45	655	57.7	G
138	71.7	48.0	68.8	419	10.6	21	1:10	695	58.6	F
139	74.8	42.0	69.4	302	11.4	35	2:30	865	60.4	P
140	72.0	44.0	65.9	291	10.5	31	2:30	780	59.6	P
141	73.4	43.0	69.5	174	10.5	30	2:15	785	62.6	F
142	73.8	43.0	68.1	150	10.5	28	2:05	775	62.6	F
143	73.7	42.5	68.8	152	10.5	30	2:05	775	62.6	P
144	74.7	50.0	68.0	163	11.0	34	2:45	870	60.1	F
145	74.1	41.5	63.5	73	11.0	30	2:20	725	63.0	P
146	74.7	50.0	65.9	146	10.6	36	2:30	820	59.6	F
147	75.5	53.0	69.0	204	11.1	35	2:15	840	59.1	F
148	73.0	55.0	67.1	292	11.0	27	1:20	830	58.1	G
149	71.0	61.5	67.6	142	10.9	32	1:40	855	59.8	VG
150	71.8	54.5	67.8	130	8.6	17	1:30	745	56.7	G
151	75.0	62.0	68.0	168	10.4	21	1:00	750	59.6	VG
153	69.9	43.5	55.8	398	11.9	26	1:15	585	59.0	P
154	71.1	47.5	66.9	79	11.8	28	1:30	710	60.7	F
155	72.1	48.0	66.9	385	11.3	38	2:25	845	60.4	F
156	72.6	55.0	66.8	323	11.0	30	1:55	830	60.1	F
157	72.7	43.0	66.4	274	10.8	24	1:40	650	59.8	P
158	70.5	57.5	67.9	426	10.6	34	3:45	885	59.6	F
159	72.3	43.5	67.7	126	11.0	34	2:00	745	60.1	-
160	72.8	45.5	67.7	158	10.7	33	1:45	705	59.0	P
161	74.2	55.0	69.0	224	10.7	24	1:30	760	59.0	F
162	72.3	57.5	68.2	202	10.2	30	1:45	765	59.3	F
163	71.3	54.5	66.6	256	11.3	32	1:30	840	60.4	P
164	72.5	57.5	67.3	351	11.6	33	1:25	825	60.7	F
165	74.6	57.5	66.3	386	8.9	17	1:40	635	56.1	G
166	75.1	45.0	66.0	222	8.5	16	1:30	605	56.9	F
167	77.4	51.5	67.2	307	8.6	15	1:30	555	56.6	G
168	77.7	50.5	67.3	162	9.2	11	0:40	445	56.4	G
169	75.8	49.0	68.5	99	10.3	15	0:45	450	57.3	F
170	75.5	55.0	67.9	235	10.0	20	1:00	710	58.3	F
171	75.8	55.0	68.2	289	10.3	30	2:30	865	59.3	G
172	75.8	58.0	68.3	99	10.6	14	0:45	480	56.6	G

Table 10 (continued)

