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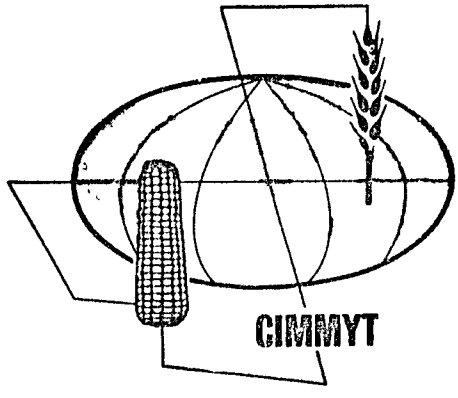

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RESULTS OF THE EIGHTH INTERNATIONAL SPRING WHEAT YIELD NURSERY

1971 - 1972

Abstract

The Eighth International Spring Wheat Yield Nursery (ISWYN) was composed of 50 spring wheat varieties representative of the major spring wheat types. Data, received from 83 locations throughout the spring wheat regions of the world, included yield, agronomic traits and disease reactions. Location summaries with statistical analyses are presented for all traits measured at each reporting location.

Introduction

A cornerstone of the success of CIMMYT's wheat program has been the International Spring Wheat Yield Nursery: ISWYN.

The first ISWYN was sent out from Mexico in 1964. The excellent response from many cooperators was very encouraging, so it was decided to continue testing internationally promising wheat varieties and advanced lines. This kind of nursery provides the participants with (I) basic information about adaptability of varieties, yield potential, as well as diseases and pest resistance, (II) parental material for accelerated breeding programs, (III) indications of those varieties which might serve as immediate introductions into potentially high production areas and (IV) a means of evaluating their most promising breeding materials on a world wide basis, and also to simultaneously fostering international cooperation.

Materials and Methods

Seed for the Eighth ISWYN was multiplied during the 1970-1971 growing season at the Centro de Investigaciones Agrícolas del Noroeste (CIANO). The seed was treated with Vitavax (registered trademark for 5, 6-dihydro-2, methyl-1, 4 oxathiin-3-carboxanilide) before it was packed. Instructions for the management of the International Yield Nurseries, the general notes to be taken sheet, as well as the data sheets were included in each box. All the nurseries were sent out from Mexico and shipped by air.

The Eighth ISWYN was composed of 50 varieties (49 commercial varieties or lines + 1 local check), representing 17 different countries. The plots consisted of six rows of 2.5 meters long, 30 cm apart, with three replications. The yield trials were conducted under both rainfed and irrigated conditions, both fertilized and infertilized.

The locations ranged from 40° latitude in Chile, Argentina, South Africa and New Zealand to 60° in Norway. The trials were sowed at elevations from several meters below sea level in Netherlands up to 3058 meters above sea level in Ecuador.

The varieties entered for testing in the Eighth ISWYN were 1/:

ARGENTINA:

* Gaboto: Bagé 2018 x H44 - Sinvalocho Mag/Bagé 1971/37. It is a variety from Argentina and one of the most important soft grained variety in the Northern part of the Argentine wheat belt. It is considered resistant to Septoria spp, Fusarium spp and all 3 rusts. It flowers in 103 days and has a height of 120 cms under Mexican conditions.

1/ Pedigree notations are: "S" = sib; E = dwarf and superscript numerals = number of backcrosses.

* An asterisk preceeding a variety or cross indicates entry in a previous ISWYN.

* Jaral "S": Son 64 A x Tzpp - Nar 60 (c). 18889-101M-1R-3C-1T-2B-0Y. It is a promising high yielding line from Argentina. It shows good resistance to stem and leaf rust. It flowers in 83 days and has height of 90 cms under Mexican conditions.

* Pato Argentino: Tzpp - Son 64 x Nar 59. II 21974-4R-4M-2B-0Y-0P-0Y. It is a semi-dwarf stiff-strawed variety from Argentina with resistance to all three rusts and Septoria spp. It flowers in 91 days and has a height of 90 cms under Mexican conditions. It is also resistant to water logging condition.

* Piamontes: It is a commercial variety from Argentina that flowers in 100 days and has a height of 130 cms. It is moderately susceptible to stem and leaf rust, and moderately resistant to Septoria spp.

* Son 64 - Kl. Rend.: II 19975-68Y-1J-1Y-1J-5Y-1T. Is a line from Argentina with promising yield potential and broad adaptation. It is of intermediate maturity, semi-dwarf with good resistance to rusts. It has some cold tolerance and has shown tolerance to Septoria in some parts of the world specially in North Africa and Middle East. It is a sister line of M.J. INTA, Soltane, Zaafrane and Mexico 226.

AUSTRALIA:

* Mexico 120: = (Pitic "S") = YT 54 - N10B. II 7074. It is an advanced line from Australia. A three gene dwarf that has shown wide adaptability. Reported to perform well under dry conditions in Australia. Susceptible to stem, leaf and stripe rust. It shows Septoria resistance in some parts of the world. It flowers in 85 days and has a height of 60 cms under Mexican conditions.

BRAZIL:

* Carazinho: Colonista - Frontana. A variety from Brazil. It is a soft red-seeded commercial variety, reported to be able to produce relatively good yield on acid soils. It has good stripe rust resistance under

most conditions. It flowers in 103 days and has a height of 130 cms. It is moderately susceptible to stem rust and moderately resistant to leaf rust under Mexican conditions.

* Iassul 20: (Frontana x Kenya 58) x Colonias. A variety released in Brazil during 1963. A tall variety, very resistant to Septoria spp in many parts of the world. It has a height of 130 cms. It is moderately susceptible to stripe rust and possibly stem rust slow ruster. It is resistant to aluminum toxicity under Brazilian conditions.

CANADA:

* Manitou: It is a light sensitive variety from Canada that flowers in 140 days and has a height of 120 cms. It is resistant to stem rust and very susceptible to leaf rust under Mexican conditions. It has some tolerance to Septoria tritici.

Manitou/Insensitive: 6/RL 4126-21 = RL 4269, RL 4126-21 = SK8/ Ex Chris. It is a light insensitive variety from Canada that flowers in 70 days and has a height of 110 cms. It shows a high level of resistance to stem rust, but is very susceptible to leaf rust under Mexican conditions. It differs only by one gene for light insensitivity to Manitou.

COLOMBIA:

* Bonza 55: Y 50 - Kt 48. 2254-2P-111B-4B-1B. An important commercial variety in Colombia and Ecuador which has maintained an effective level of resistance to both, stripe and stem rust for 19 years. Flowers in 85 days, it is awnless and of normal height of 120 cms. One of the best breeding stocks for generalized resistance to stripe rust and stem rust.

* Napo 63: Frocor - Frontana/Y48 x Nariño "S". 9314-22T-1B-1T. An important commercial variety in Colombia and Ecuador, showing a high level of resistance to stem rust. It was highly resistant to stripe rust, until recently it started getting head infection in Ecuador. It flowers in 83 days under Mexican conditions and it has a height of 105 cms.

CHILE:

* Huelquen: It is a widely grown commercial variety in Chile. It is normal in height and flowers in 75 days under Mexican conditions. It is susceptible to both, stem and leaf rust in Mexico.

Mara x Supremo - Mentana-MCM: It is a line from Chile which under Mexican conditions is very late flowering. It shows a high level of resistance to stem and leaf rust in Mexico.

Toquifen "S": $(908\text{-}Fn)^2$-4160 x (Yt - Nor 10B) $(C14^2)$. Ch-7817-3P-4P-1P-2P-1P. It is a variety from Chile with a high level of resistance to stem and leaf rust, and height of 90 cms and a flowering period of 104 days under Mexican conditions.

EGYPT:

* Giza 155: Regent - Giza 139^2 / Mida x Cadet - CI 12441 x $H62^2$. It is a variety from Egypt. White grained and of high test weight. It flowers in 86 days and has a height of 115 cms. It is resistant to stem and leaf rust under Mexican conditions.

INDIA:

* Chhoti Lerma: = 5331. LR 64 "S" - Hua (R). II 15929-1M-4Y-2M. A Mexican cross selected and released in India during 1967. Also released in Pakistan as Green Valley during 1970. Resistant to stem rust and moderately susceptible to leaf rust and susceptible to Septoria spp. It flowers in 86 days and has a height of 100 cms under Mexican conditions. It is white seeded.

Hira: = HD 1941 = E 5477 x Son 64. E-5477 = Pi "S". It is a variety from India and it is highly susceptible to all three rusts under Mexican conditions. It is a three gene dwarf with a flowering period of 78 days and a height of 65 cms. It has white grain, and has semi-erect leaf

and closed crown. Of particular interest is its extremely early flowering and relatively prolonged maturity period.

* 8156 (B): It is a variety selected in from the cross 8156 in Mexico. Because of high yield adaptation, it is grown now more than 6 m hectares in many countries. It has many names including Kalyansona, Mexipak, Siete Cerros, Laketch and Misry. It is now highly susceptible to the three rusts and is susceptible to Septoria spp. It flowers in 89 days and has height of 90 cms.

* Sonalika: II-53-388-Andès x Pitic "S" - LR64/B4946 - A 4 - 18-2.1 - Y53 x Y50^3. II 18427-4R-1M. It is a semi-dwarf variety from India that has high yield potential and excellent grain type. It is susceptible to Septoria spp. It flowers in 87 days and has a height of 90 cms. It shows resistance to stem rust, but it is susceptible to leaf rust under Mexican conditions. It is known in Pakistan as Blue Silver.

* UP 301: LR64 - Son 64. It is a triple dwarf variety from India that yields well in good environments. It was released for use in the Southern part of India. Also shows promise in Egypt and North Africa. It is resistant to stem and leaf rust. It is susceptible to Septoria. It flowers in 90 days and has a height of 60 cms under Mexican conditions.

IRAQ:

Mexico 226: Son 64 - Kl. Rend. II 19975-68Y-1T-6Y-3J-2Y. It is a variety from Iraq, that shows a high level of resistance to stem and leaf rust. It flowers in 74 days and has a height of 90 cms under Mexican conditions. It is a sister line to M.J. INTA, Soltane and Zaafrane.

ISRAEL:

* Hazera 2152: YT 54 A^3 - N10B. II 8474A-8T-12B. It is a variety from Israel released in 1969, grown extensively by 1970 with good yield potential. It flowers in 83 days and has a height of 85 cms. It shows moderate susceptibility to stem rust, but is highly susceptible to leaf rust

under Mexican conditions.

ITALY:

* Victor I: II 50-35 x Mara^3 x Frontana - Kenya 58 - New Thatch. It is a variety from Italy. It is of late maturity, intermediate growth and good yield potential. It is susceptible to stem rust, has moderate resistance to stripe rust. In North Africa and the Near and Middle East, it has shown resistance to Septoria spp. It flowers in 105 days and has a height of 95 cms under Mexican conditions.

MEXICO:

Bb - Inia: = Torim 73. 26591-1T-7M-0Y-55Y-0M. It is a Mexican variety that shows a high level of resistance to stem rust. It is moderately resistant to leaf rust and to stripe rust. It flowers in 82 days and has a height of 70 cms under Mexican conditions. It is a triple dwarf with erect spikes and white hard grain. Test weight of 82 kg/hl.

* Cajeme 71: = Bluebird # 4 = Cno "S" x Son 64 - Kl. Rend./8156. II 23584-26Y-2M-3Y-2M-0Y. It was released in Mexico during 1971 as a commercial variety. It is a sister line to Yecora F 70. It is a triple dwarf variety of 75-85 cms, with a red kernel and strong gluten. It is resistant to stem rust and moderately susceptible to leaf rust. It flowers in 90 days under Mexican conditions. It has short and strong stems. The spike is white, beared, fusiform and resistant to shattering. Test weight of 80. with good milling and baking properties. Good yield potential, higher than Inia F 66.

Calidad: = Tzpp - Son 64/LR 64A - Tzpp x An_E. 22429-16M-1Y-1M-0Y. It is a Mexican variety that shows a high level of resistance to stem rust, moderately susceptibility to leaf rust. It flowers in 75 days and has a height of 90 cms under Mexican conditions. It has tolerance to Septoria in Tunisia.

* Inia 66: Lerma Rojo 64 - Son 64. 19008-83M-100Y-100M-100Y-

100C. It is a semi-dwarf Mexican variety and has shown excellent bread making qualities and good yield potential. It has good lodging and good yield potential. It has good lodging resistance and shows a high level of resistance to many races of stem rust. It is susceptible to leaf rust, to bunt and barley yellow dwarf. Heading in 80 days. It has a height of 100 cms under Mexican conditions. Test weight 83.3 kg/hl.

* LR64 - N10B x An_E^3: It is a semi-dwarf line originally selected from Mexico. This variety was recently named Mexicani in Sudan. It shows highly susceptible to stem rust but resistant to leaf rust. It flowers in 78 days and has a height of 90 cms under Mexican conditions. It is known as WW-15 in Australia, Anza in U.S.A. (California), Moghan in Iran and Karamu in New Zealand. It has good tolerance to Septoria and moderately resistant to stripe rust.

* Penjamo 62: (Frontana x Kenya 58 - New Thatch) Norin 10 Brevor. II-7078-1R-6M-1R-1M. One of the first Mexican semi-dwarfs. It is grown in a number of countries and has broad adaptation. Spring habit with white, short and strong stem. It is a single dwarf. The spike is white, fusiform and resistant to shattering. The kernel is soft red of medium size. Test weight of 80.3 and 10.8% of protein. It flowers in 82 days and has a height of 105 cms under Mexican conditions. It has adult plant resistance to leaf rust but is tolerant to stem, stripe rust and Septoria spp.

* Pitic 62: Yaktana 54 x N10B. 26-1C-7064-1Y-1H-1R-2M. First semi-dwarf variety released in Mexico. This high yielding variety has done well in the Inter-American Nurseries, all 3 Near East-American Nurseries and the ISWYN's. It has low test weight and susceptibility to current races of stem rust. It is being grown commercially in some countries. It flowers in 95 days and has a height of 110 cms.

* Potam 70: Inia "S" - Napo 63. II 22402-6M-4Y-1M-1Y-0M. It is a Mexican variety with strong straw, white grain and soft extensible gluten. It is a double dwarf that shows a high level of resistance to stem rust but it is susceptible to leaf rust and Septoria. It flowers in 71 days and has a height of 80 cms under Mexican conditions.

Tanori 71: Son 64 - Cno "S" x Inia. 25717-11Y-3M-1Y-0M. It is an early variety with strong short straw (2 gene dwarf). Red grain with

83 kg/hl. It shows an effective level of resistance to both, stem and leaf rust in many parts of the world including Mexico, India, Pakistan and Egypt. Flowers in 85 days and is of 90 cms of height. It has shown high yield potential in many countries.

* Tobari 66: Tzpp - Son 64 A. 19201-4M-3Y-102M-100Y-101C. It is a Mexican red-seeded dwarf variety. It has excellent resistance to stem and leaf rust and flowers in 84 days under Mexican conditions. The height of this variety is of 90 cms.

Vicam 71: Inia "S" - Napo. 23398-39M-1R-0Y-101M-0Y. It is a Mexican variety which has short and strong stems. It is triple dwarf, brown glumed, bearded fusiform and resistant to shattering. Kernel is soft white and medium size test weight of 79 kg/hl. This variety shows a high level of resistance to stem rust and it is moderately susceptible to leaf rust.

* Yecora F 70: = Bluebird # 2 = Cno "S" - Son 64 - Kl. Rend./ 8156. 23584-26Y-2M-1Y-0M. A triple dwarf variety released by Mexico during 1970. The variety is a sister line to Cajeme 71. It has strong straw, white grain with strong elastic gluten. Very good yield potential in Mexico. Resistant to stem rust, moderately susceptible to leaf rust and Septoria. Heading in 78 days, short and strong stem with a height of 70-80 cms (triple dwarf). The spike is white, awned fusiform and resistant to shattering. The kernel is white and of medium size. Test weight 81.0 kg/hl.

PAKISTAN:

* Chenab 70: C-271 x Willet (E) - Son 64. PK 146-12A-4A-1A. It is a semi-dwarf variety from Pakistan with soft white grain type. It is susceptible to stripe rust and leaf rust. Stem and leaf rust may be severe under some conditions. It flowers in 86 days and has a height of 100 cms.

Nayab 70: It is a variety from Pakistan that flowers in 83 days and has a height of 105 cms. It is moderately susceptible to both, stem and leaf rust under Mexican conditions. It is somewhat subject to shattering.

PORTUGAL:

Mexicano 1481: It is a variety from Portugal that flowers in 89 days and has a height of 105 cms. It is susceptible to stem rust and leaf rust, under Mexican conditions.

RHODESIA:

Jaral "S"/Lee-SK - Mara: S 1103. It is an advanced line from Rhodesia that flowers in 79 days under Mexican conditions and has a height of 70 cms. It shows good resistance to stem rust and is moderately susceptible to leaf rust.

* Lundi: Mara x Lee - Selkirk. S 595-A1-A6-B2. It is a semi-dwarf variety from Rhodesia with moderate susceptibility to leaf rust. It flowers in 79 days and has a height of 80 cms under Mexican conditions.

* Zambezi: 8156 x Lee - Thatcher x Kenya 338 AC/Lee - Mida - Siete Cerros. It is a variety from Rhodesia with good yield potential. It shows moderate susceptibility to stem rust but has a high level of resistance to leaf rust. It flowers in 89 days and has a height of 85 cms under Mexican conditions.

TUNISIA:

Ariana 66: It is a variety from Tunisia that flowers in 118 days and has a height of 110 cms. It is resistant to stem and leaf rust under Mexican conditions.

* BT 2281: Tzpp - Son 64 x LR64 - Son 64/Son 64 A x SK_E^3 - An. It is an advanced line from Tunisia showing good resistance to all three rusts. It is a two gene dwarf with 90 cms of height. It yields about the same as Inia 66 in North Africa. The kernel is red and it flowers in 85 days under Mexican conditions.

* BT 2288: Tacuari - Pj 62. It is a good yielding line, semi-dwarf with long spikes and red grain. It is a variety from Tunisia which shows a high level of resistance to all three rusts under Mexican conditions. It flowers in 85 days and has a height of 85 cms.

BT 2296: Son 64 - Klein Rendidor. II-19975-68Y-1J-6Y-1J-3Y. It is a variety from Tunisia that flowers in 77 days and has a height of 100 cms. It is resistant to stem rust and very susceptible to leaf rust.

T - 64 - 2 - W: Kenya 338 - E. de Ch x Koudiat 17 - Kt - Y. A variety from Tunisia which shows a high level of resistance to stem rust but a high level of susceptibility to leaf rust under Mexican conditions. It is moderately resistant to Septoria spp. It flowers in 79 days under Mexican conditions, and has a height of 110 cms.

U.S.A.:

* Chris: CI 13751 Frontana - Thatcher x II 44-29 - Thatcher^2 - II 53 - 525 - 1. A variety developed in Minnesota with excellent quality, having good resistance to stem rust with fair resistance to Septoria. It is widely grown in the United States and Canada. It flowers in 91 days under Mexican conditions and it is of normal height of 120 cms.

Era: It is a semi-dwarf variety developed by the U. of Minn., which shows high level of resistance to leaf and stem rust, in many parts of the world including Mexico, USA and Kenya. It flowers in 136 days and has a height of 100 cms. It is one of the major spring wheat varieties in Northern USA.

Data Processing and Analysis of Variance

The coefficients of disease infection have been analyzed statistically as well as correlated with other traits (e.g., yield). However, for tabular presentation in this report, the standard rust scale notes from the first replication at each location are presented since it is easier to visualize from this the response of a particular variety. The mean rust reaction by location is presented as an index of the amount of rust at that location. Relatively low mean rust values indicate low incidence and/or virulence of the pathogen. Higher means are indicative of a higher incidence and/or virulence. These means provide a relative location comparison and a reflection of the degree of infection of that pathogen in that nursery under the environmental conditions that existed.

Other indices of varietal performance were analyzed whenever possible and are presented in the tables. Most of these values were percentages. Several indices were transformed to percent.

The ISWYN trials, comprising three replications, are prepared in a completely randomized block design.

The variables for each variety are collected and the mean value is calculated. The yields are ranked in descending order.

The mean values for yield and other variables are obtained for each variety. Then, the mean of the means is calculated for every variable. This is called the grand mean, and is written under each variable column.

The remaining sequences for standard error of the grand mean, coefficient of variation (CV), and LSD .05 are all called analysis of variance, which has been calculated only when there are two or more replications of data.

The analysis of variance for yield illustrate the point, and this procedure is applicable for any variable of ISWYN, when it is replicated two or three times.

In the previous nursery reports, when the coefficient of variation (CV) was greater than 75%, the data for that specific variable were deleted and the column was not printed. This event ocurred with variables other than yield. Wheat scientists have requested that variables with (CV)

greater than 75% be printed. Consequently, we may see in some tables a few variables with high (CV). A high (CV) results from high standard error and low mean values. This occurs when data is omitted, numerous zero values are recorded, difference in estimating values for variables between replicates, or it is due to natural variation in environment. Therefore, estimated error of variances were computed directly for all traits reported. The (CV) is expressed in percentage (ratio of standard error to grand mean times 100 by square root or)nr(, where n=number of varieties and r=number of replications). The (CV) is used for observing the variation between two variables among locations.

The least significant difference (LSD) is calculated at the 5% level. The advantage of (LSD) is that it is easy to use for making comparison between two means for two locations.

Considerable insight into factors influencing yield can sometimes be gained by correlation studies. Correlations were performed on all possible pairs of factors by location using the mean value for each trait reported. Correlations were computed on the replication means rather than the raw values because some types of data were frequently reported for only one replication. The population size is fairly small for this type of analysis and some spurious correlations may be encountered. Discretion is advised in interpretation of these values. Many workers find correlation analyses interesting and useful and they are presented as part of the summary table for each location with an awareness of their limitations.

The overall location means were computed for each variable and are presented herein when the number of observations justified inclusion. With the exception of the rust data, the reported units are those used throughout this report. For arithmetic purposes the mean rust reactions were computed on the coefficient of infection values (CI). A comparison of relative CIs is suggested for selecting potentially useful rust resistant varieties. Average values of less than 10 can be considered as quite resistant while varieties with values greater than 20 might be considered susceptible.

Many problems have been encountered in the analyses and summary of these unique data. It has been our attempt to provide the reader with the maximum amount of usable information and yet not confuse the picture with a great deal of computation detail.

Results and Discussion

Data from 83 locations representing 47 countries were returned to CIMMYT for the analysis of the Eighth ISWYN. The maximum number of cooperators have been included in this nursery. Figure 1 shows the reporting locations with their corresponding table number. Figure 2 illustrates the growing season at each site and the elevation above or below sea level.

Tables 1 to 83 give the performance of the varieties for yield, agronomic and disease characteristics in an specific set of environment conditions, thus giving the reader more insight into the suitability of varieties to the environment. The overall mean for all locations for the variable measures is in table 84.

The top variety for all locations was LR64-N10B x An_E^3 = WW15, contributed by Australia with a mean of 4158 kg/ha. The same variety but contributed by Sudan with the name of "Mexicani" had the highest yield in the Seventh ISWYN (4105 kg/ha). This variety is a Mexican selection, and is grown in California under the name of Anza, in New Zealand under the name of Karamu, and in Iran under the name of Moghan 1.

Tanori 71, Kalyansona 227, Penjamo 62, Chenab 70, Chotti Lerma and Cajeme 71 ranked second through seventh, respectively. In the Seventh ISWYN these varieties (except for Tanori 71 which was not included in the Seventh ISWYN) ranked, fifth, 15th, 12th, 10th, and second, respectively. However, the average for yield in the Eighth ISWYN for those varieties as compared with the Seventh was only 94 kg/ha different. All the above-mentioned varieties are of Mexican origin, except the Chenab 70 which has some of its gene pool from Pakistani origin.

The Mexican variety Pitic 62 has been included in all the International Spring Wheat Yield Nurseries. Its broad adaptability is observed from the fact that it has been included among the top varieties in some ISWYN's. However, its adaptation is decreasing in some areas because susceptibility to rusts.

The top ten varieties are semi-dwarf wheats and they have certain amount of resistance to lodging. Nine of them are of Mexican origin. On the other hand, the ten lowest varieties are tall and susceptible to lodging. None of the Mexican varieties are included in this group.

RESULTADOS DEL OCTAVO ENSAYO INTERNACIONAL DE RENDIMIENTO DE TRIGOS DE PRIMAVERA

1971 - 1972

Resumen

El Octavo Ensayo Internacional de Rendimiento de Trigos de Primavera (ISWYN) estuvo constituído por 50 variedades de trigo que representan los principales tipos de primavera. Se recibieron datos de 83 sitios localizados en las regiones productoras de trigos de primavera de todo el mundo, e incluyeron rendimiento, características agronómicas y reacción a las enfermedades. Se presentan aquí los resúmenes por sitio con análisis estadístico para todas las características que se midieron en cada localidad que envió los datos.

Introducción

Una base fundamental del éxito del programa de trigo del CIMMYT ha sido el Ensayo Internacional de Rendimiento de Trigos de Primavera: ISWYN.

El primer ISWYN se envió fuera de México en 1964. La estupenda respuesta de los numerosos cooperadores fue muy alentadora, de modo que se decidió seguir probando a nivel internacional variedades y líneas avanzadas de trigo prometedoras.

Este tipo de ensayos suministra a los participantes: 1) información básica sobre adaptación, potencial de rendimiento y resistencia a plagas y enfermedades de las variedades; 2) material parental de utilidad para los programas de mejoramiento; 3) indicaciones de las variedades que pudieran servir como introducciones inmediatas a las áreas con potencial de alta producción, y 4) un medio para evaluar a escala mundial sus materiales de mejoramiento más promisorias, y también para acrecentar de manera simultánea la cooperación internacional.

Materiales y Métodos

La semilla para el Octavo ISWYN fue multiplicada durante el ciclo de cultivo 1970-71 en el Centro de Investigaciones Agrícolas del Noroeste (CIANO), en Cd. Obregón, Sonora. La semilla se trató con Vitavax (marca registrada para 5, 6 -dihidro-2, metil-1, 4 oxathiin-3-carboxanilidad) antes de empacarse. En cada caja se incluyeron instrucciones para el manejo de los ensayos internacionales de rendimiento, las notas generales por tomar, y las hojas de datos. Todas las cajas de semilla se enviaron desde México por vía aérea.

El octavo ISWYN estuvo compuesto por 50 variedades (49 variedades y líneas comerciales + 1 testigo local), que representaban a 17 países. Las parcelas consistieron de seis surcos de 2.5 metros de largo, separados por 30 cm, con tres repeticiones. Los ensayos de rendimiento se llevaron a cabo tanto bajo condiciones de riego como de temporal, con y sin fertilizantes.

Los sitios variaron desde 40° de latitud en Chile, Argentina, Sudáfrica y Nueva Zelandia, hasta 60° en Noruega. Los ensayos se sembraron desde varios metros bajo el nivel del mar en los Países Bajos hasta 3,058 metros sobre el nivel de mar en Ecuador.

Las variedades que entraron a prueba en el Octavo ISWYN fueron 1/:

1/ Las notaciones de genealogía son: "S" = sib; E = enano y los números = número de retrocruzas

ARGENTINA:

* Gaboto: Bagé 2018 x H44 - Sinvalocho Mag/Bagé 1971/37. Es una variedad argentina, la más importante de grano suave en la parte norte de la faja triguera argentina. Se le considera resistente a Septoria spp., Fusarium y a las 3 royas. Florece a los 103 días y tiene una altura de 120 cm bajo las condiciones de México.

* Jaral "S": Son 64 A x Tzpp-Nai 60 (c). 1889-101M- 1R-3C-1T-2B-OY. Tiene una línea prometedora de alto rendimiento de Argentina. Muestra buena resistencia a las royas del tallo y de la hoja. Florece en 83 días y tiene una altura de 90 cm bajo las condiciones de México.

* Pato Argentina: Tzpp-Son64 x Nar 59. II 21974-4R-4M-2B-OY-OP-OY. Es una variedad argentina semienana, de paja fuerte, con resistencia a las tres royas y a Septoria spp. Florece en 91 días y tiene una altura de 90 cm bajo las condiciones de México. Tambiés es resistente al aniego.

* Piamontes: Es una variedad argentina comercial que florece en 100 días y tiene una altura de 130 cm. Es moderadamente susceptible a las royas del tallo y de la hoja, y moderadamente resistente a Septoria spp.

* Son 64 - Kl Rend.: II 19975-68Y-1J-1Y-1J-5Y-1T. Es una línea argentina con promisorio potencial de rendimiento y amplia adaptación. Es de madurez intermedia, semienano, con buena resistencia a la roya. Es algo tolerante al frío y ha mostrado tolerancia a Septoria en algunas partes del mundo, especialmente en Noráfrica y el Medio Oriente. Es una línea hermana de M.J. INTA, Soltane, Zaafrane y México 226.

AUSTRALIA:

* México 120: = (Pitic "S") YT 54 - N10B. II 7074. Es una línea avanzada de Australia, con tres genes de enanismo, que ha mostrado amplia adaptación. Según informes, se comporta bien bajo condiciones secas en Australia. Susceptible a las royas del tallo, de la hoja y lineal. Muestra resistencia a Septoria en algunas partes del mundo. Florece en 85 días y tiene una altura de 60 cm bajo las condiciones de México.

BRASIL:

* Carazinho: Colonista-Frontana. Variedad de Brasil. Es una variedad comercial de grano rojo suave, que según informes puede rendir relativamente

* El asterisco que precede a la variedad indica que ésta figuró en el ISWYN anterior.

bien en suelos ácidos. Tiene una buena resistencia a la roya lineal bajo la mayoría de las condiciones. Florece en 130 días y tiene una altura de 130 cm. Es moderadamente susceptible a la roya del tallo y moderadamente resistente a la roya de la hoja bajo condiciones de México.

* Iassul 20: (Frontana x Kenya58) x Colonias. Variedad lanzada en Brasil en 1963. Es alta, muy resistente a Septoria spp. en muchas partes del mundo. Tiene una altura de 130 cm. Es moderadamente susceptible a la roya lineal y posiblemente es de desarrollo de la roya del tallo. Es resistente a la toxicidad del aluminio bajo las condiciones de Brasil.

CANADA:

* Manitou: Variedad canadiense sensible al fotoperíodo; florece a los 140 días y tiene una altura de 120 cm. Es resistente a la roya del tallo y muy susceptible a la roya de la hoja bajo condiciones de México. Tiene alguna tolerancia a Septoria tritici.

Manitou/Insensitive: 6/RL4126-21 = RL 4269, RL 4126-21 = SK8/ EX Chris. Variedad canadiense insensible; florece en 70 días y tiene una altura de 110 cm. Muestra un alto nivel de resistencia a la roya del tallo pero es muy susceptible a la roya de la hoja bajo condiciones de México. Difiere del Manitou sólo por un gene de insensibilidad al fotoperíodo.

COLOMBIA:

* Bonza 55: Y 50-Kt48. 2254-2P-111B-4B-1B. Es una importante variedad comercial en Colombia y Ecuador, que por 19 años ha mantenido un efectivo nivel de resistencia a la roya lineal y a la roya del tallo. Florece en 85 días, es pelona y tiene una altura normal de 120 cm. Es uno de los mejores "stocks" de mejoramiento para obtener resistencia generalizada a la roya lineal y a la roya del tallo.

* Napo 63: Frocor-Frontana/Y 48 x Nariño "S". 9314-22T-1B-1T. Es una importante variedad comercial en Colombia y Ecuador. Muestra un alto nivel de resistencia a la roya del tallo. Fue muy resistente a la roya lineal, pero recientemente comenzó a mostrar infección de la espiga en Ecuador. Bajo condiciones de México florece a los 83 días y tiene una altura de 105 cm.

CHILE:

* Huelquen: Es una variedad comercial ampliamente sembrada en Chile. Tiene altura normal y florece a los 75 días bajo las condiciones de México, donde es susceptible a la roya del tallo y a la roya de la hoja.

Mara x Supremo - Mentana - MCM: Es una línea chilena que bajo las condiciones de México florece tardíamente. Muestra un alto nivel de resistencia a la roya del tallo y a la roya de la hoja en México.

Toquifen "S": $(908\text{- Fn})^2$ - 4160 x (Yt-Nor 10B) $(C14)^2$. Ch-7817-3P-4P-1P-2P-1P. Es una variedad chilena con un alto nivel de resistencia a la roya del tallo y roya de la hoja; tiene 90 cm de altura y florece a los 104 días bajo las condiciones de México.

EGIPTO:

* Giza 155: Regent-Giza 139^2/Mida x Cadet - CI 12441 x $H62^2$. Variedad egipcia de grano blanco de alto peso hectolítrico. Florece a los 86 días y tiene una altura de 115 cm. Es resistente a la roya del tallo y roya de la hoja bajo condiciones de México.

INDIA:

* Chhoti Lerma: = 5331 LR 64 "S" - Hua (R). II 15929-1M-4Y-2M-S-331. Una cruza mexicana seleccionada y lanzada en India durante 1967, y también lanzada en Pakistán en 1970 bajo el nombre de Green Valley. Es resistente a la roya del tallo, moderadamente susceptible a la roya de la hoja y susceptible a Septoria spp. Florece a los 86 días y tiene una altura de 100 cm bajo las condiciones de México. Es de grano blanco.

Hira: = HD 1941 = E 5477 x Son 64. E-5477 = Pi "S". Variedad de la India, altamente susceptible a las tres royas bajo las condiciones de México. Triple enano, florece a los 78 días y tiene una altura de 65 cm. Tiene grano blanco, hojas semierectas y corona cerrada. De particular interés en el corto período a la floración y su período relativamente largo a la madurez.

* 8156 (B): Variedad seleccionada de la cruza 8156 de México. Debido a su alto rendimiento y amplia adaptación se le siembra ahora en más de 6 mi-

llones de hectáreas en muchos países. Tiene muchos nombres, entre los cuales figuran Kalyansona, Mexipak, Siete Cerros, Laketch y Misry. Es ahora altamente susceptible a las tres royas y es susceptible a Septoria spp. Florece a los 89 días y tiene una altura de 90 cm.

* Sonalika: II-53-388- Andes x Pitic "S"-LR64/ B4946 - A4-18-2.1-Y53 x $Y50^3$. II 18427-4R-1M. Variedad semienana de la India, con alto potencial de rendimiento y excelente tipo de grano. Es susceptible a Septoria spp. Florece a los 87 días y tiene una altura de 90 cm. Muestra resistencia a la roya del tallo, pero es susceptible a la roya de la hoja bajo las condiciones de México. En Pakistán se le conoce como Blue Silver.

* UP 301: LR 64 - Son 64. Variedad triple enana de la India que rindebien bajo buenas condiciones. Se lanzó para sembrarse en la parte sur de la India. Es también prometedora en Egipto y Noráfrica. Es resistente a la roya del tallo y roya de la hoja, pero susceptible a Septoria. Florece a los 90 días y tiene una altura de 60 cm bajo las condiciones de México.

IRAQ:

México 226: Son 64-Kl. Rend. II 19975-68-Y-1T-6Y-3J-2Y. Variedad de Iraq que muestra un alto nivel de resistencia a la roya del tallo y roya de la hoja. Florece a los 74 días y tiene una altura de 90 cm bajo las condiciones de México. Es una línea hermana de M.J. Inta, Soltane y Zaafrane.

ISRAEL:

* Hazera 2152: $YT\,54A^3$-N10B. II 8474A-8T-12B. Es una variedad israelita lanzada en 1969 y sembrada extensamente en 1970. Tiene un buen rendimiento potencial. Florece a los 83 días y tiene una altura de 85 cm. Muestra una susceptibilidad moderada a la roya del tallo, pero es altamente susceptible a la roya de la hoja bajo las condiciones de México.

ITALIA:

* Victor I: II50-35 x $Mara^3$ x Frontana-Kenya 58-New Thatch. Variedad italiana. Es de madurez tardía, alta intermedia y buen rendimiento potencial. Es susceptible a la roya del tallo y moderadamente resistente a la roya lineal. En Noráfrica, el Cercano y Medio Oriente, ha mostrado resistencia a Septoria spp. Florece a los 105 días y tiene una altura de 105 cm bajo las condiciones de México.

MEXICO:

Bb-Inia: = Torim 73.26591-1T-7M-OY-55Y-OM. Variedad mexicana que muestra un alto nivel de resistencia a la roya del tallo. Es moderadamente resistente a las royaslineal y de la hoja. Florece a los 82 días y tiene una altura de 70 cm bajo las condiciones de México. Es triple enana, de espigas erectas y grano blanco. Peso hectolítrico de 82 kg/hl.

* Cajeme-71: = Bluebird # 4 = Cno "S" x Son 64-Kl. Rend/8156. II 23584-26Y-2M-3Y-2M-OY. Se lanzó en México en 1971 como variedad comercial. Es una línea hermana de Yécora F 70. Es triple enana, de 75-85 cm de altura, con grano rojo y gluten fuerte. Es resistente a la roya de tallo y moderadamente susceptible a la roya de la hoja. Florece a los 90 días bajo las condiciones de México. Tiene tallos cortos y fuertes. La espiga es blanca, barbada, fusiforme y resistente al desgrane. Peso hectolítrico de 80 kg/hl, con buena calidad de molienda y panificación. Buen rendimiento potencial, mayor que el de Inia F 66.

Calidad: = Tzpp - Son 64/LR 64A-Tzpp x An_E. 22429-16M-1Y-1M-OY. Variedad mexicana que muestra un alto nivel de resistencia a la roya del tallo y susceptibilidad moderada a la roya de la hoja. Florece a los 75 días y tiene una altura de 90 cm bajo las condiciones de México. En Túnez es tolerante a Septoria.

* Inia 66: Lerma Rojo 64-Son 64. 19008-83M-100Y-100M-100Y-100C. Es una variedad mexicana semienana, con excelente calidad de panificación y buen potencial de rendimiento. Tiene buena resistencia al acame y muestra un alto nivel de resistencia a muchas razas de roya del tallo. Es susceptible a la roya del tallo, al carbón y al achaparramiento amarillo de la cebada. Espiga a los 80 días. Tiene una altura de 100 cm bajo condiciones de México. Peso hectolítrico de 83.3 kg/hl.

* LR 64-N10B x An_E3: Línea semienana originalmente seleccionada en México. Esta variedad fue recientemente bautizada Mexicami en Sudán. Muestra ser altamente susceptible a la roya del tallo pero resistente a la roya de la hoja. Florece a los 78 días y tiene una altura de 90 cm bajo las condiciones de México. Se le conoce como WW-15 en Australia, Anza en los EUA (California), Moghan en Iran y Karamu en Nueva Zelandia. Tiene buena tolerancia a Septoria y es moderadamente resistente a la roya lineal.

* Pénjamo 62: (Frontana x Kenya 58 - New Thatch) Norin 10 Brevor. II-7078-1R-6M-1R-1M. Una de las primeras variedades semienanas mexicanas. Se le siembra en varios países y posee una amplia adaptación. Tiene hábito de primavera, tallos blancos, cortos y fuertes. Es simple enano. Su espiga es blanca, fusiforme y resistente al desgrane. Tiene grano suave, rojo, de tamaño mediano. Su peso hectolítrico es de 80.3 y tiene 10.8% de proteína. Florece a los 82 días y tiene una altura de 105 cm bajo las condiciones de México. Tiene resistencia de planta adulta a la roya de la hoja, es tolerante a la roya del tallo, a la roya lineal y a Septoria spp.

* Pitic 62: Yaktana 54 x N10B-26-1C-7064-1Y-1H-1R-2M. Primera variedad semienana lanzada en México. Esta variedad de alto rendimiento tuvo un buen comportamiento en los ensayos interamericanos, en los 3 Ensayos Cercano Oriente-Americanos y en los ISWYN's. Tiene un peso hectolítrico bajo y es susceptible a las razas prevalentes de roya del tallo. Todavía se le siembra comercialmente en algunos países. Florece a los 95 días y tiene una altura de 110 cm.

* Potam 70: Inia "S" - Napo 63. II 22402-6M-4Y-1M-1Y-OM. Es una variedad mexicana de paja fuerte con grano blanco y gluten suave. Es un doble enano que muestra un alto nivel de resistencia a la roya del tallo, pero es susceptible a la roya de la hoja y a Septoria. Florece a los 71 días y tiene una una altura de 80 cm bajo condiciones de Mexico.

Tanori 71: Son 64 - Cno "S" x Inia. 25717-11Y-3M-1Y-OM. Es una variedad precoz, doble enana, con paja corta y fuerte. Tiene grano rojo con peo hectolítrico de 83 kg/hl. Muestra un nivel eficaz de resistencia tanto a la roya del tallo como a la roya de la hoja en muchos países, inclusive en México, India, Pakistán y Egipto. Florece a los 85 días y tiene 90 cm de altura. Ha mostrado un alto rendimiento potencial en muchos países.

* Tobari 66: Tzpp-Son 64A. 19201-4M-3Y-102M-100Y-101C. Variedad enana mexicana de grano rojo. Posee excelente resistencia a las royas del tallo y de la hoja y florece a los 84 días bajo las condiciones de México. Tiene una altura de 90 cm.

Vicam 71: Inia "S" - Napo. 23398-39M-1R-OY-101M-OY. Variedad mexicana triple enana, de tallos cortos y fuertes. Tiene espiga café, barbada, fusiforme y resistente al desgrane. Sus granos son blancos, suaves y de tamaño mediano; su peso hectolítrico es de 70 kg/hl. Esta variedad muestra un alto nivel de resistencia a la roya del tallo y es moderadamente susceptible a la roya de la hoja.

* Yécora F 70: = Bluebird # 2. = Cno "S"- Son 64-Kl. Rend./8156 23584-26Y-2M-1Y-OM. Variedad triple enana lanzada en México durante 1970. Es una línea hermana de Cajeme 71. Tiene paja fuerte y grano blanco con gluten fuerte y elástico. Muestra un alto rendimiento potencial en México. Es resistente a la roya del tallo y moderadamente susceptible a la roya de la hoja y a Septoria. Espiga a los 78 días y tiene una altura de 70-80 cm. La espiga es blanca, barbada, fusiforme y resistente al desgrane. El grano es blanco y de tamaño medio; su peso hectolítrico es de 81 kg/hl.

PAKISTAN:

* Chenab 70: C-271 x Willet (E) - Son 64. PK 146-12A-4A-1A. Es una variedad pakistana semienana con grano blanco y suave. Es susceptible a la roya lineal y a la roya de la hoja. La roya del tallo y la roya de la hoja pueden ser severas bajo ciertas condiciones. Florece a los 86 días y tiene una altura de 100 cm.

Nayab 70: Variedad pakistana que florece a los 83 días y tiene una altura de 105 cm. Es moderadamente susceptible a las royas del tallo y de la hoja bajo condiciones de México. Es algo propensa al desgrane.

PORTUGAL:

Mexicano 1481: Variedad portuguesa que florece en 89 días y tiene una altura de 105 cm. Es suceptible a la roya del tallo y de la hoja bajo las condiciones de México.

RHODESIA:

Jaral "S"/Lee-SK-Mara: S1103. Es una línea avanzada de Rhodesia que florece a los 79 días bajo condiciones de México y que tiene una altura de 70 cm. Muestra buena resistencia a la roya del tallo y es moderadamente susceptible a la roya de la hoja.

* Lundi: Mara x Lee-Selkirk. S595-A1-A6-B2. Una variedad semienana de Rhodesia, con susceptibilidad moderada a la roya de la hoja. Florece a los 79 días y tiene una altura de 80 cm bajo las condiciones de México.

* Zambezi: 8156 x Lee - Thatcher x Kenya 338 AC/Lee mida - Siete Cerros. Variedad de Rhodesia con un buen rendimiento potencial. Muestra susceptibilidad moderada a la roya del tallo y un alto nivel de resistencia a la roya de la hoja. Florece a los 89 días y tiene una altura de 85 cm bajo las condiciones de México.

TUNEZ:

Ariana 66: Variedad tunecina que florece a los 118 días y que tiene una altura de 110 cm. Es resistente a las royas del tallo y de la hoja bajo las condiciones de México.

* BT 2281: Tzpp- Son 64 x LR 64 - Son 64/Son 64A x $SK_E{}^3$ - An. Línea avanzada tunecina que muestra buena resistencia a las tres royas. Es doble enana y tiene 90 cm de altura. Es Noráfricana rinde casi lo menos que Inia 66. Es de grano rojo; florece a los 85 días bajo las condiciones de México.

* BT 2288: Tacuari-Pj 62. Línea semienana tunecina de buen rendimiento, con largas espigas y grano rojo. Muestra un alto nivel de resistencia a las tres royas bajo las condiciones de México. Florece a los 85 días y tiene una altura de 85 cm.

BT-2296: Son-64-Klein Rendidor. II-19975-68Y-1J-6Y-1J-3Y Variedad Tunecina que florece a los 77 días y tiene una altura de 100 cm. Es resistente a la roya del tallo y muy susceptible a la roya de la hoja.

T-64-2-W: Kenya 338-E. de Ch x Koudiat 17-Kt-Y. Variedad tunecina que muestra un alto nivel de resistencia a la roya del tallo, pero un alto nivel de susceptibilidad a la roya de la hoja bajo las condiciones de México. Es moderadamente resistente a Septoria spp. Florece a los 71 días bajo las condiciones de México y tiene una altura de 110 cm.

USA:

* Chris: CI 13751 Frontana-Thatcher x II 44-29-Thatcher^2 - II 53-525-1. Variedad de excelente calidad desarrollada en Minnesota; tiene buena resistencia a la roya del tallo y regular resistencia a Septoria. Se le siembra extensamente en los EE UU y en Canadá. Florece a los 91 días bajo las condiciones de México y tiene una altura normal de 120 cm.

Era: Variedad semienana desarrollada por la Universidad de Minnesota. Muestra un alto nivel de resistencia a las royas del tallo y de la hoja en muchas partes del mundo, incluso en México, los Estados Unidos y Kenya. Florece a los 136 días y tiene una altura de 100 cm. Es una de las principales variedades de trigo de primavera en la parte norte de los Estados Unidos.

Procesamiento de los datos y análisis de varianza

Los coeficientes de infección de enfermedades se analizaron estadísticamente y también se correlacionaron con otras características (por ejemplo, con rendimiento). Sin embargo, para la presentación tabular en este informe, se dan las notas de la escala estándar de roya de la primera repetición de cada sitio, puesto que a partir de ésta es más fácil vidualizar las respuesta de una variedad en particular. La reacción media a la roya por localidad se presenta como un índice de la cantidad de roya en esa localidad. Los valores medios de roya relativamente bajos indican baja incidencia y/o virulencia del patógeno. Las medias más altas indican mayor incidencia y/o virulencia. Estas medias constituyen una comparación relativa por localidad y reflejan el grado de infección de ese patógeno en ese ensayo bajo las condiciones que existieron.

Otros índices del comportamiento varietal se analizaron siempre que fue posible y se presentan en los Cuadros. La mayoría de estos valores fueron porcentajes. Varios índices se transforaron a porcentajes.

Los ensayos ISWYN, que incluyen tres repeticiones, se preparan en un diseño de bloques completamente al azar.

Las variables para cada variedad se colectan y luego se calcula el valor de la media. Los rendimientos se ordenan decrecientemente.

Se obtuvieron valores medios para el rendimiento y otras variables para cada variedad. Luego, la media de las medias se calcula para cada variable. A ésta se le llama gran media, y se escribe bajo cada columna de las variables.

A las secuencias restantes para el error estándar de la gran media, coeficiente de variación (CV) y diferencia mínima significativa (DMS) de .05, se les llama amálisis de varianza, que se calcula sólo cuando se tienen dos o más repeticiones de datos.

El análisis de varianza para el rendimiento ilustra el punto, y este procedimiento es aplicable para cualquier variable del ISWYN, cuando se repite dos o tres veces.

En los informes de ensayos anteriores, cuando el coeficiente de variación (CV) era mayor de 75%, los datos de esa variable específica se eliminaban y la columna no se imprimía. Esto ocurría con variables aparte del rendimiento. Los especialistas en trigo han solicitado que se impriman variables con CV mayores del 75%. Por consiguiente, en algunos cuadros se observan algunas variables con altos coeficientes de correlación. Un alto coeficiente de correlación se origina en un alto error estándar y bajos valores de la media. Esto ocurre cuando se omiten datos, se registran numerosos valores de cero, hay diferencia en la estimación de valores entre repeticiones o se debe a la variación natural en el ambiente en que se tienen los experimentos. Por tanto, el error estimado de la varianza se computó directamente para todas las características reportadas. El coeficiente de variación se expresa en porcentaje (razón de error estándar/gran media x 100 x la raíz cuadrada nr donde n = número de variedades y r = número de repeticiones. El coeficiente de variación se emplea para observar la variación entre dos variables entre sitios.

La diferencia mínima significativa (DMS) se calcula al nivel del 5%. La ventaja de la DMS es que es fácil usarla para hacer comparaciones entre dos medias para dos localidades.

Mediante estudios de correlación se puede algunas veces obtener información introspectiva a los factores que influyen en el rendimiento. Se hicieron correlaciones sobre todos los posibles pares de factores por localidad, utilizando el valor de la media para cada característica reportada. Se computaron correlaciones sobre las medias de las repeticiones más que sobre los valores registrados debido a que algunos datos se reportaron frecuentemente para sólo una repetición. El tamaño de las poblaciones es más bien pequeño para este tipo de análisis, de manera que se pudieran encontrar algunas correlaciones espurias. Se recomienda cierta precaución al interpretar estos valores. Muchos investigadores encuentran útiles los análisis de correlación y por tal razón se presentan éstos como parte del cuadro de resumen para cada localidad, aunque se advierte de sus limitaciones.

Las medias generales para localidades se computaron para cada variable y se presentan aquí cuando el número de observaciones justificó su inclusión. Con la excepción de los datos sobre roya, las unidades reportadas son las que se utilizan en todo este informe. Con propósitos aritméticos las medias de reacciones a la roya se computaron sobre los valores del coeficiente de infección (CI). Se sugiere una comparación de los CI relativos para seleccionar variedades resistentes a la roya potencialmente útiles. Los materiales con valores promedio menores de 10 se pueden considerar un tano resistentes, mientras que las variedades con valores mayores de 20 pudieran considerarse susceptibles.

Al analizar y resumir estos datos se han encontrado muchos problemas. Nuestro intento es suministrar al lector la cantidad máxima posible de información útil, y de paso, no confundirlo con muchos detalles de la computación.

Resultados y Discusión

Para el análisis del Octavo ISWYN, al CIMMYT retornaron datos de 83 sitios que representaron 47 países. En este ensayo se incluyó al máximo número de cooperadores. La figura 1 muestra el número de localidades que rindieron datos con su correspondiente número de cuadro. La figura 2 ilustra el ciclo de cultivo en cada sitio y la altitud sobre o bajo el nivel del mar.

Los cuadros del 1 al 83 presentan el comportamiento de las variedades con respecto a rendimiento, características agronómicas y resistencia a enfermedades en una serie específica de condiciones ambientales, de manera que dan al lector una visión más profunda acerca de la adecuacidad de las variedades al ambiente. La media general para todas las localidades para las medias de la variable se encuentra en el Cuadro 84.

La variedad que ocupó el primer lugar para todas las localidades fue LR064-N10B x An_E^3 = WW 15, puesta por Australia y la cual tuvo una media de 4,158 kg/ha. La misma variedad, pero puesta por Sudán, con el nombre de "Mexicani" tuvo el rendimiento más alto en el Séptimo ISWYN (4,105 kg/ha). Esta variedad es una selección mexicana; se le siembra en California (USA) con el nombre de Anza, en Nueva Zelandia con el nombre de Karamu, y en Irán con el nombre de Moghan 1.

Tanori 71, Kalyansona 227, Pénjamo 62, Chenab 70, Chhoti Lerma y Cajeme 71 ocuparon del segundo al séptimo lugar, respectivamente. En el Séptimo ISWYN estas variedades (excepto Tonari 71 que no se incluyó en dicho ensayo) ocuparon el quinto, el décimoquinto, el décimosegundo, el décimo y segundo lugar, respectivamente. Sin embargo, el promedio de rendimiento en el Octavo ISWYN para esas variedades en comparación con el Séptimo, fue de sólo 94 kg/ha. Todas las variedades mencionadas antes son de origen mexicano, excepto Chenab 70, parte de cuyo complejo génico es de origen pakistano.

La variedad mexicana Pitic 62 ha sido incluída en todos los ensayos internacionales de rendimiento de trigo de primavera. Su amplia adaptación se observa a partir del hecho de que ha figurado entre las variedades más rendidoras en algunos ISWYNs. Sin embargo, su adaptación está disminuyendo en algunas regiones debido a su susceptibilidad a las royas.

Las primeras 10 variedades son trigos semienanos y poseen cierta resistencia al acame. Diez de ellas son de origen mexicano. Por otra parte, las últimas diez variedades son todas altas y susceptibles al acame. Ninguna variedad mexicana figura en este último grupo.

RESULTATS DE LA HUITIEME PEPINIERE INTERNATIONALE SUR LE RENDEMENT DES BLES DE PRINTEMPS

1971 - 1972

Resume

La Huitième Pepiniere Internationale de Rendement des Blés de Printemps (ISWYN) a été constitué par 50 variétes de blé, qui représentent les principaux types de printemps. Il a été reçu des données de 83 sites, localisés dans les régions productrices de blés de printemps du monde entier, y étaient inclus le rendement. Les résumés sont présentés ici par site, avec l'analyse statistique pour toutes les caractéristiques qui ont été mesurées dans chaque localité qui a envoyé les données.

Introduction

Une des bases fondamentales du succès du programme de blé du CIMMYT a été la Pepiniere Internationale de Rendement des Blés de Printemps: ISWYN.

Le premier ISWYN a été expédié en dehors du Mexique en 1964. L'étonnante réponse des nombreux coopérateurs fut très encourageante, de façon qu'il a été décidé de poursuivre à éprouver, au niveau international, des variétés et des lignées avancées de blé prometteuses.