Entry Number	Kg/hl	Peering 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. %	
173	75.1	56.5	69.0	74	10.0	15	0:55	500	57.3	G
174	77.9	30.0	68.9	120	12.0	30	1:45	655	67.0	P
175	76.8	33.0	68.9	113	11.5	28	1:40	475	67.4	P
176	75.8	66.0	69.8	132	10.2	19	1:10	700	59.3	G
177	77.3	57.0	69.2	242	9.5	18	1:15	705	58.7	G
178	76.3	57.0	67.4	173	10.4	26	1:15	780	59.6	F
179	75.5	59.0	67.2	246	9.2	20	1:30	665	58.4	G
180	75.8	57.0	69.4	231	10.2	20	1:30	770	59.3	VG
181	76.8	51.5	68.2	102	10.5	22	1:10	770	59.6	F
182	74.4	50.0	68.9	107	9.0	13	1:00	455	56.1	P
183	75.3	59.5	67.9	76	10.0	13	0:45	510	56.3	F
184	72.7	55.0	68.0	180	10.6	22	1:20	825	58.6	F
185	76.0	56.0	68.8	123	9.9	25	1:50	755	59.0	F
186	75.8	52.5	68.7	256	9.5	19	1:15	675	58.7	F
187	75.9	55.0	67.8	307	8.6	18	1:40	650	56.9	F
188	76.8	48.5	70.1	198	9.2	18	1:25	550	57.4	F
189	75.5	61.0	68.9	256	8.6	19	1:45	690	57.9	G
190	75.2	59.5	69.6	179	9.2	20	1:50	715	58.4	VG
191	75.2	59.0	67.7	193	9.0	19	1:50	665	57.1	G
192	75.5	58.0	66.2	265	7.6	12	1:30	440	56.0	G
193	74.8	59.5	67.6	355	7.3	11	1:00	490	55.7	G
194	77.1	52.5	67.5	197	9.5	18	1:10	625	59.2	F
195	72.1	50.0	68.5	519	9.3	15	1:15	505	58.4	F
196	77.2	53.5	68.8	240	9.5	20	1:20	725	59.7	G
197	76.7	58.0	66.8	102	9.8	24	2:40	680	59.0	VG
204	77.0	48.5	65.0	252	8.7	12	1:05	560	56.9	VG
205	76.7	52.0	68.5	207	9.0	14	1:00	600	56.1	G
206	77.9	55.0	67.9	311	8.6	12	1:10	550	56.9	F
207	78.0	52.5	67.4	305	8.6	18	1:30	530	57.9	F
208	77.4	55.0	69.4	380	9.6	13	1:35	495	56.7	G
209	76.8	52.5	68.2	283	9.5	16	1:25	680	58.7	F
210	75.5	55.0	70.3	138	9.7	16	1:10	545	58.0	F
211	76.7	59.5	69.2	100	10.0	14	0:50	630	58.0	G
212	76.9	57.5	68.3	174	10.0	21	1:40	725	58.0	VG
213	76.4	51.0	69.8	256	10.4	22	1:25	740	58.6	G
214	74.6	58.0	68.8	101	10.3	23	1:35	740	59.3	F
215	75.4	57.5	68.1	126	9.6	16	1:25	720	57.7	VG
216	75.5	50.5	67.2	108	10.3	24	1:30	775	59.3	F
217	75.9	51.0	67.7	136	10.3	23	1:15	790	59.3	F
218	75.5	54.0	68.9	103	9.7	11	0:45	465	56.0	G
219	76.4	52.5	68.6	161	10.3	19	1:00	705	57.3	F
220	71.5	57.5	71.4	142	8.5	14	1:00	700	55.9	G
221	75.0	62.0	67.2	122	10.2	19	1:00	680	57.3	G
223	76.1	51.0	67.2	229	10.1	19	1:00	710	60.4	P
224	76.8	56.5	69.4	142	9.2	19	1:15	675	58.4	G
225	76.2	57.5	71.6	143	10.0	17	1:00	630	59.0	G
226	76.0	57.5	69.4	178	9.3	17	1:10	660	56.4	G
227	76.8	63.0	68.2	157	10.7	17	1:10	755	57.8	G
228	74.7	57.0	68.6	85	10.3	19	1:05	650	57.3	F
229	75.3	58.5	67.4	175	10.4	18	1:15	705	57.6	F
230	74.5	57.0	67.0	135	9.4	21	2:00	745	57.4	F
231	75.9	59.0	69.6	150	9.5	21	1:45	800	58.7	F
232	74.7	51.5	69.1	93	9.9	18	1:15	705	57.0	G
233	76.5	54.0	69.3	99	9.2	20	1:55	720	58.4	F
234	77.3	56.5	67.2	204	9.5	23	2:20	735	58.7	F
235	76.5	52.0	66.2	228	9.4	16	1:25	620	56.7	F
236	74.9	52.5	68.2	96	10.4	21	1:25	750	59.6	P
237	76.0	53.5	67.9	319	9.8	18	1:15	750	57.0	G
238	76.1	50.0	68.4	123	10.2	17	1:05	600	57.3	F
239	76.3	34.5	64.6	132	11.0	30	1:50	670	63.6	P
240	77.7	50.0	68.0	106	10.2	18	1:05	520	58.3	P
241	77.5	44.0	67.0	110	9.9	17	1:00	520	58.0	F
242	76.9	47.0	65.8	72	9.9	17	1:05	575	58.0	F
243	77.7	51.5	66.3	195	9.9	21	1:30	740	58.0	F
244	75.5	52.0	66.8	206	10.7	25	1:20	810	58.8	P
245	76.5	61.0	69.6	138	10.2	17	1:00	665	57.3	F
246	77.3	61.0	68.5	245	10.4	17	1:00	655	57.6	G
247	76.3	52.5	68.9	69	11.0	19	1:00	660	58.1	F
248	75.1	55.5	70.1	235	10.4	20	1:25	675	57.6	G
249	76.3	52.5	66.5	183	10.8	23	1:20	750	57.8	F
250	76.0	58.0	68.6	92	11.1	20	0:50	675	58.1	F

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

### **Commentary on leaf rust**

Seven locations reported leaf rust notes. In general, infection levels were low. Two hundred twenty of 250 entries had a coefficient of infection below 15. Please refer to Table 2 for more information.

### **Commentary on stripe rust**

The stations of Mbeya in Tanzania and Cundinamarca in Colombia reported stripe rust. There were some differences between the stations with respect to the virulence. Thirty five lines had a reading of zero. Please refer to Table 2 for more details.



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