Ce genre de pepinieres a fourni aux participants: 1) une information de base sur l'adaptation, potentiel de rendement et résistance aux fléaux et maladies de ces variétés; 2) matériel de parentage d'utilité pour les programmes d'amélioration; 3) indications des variétés qui

pourraient servir comme introductions immédiates aux zones de potentiel élevé de production; et 4) un moyen pour évaluer, à l'échelle mondiale, son matériel d'amélioration le plus prometteur, et aussi pour accroitre simultanément la coopération internationale.

Materiels et Methodes

La semence pour le Huitieme ISWYN a été reproduite durant le cycle de culture 1970-71 au Centre de Recherches Agricoles du Nord-Ouest (CIANO), à Cd. Obregón, Sonora, Mexico. La semence a éte traitée au Vitavax (marque enregistrée pour 5, 6-dihidro-2, metil-1, 4 oxathiin-3-carboxanilida) avant d'être empaquetée. Dans chaque boite étaient incluses les instructions d'emploi des essais internationaux de rendement, les données générales à prendre, et les feuilles de données. Toutes les boites de semences ont été envoyées de Mexico par avion.

Le Huitieme ISWYN a été composé de 50 variétés (49 variétés et lignées commerciales + 1 témoin local), qui représentait 17 pays. Les parcelles étaient constituées de six sillons de 2,5 mètres de long, séparés de 30 cm, et avec trois répétitions. Les essais de rendement se sont effectués aussi bien sous conditions d'irrigation ou temporelles, avec ou sans engrais.

Les sites ont varié de 40° de latitude au Chili, Argentine, Afrique du Sud et Nouvelle Zélande, jusqu'à 60° en Norvège. Les essais ont été semés depuis quelques mètres sous le niveau de la mer aux Pays-Bas, jusqu'a 3.058 mètres au-dessus du niveau de la mer en Equateur. Les variétés qui ont été mises à l'épreuve dans le Huitième ISWYN ont été 1/:

1/ Les annotations de généalogie sont: "S" = sib; E = enano (nain), et les numéros = numéro de rétrocroisés

ARGENTINE:

* Gaboto: Bagé 2018 x H44 - Sinvalocho MAG/Bagé 1971/37. C'est une variété argentine, la plus importante de grain suave dans la partie nord de la ceinture à Septoria Spp., Fusarium et aux trois rouilles. Fleurit au bout de 103 jours et a une hauteur de 120 cm sous les conditions du Mexique.

* Jaral "S": Son 64 A x Tzpp-Nai 60 (c). 18889-101M-1R-3C-IT-2B-0Y. Il est une lignée prometteuse de rendement élevé d'Argentine. Il démontre une bonne résistance aux rouilles noire et brune. Fleurit au bout de 83 jours et a une hauteur de 90 cm sous les conditions du Mexique.

* Pato Argentino: Tzpp-Son 64 x Nar 59. II 21974-4R-4M-2B-OY-0P-0Y. C'est une variété argentine semi-naine, de paille forte, avec résistance aux trois rouilles et à Septoria spp. Fleurit au bout de 91 jours et a une hauteur de 90 cm sous les conditions du Mexique. Il ne 'coule" pas non plus.

* Piamontes: C'est une variété argentine commerciale qui fleurit au bout de 100 jours et a une hauteur de 130 cm. Elle est modérément susceptible aux rouilles noire et brune et plus ou moins résistan à Septoria spp.

* Son 64 - Kl. Rend: II 19975-68Y-1J-1Y-5Y-1T. Cést une lignée argentine avec un potentiel de rendement prometteur, et une très bonne adaptation. Elle est de maturité intermédiaire, demic-nain, avec une bonne résistance à la rouille. Elle est quelque peu tolérant au froid et a montré une tolérance à Septoria dans certaines parties du monde, spécialement en Afrique du Nord et au Moyen-Orient. C'est une lignée soeur de M. J. INTA, Soltane, Zaafrane et Mexico 226.

AUSTRALIE:

* México 120: = (Pitic "S") YT 54 - N10B . II 7074. C'est une lignée avancée d'Australie, avec trois génes d'énanisme, qui a montré une grande adaptation. Selon les informations, elle se comporte bien sous des conditions sèches en Australie. Elle est susceptible aux

rouilles noire, brune et jaune. Elle montre une certaine résistance dans quelques parties du monde à Septoria. Il fleurit au bout de 85 jours et a une hauteur de 60 cm sous les conditions du Mexique.

BRESIL:

*Carazinho: Colonista-Frontana. Variété du Brésil. Cést une variété de grain rouge suave, qui selon information rend relativement bien sur sols acides. Elle a une bonne résistance à la rouille jaune et à Septoria tritici dans la majeure partie des conditions. Elle fleurit au bout de 103 jours et a une hauteur de 130 cm. Elle est modérément susceptible à la rouille noire et modérément résistante à la rouille brune sous certaines contitions au Mexique.

*Iassul 20: (Frontana x Kenya 58)x Colonias. Variété lancée au Brésil en 1963. Elle est haut très résistante à Septoria tritici dans de nombreuses parties du monde. Elle a une hauteur de 130 cm. Est modérément susceptible à la rouille jaune. Est résistante à la toxicité de l'aluminium sous les conditions du Brésil.

CANADA:

*Manitou: Variété canadienne sensible a la photopériode; fleurit au bout de 140 jours et a une hauteur de 120 cm. Est résistante à la rouille noire et très susceptible à la rouille brune sous les conditions du Mexique. Il a une certaine tolérance à Septoria tritici.

Manitou/Insensitive: 6/RL 4126-21 = RL 4269, RL 4126-21 = SK 8/EX Chris. Variété canadienne insensible; fleurit au bout de 70 jours et a une hauteur de 110 cm. Montre un haut niveau de résistance à la rouille noire mais est très susceptible à la rouille brune sous les conditions du Mexique. Il diffère du Manitou seulement par un géne d'insensibilité à la photopériode.

COLOMBIE:

*Bonza 55: Y50 - Kt 48. 2254-2P-111B-4B-1B. Cést une importante varieté commerciale en Colombie et en Equateur. Montre un haut niveau de résistance à la rouille de la tige. Elle a été très résistant à la rouille jaune, mais a commencé récemment à montrer une infection de l'épi en Colombie et en Equateur. Sous les conditions du Mexique elle fleurit au bout de 83 jours et a une hauteur de 105 cm.

CHILI:

*Huelquen: C'est une variété commerciale largement semée au Chili. A une hauteur normale et fleurit au bout de 75 jours sous les conditions du Mexique, où elle est susceptible à la rouille noire et à la rouille brune.

Mara x Supremo - Mentana - MCM : Cést une lignée chilienne qui sous les conditions du Mexique fleurit tardivement. Montre une grande résistance à la rouille noire et à la rouille brune au Mexique.

Toquifen "S": $(908\text{-}Fn)^2$ - 4160 x Yt x Nor 10 - B/CN^2. Ch-7817-3P-4P-1P-2P-1P. Cést une variété chilienne avec une très grande résistance à la rouille noire et à la rouille brune, mesure 90 cm de haut, et fleurit au bout de 104 jours sous les conditions du Mexique.

EGYPTE:

*Giza 155 : Regent-Giza 139^2/Mida x Cadet - CI 12441 x $H62^2$. Variété égyptienne de grain blanc, d'un grand poids hectolitrique. Fleurit au bout de 86 jours et mesure 115 cm de haut. Est résistante à la rouille noire et à la rouille brune sous les conditions du Mexique.

INDE:

*Chhoti Lerma: LR 64 "S" - Hua (R). II 15929-1M-4Y-2M-S-331. Un croisement mexicain sélectionné et lancé en Inde en 1967, et lancé aussi au Pakistan en 1970 sous le nom de Green Valley. Est résistant à la rouille noire, modérément susceptible à la rouille brune et susceptible à Septoria Spp. Fleurit au bout de 86 jours et mesure 100 cm de haut sous les conditions du Mexique. Il est de grain blanc.

Hira: = HD 1941 = E 5477 x Son 64. E-5477 = Pi "S". Variété de l'Inde, très susceptible aux trois rouilles sous les conditions du Mexique. Triple naine, fleurit au bout de 78 jours et a une hauteur de 65 cm. Son grain est blanc, les feuilles demidressées et une couronne fermée. Particulièrement intéressante pour sa période de floraison réduite et sa période relativement longue pour la maturité.

*8156 (B): Lignée sélectionnée du croisement 8156 du Mexique. Vu son rendement élevé et sa grande adaptation, elle est semé à présent dans plus de 6 millions d'hectares dans de nombreux pays. Elle a beaucoup de noms, parmi lesquels figurent Kalyansona, Mexipak, Siete Cerros, Laketch et Misry. Elle est très susceptible maintenant aux trois rouilles et est susceptible à Septoria Spp. Fleurit au bout de 89 jours et mesure 90 cm de haut.

*Sonalika: II-53-388-Andes x Pitic "S" - LR64/B4946-A4-18-2.1 - Y53 x Y50^3. II 18427/4R-LM. Variété semi-naine de l'Inde, avec un potentiel de rendement élevé et un excellent type de grain. Elle est susceptible à Septoria Spp. Fleurit au bout de 87 jours et a une hauteur de 90 cm. Il est résistan à la rouille noire, mais est susceptible à la rouille brune sous les contidions du Mexique. Au Pakistan elle est connu sous le nom de Blue Silver.

*UP 301: LR64 - Son 64. Variété triple naine de l''inde qui rend bien sous de bonnes conditions. Elle a été lancée pour etre semé dans la partie sud de l'Inde. Il est aussi prometteur en Egypte et en Afrique du Nord. est résistante à la rouille noire et à la rouille brune, mais susceptible à Septoria. Fleurit au bout de 90 jours et a une hauteur de 60 cm sous les conditions du Mexique.

IRAK:

Mexico 226: Son 64 - Kl. Rend. II 19975-68-Y-1T-6Y-3J-2Y. Variété d'Irak qui montre une grande résistance à la rouille noire et à la rouille brune. Fleurit au bout de 74 jours et a une hauteur de 90 cm sous les conditions du Mexique. C'est une lignée soeur de M.J., Soltane et Zaafrane.

ISRAEL:

*Hazera 2152: YT 54A^3-N10B. II 8474A-8T-12B. C'est une variété israélite lancée en 1969 et amplement semée en 1970. Elle a un bon rendement potentiel. Fleurit au bout de 83 jours et a une hauteur de 85 cm. Montre une susceptibilité modérée à la rouille noire, mais est grandement susceptible a la rouille brune sous les conditions du Mexique.

ITALIE:

*Victor I: II50-35 x Mara ^{3} x Frontana-Kenya 58 - Newthatch. Variété italienne prometteuse. Est de maturité tardive, d'une taille intermédiaire et d'un bon rendement potentiel. Est susceptible à la rouille noire et modérément résistante à la rouille jaune. En Afrique du Nord, au Proche

et Moyen Orient,ellea montré une résistance à Septoria Spp. Fleurit au bout de 105 jours et a une hauteur de 105 cm sous les conditions du Mexique.

MEXIQUE:

Bb - Inia: = Torim 73.26591-7M-OY-55Y-OM. Variété mexicaine qui a un très haut pouvoir de résistance à la rouille noire. Est modérément résistant aux rouilles jaune et brune. Fleurit au bout de 82 jours et a une hauteur de 70 cm sous les conditions du Mexique. Est triple naine, d'épis trés droits et grain blanc. Son poids hectolitrique est de 82 Kg/hl.

*Cajeme - 71: Bluebird # 4 = Cno "S" x Son 64-Kl. Rend/8156. II 23584-26Y-2M-3Y-2M-OY. A été lancé au Mexique en 1971 comme varieté commerciale. C'est une lignée soeur de Yécora F 70. Triple nain, de 75-85 cm de hauteur, avec un grain rouge et gluten fort. Résistante à la rouille noire et modérément susceptible à la rouille brune. Fleurit au bout de 90 jours sous les conditions du Mexique. A des tiges courtes et fortes. L'épi est blanc, barbu, fusiforme et résistant à l'égrenage. Son poids hectolitrique est de 80 Kg/hl, avec une bonne qualité pour la mouture et la panification. Bon rendement potentiel, supérieur à celui de India F 66.

Calidad: Tzpp - Son/LR 64A-Tzpp x AnE. 22429-16M-1Y-1M-OY. Lignée mexicaine qui montre un haut pouvoir de résistance à la rouille noire et une susceptibilité modérée à la rouille brune. Fleurit au bout de 75 jours et a une hauteur de 90 cm sous les conditions du Mexique. En Tunisie elle est tolérant à Septoria.

*Inia 66: Lerma Rojo 64-Son 64. 19008-83M-100Y-100M-100Y-100C. C'est une variété mexicaine semi-naine, avec une excellente qualité de panification et un bon potentiel de rendement. A une bonne résistance a la verse et montre un haut pouvoir de résistance à de nombreuses races de rouille noire Elle est susceptible à la rouille brune, au charbon commun et au rabougrissement jaune de l'orge. Fleurit au bout de 80 jours, a une hauteur de 100 cm sous les conditions du Mexique. Poids hectolitrique de 83.3 Kg/hl.

*LR 64 - N10B x An_E3: Lignée semi-naine originellement sélectionnée au Mexique. Cette variété fut récemment baptisée Mexican au Soudan. Montre une très grande susceptibilité à la rouille noire mais est résistante à la rouille brune. Fleurit au bout de 78 jours et a une hauteur de 90 cm sous les conditions du Mexique. Elle est connu comme WW-15 en Australie, Anza aux Etats/Unis (Californie), Moghan en Iran et Karamu en Nouvelle Zélande. Elle a une bonne tolérance à Septoria et est modérément résistante à la rouille jaune.

*Pénjamo 62: (Frontana x Kenya 58 - Newthatch) Norin 10 Brevor. II-7078-1R-6M-1R-1M. Une des premières variétés seminaines mexicaines. Elle est semé dans divers pays et a une grande adaptation. Elle a l'habitude du printemps, des tiges blanches, courtes et fortes. Elle est simple naine. Son épi est blanc, fusiforme et résistant à l'égrenage. Elle a un grain suave, rouge de taille moyenne. Son poids hectolitrique est de 80.3 et contient 10.8% de protéine. Fleurit au bout de 82 jours et a une hauteur de 105 cm sous les conditions du Mexique. Elle résiste fortement à la rouille brune mais est susceptible a la rouille noire et à la rouille jaune.

*Pitic 62: Yaktana 54 x N10B-26-1C-7064-1Y-1H-1R-2M. Première variété semi-naine lancée au Mexique. Cette variété de rendement élevé a eu un bon comportement dans les essais Interaméricains, dans les 3 Pepiniers Proche Orient-Américains et dans les ISWYN's. Elle a un poids hectolitrique bas et est susceptible aux races prévalentes de la rouille noire. Toutefois elle est encore semée sommercialement dans certains pays. Fleurit au bout de 95 jours et a une hauteur de 110 cm.

*Potam 70: Inia "S" - Napo 63. II 22402-6M-4Y-1M-OM. Cést une variété mexicaine de paille forte avec un grain blanc et gluten suave. Cést un double naine qui montre un niveau élevé de résistance à la rouille noire, mais est susceptible à la rouille brune et à Septoria. Fleurit au bout de 71 jours et a une hauteur de 80 cm sous les conditions du Mexique.

*Tanori 71 : Son 64 - Cno "S" x Inia. 25717-11Y-1Y-OM. Cést une varieté précoce, double naine, avec paille courte et forte. Elle a un grain rouge d'un poids hectolitrique de 83 kg/hl. A un niveau efficace de résistance tant à la rouille noire qu'à la rouille brune. Fleurit au bout de 85 jours et a une hauteur de 90 cm. Elle a montré un rendement potentiel élevé dans de nombreux pays.

*Tobari 66: Tzpp-Son 64A. k19201-4M-3Y-102M-100Y1-101C. Variété naine mexicaine de grain rouge. Elle est intensément dans divers pays. Elle possede une excellente résistance aux rouilles noire et brune. Fleurit au bout de 84 jours sous les conditions du Mexique. A une hauteur de 90 cm.

Vicam 71 : Inia "S" - Napo 23398-39M-1R-OY-101M-0Y. Variété mexicaine triple naine, de tiges courtes et fortes. A un épi brun, barbu, fusiforme et résistan à l'égrenage. Ses grains sont blancs, suaves et de taille moyenne; son poids hectolitrique est de 79 kg/hl. Cette variété a un très haut pouvoir de résistance à la rouille noire et est modérément susceptible à la rouille brune.

*Yécora F 70: = Bluebird # 2. = Cno "S" - Son 64-Kl. Rend./8156. 23584-26Y-2M-1Y-OM. Variété triplenaine lancée au Mexique en 1970. Cést une lignée soeur de Cajeme 71. A une paille forte et un grain blanc avec gluten fort et élastique. Montre un très haut rendement potentiel au Mexique. Est résistant à la rouille noire et modérément susceptible à la rouille brune et a Septoria. Fleurit au bout de 78 jours et a une hauteur de 70 a 80 cm. L'épi est blanc, barbu, fusiforme et résistant à l'égrenage. Le grain est blanc et de taille moyenne; son poids hectolitrique est de 81 kg/hl.

PAKISTAN:

*Chenab 70: C-271 x Willet (E) - Son 64. PK 146-12A-4A-1A. Cést une variété pakistanaise semi-naine avec un grain blanc et suave. Est susceptible à la rouille jaune et à la rouille brune. La rouille noire et brune peuvent même arriver à être grave sous certaines conditions. Fleurit au bout de 86 jours et a une hauteur de 100 cm.

Nayab 70: Variété pakistanaise qui fleurit au bout de 83 jours et a une hauteur de 105 cm. Est modérément susceptible aux rouille noire et brune sous certaines conditions au Mexique. Elleest quelque peu prédisposé à l'égrenage

PORTUGAL:

Mexicano 1481: Variété protugaise qui fleurit au bout de 89 jours et a une hauteur de 105 cm. Est susceptible à la rouille noire et très susceptible à la rouille brune sous les conditions du Mexique.

RHODESIE:

Jaral "S"/Lee-SK-Mara: S1103. C'est une lignée avancée de Rhodésie qui fleurit au bout de 79 jours sous les conditions du Mexique et noira une hauteur de 70 cm. Il montre une bonne résistance à la rouille et est modérément susceptible à la rouille brune.

*Lundi: Mara x Lee Selkirk. S595-A1-A6-B2. Unc variété semi-naine de Rhodésie, avec une susceptibilité modérée à la rouille brune. Fleurit au bout de 79 jours et a une hauteur de 80 cm sous les conditions du Mexique.

*Zambezi: 8156 x Lee - Thatcher x Kenya 338 AC/Lee mida-Siete Cerros. Variété de Rhodésie avec un bon rendement potentiel. Montre une susceptibilité modérée à la rouille noire et un haut pouvoir de résistance à la rouille brune. Fleurit au bout de 89 jours et a une hauteur de 85 cm sous les conditions du Mexique.

TUNISIE:

Ariana 66: Variété tunisienne qui fleurit au bout de 118 jours et qui a une hauteur de 110 cm. Résistant aux rouilles noire et brune sous les conditions du Mexique.

*BT 2281: Tzpp-Son 64 x LR 64 - Son 64/Son 64A x $SK_E{}^3$ - An. Lignée avancée tunisienne qui montre une bonne résistance aux trois rouilles. Double naine et a 90 cm de hauteur. Cette espèce nord-africaine rend moins que Inia 66. Elle est de grain rouge. Fleurit au bout de 85 jours sous les conditions du Mexique.

*BT 2288: Tacuari-Pj 62. Lignée semi-naine tunisienne de bon rendement, avec de grands épis et un grain rouge. Montre un haut pouvoir de résistance aux trois rouilles sous les conditions du Mexique. Fleurit au bout de 85 jours et a une hauteur de 85 cm.

BT 2296: Son-Klein Rendidor. Variété tunisienne qui fleurit au bout de 77 jours et a une hauteur de 100 cm. Est résistante à la rouille noire et très susceptible à la rouille brune.

T - 64 - 2 - W: Kenya 338-E. de Ch x Koudiat 17-Kt-Y. Variété tunisienne qui montre un pouvoir de résistance élevé à la rouille noire, mais a une grande susceptibilité à la rouille brune sous les conditions du Mexique. Est modérément résistante à Septoria Spp. Fleurit au bout de 71 jours sous les conditions du Mexique et a une hauteur de 110 cm.

U. S. A.:

*Chris: CI 13751 Frontana-Thatcher x II-44-29-Thatcher^2 - II 53-525-1. Variété d'excellente qualité développée dans la Minnesota; a une bonne résistance à la rouille noire et une résistance régulière à Septoria. Est intensément semée aux Etats-Unis et au Canada. Fleurit au bout de 91 jours sous les conditions du Mexique et a une hauteur normale de 120 cm.

Era: Variété semi-naine développée par l''Université du Minnesota. Montre un grand pouvoir de résistance aux rouilles noire et brune dans de nombreuses parties du monde, y compris au Mexique, Etats Unis et Kenya. Fleurit au bout de 136 jours et a une hauteur de 90 cm. C'est une des principales variétés de blé de printemps du côté nord des Etats-Unis.

Interprétation des données et analyses de variance

Les coëfficients d'infection par maladie ont été analysés statistiquement et aussi mis en corrélation avec d'autres caractéristiques rendement par exemple. Cependant, pour la présentation tabulaire de cette notice, nous donnons les notes a l'échelle standard de la rouille pour la première répétition de chaque site, puisqu'à partir de celle-ci il est plus facile d'entrevoir la réplique d'une variété en particulier. La réaction moyenne à la rouille par localité est présentée comme un indice de la quantité de rouille de cette localité. Les valeurs moyennes de rouille relativement basses indiquent une faible incidence et ou la virulence du pathogene. Les moyennes plus élevées indiquent une plus grande incidence et ou virulence. Ces moyennes constituent une comparaison relative par localité, et reflètent le degré d'infection de ce pathogéne dans cet essai, sous les conditions existantes.

D'autres indices de comportement de variété ont été analysés chaque fois que cela était possible, et sont présentés dans les tableaux. La majorité de ces valeurs furent des pourcentages. Plusieurs indices ont été transformés en pourcentages.

Les pepinieres ISWYN, incluant trois répétitions, ont été préparés en bloque complètement au hasard.

Les variables pour chaque variété ont été rassemblées, ensuite on a calculé la valeur de la moyenne. Les rendements sont par ordre décroissant.

On a obtenu des valeurs moyennes pour le rendement et d'autres variables pour chaque variété. Ensuite, la moyenne des moyennes a été calculée pour chaque variable. Celle-ci est appelée "grande moyenne", et est inscrite sous chaque colonne des variables.

Les séquences restantes pour l'erreur standard de la grande moyenne, coëfficient de variation (CV) et différence minima significativa (PPDS)de.05, sont dénommés analyses de variance, on les calcule seulement quand il y a deux ou plusieurs répétitions de données.

L'analyse de variance pour le rendement illustre la question, et ce procédé est applicable pour n'importe quelle variable du ISWYN, quand il se répète deux ou trois fois.

Dans les informations d'essais précédents, quand le coëfficient de variation (CV) était supérieur à 75%, les données de cette variable spécifique étaient éliminées et n'étaient pas imprimées. Ceci est arrivé pour des variables autres que celles du rendement. Les spécialistes du blé ont sollicité l'apparition des variables avec un CV supérieur à 75%. Par conséquent, on peut observer sur certains tableaux quelques variables de hauts coëfficients de corrélation. Un coëfficient élevé de corrélation est originé par une grande erreur standard et des valeurs basses de la moyenne. Ceci arrive lorsque des données sont omises, qu'ils s'enregistrent des valeurs nombreuses de zéro, qu'il y a une différence dans l'estimation des valeurs entre répétitions, ou est dû à la variation naturelle de l'ambiance ou sont effectuées les expérimentations. Par conséquent, l'erreur estimée de la variance a été calculée directement pour toutes les caractéristiques reportées. Le coëfficient de variation est exprimé en pourcentage (raison d'erreur standard grande moyenne x 100 x la racine carrée No., où n = numéro des variétés et r = nombre de répétitions). Le coëfficient de variation est employé pour observer la variation entre deux variables entre sites.

La plus petite difference significative (PPDS) est calculée au niveau du 5%. L'avantage de la PPDS est qu'il est facile de l'utiliser pour fair des comparaisons entre deux moyennes de deux localités.

Au moyen d'études de corrélation, on peut quelquefois obtenir une information introspective des facteurs qui influent sur le rendement. Des corrélations ont été faites pour toutes les paires de facteurs possibles, par localité et en utilisant la valeur de la moyenne pour chaque caractéristique reportée. On a computé plus de corrélations sur les moyennes des répétitions que sur les valeurs enregistrées, car quelques données se rapportaient fréquemment à une seule répétition. La grandeur des ensembles est toutefois restreinte pour ce genre d'analyse, de manière qu'il est possible de recontrer quelques corrélations fausses. Il est recommandé d'interpréter ces valeurs avec quelque précaution. Plusieurs chercheurs trouveront utiles les analyses de corrélation et c'est pour cette raison qu'elles figurent dans le tableau de résumé pour chaque localité, mais cela est sous toutes réserves.

Les moyennes générales par localité on été calculées pour chaque variable et sont présentées ici quand le nombre d'observations justifie son inclusion. A l'exception des données sur la rouille, les unités rapportées sont celles utilisées dans toute cette information. Avec propos arithmétiques les moyennes des réactions à la rouille ont été calculées sur les valeurs du coëfficient d'infection (CI). On suggère une comparaison entre les CI relatifs pour sélectionner des variétés résistantes à la rouille, potentiellement utiles. Les matériels avec des valeurs appréciables, inférieures à 10, peuvent être considérés comme résistants, tandis que les variétés avec des valeurs supérieures à 20, peuvent être considérés comme susceptibles.

Pour analyser et résumer ces données de nombreux problèmes ont été rencontrés. Notre intention est de fournir au lecteur le maximum d'information utile, sans toutefois le troubler avec beaucoup de détails sur la computation.

Resultats et Discussion

Pour l'analyse du Huitième ISWYN, le CIMMYT a compulsé les données de 83 sites représentant 47 pays. Le nombre maximum de coopérateurs a participé à cet essai. La figure 1 montre le nombre de localités qui ont fourni des données, avec son numéro de tableau correspondant. La figure 2 illustre le cycle de culture dans chaque site, et l'altitude sur ou en-dessous du niveau de la mer.

Les tableaux 1 à 83 présentent le comportement des variétés pour le rendement, les caractéristiques agronomiques et la résistance aux maladies dans une série spécifique de conditions ambiantes, de manière à donner au lecteur une vision plus profonde au sujet de la nécessité de variétés bien appropriées au milieu ambiant. La moyenne générale pour toutes les localités pour les mesures de la variable figure au tableau 84.

La variété occupant la première place pour toutes les localités a été LR-64-N10B x An_E3 = WW 15, placée en Australie et qui a eu une moyenne de 4,158 kg/ha. La même variété, mais plantée au Soudan sous le nom de "Mexicani", a eu le rendement le plus élevé lors du Septième ISWYN (4,105 kg/ha). Cette variété est une sélection mexicaine; elle est semée en Californie (U.S.A.) sous le nom de Anza, en Nouvelle Zélande sous le nom de Karamu, et en Iran sous le nom de Moghan 1.

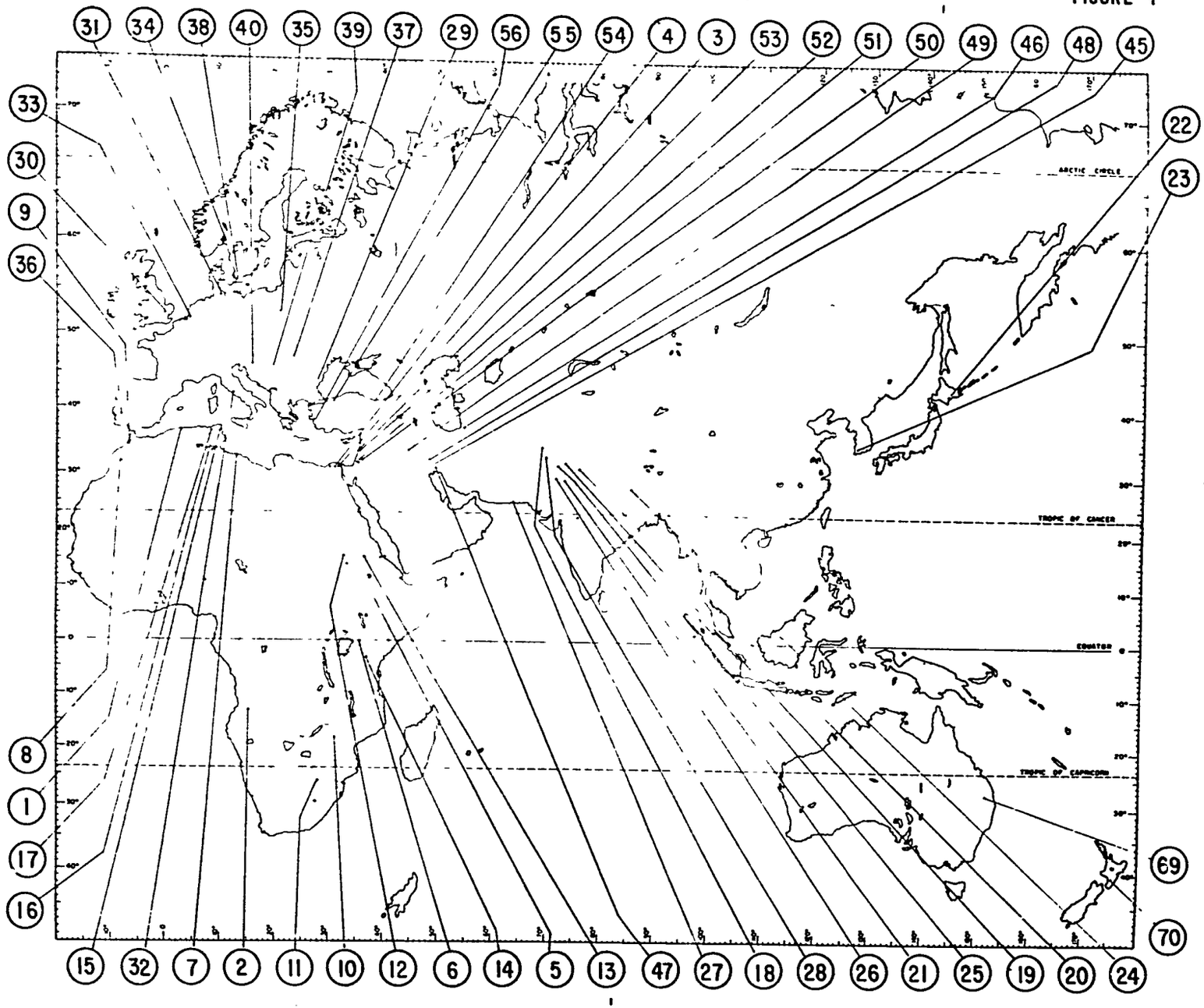
Tanori 71, Kalyansona 227, Pénjamo 62, Chenab 70, Chhoti Lerma et Cajeme 71 ont occupé respectivement de la seconde à la septième place. Au Septième ISWYN ces variétés (à l'exception de Tanori 71, qui n'était pas inclus dans cet essai), ont occupé respectivement les cincquième, quinzième, douzième, dixième et seconde places. Cependant, la moyenne de rendement dans le Huitième ISWYN pour ces variétés, en comparaison avec le Septième, n'a été que de 94 kg/ha. Toutes les variétés mentionnées ci-dessous sont d'origine mexicaine, sauf Chenab 70, dont une partie du complexe génétique est d'origine pakistanaise.

La variété mexicaine Pitic 62 a été introudite dans tous les essais internationaux de rendement de blé de printemps. On peut observer sa grande adaptation grâce au fait qu'elle ait figuré parmi les variétés les plus rentables dans certains ISWYN's. Cependant, son adaptation est en train de diminuer dans quelques régions à cause de sa susceptibilité aux rouilles.

Les dix premières variétés sont des blés semi-nains, et ont une certaine résistance à la verse. Dix d'entre elles sont d'origine mexicaine. D'autre part, les dix dernières variétés sont toutes hautes et susceptibles à la verse. Aucune variété mexicaine ne figure dans ce dernier groupe.

TABLES

FIGURE 1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ARCTIC CIRCLE
TROPIC OF CANCER
EQUATOR
TROPIC OF CAPRICORN

CONT'D FIGURE 1

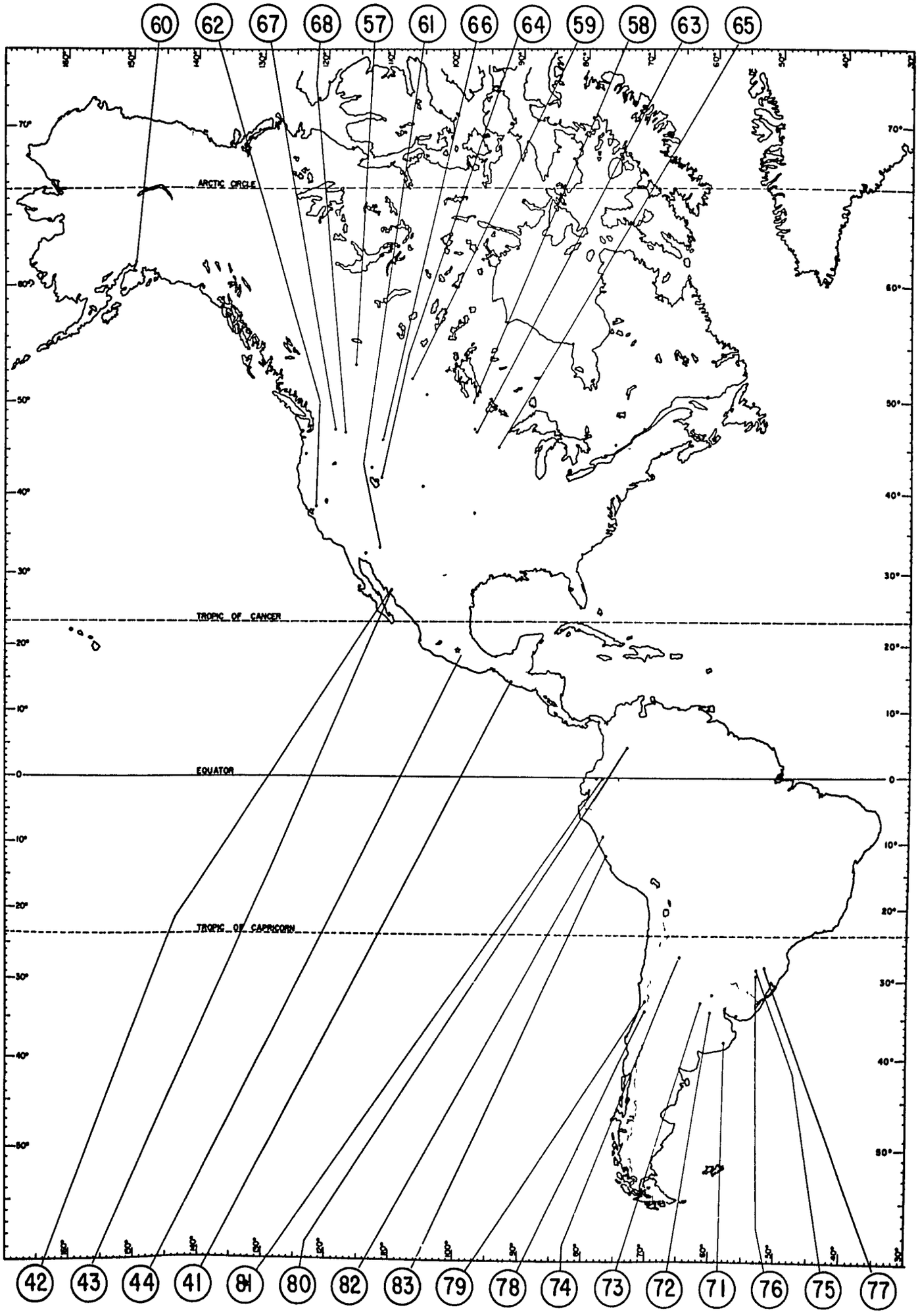
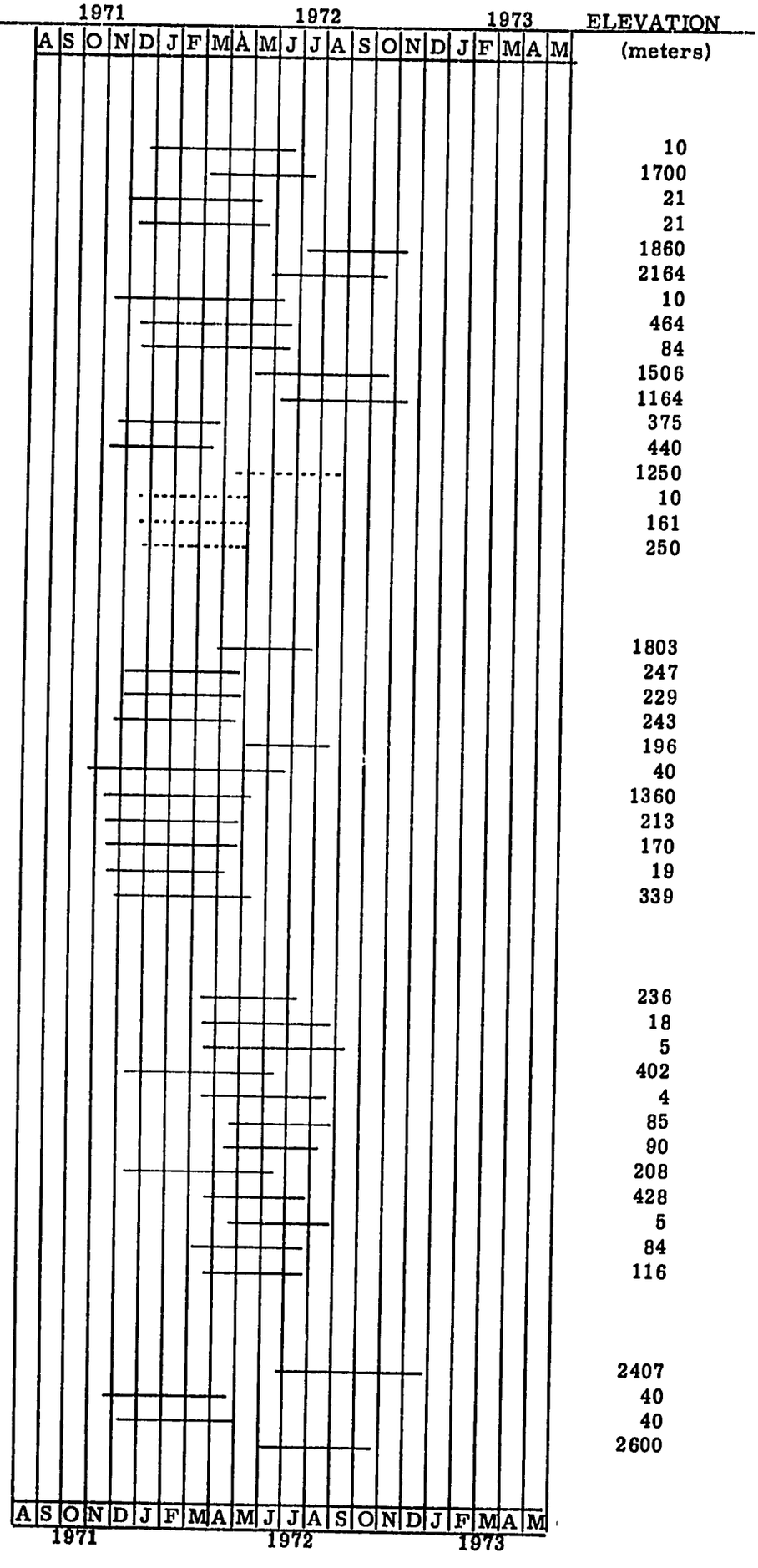


FIGURE 2



* Date harvested not reported

Cont'd. FIGURE 2

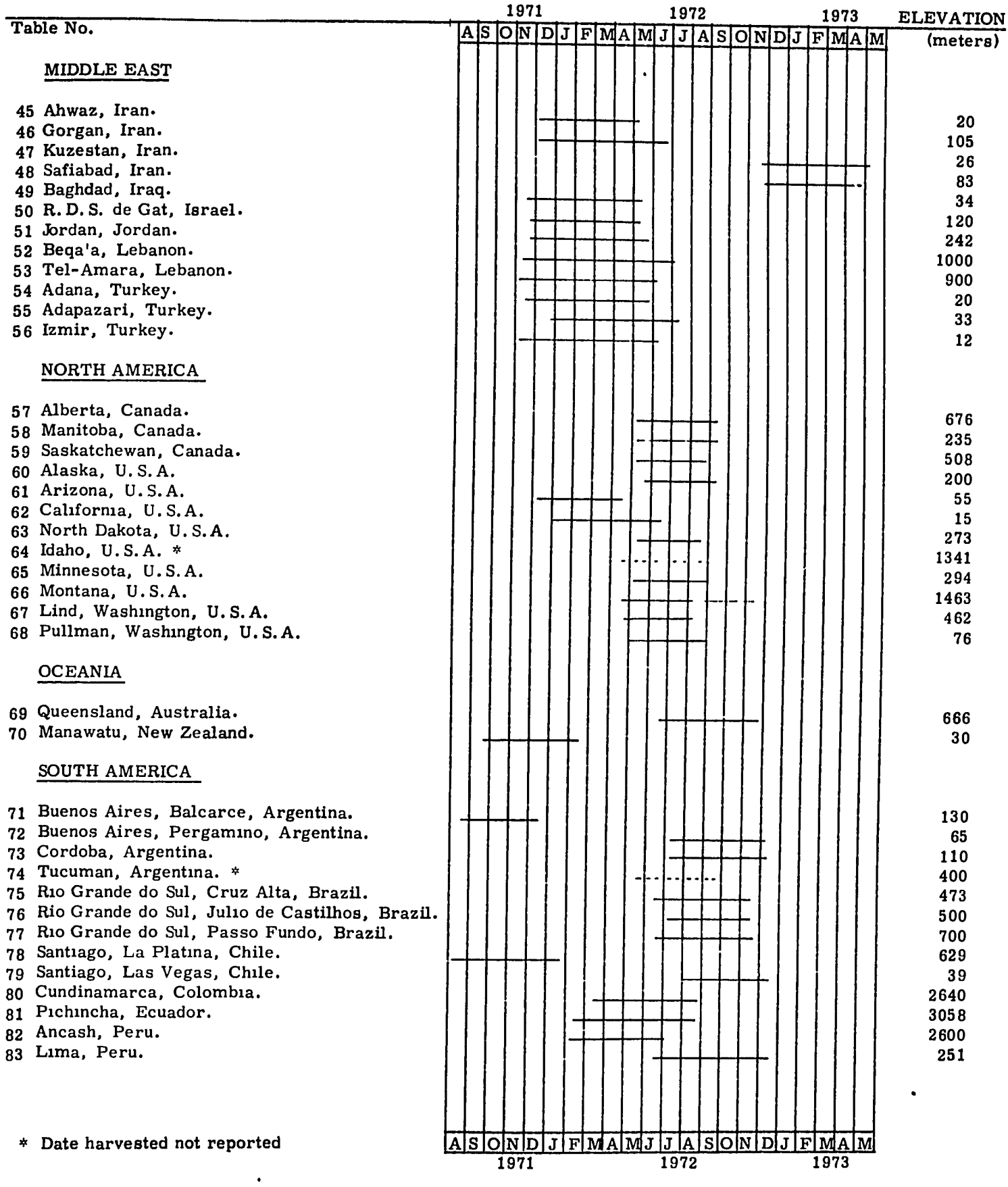


TABLE 1 AFRICA ALGERIA BARAKI

BARAKI (ALGER STATION-INRAA).
COOPERATORS INRAA, CEREAL PROJECT OF ALGERIA.

LATITUDE 36 5'N
LONGITUDE 03 10'E
ELEVATION 0010 M. ABOVE S.L.

DATE PLANTED 22/09/71
DATE HARVESTED 06/27/72
AMOUNT OF MOISTURE 0748 MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 050.0 KG/HA
POTASSIUM 000.0 KG/HA

COOL, CLOUDY, RAINY WEATHER. FREQUENT RAINS DELAYED SEEDING. HEAVY ATTACK OF SEPTORIA, STRIPE AND LEAF RUST. LATE ATTACK OF STEM RUST. HEAVY ATTACK OF CUTWORM. WEEDS CONTROLLED BY HAND. PEST PROBLEM NOT REPORTED. LOCAL CHECK FLOWERING ALREADY. LODGING SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	SEPTORIA SPP.
4	TANORI 71	MEXICO	4433.3	80.2	161.0	-	0	92.5	-	92.4
44	MEXICANO 1481	GUATEMALA	5166.6	78.2	161.0	20S	0	102.5	-	70.2
43	CIANAB 70	PAKISTAN	6166.6	79.2	161.0	20MR	0	95.0	-	81.3
5	TOGLIFEN 'S'	CHILE	6153.3	79.3	161.0	-	0	90.0	-	81.3
21	FENJANO 62	MEXICO	5713.3	78.7	161.0	-	10MR	100.0	-	85.0
47	CARAZINHO	BRAZIL	5612.3	79.0	-	-	0	125.0	2	48.0
16	FITIC 62	MEXICO	5566.6	73.0	161.0	-	0	102.5	1	81.3
3	NARO 62	COLOMBIA	5560.0	78.0	161.0	-	80S	112.5	2	85.0
42	CIZA 155	EGYPT	5506.6	79.1	161.0	-	10MR	115.0	-	66.5
35	CHECHI LERMA	INDIA	5400.6	80.6	161.0	40S	0	92.5	-	77.6
25	FATO ARGENTINO	ARGENTINA	5400.0	82.0	161.0	-	10MR	97.5	-	59.1
6	T-64-2-M	TUNISIA	5155.3	78.1	161.0	-	20MS	105.0	-	62.8
8	ERA	U.S.A.	5153.3	78.3	-	5MS	0	110.0	-	81.7
46	KALYANSONA 227	INDIA	5100.0	77.0	161.0	-	0	90.0	-	85.0
41	SONALIKA	INDIA	5126.6	79.0	161.0	-	0	97.5	-	66.7
20	FLTAR 70	MEXICO	5120.0	77.5	161.0	5MS	0	97.5	-	52.4
15	LR64-NIGB X AN 3E	AUSTRALIA	5060.0	79.3	161.0	20MS	80S	92.5	-	73.9
14	MEX 226	IRAQ	5026.6	80.5	161.0	10MR	0	95.0	-	81.3
33	CAECTO	ARGENTINA	5000.0	80.5	161.0	10MS	0	127.5	1	59.1
27	SONORA 64-K1. BENO.	ARGENTINA	4952.3	80.0	161.0	-	0	97.5	-	85.0
50	LOCAL CHECK / 6.6 CMS. / BASKET /		4953.3	-	161.0	-	100S	120.0	8	77.6
40	VICTOR 1	ITALY	4920.0	76.7	161.0	-	100S	82.5	-	59.1
7	ST 2268	TUNISIA	4906.6	79.5	161.0	-	0	90.0	-	73.9
31	CAJEME 71	MEXICO	4813.3	80.5	161.0	-	0	72.5	-	81.3
23	CALILAC	MEXICO	4780.0	80.8	161.0	10MS	0	95.0	-	55.4
32	LONDI	RHODESIA	4723.3	75.5	161.0	30S	0	77.5	-	52.4
48	NAYAB 70	PAKISTAN	4726.6	77.0	161.0	-	100S	100.0	-	81.3
49	PIAMONTES	ARGENTINA	4720.0	80.7	161.0	-	60MS	122.5	1	59.1
39	BLEUGLEN	CHILE	4720.0	78.5	161.0	-	0	117.5	2	81.3
17	ARIANA 66	TUNISIA	4640.0	78.0	-	-	40MS	115.0	-	55.4
24	TOBARI 66	MEXICO	4620.0	79.5	161.0	-	0	92.5	-	77.6
36	JARAL 'S'	ARGENTINA	4573.3	76.5	161.0	10MS	0	92.5	-	81.3
12	VICAM 71	MEXICO	4506.6	78.7	161.0	20MS	0	60.0	-	81.3
26	INIA 66	MEXICO	4493.3	81.0	161.0	-	0	90.0	-	85.0
1	BONZA 55	COLOMBIA	4466.6	75.7	161.0	-	30MS	112.5	5	70.2
2	CHRIS	U.S.A.	4440.0	81.7	161.0	-	0	120.0	9	62.8
30	HAZERA-2152	ISRAEL	4273.3	-	161.0	-	0	87.5	-	68.7
34	ET-2281	TUNISIA	4253.3	77.0	161.0	-	40MS	87.5	-	73.9
38	LR 301	INDIA	4133.3	77.5	161.0	-	0	65.0	-	81.3
16	ET-2256	TUNISIA	4126.6	-	161.0	-	0	92.5	-	73.9
15	EE-INIA	MEXICO	3973.3	79.0	161.0	-	0	67.5	-	85.0
29	MEXICO 120	AUSTRALIA	3920.0	77.7	161.0	10MR-MS	0	62.5	-	52.4
28	YECORA 70	MEXICO	3826.6	-	161.0	-	0	72.5	-	52.4
22	ZAMBEZI	RHODESIA	3806.6	-	161.0	-	10MR	85.0	-	52.4
13	MAFA > SUPREMO-MENTANA-MCN	CHILE	3760.0	79.3	161.0	-	10MR	122.5	3	85.0
37	MANITOU / INSENSITIVE /	CANADA	3673.3	79.0	161.0	-	0	117.5	3	73.9
5	IAS 20 IASSUL	BRAZIL	3613.3	-	-	-	0	137.5	9	48.0
45	MANITOU	CANADA	3566.6	-	-	-	0	137.5	8	77.6
10	HIRA	INDIA	3066.6	-	161.0	35S	0	62.5	-	66.7
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2886.6	-	161.0	-	60S	77.5	-	66.7
		GRAND MEAN	4747.8	78.6	161.0	4.6	15.7	97.2		76.8
	STANDARD ERROR OF GRAND MEAN		59.5	0.0	0.0	0.3	0.9	0.3		1.1
	COEFFICIENT OF VARIATION		15.3%	1.0%	0.1%	55.6%	73.2%	3.9%		16.2%
	LSD VARIETY MEANS 5 PC		1190.6	1.3	0.2	7.5	18.8	6.2		22.7

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.624**						
DAYS TO	MATURITY	0.05	0.25					
STRIPE	RUST	0.00	-0.01	0.11				
LEAF	RUST	0.01	0.07	0.10	-0.12			
HEIGHT	CM.	0.15	0.05	-0.46**	-0.28*	0.11		
LODGING		0.00	0.00	0.00	0.00	0.00	0.00	
SEPTORIA	SPP.	-0.14	-0.13	0.54**	-0.01	-0.07	-0.57**	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 2 AFRICA ANGOLA HUAMBO

INSTITUTO DE INVESTIGACAO AGRONOMICA
COOPERATORS VASCLEMIN GONCALVES DE MACEDO.

LATITUDE 012 44'S
LONGITUDE 015 50'E
ELEVATION 01700 M. ABOVE S.L.

DATE PLANTED 03/03/72
DATE HARVESTED 07/17/72
AMOUNT OF MOISTURE 0379 MM

NITROGEN 306.0 KG/HA
PHOSPHORUS 055.0 KG/HA
POTASSIUM 080.0 KG/HA

LATE RAINFALL DELAYED DATE OF SEEDING. UNFAVORABLE CONDITIONS FOR DISEASE DEVELOPMENT. CHEMICAL CONTROL OF INSECTS. NO WEED OR PEST PROBLEM. LOCAL CHECK HUILA. SHATTERING: 0= FREE, R= RESISTANT, MS= MODERATELY SUSCEPTIBLE, VS= VERY SUSCEPTIBLE, S= SUSCEPTIBLE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	SHATTERING	100C GRN WGT GRMS
16	E1-2256	TUNISIA	4026.6	84.7	55.0	117.0	0.0	85.0	0	43.3
15	LR64-NIGB x AN 3E	AUSTRALIA	3567.9	85.5	55.0	111.3	TS	66.6	0	35.0
5	TOCUIPEN 'S'	CHILE	3527.5	83.5	54.6	120.6	TS	68.3	0	33.7
6	T-64-2-W	TUNISIA	3513.3	81.5	57.3	116.3	10OS	88.3	0	44.8
18	FITIC 62	MEXICO	3766.0	81.6	58.0	116.6	10S	75.0	0	38.0
35	CHECTI LERMA	INDIA	3664.0	84.5	45.0	107.6	TS	73.3	0	36.6
1	ECONZA 55	COLOMBIA	3605.3	81.9	57.3	116.3	0	55.0	0	42.3
40	VICTOR I	ITALY	3596.6	83.4	65.3	123.6	20S	63.3	0	37.1
43	CHANAE 70	PAKISTAN	3562.6	83.7	52.6	108.6	30S	76.6	0	35.9
15	EE-INIA	MEXICO	3462.6	84.5	48.6	107.3	0	58.3	0	38.9
4	TANCRI 71	MEXICO	3464.0	84.4	45.0	102.3	0	68.3	0	35.1
30	PAZERA-2152	ISRAEL	3411.5	81.8	48.3	108.3	TS	73.3	0	40.9
42	CIZA 155	EGYPT	3357.3	84.3	52.6	114.6	10S	86.6	R	40.3
36	JARAL 'S'	ARGENTINA	3317.3	81.3	55.3	114.3	60S	70.0	0	36.3
22	ZAMBEZI	RHODESIA	3268.0	84.9	48.0	110.3	TS	65.0	0	34.7
26	INIA 66	MEXICO	3234.6	86.1	46.6	103.3	0	70.0	0	41.9
12	VICAN 71	MEXICO	3217.3	82.8	53.3	108.6	0	55.0	0	36.6
25	FATC ARGENTINO	ARGENTINA	3214.6	85.4	47.6	107.3	0	65.0	0	32.1
34	ET-2281	TUNISIA	3213.3	84.2	46.6	106.0	TS	66.6	0	37.0
44	MEXICANO 1481	FORTUGAL	3152.0	80.8	57.0	115.6	60S	78.3	0	36.9
46	NAYAE 70	PAKISTAN	3134.6	83.3	51.6	109.3	60S	81.6	0	40.9
14	MEX 226	IRAQ	3081.5	84.9	45.6	107.3	0	75.0	0	41.8
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3062.6	82.2	52.0	114.6	20S	85.0	0	40.9
8	EFA	U.S.A.	3062.6	83.1	50.3	141.3	0	70.0	0	32.7
28	YECORA 70	MEXICO	3057.3	83.3	48.0	120.3	0	55.0	MS	43.1
31	CALEME 71	MEXICO	3052.0	83.1	66.3	128.3	TS	65.0	MS	45.0
27	SONORA 64-K1. REND.	ARGENTINA	2989.3	84.3	46.0	102.0	0	73.3	0	38.4
21	PENJAMO 62	MEXICO	2976.6	83.4	50.3	105.3	0	68.3	MS	37.9
23	CALICAO	MEXICO	2957.3	83.3	49.6	105.3	0	70.0	MS	34.9
3	MAFC 63	COLOMBIA	2941.3	82.3	45.6	102.6	0	85.0	0	35.4
9	IAS 20 IASSUL	BRAZIL	2900.0	79.3	66.3	114.6	0	103.3	VS	40.1
2	CHRIS	U.S.A.	2890.6	81.3	54.6	111.3	0	101.6	0	32.1
46	KALYANSONA 227	INDIA	2822.6	84.0	48.3	108.3	20S	66.6	0	36.7
24	TOBARI 66	MEXICO	2816.6	84.5	48.0	106.0	0	73.3	0	35.8
10	PIRA	INDIA	2816.0	82.6	43.0	103.0	30S	50.0	0	37.4
33	CABLTO	ARGENTINA	2793.3	83.6	65.0	130.6	TS	108.3	0	31.6
29	MEXICO 120	AUSTRALIA	2776.6	81.2	52.0	110.0	20S	56.6	0	33.8
39	PUELCHEN	CHILE	2720.0	81.3	49.3	108.0	TS	85.0	0	36.9
41	SONALIKA	INDIA	2705.3	83.0	42.3	105.6	TS	70.0	0	52.6
7	BT 2266	TUNISIA	2646.6	83.6	48.0	108.3	0	73.3	0	35.3
38	LP 301	INDIA	2616.0	82.4	47.6	104.0	0	51.6	MS	40.7
13	MARA x SUPREMO-MENTANA-MCM	CHILE	2610.6	82.8	73.3	122.3	TS	93.3	S	40.7
49	PIMENTES	ARGENTINA	2581.3	83.9	57.3	116.0	TS	95.0	R	35.2
47	CARAZINHO	BRAZIL	2481.3	83.3	70.3	133.3	TS	101.6	0	40.4
37	MANITOL / INSENSITIVE /	CANADA	2470.6	81.3	47.3	104.6	0	86.6	0	25.9
32	LUNDI	RHODESIA	2456.0	80.4	48.6	102.0	10S	60.0	0	32.7
11	JARAL 'S' / LEE-SK-MARA	RHODES.A	2441.3	83.1	46.0	104.6	TS	56.6	0	31.3
20	ROTAM 70	MEXICO	2282.6	83.5	42.0	102.3	TS	60.0	0	42.5
17	ARIANA 66	TUNISIA	2260.0	83.4	53.0	155.0	0	86.6	0	40.8
45	MANITOL	CANADA	1658.6	76.4	51.3	148.0	30S	86.6	0	28.2
		GRAND MEAN	3048.7	83.0	54.6	113.4	12.3	74.8		37.9
		STANDARD ERROR OF GRAND MEAN	33.9	0.0	0.1	0.2	1.2	0.3		0.1
		COEFFICIENT OF VARIATION	13.6%	1.0%	3.8%	2.2%	127.7%	5.0%		3.7%
		LSD VARIETY MEANS 5 PC	676.6	1.3	3.4	4.1	25.8	6.1		2.3

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.37**						
DAYS TO	FLOWER	-0.24	-0.32*					
DAYS TO MATURITY		-0.19	-0.22	0.54**				
LEAF	RUST	0.32*	-0.31*	0.08	0.03			
HEIGHT	CM.	-0.05	-0.25	0.45**	0.35**	-0.04		
SHATTERING		0.00	0.00	0.00	0.00	0.00	0.00	
100 GRN WGT GRMS		0.20	0.16	-0.12	-0.04	0.07	0.02	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 3 AFRICA EGYPT GIZA

GIZA EXPERIMENT STATION
COOPERATORS DR.M.M. SADEK AND STAFF.

LATITUDE 031 00'N
LONGITUDE 030 00'E
ELEVATION +00021 M.ABOVE S.L.

DATE PLANTED 11/30/71
DATE HARVESTED 05/10/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 145.0 KG/HA
PHOSPHORUS 015.0 KG/HA
POTASSIUM 000.0 KG/HA

NORMAL WEATHER CONDITIONS. NO STEM OR STRIPE RUST OBSERVED. SATISFACTORY LEAF RUST INFECTION. NO INSECT OR PEST PROBLEMS. WEEDS WERE CONTROLLED BY HAND. LOCAL CHECK GIZA 156. SHATTERING SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	SHATTERING	1000 GRN WGT GRMS
12	VICAM 71	MEXICO	6149.3	79.5	100.0	156.0	0	75.0	S	34.2
15	LR64-MICB X AN 3E	AUSTRALIA	6049.3	83.1	103.0	157.0	30S	90.0	MS	34.1
16	ET-2256	TUNISIA	5736.3	82.7	98.0	151.0	0	110.0	MS	40.6
36	JARAL 'S'	ARGENTINA	5671.6	80.7	99.0	154.0	0	110.0	MR	35.2
31	CAJEME 71	MEXICO	5593.8	81.1	100.0	151.0	TR	105.0	S	46.5
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5588.3	81.5	97.0	158.0	0	135.0	R	48.0
20	POTAM 70	MEXICO	5393.8	81.1	88.0	143.0	5S	95.0	MS	39.1
42	GIZA 155	EGYPT	5355.0	82.7	95.0	151.0	40S	135.0	R	46.2
29	MEXICO 120	AUSTRALIA	5316.1	81.1	91.0	144.0	5S	75.0	MS	39.0
22	ZAMBEZI	RHODESIA	5121.7	82.5	99.0	149.0	30S	115.0	MS	34.3
28	YECORA 70	MEXICO	5032.8	81.5	90.0	140.0	0	80.0	MS	42.1
14	MEX 226	IRAQ	4960.6	82.7	97.0	151.0	TR	120.0	MS	43.0
7	BT 2288	TUNISIA	4760.6	82.7	93.0	151.0	TR	110.0	MS	39.1
35	CHOCTI LERMA	INDIA	4732.8	82.3	98.0	157.0	10MS	120.0	MR	32.7
46	KALYANSONA 227	INDIA	4682.8	82.0	100.0	158.0	TMR	115.0	S	37.5
38	LF 301	INDIA	4677.3	80.3	96.0	151.0	TR	85.0	MS	36.5
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4671.7	81.7	89.0	145.0	5S	85.0	S	26.5
43	CHANAB 70	PAKISTAN	4560.6	82.3	98.0	154.0	TMS	120.0	S	43.1
18	FITIC 62	MEXICO	4516.2	76.5	98.0	151.0	30S	115.0	MR	36.7
19	BB-INIA	MEXICO	4499.5	82.7	93.0	151.0	0	80.0	MS	41.5
34	BT-2281	TUNISIA	4499.5	82.7	89.0	151.0	30S	110.0	MR	35.8
4	TANORI 71	MEXICO	4477.3	81.8	95.0	140.0	TR	115.0	MS	36.5
9	TORLIFEN 'S'	CHILE	4471.7	76.3	100.0	157.0	5S	100.0	MS	29.8
32	LUNDI	RHODESIA	4443.9	81.5	91.0	148.0	10S	100.0	S	40.0
40	VICTOR I	ITALY	4421.7	82.0	112.0	158.0	TS	105.0	S	37.3
21	FENJAME 62	MEXICO	4405.1	82.7	97.0	149.0	5S	110.0	S	40.2
44	MEXICANO 1481	PORTUGAL	4266.2	79.1	108.0	155.0	20S	120.0	MS	36.3
48	NAYAB 70	PAKISTAN	4249.5	81.0	99.0	158.0	40S	135.0	MS	39.2
26	INIA 66	MEXICO	4244.0	82.0	90.0	140.0	5MS	150.0	MR	40.5
30	HAZERA-2152	ISRAEL	4244.0	81.1	92.0	146.0	40S	110.0	S	42.7
23	CALIBAD	MEXICO	4210.6	83.0	93.0	139.0	0	100.0	S	35.5
10	PIRA	INDIA	4121.8	81.3	88.0	143.0	5S	75.0	S	35.7
24	TOBARI 66	MEXICO	3816.2	83.0	90.0	139.0	0	100.0	MR	35.8
41	SONALIKA	INDIA	3832.9	82.0	88.0	142.0	TS	120.0	MR	32.0
17	ARIANA 66	TUNISIA	3255.2	81.6	114.0	158.0	5S	140.0	MR	36.5
39	HUELGLEN	CHILE	3094.1	82.0	99.0	151.0	TR	135.0	MS	37.0
49	FIAMONTES	ARGENTINA	3016.3	83.1	106.0	153.0	10S	150.0	R	38.0
8	ERA	U.S.A.	2894.1	79.3	123.0	164.0	TR	120.0	MS	26.0
27	SONORA 64-K1. BENC.	ARGENTINA	2755.2	82.0	90.0	140.0	TS	105.0	MS	39.5
25	PATO ARGENTINO	ARGENTINA	2577.5	83.2	98.0	151.0	TS	110.0	MS	32.3
13	MARA X SUPREMO-MENTANA-MCM	CHILE	2516.4	81.7	111.0	156.0	5S	135.0	S	40.3
47	CARAZINHO	BRAZIL	2494.1	80.0	109.0	158.0	40S	150.0	MR	37.3
33	CABOTO	ARGENTINA	2216.4	81.5	103.0	158.0	10MS	150.0	MR	31.0
3	NAPO 53	COLOMBIA	2060.9	80.7	96.0	141.0	20S	130.0	MR	34.3
1	BONZA 55	COLOMBIA	1527.5	78.0	98.0	157.0	5S	135.0	M	31.8
6	T-64-2-W	TUNISIA	1744.2	80.3	101.0	157.0	20S	125.0	MS	34.5
5	IAS 20 IASSUL	BRAZIL	1738.7	78.0	107.0	151.0	TR	145.0	MS	39.8
37	MANITOU / INSENSITIVE /	CANADA	1644.2	81.5	94.0	142.0	0	135.0	R	31.7
2	CHRIS	U.S.A.	1399.8	80.7	101.0	157.0	0	135.0	R	32.0
45	MANITOU	CANADA	1260.9	0.0	130.0	164.0	0	135.0	MR	20.7
		GRAND MEAN	3581.4	79.7	98.6	150.9	8.5	115.1		37.3

STANDARD ERROR OF GRAND MEAN 31.4
COEFFICIENT OF VARIATION 9.6%
LSD VARIETY MEANS 5 PC 629.3

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.32*					
DAYS TO	FLOWER	-0.39**	-0.54**				
DAYS TO MATURITY		-0.14	-0.31*	0.76**			
LEAF	RUST	0.06	0.08	-0.[illegible]	0.12		
HEIGHT	CM.	-0.58**	-0.14	0.4[illegible]**	0.33*	0.19	
SHATTERING		0.00	0.00	0.00	0.00	0.00	0.00
1000 GRN WGT GRMS		0.40**	0.46**	-0.46**	-0.34*	0.05	-0.03	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 4 AFRICA EGYPT KAFR EL SHEIK

SAKHA EXPERIMENT STATION
COOPERATORS M.M. SADEK AND STAFF.

LATITUDE 031 00'N DATE PLANTED 12/10/71 NITROGEN 145.0 KG/HA
LONGITUDE 031 00'E DATE HARVESTED 05/23/72 PHOSPHORUS 075.0 KG/HA
ELEVATION +00021 M.ABOVE S.L. AMOUNT OF MOISTURE 0050 MM POTASSIUM 000.0 KG/HA

NORMAL WEATHER CONDITIONS. MODERATE DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK GIZA 156.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS
31	CAJEME 71	MEXICO	6555.5	80.3	55.0	142.0	TR.	TR	75.0	0.0	60.0	46.0
15	BE-INIA	MEXICO	6555.9	82.5	50.0	142.0	TR	0	70.0	0.0	10.0	35.5
16	ET-2256	TUNISIA	6455.9	82.5	55.0	140.0	TR	0	105.0	0.0	5.0	42.5
30	HAZERA-2152	ISRAEL	6488.8	75.1	50.0	138.0	30S.	TR-MS	90.0	5.0	5.0	42.5
35	CHECK1 LERMA	INDIA	6355.5	81.7	55.0	143.0	0	0	110.0	5.0	0.0	36.3
25	MEXICO 120	AUSTRALIA	6344.4	75.5	53.0	144.0	5R.	0	70.0	0.0	60.0	36.5
28	YECORA 70	MEXICO	6322.2	80.6	51.0	140.0	5R.	0	75.0	0.0	15.0	40.5
14	MEX 266	IRAQ	6311.0	82.7	52.0	140.0	0	0	105.0	0.0	10.0	43.0
4	TANORI 71	MEXICO	6233.3	82.8	50.0	140.0	TR	0	100.0	5.0	20.0	42.2
42	CHANAE 70	PAKISTAN	6166.6	81.3	54.0	142.0	10S.	TMR	105.0	5.0	50.0	44.0
12	VICAM 71	MEXICO	6166.6	75.5	59.0	143.0	0	0	65.0	0.0	60.0	33.6
20	POTAM 70	MEXICO	5966.8	81.1	65.0	142.0	TR-R	0	90.0	5.0	20.0	43.0
38	LR 301	INDIA	5855.5	78.0	55.0	141.0	5R.	0	75.0	0.0	40.0	37.0
48	NAVAC 70	PAKISTAN	5755.5	75.1	55.0	145.0	30S.	5R.	105.0	5.0	40.0	42.5
23	CALICAC	MEXICO	5655.9	82.3	57.0	144.0	0	0	115.0	20.0	10.0	31.7
41	FERNANDO 62	MEXICO	5633.3	80.5	55.0	142.0	5S.	0	95.0	15.0	20.0	39.2
22	ZAMBEZI	RHODESIA	5633.3	80.7	58.0	146.0	30S.	5R.	95.0	20.0	5.0	32.3
27	SONORA 64-K1. BEND.	ARGENTINA	5588.8	81.1	93.0	137.0	0	0	95.0	0.0	5.0	38.3
18	FITIC 62	MEXICO	5555.5	74.0	55.0	142.0	10S.	5S.	115.0	10.0	0.0	33.2
10	PIRA	INDIA	5488.8	80.7	68.0	136.0	5MS.	TR-R	70.0	0.0	2.0	35.1
46	KALYANSONA 227	INDIA	5466.6	80.0	102.0	147.0	10S.	10S.	105.0	5.0	50.0	36.6
40	INIA 66	MEXICO	5444.4	82.7	65.0	138.0	TR	TR	105.0	15.0	5.0	42.2
19	LR64-NIL8 X AN 3E	AUSTRALIA	5377.7	81.0	102.0	146.0	30S.	TR	95.0	10.0	20.0	31.2
41	SONALIKA	INDIA	5311.0	81.1	50.0	142.0	5R.	0	95.0	20.0	0.0	51.0
36	JARAL 'S'	ARGENTINA	5166.6	75.7	100.0	145.0	TR-R	0	90.0	5.0	0.0	36.0
34	ET-2261	TUNISIA	5055.5	75.5	50.0	142.0	20S.	0	95.0	0.0	5.0	34.1
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5066.6	81.5	53.0	135.0	20S	0	120.0	5.0	0.0	45.1
32	LLANI	RHODESIA	5033.3	80.1	50.0	140.0	TR-MS	0	90.0	0.0	40.0	37.0
11	JARAL 'S' / LEE-SK-KARA	RHODESIA	4988.8	80.3	66.0	133.0	10S.	0	80.0	0.0	20.0	30.5
44	MEXICANO 1481	POPTUGAL	4988.8	81.5	103.0	146.0	20S.	0	100.0	5.0	20.0	35.1
40	VICTOR I	ITALY	4922.7	80.0	109.0	147.0	0	30S.	95.0	0.0	5.0	34.0
5	TOCLIPEN 'S'	CHILE	4788.8	80.0	55.0	145.0	TR	TR-MR	90.0	0.0	4.0	25.5
24	TOCAPI 66	MEXICO	4777.7	82.0	53.0	142.0	TR	0	105.0	30.0	0.0	35.1
7	ET 2266	TUNISIA	4733.3	81.2	65.0	141.0	10MS.	0	90.0	5.0	10.0	36.2
6	T-64-2-W	TUNISIA	4566.6	79.1	58.0	144.0	50S.	TR-MS	115.0	0.0	10.0	36.0
35	PLELCLEN	CHILE	4522.2	80.0	101.0	142.0	TR	0	110.0	10.0	20.0	38.1
42	GIZA 155	EGYPT	4522.2	81.1	101.0	145.0	30S.	5S.	125.0	10.0	0.0	41.7
25	FATC ARGENTINO	ARGENTINA	4488.8	80.7	59.0	144.0	0	0	105.0	5.0	10.0	28.5
3	NAPO 63	COLOMBIA	4055.5	80.0	65.0	138.0	30S	0	115.0	30.0	30.0	36.0
47	CARAZINHO	BRAZIL	4066.6	78.7	107.0	144.0	0	5S.	130.0	70.0	50.0	38.6
17	ARIANA 66	TUNISIA	3966.6	82.8	116.0	152.0	10S.	TR-MR	125.0	5.0	0.0	34.1
33	CAECIC	ARGENTINA	3844.4	80.7	107.0	144.0	5MR.	0	125.0	70.0	5.0	31.8
8	ERA	U.S.A.	3722.2	78.3	118.0	152.0	0	0	105.0	0.0	5.0	30.5
13	KARA > SUPREMO-MENTANA-MCM	CHILE	3711.1	80.1	106.0	144.0	10S.	10S.	135.0	15.0	30.0	37.5
2	CHRIS	U.S.A.	3688.8	80.3	102.0	144.0	0	0	140.0	60.0	0.0	29.3
37	MANITOU / INSENSITIVE /	CANADA	3544.4	81.5	93.0	137.0	0	0	130.0	80.0	5.0	33.0
1	GONZA 55	COLOMBIA	3066.6	77.1	59.0	143.0	10S	0	125.0	5.0	5.0	32.0
45	PIAMONTES	ARGENTINA	2822.2	81.0	103.0	146.0	TR-MS	TR	125.0	10.0	10.0	34.0
5	IAS 20 TASSLL	BRAZIL	2666.6	80.5	101.0	140.0	0	20S.	135.0	40.0	70.0	41.2
45	MANITOU	CANADA	1811.1	72.5	123.0	157.0	0	0	140.0	5.0	10.0	20.3
		GRAND MEAN	5022.1	80.3	57.6	142.7	7.7	1.7	103.2	12.5	18.1	36.8

STANDARD ERROR OF GRAND MEAN 41.0
COEFFICIENT OF VARIATION 5.9%
LSD VARIETY MEANS 5 PC 820.5

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.36**									
DAYS TO	FLOWER	-0.57**	-0.41**								
DAYS TO	MATURITY	-0.32*	-0.36**	0.84**							
LEAF	RUST	0.01	-0.05	-0.06	0.07						
STEM	RUST	-0.21	-0.09	0.29*	0.13	-0.05					
HEIGHT	CM.	-0.73**	-0.15	0.51**	0.28*	0.10	0.19				
LODGING		-0.44**	0.05	0.13	-0.06	-0.12	0.06	0.56			
SHATTERING		0.12	-0.10	0.00	-0.00	-0.06	0.24	-0.17	-0.02		
1000 GRN WGT GRMS		0.53**	0.45**	-0.50**	-0.46**	0.04	0.01	-0.24	-0.15		0.20

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 5 AFRICA ETHIOPIA SHOA

DEBRE ZEIT EXPERIMENT STATION.
COOPERATORS ALEMU MENGISTU.

LATITUDE 08E 55'N
LONGITUDE 038 58'E
ELEVATION +01880 M.ABOVE S.L.

DATE PLANTED 07/07/72
DATE HARVESTED 11/13/72
AMOUNT OF MOISTURE 0454 MM

NITROGEN 060.0 KG/HA
PHOSPHORUS 040.0 KG/HA
POTASSIUM 000.0 KG/HA

NORMAL WEATHER CONDITIONS. NO SERIOUS DISEASE DEVELOPMENT FOR MOST OF THE VARIETIES. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SEPTORIA SPP.
50	LOCAL CHECK / 6.6 CMS. / PACKET		4343.3	77.2	59.0	121.6	5MS	35VS	111.6	[illegible]	20.0
21	PENJAMO 62	MEXICO	4275.0	76.7	59.0	113.3	0	10S	90.0	[illegible]	40.0
27	SONORA 64-K1. REND.	ARGENTINA	4250.3	75.9	52.6	108.3	TR	10S	87.6	0.0	60.0
26	INIA 66	MEXICO	4226.6	80.2	54.0	106.6	0	0	83.3	0.0	50.0
41	SONALIKA	INDIA	4215.0	78.5	49.0	108.3	10S	35S	91.6	0.0	70.0
46	KALYANSONA 227	INDIA	4186.6	75.0	55.0	110.0	0	0	81.6	0.0	60.0
14	MEX 226	IRAQ	4165.0	78.0	52.0	108.3	5R	20S	90.0	0.0	60.0
7	ET 2288	TUNISIA	3835.0	77.2	53.3	108.3	5MS	50S	86.6	0.0	50.0
42	CIZ/ 155	EGYPT	3721.6	75.9	58.3	120.0	0	15S	110.0	3.3	50.0
35	CHECK 1 LERMA	INDIA	3718.3	78.0	56.6	105.0	0	TR	85.0	0.0	70.0
4	TANORI 71	MEXICO	3650.0	77.6	52.0	105.0	E	25S	83.3	0.0	90.0
16	ET-2256	TUNISIA	3601.6	72.5	64.3	113.3	5MR	10MS	90.0	0.0	20.0
10	FIRA	INDIA	3526.6	74.6	49.0	105.0	10MS	50S	55.0	0.0	60.0
48	NAYAB 70	PAKISTAN	3526.6	73.3	55.0	120.0	5R	5MR	86.6	0.0	60.0
22	ZAMBEZI	RHODESIA	3496.6	72.5	54.0	116.6	0	5R	80.0	0.0	80.0
20	POTAM 70	MEXICO	3453.3	77.2	49.0	105.0	TR	15S	65.0	0.0	70.0
43	CHANAB 70	PAKISTAN	3391.6	71.2	61.6	111.6	TR	75S	95.0	0.0	40.0
23	CALIDAD	MEXICO	3326.6	76.5	51.0	113.3	TR	5R	78.3	1.6	60.0
37	MANITOU / INSENSITIVE /	CANADA	3320.0	75.9	52.0	111.0	TR	75S	111.6	11.6	50.0
19	LR64-N108 X AN 3E	AUSTRALIA	3308.3	69.9	60.3	116.6	5MS	40S	76.6	0.0	20.0
25	PATO ARGENTINO	ARGENTINA	3295.0	76.3	51.0	113.3	TR	10S	78.3	0.0	50.0
6	T-64-2-W	TUNISIA	3206.6	73.3	67.0	123.3	80S	35S	105.0	20.0	20.0
5	NARC 63	COLOMBIA	3191.6	75.0	49.0	105.0	15MS	15S	93.3	0.0	50.0
24	TCEARI 66	MEXICO	3155.0	74.6	55.0	111.6	0	TR	86.6	0.0	60.0
32	LUNDI	RHODESIA	3063.3	70.3	53.3	106.6	0	TR	71.6	0.0	100.0
34	ET-2281	TUNISIA	3061.6	75.5	52.0	108.3	5MR	30MS	78.3	1.6	50.0
9	TOCLIFEN 'S'	CHILE	3053.3	69.4	55.0	111.6	TR	75S	78.3	0.0	60.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3003.3	69.4	49.0	108.3	5MS	5MR	68.3	0.0	100.0
28	VECORA 70	MEXICO	2956.6	72.9	52.0	118.3	0	5S	56.6	0.0	60.0
30	MAZURA-2152	ISRAEL	2938.3	67.3	60.3	106.6	5R	40S	86.6	1.6	40.0
31	CAJEME 71	MEXICO	2785.0	73.3	71.3	128.3	5MR	10S	61.6	0.0	20.0
39	KLELGLEN	CHILE	2758.3	72.0	53.3	105.0	0	35S	95.0	0.0	70.0
2	CHRIS	U.S.A.	2650.0	75.5	63.0	115.0	TR	25S	96.6	18.3	20.0
1	BONZA 53	COLOMBIA	2561.6	72.5	68.0	128.3	5MR	10S	116.6	41.6	40.0
15	EE-INIA	MEXICO	2538.3	75.0	57.6	105.0	0	5MR	61.6	0.0	70.0
8	ERA	U.S.A.	2491.6	73.7	78.0	130.0	0	0	81.6	0.0	20.0
36	JARAL 'S'	ARGENTINA	2330.0	66.4	61.6	111.6	5MS	10MR	83.3	0.0	70.0
18	FITIC 62	MEXICO	2300.0	57.9	67.0	115.0	5MS	50S	95.0	0.0	40.0
12	VICAM 71	MEXICO	2230.0	71.6	59.0	105.0	TR	5MR	55.0	0.0	80.0
29	MEXICO 120	AUSTRALIA	2161.6	68.2	68.0	115.0	TR	60S	55.0	0.0	20.0
5	IAS 20 IASSUL	BRAZIL	2155.0	65.4	67.0	115.0	TR	95S	116.6	36.3	30.0
13	MARA x SUPREMO-MENTANA-MCM	CHILE	1816.6	72.9	77.0	126.6	5MR	60S	113.3	13.3	40.0
49	PIAMONTES	ARGENTINA	1793.3	73.3	70.0	123.3	5MS	35VS	115.0	38.3	30.0
38	LR 301	INDIA	1733.3	67.3	55.0	105.0	0	0	53.3	0.0	100.0
33	CAECTO	ARGENTINA	1548.3	71.2	65.0	130.0	TR	35VS	118.3	13.3	20.0
40	VICTOR I	ITALY	1120.0	60.4	78.0	120.0	5MS	60S	80.0	0.	20.0
47	CARAZINHO	BRAZIL	913.3	57.9	76.0	125.0	5MS	35S	120.0	21.6	20.0
44	MEXICANO 1481	FORTICAL	730.0	60.4	67.0	106.6	-	100S	85.0	38.3	50.0
45	MANITOU	CANADA	663.3	59.2	82.6	125.0	10S	90S	106.6	1.6	30.0
17	AFIANA 66	TUNISIA	-	-	54.0	-	10MS	0	-	-	20.0
		GRAND MEAN	2933.6	72.2	60.4	113.8	3.1	21.6	86.7	5.5	50.5
		STANDARD ERROR OF GRAND MEAN	49.8	0.2	0.1	0.4	0.3	1.8	0.6	1.1	1.2
		COEFFICIENT OF VARIATION	20.5%	3.8%	2.2%	4.3%	98.3%	87.0%	9.0%	246.0%	24.6%
		LSD VARIETY MEANS 5 PC	586.8	4.5	2.1	8.0	5.0	30.7	12.8	22.1	20.3

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.69**							
DAYS TO	FLOWER	-0.76**	-0.67**						
DAYS TO MATURITY		0.21	0.74**	-0.15					
LEAF	RUST	-0.04	-0.09	0.17	0.01				
STEM	RUST	-0.38**	-0.14	0.29*	0.18	0.04			
HEIGHT	CM.	0.12	0.45*	0.02	0.68**	0.09	0.32*		
LODGING		-0.38**	-0.04	0.33*	0.22	0.16	0.38**	0.51	
SEPTORIA	SPP.	0.31*	0.26	-0.70**	-0.13	-0.20	-0.43**	-0.26	-0.34*

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 6 AFRICA KENYA NJORO

PLANT BREEDING STATION-NJORO.
COOPERATORS V.P. PATEL.

LATITUDE	000 18'S	DATE PLANTED	05/25/72	NITROGEN	021.0 KG/HA
LONGITUDE	035 56'E	DATE HARVESTED	10/19/72	PHOSPHORUS	063.0 KG/HA
ELEVATION	02164 M.ABOVE S.L.	AMOUNT OF MOISTURE	0374 MM	POTASSIUM	000.0 KG/HA

FAIR CLIMATIC CONDITIONS. HIGH STEM RUST, NORMAL YELLOW RUST AND BELOW NORMAL BROWN RUST. INSECT AND PEST PROBLEMS NOT REPORTED. WEEDED TWICE BY HAND AND SPRAYED ONCE. LOCAL CHECK KENYA KANGA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
32	LUNDI	RHODESIA	1756.7	64.3	112.6	40S	5MS	20S	75.4	0.0	28.6
46	KALYANSONA 227	INDIA	1562.7	66.6	115.0	40MS	5MR	30MS-S	85.9	11.0	26.3
8	EBA	L.S.A.	1557.2	85.3	138.3	40MS	5MS	5MS-S	92.0	11.0	25.3
42	GIZA 155	EGYPT	1078.1	49.6	123.3	50S	5MR	5MS-S	109.6	18.4	32.6
28	YECORA 70	MEXICO	1050.8	64.6	107.6	50S	5MS	30MS-S	68.3	18.4	17.5
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	854.8	60.3	107.3	50S	TMS	15S	73.7	7.3	15.5
15	EE-INIA	MEXICO	772.1	67.0	105.0	15S	5MR	50MS-S	61.9	18.4	21.4
31	CAJEME 71	MEXICO	735.0	75.6	114.3	30MS	5MS	80S	75.4	22.1	15.5
1	BONZA 55	COLOMBIA	703.4	74.3	127.6	30S	TMS	30MS-S	129.3	22.1	15.4
3	MARC 63	CHILE	651.5	66.3	112.0	TMS	5MR	40MS-S	102.9	22.1	24.3
26	INIA 66	COLOMBIA	664.2	63.0	112.6	10MS	30S	60MS-S	95.9	14.7	16.6
20	PITAM 70	MEXICO	615.2	60.3	104.0	10MS	5MR-MS	70S	78.5	22.1	15.0
6	T-64-2-W	MEXICO	562.6	59.6	102.3	30S	5MR	60MS-S	72.8	11.0	15.2
38	LF 301	TUNISIA	566.2	72.6	111.3	TMS	50S	80MS-S	110.5	11.0	21.5
50	LOCAL CHECK / 6.F CMS. / PACKET	INDIA	506.3	66.6	109.0	20S	20MS	40MS-S	55.2	11.0	16.7
41	SONALIKA		381.1	60.0	101.3	TMS	5MS	80MS-S	98.9	25.8	14.3
17	ARIANA 66	INDIA	370.2	59.3	101.0	TMS	20MS	50MS-S	84.5	11.0	13.3
4	TANORI 71	TUNISIA	370.2	104.6	136.4	5S	20MS	40S	99.3	7.3	16.1
49	TOCAHI 66	MEXICO	353.9	60.0	103.3	5MR	10MR-MS	80MS-S	79.3	22.1	13.4
9	CHRIS	MEXICO	310.3	62.3	104.4	15MS	10MS	60S	85.2	14.7	13.9
12	VICAM 71	L.S.A.	266.8	69.0	116.0	50S	5MS	60MS-S	121.1	33.2	11.4
35	CHECTI LERMA	MEXICO	235.5	70.3	109.0	50S	TMS	40MS-S	57.1	11.0	14.3
7	PT 2288	INDIA	234.1	65.3	105.6	10S	5MR	70S	77.3	11.0	14.5
14	MEX 228	TUNISIA	196.0	80.4	103.0	20S	5MS	70S	66.1	22.1	5.0
47	SONORA 64-KL. REND.	IRAQ	174.2	62.0	102.6	50S	10MS	60MS-S	84.9	33.2	6.3
21	FERNANDO 62	ARGENTINA	166.7	63.3	103.3	70MS	5MS	50MS-S	83.1	18.4	5.4
16	BT-2256	MEXICO	152.4	66.0	103.0	30MS	10MS	50MS-S	85.6	25.8	7.5
33	CABECIC	TUNISIA	152.4	69.6	108.0	60S	10S	60MS-S	91.5	11.0	8.9
34	BT-2281	ARGENTINA	102.3	83.0	125.3	40S	10MS	60MS-S	118.4	22.1	13.5
22	ZAMBEZI	TUNISIA	58.0	65.6	105.6	5MS	2MS	70S	72.9	11.0	7.7
23	CALILAC	RHODESIA	56.0	67.3	106.0	60S	TMS	40MS-S	72.5	14.7	10.2
13	MARA X SONORA-MENTANA-PCM	MEXICO	58.0	66.0	104.0	30S	20MS	90S	81.3	14.7	7.1
10	FIFA	CHILE	52.5	51.0	126.3	TMS	TMS	50S	108.9	22.1	15.5
47	CARAZINHO	INDIA	52.5	57.6	95.6	10MS	0	70MS-S	61.0	25.5	6.3
45	FATC ARGENTINO	BRAZIL	51.6	86.0	129.0	40S	TMS	70MS-S	121.2	25.8	10.6
37	MANTICL / INSENSITIVE /	ARGENTINA	76.2	64.3	103.3	30MS	5MR	70MS-S	76.6	7.3	5.3
36	JARAL 'S'	CANADA	54.4	62.6	103.3	50S	10MS	70MS	57.2	30.9	8.3
5	TOCUIPEN 'S'	ARGENTINA	54.4	70.6	110.0	50S	5MS	40MS-S	74.4	14.7	7.1
43	CHANAE 70	CHILE	49.0	68.6	106.0	20S	5MS	60S	75.0	14.7	5.9
48	NAVAE 70	PAKISTAN	43.5	66.3	104.0	50S	5MS	70S	84.5	25.5	6.5
5	IAS 40 BASSUL	PAKISTAN	43.5	66.6	106.3	40MS	20MS	90S	79.9	25.5	6.1
45	PIAMONTES	BRAZIL	38.1	76.3	110.6	5S	5MS	50MS-S	119.0	36.9	11.4
40	VICTOR I	ARGENTINA	32.6	78.3	115.3	15S	TMS	50MS-S	118.7	25.5	9.1
29	MEXICO 120	ITALY	32.4	65.3	118.0	3MS	5S	40MS-S	75.1	11.0	5.3
30	MAZEMA-2152	AUSTRALIA	18.5	71.3	106.3	40S	5S	80S	53.2	22.1	5.1
19	LR64-NICE X AN 38	ISRAEL	16.3	70.0	105.0	20S	10MS	80S	71.9	25.9	18.5
18	FITIC 62	AUSTRALIA	16.3	71.6	104.0	2MS	30S	70S	71.3	14.7	4.7
49	MANTICL	MEXICO	11.9	82.3	107.0	15MS	5MS	80S	85.1	14.7	13.4
44	MEXICANO 1481	CANADA	8.7	106.6	136.6	70S	TMS	60MS-S	91.5	11.0	-
		PORTUGAL	8.7	76.0	106.0	TMS	10MS	70MS-S	78.7	33.2	-
		GRAND MEAN	364.7	70.7	110.5	27.2	8.1	55.6	86.2	16.8	13.9
		STANDARD ERROR OF GRAND MEAN	10.0	0.2	0.2	0.6	0.5	0.6	0.2	0.6	0.2
		COEFFICIENT OF VARIATION	33.7%	4.6%	2.4%	30.6%	84.4%	14.6%	3.9%	41.0%	21.8%
		LSD VARIETY MEANS 5 PC	201.0	5.4	4.3	13.6	11.2	13.3	5.5	12.6	4.5

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
DAYS TO FLOWER	-0.12								
DAYS TO MATURITY	0.25	0.84**							
STRIPE RUST	-0.05	-0.04	0.04						
LEAF RUST	-0.15	0.30*	0.10	-0.32*					
STEM RUST	-0.74**	-0.04	-0.38**	-0.36**	0.24				
HEIGHT CM.	0.00	0.36**	0.54**	-0.03	-0.04	-0.05			
LODGING	-0.40**	-0.09	-0.15	0.04	-0.14	0.34*	0.33		
1000 GRN WGT GRMS	0.83**	-0.10	0.27*	-0.15	-0.15	-0.64**	0.16	-0.33*	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 7 AFRICA LIBYA TRIPOLI

SIDI MISRY.
COOPERATORS ABE-EL-HATTY ABAFA AND AHMAD-EL AHMAR.

LATITUDE 032 00'N
LONGITUDE 013 12'E
ELEVATION +00010 M.ABOVE S.L.

DATE PLANTED 11/10/71
DATE HARVESTED 06/11/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 114.0 KG/HA
PHOSPHORUS 141.0 KG/HA
POTASSIUM 000.0 KG/HA

HOT WINDS (CEBLI) AT DIFFERENT TIMES DURING MARCH AND APRIL. NO DISEASE DEVELOPMENT. NO INSECT PROBLEM. MECHANICAL CONTROL OF WEEDS. SOME BIRD DAMAGE. LOCAL CHECK FLORANCE AURORA. LODGING AND SHATTERING SCALES NOT RECORDED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS
45	PIAMONTES	ARGENTINA	4056.7	75.0	107.0	110.0	R	R	39.1
16	FITIC 62	MEXICO	3279.1	70.5	95.0	95.0	R	R	44.8
44	MEXICANO 1461	MOROCCO	3279.1	72.5	84.0	100.0	R	R	48.8
15	LR64-NICB X AN 3E	AUSTRALIA	3083.6	73.5	98.0	80.0	R	R	46.2
46	KALYANSONA 227	INDIA	2966.1	72.5	94.0	80.0	R	R	47.6
50	LOCAL CHECK / 6.6 CMS. / BACKET /		2577.1	74.0	95.0	105.0	M	M	60.7
43	CHANAB 70	PAKISTAN	2577.1	70.5	91.0	90.0	R	R	49.0
12	VICAM 71	MEXICO	2577.1	70.5	93.0	80.0	R	R	43.8
16	ET-2296	TUNISIA	2566.2	73.5	94.0	90.0	R	R	50.6
35	CHECTI LERMA	INDIA	2566.2	73.5	94.0	75.0	R	R	47.5
41	SONALIKA	INDIA	2559.3	70.5	82.0	90.0	R	R	57.8
22	ZAMBEZI	RHODESIA	2550.4	76.0	94.0	70.0	R	R	45.0
48	NAYAB 70	PAKISTAN	2541.5	72.5	95.0	80.0	R	R	53.6
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2532.6	70.5	89.0	80.0	R	R	40.4
33	CAECTC	ARGENTINA	2532.6	73.0	106.0	105.0	R	R	39.5
40	VICTOR I	ITALY	2523.8	70.0	122.0	85.0	R	R	40.6
17	ARIANA 66	TUNISIA	2506.0	76.0	129.0	110.0	R	R	47.8
2	CERIS	U.S.A.	2470.4	72.0	104.0	110.0	R	R	47.6
47	CARAZINHO	BRAZIL	2461.6	72.0	104.0	110.0	M	R	50.7
5	TOCUIPEN 'S'	CHILE	2359.3	72.5	95.0	80.0	R	R	42.4
30	HAZERA-2152	ISRAEL	2390.5	68.0	91.0	75.0	R	R	50.4
29	MEXICO 120	AUSTRALIA	2266.0	68.5	95.0	65.0	R	R	47.4
36	JARAL 'S'	ARGENTINA	2221.6	73.5	97.0	75.0	R	R	44.1
21	FERJANC 62	MEXICO	2203.8	73.0	91.0	80.0	R	R	48.4
31	CAJEME 71	MEXICO	2203.8	73.5	97.0	70.0	R	R	51.3
27	SONORA 64-KL. REND.	ARGENTINA	2186.1	75.0	89.0	80.0	R	R	48.5
14	MEX 226	IRAQ	2066.3	75.5	93.0	75.0	R	R	52.8
42	CIZA 155	EGYPT	2061.7	72.0	99.0	100.0	R	R	50.4
1	BONZA 55	COLOMBIA	2052.8	69.0	96.0	105.0	R	R	42.4
23	CALIDAD	MEXICO	2035.0	71.5	88.0	90.0	R	R	44.6
15	BE-INDIA	MEXICO	2035.0	73.5	94.0	60.0	R	R	45.4
34	ET-2291	TUNISIA	2026.1	72.5	91.0	75.0	R	R	47.5
6	T-64-2-W	TUNISIA	2017.2	72.5	89.0	90.0	R	R	50.1
13	MARA X SUPREMO-MENTANA-MCP	CHILE	1963.9	74.0	117.0	95.0	R	R	51.3
25	PATC ARGENTINO	ARGENTINA	1955.0	72.5	97.0	70.0	R	R	39.5
38	LR 301	INDIA	1928.4	73.0	94.0	80.0	R	R	46.9
39	FLEL&LEN	CHILE	1926.4	71.5	97.0	100.0	M	R	45.9
10	HIFA	INDIA	1892.8	69.0	93.0	90.0	R	R	43.2
32	LUNDI	RHODESIA	1883.9	72.0	94.0	70.0	R	R	47.0
8	BRA	U.S.A.	1857.3	74.5	140.0	105.0	R	R	38.8
26	INIA 66	MEXICO	1803.9	72.0	88.0	80.0	R	R	46.1
4	TANORI 71	MEXICO	1786.2	71.5	85.0	90.0	R	R	48.7
37	MANITOL / INSENSITIVE /	CANADA	1786.2	69.0	91.0	90.0	M	R	36.0
3	NARC 63	COLOMBIA	1626.2	68.0	88.0	100.0	R	R	42.6
24	TOBARI 66	MEXICO	1599.5	73.0	87.0	90.0	R	R	34.3
45	MANITOL	CANADA	1526.5	73.5	162.0	105.0	M	R	31.7
9	IAS 20 IASSEL	BRAZIL	1448.5	71.0	95.0	130.0	R	R	49.9
7	BT 2288	TUNISIA	1261.9	74.0	91.0	75.0	R	R	44.7
28	YECORA 70	MEXICO	1021.9	71.0	92.0	65.0	R	R	46.1
20	POTAM 70	MEXICO	693.1	71.0	89.0	65.0	R	R	51.6
		GRAND MEAN	2206.1	72.1	97.5	84.8			46.0

STANDARD ERROR OF GRAND MEAN 36.5
COEFFICIENT OF VARIATION 20.2%
LSD VARIETY MEANS 5 PC 731.7

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.18				
DAYS TO	FLOWER	0.00	0.31*			
HEIGHT	CM.	0.16	0.13	0.32*		
LODGING		0.00	0.00	0.00	0.00	
SHATTERING		0.00	0.00	0.00	0.00	0.00
1000 GRN WGT GRMS		0.07	0.08	-0.40**	-0.03	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 8 AFRICA MOROCCO MARRAKECH

MENARA EXPERIMENT STATION.
COOPERATORS A. HAMDALI, A.SAFRAOUI AND A. ACOSTA.

LATITUDE	31 37N	DATE PLANTED	12/17/71	NITROGEN	196.0 KG/HA
LONGITUDE	008 03W	DATE HARVESTED	06/20/72	PHOSPHORUS	150.0 KG/HA
ELEVATION	00464 M.ABOVE S.L.	AMOUNT OF MOISTURE	3014 MM	POTASSIUM	196.0 KG/HA

GOOD WEATHER WITH A SLIGHT RISE OF TEMPERATURES TOWARDS THE END OF THE SEASON. NOT TOO MUCH RAIN. NO SERIOUS RUSTS AND SEPTORIA. INSECT AND PEST PROBLEMS NOT REPORTED. CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED. SEPTORIA SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	SEPTORIA SPP.
46	KALYANSONA 227	INDIA	8482.4	80.5	98.0	144.0	TR-MR	100.0	2
19	LR64-NICB X AN 3E	AUSTRALIA	8399.1	82.0	98.0	147.0	30S	90.0	1
36	JARAL 'S'	ARGENTINA	8271.3	80.0	98.0	152.0	TR-S	105.0	1
4	TANORI 71	MEXICO	8160.2	83.2	93.0	142.0	-	105.0	2
30	HAZERA-7152	ISRAEL	8032.5	80.8	93.0	147.0	5S	100.0	2
21	BENJAMIN 72	MEXICO	7599.1	81.5	98.0	145.0	-	115.0	1
31	CAJEME 71	MEXICO	7593.6	82.1	98.0	145.0	-	85.0	1
28	YECORA 70	MEXICO	7336.1	83.6	93.0	145.0	-	85.0	2
27	SONORA 64-KL. SEND.	ARGENTINA	7215.9	81.8	98.0	145.0	-	110.0	1
20	INIA 66	MEXICO	7165.9	84.1	87.0	142.0	-	110.0	1
43	CHANAE 70	PAKISTAN	7115.9	82.6	93.0	145.0	5TR	100.0	3
9	TOGLIFEN 'S'	CHILE	7077.0	81.8	98.0	144.0	-	90.0	3
32	LONDI	RHODESIA	7077.0	79.5	93.0	145.0	-	95.0	3
44	MEXICANO 1481	PORTUGAL	7027.0	77.5	98.0	145.0	10TR	100.0	2
22	ZAMBEZI	RHODESIA	6854.8	81.0	98.0	147.0	-	105.0	2
12	VICAM 71	MEXICO	6838.1	80.6	93.0	142.0	-	65.0	4
42	CIZA 155	EGYPT	6821.5	80.0	93.0	147.0	TR-S	130.0	2
10	FIRA	INDIA	6810.4	82.0	93.0	142.0	-	75.0	3
35	CHEROTI LERMA	INDIA	6810.4	81.5	98.0	152.0	-	110.0	1
29	MEXICO 120	AUSTRALIA	6682.6	82.1	98.0	145.0	-	70.0	2
23	CALILAE	MEXICO	6671.5	82.3	98.0	145.0	-	105.0	1
24	TOEARI 66	MEXICO	6571.5	81.2	93.0	145.0	-	105.0	2
26	POTAM 70	MEXICO	6560.4	82.7	87.0	145.0	-	100.0	2
34	ET-2281	TUNISIA	6338.2	81.8	93.0	150.0	30S	105.0	TR
14	MEX 226	IRAQ	6304.9	82.3	93.0	142.0	-	105.0	2
38	UP 301	INDIA	6260.4	80.2	93.0	145.0	-	70.0	4
16	ET-2256	TUNISIA	6254.9	83.0	93.0	142.0	-	90.0	4
15	EE-INIA	MEXICO	6221.5	83.1	93.0	142.0	TR-7R	70.0	4
40	VICTOR I	ITALY	6204.9	80.6	104.0	145.0	TR-S	85.0	TR
41	SONALIKA	INDIA	6204.9	81.8	87.0	145.0	-	110.0	3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	6060.5	79.2	86.0	140.0	10S	90.0	3
18	FITIC 62	MEXICO	5921.6	73.0	93.0	142.0	5TR	90.0	3
6	T-64-2-W	TUNISIA	5910.5	80.8	98.0	145.0	-	110.0	3
3	NARC 63	COLOMBIA	5782.7	80.8	93.0	142.0	5TR	125.0	2
8	ERA	U.S.A.	5771.6	81.7	110.0	153.0	-	95.0	3
7	BT 2288	TUNISIA	5727.1	81.6	93.0	142.0	-	95.0	4
39	KLEIGLEN	CHILE	5688.3	80.1	98.0	145.0	-	130.0	2
25	FATC ARGENTINO	ARGENTINA	5554.9	80.5	98.0	144.0	-	105.0	1
48	NAVAE 70	PAKISTAN	5510.5	81.5	93.0	145.0	10S	105.0	2
1	ECRZ 55	COLOMBIA	5332.7	80.6	98.0	144.0	TR-S	130.0	TR
49	PIAMONTES	ARGENTINA	4782.8	83.5	98.0	145.0	5S	130.0	TR
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4655.0	83.1	98.0	146.0	30S	145.0	1
33	CAECTC	ARGENTINA	4538.4	81.1	104.0	152.0	-	135.0	1
5	IAS 20 IASSLL	BRAZIL	4255.1	78.1	100.0	145.0	-	145.0	TR
47	CARAZINHO	BRAZIL	4210.6	80.5	98.0	145.0	-	125.0	TR
13	MARA X SUPREME-MENTANA-MCM	CHILE	4144.0	72.0	104.0	145.0	10S	120.0	3
17	ARIANA 66	TUNISIA	4055.1	80.5	104.0	152.0	-	95.0	2
2	CHRIS	U.S.A.	4016.2	81.8	98.0	145.0	-	135.0	1
45	MANITOU	CANADA	3271.8	78.5	110.0	154.0	-	130.0	1
37	MANITOU / INSENSITIVE /	CANADA	3249.6	-	93.0	145.0	-	125.0	1
		GRAND MEAN	6196.1	81.0	96.2	145.4	3.3	105.0	
		STANDARD ERROR OF GRAND MEAN	104.5		0.0				
		COEFFICIENT OF VARIATION	20.6%		0.1%				
		LSD VARIETY MEANS 5 PC	2090.8		0.2				

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.37**					
DAYS TO	FLOWER	-0.35**	0.03				
DAYS TO	MATURITY	-0.15	0.00	0.64**			
LEAF	RUST	0.05	0.05	-0.02	0.10		
HEIGHT	CM.	-0.52**	-0.16	0.25	0.25	0.08	
SEPTORIA	SPP.	0.00	0.00	0.00	0.00	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 9 AFRICA MOROCCO KENITRA

SIDI KACEM EXPERIMENT STATION.
COOPERATORS ARISTEO ACOSTA ET AL.

LATITUDE	034 13'N	DATE PLANTED	12/16/71	NITROGEN	100.0 KG/HA
LONGITUDE	005 43'W	DATE HARVESTED	06/20/72	PHOSPHORUS	057.0 KG/HA
ELEVATION	+0000004 M.ABOVE S.L.	AMOUNT OF MOISTURE	0454 MM	POTASSIUM	039.0 KG/HA

GOOD WEATHER. DRY PERIOD DURING FLOWERING. LATE RAINS. DISEASE DEVELOPMENT NOT ENOUGH FOR SCREENING. IN ECT AND PEST PROBLEMS NOT REPORTED. WEEDS CONTROLLED CHEMICALLY AND BY HAND. LOCAL CHECK ET-SOE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	LODGING	1000 GRN WGT GRMS
20	POTAM 70	MEXICO	4721.4	81.0	5.0	-
25	MEXICO 120	AUSTRALIA	4565.9	81.0	0.0	-
4	TARORI 71	MEXICO	4362.6	81.7	0.0	-
8	ERA	U.S.A.	4379.8	81.1	0.0	-
10	HIRA	INDIA	4365.9	79.7	0.0	-
27	SONORA 64-KI. REND.	ARGENTINA	4307.6	80.8	0.0	-
36	JARAL 'S'	ARGENTINA	4245.3	78.6	0.0	-
6	T-64-2-W	TUNISIA	4174.3	80.6	10.0	-
35	CHHOTI LERMA	INDIA	4165.9	81.6	1.0	-
14	MEX 226	IRAQ	4163.2	82.0	15.0	-
16	ET-2256	TUNISIA	4154.8	81.3	20.0	43.0
31	CAJEME 71	MEXICO	4154.8	-	0.0	47.0
15	EE-INIA	MEXICO	4113.2	81.0	0.0	-
19	LR64-NIOB X AN 3E	AUSTRALIA	4104.8	82.2	0.0	-
38	LR 301	INDIA	4102.1	80.1	0.0	-
48	NAYAB 70	PAKISTAN	4074.3	81.0	0.0	-
22	ZAMBEZI	RHODESIA	4074.3	80.8	1.0	-
32	LUNDI	RHODESIA	4066.0	80.0	1.0	-
26	INIA 66	MEXICO	4060.4	82.8	0.0	-
43	CHANAB 70	PAKISTAN	3977.1	81.6	0.0	-
41	SONALIKA	INDIA	3946.5	81.2	15.0	-
44	MEXICANO 1481	PORTUGAL	3896.5	77.5	50.0	-
30	HAZERA-2152	ISRAEL	3877.1	79.3	1.0	-
9	TOGLIFEN 'S'	CHILE	3782.7	81.6	0.0	-
18	FITIC 62	MEXICO	3718.8	75.5	5.0	-
12	VICAM 71	MEXICO	3596.6	78.2	0.0	-
28	YECORA 70	MEXICO	3596.6	80.7	0.0	-
40	VICTOR 1	ITALY	3579.9	80.0	0.0	-
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3518.8	-	1.0	39.0
23	CALICAO	MEXICO	3366.1	82.5	75.0	37.0
7	ET 2288	TUNISIA	3332.7	78.6	5.0	-
46	KALYANSONA 227	INDIA	3257.8	-	1.0	38.0
24	TOBARI 66	MEXICO	3238.3	80.0	1.0	36.0
34	ET-2281	TUNISIA	3210.5	81.8	15.0	-
2	CHRIS	U.S.A.	3168.9	-	95.0	34.0
21	BENJAMIN 62	MEXICO	3096.7	80.1	80.0	-
29	PATO ARGENTINO	ARGENTINA	2902.3	82.2	0.0	-
17	ARIANA 66	TUNISIA	2871.7	80.5	50.0	41.0
47	CARAZINHO	BRAZIL	2827.3	-	60.0	43.0
35	PLELGLEN	CHILE	2818.9	-	75.0	41.0
13	MARA > SUPREMO-MENTANA-MON	CHILE	2755.1	90.8	15.0	-
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2657.9	-	15.0	39.0
42	CIZA 155	EGYPT	2613.4	-	50.0	57.0
1	ECNZA 55	COLOMBIA	2469.0	-	95.0	41.0
3	NAPO 63	COLOMBIA	2344.0	-	5.0	40.0
5	IAS 20 IASSUL	BRAZIL	2321.8	-	50.0	45.0
33	CAEDIC	ARGENTINA	2252.4	-	40.0	34.0
45	MANITOU	CANADA	2069.1	77.3	40.0	27.0
37	MANITOU / INSENSITIVE /	CANADA	1920.2	-	80.0	33.0
49	PIAMONTES	ARGENTINA	820.7	-	70.0	39.0
		GRAND MEAN	3483.9	80.5	21.6	35.6

STANDARD ERROR OF GRAND MEAN 49.8
COEFFICIENT OF VARIATION 17.5%
LSD VARIETY MEANS 5 PC 597.3

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	LODGING
TEST WEIGHT	0.64**		
LODGING	-0.65**	-0.54**	
1000 GRN WGT GRMS	-0.63**	-0.81**	0.58**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 10 AFRICA RHODESIA SALISBURY

SALISBURY RESEARCH STATION
COOPERATORS MRS. M.S. DEWDNEY

LATITUDE 017 48'S
LONGITUDE 030 05'E
ELEVATION 4015.00 M.ABOVE S.L.

DATE PLANTED 05/04/72
DATE HARVESTED 10/22/72
AMOUNT OF MOISTURE 0902 MM

NITROGEN 093.0 KG/HA
PHOSPHORUS 048.0 KG/HA
POTASSIUM 075.0 KG/HA

GENERALLY A MILD WINTER WITH WARMER ENDING THAN USUAL. DISEASE DEVELOPMENT NOT REPORTED. CHEMICAL CONTROL OF APHIDS. WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING
15	EE-INIA	MEXICO	9095.7	79.8	85.0	144.6	88.3	15.0
9	TOLLIFER 'S'	CHILE	8724.6	79.8	84.0	147.3	98.3	30.0
35	CHECTI LERMA	INDIA	8710.2	81.0	86.0	145.6	109.3	78.3
26	INIA 66	MEXICO	8684.6	81.9	80.3	139.0	112.0	6.6
41	SONALIKA	INDIA	8649.1	77.8	76.3	143.0	110.6	6.6
4	TANCHI 71	MEXICO	8583.5	80.2	80.3	134.6	102.0	1.6
10	HIRA	INDIA	8522.4	78.8	79.0	143.3	79.3	0.0
20	POTAM 70	MEXICO	8435.8	80.1	77.3	138.3	94.3	3.3
36	JARAL 'S'	ARGENTINA	8433.5	76.7	85.6	146.6	107.0	10.0
28	YECORA 70	MEXICO	8243.6	79.0	83.0	144.0	87.0	53.3
19	LR64-NIOB X AN 3E	AUSTRALIA	8191.3	79.7	95.3	151.0	98.0	61.6
34	ET-2281	TUNISIA	8168.0	80.3	81.6	145.0	103.6	15.0
24	TOBARI 66	MEXICO	8071.4	80.7	85.0	144.6	108.6	18.3
3	NARC 63	COLOMBIA	8048.0	78.0	77.6	131.3	114.0	20.0
22	ZAMBEZI	RHODESIA	8003.6	79.2	83.0	147.0	95.0	3[illegible].0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		7955.8	74.1	84.3	146.6	73.0	0.0
46	KALYANSONA 227	INDIA	7868.0	77.1	85.0	147.0	101.6	73.3
32	LONDI	RHODESIA	7828.1	74.0	81.6	143.3	90.0	0.0
38	LR 301	INDIA	7800.3	75.3	86.3	147.0	79.3	0.0
30	HAZERA-2152	ISRAEL	7781.4	75.7	87.0	147.0	107.0	75.0
7	ET 2288	TUNISIA	7781.4	81.1	82.6	142.3	105.0	5.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	7531.4	75.1	78.0	137.6	86.6	0.0
43	CHANAB 70	PAKISTAN	7561.4	81.1	85.0	142.6	116.6	26.6
27	SONORA 64-K1. REND.	ARGENTINA	7500.3	79.9	82.6	144.3	107.6	43.3
14	MEX 226	IRAQ	7145.9	80.3	83.0	141.6	113.3	36.6
48	NAYAB 70	PAKISTAN	6943.7	77.0	84.3	145.0	111.3	28.3
31	CAJEME 71	MEXICO	6748.2	76.9	108.3	152.6	103.0	98.3
25	PATO ARGENTINO	ARGENTINA	6637.1	79.1	85.0	145.6	104.3	91.6
12	VICAM 71	MEXICO	6594.8	76.3	96.3	152.0	77.6	0.0
21	PENJAMO 62	MEXICO	6534.8	76.4	83.3	140.6	110.6	16.6
29	MEXICO 120	AUSTRALIA	6528.2	74.9	103.0	153.6	80.6	26.6
39	PLELOLEN	CHILE	6497.1	79.1	88.6	145.0	117.0	73.3
23	CALIDAD	MEXICO	5817.1	80.0	85.3	142.0	106.0	78.3
6	T-64-2-W	TUNISIA	5453.8	76.7	99.0	149.6	125.0	88.3
40	VICTOR I	ITALY	5388.3	78.1	118.0	158.6	111.0	91.6
42	GIZA 155	EGYPT	4206.2	77.8	85.3	142.3	126.6	86.6
16	ET-2296	TUNISIA	4122.9	78.9	100.6	147.6	115.0	95.0
8	ERA	U.S.A.	4060.7	74.8	116.0	160.3	115.0	65.0
44	MEXICANO 1481	PORTUGAL	3867.3	73.1	107.3	153.3	117.3	100.0
18	FITIO 62	MEXICO	3256.3	69.9	95.3	154.6	116.0	100.0
1	BONZA 55	COLOMBIA	2769.7	75.0	98.3	147.3	138.6	98.3
17	ARIANA 66	TUNISIA	2634.1	78.6	128.0	166.3	143.3	100.0
37	MANITOL / INSENSITIVE /	CANADA	2626.4	75.4	79.3	137.6	129.0	100.0
33	CABECIO	ARGENTINA	2617.5	78.3	107.6	152.6	147.3	100.0
13	MARA X SUPREMO-MENTANA-MCM	CHILE	2571.9	78.5	117.0	158.6	135.0	100.0
47	CARAZINHO	BRAZIL	2546.4	76.8	108.6	149.6	148.0	100.0
5	IAS 20 IASSUL	BRAZIL	2113.1	74.9	99.6	145.3	152.0	98.3
49	PIAMONTES	ARGENTINA	2095.3	77.7	108.0	150.0	138.0	98.3
2	CHRIS	U.S.A.	2017.5	76.7	94.3	150.6	137.0	98.3
45	MANITOL	CANADA	1247.6	73.5	120.0	160.0	145.3	100.0
		GRAND MEAN	5187.1	77.7	91.9	146.9	110.7	52.9
	STANDARD ERROR OF GRAND MEAN		55.5	0.0	0.2	0.2	0.2	1.8
	COEFFICIENT OF VARIATION		11.7%	1.5%	2.8%	2.3%	2.9%	41.6%
	LSD VARIETY MEANS 5 PC		1150.0	1.9	4.2	5.7	5.2	36.0

CORRELATIONS

YIELD KG/HA						
TEST WEIGHT	0.47**					
DAYS TO FLOWER	-0.72**	-0.32*				
DAYS TO MATURITY	-0.54**	-0.34*	0.85**			
HEIGHT CM.	-0.80**	-0.05	0.54**	0.31*		
LODGING	-0.79**	-0.27	0.67**	0.53**	0.73**	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 11 AFRICA SOUTH AFRICA TRANSVAAL

RECOGNITION
COOPERATORS CR. C.J. ROSSOUW ET AL.

LATITUDE 025 35'S
LONGITUDE 028 21'E
ELEVATION +01164 M.ABOVE S.L.

DATE PLANTED 06/05/72
DATE HARVESTED 11/15/72
AMOUNT OF MOISTURE 0683 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 025.0 KG/HA
POTASSIUM 020.0 KG/HA

DRY WEATHER FROM PLANTING TO MATURITY STAGE. LIGHT RAIN DURING RIPENING STAGES. LATE AND MINIMAL RUST DISEASES. NO WEEDS OR PEST PROBLEMS. APHIDS SPRAYED BY PLANE. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
19	LR64-N108 X AN 3E	AUSTRALIA	5841.6	77.1	95.0	148.0	65MS	100S	80.0	0.0	31.5
22	ZAMBEZI	RHODESIA	5831.6	75.8	92.6	150.0	100S	0	90.0	60.0	31.8
50	LOCAL CHECK / 6.6 CMS. / PACKET		5767.1	77.0	95.0	153.0	80S	TS	85.0	10.0	34.3
44	MEXICANO 1481	PORTUGAL	5667.2	72.0	98.3	148.0	100S	0	95.0	60.0	34.6
35	CHHOTI LERMA	INDIA	5346.3	76.0	95.0	145.0	25R-MR	40S	90.0	5.0	31.6
18	PITIC 62	MEXICO	5223.9	73.0	95.0	143.0	100MS	65MS	100.0	40.0	35.3
10	PIRA	INDIA	5131.6	75.1	81.0	143.0	100S	25MS	70.0	5.0	35.3
36	JARAL 'S'	ARGENTINA	5125.4	75.1	88.6	145.0	100S	65MS	85.0	45.0	34.3
29	MEXICO 120	AUSTRALIA	4988.3	75.1	86.3	148.0	100MS	65MS	70.0	0.0	35.6
46	KALYANSONA 227	INDIA	4852.8	76.3	98.3	148.0	100MS	65S	95.0	25.0	35.0
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	4836.1	72.6	77.0	138.0	100MS	25MS	80.0	5.0	30.5
12	VICAM 71	MEXICO	4755.5	72.6	103.3	148.0	5VR	40S	70.0	5.0	36.0
27	SONORA 64-K1. PEND.	ARGENTINA	4788.4	76.8	88.6	143.0	40VR	25MS	85.0	5.0	37.8
15	EE-INDIA	MEXICO	4723.9	77.3	83.0	143.0	40VR	25MS	75.0	10.0	35.5
43	CHANAE 70	PAKISTAN	4681.7	76.6	88.0	143.0	100S	100S	95.0	0.0	43.0
41	SONALIKA	INDIA	4630.6	77.5	83.0	138.0	10MR	100S	100.0	20.0	46.3
30	PAZEMA-2152	ISRAEL	4552.8	74.1	77.0	143.0	100MS	65S	85.0	10.0	41.8
14	MEX 628	IRAQ	4508.4	77.1	86.3	143.0	40VR	65MS	90.0	40.0	42.1
24	TOEAPI 66	MEXICO	4507.3	77.0	92.6	148.0	25R	25MS	95.0	10.0	30.1
18	ET-2266	TUNISIA	4487.3	77.5	88.6	143.0	40VR	65MS	95.0	40.0	40.8
48	NAYAB 70	PAKISTAN	4466.2	76.3	90.3	148.0	100MS	100S	95.0	5.0	40.0
5	TOCUIPEN 'S'	CHILE	4404.0	76.3	86.6	148.0	25VR-MS	40S	90.0	10.0	30.3
28	INIA 66	MEXICO	4354.0	75.6	75.0	133.0	10MR	40MS	95.0	40.0	35.1
34	ET-2281	TUNISIA	4365.1	75.8	88.6	148.0	100MS	10MS	90.0	0.0	34.6
21	PENJAMO 62	MEXICO	4357.3	75.5	90.3	148.0	40MS	65S	85.0	60.0	35.3
6	T-64-2-4	TUNISIA	4330.6	75.6	98.3	148.0	100S	65MS	105.0	20.0	35.6
28	YECORA 70	MEXICO	4295.1	74.5	88.0	143.0	5MS-VR	40MS	80.0	0.0	37.0
42	CIZA 155	EGYPT	4275.1	73.8	96.6	148.0	100MS	100S	105.0	80.0	37.1
4	TANORI 71	MEXICO	4260.6	77.8	75.0	138.0	25MR	25MS	95.0	25.0	36.6
25	FATE ARGENTINO	ARGENTINA	4216.2	76.3	95.0	150.0	5MS-25VR	40MS	90.0	25.0	26.8
32	LUNDI	RHODESIA	4180.6	73.1	83.0	143.0	65MR	65S	75.0	10.0	34.8
20	PLATA 70	MEXICO	4166.2	74.5	75.0	143.0	40VR	100S	90.0	60.0	40.5
23	CALICAE	MEXICO	4155.1	75.0	92.6	148.0	10S-25VR	25MS	90.0	25.0	30.3
3	NARC 62	COLOMBIA	4074.0	74.3	75.0	133.0	100S	0	105.0	10.0	35.1
21	CALERE 71	MEXICO	4065.5	72.8	95.0	143.0	5VR	25MS	70.0	5.0	40.0
38	LF 301	INDIA	4064.0	74.6	93.6	143.0	25VR	65MS	70.0	0.0	37.5
17	ARIANA 66	TUNISIA	4058.4	75.5	110.0	150.0	100MS	10S	105.0	70.0	34.0
8	ERA	U.S.A.	3958.4	74.6	116.0	155.0	40VR	TS	105.0	50.0	25.5
40	VICTOR 1	ITALY	3939.6	73.8	105.0	148.0	65MS	100S	85.0	5.0	34.3
7	ET 2288	TUNISIA	3805.6	76.6	81.0	138.0	5MS	40MS	90.0	5.0	33.0
35	PUELOLEN	CHILE	3585.6	75.8	95.0	143.0	65VR	65S	105.0	20.0	22.8
1	ECONZA 35	COLOMBIA	3180.7	72.1	92.6	128.0	100S	25S	105.0	60.0	30.3
37	MANITOU / INSENSITIVE /	CANADA	3057.4	74.1	91.0	133.0	100R	40S-MS	105.0	50.0	31.3
33	CAECTC	ARGENTINA	2974.1	76.8	98.3	148.0	10VR	65MS	110.0	60.0	25.6
47	CARAZINHO	BRAZIL	2887.4	74.8	95.0	148.0	0	25S	115.0	50.0	35.0
2	CHRIS	U.S.A.	2835.2	75.3	96.6	138.0	10VR	10MS-S	110.0	80.0	26.3
45	MANITOU	CANADA	2585.7	73.1	130.0	155.0	25VR	40MS	115.0	60.0	21.8
31	MAPA X SUPREMO-MENTANA-PCM	CHILE	2468.6	76.0	103.3	133.0	65MS	65S	110.0	60.0	34.3
49	PIAMONTES	ARGENTINA	2393.0	71.0	96.6	148.0	10MR	10S	115.0	60.0	34.1
5	IAS 20 IASSUL	BRAZIL	2348.6	73.6	95.0	133.0	40VR	100S	120.0	100.0	32.5
		GRAND MEAN	4251.8	75.4	92.4	144.0	39.6	43.3	93.0	34.0	34.7
	STANDARD ERROR OF GRAND MEAN		32.6	0.0	0.2						0.1
	COEFFICIENT OF VARIATION		5.4%	1.5%	3.8%						4.3%
	LSD VARIETY MEANS 5 PC		652.9	1.9	5.8						2.4

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.14							
DAYS TO	FLOWER	-0.31*	-0.22						
DAYS TO	MATURITY	0.31*	0.06	0.52**					
LEAF	RUST	0.42**	-0.29*	-0.09	0.02				
STEM	RUST	-0.03	-0.00	-0.07	-0.05	0.01			
HEIGHT	CM.	-0.64**	0.03	0.39**	-0.13	-0.06	0.01		
LODGING		-0.54**	-0.15	0.38**	-0.07	-0.07	-0.06	0.72	
1000 GRN	WGT GRMS	0.31*	0.16	-0.57**	-0.23	0.13	0.37**	-0.33	-0.31*

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 12 AFRICA SUDAN KHARTOUM

SHAMBAT RESEARCH STATION.
COOPERATORS DR.A.G. IMAM.

LATITUDE 015 00'N
LONGITUDE 032 32'E
ELEVATION +00375 M.ABOVE S.L.

DATE PLANTED 11/24/71
DATE HARVESTED 03/26/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 240.0 KG/HA
PHOSPHORUS 000.0 KG/HA
POTASSIUM 000.0 KG/HA

WEATHER COOL AND SUNNY. NO DISEASE DEVELOPMENT. APHIDS **20 %**
TREATED BY FOGER. CONTINUOUS WEEDING. PEST PROBLEMS NOT REPORTED. LOCAL
CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
12	VICAM 71	MEXICO	5144.4	60.3	110.0	62.6	29.5
10	HIRA	INDIA	4933.3	45.3	94.3	57.0	37.6
19	LR64-NICE X AN 3E	AUSTRALIA	4888.8	61.0	104.3	76.6	31.7
15	EE-INIA	MEXICO	4844.4	57.0	103.3	65.6	39.4
28	YECORA 70	MEXICO	4833.3	51.0	102.6	62.0	38.5
22	ZAMBEZI	RHODESIA	4738.8	51.3	101.0	80.6	34.7
25	MEXICO 120	AUSTRALIA	4716.6	59.3	106.0	62.6	29.7
26	INIA 66	MEXICO	4644.4	53.3	96.0	91.6	40.2
43	CHANAB 70	PAKISTAN	4616.6	59.0	104.3	83.0	36.0
46	MAYAB 70	PAKISTAN	4611.1	56.3	102.0	89.0	39.0
41	SONALIKA	INDIA	4599.9	48.3	95.3	90.6	45.6
4	TANORI 71	MEXICO	4572.2	52.3	94.0	88.3	35.6
21	PENJAMO 62	MEXICO	4566.6	57.6	97.6	78.6	36.3
20	POTAM 70	MEXICO	4505.5	45.3	94.0	75.0	41.3
11	JARAL 'S' / LEC-SK-MARA	RHODESIA	4377.7	50.0	92.6	69.3	25.6
36	JARAL 'S'	ARGENTINA	4344.4	59.3	104.3	77.6	30.4
24	TOBARI 66	MEXICO	4272.2	53.3	96.0	83.6	39.3
23	CALICAO	MEXICO	4133.3	53.6	96.3	84.3	35.8
34	ET-2281	TUNISIA	4116.6	51.6	100.6	79.0	37.1
27	SONORA 64-K1. REND.	ARGENTINA	4111.1	53.3	95.6	84.6	36.2
42	GIZA 155	EGYPT	4059.9	59.0	104.0	103.0	39.2
38	LR 301	INDIA	4072.2	55.6	99.3	80.0	39.5
7	ET 2288	TUNISIA	4066.6	52.3	96.3	90.6	34.5
46	KALYANSONA 227	INDIA	3972.2	53.3	97.6	78.0	33.2
35	CHECTI LERMA	INDIA	3883.3	56.3	98.3	82.0	31.2
32	LUNDI	RHODESIA	3883.3	51.3	95.6	84.0	37.9
44	MEXICANO 1481	PORTUGAL	3838.8	64.6	105.6	91.3	33.6
39	PUELCLEN	CHILE	3783.3	54.3	98.3	91.3	37.9
18	PITIC 62	MEXICO	3733.3	65.3	105.3	97.0	30.1
25	FATC ARGENTINO	ARGENTINA	3694.4	52.3	96.3	69.3	30.3
3	NARO 63	COLOMBIA	3655.5	50.6	92.6	95.6	36.3
30	HAZERA-2152	ISRAEL	3616.6	53.3	97.3	76.0	39.1
14	MEX 226	IRAQ	3544.4	50.6	93.0	82.0	41.6
16	ET-2296	TUNISIA	3538.8	59.6	91.3	83.3	39.2
31	CAJEME 71	MEXICO	3499.9	71.0	111.0	80.0	26.4
6	T-64-2-W	TUNISIA	3344.4	61.0	102.6	98.0	34.9
5	TORLIEN 'S'	CHILE	3194.4	59.6	104.3	71.0	26.7
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2944.4	65.6	104.0	64.0	29.6
49	PIAMONTES	ARGENTINA	2927.7	66.0	103.3	100.0	31.6
1	BONZA 55	COLOMBIA	2905.5	61.0	101.3	102.6	28.8
2	CHRIS	U.S.A.	2883.3	58.3	99.0	104.3	28.1
13	MARA X SUPREMO-MENTANA-MCP	CHILE	2816.6	75.3	108.3	128.0	28.0
37	MANITOL / INSENSITIVE /	CANADA	2599.9	50.0	88.3	102.0	27.4
40	VICTOR I	ITALY	2361.1	75.3	109.0	82.6	25.1
33	GABOTO	ARGENTINA	2338.8	66.0	109.0	108.0	22.8
47	CARAZINHO	BRAZIL	2316.6	73.3	111.3	112.0	29.2
9	IAS 20 IASSOL	BRAZIL	2244.4	67.6	102.0	112.6	32.7
8	ERA	U.S.A.	1794.4	71.3	120.3	82.0	15.5
17	ARIANA 66	TUNISIA	1422.2	81.3	120.3	107.3	21.6
45	MANITOL	CANADA	538.8	68.3	121.0	101.6	15.1
		GRAND MEAN	3653.7	58.5	101.5	85.2	33.0
		STANDARD ERROR OF GRAND MEAN	58.8	0.3	0.2	0.7	0.1
		COEFFICIENT OF VARIATION	19.4%	6.7%	3.5%	11.0%	5.8%
		LSD VARIETY MEANS 5 PC	1176.1	6.4	5.8	15.3	3.1

CORRELATIONS

	YIELD KG/HA			
DAYS TO FLOWER	-0.68**			
DAYS TO MATURITY	-0.53**	0.83**		
HEIGHT CM.	-0.59**	0.48**	0.23	
1000 GRN WGT GRMS	0.65**	-0.67**	-0.65**	-0.25

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 13 AFRICA SUDAN KASSALA

KHASHM EL GIRBA.
COOPERATORS DAFALLA AHMED DAFALLA.

LATITUDE 015 16°N DATE PLANTED 11/08/71 NITROGEN 095.0 KG/HA
LONGITUDE 035 45°E DATE HARVESTED 03/19/72 PHOSPHORUS 000.0 KG/HA
ELEVATION +00440 M.ABOVE S.L. AMOUNT OF MOISTURE ---- MM POTASSIUM 000.0 KG/HA

GENERALLY WARM EXCEPT FOR A SHORT COLD SPELL BETWEEN MID-DECEMBER AND THE END OF JANUARY. LATE APPEARANCE OF RUST. SPRAYED TWICE AGAINST APHIDS. WEEDED THREE TIMES. PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
43	CHANAB 70	PAKISTAN	4209.5	65.3	104.3	85.0	34.1
33	CAECTO	ARGENTINA	4161.8	75.0	112.0	104.6	27.6
28	YECORA 70	MEXICO	4086.2	49.6	108.3	60.0	30.8
15	LR64-N10B x AN 3E	AUSTRALIA	4012.9	59.3	97.6	64.3	32.5
5	TOCUIPEN 'S'	CHILE	3856.2	65.0	112.6	71.3	27.8
44	MEXICANO 1481	PORTUGAL	3796.2	66.6	105.0	86.6	32.0
18	PITIC 62	MEXICO	3752.9	66.0	106.0	90.0	31.0
12	VICAM 71	MEXICO	3675.1	66.6	104.6	96.6	33.0
29	MEXICO 120	AUSTRALIA	3636.3	60.3	99.6	97.0	32.3
42	CIZA 155	EGYPT	3620.7	63.0	105.6	103.0	34.5
16	ET-2298	TUNISIA	3568.5	62.0	100.6	83.0	35.9
14	MEX 226	IRAQ	3499.6	47.0	93.6	71.3	37.7
31	CAJEME 71	MEXICO	3497.4	75.0	111.0	67.3	35.3
35	CHECTI LERMA	INDIA	3421.8	56.6	94.6	72.6	32.5
19	EE-INIA	MEXICO	3417.4	58.3	96.6	55.0	35.5
6	T-64-2-W	TUNISIA	3404.1	62.0	99.0	93.0	35.2
4	TANORI 71	MEXICO	3386.5	47.0	94.6	66.0	30.8
25	PATO ARGENTINO	ARGENTINA	3354.1	52.6	95.0	61.3	24.9
21	BENJAMIN 62	MEXICO	3347.4	67.3	95.3	71.3	32.9
30	HAZERA-2152	ISRAEL	3346.3	46.3	93.3	69.0	37.9
40	VICTOR I	ITALY	3239.6	76.0	107.3	72.3	34.8
26	INIA 66	MEXICO	3203.0	48.0	92.0	66.6	34.6
22	ZAMBEZI	RHODESIA	3176.3	49.3	95.3	64.0	30.8
48	NAYAB 70	PAKISTAN	3149.6	58.0	94.6	82.0	37.1
46	KALYANSONA 227	INDIA	3140.7	49.6	95.3	66.0	33.3
7	ET 2266	TUNISIA	3080.8	53.6	97.0	71.3	34.2
23	CALILAO	MEXICO	3065.2	49.3	91.3	65.6	32.2
36	JARAL 'S'	ARGENTINA	3037.4	65.0	102.0	72.0	30.1
32	LLANO	RHODESIA	3036.3	54.6	91.3	58.6	32.5
39	PUELCHEN	CHILE	3009.6	49.3	93.3	83.6	33.2
1	ESNZA 55	COLOMBIA	2916.3	57.3	97.3	113.0	29.7
3	NARC 63	COLOMBIA	2883.0	44.6	92.0	79.3	33.8
38	LP 301	INDIA	2824.1	53.3	93.3	49.6	33.7
50	LOCAL CHECK / 6.6 CMS. / PACKET		2816.3	65.3	110.6	105.6	34.0
24	TOBARI 66	MEXICO	2791.9	47.3	91.0	65.6	32.8
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2750.3	48.6	94.0	51.0	26.3
34	ET-2281	TUNISIA	2750.8	50.3	93.6	61.0	34.6
27	SONORA 64-K1. REND.	ARGENTINA	2699.7	46.0	91.0	66.3	36.5
41	SONALIKA	INDIA	2633.0	45.3	95.0	68.0	40.9
47	CARAZINHO	BRAZIL	2595.2	80.0	110.6	106.6	35.3
2	CHRIS	U.S.A.	2568.6	56.0	96.6	93.6	30.9
10	HIRA	INDIA	2541.9	43.0	94.3	45.6	31.0
13	MARA x SUPREME-MENTANA-MCM	CHILE	2534.1	75.0	107.0	101.0	35.9
20	POTAM 70	MEXICO	2480.8	42.0	92.6	58.3	36.4
37	MANITOU / INSENSITIVE /	CANADA	2337.5	50.0	94.3	77.0	28.8
9	IAS 20 IASSUL	BRAZIL	2254.2	74.6	103.3	106.6	27.7
17	ARIANA 66	TUNISIA	2248.6	84.3	119.0	91.0	38.4
49	PIAMONTES	ARGENTINA	2047.5	61.6	100.6	100.6	32.6
8	EFA	U.S.A.	1575.3	99.6	126.0	68.3	24.1
45	MANITOU	CANADA	1126.5	104.0	130.0	84.6	18.9
		GRAND MEAN	3072.2	59.8	100.4	75.4	32.7
		STANDARD ERROR OF GRAND MEAN	37.4	0.2	0.1	0.3	0.1
		COEFFICIENT OF VARIATION	14.9%	5.9%	1.7%	5.8%	6.9%
		LSD VARIETY MEANS 5 PC	745.9	5.8	2.9	7.2	3.7

CORRELATIONS

YIELD KG/HA				
DAYS TO FLOWER	-0.28*			
DAYS TO MATURITY	-0.21	0.90**		
HEIGHT CM.	-0.11	0.46**	0.41**	
1000 GRN WGT GRMS	0.29*	-0.39**	-0.35**	-0.03

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

WEST KILIMANJARO DISTRICT, LYAMUNGU.
COOPERATORS AGRONOMIC RESEARCH PROJECT.

LATITUDE	03 15'S	DATE PLANTED	04/14/72	NITROGEN	000.0 KG/HA
LONGITUDE	003 15'E	DATE HARVESTED	--/--/--	PHOSPHORUS	000.0 KG/HA
ELEVATION	+01250 M.ABOVE S.L.	AMOUNT OF MOISTURE	0305 MM	POTASSIUM	000.0 KG/HA

RAINFALL BELOW AVERAGE. TEMPERATURE SLIGHTLY ABOVE AVERAGE. DISEASE DEVELOPMENT NOT REPORTED. INSECT AND PEST PROBLEM NOT REPORTED. WEEDS CONTROLLED BY HAND. LOCAL CHECK NOT REPORTED. XX= LEAF BLOTCH.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	DAYS TO FLOWER	STEM RUST	HEIGHT CM.	XX
17	AFRIANA 66	TUNISIA	107.3	30S	81.3	86.6
45	MANITOU	CANADA	101.3	90S	87.6	46.6
8	ERA	U.S.A.	97.0	2S	82.0	53.3
40	VICTOR I	ITALY	89.0	100S	61.6	20.0
13	MARA X SUPREMO-MENTANA-MOP	CHILE	87.6	40S	85.6	40.0
47	CARAZINHO	BRAZIL	87.0	90S	94.0	33.3
31	CAMPE 71	MEXICO	86.6	100MS	62.6	20.0
1	BONZA 55	COLOMBIA	81.3	35S	100.0	33.3
33	CABOTO	ARGENTINA	79.3	90S	96.3	26.6
5	IAS 20 IASSUL	BRAZIL	78.6	80MS-S	105.6	26.6
18	PITIC 62	MEXICO	78.3	95S	74.0	40.0
49	PIAMONTES	ARGENTINA	78.3	100S	94.3	33.3
44	MEXICANO 1481	PORTUGAL	77.6	95S	68.3	60.0
6	T-64-2-W	TUNISIA	77.0	20MS-S	88.0	53.3
25	MEXICO 120	AUSTRALIA	76.6	100S	49.3	40.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		76.3	15S	94.3	60.0
16	ET-2296	TUNISIA	76.3	80S	78.0	33.3
36	JARAL 'S'	ARGENTINA	75.6	95S.	73.0	60.0
42	GIZA 155	EGYPT	75.3	7S	91.3	33.3
15	LR64-NIOB X AN 3E	AUSTRALIA	75.3	90S	65.3	40.0
30	MAZERA-2152	ISRAEL	75.3	100S	73.0	26.6
9	TOLUIFEN 'S'	CHILE	74.6	50S	68.6	33.3
2	CRIS	U.S.A.	74.6	45S	107.3	26.6
43	CHANAB 70	PAKISTAN	74.0	50S	72.3	26.6
12	VICAM 71	MEXICO	70.3	20S	50.6	46.6
34	ET-2281	TUNISIA	69.0	60S	70.6	46.6
46	KALYANSONA 227	INDIA	66.0	7S	74.3	40.0
35	PLELOLEN	CHILE	66.6	40S	66.6	46.6
32	LLANI	RHODESIA	66.3	5S	63.0	60.0
24	TOBARI 66	MEXICO	66.0	50S	77.0	33.3
48	NAYAB 70	PAKISTAN	65.6	70S	73.0	46.6
19	EE-INIA	MEXICO	65.6	30S	55.6	40.0
39	CHECTI LERMA	INDIA	65.6	40S	72.3	66.6
21	PERJANO 62	MEXICO	65.3	60S	60.3	60.0
23	CALICAO	MEXICO	65.3	50S	71.6	20.0
22	ZAMBEZI	RHODESIA	65.3	20S	70.0	60.0
14	MEX 226	IRAQ	65.0	50S	78.3	46.6
25	PATO ARGENTINO	ARGENTINA	64.6	90S	68.0	26.6
38	UP 301	INDIA	64.3	40S	49.3	33.3
4	TANORI 71	MEXICO	64.0	50S	74.6	33.3
27	SONORA 64-K1. REND.	ARGENTINA	64.0	50S	74.0	60.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	63.6	5S	59.3	60.0
41	SONALIKA	INDIA	63.3	25S	75.3	73.3
26	INIA 66	MEXICO	63.3	50S	68.0	40.0
37	MANITOU / INSENSITIVE /	CANADA	63.0	95.S	66.6	53.3
3	NARC 63	COLOMBIA	63.0	30S	66.3	73.3
7	BT 2266	TUNISIA	62.6	40S	73.6	66.6
28	YECORA 70	MEXICO	62.3	40S	55.3	26.6
10	HIRA	INDIA	62.0	90S	57.0	60.0
20	POTAM 70	MEXICO	61.3	30S	67.0	66.6
		GRAND MEAN	72.9	54.5	75.4	45.1
		STANDARD ERROR OF GRAND MEAN	0.0	1.2	0.4	0.5
		COEFFICIENT OF VARIATION	1.4%	28.5%	6.5%	24.5%
		LSD VARIETY MEANS 5 PC	1.7	25.4	8.0	18.0

CORRELATIONS

	DAYS TO FLOWER	STEM RUST	HEIGHT CM.
STEM RUST	0.16		
HEIGHT CM.	0.34*	-0.00	
XX	-0.12	-0.31*	-0.06

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 15 AFRICA TUNISIA ARIANA

INPAT-ARIANA-TUNIS.
COOPERATORS ACPF/INRAT/ENSAT.

LATITUDE	036 45'	DATE PLANTED	12/12/71	NITROGEN	670.0 KG/HA
LONGITUDE	010 12'	DATE HARVESTED	--/--/--	PHOSPHORUS	050.0 KG/HA
ELEVATION	00001 M.ABOVE S.L.	AMOUNT OF MOISTURE	0455 MM	POTASSIUM	000.0 KG/HA

GOOD WEATHER CONDITION. NO SIGNIFICANT ATTACK OF SEPTORIA. NO INSECT, WEED OR PEST PROBLEMS REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.
20	POTAM 70	MEXICO	4847.0	103.0	95.0
1	BONZA 55	COLOMBIA	4708.0	107.0	120.0
31	CAJEME 71	MEXICO	4673.0	109.0	100.0
3	NAPO 63	COLOMBIA	4631.0	104.0	115.0
41	SONALIKA	INDIA	4455.0	101.0	95.0
38	LP 301	INDIA	4430.0	110.0	130.0
28	YECORA 70	MEXICO	4374.0	107.0	100.0
30	PAZERA-2152	ISRAEL	4243.0	104.0	75.0
35	CHECTI LERMA	INDIA	4194.0	110.0	100.0
15	EE-INIA	MEXICO	4166.0	105.0	85.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4048.0	101.0	85.0
12	VICAM 71	MEXICO	3986.0	105.0	75.0
9	TOCUIPEN 'S'	CHILE	3937.0	109.0	100.0
44	MEXICANO 1461	PORTUGAL	3916.0	112.0	105.0
29	MEXICO 120	AUSTRALIA	3902.0	107.0	85.0
46	KALYANSONA 227	INDIA	3840.0	110.0	130.0
21	PENJAMO 62	MEXICO	3840.0	110.0	110.0
32	LONDI	RHODESIA	3819.0	109.0	90.0
18	PITIC 62	MEXICO	3749.0	110.0	110.0
25	PATO ARGENTINO	ARGENTINA	3743.0	110.0	105.0
16	ET-2296	TUNISIA	3722.0	107.0	100.0
50	LOCAL CHECK / 6.5 CMS. / PACKET /		3701.0	108.0	105.0
14	MEX 226	IRAQ	3687.0	106.0	110.0
17	ARIANA 66	TUNISIA	3652.0	115.0	120.0
22	ZAMBEZI	RHODESIA	3590.0	110.0	100.0
36	JARAL 'S'	ARGENTINA	3590.0	111.0	115.0
4	TANORI 71	MEXICO	3576.0	102.0	95.0
34	ET-2281	TUNISIA	3562.0	104.0	125.0
43	CHANAB 70	PAKISTAN	3555.0	108.0	120.0
48	NAYAB 70	PAKISTAN	3460.0	110.0	130.0
24	TOBARI 66	MEXICO	3409.0	104.0	105.0
10	HIRA	INDIA	3381.0	103.0	80.0
7	ET 2288	TUNISIA	3374.0	102.0	105.0
19	LR64-N10B X AN 3F	AUSTRALIA	3361.0	115.0	85.0
40	VICTOR 1	ITALY	3332.0	118.0	120.0
27	SONORA 64-K1. REND.	ARGENTINA	3312.0	110.0	100.0
26	INIA 66	MEXICO	3173.0	105.0	105.0
23	CALICAO	MEXICO	3166.0	109.0	105.0
8	ERA	U.S.A.	3083.0	108.0	110.0
42	GIZA 153	EGYPT	2895.0	110.0	105.0
6	T-64-2-W	TUNISIA	2888.0	107.0	115.0
39	PUELCLEN	CHILE	2631.0	110.0	75.0
33	CABOTL	ARGENTINA	2270.0	118.0	90.0
47	CARAZINHO	BRAZIL	2180.0	110.0	105.0
37	MANITOU / INSENSITIVE /	CANADA	1979.0	109.0	100.0
13	MARA X SUPREMO-MENTANA-MGM	CHILE	1881.0	116.0	120.0
49	FIAMONTES	ARGENTINA	1763.0	120.0	115.0
5	IAS 20 IASSUL	BRAZIL	1624.0	118.0	125.0
2	CHRIS	U.S.A.	1499.0	111.0	110.0
45	MANITOU	CANADA	1451.0	107.0	105.0
		GRAND MEAN	3445.4	108.6	104.1

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
LSD VARIETY MEANS 5 PC

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.
DAYS TO FLOWER	-0.504**		
HEIGHT CM.	-0.14	0.33*	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 14 AFRICA TUNISIA BEJA

BEJA.
COOPERATORS ACPF. INRAT. ENSAT.

LATITUDE	036 40°N	DATE PLANTED	12/12/71	NITROGEN	070.0 KG/HA
LONGITUDE	009 10°E	DATE HARVESTED	--/--/--	PHOSPHORUS	050.0 KG/HA
ELEVATION	+00101 M.ABOVE S.L.	AMOUNT OF MOISTURE	0622 MM	POTASSIUM	000.0 KG/HA

GOOD WEATHER CONDITIONS. DIFFICULT RAINFALL. GOOD INFECTION OF SEPTORIA.
INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK ZAAFRANE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA
44	MEXICANO 1481	PORTUGAL	4970.0
31	CAJEME 71	MEXICO	4650.0
41	SONALIKA	INDIA	4635.0
28	NECORA 70	MEXICO	4630.0
20	POTAM 70	MEXICO	4580.0
18	FITTIC 62	MEXICO	4415.0
29	MEXICO 120	AUSTRALIA	4355.0
19	LR64-NIDE x AN 38	AUSTRALIA	4320.0
4	TANORI 71	MEXICO	4290.0
21	BENJAMIN 62	MEXICO	4255.0
35	CHRCTI LERMA	INDIA	4250.0
7	ET 2288	TUNISIA	4250.0
9	TOCUIPEN 'S'	CHILE	4225.0
46	KALYANSONA 227	INDIA	4225.0
16	ET-2259	TUNISIA	4135.0
25	PATO ARGENTINO	ARGENTINA	4090.0
14	PEX 620	IRAQ	4085.0
26	INIA 66	MEXICO	4050.0
23	CALICAO	MEXICO	4020.0
27	SONORA 64-NI. REND.	ARGENTINA	4020.0
40	VICTOR I	ITALY	3990.0
30	HAZERA-2152	ISRAEL	3885.0
34	ET-2281	TUNISIA	3815.0
43	CHANAB 70	PAKISTAN	3780.0
15	EE-INIA	MEXICO	3765.0
36	LR 301	INDIA	3750.0
24	TOCARI 66	MEXICO	3730.0
10	PIRA	INDIA	3680.0
38	JARAL 'S'	ARGENTINA	3665.0
6	T-64-2-W	TUNISIA	3640.0
17	ARIANA 66	TUNISIA	3590.0
32	LUNDI	RHODESIA	3555.0
22	ZAMBEZI	RHODESIA	3515.0
39	PLELLEN	CHILE	3365.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3220.0
48	NAYAB 70	PAKISTAN	3185.0
3	MARC 63	COLOMBIA	3170.0
13	MARA > SUPREME-MENTANA-MCM	CHILE	3095.0
8	ERA	U.S.A.	2975.0
47	CARAZINHO	BRAZIL	2930.0
1	BONZA 55	COLOMBIA	2820.0
12	VICAM 71	MEXICO	2780.0
2	CHRIS	U.S.A.	2615.0
42	CIZA 153	EGYPT	2565.0
37	MANITOU / INSENSITIVE /	CANADA	2455.0
45	PIAMONTES	ARGENTINA	2440.0
33	CABECO	ARGENTINA	2340.0
5	IAS 20 IASSUL	BRAZIL	1745.0
49	MANITOU	CANADA	1545.0

GRAND MEAN 3633.7
STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
USE VARIETY MEANS 5 PC

CORRELATIONS

YIELD KG/HA

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

WATEUR.
COOPERATORS ACRF. INRAT. ENSAT.

LATITUDE	041 10'N	DATE PLANTED	--/--/--	NITROGEN	070.0 KG/HA
LONGITUDE	006 20'E	DATE HARVESTED	--/--/--	PHOSPHORUS	050.0 KG/HA
ELEVATION	+00250 M.ABOVE S.L.	AMOUNT OF MOISTURE	0550 MM	POTASSIUM	000.0 KG/HA

GOOD WEATHER CONDITIONS. SUFFICIENT RAINFALL. VERY GOOD SEPTORIA INFECTION. INSECT AND PEST PROBLEMS NOT REPORTED. SOME WEED PROBLEMS. LOCAL CHECK NOT REPORTED. SEPTORIA SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	LODGING	SEPTORIA TRITICI
20	PLATAN 70	MEXICO	4572.0	5.0	7
36	JARAL 'S'	ARGENTINA	4530.0	-	4
16	ET-2266	TUNISIA	4523.0	15.0	5
14	MEX 226	IRAQ	4505.0	20.0	4
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4666.0	70.0	4
34	ET-2281	TUNISIA	4861.0	-	6
15	LR64-NIOB X AN 3E	AUSTRALIA	4826.0	-	5
31	CAJEME 71	MEXICO	4756.0	-	7
21	PENJAMO 62	MEXICO	4777.0	70.0	5
27	SONORA 64-KI. REND.	ARGENTINA	4715.0	-	4
25	MEXICO 120	AUSTRALIA	4620.0	-	6
41	SONALIKA	INDIA	4618.0	-	8
40	VICTOR I	ITALY	4455.0	50.0	2
25	FATO ARGENTINO	ARGENTINA	4430.0	-	2
24	TOEARI 66	MEXICO	4333.0	-	4
7	ET 2266	TUNISIA	4245.0	10.0	6
32	LUNDI	RHODESIA	4215.0	-	6
26	YECORA 70	MEXICO	4160.0	-	7
30	HAZERA-2152	ISRAEL	4065.0	80.0	6
5	TOCUIPEN 'S'	CHILE	4048.0	-	6
44	MEXICANO 1481	PORTUGAL	4048.0	80.0	6
26	INIA 66	MEXICO	3965.0	-	4
39	HUELGUEN	CHILE	3951.0	-	5
23	CALIDAD	MEXICO	3868.0	-	3
35	CHECTI LERMA	INDIA	3840.0	-	7
18	FITIC 62	MEXICO	3805.0	20.0	5
6	T-64-2-W	TUNISIA	3756.0	30.0	5
46	NAYAB 70	PAKISTAN	3777.0	60.0	7
22	ZAMBEZI	RHODESIA	3701.0	-	7
3	NARO 63	COLOMBIA	3565.0	10.0	7
17	ARIANA 66	TUNISIA	3506.0	10.0	3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3479.0	-	6
4	TANORI 71	MEXICO	3472.0	-	8
15	EE-INIA	MEXICO	3347.0	-	5
43	CHANAB 70	PAKISTAN	3160.0	-	7
42	GIZA 155	EGYPT	3155.0	-	7
8	ERA	U.S.A.	3131.0	-	7
10	HIRA	INDIA	3131.0	-	5
1	BONZA 55	COLOMBIA	3104.0	30.0	5
38	LF 301	INDIA	3097.0	-	8
47	CARAZINHO	BRAZIL	3055.0	70.0	2
46	KALYANSONA 227	INDIA	2888.0	-	8
37	MANITOL / INSENSITIVE /	CANADA	2861.0	70.0	3
13	MARA X SUPREMO-MENTANA-MON	CHILE	2694.0	60.0	2
45	PIAMONTES	ARGENTINA	2618.0	30.0	2
33	CABECTO	ARGENTINA	2550.0	50.0	3
12	VICAM 71	MEXICO	2333.0	-	5
2	CHRIS	U.S.A.	2243.0	40.0	4
5	IAS 20 IASSUL	BRAZIL	2131.0	40.0	2
49	MANITOL	CANADA	1666.0	50.0	1
		GRAND MEAN	3756.9	43.9	

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
LSD VARIETY MEANS 5 PC

CORRELATIONS

	YIELD KG/HA	
LODGING	-0.17	
SEPTORIA TRITICI	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 18 ASIA AFGHANISTAN KABUL

DARUL AMAN AGRICULTURE RESEARCH STATION.
COOPERATORS MOHAMMAD. ASEF RASHID.

LATITUDE	034 33'N	DATE PLANTED	03/25/72	NITROGEN	120.0 KG/HA
LONGITUDE	069 12'E	DATE HARVESTED	07/25/72	PHOSPHORUS	100.0 KG/HA
ELEVATION	401803 M.ABOVE S.L.	AMOUNT OF MOISTURE	0356 MM	POTASSIUM	050.0 KG/HA

FAVORABLE WEATHER CONDITIONS FOR CROP GROWTH. VERY HEAVY RUST INFECTIONS ESPECIALLY STEM RUST. GREAT ARMY WORM INFESTATION DURING HEADING. WERE CHEMICALLY CONTROLLED. WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK KALYAN 227.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STEM RUST	HEIGHT CM.	SHATTERING
35	CHECHI LERMA	INDIA	5711.5	67.6	106.3	0	90.6	0.0
44	MEXICANO 1481	MOROCCO	5071.4	70.6	110.6	80MS	92.6	0.0
36	JARAL 'S'	ARGENTINA	4874.2	67.6	105.0	0	84.3	2.0
43	CHANAB 70	PAKISTAN	4871.4	65.6	106.0	10MS	86.0	13.3
15	EE-INIA	MEXICO	4864.4	65.3	106.0	0	95.3	20.0
46	KALYANSONA 227	INDIA	4793.6	68.6	110.3	40MS	86.3	3.3
21	FERNANDO 62	MEXICO	4714.5	66.3	105.3	0	85.6	11.6
16	E1-2258	TUNISIA	4675.8	66.6	106.0	5R	90.0	0.0
41	SONALIKA	INDIA	4672.8	65.0	108.3	10MR	87.6	0.0
4	TANORI 71	MEXICO	4627.0	64.6	104.6	10R	84.0	0.0
12	VICAM 71	MEXICO	4617.3	67.0	106.0	0	80.3	0.0
30	MAZURKA-2152	ISRAEL	4522.8	66.0	108.6	15MS	82.3	0.0
11	JARAL 'S' / LRC-SK-MARA	INDONESIA	4492.3	66.0	105.6	15MR	71.6	0.0
38	CP 301	INDIA	4489.5	66.3	105.3	0	82.3	0.0
9	TOLLIPEN 'S'	CHILE	4483.9	66.6	110.6	0	85.0	15.0
42	GIZA 155	EGYPT	4420.1	67.6	107.0	20MR	107.0	0.0
7	E1 2288	TUNISIA	4413.1	66.0	108.0	0	88.3	21.6
22	ZAMBEZI	RHODESIA	4407.6	67.0	109.0	1R	82.6	3.3
29	MEXICO 120	AUSTRALIA	4388.1	67.3	108.3	10MR	59.3	20.0
50	LOCAL CHECK / 6.5 CMS. / PACKET /		4365.9	71.0	110.6	40MS	84.3	5.0
24	TOBARI 66	MEXICO	4310.4	67.6	109.0	0	87.6	8.3
23	CALICAO	MEXICO	4306.2	67.0	107.6	10MR	91.6	19.3
31	CALORE 71	MEXICO	4276.4	68.3	105.6	25MS	65.3	0.0
28	YECORA 70	MEXICO	4260.4	65.6	106.6	40S	83.0	28.3
14	MEX 226	IRAQ	4259.0	65.6	105.3	10R	89.3	33.3
8	EIA	U.S.A.	4246.5	73.6	111.6	5R	88.3	23.3
48	NAYAB 70	PAKISTAN	4218.7	67.0	109.0	40S	92.3	11.6
27	SONORA 64-K1. SEND.	ARGENTINA	4165.9	65.6	106.3	10MR	83.3	15.0
19	LR64-NIGE X AN 3E	AUSTRALIA	4164.6	69.6	110.0	30MS	76.6	23.0
39	PLELLEN	CHILE	4093.7	70.0	107.6	0	110.0	1.6
1	BONZA 55	COLOMBIA	4075.8	69.3	110.3	30MS	118.3	0.0
20	POTAR 70	MEXICO	4071.5	64.3	105.0	15MR	76.6	11.6
3	NAPO 63	COLOMBIA	4024.3	66.3	104.0	20MS	100.6	0.0
32	BONDI	RHODESIA	3924.3	67.0	105.6	20MS	75.6	0.0
34	E1-2281	TUNISIA	3888.9	66.3	108.3	15MS	70.0	0.0
1	PUSA	INDIA	3866.0	65.3	106.3	15MS	74.6	25.0
40	VICTOR I	ITALY	3746.6	76.0	110.3	20MS	81.0	26.6
25	PATO ARGENTINO	ARGENTINA	3721.6	67.3	107.3	15MR	83.3	31.6
6	1-64-2-W	TUNISIA	3710.5	72.0	110.6	50MS	110.0	5.0
26	INIA 66	MEXICO	3670.2	66.3	104.6	0	80.0	0.0
18	FITIC 62	MEXICO	3582.7	71.0	107.0	20MR	85.0	13.3
37	MANITOU / INSENSITIVE /	CANADA	3255.0	66.3	105.3	10MR	108.3	0.0
33	CABOTO	ARGENTINA	3211.9	72.0	107.0	25MS	115.0	18.3
45	FIRMENTOS	ARGENTINA	3177.2	72.3	106.3	25MS	99.6	0.0
47	CARAZINHO	BRAZIL	3152.2	74.0	111.3	15MR	121.6	0.0
2	CHRIS	U.S.A.	3131.4	70.0	109.3	0	122.3	19.0
45	MANITOU	CANADA	2880.0	74.6	108.3	5R	117.6	20.6
13	MARA > SUPREMO-MENTANA-MON	CHILE	2852.3	76.3	111.0	20MR	121.3	26.6
5	IAS 20 IASSUL	BRAZIL	2442.6	74.6	106.0	60MS	128.3	31.6
17	ARIANA 66	TUNISIA	1247.0	54.0	-	40MS	108.3	33.3
		GRAND MEAN	4066.0	66.7	107.7	12.2	85.7	10.8
		STANDARD ERROR OF GRAND MEAN	39.0	0.0	0.1	0.3	0.2	0.3
		COEFFICIENT OF VARIATION	11.7%	1.0%	1.2%	38.3%	3.8%	37.9%
		LSD VARIETY MEANS 5 PC	780.5	1.1	2.2	7.7	5.6	6.7

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	-0.72**				
DAYS TO MATURITY		0.52**	-0.50**			
STEM	RUST	-0.26	0.39**	-0.19		
HEIGHT	CM.	-0.57**	0.57**	-0.10	0.20	
SHATTERING		-0.42**	0.35**	-0.26	0.10	0.09

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 19 ASIA INDIA PUNJAB

WHEAT RESEARCH STATION, PUNJAB AGRICULTURAL UNIVERSITY
COOPERATORS DR. S.C. ANAND.

LATITUDE	030 56'N	DATE PLANTED	12/01/71	NITROGEN	134.0 KG/HA
LONGITUDE	070 52'E	DATE HARVESTED	04/28/72	PHOSPHORUS	067.0 KG/HA
ELEVATION	400247 M.ABOVE S.L.	AMOUNT OF MOISTURE	0341 MM	POTASSIUM	000.0 KG/HA

ORDER IN THE BEGINNING OF THE SEASON. FEW RAINS IN THE LATER PART. HUMIDITY WAS ABOVE NORMAL. SEVERE ATTACK OF LEAF RUST. LITTLE ATTACK OF STRIPE AND STEM RUST. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK KALYANSONA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
48	NAYAB 70	PAKISTAN	4626.0	105.0	143.0	0	50S	20S	110.5	0.0	37.0
31	CAJEME 71	MEXICO	4811.5	109.0	138.0	0	TS	TS	83.0	0.0	32.0
14	MEX 226	IRAQ	4782.5	101.0	137.0	20S	15M	0	102.5	13.3	41.0
43	CHANAB 70	PAKISTAN	4637.6	107.0	143.0	20S	30S	15S	105.0	1.6	38.0
21	BENJAMO 62	MEXICO	4637.6	102.0	139.0	20S	TS	TS	107.5	23.3	34.0
16	ET-2256	TUNISIA	4637.6	104.0	136.0	15S	TS	0	101.0	30.0	37.0
46	KALYANSONA 227	INDIA	4623.1	110.0	144.0	10S	50S	10S	104.0	26.3	29.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4565.1	110.0	144.0	15S	30S	10S	107.5	33.3	29.0
26	INIA 66	MEXICO	4565.1	98.0	133.0	0	TS	0	103.0	21.6	31.0
22	ZAMBEZI	RHODESIA	4463.7	105.0	143.0	30S	TS	10S	98.0	5.0	29.0
28	YECORA 70	MEXICO	4434.7	102.0	138.0	0	TS	0	74.0	0.0	36.0
15	BE-INIA	MEXICO	4420.2	99.0	136.0	0	0	0	77.5	0.0	37.0
19	LR64-MCB x AN 3E	AUSTRALIA	4316.8	108.0	142.0	0	20S	10S	95.0	30.0	26.0
25	PATO ARGENTINO	ARGENTINA	4304.3	107.0	140.0	0	TS	10S	104.0	0.0	28.0
29	MEXICO 120	AUSTRALIA	4130.4	104.0	138.0	25S	TS	10S	72.0	0.0	32.0
27	SONORA 64-K1. REND.	ARGENTINA	4130.4	102.0	138.0	25S	TS	TS	97.0	5.0	37.0
12	VICAM 71	MEXICO	4101.4	106.0	138.0	TR	0	TS	72.5	0.0	31.0
42	CIZA 155	EGYPT	4086.9	107.0	144.0	10S	20S	0	115.0	36.6	35.0
41	SONALIKA	INDIA	4057.9	97.0	137.0	0	10S	0	99.0	20.0	44.0
38	LR 301	INDIA	4057.9	106.0	142.0	0	0	0	72.5	0.0	34.0
30	HAZERA-2152	ISRAEL	4014.4	102.0	138.0	15S	40S	0	96.0	21.6	37.0
4	TANORI 71	MEXICO	3985.4	101.0	135.0	0	0	0	101.0	2.3	37.0
20	POTAM 70	MEXICO	3840.5	95.0	132.0	0	TR	0	93.5	5.0	34.0
18	FITIC 62	MEXICO	3840.5	106.0	139.0	0	40S	10S	106.0	43.3	27.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3811.5	96.0	134.0	20S	60S	0	84.0	3.3	29.0
10	HIRA	INDIA	3797.0	98.0	134.0	10S	30S	0	75.5	0.0	33.0
35	CHECK1 LERMA	INDIA	3797.0	108.0	142.0	0	TM	TS	101.5	0.0	29.0
6	T-64-2-W	TUNISIA	3724.6	106.0	142.0	0	20M	20S	112.5	8.3	36.0
24	TOBARI 66	MEXICO	3695.6	101.0	139.0	0	0	0	103.5	18.3	31.0
32	LERDI	RHODESIA	3623.1	103.0	139.0	30S	30S	0	87.0	3.3	36.0
40	VICTOR I	ITALY	3579.7	115.0	148.0	30S	25S	30S	95.0	16.6	26.0
47	CAFAZINHO	BRAZIL	3521.7	108.0	142.0	0	TS	10S	139.0	33.3	37.0
44	MEXICANO 1481	PORTUGAL	3478.2	109.0	144.0	0	50S	20S	106.0	15.0	28.0
36	JARAL 'S'	ARGENTINA	3449.2	111.0	144.0	15S	TR	TS	97.5	0.0	26.0
37	MANITOU / INSENSITIVE /	CANADA	3434.7	107.0	140.0	10S	10S	0	126.5	51.6	30.0
39	KLEELLEN	CHILE	3420.2	109.0	143.0	0	0	0	122.0	83.3	26.0
33	CABECIC	ARGENTINA	3318.8	111.0	143.0	20S	20S	0	130.5	53.3	28.0
34	ET-2281	TUNISIA	3289.8	104.0	143.0	10S	50S	10S	94.0	13.3	31.0
17	AFIANA 66	TUNISIA	3246.3	115.0	148.0	0	30S	40S	121.5	0.0	33.0
49	FIAMONTES	ARGENTINA	3246.3	112.0	140.0	TS	20S	TS	129.0	55.0	31.0
13	MARA > SUPREMO-MENTANA-MCM	CHILE	3217.3	114.0	143.0	0	30S	TS	125.5	43.3	36.0
7	ET 2288	TUNISIA	3188.3	100.0	137.0	0	0	0	101.0	15.0	36.0
3	MARO 63	COLOMBIA	3043.4	98.0	132.0	0	60S	0	115.5	30.0	28.0
5	IAS 20 IASSUL	BRAZIL	2956.5	115.0	140.0	0	0	10S	139.0	25.0	34.0
1	BONZA 55	COLOMBIA	2927.5	110.0	143.0	0	25S	10S	132.0	50.0	30.0
23	CALILAO	MEXICO	2927.5	104.0	142.0	0	0	0	100.5	21.6	29.0
9	TOCLIFEN 'S'	CHILE	2884.0	104.0	143.0	0	0	10S	90.5	3.3	27.0
2	CHRIS	U.S.A.	2840.3	111.0	142.0	15S	0	10S	137.0	56.6	27.0
8	ERA	U.S.A.	2262.3	123.0	148.0	0	0	0	101.0	1.6	24.0
45	MANITOU	CANADA	1884.0	131.0	152.0	0	TS	30S	132.0	6.6	19.0
	GRAND MEAN		3778.8	106.3	142.1	8.7	13.9	4.9	103.9	18.5	31.9
	STANDARD ERROR OF GRAND MEAN		46.4			0.9	0.7	0.3	0.3	1.5	
	COEFFICIENT OF VARIATION		15.0%			103.0%	55.7%	77.9%	3.7%	99.6%	
	LSD VARIETY MEANS 5 PC		529.6			14.7	12.7	5.9	6.3	30.2	

CORRELATIONS

YIELD	KG/HA								
DAYS TO	FLOWER	-0.51**							
DAYS TO	MATURITY	-0.53**	0.82**						
STRIPE	RUST	0.19	0.04	-0.03					
LEAF	RUST	0.01	-0.02	-0.08	0.14				
STEM	RUST	-0.23	0.52**	0.39**	0.06	0.30*			
HEIGHT	CM.	-0.46**	0.49**	0.26	0.05	0.08	0.31*		
LODGING		-0.24	0.17	-0.06	0.11	0.11	-0.10	0.66	
1000 GRN	WGT GRMS	0.50**	-0.54**	-0.52**	-0.05	-0.06	-0.25	-0.17	-0.16

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 20 ASIA INDIA NEW DELHI

INDIAN AGRICULTURAL RESEARCH INSTITUTE.
COOPERATORS M.V. RAO, R.K AGGARWAL AND R.V.P. SINGH.

LATITUDE	028 04'N	DATE PLANTED	12/01/71	NITROGEN	120.0 KG/HA
LONGITUDE	077 01'E	DATE HARVESTED	04/29/72	PHOSPHORUS	060.0 KG/HA
ELEVATION	400229 M.ABOVE S.L.	AMOUNT OF MOISTURE	0540 MM	POTASSIUM	040.0 KG/HA

FAVORABLE WEATHER THROUGHOUT THE CROP SEASON. GOOD DISEASE DEVELOPMENT.
NEGLIGIBLE INSECT, WEED AND PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
21	PENJAMO 62	MEXICO	3784.1	95.0	126.0	10S	TR-R	40S	97.0	70.0	30.7
41	SONALIKA	INDIA	3742.4	87.0	126.0	TR-M	10M	10M	97.0	40.0	36.7
4	TANORI 71	MEXICO	3659.1	102.0	133.0	0	40M	20MR	95.5	2.5	36.3
42	CIZA 155	EGYPT	3554.9	95.0	133.0	5S	10M	TR-S	113.0	67.5	28.3
14	MEX 226	IRAQ	3513.3	102.0	133.0	20S	2M	10M	90.0	42.5	30.0
7	ET 2266	TUNISIA	3366.3	95.0	133.0	TR-S	0	5M	101.0	65.0	25.5
26	INIA 66	MEXICO	3339.7	95.0	126.0	TR-R	60S	10R	93.5	25.0	36.3
10	PIRA	INDIA	3263.3	87.0	126.0	20S	5S	TR-M	71.5	2.5	26.3
19	LR64-NICB x AN 3E	AUSTRALIA	3263.3	95.0	133.0	0	15S	40S	88.5	60.0	22.3
30	PAZERA-2152	ISRAEL	3249.4	95.0	126.0	10S	30S	100M	82.0	47.5	32.0
15	EE-INIA	MEXICO	3228.6	95.0	133.0	TR-M	2S	TR-M	68.0	0.0	32.0
35	CHECTI LERMA	INDIA	3228.6	102.0	133.0	TR-M	5S	TRM	92.0	0.0	22.0
32	LUNDI	RHODESIA	3221.7	102.0	126.0	5S	15M	5M	82.5	0.5	31.1
48	NAYAB 70	PAKISTAN	3193.9	102.0	133.0	10S	TR-S	20M	90.0	0.0	30.0
6	T-64-2-W	TUNISIA	3062.0	102.0	133.0	TR-S	TR-S	100S	103.5	0.5	25.5
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3041.1	102.0	133.0	60S	40S	TR-M	100.0	30.0	26.3
43	CHANAB 70	PAKISTAN	3020.3	102.0	133.0	20S	5S	10M	93.5	10.0	28.3
16	ET-2256	TUNISIA	2916.1	102.0	133.0	20S	20S	TR-M	95.5	5.0	28.7
39	PLELCLEN	CHILE	2866.4	102.0	133.0	0	10S	5M	113.0	45.0	24.7
46	KALYANSONA 227	INDIA	2751.2	102.0	133.0	100S	30S	5M	101.5	60.0	27.1
47	CARAZINHO	BRAZIL	2763.4	109.0	133.0	2S	20M	100S	110.0	10.5	32.0
31	CAJEME 71	MEXICO	2721.7	102.0	133.0	TR-S	5S	TR-R	71.0	0.0	24.7
27	SONORA 64-K1. REND.	ARGENTINA	2707.8	95.0	126.0	20M	TR-M	TR-M	87.5	15.0	27.5
36	JARAL 'S'	ARGENTINA	2700.9	102.0	133.0	40S	TR-R	100M	79.5	0.0	22.7
36	LF 301	INDIA	2617.6	102.0	133.0	TR-R	40S	TR-R	66.5	0.0	24.0
20	POTAM 70	MEXICO	2562.9	87.0	126.0	10M	5S	TR-M	81.0	45.0	27.5
28	YECORA 70	MEXICO	2575.9	95.0	126.0	10S	30S	0	71.0	5.0	21.1
18	PITIC 62	MEXICO	2562.0	102.0	133.0	15S	40S	100M	96.5	25.0	21.5
23	CALILAC	MEXICO	2527.3	95.0	133.0	15S	20MR	5MR	90.5	12.5	24.3
24	TCEARI 66	MEXICO	2495.5	95.0	133.0	10S	TR-S	40MR	87.5	47.5	26.0
25	PATC ARGENTINO	ARGENTINA	2457.9	102.0	133.0	0	20M	10M	91.5	7.5	20.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2366.5	87.0	126.0	N	N	0	79.0	30.0	19.5
34	ET-2281	TUNISIA	2326.0	102.0	133.0	10M	TRS	100M	87.0	0.0	24.0
3	NAFC 63	COLOMBIA	2263.5	95.0	126.0	TR-R	20S	60S	101.5	57.5	22.0
9	TOCUIPEN 'S'	CHILE	2249.6	102.0	133.0	10S	TR-M	20M	84.5	10.0	16.0
49	PIANCATES	ARGENTINA	2228.8	109.0	133.0	0	20S	10S	112.5	67.5	24.7
40	VICTOR 1	ITALY	2207.9	109.0	133.0	10M	20M	100S	87.0	5.0	22.3
1	BONZA 55	COLOMBIA	2131.6	102.0	133.0	10S	TR-S	100S	110.5	30.0	21.5
44	MEXICANO 1481	PORTUGAL	2110.7	102.0	133.0	20S	100M	100M	93.5	5.0	21.1
5	IAS 20 IASSUL	BRAZIL	2103.8	109.0	133.0	10S	0	20M	111.5	1.0	28.7
17	AFIANA 66	TUNISIA	2069.1	109.0	140.0	TR-R	TR-S	100M	100.0	2.5	24.3
12	VICAM 71	MEXICO	2048.2	102.0	126.0	20X	5M	TR-R	70.0	0.0	16.7
29	MEXICO 120	AUSTRALIA	2048.2	95.0	133.0	10S	10S	40S	55.5	0.0	20.3
33	CAECTO	ARGENTINA	2034.3	109.0	133.0	50S	TRR	10S	108.5	30.0	26.3
22	ZAMBEZI	RHODESIA	2034.3	95.0	133.0	60S	0	10M	86.5	10.0	22.0
13	MARA x SUPREME-MENTANA-MCM	CHILE	2020.5	109.0	140.0	0	TR-M	10M	100.5	20.0	28.7
37	MANITOL / INSENSITIVE /	CANADA	1992.7	95.0	126.0	40S	40S	20M	108.0	50.0	22.3
2	CHRIS	U.S.A.	1728.8	109.0	133.0	5S	TR-S	10S	100.0	0.0	22.3
8	ERA	U.S.A.	840.1	116.0	147.0	30M	0	0	85.5	0.0	17.5
45	MANITOL	CANADA	455.9	116.0	140.0	50S	20M	40S	110.5	30.0	12.7
		GRAND MEAN	2627.8	100.3	131.8	14.3	12.5	22.7	91.8	22.7	25.5
	STANDARD ERROR OF GRAND MEAN		26.3						0.5	2.1	
	COEFFICIENT OF VARIATION		12.2%						6.1%	94.6%	
	LSD VARIETY MEANS 5 PC		527.5						9.2	35.1	

CORRELATIONS

YIELD	KG/HA							
DAYS TO	FLOWER	-0.55**						
DAYS TO	MATURITY	-0.48**	0.73**					
STRIPE	RUST	-0.23	0.13	0.11				
LEAF	RUST	0.07	-0.06	-0.20	0.17			
STEM	RUST	-0.14	0.23	0.11	-0.10	0.03		
HEIGHT	CM.	-0.07	0.38**	0.22	0.14	0.03	0.21	
LODGING		0.18	-0.30*	-0.25	0.16	0.16	-0.05	0.46
1000 GRN WGT	GRMS	0.75**	-0.27*	-0.28*	-0.18	0.07	-0.09	0.15	0.12

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 21 ASIA INDIA UTTAR PRADESH

PANTNAGAR
COOPERATORS DR. J.P. SRIVASTAVA

LATITUDE 029 00'N
LONGITUDE 072 00'E
ELEVATION 400243 M.ABOVE S.L.

DATE PLANTED 11/24/71
DATE HARVESTED 04/21/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 134.0 KG/HA
* PHOSPHORUS 067.0 KG/HA
POTASSIUM 034.0 KG/HA

NORMAL WEATHER. SEVERE DEVELOPMENT OF BROWN RUST. NO GOOD DEVELOPMENT O YELLOW AND BLACK RUST. NO INSECT OR PEST PROBLEMS. WEEDING WAS DONE FROM TIME TO TIME. LOCAL CHECK NOT REPORTED. LEAF FIRING SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	PLANT STAND
30	HAZERA-2152	ISRAEL	6115.9	107.0	149.6	60S	94.0	0.0	31.8	85.0
43	CHANAB 70	PAKISTAN	5999.9	117.0	154.3	100S	120.0	0.0	34.7	85.0
35	CHECTI LERMA	INDIA	5855.0	113.6	152.0	20S	110.0	0.0	34.4	85.0
27	SONORA 64-K1. REND.	ARGENTINA	5826.0	106.0	145.6	20S	99.0	20.0	36.0	85.0
38	LR 301	INDIA	5739.1	114.6	155.3	10S	70.0	0.0	35.0	85.0
34	ET-2281	TUNISIA	5550.7	116.0	151.6	50S	100.0	16.6	36.0	85.0
22	ZAMBEZI	RHODESIA	5478.2	111.0	148.3	30S	91.0	6.6	31.1	85.0
9	TOCUIFEN 'S'	CHILE	5463.7	111.3	154.6	0	93.0	0.0	28.3	85.0
41	SONALIKA	INDIA	5463.7	100.6	153.0	TR	111.0	23.3	47.8	76.6
15	EE-INIA	MEXICO	5434.7	107.3	146.0	5S	87.0	0.0	35.2	85.0
19	LR64-MICB X AN 3E	AUSTRALIA	5260.8	122.0	151.6	40S	89.0	0.0	30.5	85.0
29	MEXICO 120	AUSTRALIA	5260.8	117.6	147.0	50S	70.0	0.0	27.1	85.0
26	INIA 66	MEXICO	5217.3	100.3	143.0	20S	97.0	10.0	41.6	81.6
46	KALYANSONA 227	INDIA	5188.3	119.0	155.6	80S	108.0	16.6	31.5	83.3
50	LOCAL CHECK / 6.6 CMS. / PACKET'/		5159.4	105.0	144.6	60S	79.0	0.0	41.3	75.0
36	ET-2296	TUNISIA	5159.4	115.0	149.0	10S	88.0	0.0	40.5	85.0
12	VICAM 71	MEXICO	5144.9	121.0	153.6	30S	65.0	0.0	27.6	85.0
7	ET 2288	TUNISIA	5072.4	102.6	144.3	0	103.0	0.0	34.6	85.0
36	JARAL 'S'	ARGENTINA	5043.4	120.6	155.3	0	99.0	0.0	31.5	85.0
28	YECORA 70	MEXICO	4855.0	103.6	144.0	50S	82.0	0.0	32.0	85.0
31	CAJEME 71	MEXICO	4840.5	125.3	155.6	5S	94.0	0.0	37.8	85.0
32	LERMI	RHODESIA	4768.0	102.0	143.6	80S	90.0	0.0	39.0	80.0
44	MEXICANO 1481	PORTUGAL	4666.6	125.6	157.3	60S	119.0	65.0	26.5	85.0
14	MEX 226	IRAQ	4637.6	100.6	141.6	5S	98.0	40.0	40.5	85.0
23	CALICAO	MEXICO	4554.1	117.3	155.3	0	101.0	53.3	31.3	85.0
21	PENJAMO 62	MEXICO	4575.6	107.3	144.6	10S	95.0	16.6	38.5	85.0
20	PITAM 70	MEXICO	4521.7	99.3	140.6	20S	77.0	15.0	31.5	85.0
24	TOCAHI 66	MEXICO	4347.8	114.0	146.3	0	100.0	1.6	37.6	83.3
18	FITIC 62	MEXICO	4347.8	114.0	149.0	40S	96.0	8.3	30.7	80.0
4	TANORI 71	MEXICO	4333.3	101.6	143.0	5S	84.0	0.0	36.5	85.0
3	NAFC 63	COLOMBIA	4275.3	99.0	143.6	-	-	83.3	-	84.6
39	HUELGUEN	CHILE	4246.3	116.3	154.4	10S	129.0	65.0	39.3	85.0
10	HIRA	INDIA	4202.8	99.6	145.0	60S	73.0	0.0	38.9	83.3
6	T-64-2-W	TUNISIA	3884.0	118.3	155.3	20S	105.0	43.3	34.0	80.0
48	NAYAB 70	PAKISTAN	3797.0	118.0	153.6	TR	132.0	33.3	35.3	85.0
17	ARIANA 66	TUNISIA	3739.1	129.0	150.0	MR-TS	110.0	6.6	29.6	83.3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3666.6	100.6	140.3	50S	75.0	23.3	36.7	83.3
25	PATO ARGENTINO	ARGENTINA	3666.6	111.0	149.6	10S	92.0	23.3	23.6	85.0
40	VICTOR I	ITALY	3637.6	128.6	158.0	15S	105.0	30.0	29.6	81.6
49	PIAMONTES	ARGENTINA	3536.2	112.6	143.6	60S	108.0	50.0	30.0	83.3
42	GIZA 155	EGYPT	3376.8	117.0	154.3	50S	126.0	60.0	44.5	85.0
13	MARA > SLEREMO-MENTANA-MCM	CHILE	3347.8	111.0	145.3	30S	120.0	53.3	34.0	83.3
33	CAECTO	ARGENTINA	3260.8	126.0	157.0	0	150.0	96.6	30.3	85.0
47	CARAZINHO	BRAZIL	2739.1	127.3	157.6	15S	145.0	96.6	35.8	83.3
37	MANITOU / INSENSITIVE /	CANADA	2724.6	109.0	145.6	80S	137.0	81.6	22.0	85.0
2	CHRIS	U.S.A.	2594.1	122.3	155.6	0	123.0	63.3	34.1	80.0
1	BONZA 55	COLOMBIA	2420.2	119.6	152.3	15S	112.0	56.6	29.6	81.6
5	IAS 20 IASSUL	BRAZIL	2333.3	123.0	151.6	0	120.0	50.0	36.6	83.3
8	ERA	U.S.A.	2057.9	135.0	157.6	0	92.0	0.0	18.5	85.0
45	MANITOU	CANADA	1797.0	133.3	169.0	5S	120.0	65.0	20.0	81.6
		GRAND MEAN	4364.5	113.9	150.4	25.6	101.7	25.4	33.5	83.6
	STANDARD ERROR OF GRAND MEAN		88.5	0.5	0.4			2.3		0.1
	COEFFICIENT OF VARIATION		24.7%	5.7%	4.0%			110.6%		2.6%
	LSD VARIETY MEANS 5 PC		1770.3	10.6	5.8			46.0		3.6

CORRELATIONS

YIELD	KG/HA							
DAYS TO	FLOWER	-0.440*						
DAYS TO	MATURITY	-0.29*	0.86**					
LEAF	RUST	0.23	-0.18	-0.22				
HEIGHT	CM.	-0.38**	0.46**	0.45**	0.00			
LODGING		-0.64**	0.25	0.26	-0.11	0.44**		
1000 GRN	WGT GRMS	0.28*	-0.24	-0.11	0.06	0.35**	-0.27*	
PLANT	STAND	0.15	0.08	-0.02	-0.08	-0.05	-0.03	-0.26

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 22 ASIA JAPAN HOKKAIDO

HOKKAIDO PREFECTURAL KITAMI AGRICULTURAL EXPERIMENT.
COOPERATORS SACHIO OZEKI

LATITUDE	043 47'N	DATE PLANTED	05/01/72	NITROGEN	036.0 KG/HA
LONGITUDE	143 42'E	DATE HARVESTED	08/17/72	PHOSPHORUS	060.0 KG/HA
ELEVATION	+00156 M.ABOVE S.L.	AMOUNT OF MOISTURE	0278 MM	POTASSIUM	030.0 KG/HA

STRONG WIND AND DROUGHT CAUSED POOR GERMINATION. RIPENING PERIOD HOT AND SUNNY. HEAVY RAIN CAUSED LODGING. MODERATE OOCURRENCE OF MILDDEW. SLIGHT INJURIES BY RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK HARUH IKARI.
POWDERY MILDEW: L= SLIGHT, NIL= NIL, S= SEVERE, TR= TRACE, M= MODERATE.

NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	PROTEIN %
16	ET-2256	TUNISIA	4192.9	77.2	68.6	100.6	0	77.6	10.0	43.0	L	14.6
6	ERA	U.S.A.	4112.9	77.0	72.6	104.6	0	74.3	26.6	34.4	NIL	14.2
42	GIZA 155	EGYPT	4045.1	74.3	68.0	101.3	0	82.0	25.0	41.5	S	13.6
4	TANCHI 71	MEXICO	3971.8	75.6	62.0	98.0	3	72.6	25.0	39.9	S	14.6
44	MEXICANO 1481	PORTUGAL	3918.4	71.0	70.3	101.0	3	77.6	36.6	33.7	TR	11.0
18	PITIC 62	MEXICO	3848.5	69.6	72.6	104.0	0	83.3	36.6	37.7	NIL	13.1
19	LR64-NIOB x AN 3E	AUSTRALIA	3818.5	74.5	69.3	103.3	7	67.0	31.6	34.9	NIL	13.3
35	HUELGUEN	CHILE	3754.0	74.5	70.6	100.3	3	87.0	38.3	36.3	TR	15.2
30	HAZERA-2152	ISRAEL	3760.7	72.3	69.3	102.0	1	71.0	15.0	40.0	M	14.5
9	TOCUIHEN 'S'	CHILE	3706.2	75.7	65.6	102.6	0	66.6	30.0	34.7	TR	15.1
43	CHANAB 70	PAKISTAN	3637.4	73.7	64.3	100.3	3	69.0	28.3	39.2	M	14.0
36	JARAL 'S'	ARGENTINA	3574.0	74.5	69.6	101.3	0	70.3	43.3	36.2	L	14.0
20	POTAM 70	MEXICO	3510.7	71.8	61.0	96.6	5	68.0	53.3	40.0	TR	14.6
39	CHECTI LERMA	INDIA	3492.9	77.5	67.0	101.0	0	72.0	36.6	36.2	M	13.7
5	IAS 20 IASSUL	BRAZIL	3479.6	74.3	74.3	103.3	0	109.3	35.0	40.1	TR	13.8
14	MEX 226	IRAQ	3452.9	76.1	66.6	101.6	5	75.6	8.3	42.8	L	14.5
10	MIRA	INDIA	3446.5	70.3	62.6	98.0	5	54.3	10.0	36.1	TR	13.6
45	MANITOU	CANADA	3444.0	75.2	70.3	102.6	3	95.0	35.0	30.0	M	15.0
25	PATO ARGENTINO	ARGENTINA	3425.2	76.0	69.3	103.0	1	65.6	18.3	32.6	TR	14.3
21	PERJAPO 62	MEXICO	3395.2	76.7	67.3	100.6	0	70.0	35.0	39.2	L	14.0
13	MARA > SUPREMO-MENTANA-MCM	CHILE	3390.7	74.6	76.6	103.6	0	102.6	36.6	36.8	L	14.1
27	SONORA 64-K1. REND.	ARGENTINA	3389.6	76.7	65.3	100.3	0	72.6	13.3	40.5	M	16.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3388.5	77.6	70.3	101.3	0	96.6	43.3	36.6	NIL	13.8
46	KALYANSONA 227	INDIA	3388.5	72.0	69.3	102.0	3	70.3	38.3	31.0	TR	12.5
24	TOBARI 66	MEXICO	3381.8	77.7	66.0	102.3	3	72.0	25.0	38.0	L	14.2
2	CHRIS	U.S.A.	3350.7	77.1	70.0	103.3	0	95.3	26.6	33.2	L	16.2
22	ZAREEZI	INDONESIA	3330.7	73.7	67.6	101.6	3	67.0	26.6	31.9	L	13.6
47	CARAZINHO	BRAZIL	3297.4	76.1	74.3	103.3	1	103.6	40.0	40.1	S	14.0
29	MEXICO 120	AUSTRALIA	3220.7	70.8	69.3	99.0	3	48.3	22.6	34.5	L	13.0
32	LUNCI	INDONESIA	3205.2	71.3	66.0	100.6	5	62.6	16.6	36.8	L	14.5
41	SONALIKA	INDIA	3169.6	72.2	64.3	98.6	5	76.0	33.3	41.7	L	14.7
26	INIA 66	MEXICO	3166.3	76.2	63.6	98.0	0	68.3	15.0	42.2	S	14.7
3	NAPO 63	COLOMBIA	3143.0	72.3	63.0	96.6	5	83.6	46.6	36.5	L	15.0
28	YECORA 70	MEXICO	3111.9	71.5	67.0	99.6	3	53.6	20.0	40.1	TR	15.0
34	ET-2261	TUNISIA	3109.6	74.5	69.3	102.3	0	70.3	15.0	39.7	L	15.0
31	CAJEME 71	MEXICO	3105.2	73.6	69.3	99.0	5	60.6	18.3	45.5	TR	15.2
7	ET 2288	TUNISIA	3099.6	74.7	63.6	98.0	3	72.3	43.3	36.7	L	13.6
11	JARAL 'S' / LEE-SK-MARA	INDONESIA	3083.0	71.8	62.6	98.3	7	60.0	16.6	31.0	L	15.3
23	CALILAL	MEXICO	3049.6	77.5	66.6	101.0	0	66.0	43.3	34.5	M	16.0
37	MANITOU / INSENSITIVE /	CANADA	2981.9	75.7	66.3	100.3	3	85.6	31.6	31.5	L	16.5
33	GAUCHO	ARGENTINA	2945.2	77.0	74.6	103.6	0	102.3	50.0	33.1	M	13.7
15	BE-INIA	MEXICO	2937.4	72.2	64.0	96.6	3	53.3	26.6	36.1	TR	13.8
40	VICTOR 1	ITALY	2888.5	70.0	76.3	106.6	7	70.6	8.3	37.0	TR	16.6
6	T-64-2-W	TUNISIA	2854.1	71.3	71.3	107.0	5	82.3	8.3	40.6	L	15.5
1	BONZA 55	COLOMBIA	2813.0	70.6	71.0	100.6	7	96.3	45.0	34.6	TR	14.5
12	VICAM 71	MEXICO	2810.8	66.0	67.3	97.0	5	48.6	25.0	35.3	L	15.0
49	PIAMONTES	ARGENTINA	2755.2	76.8	71.3	101.6	3	97.3	31.6	37.7	M	14.8
38	LP 301	INDIA	2457.5	70.5	68.0	98.6	5	48.0	8.3	43.1	TR	15.7
48	NAYAB 70	PAKISTAN	2408.6	69.8	65.0	103.6	0	71.6	31.6	39.6	S	13.5
17	ARIANA 66	TUNISIA	1913.1	70.3	77.0	108.0	7	102.3	25.0	31.5	L	16.0
	GRAND MEAN		3304.3		68.3	101.1	5.1	75.3	28.2	37.1		14.5
	STANDARD ERROR OF GRAND MEAN		25.2		0.0	0.0	0.2	0.2	0.8	0.1		
	COEFFICIENT OF VARIATION		9.3%		1.1%	1.2%	67.9%	3.9%	37.7%	4.2%		
	LSD VARIETY MEANS 5 PC		504.7		1.2	1.9	5.7	4.9	17.4	2.5		

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW
TEST WEIGHT	0.37**								
DAYS TO FLOWER	-0.11	0.00							
DAYS TO MATURITY	-0.08	0.09	0.76**						
LEAF RUST	-0.13	-0.54*	-0.18	-0.24					
HEIGHT CM.	-0.00	0.34*	0.60**	0.51**	-0.30*				
LODGING	0.06	0.16	0.08	-0.08	-0.21	0.44**			
1000 GRN WGT GRMS	0.10	0.03	-0.16	-0.20	-0.06	0.13	-0.34		
POWDERY MILDEW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PROTEIN %	-0.38**	0.10	-0.01	0.06	0.01	0.02	-0.33	0.08	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 23 ASIA SOUTH KOREA KWANGJU

KWANGJU BRANCH STATION
COOPERATORS PYUN OK CHOI,CHANG HWAN CHO AND STAFF.

LATITUDE	035 00'N	DATE PLANTED	10/20/71	NITROGEN	063.0 KG/HA
LONGITUDE	127 00'E	DATE HARVESTED	06/20/72	PHOSPHORUS	050.0 KG/HA
ELEVATION	+000040 M.ABOVE S.L.	AMOUNT OF MOISTURE	0769 MM	POTASSIUM	036.0 KG/HA

FROST DAMAGE IN EARLY SPRING. TALL VARIETIES WERE LODGING DUE TO HEAVY RAINFALL. HEAVY ATTACK OF SCAB IN JUNE. NO INSECT AND PEST PROBLEMS. WEEDS CONTROLLED TWICE BY HAND. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	FROST DAMAGE	SCAB %
40	VICTOR 1	ITALY	6511.5	77.4	188.0	234.3	69.3	0.0	34.4	33.2	0.0
35	CHOCTI LERMA	INDIA	5556.2	76.2	183.0	232.3	70.0	0.0	35.5	11.0	0.0
29	MEXICO 120	AUSTRALIA	5565.4	77.1	180.3	228.6	55.0	0.0	36.6	18.4	0.0
30	HAZERA-2152	ISRAEL	5556.1	75.6	176.0	232.0	71.6	6.6	40.0	33.2	13.3
4	TANORI 71	MEXICO	5530.5	76.0	176.3	231.6	68.3	0.0	35.5	33.2	10.0
5	TOCUIPEN 'S'	CHILE	5520.5	76.7	179.6	235.6	71.3	0.0	36.7	33.2	10.0
10	HIRA	INDIA	5480.5	76.2	178.3	232.6	59.6	0.0	36.7	48.0	0.0
6	ERA	U.S.A.	5347.2	76.1	152.3	235.0	85.0	0.0	28.3	11.0	0.0
28	YECORA 70	MEXICO	5250.5	75.1	179.6	229.6	57.0	0.0	37.5	40.6	10.0
36	UP 301	INDIA	5277.2	75.2	180.0	232.6	183.0	0.0	36.3	33.2	3.3
6	T-64-2-W	TUNISIA	5152.8	75.7	184.3	163.1	66.6	20.0	39.0	33.2	3.3
25	PATO ARGENTINO	ARGENTINA	5171.7	78.9	183.0	232.3	72.3	26.6	34.2	48.0	3.3
43	CHANAB 70	PAKISTAN	5065.4	76.3	182.0	232.0	73.3	0.0	37.1	33.2	13.3
12	VICAM 71	MEXICO	5021.7	76.9	181.6	234.0	54.3	0.0	38.0	18.4	6.6
17	ARIANA 66	TUNISIA	5005.0	76.1	188.0	236.0	90.0	0.0	40.9	18.4	10.0
19	LR64-MICB X AN 3E	AUSTRALIA	4945.0	78.7	184.0	233.3	68.3	0.0	33.4	33.2	6.6
21	PENJAMO 62	MEXICO	4921.7	77.0	181.6	232.3	79.0	0.0	38.7	40.6	10.0
26	INIA 66	MEXICO	4883.9	77.5	176.6	231.3	72.3	33.3	37.3	33.2	6.6
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4869.5	67.8	186.0	232.6	75.6	60.0	34.8	11.0	6.6
46	KALYANSONA 227	INDIA	4812.8	76.9	187.0	235.0	70.3	0.0	33.6	33.2	10.0
36	JARAL 'S'	ARGENTINA	4761.7	73.8	183.3	235.0	75.0	0.0	31.8	25.8	3.3
31	CALEME 71	MEXICO	4756.1	75.5	179.6	230.6	57.3	13.3	43.2	33.2	10.0
32	LUNDI	RHODESIA	4728.4	75.1	180.6	231.3	66.0	0.0	34.4	55.5	13.3
22	ZAMBEZI	RHODESIA	4700.6	75.5	184.6	235.6	68.0	0.0	34.0	40.6	10.0
7	BT 2288	TUNISIA	4682.8	78.9	176.0	232.0	67.6	0.0	37.8	33.2	3.3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4660.6	72.9	175.3	231.6	61.6	0.0	27.8	33.2	30.0
27	SONORA 64-K1. REND.	ARGENTINA	4496.2	76.5	181.6	230.0	77.6	6.6	37.4	33.2	3.3
24	TOBARI 66	MEXICO	4460.6	76.7	179.0	234.0	75.0	53.3	36.7	48.0	6.6
48	NAYAB 70	PAKISTAN	4436.2	78.1	183.6	234.6	74.0	0.0	44.3	33.2	10.0
15	EE-INIA	MEXICO	4401.7	74.0	181.6	232.0	56.6	0.0	33.9	33.2	6.6
18	FITIC 62	MEXICO	4389.5	72.8	185.0	233.3	77.6	83.3	34.1	33.2	10.0
44	MEXICANO 1481	PORTUGAL	4357.3	73.6	184.0	233.3	72.6	43.3	41.9	11.0	0.0
23	CALIDAD	MEXICO	4349.5	75.3	182.0	233.3	71.0	0.0	34.9	48.0	3.3
14	MEX 226	IRAQ	4336.2	78.0	183.3	231.6	81.3	33.3	38.3	33.2	0.0
3	NAPO 63	COLOMBIA	4311.7	72.8	175.6	230.3	83.6	0.0	36.9	33.2	13.3
16	BT-2286	TUNISIA	4241.7	77.3	182.6	230.3	72.3	93.3	41.7	18.4	0.0
20	POTAM 70	MEXICO	4186.2	74.8	175.6	230.6	67.0	23.3	38.0	33.2	13.3
42	GIZA 155	EGYPT	4172.9	76.0	181.0	235.6	80.3	70.0	41.8	40.6	3.3
34	BT-2281	TUNISIA	4171.8	75.5	181.6	233.3	72.3	0.0	35.8	40.6	10.0
41	SONALIKA	INDIA	4135.5	75.4	178.0	235.6	72.3	0.0	39.3	33.2	10.0
49	FLAMENTES	ARGENTINA	4107.3	78.8	185.6	233.3	99.3	100.0	36.0	11.0	3.3
39	HUELGUEN	CHILE	3946.2	75.2	183.6	232.6	85.6	53.3	36.2	33.2	3.3
13	MARA X SUPREMO-MONTANA-MCM	CHILE	3477.4	76.4	186.3	233.0	86.6	80.0	38.6	18.4	3.3
33	CAECTC	ARGENTINA	3361.8	78.2	186.0	233.0	92.6	93.3	30.7	18.4	3.3
5	IAS 20 IASSUL	BRAZIL	3304.1	74.9	183.3	234.6	96.6	100.0	42.2	33.2	0.0
37	MANITOU / INSENSITIVE /	CANADA	3249.6	74.6	180.0	233.3	87.0	100.0	30.1	33.2	3.3
2	CHRIS	U.S.A.	3097.4	78.3	184.0	231.6	92.6	100.0	33.7	25.8	0.0
1	BONZA 55	COLOMBIA	2965.2	70.7	183.6	232.0	87.0	100.0	32.9	25.8	6.6
47	CARAZINHO	BRAZIL	2701.9	74.0	184.0	233.3	88.0	100.0	41.4	11.0	0.0
45	MANITOU	CANADA	2357.5	74.5	152.0	238.0	58.0	66.6	31.4	11.0	0.0
	GRAND MEAN		4546.9	76.0	182.4	231.5	77.5	29.1	36.4	30.3	6.1
	STANDARD ERROR OF GRAND MEAN		45.3	0.1	0.1	1.4	2.6	1.7	0.2	0.6	0.4
	COEFFICIENT OF VARIATION		12.2%	1.9%	0.8%	7.4%	41.7%	74.1%	6.9%	27.3%	56.7%
	LSD VARIETY MEANS 5 PC		906.5	2.4	2.5	28.1	52.7	35.3	4.1	13.5	5.8

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.24						
DAYS TO	FLOWER	-0.26	0.00					
DAYS TO	MATURITY	-0.14	0.02	0.03				
HEIGHT	CM.	-0.26	-0.05	0.26	-0.02			
LODGING		-0.74**	-0.20	0.35**	0.04	0.31*		
1000 GRN	WGT GRMS	0.02	0.15	-0.12	-0.11	-0.03	0.01	
FROST	DAMAGE	0.22	0.15	-0.44**	-0.06	-0.18	-0.36**	0.01
SCAB	%	0.16	-0.25	-0.49**	0.04	-0.26	-0.38**	-0.11

0.34*

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 24 ASIA NEPAL KATHMANDU

AGRONOMY EXPERIMENTAL FARM. KHUMALTAR.
COOPERATORS A.N. BHATTARAI AND STAFF.

LATITUDE	027 40'N	DATE PLANTED	11/10/71	NITROGEN	120.0 KG/HA
LONGITUDE	085 20'E	DATE HARVESTED	05/08/72	PHOSPHORUS	080.0 KG/HA
ELEVATION	4013600 M.ABOVE S.L.	AMOUNT OF MOISTURE	01E4 MM	POTASSIUM	040.0 KG/HA

TEMPERATURES FROM 2' C. TO 30' C. LITTLE FROST. COMPLETELY DRY WEATHER PREVAILED IN LATER PART OF CROP GROWTH, ESPECIALLY AFTER INITIATION OF HEADING. NO DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
44	MEXICANO 1481	PORTUGAL	5553.3	78.1	110.0	160.0	59.8	44.2
35	GAPOTI LERMA	INDIA	5515.5	77.0	109.0	156.0	55.7	38.3
3	NARC 63	COLOMBIA	5466.5	78.2	99.0	150.0	104.0	41.1
19	LR64-NIOB X AN 3E	AUSTRALIA	5455.5	82.8	109.3	156.3	84.0	40.1
43	CHANAB 70	PAKISTAN	5412.2	81.6	109.0	156.0	68.8	50.6
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5261.1	81.6	110.0	156.0	53.0	41.0
18	PITIC 62	MEXICO	5165.5	77.2	111.0	156.6	58.8	38.7
6	T-64-2-6	TUNISIA	5155.5	80.2	107.3	159.3	107.5	44.0
46	KALYANSONA 227	INDIA	5126.6	80.0	110.3	156.0	80.4	39.8
41	PENJAMO 62	MEXICO	5109.9	80.3	114.3	156.3	67.3	46.5
31	CAJEME 71	MEXICO	5101.0	81.6	109.6	152.6	70.4	51.5
42	GIZA 155	EGYPT	5058.8	81.1	108.3	156.3	104.4	44.6
12	VICAM 71	MEXICO	5073.3	79.8	109.3	156.0	59.9	41.2
41	SONALIKA	INDIA	5062.2	81.3	101.6	150.6	50.7	58.1
36	JARAL 'S'	ARGENTINA	5051.0	75.3	110.0	159.0	62.3	40.2
14	MEX 226	IRAQ	5023.3	81.0	112.0	159.0	89.6	43.1
47	CARAZINHO	BRAZIL	4992.2	80.0	111.6	157.0	126.0	44.1
16	ET-2256	TUNISIA	4984.4	82.5	110.0	155.6	89.8	46.7
27	SONORA 64-K1. REND.	ARGENTINA	4958.8	82.0	109.0	153.0	86.5	44.0
22	ZAMBEZI	RHODESIA	4816.6	80.8	109.0	156.6	85.6	39.2
26	INIA 66	MEXICO	4809.9	82.3	97.0	147.6	89.0	47.6
13	MAFA X SUPREMO-MENTANA-MCM	CHILE	4783.3	81.5	120.0	160.6	115.5	43.2
1	BONZA 55	COLOMBIA	4771.0	79.5	110.0	155.3	123.3	38.5
5	TOCUIPEN 'S'	CHILE	4766.6	80.5	112.0	156.3	82.6	40.5
49	PIAMONTES	ARGENTINA	4627.7	81.0	113.4	157.0	115.0	41.0
4	TANORI 71	MEXICO	4536.6	81.0	99.0	152.0	81.3	39.5
30	PAZERA-2152	ISRAEL	4521.0	80.0	99.0	153.0	81.9	50.0
48	NAYAB 70	PAKISTAN	4355.5	80.5	110.0	156.0	87.7	45.7
15	EE-INIA	MEXICO	4323.3	82.1	98.6	149.6	97.9	47.7
40	VICTOR I	ITALY	4312.2	78.1	117.6	160.3	73.0	34.5
34	ET-2281	TUNISIA	4287.7	81.5	102.3	156.6	90.4	42.3
29	MEXICO 120	AUSTRALIA	4206.6	78.1	109.3	156.0	81.9	43.8
8	ERA	U.S.A.	4154.4	80.5	121.3	157.3	89.3	38.0
10	PIPA	INDIA	4139.9	80.7	99.0	153.0	85.5	46.2
33	GABOTO	ARGENTINA	4059.9	80.7	111.0	157.3	122.9	32.5
23	CALICAO	MEXICO	4025.5	79.8	109.0	154.0	86.7	40.7
25	FATO ARGENTINO	ARGENTINA	4017.7	80.7	108.6	159.3	90.4	34.0
24	TOLAR 66	MEXICO	3892.2	78.6	110.0	155.6	87.5	40.0
32	LUNDI	RHODESIA	3883.3	79.0	99.0	149.6	74.9	40.5
11	JARAL 'S' / LEE-SK-MAFA	RHODESIA	3881.1	78.6	99.0	149.0	74.4	31.0
39	PUELLEN	CHILE	3859.9	79.1	110.0	156.0	106.6	37.3
20	POTAM 70	MEXICO	3854.4	80.5	96.3	147.0	68.9	49.7
2	CHRIS	U.S.A.	3803.5	80.0	110.0	156.0	124.1	32.5
9	IAS 20 IASSUL	BRAZIL	3734.4	77.6	110.0	148.0	132.3	0.0
38	UP 301	INDIA	3547.7	77.8	109.3	157.0	61.9	40.3
7	BT 2288	TUNISI	3527.7	82.2	99.0	153.0	85.9	39.0
37	MANITOU / INSENSITIVE /	CANADA	3457.7	80.8	109.3	154.0	107.3	30.6
17	ARIANA 66	TUNISIA	3381.1	76.8	128.6	168.6	106.6	42.6
45	MANITOU	CANADA	3356.8	78.0	129.6	170.3	121.8	29.1
28	MECORA 70	MEXICO	3178.8	81.7	98.0	151.3	63.9	50.6
		GRAND MEAN	4517.3	80.1	108.8	155.4	91.3	40.9
		STANDARD ERROR OF GRAND MEAN	59.2		0.0	0.1	0.3	
		COEFFICIENT OF VARIATION	16.0%		0.4%	0.8%	4.4%	
		LSD VARIETY MEANS 5 PC	1185.4		0.7	2.0	6.6	

CORRELATIONS

YIELD KG/HA TEST WEIGHT	0.16				
DAYS TO FLOWER	-0.02	-0.33*			
DAYS TO MATURITY	-0.01	-0.31*	0.84**		
HEIGHT CM.	0.02	-0.16	0.43**	0.32*	
1000 GRN WGT GRMS	0.35**	0.42**	-0.27*	-0.08	-0.46**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 25 ASIA PAKISTAN PUNJAB

PUNJAB AGRICULTURAL RESEARCH INSTITUTE. LYALLPUR.
COOPERATORS CEREAL BOTANIST.

LATITUDE 031 30'N
LONGITUDE 073 10'E
ELEVATION 000213 M.ABOVE S.L.

DATE PLANTED 11/13/71
DATE HARVESTED 04/27/72
AMOUNT OF MOISTURE 0421 MM

NITROGEN 090.0 KG/HA
PHOSPHORUS 060.0 KG/HA
POTASSIUM 000.0 KG/HA

NORMAL WEATHER CONDITIONS. BAD YEAR FOR RUST EPIDEMIC. INSECT OR PEST PROBLEMS NOT REPORTED. WEEDING BY MANUAL LABOR. LOCAL CHECK NOT REPORTED FROST SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	FROST DAMAGE
44	MEXICANO 1481	BOTTICAL	5577.2	70.0	102.0	129.0	0.0	0
31	CAMEME 71	MEXICO	5466.1	68.0	99.0	78.0	0.0	1
16	ET-2256	TUNISIA	5466.1	63.0	99.0	107.0	5.0	0
46	KALYANSONA 227	INDIA	5377.2	71.0	110.0	108.0	60.0	1
40	VICTOR 1	ITALY	5277.2	76.0	108.0	91.0	20.0	0
43	CHANDE 70	PAKISTAN	5221.6	65.0	103.0	114.0	0.0	0
19	LR64-MICB x AN 3E	AUSTRALIA	5066.1	68.0	102.0	95.0	5.0	0
14	MEX 226	IRAQ	5066.1	56.0	101.0	106.0	5.0	0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5021.7	69.0	104.0	111.0	0.0	1
26	INIA 66	MEXICO	4932.8	49.0	97.0	104.0	0.0	6
29	MEXICO 120	AUSTRALIA	4888.3	56.0	97.0	97.0	0.0	0
36	JARAL 'S'	ARGENTINA	4888.3	66.0	103.0	97.0	5.0	0
30	PAZERA-2152	ISRAEL	4843.9	53.0	97.0	100.0	0.0	4
9	TOCLIFEN 'S'	CHILE	4832.8	67.0	106.0	103.0	0.0	0
35	CHECTI LERMA	INDIA	4821.7	64.0	98.0	102.0	10.0	0
18	FITIC 62	MEXICO	4821.7	66.0	100.0	116.0	30.0	0
41	SONALIKA	INDIA	4821.7	70.0	101.0	95.0	70.0	4
48	NAYAB 70	PAKISTAN	4788.3	65.0	103.0	113.0	0.0	0
25	FATC ARGENTINO	ARGENTINA	4777.2	64.0	102.0	102.0	0.0	0
27	SONORA 64-K1. REND.	ARGENTINA	4777.2	58.0	100.0	103.0	0.0	2
47	CARAZINHO	BRAZIL	4732.8	73.0	103.0	150.0	100.0	0
17	ARIANA 66	TUNISIA	4677.3	77.0	108.0	142.0	20.0	0
21	PENJAMO 62	MEXICO	4666.1	57.0	96.0	114.0	0.0	0
22	ZAMBEZI	RHODESIA	4621.7	63.0	97.0	92.0	0.0	0
42	CIZA 155	EGYPT	4577.3	66.0	106.0	122.0	70.0	0
4	TANORI 71	MEXICO	4577.3	53.0	98.0	102.0	0.0	4
15	EE-INIA	MEXICO	4555.0	56.0	97.0	65.0	0.0	4
28	VECORA 70	MEXICO	4443.9	56.0	97.0	77.0	0.0	6
3	NARC 63	COLOMBIA	4377.3	53.0	97.0	117.0	10.0	0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4355.1	47.0	97.0	88.0	10.0	4
6	T-64-2-W	TUNISIA	4288.4	73.0	105.0	127.0	5.0	0
24	TOBARI 66	MEXICO	4221.7	57.0	98.0	104.0	0.0	0
32	LUNDI	RHODESIA	4132.9	61.0	95.0	95.0	0.0	0
20	POTAM 70	MEXICO	4132.9	44.0	97.0	90.0	10.0	8
39	HUELLEN	CHILE	4132.9	66.0	95.0	125.0	100.0	0
34	BT-2261	TUNISIA	4121.8	53.0	103.0	100.0	40.0	0
10	PIRA	INDIA	4121.8	35.0	98.0	77.0	0.0	7
23	CALICAO	MEXICO	4077.3	61.0	97.0	105.0	0.0	0
7	ET 2288	TUNISIA	3999.5	51.0	97.0	124.0	0.0	2
38	LR 301	INDIA	3999.5	61.0	97.0	71.0	0.0	2
13	MARA x SUPREME-MENTANA-MCM	CHILE	3955.1	73.0	102.0	125.0	80.0	0
12	VICAM 71	MEXICO	3955.1	66.0	99.0	73.0	0.0	1
8	ERA	U.S.A.	3899.6	83.0	109.0	107.0	0.0	0
5	IAS 20 IASSUL	BRAZIL	3844.0	73.0	102.0	137.0	100.0	0
33	CAECTC	ARGENTINA	3421.8	73.0	102.0	151.0	100.0	0
2	CHRIS	U.S.A.	3277.4	72.0	102.0	150.0	80.0	0
1	BONZA 55	COLOMBIA	3199.6	65.0	102.0	146.0	90.0	1
49	PIAMONTES	ARGENTINA	3088.5	76.0	103.0	142.0	50.0	0
37	MANITOU / INSENSITIVE /	CANADA	2888.5	62.0	99.0	131.0	50.0	0
45	MANITOU	CANADA	2644.1	-	-	134.0	99.0	0
		GRAND MEAN	4434.4	63.1	100.7	109.2	24.7	
		STANDARD ERROR OF GRAND MEAN	42.3		0.0			
		COEFFICIENT OF VARIATION	11.6%		0.0%			
		LSD VARIETY MEANS 5 PC	846.9		0.1			

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	0.25				
DAYS TO	MATURITY	0.39**	0.80**			
HEIGHT	CM.	-0.40**	0.22	-0.07		
LODGING		-0.53**	0.07	-0.20	0.67**	
FROST	DAMAGE	0.00	0.00	0.00	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

AGRICULTURAL RESEARCH STATION, RAHAWALPUR.
COOPERATORS DR.M.A. RAJHA AND STAFF.

LATITUDE 029 25'N
LONGITUDE 071 40'E
ELEVATION 00170 M.ABOVE S.L.

DATE PLANTED 11/15/71
DATE HARVESTED 04/26/72
AMOUNT OF MOISTURE 0457 MM

NITROGEN 135.0 KG/HA
PHOSPHORUS 066.0 KG/HA
POTASSIUM 000.0 KG/HA

NORMAL TEMPERATURES DURING GROWTH PERIOD EXCEPT JANUARY AND FEBRUARY.
GROUND FROSTS OCCURED SEVERAL TIMES. NO RAINS DURING WHOLE GROWTH PERIOD
LOW DISEASE DEVELOPMENT. NO INSECT OR PEST PROBLEMS. WEEDS WERE REMOVED.
PROTECTION WAS TAKEN AGAINST BIRD DAMAGE. LOCAL CHECK S. A. 42.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
27	SONORA 64-K1. REND.	ARGENTINA	5316.1	98.0	140.3	105.0	0.0	37.0
26	INIA 66	MEXICO	5288.3	90.0	135.4	104.6	0.0	43.4
43	CHANAE 70	PAKISTAN	5287.2	106.6	145.0	103.0	33.3	38.6
30	PAZBRA-2152	ISRAEL	5216.1	96.0	138.3	95.0	26.6	40.3
16	ET-2656	TUNISIA	5173.9	109.0	145.0	109.0	26.6	36.5
48	NAYAB 70	PAKISTAN	5135.0	101.3	147.0	105.0	0.0	35.8
32	LERDI	PHILIPPINES	4916.1	97.3	139.0	96.0	0.0	39.2
22	ARMEEZI	PHILIPPINES	4810.6	103.0	145.3	94.3	0.0	31.4
41	SONALIKA	INDIA	4756.1	90.0	141.3	106.3	60.0	49.3
21	PENJAMO 62	MEXICO	4752.8	100.6	139.3	98.3	46.6	34.6
19	LERMA-MILE X AN 38	AUSTRALIA	4748.4	112.0	153.0	97.6	6.6	28.9
11	CARAL 'S' / LERMA-SK-MARA	PHILIPPINES	4732.8	89.3	137.0	91.3	0.0	29.2
46	MALVANSONA 227	INDIA	4593.9	106.0	151.6	99.6	33.3	28.2
20	POTAM 70	MEXICO	4560.6	90.0	138.6	88.6	0.0	38.1
9	TOCUPEN 'S'	CHILE	4527.3	100.3	151.0	93.3	33.3	27.1
45	MEXICO 120	AUSTRALIA	4410.6	98.0	142.0	89.3	0.0	28.6
31	CAJEME 71	MEXICO	4399.5	112.3	144.6	77.0	0.0	38.7
3	NAPO 63	COLOMBIA	4356.2	97.3	137.3	123.6	26.6	30.7
14	MEX 226	IRAQ	4360.6	94.6	138.3	103.3	0.0	38.2
36	CARAL 'S'	ARGENTINA	4205.1	103.0	150.6	94.3	26.6	27.7
4	TANORI 71	MEXICO	4204.0	95.0	139.0	99.3	0.0	37.0
28	YECORA 70	MEXICO	4160.6	95.6	142.6	76.6	0.0	37.7
50	LOCAL CHECK / 6.6 GMS. / PACKET /		4135.1	82.6	134.6	101.6	13.3	54.4
15	EE-INIA	MEXICO	4056.4	98.0	140.6	81.3	0.0	36.5
40	VICTOR 1	ITALY	4016.2	122.3	151.0	98.3	6.6	30.9
10	PIRA	INDIA	4012.9	90.0	140.3	78.3	0.0	39.9
38	LR 261	INDIA	3852.9	98.0	147.0	73.6	0.0	32.0
34	ET-2261	TUNISIA	3816.2	95.0	146.0	93.3	0.0	31.7
42	GIZA 139	EGYPT	3774.0	101.3	143.3	109.0	33.3	35.2
6	T-64-2-W	TUNISIA	3742.9	109.6	149.0	111.6	13.3	36.8
24	TLERMI 65	MEXICO	3733.1	101.0	143.0	101.3	20.0	32.5
18	FITIC 62	MEXICO	3716.2	108.0	145.0	101.0	20.0	30.3
35	CHRIST LERMA	INDIA	3605.1	108.0	149.0	104.6	33.3	28.5
44	MEXICANO 1481	PORTUGAL	3602.9	115.6	153.3	106.3	100.0	29.1
13	MARA X SUPREMO-MENTANA-MCR	CHILE	3541.8	118.0	150.0	119.3	80.0	35.0
7	ET 2266	TUNISIA	3535.2	97.0	140.3	98.0	6.6	32.3
47	CARAZINHO	BRAZIL	3499.6	118.0	150.6	124.3	80.0	33.1
23	CALICAO	MEXICO	3456.3	101.0	146.0	97.6	53.3	29.0
12	VICAM 71	MEXICO	3427.4	110.0	147.0	70.6	0.0	26.3
5	IAS 20 TASSEL	BRAZIL	3365.2	113.0	146.3	130.6	66.6	33.2
39	FLEUGUER	CHILE	3313.0	108.0	144.0	125.0	33.3	33.8
37	MANITOU / INSENSITIVE /	CANADA	3010.8	97.0	140.3	120.6	93.3	30.4
33	CAECTC	ARGENTINA	2883.0	113.0	149.0	127.0	80.0	28.4
2	CHRIS	U.S.A.	2694.1	112.6	148.0	124.3	80.0	24.7
25	PATO ARGENTINO	ARGENTINA	2685.2	110.6	150.6	97.3	40.0	25.8
49	FILAMENTES	ARGENTINA	2644.1	116.0	147.0	127.0	73.3	28.9
1	ELNZA 51	COLOMBIA	2513.0	108.6	144.3	117.3	73.3	28.2
8	ERA	U.S.A.	2360.8	124.3	156.0	92.0	0.0	24.2
17	ARIANA 65	TUNISIA	2109.7	125.3	154.0	117.3	33.3	28.6
45	MANITOU	CANADA	1420.9	131.0	158.0	115.3	33.3	23.5
		GRAND MEAN	3532.0	104.4	145.1	101.9	27.7	33.2
		STANDARD ERROR OF GRAND MEAN	64.6	0.1	0.2	0.6	2.3	0.2
		COEFFICIENT OF VARIATION	20.1%	1.2%	2.4%	6.0%	101.8%	10.3%
		LSD VARIETY MEANS 5 PC	1292.8	2.1	5.8	13.4	46.1	5.6

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING
DAYS TO FLOWER	-0.51**				
DAYS TO MATURITY	-0.54**	0.85**			
HEIGHT CM.	-0.36**	0.38**	0.17		
LODGING	-0.45**	0.38**	0.29*	0.70**	
1000 GRN WGT GRMS	0.56**	-0.61**	-0.66**	-0.10	-0.24

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 27 ASIA PAKISTAN SIND

AGRICULTURAL RESEARCH INSTITUTE TANDOJAM.
COOPERATORS Z.A KHASHI AND RESEARCH STAFF.

LATITUDE 025 024N
LONGITUDE 068 38'E
ELEVATION 00019 M.ABOVE S.L.

DATE PLANTED 11/12/71
DATE HARVESTED 04/04/72
AMOUNT OF MOISTURE 0555 MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 080.0 KG/HA
POTASSIUM 000.0 KG/HA

COMPARATIVELY SHORT AND WARM WINTER. NEGLIGIBLE RAINS DURING GROWTH PERIOD. ABUNDANCE OF LEAF AND STEM RUST. NO INSECT OR PEST PROBLEMS. MECHANICAL CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
43	CHANAB 70	PAKISTAN	4331.0	79.1	84.0	133.0	5MS	TR-MR	96.5	-	49.0
34	BT-4481	TUNISIA	4199.0	77.3	66.0	134.0	25MS	10S	96.2	-	46.0
22	ZAMBEZI	RHODESIA	4134.2	79.7	66.0	135.0	10MS	TR-MS	86.2	-	39.0
26	INIA 66	MEXICO	4003.4	80.9	66.0	132.0	TR-MR	TR-MR	96.5	-	52.0
35	CHECTI LERMA	INDIA	4002.4	79.6	80.0	131.0	TR-MR	0	88.8	-	39.0
36	LP 301	INDIA	3936.3	77.0	66.0	129.0	10MS	TR-MR	58.3	-	43.5
14	MEX 426	IRAQ	3872.6	79.5	66.0	133.0	TR-MS	5MS	71.0	-	46.5
42	CIZA 155	EGYPT	3871.5	79.5	54.0	135.0	10S	5MS	106.5	-	46.0
27	SONORA 64-K1. REND.	ARGENTINA	3006.7	79.9	66.0	133.0	TR-MS	5MS	86.2	-	45.0
18	FITIC 62	MEXICO	3805.5	75.2	90.0	135.0	5MS	10MS	88.8	-	41.5
15	EE-INIA	MEXICO	3674.7	79.6	68.0	132.0	5MS	5MS	101.5	-	49.0
21	FENJAMC 62	MEXICO	3674.7	76.6	70.0	130.0	TR-MR	5MS	88.8	-	46.0
16	BT-2246	TUNISIA	3545.1	80.0	85.0	128.0	TR-MS	10S	111.2	-	47.0
44	MEXICANO 1481	PORTUGAL	3543.9	75.8	66.0	133.0	5S	25S	101.5	-	44.0
29	MEXICO 120	AUSTRALIA	3543.9	76.3	66.0	133.0	TR-MR	TR-MR	66.0	-	42.5
24	TCEARI 66	MEXICO	3543.9	79.9	72.0	131.0	TR-MR	TR-MR	93.8	5.0	43.5
23	CALICAO	MEXICO	3479.1	80.6	80.0	132.0	TR-MR	TR-MS	93.8	-	36.0
39	KUELGLEN	CHILE	3476.0	78.8	66.0	130.0	TR-R	TR-MR	109.1	-	45.5
36	JARAL 'S'	ARGENTINA	3413.1	74.6	90.0	134.0	TR-MR	TR-MS	81.1	-	34.5
31	CAJEME 71	MEXICO	3413.1	75.1	92.0	130.0	25S	40S	81.1	-	47.0
30	HAZERA-2152	ISRAEL	3413.1	76.1	66.0	128.0	TR-R	TR-R	81.1	-	49.5
6	1-64-2-W	TUNISIA	3347.2	77.7	80.0	130.0	25S	25S	78.6	-	45.0
19	LR64-NICB X AN 3E	AUSTRALIA	3347.2	79.5	90.0	132.0	40S	25S	76.1	-	39.0
46	KALYANSONA 227	INDIA	3216.4	79.1	66.0	135.0	5MS	10S	86.2	-	39.0
41	SONALIKA	INDIA	3019.6	79.0	54.0	128.0	0	0	81.1	-	59.0
45	FATC ARGENTINO	ARGENTINA	3018.5	79.6	90.0	135.0	5S	TR-MR	91.3	-	34.5
13	MAFA > SUPREMO-MENTANA-MCM	CHILE	3017.3	73.3	109.0	136.0	40S	25S	91.3	-	37.5
20	FOTAM 70	MEXICO	2953.7	79.4	56.0	128.0	5S	5MS	91.3	-	42.0
4	TANORI 71	MEXICO	2953.7	79.4	56.0	124.0	TR-MR	TR-MS	76.1	-	43.5
12	VICAM 71	MEXICO	2953.6	77.0	85.0	129.0	0	5MS	124.3	-	34.0
48	NAYAE 70	PAKISTAN	2887.7	77.8	68.0	132.0	25S	5MS	88.8	-	47.0
40	VICTOR I	ITALY	2756.9	76.9	102.0	136.0	10S	TR-MR	88.8	-	37.0
32	LERMI	RHODESIA	2756.9	76.7	68.0	132.0	10S	5MS	78.6	-	43.0
33	CAECTO	ARGENTINA	2690.9	78.6	109.0	137.0	5MS	25S	129.5	50.0	30.5
5	TOCLIFEN 'S'	CHILE	2665.8	75.2	80.0	133.0	5MS	10MS	78.6	-	35.5
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2624.9	76.9	85.0	132.0	40S	10MS	93.8	-	45.5
10	FIRA	INDIA	2624.9	78.3	56.0	128.0	TR-MR	TR-MS	50.7	-	43.5
1	ECNZA 55	COLOMBIA	2559.0	76.5	84.0	130.0	40S	10MS	109.1	10.0	41.0
3	NARC 63	COLOMBIA	2559.0	78.3	54.0	125.0	25S	10MS	96.5	-	44.0
49	PIAMONTES	ARGENTINA	2426.2	79.4	92.0	126.0	5MS	25S	109.1	-	39.0
28	NECCHI 70	MEXICO	2427.0	76.1	68.0	132.0	60S	60S	71.0	-	46.0
37	MANITOL / INSENSITIVE /	CANADA	2297.4	77.3	66.0	131.0	TR-MR	5S	109.1	50.0	32.5
17	ARIANA 66	TUNISIA	2231.4	70.5	105.0	144.0	5S	10S	96.5	-	30.0
47	CARAZINHO	BRAZIL	2165.5	76.3	100.0	135.0	5S	40S	137.0	-	46.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2033.5	77.2	84.0	127.0	10S	TR-MR	63.5	-	35.5
7	BT 2266	TUNISIA	1905.0	79.0	56.0	128.0	TR-MR	10MS	91.3	-	42.5
2	CHRIS	U.S.A.	1443.2	77.8	66.0	128.0	25S	5MS	121.8	50.0	34.5
9	IAS 20 IASSLL	BRAZIL	1376.4	72.4	100.0	132.0	5S	10S	137.0	-	42.0
8	ERA	U.S.A.	1247.6	-	110.0	145.0	TR-MR	0	76.1	-	26.5
45	MANITOL	CANADA	854.1	57.0	122.0	145.0	0	0	114.2	-	18.0
		GRAND MEAN	3021.5	77.4	77.9	132.1	9.6	8.7	92.3	40.9	41.4
		STANDARD ERROR OF GRAND MEAN	71.7								
		COEFFICIENT OF VARIATION	29.0%								
		LSD VARIETY MEANS 5 PC	1435.3								

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.46**							
DAYS TO	FLOWER	-0.38**	-0.43**						
DAYS TO	MATURITY	-0.21	-0.58**	0.66**					
LEAF	RUST	-0.12	0.08	0.05	-0.06				
STEM	RUST	-0.12	0.07	0.28*	0.03	0.58**			
HEIGHT	CM.	-0.29*	0.05	0.44**	0.14	-0.09	0.14		
LODGING		-0.25	0.04	0.06	-0.02	-0.00	0.01	0.34	
1000 GRN	WGT GRMS	0.56**	0.46**	-0.60**	-0.56**	0.11	0.11	-0.19	-0.30*

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 28 ASIA PAKISTAN TARNAB

AGRICULTURAL RESEARCH INSTITUTE, TARNAB
COOPERATORS CEREAL ECTANIST AND STAFF.

LATITUDE 032 33'N
LONGITUDE 066 45'E
ELEVATION 400335 M.ABOVE S.L.

DATE PLANTED 11/27/71
DATE HARVESTED 05/10/72
AMOUNT OF MOISTURE 0473 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 060.0 KG/HA
POTASSIUM 000.0 KG/HA

DRY WEATHER DURING NOVEMBER AND DECEMBER. HUMID FROM JANUARY TO MARCH.
EPIDEMICS OF P. RECONDITA. LITTLE EPIDEMIC OF STRIPE AND STEM RUST.
INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.
xx= EAR NECROSIS. xxx= PLANT NECROSIS SCALES NOT REPORTED. EAR NECROSIS:
PREST= PRESENT.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	PLANT STAND	xx	xxx
4	TANORI 71	MEXICO	8433.9	114.3	100.7	98.3	NO	NO
43	CHANAB 70	PAKISTAN	8433.9	120.0	99.9	95.0	PRESENT	PRESENT
14	MEX 226	IRAQ	8339.5	116.0	104.9	95.0	NO	NO
50	LOCAL CHECK / 6.6 CMS. / PACKET /		8182.1	114.0	88.8	96.6	TRACES	TRACES
22	ZAMBEZI	RHODESIA	8150.7	115.6	94.8	91.6	NO	NO
40	VICTOR I	ITALY	8119.2	122.0	94.8	96.6	NIL	NIL
41	SONALIKA	INDIA	7710.1	112.0	106.6	93.3	NIL	NIL
21	PENJAMO 62	MEXICO	7678.6	118.0	102.2	93.3	NO	NO
27	SONORA 64-K1. REND.	ARGENTINA	7615.7	114.6	104.9	91.6	NIL	NIL
26	INIA 66	MEXICO	7584.2	114.0	101.5	86.6	PRESENT	NIL
46	KALYANSONA 227	INDIA	7521.3	115.3	99.0	95.0	TRACES	TRACES
24	TCEARI 66	MEXICO	7363.9	114.6	100.7	95.0	NIL	NIL
10	HIRA	INDIA	7206.6	114.0	75.3	95.0	NO	NO
20	FCTAM 70	MEXICO	7206.6	113.6	90.5	90.0	NO	NO
30	MAZURKA-2152	ISRAEL	7206.6	115.0	94.5	80.0	PRESENT	PRESENT
31	CAJEME 71	MEXICO	7175.1	115.3	76.1	83.3	PRESENT	NIL
23	CALICAL	MEXICO	7143.6	117.6	97.3	93.3	NIL	NIL
32	LERMI	RHODESIA	7080.7	115.0	86.3	86.6	PRESENT	PRESENT
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	7017.8	111.6	96.5	95.0	NO	NO
28	YECORA 70	MEXICO	6766.0	114.0	77.0	93.3	PRESENT	PRESENT
15	LR64-NICB > AN 38	AUSTRALIA	6734.5	115.6	84.6	93.3	NO	NO
9	TOCUIFEN 'S'	CHILE	6577.2	116.0	90.5	90.0	NO	NO
17	ARIANA 66	TUNISIA	6514.2	118.6	118.5	93.3	NO	NO
35	FLORCLEN	CHILE	6451.3	120.0	116.5	91.6	PRESENT	NIL
16	ET-2256	TUNISIA	6451.3	116.0	100.7	96.6	NO	NO
47	CARAZINHO	BRAZIL	6356.9	119.0	137.1	96.6	NIL	NIL
18	EE-INIA	MEXICO	6293.9	115.0	76.1	90.0	YES	YES
29	MEXICO 120	AUSTRALIA	6293.9	114.6	67.7	91.6	NIL	NIL
7	ET 2288	TUNISIA	6262.5	114.3	95.6	85.0	NO	NO
36	LR 301	INDIA	6262.5	117.0	85.1	83.3	PRESENT	PRESENT
34	ET-2281	TUNISIA	6231.0	115.3	95.6	86.6	NIL	NIL
12	VICAM 71	MEXICO	6231.0	116.6	66.0	93.3	NO	NO
35	CHECTI LERMA	INDIA	6199.5	115.6	95.6	86.6	PRESENT	PRESENT
44	MERICANO 1481	PORTUGAL	6168.1	118.3	103.2	93.3	PRESENT	PRESENT
25	PATO ARGENTINO	ARGENTINA	6073.6	118.3	98.2	93.3	NIL	NIL
6	1-64-2-H	TUNISIA	6010.7	118.0	114.2	95.0	NO	NO
48	NAYAB 70	PAKISTAN	5947.8	118.6	102.4	90.0	NIL	NIL
16	PITIC 62	MEXICO	5916.3	117.6	106.6	91.6	NO	NO
42	GIZA 155	EGYPT	5727.5	116.6	117.6	88.3	NIL	NIL
36	CAPAL 'S'	ARGENTINA	5664.5	116.0	92.2	93.3	NIL	NIL
33	CABOTO	ARGENTINA	5349.8	120.6	140.5	86.6	NIL	NIL
3	NAFC 63	COLOMBIA	5288.4	115.0	118.5	91.6	NO	NO
5	IAS 20 IASSLL	BRAZIL	5129.6	121.0	140.5	96.6	NO	NO
45	PIAMONTES	ARGENTINA	4751.9	118.3	131.2	93.3	NIL	NIL
37	MANITOL / INSENSITIVE /	CANADA	4685.0	118.3	132.9	93.3	NIL	NIL
2	CHRIS	U.S.A.	4685.0	115.3	132.9	91.6	NO	NO
13	MARA > SUPREME-MENTANA-MCN	CHILE	4685.0	122.6	126.9	95.0	NO	NO
1	BONZA 55	COLOMBIA	4531.6	117.0	121.0	80.0	NO	NO
8	ERA	U.S.A.	3052.5	116.0	104.1	96.6	NO	NO
49	MANITOL	CANADA	1625.2	122.6	134.6	91.6	NIL	NIL
		GRAND MEAN	6405.3	117.1	102.5	91.6		
		STANDARD ERROR OF GRAND MEAN	66.6	0.3	0.5	0.5		
		COEFFICIENT OF VARIATION	12.7%	3.4%	6.6%	7.3%		
		LSD VARIETY MEANS 5 PC	1333.1	6.5	11.5	11.0		

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	-0.38**				
HEIGHT	CM.	-0.49**	0.49**			
PLANT	STAND	0.11	0.14	0.15		
xx		0.00	0.00	0.00	0.00	
xxx		0.00	0.00	0.00	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 29 EUROPE BULGARIA TOLBUKHIN

DOBRUDJA AGRICULTURAL RESEARCH INSTITUTE.
COOPERATORS IVAN TODOROV

LATITUDE 043 40'N
LONGITUDE 028 10'E
ELEVATION +00236 M.ABOVE S.L.

DATE PLANTED 03/05/72
DATE HARVESTED 07/10/72
AMOUNT OF MOISTURE 0146 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 130.0 KG/HA
POTASSIUM 000.0 KG/HA

SLIGHT DROUGHT IN SPRING. SUFFICIENT RAINFALL IN SUMMER. HEAVY ATTACK OF E. GRAMINIS, LEAF AND STEM RUST. NO INSECT,WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.LODGING SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	PODDERY MILDEW
20	POTAM 70	MEXICO	2888.5	70.7	145.0	183.0	0	0	71.4	0	32.6	40.0
22	ZAMEEZI	RHODESIA	2666.3	74.3	149.0	187.0	5MR	0	75.9	0	28.6	80.0
3	NARC 63	COLOMBIA	2666.3	75.1	145.0	183.0	65S	0	89.1	0	29.1	65.0
16	BT-2256	TUNISIA	2533.0	74.3	148.0	187.0	TR-R	0	75.2	0	32.9	80.0
14	MEX 226	IRAQ	2399.7	75.1	149.0	187.0	TR-R	TR-R	81.1	0	32.7	65.0
35	CHECTI LERMA	INDIA	2355.3	78.7	151.0	190.0	0	0	79.9	0	25.9	40.0
31	CAJEME 71	MEXICO	2310.8	70.3	147.0	184.0	TR-R	5MR	64.6	0	30.6	25.0
8	ERA	U.S.A.	2221.9	74.0	156.0	191.0	0	0	77.2	0	28.6	5.0
7	BT 2288	TUNISIA	2221.9	75.5	147.0	185.0	0	5MR	82.1	0	25.0	40.0
19	LR64-NIOB X AN 3E	AUSTRALIA	2221.9	72.7	152.0	185.0	5MR	25MS	67.4	0	26.6	40.0
18	FITIC 62	MEXICO	2221.9	73.1	152.0	190.0	40S	10MR	80.2	0	27.1	65.0
4	TANORI 71	MEXICO	2221.9	74.3	145.0	183.0	TR-R	TR-R	68.0	0	27.7	65.0
6	T-64-2-W	TUNISIA	2221.9	72.7	151.0	190.0	65S	25MS	91.3	0	32.5	80.0
46	KALYANSONA 227	INDIA	2177.5	75.5	153.0	190.0	25MS	0	78.8	0	31.0	10.0
2	CERIS	U.S.A.	2133.1	76.0	151.0	191.0	0	0	101.8	5	28.0	65.0
5	TOCUIFEN 'S'	CHILE	2133.1	74.7	149.0	191.0	TR-R	10MR	73.2	0	27.1	40.0
33	CAEOTO	ARGENTINA	2088.6	77.1	154.0	190.0	TR-R	0	92.0	0	29.3	65.0
30	HAZERA-2152	ISRAEL	2088.6	68.3	147.0	185.0	65S	5MR	70.4	0	30.9	25.0
47	CARAZINHO	BRAZIL	2088.6	76.0	153.0	191.0	TR-R	5MR	105.7	5	34.1	65.0
12	VICAM 71	MEXICO	2044.2	72.7	147.0	185.0	TR-R	0	57.8	0	25.8	100.0
29	MEXICO 120	AUSTRALIA	2044.2	70.3	148.0	189.0	5MR	5MR	51.2	0	27.1	65.0
37	MANITOU / INSENSITIVE /	CANADA	2044.2	74.3	150.0	185.0	TR-R	0	88.3	5	27.5	65.0
13	MARA X SUPREME-MENTANA-MCM	CHILE	1999.7	74.7	156.0	191.0	25MS	5MR	101.9	5	32.6	40.0
41	SONALIKA	INDIA	1999.7	74.0	147.0	189.0	0	0	76.8	0	36.3	30.0
1	BONZA 55	COLOMBIA	1999.7	71.1	150.0	190.0	65S	0	95.0	0	29.9	25.0
24	TOEARI 66	MEXICO	1999.7	73.5	148.0	188.0	0	0	74.0	0	28.1	65.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	1955.3	72.7	146.0	185.0	40S	0	62.1	0	23.1	10.0
45	MANITOU	CANADA	1955.3	76.0	157.0	191.0	0	0	95.4	0	26.1	80.0
21	PENJAMO 62	MEXICO	1910.9	72.3	149.0	188.0	TR-R	5MR	77.8	0	29.9	65.0
27	SONORA 64-K1. REND.	ARGENTINA	1910.9	75.5	147.0	185.0	0	0	76.0	0	30.6	40.0
5	IAS 20 IASSLL	BRAZIL	1910.9	75.1	156.0	190.0	5MR	40S	108.9	5	33.3	65.0
32	LLANI	RHODESIA	1910.9	71.5	150.0	185.0	65S	10MR	64.4	0	30.5	40.0
25	FATC ARGENTINO	ARGENTINA	1866.4	74.7	149.0	185.0	25MS	0	74.9	0	24.3	80.0
10	HIRA	INDIA	1866.4	71.1	146.0	185.0	10MR	0	58.0	0	25.7	40.0
38	LR 301	INDIA	1866.4	75.1	148.0	184.0	0	0	55.9	0	33.9	65.0
36	JARAL 'S'	ARGENTINA	1822.0	72.3	151.0	189.0	0	0	72.9	0	28.2	40.0
39	HUELGUEN	CHILE	1777.5	74.0	152.0	191.0	TR-R	TR-R	99.4	5	31.3	80.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		1733.1	74.3	-	192.0	65S	65S	77.7	0	25.7	30.0
44	MEXICANO 1461	PORTUGAL	1733.1	71.1	151.0	191.0	100S	10MR	77.9	0	27.4	80.0
26	INIA 66	MEXICO	1688.7	73.1	146.0	184.0	0	0	70.7	0	29.1	65.0
48	NAVAE 70	PAKISTAN	1688.7	73.1	148.0	185.0	25MS	0	78.4	0	33.4	80.0
34	BT-2281	TUNISIA	1688.7	72.7	148.0	189.0	80S	0	71.2	0	30.7	40.0
42	CIZA 155	EGYPT	1688.7	73.1	149.0	190.0	80S	5S	81.8	0	32.3	10.0
23	CALICAO	MEXICO	1644.2	76.0	150.0	188.0	0	0	79.0	5	28.7	100.0
15	EE-INIA	MEXICO	1555.3	71.5	149.0	185.0	0	0	56.3	0	28.9	80.0
28	YECORA 70	MEXICO	1555.3	68.3	148.0	185.0	0	0	58.1	0	29.0	65.0
40	VICTOR 1	ITALY	1466.5	68.0	157.0	191.0	100S	25MS	62.5	0	23.3	65.0
43	CHANAE 70	PAKISTAN	1466.5	72.3	149.0	191.0	40S	0	70.6	0	30.5	45.0
17	AFIANA 66	TUNISIA	1333.1	75.5	162.0	193.6	80S	10MR	92.1	0	28.9	80.0
49	PIAMONTES	ARGENTINA	1288.7	76.7	151.0	191.0	10MR	5MR	90.1	0	32.1	40.0
		GRAND MEAN	1885.5	73.5	150.0	188.3	21.0	4.1	77.7		29.6	54.6
	STANDARD ERROR OF GRAND MEAN		34.2			0.0	0.1	0.0	0.2		0.1	
	COEFFICIENT OF VARIATION		21.1%			0.1%	7.7%	9.9%	4.2%		4.4%	
	LSD VARIETY MEANS 5 PC		684.7			0.4	2.6	0.6	5.3		2.1	

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.14									
DAYS TO	FLOWER	0.05	-0.00								
DAYS TO	MATURITY	-0.32*	0.25	-0.06							
LEAF	RUST	-0.28*	-0.35*	-0.16	0.27*						
STEM	RUST	-0.12	-0.03	-0.72**	0.31*	0.28*					
HEIGHT	CM.	0.07	0.56**	0.08	0.54**	0.02	0.14				
LODGING		0.00	0.00	0.00	0.00	0.00	0.00	0.00			
1000 GRN	WGT GRMS	0.11	0.20	-0.01	0.05	-0.12	0.01	0.31	0.00		
PODDERY	MILDEW	-0.09	0.11	0.16	-0.08	-0.14	-0.07	0.08	0.00	-0.07	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 30 EUROPE ENGLAND CAMBRIDGESHIRE

PLANT BREEDING INSTITUTE, CAMBRIDGE.
COOPERATORS F.JACKSON

LATITUDE 052 11'N
LONGITUDE 000 07'E
ELEVATION 00018 M.ABOVE S.L.

DATE PLANTED 03/15/72
DATE HARVESTED 08/22/72
AMOUNT OF MOISTURE 0177 MM

NITROGEN 133.0 KG/HA
PHOSPHORUS 015.0 KG/HA
POTASSIUM 029.0 KG/HA

COOL, CLOSEY AND RATHER DRY WEATHER. GOOD DEVELOPMENT OF P. GLUMARUM.
INSECT AND PEST PROBLEM NOT REPORTED. SOME WEED PROBLEMS. LOCAL CHECK
MARIS DOVE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST
42	GIZA 155	EGYPT	6128.0	85.6	0
15	LR64-MICB X AN 3E	AUSTRALIA	6001.3	90.3	70MS
18	FITIC 62	MEXICO	5958.6	92.3	2MR
9	TOGLIFLN 'S'	CHILE	5550.6	86.0	50MS
17	AFIANA 66	TUNISIA	5354.6	93.6	10MR
34	ET-2481	TUNISIA	5341.3	86.3	0
6	EFA	U.S.A.	5292.0	92.0	100S
50	LOCAL CHECK / 6.6 CMS. / FACHET /		5206.6	96.3	5MR
42	ZAMBEZI	RHODESIA	5192.0	92.0	20MR
7	BT 2288	TUNISIA	5149.3	85.6	50MS
35	FLAFLGLEN	CHILE	5142.6	96.3	10MR
24	TOBAFI 66	MEXICO	5037.3	90.0	1MR
13	MARA X SUPREMO-MENTANA-MCM	CHILE	4992.0	94.0	2MR
30	MAZEPA-2152	ISRAEL	4958.6	87.0	30MS
4	TANCFI 71	MEXICO	4637.3	83.6	1MR
46	KALYANSONA 227	INDIA	4618.6	96.0	10S
48	NAYAB 70	PAKISTAN	4614.6	86.3	10MR
45	MEXICO 120	AUSTRALIA	4586.6	87.0	80S
44	MEXICANO 1481	PORTUGAL	4549.3	90.3	40S
36	LF 361	INDIA	4504.0	89.3	10MS
25	FATC ARGENTINO	ARGENTINA	4477.3	89.6	2MR
6	T-64-2-W	TUNISIA	4358.6	90.3	0
20	FOTAM 70	MEXICO	4358.6	94.6	100S
40	VICTOR I	ITALY	4360.0	95.0	80S
3	MARC 62	COLOMBIA	4326.0	85.0	1MR
35	CHECII LERMA	INDIA	4245.3	90.6	100S
37	MANITOL / INSENSITIVE /	CANADA	4233.3	85.0	50MS
49	PIAMONTES	ARGENTINA	4222.6	93.0	0
10	FIRA	INDIA	4114.6	86.0	10MR
2	CHRIS	U.S.A.	4102.6	90.0	2MR
14	MEX 226	IRAQ	4100.0	86.6	70S
21	BENJAMO 62	MEXICO	4072.0	91.3	100S
23	CALIBAL	MEXICO	4052.0	86.6	2MR
32	LLANI	RHODESIA	3958.6	90.6	80S
38	JARAL 'S'	ARGENTINA	3990.6	87.0	90S
41	SONALIKA	INDIA	3980.0	86.0	5MR
12	VICAM 71	MEXICO	3858.6	87.3	80S
16	ET-2256	TUNISIA	3878.6	90.6	50MS
45	MANITOL	CANADA	3822.6	94.6	70S
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3812.0	87.3	70MS
27	SONORA 64-KI. HEAD.	ARGENTINA	3782.6	87.6	50S
1	ELNZA 55	COLOMBIA	3716.0	93.6	50MS
15	EE-INIA	MEXICO	3600.0	86.0	0
33	CAECTC	ARGENTINA	3596.0	96.3	50S
43	CHANAB 70	PAKISTAN	3588.0	88.0	90S
28	YECORA 70	MEXICO	3473.3	87.3	4MR
26	INIA 66	MEXICO	3241.3	84.6	10MR
47	CARAZINHO	BRAZIL	3224.0	92.6	70S
5	IAS 20 IASSLL	BRAZIL	3070.6	92.3	70MS
31	CAJEME 71	MEXICO	2988.0	87.0	2MR
		GRAND MEAN	4383.6	89.4	37.2
		STANDARD ERROR OF GRAND MEAN	56.6	0.2	1.9
		COEFFICIENT OF VARIATION	18.8%	3.6%	63.9%
		LSD VARIETY MEANS 5 PC	1132.0	5.3	38.8

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER
DAYS TO FLOWER	0.10	
STRIPE RUST	-0.33*	0.02

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 31 EUROPE GERMANY SHLESWIG-HOLSTEIN

NORDSAAT SAATZUCHT GMBH
COOPERATORS PROF. DR. KLAUS VON ROSENSTIEL.

LATITUDE 054 22'N DATE PLANTED 03/16/72 NITROGEN 100.0 KG/HA
LONGITUDE 006 04'E DATE HARVESTED 09/03/72 PHOSPHORUS 120.0 KG/HA
ELEVATION +00005 M.ABOVE S.L. AMOUNT OF MOISTURE 0324 MM POTASSIUM 160.0 KG/HA

COOLER TEMPERATURES THAN NORMAL FROM MARCH THROUGH JUNE. MAY AND JUNE TOO WET. EARLY ATTACK OF E. GRAMINIS. HEAVY ATTACK OF SEPTORIA. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK MOLIERI.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	SEPTORIA NODORUM	FUSARIUM	ERYS. BLADE	ERYS. HEAD	SEPT. BLAD
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5893.3	86.0	29.5	39.9	33.2	11.0	44.3	70.2	33.2
35	CHHOTI LERMA	INDIA	5266.6	73.3	44.3	34.3	77.6	11.0	36.9	36.9	77.6
8	ERA	U.S.A.	5159.9	76.6	44.3	38.0	33.2	22.1	18.4	22.1	33.2
30	PAZERA-2152	ISRAEL	4866.6	66.6	0.0	42.0	77.6	11.0	33.2	55.5	99.8
18	FITIC 62	MEXICO	4799.9	78.3	66.9	34.1	33.2	22.1	33.2	40.6	33.2
43	CHANAB 70	PAKISTAN	4719.9	66.6	22.1	38.5	99.8	11.0	36.9	73.9	99.8
46	KALYANSONA 227	INDIA	4679.9	70.0	73.9	35.5	55.5	22.1	25.8	51.7	55.5
19	LR64-NIOB X AN 3E	AUSTRALIA	4639.9	60.0	0.0	28.9	77.6	22.1	36.9	55.5	77.6
17	ARIANA 66	TUNISIA	4639.9	66.3	11.0	40.5	22.1	33.2	40.6	62.8	11.0
32	LUNDI	RHODESIA	4613.3	56.6	44.3	35.7	77.6	11.0	22.1	55.5	99.8
1	ECNZA 55	COLOMBIA	4599.9	90.0	66.5	40.4	55.5	33.2	25.8	66.5	55.5
42	GIZA 155	EGYPT	4559.9	80.0	44.3	43.7	33.2	11.0	25.8	33.2	33.2
10	HIRA	INDIA	4533.3	48.3	0.0	36.9	77.6	11.0	29.5	51.7	99.8
14	MEX 226	IRAQ	4506.6	76.6	0.0	41.0	77.6	33.2	44.3	62.8	77.6
9	TOCLIFEN 'S'	CHILE	4466.6	61.6	22.1	31.1	33.2	22.1	36.9	33.2	77.6
44	MEXICANO 1481	PORTUGAL	4453.3	75.0	44.3	33.8	55.5	22.1	70.2	77.6	55.5
3	NARO 63	COLOMBIA	4346.6	76.6	22.1	35.5	99.8	22.1	55.4	73.9	99.8
16	ET-2256	TUNISIA	4333.3	73.3	0.0	43.3	77.6	22.1	36.9	51.7	99.8
22	ZAMBEZI	RHODESIA	4279.9	66.6	22.1	32.5	77.6	11.0	36.9	55.5	99.8
21	FENJANG 62	MEXICO	4239.9	66.6	22.1	44.7	55.5	22.1	29.5	51.7	77.6
24	ET-2261	TUNISIA	4239.9	70.0	22.1	36.1	55.5	22.1	48.0	55.5	33.2
36	JARAL 'S'	ARGENTINA	4226.6	71.6	44.3	35.6	55.5	22.1	25.5	36.9	99.8
24	TOEARI 66	MEXICO	4213.3	70.0	19.4	38.1	33.2	22.1	25.8	62.1	55.5
27	SONORA 64-K1. REND.	ARGENTINA	4133.3	71.6	0.0	37.5	77.6	11.0	29.5	48.0	99.8
40	VICTOR 1	ITALY	4119.9	65.0	22.1	36.5	33.2	11.0	51.7	51.7	33.2
39	KLELGLEN	CHILE	4119.9	86.6	51.7	38.3	99.8	11.0	36.9	70.2	99.8
6	7-64-2-W	TUNISIA	4039.9	80.0	22.1	40.6	55.5	33.2	29.5	62.8	55.5
20	POTAM 70	MEXICO	3973.3	65.0	44.3	41.6	99.8	22.1	36.9	55.5	99.8
5	IAS 20 IASSUL	BRAZIL	3973.3	121.6	66.5	40.4	55.5	11.0	40.6	51.7	55.5
7	BT 2266	TUNISIA	3946.6	65.0	36.9	41.2	44.3	22.1	25.8	22.1	55.5
33	GABOTO	ARGENTINA	3906.6	96.6	61.3	37.6	55.5	11.0	48.0	55.5	77.6
47	CARAZINHO	BRAZIL	3893.3	96.6	73.9	40.7	33.2	33.2	70.2	77.6	33.2
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3893.3	55.0	0.0	33.7	99.8	11.0	25.8	59.1	99.8
12	MARA > SUPREME-MENTANA-MCM	CHILE	3826.6	55.0	73.9	37.8	55.5	22.1	25.8	55.5	55.5
49	FIAMENTES	ARGENTINA	3813.3	86.6	51.7	38.4	33.2	11.0	55.4	70.2	77.6
41	SONALIKA	INDIA	3759.9	71.6	44.3	40.4	99.8	11.0	40.6	51.7	99.8
25	PATO ARGENTINO	ARGENTINA	3746.6	63.3	25.7	36.9	55.5	22.1	62.8	77.6	55.5
26	INIA 66	MEXICO	3666.6	63.3	22.1	37.8	99.8	11.0	59.1	66.5	99.8
38	LR 3C1	INDIA	3573.3	45.0	0.0	38.8	77.6	11.0	33.2	51.7	99.8
4	TANORI 71	MEXICO	3506.6	55.0	22.1	37.4	99.8	22.1	46.0	70.2	99.8
31	CAJEME 71	MEXICO	3440.0	55.0	0.0	46.6	77.6	11.0	25.8	51.7	77.6
45	MANITOU	CANADA	3400.0	86.6	59.1	31.7	33.2	22.1	48.0	55.5	99.8
15	EE-INIA	MEXICO	3386.6	48.3	0.0	36.8	99.8	33.2	55.4	66.5	99.8
37	MANITOU / INSENSITIVE /	CANADA	3333.3	80.0	73.9	32.4	55.5	11.0	44.3	51.7	99.8
2	CHRIS	U.S.A.	3200.0	56.6	66.5	36.5	77.6	11.0	48.0	77.6	77.6
29	MEXICO 120	AUSTRALIA	3160.0	46.6	0.0	34.4	77.6	22.1	55.4	70.2	99.8
48	NAYAB 70	PAKISTAN	3106.6	70.0	0.0	40.2	40.6	11.0	70.2	77.6	55.5
23	CALILAC	MEXICO	3053.3	66.6	14.7	40.2	77.6	22.1	51.7	55.5	99.8
12	VICAM 71	MEXICO	2920.0	46.6	0.0	36.8	99.8	33.2	51.7	62.8	99.8
28	NECORA 70	MEXICO	2520.0	46.6	0.0	44.8	99.8	33.2	22.1	51.7	99.8
		GRAND MEAN	4074.6	71.5	30.4	38.3	65.8	19.0	40.4	56.3	75.9
	STANDARD ERROR OF GRAND MEAN		49.2	0.3	0.9	0.3	0.1	0.0	1.0	0.6	0.0
	COEFFICIENT OF VARIATION		14.8%	5.2%	26.6%	9.7%	2.7%	0.0%	31.2%	13.0%	0.1%
	LSD VARIETY MEANS 5 PC		585.9	6.0	18.1	6.1	2.9	0.0	20.6	12.0	0.1

CORRELATIONS

YIELD	KG/HA									
HEIGHT	CM.	0.24								
LODGING		0.14	0.71**							
1000 GRN WGT GRMS		-0.06	0.09	-0.15						
SEPTORIA NODORUM		-0.31*	-0.47**	-0.37*	0.04					
FUSARIUM		-0.14	-0.06	-0.09	0.16	-0.08				
ERYS.	BLADE	-0.32*	0.10	-0.00	-0.16	-0.01	0.06			
ERYS.	HEAD	-0.25	0.05	-0.04	-0.01	0.30*	0.06	0.67		
SEPT.	BLADE	-0.40**	-0.46**	-0.30*	-0.10	0.78**	-0.21	-0.03	0.13	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 32 EUROPE ITALY ROME

STAZIONE FITOTECNICA DI RIETI.
COOPERATORS INSTITUTE SPERIMENTALE-CEREALICOLTURA.

LATITUDE 44° 24'N DATE PLANTED 12/10/71 NITROGEN 105.0 KG/HA
LONGITUDE 012 52'E DATE HARVESTED 06/14/72 PHOSPHORUS 115.0 KG/HA
ELEVATION 400402 M.ABOVE S.L. MOISTURE 0300 MM POTASSIUM 000.0 KG/HA

WEATHER CONDITIONS NOT REPORTED. DISEASE DEVELOPMENT NOT REPORTED.
INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK S. PASTORE.

VARIETY NUMBER	VARIETY OF ORIGIN	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	SEDIMENTATION SED.	NECK BREAK	SHRINKING %
18	FITIC 42	MEXICO	5522.7	73.8	133.0	165.0	0	0	103.3	0.0	1.3	42.7	60.0	0.6	2.2
5	TOCUPEN 'S'	CHILE	5180.5	81.8	130.0	162.3	0	0	83.3	0.0	2.0	41.5	70.0	4.0	2.8
44	MEXICANO 1461	PORTUGAL	5734.9	73.0	133.0	162.6	0	0	101.6	0.0	6.3	47.0	40.0	2.6	1.6
15	LREA-NIOB M AN JE	AUSTRALIA	5564.9	75.1	133.0	162.0	40S	0	86.6	0.0	2.6	39.4	100.0	1.6	1.5
6	T-64-2-W	TUNISIA	5538.3	75.0	133.0	162.0	0	40MS	106.6	0.0	4.6	45.4	70.0	0.0	2.6
20	FOTAP 70	MEXICO	5400.5	77.8	124.0	177.0	10R	0	90.6	0.0	8.0	50.2	60.0	0.0	1.3
2	NARC 63	COLOMBIA	5010.6	76.1	124.0	177.0	100S	0	116.3	0.0	4.3	41.7	0.0	0.0	1.3
7	BT 2468	TUNISIA	4895.0	81.1	124.0	180.0	0	0	95.6	0.0	3.3	42.3	100.0	0.0	1.2
42	KALYANSONA 22	INDIA	4876.3	74.8	135.0	182.0	0	0	95.0	0.0	5.3	42.2	60.0	3.6	2.0
16	E1-2-56	TUNISIA	4873.9	80.8	128.0	177.0	0	0	95.6	0.0	2.0	50.4	40.0	0.0	1.3
4	TANGRI 71	MEXICO	4871.7	81.5	123.0	177.0	0	0	86.6	0.0	6.0	44.7	40.0	0.0	3.1
1	ELNIA 55	COLOMBIA	4751.7	78.5	130.0	175.0	0	0	127.0	0.0	0.6	41.8	60.0	5.0	1.7
8	EFA	U.S.A.	4742.5	82.4	143.0	187.3	0	0	100.6	0.0	6.3	35.0	70.0	4.3	1.8
41	SONALIKA	INDIA	4771.7	75.3	124.0	177.0	0	0	103.3	0.0	6.3	53.8	40.0	0.0	1.3
43	CHENAB 70	PAKISTAN	4747.2	75.0	128.0	175.0	0	0	93.3	0.0	5.0	45.6	70.0	0.0	1.0
10	PIRA	INDIA	4727.2	75.7	125.0	177.0	0	0	72.6	0.0	5.3	43.8	0.0	0.0	4.7
50	LOCAL CHECK / 6.6 GMS. / PACHET /		4727.3	73.6	133.0	175.0	100S	40S	118.3	0.0	8.6	43.3	60.0	1.0	0.5
32	CAECTL	ARGENTINA	4662.9	77.0	132.0	182.6	0	0	121.6	0.0	4.6	36.4	40.0	0.5	1.4
13	MAPA M SUPREMO-MENTANA-MCM	CHILE	4661.1	81.5	128.0	180.0	70MS	60S	121.3	0.0	4.6	45.1	40.0	2.6	1.2
47	CAMPINAS	BRAZIL	4570.6	73.8	133.0	155.0	0	30S	129.3	0.0	7.6	48.8	40.0	0.3	1.6
35	PUELLUEN	CHILE	4547.3	75.7	127.0	160.0	0	0	111.0	0.0	7.8	41.5	70.0	1.6	2.0
48	NAVAE 70	PAKISTAN	4512.5	75.5	130.0	182.0	100S	0	103.3	0.0	4.3	48.5	40.0	0.0	2.1
46	GIZA 155	EGYPT	4505.0	74.0	133.0	182.0	0	0	108.3	0.0	0.3	45.5	50.0	0.0	1.8
49	SONORA 64-K1. PERC.	ARGENTINA	4465.5	76.7	128.0	175.0	0	0	95.6	0.0	4.6	43.7	40.0	5.3	1.4
9	IAS 40 IASSUL	BRAZIL	4481.7	75.1	128.0	165.0	0	40MS	146.3	50.0	11.0	45.5	0.0	0.0	1.2
36	INIA 66	MEXICO	4457.3	77.1	123.0	177.0	0	0	95.0	0.0	5.0	45.7	50.0	0.0	2.1
45	PATL ARGENTINO	ARGENTINA	4456.2	77.5	133.0	182.0	0	0	98.3	0.0	3.3	36.1	40.0	4.3	1.5
19	EE-INIA	MEXICO	4456.6	80.0	125.0	177.0	40MR	0	70.6	0.0	4.6	45.4	70.0	0.0	2.3
29	CHECK1 LERMA	INDIA	4347.3	77.3	133.0	182.0	0	0	90.6	0.0	3.0	35.5	40.0	1.3	0.7
11	JAMEL 'S' / LEE-SK-PARA	PROCESIA	4326.2	77.4	124.0	177.0	0	0	85.6	0.0	7.0	45.8	50.0	0.0	1.8
23	CALIBAC	MEXICO	4276.4	76.3	129.0	180.0	0	0	86.0	0.0	4.0	42.4	80.0	0.0	0.5
38	LR 201	INDIA	4276.2	76.2	130.0	175.0	0	0	66.6	0.0	7.0	45.3	10.0	0.6	0.9
30	HAZERA-2152	ISRAEL	4272.9	72.8	124.0	177.0	0	0	50.0	0.0	3.0	47.5	80.0	0.6	2.5
37	ARIANA 66	TUNISIA	4215.1	78.5	133.0	182.0	0	0	112.3	0.0	3.6	47.5	40.0	0.0	1.5
28	JAMEL 'S'	ARGENTINA	4206.2	76.5	130.0	175.0	0	0	91.0	0.0	3.0	41.1	30.0	2.6	1.8
3	CHRIS	U.S.A.	4201.7	80.8	123.0	164.8	0	0	131.3	25.0	3.0	38.0	80.0	4.0	1.4
22	ZAMBEZI	PROCESIA	4182.5	76.6	133.0	182.0	0	0	87.6	0.0	3.6	35.2	40.0	0.0	2.9
14	MEP 228	IRAQ	4115.1	75.9	128.0	177.0	0	0	100.6	0.0	2.3	45.7	40.0	0.0	1.4
34	LLANCI	PROCESIA	4070.7	70.8	130.0	175.0	0	0	81.0	0.0	5.6	35.2	40.0	4.0	1.0
26	YECORA 70	MEXICO	4066.5	76.8	124.0	177.0	0	20MS	71.6	0.0	4.6	52.7	40.0	1.6	0.9
40	VICTOR 1	ITALY	4021.8	72.6	128.0	180.0	40S	0	86.6	0.0	11.0	38.5	80.0	3.3	2.9
34	E1-2481	TUNISIA	3976.2	77.1	128.0	177.0	50S	0	93.3	0.0	2.3	44.3	30.0	3.3	1.6
31	CAJEME 71	MEXICO	3911.8	76.7	128.0	175.0	0	0	76.0	0.0	7.0	55.0	40.0	0.0	1.7
24	TCEFFI 65	MEXICO	3866.4	80.1	124.0	177.0	0	0	97.6	0.0	5.6	44.5	60.0	0.0	1.3
12	VICAM 71	MEXICO	3797.3	76.9	130.0	180.0	0	0	65.0	0.0	5.3	4[illegible]	30.0	0.3	4.5
45	PIANCANTES	ARGENTINA	3656.5	77.7	135.0	185.0	30MS	0	128.3	0.0	1.3	39.[illegible]	40.0	8.3	0.4
21	PERLANC 62	MEXICO	3651.8	74.4	130.0	180.0	30MS	0	90.6	0.0	1.3	46.4	0.0	0.0	2.5
37	MARTOL / INSENSITIVE /	CANADA	3547.4	75.4	130.0	175.0	0	0	118.3	75.0	[illegible]	35.1	60.0	7.6	0.3
25	MEXICO 120	AUSTRALIA	3577.4	75.0	124.0	177.0	0	0	63.3	0.0	6.0	45.1	80.0	0.0	4.5
39	MARTOL	CANADA	2795.2	76.4	143.0	185.0	[illegible]	0	131.6	0.0	3.3	36.5	60.0	4.6	1.0
		GRAND MEAN	4475.0	77.2	130.3	180.3	11.8	4.1	98.7	3.0	4.7	43.8	45.7	1.6	1.8
	STANDARD ERROR OF GRAND MEAN		73.4	0.0	0.0	0.0			0.5		0.1	0.1		0.2	0.0
	COEFFICIENT OF VARIATION		20.0%	1.2%	0.1%	0.4%			6.6%		41.4%	3.0%		153.7%	58.9%
	LSD VARIETY MEANS 5 PC		1483.7	1.5	0.2	1.2			10.7		3.6	2.1		5.1	1.7

CORRELATIONS

YIELD	KG/HA													
TEST	WEIGHT	0.15												
DAYS TO	FLOWER	-0.04	-0.05											
DAYS TO	MATURITY	0.04	-0.00	0.82**										
LEAF	RUST	0.04	-0.07	0.03	-0.11									
STEM	RUST	0.13	0.07	0.28*	0.12	0.28*								
HEIGHT	CM.	0.01	0.02	0.49**	0.53**	0.15	0.37**							
LODGING		-0.15	0.02	0.12	0.12	-0.09	0.12	0.39						
SHATTERING		0.01	-0.17	0.13	-0.05	0.02	0.29*	-0.06	0.12					
1000 GRN	WGT GRMS	0.10	-0.06	-0.22*	-0.31*	-0.00	0.14	-0.19	-0.20	0.07				
SEDIMENTATION	SED.	0.16	0.04	-0.00	0.04	-0.15	-0.10	-0.05	-0.05	-0.03	-0.17			
NECK	BREAK	-0.15	-0.04	0.44**	0.35**	-0.00	-0.07	0.31	0.31*	-0.17	-0.48**	0.08		
SHRINKING %		0.03	0.07	-0.16	-0.16	-0.12	-0.16	-0.48	-0.24	0.07	0.02	-0.01	-0.31*	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 33 EUROPE NETHERLANDS VAN DER HAVE

BREEDING STATION D.J.VAN DER HAVE.
COOPERATORS K. E. CELING.

LATITUDE 051 27'N DATE PLANTED 03/15/72 NITROGEN 040.0 KG/HA
LONGITUDE 004 20'E DATE HARVESTED 08/15/72 PHOSPHORUS 000.0 KG/HA
ELEVATION +00004 M. BELOW S.L. AMOUNT OF MOISTURE 0372 MM POTASSIUM 000.0 KG/HA

TEMPERATURES IN SPRING BELOW NORMAL. NORMAL RAINS OVER THE GROWING PERIOD. SEVERE ATTACK OF RIPENING DISEASES. YELLOW RUST ATTACK CAUSED BY AN ARTIFICIAL INFECTION IN THE NEIGHBORHOOD. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK TOPO. XX= WORTH. XXX= RIPENING DISEASES.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	XX	XXX
50	LOCAL CHECK / 6.6 CMS. / PACKET /		10043.4	203.6	237.0	2	101.6	18.4	42.0	51.7	48.0
42	GIZA 155	EGYPT	8876.8	179.0	231.0	2	93.3	18.4	41.6	66.5	70.2
14	MEX 226	IRAQ	8321.3	177.6	222.0	4	88.3	18.4	42.6	66.5	66.5
15	LR64-NICB X AN 3E	AUSTRALIA	8099.1	179.6	226.0	2	76.6	11.0	30.3	70.2	77.6
8	ERA	U.S.A.	7988.0	194.[illegible]	223.0	4	95.0	25.8	30.0	70.2	66.5
16	ET-2256	TUNISIA	7765.6	177.6	214.0	4	85.0	11.0	41.3	66.5	66.5
35	FLELGLEN	CHILE	7543.6	179.6	222.0	1	103.3	36.9	32.3	73.9	81.3
17	ARIANA 66	TUNISIA	7468.1	182.3	228.0	2	108.3	22.1	38.3	70.2	73.9
23	CALILAC	MEXICO	7432.5	178.3	220.0	3	85.0	22.1	35.6	77.6	66.5
9	TOCUIFEN 'S'	CHILE	7377.0	177.0	223.0	2	78.3	11.0	33.6	70.2	81.3
24	TOLARI 66	MEXICO	7377.0	177.0	221.0	2	88.3	14.7	36.0	70.2	66.5
30	HAZERA-2152	ISRAEL	7321.4	179.0	217.0	3	90.0	25.8	35.6	70.2	77.6
47	CARAZINHO	BRAZIL	7321.4	175.0	227.0	8	103.3	73.9	39.0	85.0	77.6
3	NAPO 63	COLOMBIA	7321.4	175.0	220.0	2	95.0	44.3	36.3	81.3	77.6
6	T-64-2-W	TUNISIA	7265.9	179.0	229.0	6	100.0	14.7	38.0	59.1	66.5
21	BENJAMIN 62	MEXICO	7265.9	177.6	222.0	6	85.0	25.8	38.3	77.6	73.9
18	PITIC 62	MEXICO	7210.3	177.6	224.0	4	98.3	36.9	28.6	73.9	66.5
27	SONORA 64-K1. REND.	ARGENTINA	7154.8	174.3	216.0	2	90.0	29.5	35.6	73.9	70.2
2	CHRIS	U.S.A.	7154.8	179.0	228.0	3	115.0	40.6	32.3	73.9	70.2
4	TANORI 71	MEXICO	7099.2	173.0	215.0	3	75.0	11.0	38.6	77.6	77.6
20	POTAM 70	MEXICO	6988.1	173.0	216.0	4	81.6	33.2	38.0	77.6	77.
25	PATO ARGENTINO	ARGENTINA	6877.0	178.3	216.0	1	83.3	14.7	31.0	77.6	70.2
49	PIAMONTES	ARGENTINA	6821.5	179.0	222.0	3	103.3	36.9	32.3	77.6	73.9
43	CHANAE 70	PAKISTAN	6821.5	174.3	215.0	6	80.0	14.7	36.0	77.6	73.9
38	LP 301	INDIA	6821.5	173.6	216.0	2	60.0	11.0	36.6	70.2	66.5
44	MEXICANO 1481	PERU/LOCAL	6765.9	179.0	219.0	9	91.6	25.8	32.0	81.3	73.9
1	ECAZA 55	COLOMBIA	6710.4	179.0	220.0	3	113.3	40.6	37.3	73.9	66.5
33	CABECO	ARGENTINA	6710.4	180.3	225.0	6	100.0	62.8	31.6	77.6	73.9
45	MANITOL	CANADA	6710.4	181.0	224.0	8	111.6	66.5	27.3	77.6	66.5
41	SONALIKA	INDIA	6710.4	173.6	223.0	2	88.3	22.1	39.0	81.3	81.3
46	KALYANSONA 227	INDIA	6677.0	179.0	226.0	8	86.6	18.4	29.6	70.2	70.2
22	ZAMBEZI	RHODESIA	6654.8	179.0	223.0	7	86.6	14.7	29.0	76.5	73.9
10	HIRA	INDIA	6488.2	174.3	219.0	6	66.6	11.0	35.0	73.9	73.9
34	BT-2281	TUNISIA	6488.2	177.0	223.0	4	66.6	14.7	35.3	70.2	70.2
37	MANITOL / INSENSITIVE /	CANADA	6432.6	177.6	216.0	3	95.0	70.2	28.6	81.3	73.9
5	IAS 20 IASSUL	BRAZIL	6432.6	181.0	219.0	5	126.6	73.9	44.0	88.7	87.5
35	CHECTI LERMA	INDIA	6099.3	177.6	220.0	9	85.0	18.4	32.3	77.6	81.3
26	INIA 66	MEXICO	6043.8	173.6	214.0	2	83.3	18.4	34.3	81.3	81.3
13	MARA X SUPREMO-MENTANA-MCM	CHILE	5988.2	156.3	221.0	3	108.3	51.7	35.6	73.9	66.5
28	YECORA 70	MEXICO	5932.7	173.0	213.0	4	70.0	11.0	43.0	73.9	70.2
15	EE-INIA	MEXICO	5821.6	173.0	217.0	3	65.6	11.0	35.0	73.9	70.2
7	BT 2288	TUNISIA	5677.2	173.0	223.0	2	83.3	18.4	36.0	73.9	73.9
48	NAYAB 70	PAKISTAN	5599.4	173.6	224.0	6	90.0	11.0	40.0	73.9	70.2
32	LERDI	RHODESIA	5543.8	174.3	217.0	7	88.3	11.0	30.3	77.6	88.7
12	VICAM 71	MEXICO	5488.5	173.6	213.0	7	65.0	11.0	31.0	73.9	77.6
40	VICTOR 1	ITALY	5377.2	185.0	230.0	5	70.0	11.0	28.6	66.5	85.0
29	MEXICO 120	AUSTRALIA	5155.0	175.0	214.0	5	66.6	18.4	32.0	77.6	70.2
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	5099.4	173.0	214.0	7	70.0	11.0	25.0	85.0	96.1
36	JARAL 'S'	ARGENTINA	4877.2	179.0	157.6	6	85.0	22.1	29.3	77.6	73.9
31	CALENE 71	MEXICO	4655.0	175.0	218.0	4	66.6	11.0	47.0	73.9	81.3
		GRAND MEAN	6757.9	177.3	219.8	4.4	87.8	25.6	34.9	74.2	73.3
	STANDARD ERROR OF GRAND MEAN		62.0	0.6	1.3	0.0	0.3	0.7	0.1	0.4	0.4
	COEFFICIENT OF VARIATION		11.2%	4.3%	7.5%	26.3%	4.3%	34.9%	4.5%	7.1%	8.0%
	LSD VARIETY MEANS 5 PC		1240.3	12.7	26.9	1.9	6.2	14.6	2.5	8.6	9.5

CORRELATIONS

YIELD	KG/HA								
DAYS TO	FLOWER	0.54**							
DAYS TO	MATURITY	0.47**	0.27*						
STRIPE	RUST	-0.44**	0.04	-0.23					
HEIGHT	CM.	0.40*	0.29*	0.29*	-0.15				
LODGING		0.09	0.05	0.10	0.01	0.73**			
1000 GRN	WGT GRMS	0.26	0.00	0.17	-0.33*	0.09	-0.06		
XX		-0.48**	-0.45**	-0.32*	0.19	0.05	0.45**	-0.18	
XXX		-0.51**	0.37**	-0.19	0.25	-0.40**	-0.15	-0.33	0.49**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 34 EUROPE NORWAY JORDET

CEFARTMENT OF FARM CROPS.
COOPERATORS DR. HARE FINGLLAC.

LATITUDE C55 C5'N
LONGITUDE C11 00'E
ELEVATION 4CCC85 F.ABOVE S.L.

DATE PLANTED 04/27/72
DATE HARVESTED 0E/25/72
AMOUNT OF MOISTURE 0375 MM

NITROGEN C56.C KG/HA
PHOSPHORUS C40.C KG/HA
POTASSIUM C71.C KG/HA

MAY AND JUNE RELATIVELY COOL. HEAVY ATTACK OF SEPTORIA. MODERATE ATTACK OF MILDEW. INSECT PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. PEST PROBLEM NOT REPORTED. LOCAL CHECK FLAVR. XX= % SPROUTED KERNELS. XXX= PLANT COVER.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST DAYS TO EIGHT FLOWER	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA TRITICI	SEPTORIA NODORUM	SED. INDEX	MOIS-TURE%	XX	XXX
5C	LOCAL CHECK / 6.6 CMS. / PACKET /		3629.2	78.5	64.3	86.0	0.0	33.2	0.0	26.6	0.0	35.0	16.5	0.0	91.6
5	IAS 20 BASSLL	BRAZIL	3422.9	75.5	70.5	115.5	50.0	41.5	20.0	13.3	0.0	26.0	24.0	4.5	86.6
6	BPA	U.S.A.	3295.9	75.1	67.0	72.6	1.6	28.6	3.3	23.3	0.0	42.0	17.5	0.2	85.0
6C	PCTAP 70	MEXICO	3221.8	7[illegible].5	61.0	66.3	0.0	37.5	23.3	30.0	0.0	42.0	16.0	6.0	85.0
4C	VICTOR 1	ITALY	3214.4	75.7	72.3	68.6	0.0	31.5	23.3	13.3	0.0	31.0	1.3	2.9	83.3
1C	FITIC 62	MEXICO	3066.3	71.0	68.0	84.6	8.3	30.0	10.0	23.3	0.0	23.0	18.5	0.[illegible]	78.3
35	FLEGGLIF	CHILE	2928.6	76.1	65.4	50.6	5.0	30.5	16.6	33.3	30.0	43.0	16.5	0.2	88.3
36	JAMAL 'S'	ARGENTINA	2873.7	73.5	64.3	72.3	0.0	24.7	23.3	23.3	0.0	47.0	17.2	1.0	86.6
37	SONORA 64-KI. REND.	ARGENTINA	2759.7	75.1	63.3	76.3	0.0	32.1	16.6	40.0	0.0	45.0	16.3	0.2	88.3
4	TAMPI 71	MEXICO	2725.6	77.2	61.3	67.0	0.0	35.1	33.3	30.0	10.0	66.0	16.1	0.5	86.6
14	PL 428	IRAQ	2716.2	77.5	63.[illegible]	78.6	0.0	36.0	16.6	26.6	0.0	48.0	16.3	1.0	88.3
41	SCIA'IRA	INDIA	2716.8	74.5	62.0	75.3	0.0	37.2	33.3	23.3	10.0	35.0	17.2	1.5	80.0
64	TAMPI 66	MEXICO	2681.2	75.3	64.0	77.0	0.0	34.5	3.3	33.3	0.0	57.0	16.8	0.5	90.0
5	TESLIFEN 'S'	CHILE	2636.7	77.8	62.0	64.3	0.0	31.0	6.6	40.0	0.0	45.0	16.7	1.2	81.6
35	CHECK LERMA	INDIA	2621.5	75.0	64.6	71.0	0.0	30.8	23.3	26.6	13.3	27.0	18.2	0.7	81.6
43	CHANAB 70	PAKISTAN	2555.7	75.2	62.0	65.0	0.0	34.0	30.0	33.3	6.6	41.0	16.6	3.7	86.6
44	MENILAND 1481	BELGICAL	2555.7	73.5	6[illegible].6	75.0	6.6	32.6	33.3	20.0	0.0	18.0	17.6	0.7	80.0
37	PANITCL / INSENSITIVE /	CANADA	2570.1	76.5	62.0	50.3	18.3	27.0	30.0	33.3	3.3	47.0	16.2	0.2	83.3
3C	MAZEPA-2152	ISRAEL	2562.7	72.3	6[illegible].4	68.3	0.0	31.6	10.0	33.3	3.3	31.0	15.5	0.5	86.6
34	EI-2281	TUNISIA	2562.7	76.2	63.0	70.0	0.0	32.2	30.0	30.0	0.0	40.0	17.2	2.2	88.3
61	PERJAMC 62	MEXICO	2456.0	76.[illegible]	64.3	73.3	0.0	37.0	23.3	30.0	0.0	27.0	16.4	0.7	90.0
46	INIA 66	MEXICO	2486.6	77.6	61.3	66.6	0.0	34.5	36.6	36.6	23.3	65.0	16.4	0.7	80.0
16	EI-2255	TUNISIA	2486.6	76.0	65.3	77.0	0.0	34.1	26.6	26.6	3.3	52.0	16.2	0.7	83.3
45	PIAMONTES	ARGENTINA	2451.6	81.[illegible]	67.3	56.6	5.0	34.6	30.0	26.6	0.0	60.0	17.6	0.7	85.0
63	CALICAO	MEXICO	2451.6	75.6	63.0	70.6	0.0	30.5	50.0	30.0	3.3	46.0	17.7	0.2	86.6
15	LFE4-NIGB X AN 3F	AUSTRALIA	2421.9	74.[illegible]	67.6	63.0	0.0	24.5	30.0	20.0	0.0	22.0	18.2	0.2	81.6
1	ECAZA 55	COLOMBIA	2364.9	74.1	66.4	55.3	15.6	31.0	13.3	23.3	6.6	35.0	16.3	1.[illegible]	88.3
25	FATC ARGENTINO	ARGENTINA	2377.5	78.6	63.3	66.3	0.0	27.0	30.0	30.0	3.3	52.0	16.[illegible]	1.5	90.0
47	CARAZINHO	BRAZIL	2370.1	77.7	68.4	105.6	24.6	38.2	43.3	20.0	0.0	24.0	21.7	2.0	81.6
33	CALCTC	ARGENTINA	2347.9	81.5	65.0	104.3	8.3	30.5	26.6	26.6	0.0	37.0	21.2	1.5	85.0
13	PARA X SUPREMO-MENTANA-MCM	CHILE	2340.5	78.1	71.4	55.0	10.0	35.3	0.0	23.3	3.3	25.0	20.0	0.5	83.3
7	EI 2288	TUNISIA	2303.4	74.8	62.3	65.3	0.0	29.7	0.0	40.0	3.3	55.0	16.1	0.5	81.6
8	T-64-4-4	TUNISIA	2256.0	70.[illegible]	67.0	64.3	1.6	31.6	23.3	23.3	0.0	21.0	15.0	0.7	82.3
10	PIRA	INDIA	2273.8	73.0	62.0	45.3	0.0	29.1	10.0	43.3	0.0	61.0	16.4	3.5	82.3
40	MALVANSONA 227	INDIA	2251.6	75.0	68.0	72.0	0.0	28.5	0.0	33.3	0.0	42.0	16.4	1.2	85.0
68	YECORA 70	MEXICO	2244.2	72.0	62.0	52.0	0.0	33.3	6.6	40.0	3.3	67.0	16.2	1.0	80.0
3	MARC 62	COLOMBIA	2241.9	74.2	61.[illegible]	76.6	0.0	31.1	23.3	33.3	26.6	42.0	16.0	2.0	80.0
11	CALEFE 71	MEXICO	2207.1	74.0	65.3	56.3	0.0	43.1	23.3	33.3	3.3	65.0	15.5	2.5	80.0
45	PANITCL	CANADA	2170.1	77.0	64.0	50.3	36.6	24.8	33.3	26.6	0.0	53.0	16.2	0.5	83.3
65	PERICL 120	AUSTRALIA	2140.5	55.5	66.4	46.6	0.0	26.0	46.6	30.0	0.0	21.0	16.3	1.7	80.0
62	CIZA 155	EGYPT	2118.3	76.[illegible]	62.6	61.0	0.0	33.0	13.3	30.0	3.3	33.0	16.1	2.0	81.6
12	VICAM 71	MEXICO	2036.8	68.1	64.0	45.3	0.0	26.3	40.0	26.6	3.3	70.0	16.1	4.0	81.6
32	LERCI	ECUADOR	1955.3	65.0	63.3	41.3	0.0	26.3	10.0	36.6	20.0	54.0	15.1	0.7	85.0
48	NAMAL 70	PAKISTAN	1923.8	72.2	62.3	76.0	0.0	32.3	40.0	36.6	10.0	64.0	16.0	2.5	85.0
6	CPIS	U.S.A.	1933.1	77.0	65.6	104.3	49.3	25.2	30.0	26.6	0.0	61.0	17.1	0.2	85.0
66	ZAPEZZI	ECUADOR	1918.3	68.3	65.0	65.3	0.0	22.8	20.0	46.6	6.6	64.0	15.5	2.0	88.3
28	LF 341	INDIA	1888.6	67.1	64.0	46.0	0.0	28.6	16.6	43.3	26.6	63.0	15.7	4.2	83.3
19	EE-INIA	MEXICO	1807.2	70.0	63.3	58.6	0.0	26.0	30.0	50.0	30.0	66.0	15.5	2.5	78.3
11	JAMAL 'S' / LEE-SK-MARA	ECUADOR	1888.7	65.3	62.0	56.0	0.0	15.5	26.6	43.3	16.6	64.0	15.3	0.0	85.0
17	ARIANA 66	TUNISIA	1562.8	67.2	75.0	51.3	0.0	32.0	20.0	10.0	0.0	28.0	17.5	1.0	86.6
		GRAND MEAN	2460.4	74.8	64.5	75.2	4.9	31.2	22.1	30.2	5.4	45.5	17.2	1.5	84.1
	STANDARD ERROR OF GRAND MEAN		31.9		0.0	0.3	0.5		0.7	0.6	0.4		0.0		0.3
	COEFFICIENT OF VARIATION		15.8%		0.5%	6.4%	130.8%		40.9%	26.0%	50.8%		4.7%		4.9%
	LSD VARIETY MEANS 5 PC		636.9		0.8	7.5	10.4		14.8	12.8	8.1		1.3		6.7

CORRELATIONS

	YIELD KG/HA	TEST DAYS TO EIGHT FLOWER	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA TRITICI	SEPTORIA NODORUM	SED. INDEX	MOISTURE %	XX	XXX
TEST HEIGHT	0.55**											
DAYS TO FLOWER	0.05	0.02										
HEIGHT CM.	0.24	0.52**	0.48**									
LODGING	0.07	0.28*	0.28*	0.67**								
1000 GRN WGT GRMS	0.41**	0.43**	0.10	0.30*	0.05							
POWDERY MILDEW	-0.23	-0.17	-0.12	-0.04	0.13	-0.05						
SEPTORIA TRITICI	-0.36**	-0.30*	-0.49**	-0.56**	0.36**	-0.35*	0.14					
SEPTORIA NODORUM	-0.29*	-0.30*	-0.33*	-0.24	-0.19	-0.18	0.08	0.47**				
SED. INDEX	-0.35*	-0.11	-0.54**	-0.42**	-0.14	-0.23	0.16	0.65**	0.33*			
MOISTURE %	0.35**	0.41**	0.65**	0.60**	0.46**	0.30*	0.07	-0.65**	-0.33*	-0.54**		
XX	-0.03	-0.22	-0.14	-0.29*	-0.00	0.25	0.04	0.14	0.04	0.16	0.06	
XXX	0.25	0.22	0.0[illegible]	0.25	0.03	-0.04	-0.20	0.04	-0.17	[illegible]	-0.04	0.18

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 35 EUROPE POLAND WARSAW

PLANT BREEDING AND ACCLIMATIZATION INST. AT RADZIKOW.
COOPERATORS PROF. STANISLAW STARZYCKI ET ALL.

LATITUDE 52° 12'N DATE PLANTED 04/12/72 NITROGEN 120.0 KG/HA
LONGITUDE 020 35'E DATE HARVESTED 08/03/72 PHOSPHORUS 180.0 KG/HA
ELEVATION 100000 M.ABOVE S.L. AMOUNT OF MOISTURE 2371 MM POTASSIUM 140.0 KG/HA

JULY WAS UNUSUALLY HOT AND DRY. THERE WAS A FAIR EPIDEMIC OF STEM, LEAF RUST AND POWDERY MILDEW. WEEDS WERE PULLED BY HAND. LOCAL CHECK UREANKA.
XX= PERCENTAGE OF APHIS. XXX= PERCENTAGE OF PLANTS WITH THRIPS.

NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA SPP.	APHIS %	THRIPS %
8	PBA	U.S.A.	5333.3	74.5	73.6	114.3	0	83.3	0.0	29.3	0.0	60.0	0.0	19.9
46	MALYANSKA 227	INDIA	5320.0	70.0	74.3	107.3	TR	80.0	13.3	33.1	13.3	30.0	0.6	1.6
4	TANORI 71	MEXICO	5026.6	72.7	67.3	105.3	TR	73.3	13.3	41.6	63.3	10.0	66.6	1.6
18	PITIC 62	MEXICO	4920.0	65.5	67.3	108.3	TR	85.0	0.0	34.0	10.0	10.0	0.0	1.6
39	CHRIT 71 LERMA	INDIA	4766.6	76.2	71.6	104.3	TR	78.3	0.0	35.5	26.6	0.0	0.0	0.0
30	MIZERA-2152	ISRAEL	4766.6	67.0	68.0	106.6	TR	80.0	13.3	34.2	30.0	20.0	.	3.3
5	TOCLIFEN 'S'	CHILE	4160.0	72.6	70.6	111.3	10MR	73.3	0.0	26.8	13.3	30.0	3.3	0.0
41	SONALIKA	INDIA	4746.6	71.5	68.0	106.0	TR	81.6	0.0	42.1	73.3	60.0	0.0	0.0
42	CIZA 155	EGYPT	4653.3	73.7	71.6	107.6	TR	88.3	23.3	40.3	1.3	3.3	3.3	3.3
28	YECORA 70	MEXICO	4640.0	65.5	73.6	106.0	TR	60.0	0.0	37.3	43.3	10.0	0.0	0.0
24	TOBARI 66	MEXICO	4506.6	72.5	71.3	105.3	TR	76.6	0.0	36.9	0.0	10.0	3.3	5.0
14	REX 620	IRAQ	4466.6	71.5	74.3	105.6	0	80.0	0.0	37.6	36.6	10.0	0.0	3.3
15	LREA-NICE X AN 3E	AUSTRALIA	4440.0	71.1	68.0	110.0	0	70.0	0.0	31.3	16.6	0.0	1.6	3.3
37	PANITCL / INSENSITIVE /	CANADA	4413.3	72.6	73.3	106.6	10MR	83.3	56.6	32.3	33.3	0.0	0.0	0.0
20	FETAP 70	MEXICO	4400.0	64.4	65.6	105.6	0	63.3	0.0	30.3	43.3	0.0	3.3	0.0
26	INIA 66	MEXICO	4320.0	74.4	65.6	106.6	TR	63.3	0.0	35.5	33.3	0.0	0.0	0.0
10	MIRA	INDIA	4306.6	65.3	68.6	107.3	TR	61.6	0.0	28.3	16.3	10.0	0.0	0.0
21	PERJAPC 62	MEXICO	4280.0	72.2	74.0	105.0	0	86.6	10.0	35.3	23.3	10.0	0.0	0.0
43	CHANAB 70	PAKISTAN	4212.3	71.4	66.6	103.0	10MR	75.0	26.6	36.4	73.3	0.0	10.0	0.0
44	MEXICANO 1481	FLORIDA	4166.6	67.0	73.3	103.3	TR	73.3	23.3	34.5	46.6	10.0	0.0	3.3
31	CALEME 71	MEXICO	4173.3	72.7	70.0	106.0	TR	60.0	0.0	43.1	33.3	10.0	0.0	0.0
15	EI-INIA	MEXICO	4066.6	71.7	64.3	103.3	10MR	60.0	0.0	38.8	36.6	10.0	0.0	0.0
16	EI-2256	TUNISIA	3906.6	70.1	70.3	107.6	TR	80.0	0.0	36.0	34.6	10.0	0.0	0.0
27	SONORA 64-K1. REND.	ARGENTINA	3653.3	72.2	73.0	101.6	TR	70.0	0.0	35.2	43.3	0.0	0.0	1.6
47	CARAZINHO	BRAZIL	3640.0	72.2	77.0	105.6	TR	105.0	60.0	36.6	26.6	0.0	0.0	9.0
9	IAS 20 IASSUL	BRAZIL	3626.6	65.9	75.6	110.0	TR	111.6	80.0	33.5	13.3	0.0	0.0	13.3
7	BT 2266	TUNISIA	3626.6	71.8	67.6	107.3	0	75.0	0.0	27.4	6.6	13.3	26.6	3.3
36	JARAL 'S'	ARGENTINA	3612.3	70.2	74.0	104.6	TR	75.0	0.0	31.1	20.0	26.6	0.0	0.0
2	CALICAE	MEXICO	3560.0	74.6	72.0	107.3	10MR	81.6	13.3	37.0	50.0	0.0	3.3	0.0
45	PAP 1CL	CANADA	3560.0	73.3	73.3	105.3	TR	90.0	80.0	30.5	33.3	0.0	0.0	10.0
49	FIAMCNTES	ARGENTINA	3533.3	73.0	74.6	106.3	10MR	85.0	66.6	37.0	26.6	0.0	0.0	6.6
1	ECNZA 55	COLOMBIA	3720.0	67.7	68.0	105.6	TR	56.6	0.0	33.2	16.3	26.6	20.0	11.6
22	ZAMBEZI	RHODESIA	3566.6	66.7	73.6	106.6	10MR	71.6	0.0	27.8	33.3	20.0	0.0	0.0
32	CABECTC	ARGENTINA	3513.3	75.2	78.0	105.3	TR	100.0	23.3	35.3	13.3	0.0	0.0	33.3
38	LF 301	INDIA	3560.0	65.4	68.0	103.6	TR	56.6	0.0	35.2	33.3	0.0	10.6	1.6
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	3460.0	64.4	65.6	103.0	TR	61.6	26.6	23.7	16.3	10.0	0.0	0.0
34	LLANI	RHODESIA	3460.0	66.7	67.6	102.6	TR	60.0	28.3	35.3	10.0	30.0	10.0	0.0
34	EI-2281	TUNISIA	3426.6	72.3	75.3	107.3	TR	76.6	13.3	36.5	0.3	0.0	1.6	6.6
23	FATC ARGENTINO	ARGENTINA	3360.0	75.0	74.6	105.0	20MR	75.0	0.0	34.3	30.0	0.0	20.0	0.0
25	MEXICO 120	AUSTRALIA	3346.6	68.7	70.3	107.3	TR	55.0	0.0	35.2	60.0	0.0	0.	0.0
12	VICAM 71	MEXICO	3346.6	68.3	70.0	104.3	TR	60.0	0.0	25.1	73.3	10.0	0.0	0.0
6	1-64-2-W	TUNISIA	3306.6	65.8	77.3	105.6	CMS.	85.0	0.0	29.8	26.6	10.0	0.0	0.0
2	CHRIS	U.S.A.	3173.3	74.0	74.0	110.0	0	101.6	53.3	32.7	16.6	10.0	6.6	0.0
13	PARA 7 SUPREMO-MENTANA-MCM	CHILE	3146.6	71.4	78.6	114.0	0	111.6	0.0	25.6	2.0	26.6	0.0	13.3
3	NAFC 63	COLOMBIA	2966.6	70.0	65.6	102.0	0	88.3	26.6	33.8	43.3	60.0	1.6	10.0
40	VITTORI I	ITALY	2520.0	68.7	81.0	113.0	TR	73.3	0.0	34.3	16.6	0.0	0.0	11.6
48	NAVAR 70	PAKISTAN	2613.3	67.7	74.3	106.3	10MR	81.6	0.0	37.2	46.6	0.0	10.0	0.0
17	ARIANA 66	TUNISIA	2533.3	45.7	80.3	112.0	20MS	113.3	0.0	22.5	15.0	0.0	0.0	30.0
35	MELGLEN	CHILE	2400.0	65.4	70.0	103.6	TR	93.3	13.3	33.4	20.0	20.0	10.0	0.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		1566.6	72.2	77.6	112.6	TCS	113.3	80.0	35.5	13.3	0.0	8.3	3.3
		GRAND MEAN	3501.0	70.6	71.9	107.3	3.3	79.6	14.8	34.5	27.7	10.1	3.6	4.0
	STANDARD ERROR OF GRAND MEAN		14.6	0.1	0.0	0.1	0.1	0.2	0.4	0.1	0.6	0.1	0.3	0.2
	COEFFICIENT OF VARIATION		4.5%	2.7%	1.2%	1.1%	42.5%	3.6%	35.6%	4.5%	27.1%	22.7%	102.5%	83.9%
	LSD VARIETY MEANS 5 P.		292.7	3.2	1.5	2.0	2.3	4.0	8.6	2.7	12.3	3.7	6.4	5.6

CORRELATIONS

YIELD	KG/HA													
TEST	WEIGHT	0.31*												
DAYS TO	FLOWER	-0.37**	-0.10											
DAYS TO	MATURITY	-0.05	0.03	0.65**										
STEM	RUST	-0.45**	-0.09	0.31*	0.31*									
HEIGHT	CM.	-0.32*	-0.05	0.52**	0.52**	0.36**								
LODGING		-0.22	0.16	0.23	0.05	0.33*	0.50**							
1000 GRN	WGT GRMS	0.21	0.29*	-0.10	-0.14	-0.02	-0.05							
POWDERY	MILDEW	0.01	0.03	-0.24	-0.48**	-0.11	-0.45**	0.00						
SEPTORIA	SPP.	0.17	-0.05	-0.33*	-0.11	-0.20	-0.09	-0.13	0.36**					
APHIS	%	-0.05	0.08	-0.25	-0.17	0.07	-0.02	-0.33	-0.30*	-0.11				
THRIP	%	-0.21	-0.28*	0.46**	0.43**	0.04	0.56**	-0.06	0.03	-0.01	0.15			
								0.14	-0.13	-0.37**	-0.13	-0.12		

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 36 EUROPE PORTUGAL ALENTEJO

ESTACAO DE MELHORAMENTO DE PLANTAS
COORDENADAS INCS. M.T. ESPRACAS AND F. BACHULC.

LATITUDE 038 53'N
LONGITUDE 007 09'W
ELEVATION 00200 M.ABOVE S.L.

DATE PLANTED 12/13/71
DATE HARVESTED 06/14/72
AMOUNT OF MOISTURE 0363 MM

NITROGEN 147.0 KG/HA
PHOSPHORUS 028.0 KG/HA
POTASSIUM 040.0 KG/HA

FAVORABLE CLIMATIC CONDITIONS DURING WINTER. VERY DRY SPRING.
UNFAVORABLE WEATHER CONDITIONS FROM FLOWERING TO MATURITY DUE TO DROUGHT
NO DISEASE DEVELOPMENT. AGRESSIVE ATTACK OF CEPHUS FLY. WEED AND PEST
PROBLEMS NOT REPORTED. 1COAL CHECK CHAIMITE NECK BREAK' 1= LOW RESISTANCE,
2= MEDIUM RESISTANCE, 3= HIGHLY RESISTANCE

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	CONDITY WILDEN	EFTORIA SPP.	NECK BREAK
23	SLROFA 64-K1. BRAC.	ARGENTINA	5084.4	84.8	121.0	170.0	0	89.6	16.3	1.3	0.0	36.5	2
38	LF 301	INDIA	4849.9	82.9	122.0	165.6	0	58.3	4.3	1.0	0.0	55.1	1
41	SONALIKA	INDIA	4832.2	83.0	116.3	165.0	0	96.0	17.6	1.6	20.0	55.1	1
31	CAJEME 71	MEXICO	4812.2	84.2	120.3	168.0	0	75.0	6.3	1.0	0.0	44.3	2
26	INIA 66	MEXICO	4801.0	85.7	117.3	168.6	0	96.6	15.3	2.3	20.0	49.5	1
25	MEXICO 120	AUSTRALIA	4773.3	84.5	118.3	168.0	0	61.0	3.0	1.0	0.0	48.0	2
22	ZARHEZI	RHODESIA	4656.6	83.9	123.6	172.6	0	89.6	14.6	2.0	0.0	44.3	2
28	MECORA 70	MEXICO	4666.6	85.3	115.6	168.0	0	71.3	6.3	1.0	0.0	48.0	3
30	MAZURA-2152	ISRAEL	4644.4	81.3	118.3	165.0	30S	87.6	10.6	1.3	40.0	38.8	2
20	FLTAM 70	MEXICO	4608.8	84.1	116.6	168.0	0	83.3	11.0	1.3	0.0	48.0	1
36	JUPAL 'S'	ARGENTINA	4542.2	81.2	125.0	171.0	60S	84.3	11.0	1.6	0.0	40.6	2
18	ET-2656	TUNISIA	4535.5	85.5	120.0	170.0	0	91.3	15.0	2.3	0.0	33.2	1
46	MALVINSONA 227	INDIA	4521.0	84.1	126.6	172.0	0	90.6	14.3	1.0	0.0	36.5	2
44	MEXICANO 1461	PORTUGAL	4457.7	81.1	126.6	171.3	5MS	95.6	15.6	1.6	40.0	44.3	3
35	CHECTI LERMA	INDIA	4428.8	84.5	124.6	171.6	5MS	87.3	16.3	1.6	20.0	48.0	2
24	ET-2261	TUNISIA	4405.5	85.5	117.0	165.0	TMR	88.3	10.3	2.0	0.0	33.2	2
24	TCEANI 66	MEXICO	4356.6	85.7	118.0	165.3	0	91.3	14.0	2.0	0.0	33.2	1
43	CHANAE 70	PAKISTAN	4347.7	84.8	120.3	165.0	0	87.3	15.3	1.0	0.0	55.5	2
21	FERJAPE 62	MEXICO	4366.8	84.0	121.6	165.0	0	93.6	17.3	2.0	0.0	33.2	2
14	MEX 226	IRAQ	4306.6	85.6	120.6	165.6	0	92.3	18.3	1.6	0.0	33.2	2
16	FITIC 62	MEXICO	4275.5	81.0	124.0	170.3	0	97.6	17.0	2.0	0.0	40.6	2
12	VICAM 71	MEXICO	4272.2	82.8	120.0	165.3	0	62.3	4.3	1.0	0.0	66.5	1
10	PIPA	INDIA	4262.2	84.4	116.6	168.0	TMS	69.3	9.3	1.0	0.0	55.4	2
15	LR64-NIGB > AN 3E	AUSTRALIA	4174.4	84.9	127.0	173.6	0	80.3	10.0	1.3	0.0	27.1	2
15	EE-INIA	MEXICO	4144.4	85.7	117.6	165.0	0	66.6	7.6	1.3	0.0	62.8	1
23	CALIEAC	MEXICO	4092.2	84.0	122.6	170.0	0	96.0	16.3	1.3	40.0	38.8	2
17	ARIANA 66	TUNISIA	4051.1	84.7	126.3	174.6	TR	115.0	15.0	3.0	0.0	25.8	2
48	NAYAE 70	PAKISTAN	4071.1	83.5	123.3	171.3	TR	94.3	15.6	1.6	0.0	44.3	3
5	TCOLUFEN 'S'	CHILE	4041.1	84.2	122.6	171.6	0	81.3	12.6	1.3	0.0	27.7	3
29	FLEGLER	CHILE	4016.6	84.0	125.3	172.3	0	117.3	21.6	3.0	0.0	33.2	2
82	LLACI	RHODESIA	3932.2	83.8	120.0	168.6	0	82.3	10.0	1.6	0.0	44.3	1
1	ECAZA 55	COLOMBIA	3912.2	82.4	121.6	170.0	0	127.0	23.3	3.0	0.0	33.2	1
4	TANORI 71	MEXICO	3905.5	86.2	117.0	168.3	0	84.3	12.3	2.0	0.0	48.0	2
3	MAFC 60	COLOMBIA	3835.5	82.2	116.6	165.6	0	112.0	22.3	1.6	20.0	44.3	1
7	BT 2268	TUNISIA	3813.3	85.6	116.3	168.0	0	88.0	13.6	1.0	0.0	25.8	2
42	CIZA 155	EGYPT	3773.3	85.4	124.3	173.6	0	108.6	16.0	3.0	0.0	36.5	2
6	T-64-2-4	TUNISIA	3726.6	82.3	122.0	171.0	0	107.3	14.0	3.0	0.0	36.5	3
40	VICTOR 1	ITALY	3593.3	83.3	127.6	176.0	TS	87.0	7.3	1.0	40.0	27.7	2
45	FATC ARGENTINO	ARGENTINA	3573.3	85.5	125.0	171.3	0	87.3	13.6	1.3	0.0	14.7	3
37	MANITOL / INSENSITIVE /	CANADA	3561.1	84.4	121.0	165.6	0	119.0	28.3	3.0	0.0	16.6	1
45	MANITOL	CANADA	3512.2	81.5	140.3	175.3	0	125.0	20.3	3.0	0.0	11.0	1
10	MPA > SUPREMO-MENTANA-MCR	CHILE	3246.6	84.3	129.0	171.6	0	110.0	25.6	1.0	0.0	25.8	2
11	JUPAL 'S' / LEE-SK-MPA	RHODESIA	3229.9	83.7	117.6	168.0	0	80.3	12.3	1.0	0.0	55.5	2
2	CHRIS	U.S.A.	3152.2	84.1	124.6	171.6	0	127.6	20.0	3.0	40.0	22.1	1
8	ERA	U.S.A.	3136.8	84.7	138.3	180.0	TR	95.0	10.3	2.3	40.0	11.0	3
33	CAECTC	ARGENTINA	3112.2	84.2	127.0	173.3	0	128.0	26.0	1.6	20.0	16.6	2
47	CARAZINHO	BRAZIL	3102.2	83.3	124.3	173.3	0	124.0	21.3	1.0	80.0	16.6	2
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3085.5	82.0	127.0	170.6	TS	90.0	10.6	2.0	0.0	40.6	3
49	FIAMENTES	ARGENTINA	2866.8	85.2	127.0	174.3	0	110.3	21.0	2.6	0.0	16.4	3
9	IAS 20 IASSUL	BRAZIL	2667.7	80.4	129.3	171.0	0	128.0	30.3	1.3	0.0	22.1	3
		GRAND MEAN	4046.9	84.0	122.6	170.7	1.5	94.2	14.8	1.7	8.3	37.3	
	STANDARD ERROR OF GRAND MEAN		42.3	0.0	0.5	0.0	0.5	0.3	0.2	0.0	2.1	0.7	
	COEFFICIENT OF VARIATION		12.8%	0.3%	1.2%	0.6%	401.9%	4.0%	21.0%	22.2%	256.4%	22.7%	
	LSD VARIETY MEANS 5 PC		846.6	0.4	2.5	1.6	10.3	6.2	5.1	0.6	35.1	13.8	

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.13									
DAYS TO	FLOWER	-0.51**	-0.31*								
DAYS TO MATURITY		-0.44**	-0.11	0.85**							
STEM	RUST	0.17	-0.35**	-0.03	-0.08						
HEIGHT	CM.	-0.55**	-0.22	0.45**	0.45**	-0.15					
LODGING		-0.50**	-0.15	0.30*	0.30*	-0.17	0.88**				
SHATTERING		-0.24	-0.00	0.30*	0.44**	-0.13	0.62**	0.42			
PONDERY	WILDEN	-0.21	-0.15	0.18	0.21	-0.03	0.28*	0.12	-0.08		
EFTORIA	SPP.	0.60**	-0.03	-0.64**	-0.64**	0.15	-0.67**	0.54	-0.39**	-0.22	
NECK	BREAK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 37 EUROPE ROMANIA JUD. CLUJ

STATIUNEA EXPERIMENTALA AGRICOLA TURDA.
COOPERATORS ING. TIMARIU AUREL.

LATITUDE 046 36'N
LONGITUDE 023 47'E
ELEVATION +00428 M.ABOVE S.L.

DATE PLANTED 03/21/72
DATE HARVESTED 07/26/72
AMOUNT OF MOISTURE 0242 MM

NITROGEN 056.0 KG/HA
PHOSPHORUS 054.0 KG/HA
POTASSIUM 000.0 KG/HA

YIELD LEVEL DETERMINED BY PRECIPITATION IN APRIL AND MAY. MARCH AND JULY WERE EXCESSIVELY DRY. DEVELOPMENT OF POWDERY MILDEW AND SEPTORIA. INSECT WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA NODORUM	EAR NUMBER
4	TANORI 71	MEXICO	6350.4	78.5	48.6	101.0	69.0	0.0	39.0	46.0	10.0	259.3
5	IAS 20 IASSUL	BRAZIL	5640.5	76.7	60.0	106.0	122.3	50.0	39.5	20.7	10.0	224.6
6	BRA	U.S.A.	4738.4	80.5	61.0	105.3	75.3	0.0	33.1	5.0	30.0	380.0
20	POTAM 70	MEXICO	4615.0	78.2	49.0	100.0	70.3	3.3	42.5	44.6	10.0	226.6
7	BT 22EE	TUNISIA	4540.6	80.2	51.6	102.0	81.6	0.0	38.8	31.3	20.0	248.0
14	MEX 226	IRAQ	4261.7	80.2	51.3	99.0	80.0	0.0	41.5	35.8	10.0	344.0
16	BT-22E6	TUNISIA	4009.5	78.7	53.3	99.0	80.0	0.0	42.5	41.9	20.0	251.3
10	PIPA	INDIA	3866.2	79.1	50.0	100.0	56.3	0.0	38.3	36.5	20.0	310.0
19	LR64-NICB X AN 3E	AUSTRALIA	3861.8	80.0	57.0	105.0	66.6	0.0	34.8	44.4	20.0	275.0
36	JARAL 'S'	ARGENTINA	3844.0	77.8	54.3	103.0	70.6	16.6	34.8	32.6	20.0	272.5
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3785.1	76.5	51.3	99.0	68.0	0.0	31.0	36.2	10.0	324.0
9	TOCUIFEN 'S'	CHILE	3759.6	79.9	51.6	100.0	69.3	0.0	36.8	25.0	30.0	250.6
22	ZAMBEZI	RHODESIA	3735.1	78.5	54.6	104.3	73.6	0.0	33.5	25.8	30.0	266.6
18	PITIC 62	MEXICO	3732.9	76.0	58.0	103.0	82.0	3.3	37.0	22.0	30.0	248.6
12	VICAM 71	MEXICO	3717.4	76.7	53.6	100.0	46.3	0.0	36.0	40.5	10.0	315.6
21	BENJAMIN 62	MEXICO	3680.7	78.0	55.0	103.0	77.3	3.3	37.8	40.4	30.0	270.0
34	BT-2281	TUNISIA	3605.1	79.6	52.3	108.0	70.0	0.0	34.6	42.3	20.0	260.3
25	MEXICO 120	AUSTRALIA	3564.0	77.7	53.3	102.0	52.6	0.0	37.1	43.9	20.0	344.3
43	CHAMAB 70	PAKISTAN	3484.0	78.8	51.0	101.0	73.0	0.0	39.5	35.2	20.0	289.3
35	CHECTI LERMA	INDIA	3425.2	80.2	54.0	103.0	77.3	0.0	36.1	24.3	10.0	244.3
13	MARA X SUPREMO-MENTANA-MCM	CHILE	3421.8	78.7	61.6	106.0	102.6	26.6	38.0	12.9	10.0	225.3
6	T-64-2-W	TUNISIA	3340.7	76.0	57.0	105.3	57.3	0.0	36.8	33.3	20.0	249.0
2	CHRIS	U.S.A.	3330.7	78.3	57.0	103.0	106.6	53.3	34.3	33.9	10.0	259.6
3	NARC 63	COLOMBIA	3250.7	78.0	49.3	101.0	54.3	13.3	38.1	29.3	20.0	232.6
46	NAYAB 70	PAKISTAN	3141.9	77.6	52.3	102.0	76.3	0.0	42.8	38.8	20.0	258.3
23	CALIDAD	MEXICO	3123.0	57.1	53.3	101.0	77.3	3.3	36.5	45.5	10.0	252.6
1	ECAZA 55	COLOMBIA	3115.6	75.1	57.0	102.0	111.6	21.6	35.8	21.8	20.0	243.0
47	CARAZINHO	BRAZIL	3116.3	78.7	60.0	109.0	113.3	40.0	42.3	41.3	20.0	158.0
49	PIAMONTES	ARGENTINA	3095.2	80.8	59.0	105.0	97.6	18.3	39.6	24.8	10.0	255.3
38	LR 301	INDIA	3085.2	76.0	54.0	103.0	54.3	0.0	40.0	33.2	20.0	214.6
45	MANITOL	CANADA	3067.4	79.6	60.0	108.0	106.6	56.6	32.8	50.3	10.0	317.3
15	EE-INIA	MEXICO	3001.9	76.7	51.0	99.0	52.3	0.0	37.5	35.7	20.0	219.6
46	KALYANSONA 227	INDIA	2947.4	80.2	58.0	108.0	77.0	0.0	37.6	3.8	10.0	245.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2908.5	79.9	58.0	103.0	122.6	70.0	33.6	32.9	20.0	283.3
42	CIZA 155	EGYPT	2888.5	78.7	52.6	103.0	99.0	3.3	43.1	19.3	10.0	280.3
25	PATO ARGENTINO	ARGENTINA	2863.0	80.7	52.6	100.3	76.3	0.0	35.1	40.3	20.0	331.3
44	MEXICANO 1481	PORTUGAL	2827.4	76.7	57.0	105.0	77.3	3.3	40.6	38.9	10.0	248.0
24	TOBARI 66	MEXICO	2825.2	80.5	52.6	101.0	77.3	0.0	39.5	31.5	20.0	261.3
28	YECORA 70	MEXICO	2783.0	76.0	51.0	98.0	54.6	0.0	41.5	44.3	10.0	315.6
30	HAZERA-2152	ISRAEL	2765.7	76.7	53.0	103.0	65.3	0.0	41.6	32.2	10.0	256.3
41	SONALIKA	INDIA	2765.2	78.5	51.0	102.0	78.0	0.0	51.3	37.3	20.0	277.0
27	SONORA 64-K1. REND.	ARGENTINA	2135.7	80.2	51.0	100.0	79.0	0.0	41.1	26.6	20.0	322.6
37	MANITOL / INSENSITIVE /	CANADA	2527.5	80.0	53.0	101.0	56.0	35.0	31.6	40.1	30.0	354.3
39	PELELEN	CHILE	2476.4	78.8	57.0	104.0	53.0	16.6	36.3	32.8	10.0	223.0
33	GABOTO	ARGENTINA	2463.0	78.7	60.0	108.0	106.6	31.6	31.6	28.9	10.0	210.3
40	VICTOR I	ITALY	2454.1	78.0	61.6	106.0	66.6	0.0	32.6	33.2	20.0	238.3
31	CAJEME 71	MEXICO	2453.0	76.7	53.6	99.0	50.6	0.0	41.6	36.3	20.0	247.0
26	INIA 66	MEXICO	2225.3	78.7	49.6	95.0	72.3	0.0	40.1	47.6	20.0	165.6
32	LUNDI	RHODESIA	2137.5	76.7	54.0	104.0	63.0	0.0	39.5	32.6	10.0	267.0
17	ARIANA 66	TUNISIA	1547.5	76.0	67.0	116.0	53.3	0.0	35.1	3.8	20.0	183.0
		GRAND MEAN	3346.3	77.5	54.7	102.5	80.0	9.3	37.8	33.0	17.1	272.2
	STANDARD ERROR OF GRAND MEAN		124.3	0.4	0.0	0.0	0.3	0.6	0.0	0.7		3.2
	COEFFICIENT OF VARIATION		45.5%	7.3%	0.8%	0.3%	5.3%	85.7%	2.0%	29.1%		14.8%
	LSD VARIETY MEANS 5 PC		2487.6	5.3	0.7	0.6	6.9	13.1	1.2	15.7		65.5

CORRELATIONS

YIELD KG/HA									
TEST WEIGHT	0.08								
DAYS TO FLOWER	-0.20	0.00							
DAYS TO MATURITY	-0.16	0.07	0.82**						
HEIGHT CM.	-0.02	0.09	0.52**	0.45**					
LODGING	-0.01	0.09	0.43**	0.28*	0.78**				
1000 GRN WGT GRMS	0.00	0.00	-0.38**	-0.27*	-0.15	-0.29*			
POWDERY MILDEW	0.04	-0.20	-0.53**	-0.47**	-0.29*	-0.00	0.13		
SEPTORIA NODORUM	-0.00	0.17	-0.01	-0.04	-0.10	-0.16	-0.15	-0.10	
EAR NUMBER	0.25	0.22	-0.21	-0.36**	-0.05	0.16	-0.19	0.22	0.06

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 38 EUROPE SWEDEN LANDSKRONA

WEIBULLSHOLM PLANT BREEDING INSTITUTE,
COOPERATORS DR. FAJER FAJERSON ET ALL.

LATITUDE	055 55'N	DATE PLANTED	04/22/72	NITROGEN	050.0 KG/HA
LONGITUDE	012 50'E	DATE HARVESTED	08/28/72	PHOSPHORUS	060.0 KG/HA
ELEVATION	000005 M.ABOVE S.L.	AMOUNT OF MOISTURE	0250 MM	POTASSIUM	050.0 KG/HA

MUCH RAIN AND FAIRLY LOW TEMPERATURE DURING MAY AND JUNE. TEMPERATURE NOT GOOD ENOUGH FOR GOOD SYSTEM DEVELOPMENT. MUCH MILDEW AND SEPTORIA NODORUM AND SOME STRIPE AND LEAF RUST. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	LODGING	1000 GRN WGT GRMS
24	TLEARI 66	MEXICO	6129.1	68.6	86.6	31.5
46	KALYANSONA 227	INDIA	6108.7	71.6	80.0	30.8
50	LOCAL CHECK / 5.6 GMS. / PACKET /		5455.9	71.6	70.0	30.7
30	PAZERA-2152	ISRAEL	5442.1	65.0	50.0	33.4
36	LR 301	INDIA	5357.9	66.6	100.0	33.8
42	GIZA 155	EGYPT	5364.3	67.6	76.6	36.8
8	ERA	U.S.A.	5357.0	74.0	80.0	25.6
44	MEXICANO 1461	PORTUGAL	5248.2	70.0	73.3	32.4
27	SONORA 64-KI. SEND.	ARGENTINA	5214.2	68.0	80.0	34.0
16	ET-2256	TUNISIA	5101.9	65.3	83.3	37.6
35	PUELCUEN	CHILE	5050.9	71.3	56.6	35.7
43	CHANAE 70	PAKISTAN	4982.9	65.6	80.0	37.0
14	MEX 226	IRAQ	4955.7	68.6	83.3	36.8
47	CARAZINHO	BRAZIL	4880.9	73.3	40.0	35.7
36	GARAL 'S'	ARGENTINA	4825.8	65.0	53.3	25.2
35	CHECTI LERMA	INDIA	4808.0	65.6	50.0	30.7
18	PITIC 62	MEXICO	4734.6	72.6	50.0	25.0
21	BENJAMIN 62	MEXICO	4653.8	68.6	70.0	33.5
7	BT 2208	TUNISIA	4635.4	66.0	86.6	32.3
45	PIAMONTES	ARGENTINA	4608.7	72.6	56.6	34.3
31	CAJEME 71	MEXICO	4564.5	68.6	53.3	36.7
41	SONALIKA	INDIA	4557.7	64.6	80.0	39.3
6	T-64-2-W	TUNISIA	4513.5	72.6	50.0	35.3
28	YECORA 70	MEXICO	4482.9	66.3	56.6	34.0
22	ZAMBEZI	RHODESIA	4472.7	65.0	86.6	25.1
34	ET-2261	TUNISIA	4459.1	67.6	56.6	31.4
29	PATO ARGENTINO	ARGENTINA	4404.7	68.0	50.0	28.4
32	LUNDI	RHODESIA	4353.6	68.6	100.0	32.4
33	CABECU	ARGENTINA	4316.2	72.0	36.6	30.9
48	NAYAB 70	PAKISTAN	4224.4	66.0	86.6	37.3
49	MEXICO 120	AUSTRALIA	4217.6	70.0	100.0	28.0
40	VICTOR I	ITALY	4187.0	75.3	100.0	28.1
4	TANORI 71	MEXICO	4183.6	63.6	56.6	36.0
9	IAS 20 IASSUL	BRAZIL	4139.4	73.6	83.3	42.2
20	FOTAN 70	MEXICO	4108.8	63.0	83.3	36.7
1	BONZA 55	COLOMBIA	4081.5	70.6	46.6	33.4
13	MARA > SUPREMO-MENTANA-NOM	CHILE	4016.9	77.3	36.6	33.5
11	GARAL 'S' / LEE-SK-MARA	RHODESIA	3959.1	67.3	100.0	27.5
2	CHRIS	U.S.A.	3854.5	70.6	43.3	31.0
10	PIRA	INDIA	3943.5	66.3	56.6	29.7
15	EE-INIA	MEXICO	3802.6	66.0	56.6	30.8
45	MANITOU	CANADA	3755.2	70.6	63.3	29.5
19	LR64-NIC8 X AN 38	AUSTRALIA	3751.6	71.6	53.3	26.6
26	INIA 66	MEXICO	3649.6	63.3	86.6	32.7
12	VICAM 71	MEXICO	3608.8	65.0	100.0	30.2
37	MANITOU / INSENSITIVE /	CANADA	3554.3	67.0	56.6	29.9
23	CALILAC	MEXICO	3360.5	67.0	80.0	34.9
3	NARC 63	COLOMBIA	3302.6	65.0	86.6	34.7
5	TOCUIPEN 'S'	CHILE	3258.4	67.0	56.6	29.5
17	ARIANA 66	TUNISIA	2851.1	63.0	70.0	27.9
		GRAND MEAN	4460.5	69.3	79.3	32.8
		STANDARD ERROR OF GRAND MEAN	86.0	0.0	0.6	0.1
		COEFFICIENT OF VARIATION	23.9%	1.3%	9.8%	6.8%
		LSD VARIETY MEANS 5 PC	1721.2	1.5	12.7	3.6

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	LODGING
DAYS TO FLOWER	-0.00		
LODGING	-0.00	-0.42**	
1000 GRN WGT GRMS	0.25	-0.21	-0.24

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 39 EUROPE YUGOSLAVIA VOYVODINA

INSTITUTE FOR AGRICULTURAL RESEARCH, NOVI SAD.
COOPERATORS DR. S. BOROJEVIC

LATITUDE 045 00'N
LONGITUDE 019 00'E
ELEVATION +000084 M.ABOVE S.L.

DATE PLANTED 03/02/72
DATE HARVESTED 07/17/72
AMOUNT OF MOISTURE 0166 MM

NITROGEN 083.0 KG/HA
PHOSPHORUS 088.0 KG/HA
POTASSIUM 072.0 KG/HA

VERY DRY WEATHER DURING SPRING. VERY WEAK DISEASE DEVELOPMENT DUE TO DRY WEATHER. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NS-718.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW
3	NAPO 63	COLOMBIA	3456.3	76.2	62.0	129.6	0	101.6	32.9	1
4	TANORI 71	MEXICO	3058.3	75.8	61.0	129.6	0	79.6	32.6	2
20	POTAR 70	MEXICO	2991.6	72.4	60.3	130.0	0	75.6	32.7	2
41	SONALIKA	INDIA	2991.6	75.2	60.0	130.0	0	86.0	36.8	3
7	FT 2268	TUNISIA	2983.3	78.9	60.6	129.6	0	83.6	33.5	1
5	TOCUIPEN 'S'	CHILE	2983.3	77.1	63.6	132.0	0	79.0	30.2	1
46	MALYANSONA 227	INDIA	2966.6	75.6	66.6	130.0	0	78.0	31.6	1
27	SONORA 64-K1. REND.	ARGENTINA	2925.0	76.5	60.6	130.0	0	82.3	34.4	1
14	MEX 20	IRAQ	2908.3	77.0	58.6	130.0	0	86.3	35.3	2
8	ERA	U.S.A.	2870.0	79.1	71.0	135.0	0	80.0	30.4	1
2	CHRIS	U.S.A.	2790.0	76.3	66.3	129.6	0	107.6	29.6	1
22	ZAMBEZI	RHODESIA	2783.3	76.3	66.3	130.0	0	75.6	31.0	2
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2766.6	72.9	60.6	129.6	0	70.0	27.2	1
37	ET-2281	TUNISIA	2750.0	77.8	66.0	132.0	0	77.6	34.9	1
13	MARA X SUPERNO-MENTANA-MCM	CHILE	2741.6	78.2	68.0	131.0	0	99.0	30.8	1
10	MERA	INDIA	2666.6	74.2	60.6	129.6	0	60.0	30.1	3
16	ET-2266	TUNISIA	2641.6	76.5	63.0	130.0	0	83.3	35.1	3
30	MAZERA-2152	ISRAEL	2633.3	72.8	63.6	130.0	0	75.6	33.3	2
21	BENJAMIN 62	MEXICO	2600.0	75.5	66.3	130.0	0	82.3	34.6	3
1	BONZA 55	COLOMBIA	2591.6	74.6	66.0	129.6	0	106.3	33.5	0
44	MEXICANO 1481	PORTUGAL	2566.6	73.1	67.0	131.0	0	80.6	32.7	3
31	CAJEME 71	MEXICO	2516.6	73.3	64.0	130.0	0	64.3	36.3	2
29	MEXICO 120	AUSTRALIA	2458.3	72.1	62.3	130.0	0	57.0	29.9	3
18	PITIC 62	MEXICO	2450.0	70.4	66.6	130.0	0	85.0	31.4	2
48	NAYAB 70	PAKISTAN	2441.6	75.1	62.0	130.0	0	80.3	37.1	3
15	LR64-NIGB X AN 3E	AUSTRALIA	2433.3	76.6	66.6	130.0	40S	67.6	30.6	2
35	CHECTI LERMA	INDIA	2416.6	77.4	65.6	131.0	0	77.3	33.7	2
43	CHANAB 70	PAKISTAN	2383.3	74.8	61.0	131.0	0	82.3	31.5	3
26	INIA 66	MEXICO	2370.0	76.5	60.6	130.0	0	79.0	32.3	3
45	MANITOL	CANADA	2358.3	76.7	69.0	132.0	0	105.0	26.5	2
39	HUELGUEN	CHILE	2341.6	76.3	66.3	131.0	0	95.3	33.4	2
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2333.3	72.6	67.6	130.0	0	86.3	29.3	1
28	YECORA 70	MEXICO	2325.0	71.5	63.3	130.0	0	61.0	35.0	3
38	UP 301	INDIA	2325.0	70.4	61.0	130.0	0	55.6	31.4	1
37	MANITOL / INSENSITIVE /	CANADA	2325.0	77.4	62.6	130.0	0	95.3	28.3	2
12	VICAM 71	MEXICO	2316.6	70.8	60.6	129.6	0	53.6	29.7	4
24	TOBARI 66	MEXICO	2256.3	76.9	62.3	131.0	0	80.3	31.9	1
36	JARAL 'S'	ARGENTINA	2241.6	74.0	66.3	131.0	0	75.0	30.1	1
25	FATC ARGENTINO	ARGENTINA	2233.3	76.4	64.6	130.0	0	75.6	27.0	2
15	EE-INIA	MEXICO	2208.3	74.1	61.3	130.0	0	59.6	31.9	2
9	IAS 20 IASSLL	BRAZIL	2183.3	73.4	67.3	129.6	0	110.3	33.6	2
23	CALICAO	MEXICO	2156.3	77.8	62.3	130.0	0	77.3	31.2	4
42	GIZA 155	EGYPT	2116.6	77.8	64.0	132.0	0	91.6	37.1	1
6	T-64-2-W	TUNISIA	2040.0	74.2	66.6	131.0	0	94.3	34.3	1
32	LUNDI	RHODESIA	1875.0	71.5	62.3	130.0	0	73.6	32.4	1
49	PIAMONTES	ARGENTINA	1825.0	78.0	66.3	130.0	0	97.6	34.0	2
33	CABOTO	ARGENTINA	1825.0	78.9	66.0	130.0	0	100.6	31.3	1
40	VICTOR 1	ITALY	1801.6	71.9	67.6	131.0	0	67.0	31.9	3
47	CARAZINHO	BRAZIL	1700.0	76.1	66.6	130.0	0	102.6	36.0	3
17	ARIANA 66	TUNISIA	1678.3	77.3	75.0	137.0	0	91.1	34.4	1
	GRAND MEAN		2471.5	75.3	64.3	130.5	1.1	81.9	32.5	
	STANDARD ERROR OF GRAND MEAN		31.6	0.1	0.1	0.0	0.3	0.2	0.1	
	COEFFICIENT OF VARIATION		15.6%	1.6%	2.0%	0.7%	340.2%	4.1%	4.8%	
	LSD VARIETY MEANS 5 PC		632.7	2.0	2.2	1.5	6.6	5.5	2.6	

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.12						
DAYS TO	FLOWER	-0.37**	0.21					
DAYS TO	MATURITY	-0.18	0.22*	0.63**				
STEM	RUST	-0.06	0.08	0.19	0.02			
HEIGHT	CM.	-0.05	0.51**	0.40**	0.11	-0.16		
1000 GRN	WGT GRMS	0.00	0.11	-0.03	0.02	-0.03	0.16	
POWDERY	MILDEW	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 4C EUROPE YUGOSLAVIA CROATIA

INST. OF PLANT BREEDING AND PRODUCTION
COOPERATORS DR. ZDRAVKO PARTINIC.

LATITUDE 045 45'N
LONGITUDE 015 45'E
ELEVATION 00116 M.ABOVE S.L.

DATE PLANTED 03/16/72
DATE HARVESTED 07/28/72
AVERAGE OF MOISTURE 05E7 PM

NITROGEN 130.0 KG/HA
PHOSPHORUS 090.0 KG/HA
POTASSIUM 090.0 KG/HA

FAVORABLE WEATHER FOR VARIETIES RESISTANT TO RUST. UNFAVORABLE WEATHER AT HARVESTED TIME DUE TO ABUNDANT RAINS. FAVORABLE DISEASE DEVELOPMENT FOR STEM AND LEAF RUST, POWDERY MILDEW, FUSARIUM AND SEPTORIA. INSECT AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK PARA

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST HEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA NODORUM	FUSARIUM
6	ERA													
5	IAS 40 IASSUL	L.S.A.	2666.3	70.9	66.4	105.0	0	1	89.0	5	30.2	44.3	51.7	25.8
7	ET 2266	BRAZIL	2844.1	68.9	65.4	100.3	0	5	115.3	5	37.2	77.6	55.4	29.5
33	BENJAMIN 62	TUNISIA	2755.7	71.0	56.3	102.6	0	4	82.3	7	34.3	48.0	85.0	66.5
9	TOCLIFEN 'S'	MEXICO	2688.6	66.5	59.0	100.0	0	3	85.0	7	32.8	73.9	81.3	59.1
44	MEXICANO 1481	CHILE	2688.6	67.5	58.0	100.3	0	9	81.3	3	28.5	44.3	66.5	66.5
46	MALYANSONA 227	PORTUGAL	2644.1	64.2	63.0	103.6	60MS	3	85.6	5	32.1	85.0	70.2	55.4
35	LR64-NICB X AN 3E	INDIA	2555.2	62.2	64.0	106.6	30MR	8	78.0	6	28.7	44.3	66.5	81.3
45	PARITCI	AUSTRALIA	2544.1	67.0	63.0	106.0	80S	6	77.3	4	30.0	70.2	70.2	40.0
29	FATC ARGENTINO	CANADA	2510.8	72.3	65.3	98.6	30MR	1	105.3	9	30.9	81.3	72.9	33.2
4	TANCRI 71	ARGENTINA	2455.3	70.7	59.0	96.6	40MS	4	78.3	5	25.8	70.2	70.2	66.5
37	PARITCI / INSENSITIVE /	MEXICO	2359.7	68.0	54.3	96.0	0	1	76.3	3	32.1	52.4	77.6	73.9
44	TCEARI 66	CANADA	2366.4	70.8	56.3	96.0	20MR	1	102.3	7	29.8	52.4	81.3	46.6
43	CALIEAT	MEXICO	2344.2	72.3	58.3	98.6	0	1	84.0	5	34.3	51.7	66.5	55.4
13	PARA X SUPREMO-PENTANA-PLP	MEXICO	2288.6	71.1	58.3	98.6	0	2	81.6	7	33.4	56.1	88.7	51.7
32	LLANI	CHILE	2288.6	68.6	66.6	101.3	80S	6	107.3	8	33.4	36.5	88.7	40.6
18	FITIC 62	RHODESIA	2255.3	64.4	58.6	100.6	20MR	4	73.6	4	31.5	44.3	73.9	70.2
33	CAPLTC	MEXICO	2233.1	62.7	63.3	100.3	60MS	4	84.0	6	29.0	66.5	52.4	62.8
35	PLEIGLEN	ARGENTINA	2210.8	72.5	64.6	102.6	0	4	109.0	6	32.6	77.6	73.9	40.6
26	INIA 70	CHILE	2188.6	66.7	63.3	99.3	20MR	1	104.0	7	31.8	77.6	56.1	51.7
6	T-64-2-4	MEXICO	2177.5	67.7	55.0	99.0	0	1	74.0	2	32.6	52.4	85.0	88.7
31	CAJEPE 71	TUNISIA	2166.4	62.2	63.0	107.3	60MS	9	78.3	5	30.6	70.2	88.7	62.8
47	CARAJINHO	MEXICO	2155.3	65.0	58.0	94.6	0	1	68.0	2	35.3	70.2	70.2	88.7
10	PIRA	BRAZIL	2122.0	69.9	65.6	104.6	40MS	9	106.6	9	35.6	56.1	81.3	40.6
50	LOCAL CHECK / 6.6 CMS. / PACKET /	INDIA	2110.8	63.0	56.3	98.6	0	1	63.0	1	31.1	62.8	66.5	85.0
1	BONZA 55		2066.4	58.8	67.0	106.6	70MS	9	75.6	6	21.9	44.3	55.1	40.6
39	CHECTI LERMA	COLOMBIA	2033.1	65.1	61.3	100.3	40MS	1	102.3	6	33.1	55.1	77.6	40.6
46	VICTOR I	INDIA	2022.0	71.7	59.0	100.3	20MR	1	83.0	4	33.7	66.5	77.6	55.5
2	CHRIS	ITALY	2010.9	61.7	67.3	104.3	80S	4	76.3	3	28.8	85.0	55.5	40.6
40	FOTAP 70	L.S.A.	2010.9	65.3	62.0	100.0	0	1	109.0	8	31.2	77.6	77.6	36.9
14	PEN 226	MEXICO	1955.7	60.3	55.3	97.6	0	3	76.3	4	31.8	77.6	77.6	77.6
30	HAZERA-4152	IRAQ	1877.5	66.2	58.0	95.3	50MS	6	91.3	2	33.3	70.2	88.7	81.3
27	SONORA 64-K1. REND.	ISRAEL	1877.5	62.1	58.4	98.3	30MS	1	81.3	2	32.6	36.5	81.3	77.6
49	MEXICO 120	ARGENTINA	1888.6	65.6	57.3	94.6	0	1	83.6	2	25.4	55.4	85.0	88.7
16	ET-2254	AUSTRALIA	1844.2	60.8	58.3	96.0	0	1	95.0	1	28.9	52.4	70.2	88.7
38	LF 301	TUNISIA	1822.0	65.1	58.6	96.0	30MS	4	85.6	4	31.5	77.5	81.3	85.0
42	GIZA 155	INDIA	1788.7	60.6	58.0	97.0	20MR	1	56.3	1	35.2	48.0	62.8	81.3
15	EE-INIA	EGYPT	1777.5	67.7	57.3	104.6	70MS	5	94.6	4	38.3	59.1	85.0	49.0
3	NARC 63	MEXICO	1744.2	61.9	57.0	99.0	0	1	67.0	1	31.2	88.7	77.6	52.4
17	ARIANA 66	COLOMBIA	1723.1	64.9	56.3	95.3	60MS	1	95.0	7	30.7	73.9	66.5	77.6
11	JARAL 'S' / LEE-SK-PARA	TUNISIA	1655.8	68.9	67.3	101.6	50MS	8	108.6	6	34.6	59.1	73.9	55.5
28	YECORA 70	RHODESIA	1666.7	55.5	56.0	100.3	60MS	1	65.6	2	25.1	73.9	70.2	56.1
34	ET-2261	MEXICO	1677.6	60.9	56.6	94.6	0	1	67.3	1	33.9	77.6	77.6	56.1
41	SONALIKA	TUNISIA	1644.2	65.1	57.6	101.6	50S	2	83.6	3	34.4	66.5	77.6	62.8
22	ZAPELZI	INDIA	1622.0	64.4	56.0	102.6	0	1	85.6	3	37.6	59.1	52.4	88.7
43	CHANAE 70	RHODESIA	1577.6	60.3	59.6	104.6	0	7	79.0	4	24.8	62.8	81.3	56.1
12	VICAP 71	PAKISTAN	1555.3	55.1	57.6	102.0	20MR	8	79.6	2	28.2	52.4	52.4	81.3
48	NAYAE 70	MEXICO	1533.1	58.2	58.3	99.6	0	1	60.3	1	28.6	88.7	62.8	88.7
49	PIANCATES	PAKISTAN	1522.0	65.5	58.6	97.0	30MR	4	84.6	4	34.5	85.0	85.0	59.8
36	JARAL 'S'	ARGENTINA	1355.8	72.3	64.3	101.0	40MS	3	108.3	7	36.9	55.5	70.2	44.3
0		ARGENTINA	1177.6	61.6	60.0	101.3	20MR	4	84.6	3	26.6	66.5	77.6	66.5
			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		GRAND MEAN	2073.9	65.6	60.1	100.3	20.2	35.3	84.7		31.7	65.4	76.2	65.5
	STANDARD ERROR OF GRAND MEAN		23.4	0.1	0.0	0.1	0.9	0.8	0.5		0.1	0.7	0.5	0.8
	COEFFICIENT OF VARIATION		13.8%	2.5%	1.1%	1.4%	58.4%	27.9%	8.2%		4.6%	12.7%	15.5%	15.3%
	LSD VARIETY MEANS 5 PC		468.3	2.6	1.1	2.2	19.3	16.1	11.4		2.4	14.5	15.3	16.4

CORRELATIONS

YIELD	KG/HA											
TEST	HEIGHT	0.65**										
DAYS TO	FLOWER	0.62**	0.87**									
DAYS TO	MATURITY	0.60**	0.88**	0.54**								
LEAF	RUST	-0.00	0.09	0.27*	0.21							
STEM	RUST	0.12	0.13	0.33*	0.35*	0.28*						
HEIGHT	CM.	0.48**	0.77**	0.74**	0.65**	0.20	0.27*					
LODGING		0.00	0.00	0.00	0.00	0.00	0.00	0.00				
1000 GRN	WGT GRMS	0.50**	0.85**	0.71**	0.76**	0.06	0.05	0.67	0.00			
POWDERY	MILDEW	0.20	0.49**	0.40**	0.41**	-0.01	-0.05	0.38	0.00	0.40**		
SEPTORIA	NODORUM	0.30*	0.67**	0.58**	0.67**	0.01	0.18	0.94	0.00	0.66**	0.47**	
FUSARIUM		-0.11	0.14	0.10	0.30*	-0.24	-0.08	-0.23	0.00	0.24	0.28*	0.43**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 41 MESOAMERICA CUATEMALA QUEZALTENANGO

LABOR OVALLE.
COOPERATORS F.A. VALENTIN AZANCA AND F.A. S. CRUZ.

LATITUDE 014 52'N
LONGITUDE 091 30'W
ELEVATION 402407 M.ABOVE S.L.

DATE PLANTED 06/27/72
DATE HARVESTED 12/27/72
AMOUNT OF MOISTURE 0700 MM

NITROGEN 124.0 KG/HA
PHOSPHORUS 105.0 KG/HA
POTASSIUM <22.0 KG/HA

HEAVY RAINS IN JUNE AND SEPTEMBER. IT WAS A YEAR OF LITTLE RAIN IN GENERAL. HEAVY ATTACK OF PUCCINIA RECONDITA AND GRAMINIS. HEAVY ATTACK OF APHIDS IN SEPTEMBER. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA SPP.
42	CIZA 155	EGYPT	4645.0	55.0	136.0	20MS	TR-S	TR-S	105.0	45.8	40.0
19	LR64-NICB X AN 3E	AUSTRALIA	3512.9	55.0	135.0	30MS	TR-S	90S	75.0	37.6	30.0
21	PENJAMO 62	MEXICO	3365.2	54.0	133.0	30MS	TR-S	20MS	75.0	42.5	30.0
31	CAJEME 71	MEXICO	3345.2	63.0	133.0	10R	20MS	20MS	70.0	50.8	40.0
40	VICTOR 1	ITALY	3304.1	76.0	142.0	0	TR-S	TR-S	75.0	32.1	30.0
5	IAS 20 IASSUL	BRAZIL	3253.0	67.0	127.0	20MS	TR-S	20MS	130.0	46.6	30.0
4	TANORI 71	MEXICO	3235.2	48.0	133.0	TR-S	60S	0.0	80.0	41.8	80.0
47	CARAZINHO	BRAZIL	3126.5	0.0	126.0	0	0	TR-S	130.0	42.6	30.0
22	ZAMBEZI	RHODESIA	3041.9	55.0	136.0	20MS	TR-S	TR-S	75.0	31.3	50.0
45	FATL ARGENTINO	ARGENTINA	3021.1	52.0	133.0	20MS	TR-S	40S	75.0	33.8	30.0
50	LOCAL CHECK / 6.6 CMS. / PACKE.		3010.8	54.0	135.0	20MS	20MS	90S	105.0	41.1	30.0
24	TOLANI 66	MEXICO	2951.9	52.0	133.0	30MS	TR-S	20MS	80.0	36.3	30.0
15	EE-INIA	MEXICO	2906.5	51.0	135.0	20MS	30S	30S	60.0	46.0	50.0
7	ET 2288	TUNISIA	2940.8	50.0	137.0	20MS	20MS	0.0	85.0	43.0	60.0
46	KALYANSONA 227	INDIA	2924.1	59.0	128.0	40S	TR-S	TR-S	80.0	36.3	50.0
16	ET-2256	TUNISIA	2897.4	59.0	133.0	60S	TR-S	TR-S	90.0	46.1	30.0
43	CHANAB 70	PAKISTAN	2887.1	52.0	132.0	60S	90S	20S	90.0	49.1	40.0
48	NAYAB 70	PAKISTAN	2866.6	54.0	135.0	20MS	30S	80S	90.0	43.5	30.0
28	YECORA 70	MEXICO	2815.7	56.0	132.0	20MS	TR-S	60S	60.0	43.6	40.0
33	CAECTO	ARGENTINA	2786.6	65.0	140.0	60S	0	0	130.0	37.1	30.0
39	PELLUEN	CHILE	2786.3	55.0	135.0	40S	0	0	95.0	37.8	30.0
35	CHECTI LERMA	INDIA	2777.4	56.0	130.0	100S	0	0	80.0	39.1	30.0
1	ELNZA 35	COLOMBIA	2765.2	61.0	136.0	TR-R	TR-S	20MS	115.0	40.8	30.0
13	MARA > SUPREME-MENTANA-MCM	CHILE	2740.0	70.0	139.0	20MS	TR-S	TR-S	110.0	36.1	30.0
44	MEXICANO I 9L	PORTUGAL	2719.7	62.0	132.0	30S	0	90S	90.0	36.1	20.0
8	ERA	U.S.A.	2712.0	70.0	142.0	TR-S	0	0	90.0	34.0	30.0
2	CRIS	U.S.A.	2708.6	60.0	137.0	TR-R	0	0	110.0	38.6	30.0
6	T-64-2-W	TUNISIA	2687.5	65.0	137.0	0	20MS	0.0	95.0	39.3	40.0
30	HAZERA-2152	ISRAEL	2624.1	56.0	135.0	40S	80S	80S	80.0	43.5	30.0
9	TOLUPEN 'S'	CHILE	2611.9	58.0	140.0	20MS	0	0	75.0	36.1	40.0
34	ET-2281	TUNISIA	2607.5	51.0	135.0	50S	TR-S	TR-S	80.0	38.0	40.0
41	SONALIKA	INDIA	2526.6	48.0	130.0	50S	30S	60S	85.0	46.3	40.0
3	MARC 63	COLOMBIA	2497.5	49.0	133.0	TR-R	50S	30S	95.0	36.0	60.0
20	ECTAM 70	MEXICO	2429.7	44.0	132.0	TR-S	TR-S	20MS	70.0	50.8	30.0
23	CALICAO	MEXICO	2391.9	53.0	133.0	50S	0	TR-S	80.0	37.1	40.0
27	SONORA 64-K1. REND.	ARGENTINA	2346.4	51.0	130.0	50MS	20MS	50S	80.0	40.6	40.0
18	FITIC 62	MEXICO	2336.4	65.0	138.0	40S	20MS	TR-S	90.0	33.1	30.0
49	FIRMENTES	ARGENTINA	2319.7	65.0	135.0	20MS	20MS	TR-S	120.0	43.3	30.0
12	VICAM 71	MEXICO	2254.2	56.0	135.0	100S	0	0	55.0	36.3	40.0
26	INIA 66	MEXICO	2239.7	50.0	130.0	30MS	60S	80S	80.0	41.0	30.0
14	MEX 226	IRAQ	2235.3	50.0	135.0	60S	TR-S	TR-S	85.0	42.3	50.0
38	LF 301	INDIA	2207.5	55.0	138.0	30S	30S	TR-S	60.0	41.3	30.0
32	LUNDI	RHODESIA	2186.4	53.0	139.0	60S	TR-S	TR-S	70.0	35.0	50.0
10	FIRA	INDIA	2137.5	49.0	135.0	50S	TR-S	60S	60.0	40.5	30.0
17	ARIANA 66	TUNISIA	2048.6	53.0	153.0	0	0	0	110.0	32.6	30.0
37	MANITOU / INSENSITIVE /	CANADA	1528.6	54.0	130.0	50S	0	20S	95.0	32.1	30.0
45	MANITOU	CANADA	1523.1	0.0	140.0	100S	0	TR-S	110.0	31.6	40.0
29	MEXICO 120	AUSTRALIA	1403.1	59.0	132.0	60S	TR-S	90S	60.0	33.3	60.0
36	JORAL 'S'	ARGENTINA	1434.3	59.0	130.0	100S	0	0	80.0	28.6	30.0
11	JORAL 'S' / LEE-SK-MARA	RHODESIA	512.1	45.0	135.0	100S	0	0	60.0	26.1	40.0
		GRAND MEAN	2659.3	54.5	135.3	36.4	11.5	22.8	86.5	39.4	37.1
	STANDARD ERROR OF GRAND MEAN		45.6							0.2	
	COEFFICIENT OF VARIATION		21.0%							7.9%	
	LSD VARIETY MEANS 5 PC		512.6							5.1	

CORRELATIONS

		YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA SPP.
DAYS TO	FLOWER	0.06								
DAYS TO	MATURITY	0.03	0.27							
STRIPE	RUST	-0.55**	-0.21	-0.31*						
LEAF	RUST	0.04	-0.07	-0.24	-0.13					
STEM	RUST	0.02	-0.01	-0.39**	-0.05	0.29*				
HEIGHT	CM.	0.22	-0.01	0.33*	-0.23	-0.07	-0.21			
1000 GRN WGT	GRMS	0.51**	-0.07	-0.28*	-0.31*	0.35**	0.15	0.08		--
SEPTORIA	SPP.	0.00	-0.17	-0.08	-0.00	0.26	-0.13	-0.28		0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 42 MESOAMERICA MEXICO SEMBRA GRANO PRIMERA FECHA

C.I.A.N.C.
COOPERATORS CIMMYT STAFF.

LATITUDE	027 20'N	DATE PLANTED	11/21/71	NITROGEN	150.0 KG/HA
LONGITUDE	109 54'W	DATE HARVESTED	04/20/72	PHOSPHORUS	100.0 KG/HA
ELEVATION	00040 M.ABOVE S.L.	AMOUNT OF MOISTURE	---- MM	POTASSIUM	000.0 KG/HA

GOOD NORMAL WEATHER CONDITIONS. SUNNY DAYS AND COLD NIGHTS. NO FROST.
GOOD DEVELOPMENT OF LEAF AND STEM RUST.NO INSECT, WEED AND PEST PROBLEMS
LOCAL CHECK STATE CEPROS.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING
50	LOCAL CHECK / A.I. CPS. / BACULT /		8088.1	90.0	60S	TRS	111.6	6.6
21	FEP.SRC 42	MEXICO	7886.1	82.6	30S	5S	116.6	1.6
16	ET-2251	TUNISIA	7750.4	85.6	40S	C	113.3	0.0
28	VECORA 70	MEXICO	7733.9	88.0	TRR	C	86.5	0.0
41	SONALIKA	INDIA	7608.9	75.6	70S	C	116.6	0.0
24	TCEAN1 [illegible]	MEXICO	7604.7	82.6	TRR	C	111.6	0.0
42	KALYANSONA .27	INDIA	7546.4	85.3	40S	TRS	110.0	0.0
42	CIZA 155	EGYPT	7521.4	83.6	40S	C	136.6	41.6
14	[illegible]	IRAQ	7500.6	82.0	20S	C	118.3	0.0
7	ET [illegible]	TUNISIA	7408.9	81.0	TRR	5MS	111.6	0.0
46	TCIAT [illegible]	MEXICO	7367.2	78.3	30S	C	100.0	0.0
40	VICTOR I	ITALY	7338.0	100.0	TRR	20S	100.3	0.0
12	VICAM 71	MEXICO	7296.4	86.0	TRMR	TRR	80.0	0.0
22	ZAMBEZI	RHODESIA	7271.4	84.6	TRMR	10S	108.3	0.0
38	LR 201	INDIA	7271.4	86.0	TRR	C	76.5	0.0
15	BB-INIA	MEXICO	7263.0	83.6	5-60S	TRR	83.3	0.0
47	SONORA 64-K1. GRAND.	ARGENTINA	7232.9	83.6	TRR	C	106.3	0.0
31	CALEMI 71	MEXICO	7200.5	91.0	TRMR	C	50.0	0.0
18	PITIC 62	MEXICO	7046.3	88.6	50S	30S	118.3	10.0
25	FATC ARGENTINO	ARGENTINA	7032.9	95.0	TRR	C	111.6	0.0
3	NAPO 63	COLOMBIA	6971.3	82.3	20S	TRR	138.3	25.0
43	CHANAB 70	PAKISTAN	6941.2	85.0	60S	C	115.0	0.0
4	TANORI 71	MEXICO	6936.0	82.0	5MR	TRR	111.6	0.0
11	GARAL "S" / LEE-SK-MERA	RHODESIA	6792.1	78.0	TRMR	C	96.5	0.0
10	MIRA	INDIA	6706.8	73.3	40S	30S	76.6	0.0
39	MELGOLLN	CHILE	6700.5	87.0	40S	TRS	141.6	50.0
30	FAZEFA-2152	ISRAEL	6630.0	79.0	40S	40S	105.0	0.0
29	MEXICO 120	AUSTRALIA	6575.5	84.0	40S	20S	73.3	0.0
48	NAVAB 70	PAKISTAN	6475.5	84.0	30S	TRMS	118.3	0.0
35	CHECTI LERMA	INDIA	6454.6	86.6	60S	C	113.3	0.0
26	INIA [illegible]	MEXICO	6462.0	80.0	80S	0	106.6	0.0
32	LERMA	RHODESIA	6408.8	82.6	TRR	TRS	100.0	0.0
19	LR64-NILO X AN 3E	AUSTRALIA	6336.0	93.0	30MS	20S	100.0	0.0
1	ECONZA 55	COLOMBIA	6150.8	87.6	10MS	5S	155.0	86.6
37	MANITOU / INSENSITIVE /	CANADA	6150.4	84.3	80S	5S	151.6	75.0
34	ET-2261	TUNISIA	6083.3	81.6	80S	C	101.6	0.0
9	TCGUIFEN "S"	CHILE	6021.3	90.3	TRR	5S	103.3	0.0
23	CALICAC	MEXICO	5875.4	85.3	20MS	C	110.0	0.0
13	MARA X SUPREMO-MENTANA-MCN	CHILE	5771.2	96.6	20MS	5S	155.0	23.3
6	1-64-2-W	TUNISIA	5754.4	87.3	10MR	20S	129.3	0.0
45	PIAMONTES	ARGENTINA	5375.4	95.0	TRR	5S	148.3	83.3
5	IAS 20 IASSLL	BRAZIL	5262.9	95.3	TRR	10S	155.0	85.0
8	ERA	U.S.A.	5212.9	73.0	C	C	106.6	0.0
33	GABLTC	ARGENTINA	5046.2	95.0	TRR	5S	156.6	80.0
47	CAMAZINHO	BRAZIL	4937.8	96.0	TRMR	TRS	151.6	91.6
36	JARAL "S"	ARGENTINA	4671.1	89.3	TRR	C	103.3	0.0
2	CHRIS	U.S.A.	4629.5	90.3	10MS	5MS	156.6	76.6
17	AFIANA 66	TUNISIA	4483.6	109.3	TRMR	TRMR	148.3	53.3
49	MANITOU	CANADA	1562.6	114.6	30MR	TRMS	588.5	66.6
44	MEXICANO 1481	FORTICAL		92.0	40S	40S	118.3	33.3
		GRAND MEAN	4912.6	87.0	22.3	6.2	125.0	17.7
	STANDARD ERROR OF GRAND MEAN			0.7		0.4	5.5	0.9
	COEFFICIENT OF VARIATION			10.3%		10.1%	54.8%	62.7%
	LSD VARIETY MEANS 5 PC			14.7		7.1	111.9	18.2

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	-0.51**				
LEAF	RUST	0.12	-0.30*			
STEM	RUST	-0.30*	0.06	0.09		
HEIGHT	CM.	-0.52**	0.61**	-0.07	-0.11	
LODGING		-0.50**	0.52**	-0.12	-0.05	0.47**

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 43 MESOAMERICA MEXICO SONORA CIANO SECOND DATE

C.I.A.N.O.
COOPERATORS CIANO STAFF.

LATITUDE	27 20N	DATE PLANTED	12/05/71	NITROGEN	150.0 KG/HA
LONGITUDE	109 54W	DATE HARVESTED	04/30/72	PHOSPHORUS	100.0 KG/HA
ELEVATION	40000 M.ABOVE S.L.	AMOUNT OF MOISTURE	------MM	POTASSIUM	000.0 KG/HA

NORMAL WEATHER CONDITIONS. GOOD DEVELOPMENT OF LEAF AND STEM RUST. NO INSECT WEED AND PEST PROBLEMS. LOCAL CHECK SIETE CERROS.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	LEAF RUST	STEM RUST	LODGING	LEAF FIRE
43	CHANAE 70	PAKISTAN	7854.7	85.6	70S	TRR	0.0	25.0
50	LOCAL CHECK / 6.5 GMS. / PACKET /		7317.2	91.0	50S	5S	0.0	25.0
41	SONALIKA	INDIA	7242.2	78.3	70S	TRS	0.0	25.0
21	FENJAMU 62	MEXICO	7221.4	65.6	10S	20S	0.0	25.0
14	MEX 226	IRAQ	7206.8	82.3	30MS	5MR	0.0	25.0
4	TANORI 71	MEXICO	7188.0	81.2	50MS	TRR	0.0	25.0
28	YECORA 70	MEXICO	7138.0	84.6	10S	TRR	0.0	25.0
31	CAJEME 71	MEXICO	7109.7	90.0	10MR	TRR	0.0	0.0
16	ET-2256	TUNISIA	7067.2	87.6	50MS	TRR	0.0	25.0
15	EL-INIA	MEXICO	6763.0	82.6	80S	TRR	0.0	25.0
42	CIZA 155	EGYPT	6742.1	93.3	30S	TRR	10.0	25.0
27	SONORA 64-KI. MEND.	ARGENTINA	6706.8	81.0	TRR	20S	0.0	25.0
7	ET 2288	TUNISIA	6688.0	82.0	10MR	5MR	0.0	25.0
46	KALYANSONA 227	INDIA	6650.5	90.3	60S	TRS	0.0	25.0
22	ZARHEZI	PROCESIA	6[illegible]	85.0	[illegible]	5S	0.0	25.0
11	JARAL "S" / LLE-SK-MARA	PROCESIA	6492.1	80.6	20MR	TRS	0.0	50.0
35	PUELCLEN	CHILE	6400.5	85.6	30MS-S	0	20.0	50.0
35	CHELTI LERMA	INDIA	6354.6	88.3	60S	10MR	0.0	25.0
48	NAYAB 70	PAKISTAN	6354.6	88.3	90S	TRR	0.0	25.0
20	FOTAN 70	MEXICO	6325.5	79.0	50S	TRR	0.0	50.0
30	MAZEKA-2152	ISRAEL	6271.3	81.0	50S	40S	0.0	50.0
36	JARAL "S"	ARGENTINA	6225.6	85.6	5MR	TRR	0.0	25.0
3	NARC 4.	COLOMBIA	6221.3	83.0	30S	TRR	20.0	25.0
32	LONDI	PROCESIA	6200.8	82.6	20MR	0	0.0	50.0
26	INIA 66	MEXICO	6158.8	80.6	100S	5R	0.0	25.0
5	TOGUIPEN "S"	CHILE	6158.8	92.6	5R	TRS	0.0	50.0
12	VICAM 71	MEXICO	6150.4	85.6	5MR	0	0.0	25.0
10	PINA	INDIA	6047.1	82.3	5R	TRS	0.0	25.0
29	MEXICO 120	AUSTRALIA	6054.6	82.3	50S	50S	0.0	25.0
25	FATO ARGENTINO	ARGENTINA	5952.1	91.3	5MR	TRR	0.0	25.0
19	LR64-NICO X AN 3E	AUSTRALIA	5950.4	92.6	60S	10S	0.0	25.0
23	CALILAL	MEXICO	5942.1	85.0	10MR	TRR	0.0	25.0
36	LR 301	INDIA	5867.1	86.6	10MS	TRR	0.0	50.0
18	FITIC 62	MEXICO	5812.9	85.0	80S	60S	0.0	25.0
40	VICTOR I	ITALY	5762.9	-	10S	10S	0.0	25.0
6	T-64-2-W	TUNISIA	5712.9	87.3	40S	5MR	0.0	25.0
24	TOBARI 66	MEXICO	5558.7	80.3	TRR	TRR	0.0	50.0
34	ET-2281	TUNISIA	5521.2	80.0	70S	TRR	0.0	25.0
47	CARAZINHO	BRAZIL	5479.6	97.3	TRMR	TRR	50.0	0.0
13	MAYA X SUFRENO-MENTANA-MCM	CHILE	5202.0	98.3	30MS	0	0.0	25.0
33	CABLTO	ARGENTINA	4962.9	95.0	5MR	0	50.0	25.0
45	FIAMENTES	ARGENTINA	4583.5	98.3	10MS	5S	50.0	25.0
2	CHRIS	U.S.A.	4512.8	90.3	5MR	TRMR	30.0	25.0
17	ANIANA 65	TUNISIA	4358.6	-	5MS	TRR	40.0	50.0
44	MEXICANO 1481	PORTUGAL	4346.1	94.3	60S	20S	40.0	50.0
1	BONZA 55	COLOMBIA	4250.3	89.0	30S	TRMR	5.0	25.0
8	BWA	U.S.A.	4212.8	-	TRR	TRR	0.0	50.0
37	MANITOU / INSENSITIVE /	CANADA	4146.1	83.0	60S	TRR	50.0	50.0
45	MANITOU	CANADA	3833.6	-	50S	30S	40.0	75.0
5	IAS 20 IASSUL	BRAZIL	0.0	95.0	0.0	0.0	0.0	25.0
		GRAND MEAN	6022.8	86.8	30.4	8.2	10.3	31.0
	STANDARD ERROR OF GRAND MEAN			0.1		1.1		
	COEFFICIENT OF VARIATION			2.2%		141.0%		
	LSD VARIETY MEANS 5 PC			3.2		15.0		

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	0.22				
LEAF	RUST	0.15	0.08			
STEM	RUST	-0.03	-0.06	0.24		
LODGING		-0.40**	-0.03	-0.10	0.03	
LEAF	FIRE	-0.26	-0.44**	0.01	0.12	0.08

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 44 MESOAMERICA MEXICO MEXICO

ATIZAPAN.
COOPERATORS CIMMYT STAFF.

LATITUDE	19 50'N	DATE PLANTED	05/30/72	NITROGEN	100.0 KG/HA
LONGITUDE	100 00'W	DATE HARVESTED	10/20/72	PHOSPHORUS	040.0 KG/HA
ELEVATION	2600 M.ABOVE S.L.	AMOUNT OF MOISTURE	1200 MM	POTASSIUM	000.0 KG/HA

COOL, CLOUDY, RAINY WEATHER. SATISFACTORY STRIPE AND STEM RUST INFECTION
NO INSECT, WEED AND PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	STEM RUST
4	TANORI 71	MEXICO	6347.7	54.6	5MS	TRMR
35	CHOTI LERMA	INDIA	5305.9	58.6	5MS	TRR
26	INIA 66	MEXICO	5097.6	54.0	10MS	TRMS
27	SONORA 64-K1. REND.	ARGENTINA	5065.8	53.3	10MS	TRMR
42	CHANAB 70	PAKISTAN	4956.7	57.3	TRMR	TRMS
41	SONALIKA	INDIA	4722.5	49.6	5MS	10MR
46	KALYANSONA 227	INDIA	4635.2	64.0	20MS	TRMR
14	MEX 226	IRAQ	4625.3	58.0	40MS	10MR
7	ET 2268	TUNISIA	4611.4	57.6	10MS	5S
21	BENJAMIN 62	MEXICO	4597.5	59.3	TRMR	20S
39	FLEUGUEN	CHILE	4583.6	62.3	5MS	10MR
48	NAYAB 70	PAKISTAN	4563.6	58.0	10MS	30MS
23	CALICAO	MEXICO	4555.9	56.6	5MS	5MS
24	TOBARI 66	MEXICO	4542.0	59.0	TRMR	10MR
3	NARO 63	COLOMBIA	4500.3	50.6	5MR	TRR
25	BATO ARGENTINO	ARGENTINA	4500.3	54.3	5MR	TRMS
15	EE-INIA	MEXICO	4472.5	58.0	TRMR	TRMR
20	POTAM 70	MEXICO	4222.5	47.6	5MR	10MS
42	CIZA 155	EGYPT	4166.9	58.6	5MR	TRMR
12	VICAM 71	MEXICO	4125.3	65.6	20MS	TRMR
37	MANITOU / INSENSITIVE /	CANADA	4111.4	54.6	10MS	10S
10	PIRA	INDIA	4041.9	50.0	5MR	10S
34	ET-2281	TUNISIA	4028.0	53.3	5MR	TRR
16	ET-2256	TUNISIA	3966.4	57.0	30MS	10S
31	CAJEME 71	MEXICO	3572.5	63.6	TRMR	10MS
26	YECORA 70	MEXICO	3873.3	52.6	10MS	10MR
22	ZAMBEZI	RHODESIA	3847.5	56.6	5MS	5MS
9	TOGUIFEN 'S'	CHILE	3791.9	56.3	5MR	5S
6	T-64-2-4	TUNISIA	3750.2	66.3.	TRMR	40S
38	LR 301	INDIA	3569.7	57.0	5MS	5MS
2	CHRIS	U.S.A.	3526.0	67.0	TRMR	TRMS
5	IAS 20 IASSUL	BRAZIL	3472.4	68.6	60MS	10MS
8	ERA	U.S.A.	2944.6	66.6	50MS	10-10S
1	BONZA 55	COLOMBIA	2875.2	67.0	20MS	TRMR
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2694.6	51.3	60MS	TRMR
19	LR64-NIOB x AN 3E	AUSTRALIA	2597.4	64.6	5MR	80S
30	HAZERA-2152	ISRAEL	2583.3	66.6	TRMR	80S
45	MANITOU	CANADA	2569.6	74.3	50MS	30S
13	MARA > SUPREMO-MENTANA-MGM	CHILE	2541.8	77.0	10MS	30S
33	CABUTO	ARGENTINA	2430.7	70.3	20MS	20MS
49	PIAMONTES	ARGENTINA	2291.8	65.0	TRMR	50MS
36	JARAL 'S'	ARGENTINA	2125.1	61.3	80S	10MS
47	CARAZINHO	BRAZIL	2065.6	80.3	TRMR	50MS
32	LONDI	RHODESIA	2000.1	54.3	60MS	10MR
18	PITIC 62	MEXICO	1805.6	66.6	TRMR	80S
29	MEXICO 120	AUSTRALIA	1541.7	60.3	TRMR	100S
40	VICTOR I	ITALY	1138.9	80.0	5MR	100S
44	MEXICANO 1481	PORTUGAL	1000.0	49.3	10MS	80S
50	LOCAL CHECK / 6.6 CMS. / PACHET /		-	-	-	-
17	ARIANA 66	TUNISIA	-	103.6	TRMR	40MS
		GRAND MEAN	3654.4	61.9	10.5	22.1
		STANDARD ERROR OF GRAND MEAN	50.4	0.2	0.6	1.4
		COEFFICIENT OF VARIATION	16.5%	4.2%	73.1%	63.5%
		LSD VARIETY MEANS 5 PC	987.9	4.2	12.4	22.9

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST
DAYS TO FLOWER	-0.22		
STRIPE RUST	-0.12	0.06	
STEM RUST	-0.56**	0.42**	-0.21

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 45 MIDDLE EAST IRAN AHWAZ

AHWAZ EXPERIMENT STATION
COOPERATORS MOHAMMAD CHAIN

LATITUDE 031 20 N
LONGITUDE 048 40 E
ELEVATION +00020 M.ABOVE S.L.

DATE PLANTED 12/05/71
DATE HARVESTED 05/05/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 027.0 KG/HA
POTASSIUM 000.0 KG/HA

NORMAL WEATHER CONDITIONS DURING VEGETATIVE PERIOD. HIGH HUMIDITY DURING POLLINATION AND RIPING INFLUENCED YIELD. SEPTORIA AND RUST DEVELOPMENT NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK SHOLEH.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	SEPTORIA TRITICI
44	MEXICANO 1481	PORTUGAL	4655.0	107.0	146.0	0	0	101.6	0.0	26.6	38.0	0.0
15	EE-INIA	MEXICO	4244.0	106.0	146.0	0	0	70.0	0.0	0.0	45.0	100.0
31	CAJEME 71	MEXICO	4210.6	125.0	144.0	25S	0	75.0	0.0	0.0	42.0	0.0
21	PENJAMO 62	MEXICO	4177.3	106.0	146.0	10S	0	91.6	0.0	0.0	39.0	40.0
29	MEXICO 120	AUSTRALIA	4088.4	106.0	145.0	0	0	71.6	0.0	0.0	35.0	0.0
43	CHANAB 70	PAKISTAN	4066.2	104.0	145.0	0	0	98.3	0.0	0.0	35.0	0.0
48	NAYAB 70	PAKISTAN	4010.7	120.0	148.0	0	0	100.0	0.0	0.0	39.0	38.0
36	JARAL "S"	ARGENTINA	3999.5	106.0	147.0	10S	0	95.0	0.0	0.0	33.0	63.0
35	PLELOLEN	CHILE	3966.2	106.0	144.0	0	0	111.6	13.3	0.0	33.0	0.0
7	BT 2266	TUNISIA	3955.1	101.0	144.0	0	0	90.0	0.0	0.0	37.0	0.0
46	KALYANSONA 227	INDIA	3932.9	106.0	145.0	5S	0	101.6	0.0	0.0	35.0	25.3
27	SONORA 64-KI. REND.	ARGENTINA	3888.4	102.0	144.0	5S	0	93.3	0.0	30.0	35.0	0.0
30	HAZERA-2152	ISRAEL	3888.4	[illegible]	145.0	0	0	90.0	0.0	0.0	42.0	[illegible]
22	ZAMBEZI	RHODESIA	3877.3	106.0	146.0	25S	0	95.0	0.0	0.0	37.0	16.[illegible]
19	LR64-MICB X AN 3E	AUSTRALIA	3832.9	107.0	146.0	0	0	85.0	0.0	0.0	33.0	0.0
41	SONALIKA	INDIA	3821.8	95.3	145.0	0	0	93.3	0.0	0.0	47.0	0.0
42	GIZA 155	EGYPT	3821.8	102.0	147.0	0	25S	111.6	0.0	0.0	43.6	0.0
47	CARAZINHO	BRAZIL	3810.7	109.0	147.0	25S	0	113.3	36.6	0.0	42.0	25.3
25	PATO ARGENTINO	ARGENTINA	3777.3	104.0	148.0	0	0	95.0	0.0	0.0	32.0	0.0
4	TANORI 71	MEXICO	3744.0	101.0	144.0	0	0	85.0	0.0	26.6	40.0	0.0
18	PITIC 62	MEXICO	3732.9	107.0	146.0	0	0	91.6	3.3	0.0	34.0	0.0
16	BT-2256	TUNISIA	3710.7	103.0	144.0	10S	0	90.0	0.0	23.3	41.0	0.0
12	VICAM 71	MEXICO	3659.6	106.0	144.0	0	0	70.0	0.0	0.0	32.0	38.0
14	MEX 246	IRAQ	3677.4	105.0	146.0	25S	0	95.0	0.0	0.0	46.0	0.0
35	CHECTI LERMA	INDIA	3666.2	107.0	145.0	0	0	91.6	0.0	0.0	41.0	0.0
20	POTAM 70	MEXICO	3621.8	116.6	146.0	5S	0	85.0	0.0	0.0	41.0	16.6
26	INIA 66	MEXICO	3544.1	102.0	146.0	0	0	85.0	0.0	0.0	40.0	0.0
28	UP 301	INDIA	3421.8	107.0	144.0	0	0	66.6	0.0	0.0	37.6	0.0
28	YECORA 70	MEXICO	3377.4	105.0	144.0	25S	0	70.0	0.0	0.0	41.0	0.0
6	T-64-2-W	TUNISIA	3355.2	106.0	146.0	0	0	101.6	0.0	0.0	37.0	0.0
32	LERDI	RHODESIA	3355.2	106.0	144.0	0	0	83.3	0.0	0.0	35.0	63.0
24	TOBARI 66	MEXICO	3332.9	104.0	146.0	0	0	90.0	0.0	0.0	34.0	0.0
11	JARAL "S" / LEE-SK-MARA	RHODESIA	3266.5	102.0	144.0	40S	0	85.0	0.0	0.0	27.0	0.0
10	PIRA	INDIA	3277.4	102.0	144.0	0	0	66.6	0.0	0.0	25.0	38.0
17	ARIANA 66	TUNISIA	3159.6	110.0	146.0	0	0	108.3	0.0	0.0	36.0	50.0
3	NARC 63	COLOMBIA	3177.4	103.0	144.0	0	0	110.0	30.0	0.0	34.0	0.0
34	BT-2281	TUNISIA	3177.4	98.0	144.0	0	0	88.3	0.0	0.0	37.0	0.0
9	TOCOLPEN "S"	CHILE	3166.3	107.0	148.0	0	0	90.0	0.0	0.0	31.0	0.0
23	CALICAE	MEXICO	3044.1	106.0	146.0	0	0	90.0	0.0	26.6	41.0	0.0
40	VICTOR I	ITALY	3010.8	116.0	146.0	0	0	88.3	0.0	0.0	36.0	0.0
1	BONZA 55	COLOMBIA	2988.5	107.0	144.0	25S	0	110.0	36.6	0.0	30.0	0.0
49	FIAMENTES	ARGENTINA	2944.1	112.0	146.0	0	0	115.0	20.0	0.0	35.0	0.0
33	CABOTO	ARGENTINA	2910.8	115.0	147.0	0	0	111.6	23.3	0.0	24.0	0.0
45	MANITOU	CANADA	2755.7	101.0	153.0	5S	0	120.0	0.0	0.0	26.0	0.0
37	MANITOU / INSENSITIVE /	CANADA	2733.0	103.0	144.0	0	0	106.6	36.6	0.0	32.0	0.0
13	PERA X SUPREMO-MENTANA-MCM	CHILE	2677.5	113.0	147.0	0	25S	110.0	30.0	30.0	41.0	0.0
8	ERA	U.S.A.	2455.7	101.0	156.0	0	0	95.0	0.0	0.0	31.0	0.0
2	CHRIS	U.S.A.	2488.6	107.0	144.0	10S	0	113.3	26.6	0.0	31.0	0.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2388.6	112.0	146.0	0	0	110.0	50.0	0.0	31.0	100.0
5	IAS 20 IASSUL	BRAZIL	1799.8	111.0	145.0	0	0	120.0	70.0	46.6	38.0	0.0
		GRAND MEAN	3476.7	106.4	145.7	5.5	1.0	94.5	6.5	4.1	36.3	13.5
	STANDARD ERROR OF GRAND MEAN		38.2	0.5	0.0	0.2	0.0	0.1	0.3	0.2	0.0	0.5
	COEFFICIENT OF VARIATION		13.4%	6.5%	0.1%	65.5%	39.5%	2.0%	58.6%	60.1%	1.1%	51.8%
	LSD VARIETY MEANS 5 PC		765.0	11.4	0.3	5.9	0.4	3.1	6.2	5.4	0.6	11.8

CORRELATIONS

YIELD	KG/HA									
DAYS TO	FLOWER	-0.06								
DAYS TO MATURITY		-0.23	0.03							
STRIPE	RUST	0.12	0.09	-0.14						
STEM	RUST	-0.08	0.04	0.11	-0.10					
HEIGHT	CM.	-0.41**	0.09	0.30*	-0.04	0.23				
LODGING		-0.54**	0.22	-0.07	0.04	0.14	0.59**			
SHATTERING		-0.19	0.01	-0.11	-0.13	0.21	0.17	0.06		
1000 GRN WGT GRMS		0.41**	0.03	-0.20	0.03	0.23	-0.20	-0.29	0.20	
SEPTORIA	TRITICI	0.12	0.07	-0.02	-0.07	-0.10	-0.14	0.07	-0.20	0.06

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 46 MIDDLE EAST IRAN GORGAN

GORGAN EXPERIMENT STATION.
COOPERATORS E. SAGRI AND F. MEHRAIN

LATITUDE	036 51'N	DATE PLANTED	12/04/71	NITROGEN	120.0 KG/HA
LONGITUDE	054 28'E	DATE HARVESTED	06/20/72	PHOSPHORUS	027.0 KG/HA
ELEVATION	00105 M.ABOVE S.L.	AMOUNT OF MOISTURE	0365 MM	POTASSIUM	000.0 KG/HA

VERY COLD WINTER WITH SNOW. MINIMUM TEMPERATURE 13° C. GOOD DEVELOPMENT OF MILDEW. NO RUST EPIDEMIC. INSECT, WEED AND PEST PROBLEMS NOT REPORTED LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW
22	ZAMBEZI	RHODESIA	5288.3	141.0	188.0	72.0	33.0	44.3
6	T-64-2-W	TUNISIA	5255.0	140.0	190.0	66.0	40.0	22.1
20	FOTAN 70	MEXICO	5232.8	135.0	190.0	70.0	56.0	22.1
19	LR64-NICB X AN 3E	AUSTRALIA	5221.6	140.0	189.0	71.0	33.0	22.1
14	MEX 226	IRAQ	5121.7	139.0	187.0	71.0	44.0	33.2
46	KALYANSONA 227	INDIA	5088.3	143.0	188.0	77.0	34.0	0.0
5	TUCLIFER 'S'	CHILE	5066.1	139.0	187.0	64.0	34.0	0.0
31	JARAL 'S' / LEE-SK-MARA	RHODESIA	5032.8	136.0	187.0	85.0	31.0	22.1
40	VICTOR I	ITALY	5010.6	145.0	188.0	66.0	34.0	33.2
32	LUNDI	RHODESIA	4766.1	140.0	188.0	67.0	38.0	22.1
43	CHANDR 70	PAKISTAN	4755.0	139.0	188.0	72.0	40.0	44.3
25	PATO ARGENTINO	ARGENTINA	4755.0	141.0	190.0	67.0	38.0	22.1
29	MEXICO 120	AUSTRALIA	4732.8	137.0	190.0	62.0	38.0	44.3
30	HAZERA-2152	ISRAEL	4666.1	137.0	190.0	66.0	42.0	22.1
28	YECORA 70	MEXICO	4666.1	136.0	190.0	57.0	35.0	22.1
4	TANORI 71	MEXICO	4655.0	135.0	189.0	72.0	43.0	66.5
7	ET 2286	TUNISIA	4655.0	132.0	189.0	66.0	38.0	11.0
31	CAJEME 71	MEXICO	4643.9	139.0	188.0	59.0	46.0	22.1
3	NARO 62	COLOMBIA	4599.5	137.0	188.0	68.0	36.0	33.2
16	ET-2256	TUNISIA	4566.4	139.0	187.0	60.0	40.0	44.3
41	SONALIKA	INDIA	4555.0	134.0	188.0	79.0	48.0	0.0
35	CHECTI LERMA	INDIA	4521.7	142.0	189.0	75.0	36.0	44.3
27	SONORA 64-KI. REND.	ARGENTINA	4366.2	139.0	188.0	76.0	38.0	22.1
34	ET-2261	TUNISIA	4288.4	137.0	191.0	72.0	40.0	33.2
12	VICAM 71	MEXICO	4255.1	137.0	190.0	60.0	35.0	44.3
10	PIRA	INDIA	4244.0	134.0	188.0	56.0	42.0	44.3
21	BENJAMIN 62	MEXICO	4244.0	139.0	190.0	65.0	36.0	33.2
48	NAYAB 70	PAKISTAN	4199.5	141.0	187.0	75.0	44.0	44.3
38	LR 301	INDIA	4166.2	142.0	188.0	50.0	44.0	44.3
42	GIZA 155	EGYPT	4132.9	139.0	190.0	64.0	43.0	22.1
18	PITIC 62	MEXICO	4121.8	141.0	190.0	75.0	33.0	0.0
17	ARIANA 66	TUNISIA	4110.6	141.0	190.0	75.0	40.0	33.2
24	TOBARI 66	MEXICO	4077.3	137.0	189.0	76.0	43.0	55.5
15	EE-INIA	MEXICO	4021.8	140.0	187.0	70.0	45.0	22.1
44	MEXICANO 1481	PORTUGAL	3966.2	142.0	190.0	64.0	33.0	44.3
36	JARAL 'S'	ARGENTINA	3955.1	142.0	188.0	69.0	35.0	44.3
8	ERA	U.S.A.	3855.1	145.0	191.0	60.0	30.0 *	0.0
26	INIA 66	MEXICO	3832.9	134.0	189.0	74.0	44.0	44.3
5	IAS 20 IASSUL	BRAZIL	3788.5	143.0	190.0	57.0	38.0	22.1
23	CALIDAC	MEXICO	3755.1	139.0	189.0	79.0	33.0	22.1
47	CARAZINHO	BRAZIL	3721.8	142.0	190.0	76.0	40.0	22.1
39	FLELCLER	CHILE	3488.3	143.0	190.0	52.0	37.0	22.1
49	FIAMENTES	ARGENTINA	3488.5	143.0	188.0	60.0	38.0	22.1
33	CAECTC	ARGENTINA	3432.9	141.0	190.0	79.0	33.0	22.1
50	LOCAL CHECK / 6.6 CRS. / PACHET /		3344.1	139.0	190.0	53.0	45.0	44.3
2	CHRIS	U.S.A.	3321.8	141.0	189.0	111.0	29.0	22.1
13	MARA X SUPERNO-MENTANA-MCM	CHILE	3199.6	139.0	189.0	88.0	40.0	0.0
37	MANITOL / INSENSITIVE /	CANADA	3199.6	139.0	188.0	77.0	35.0	22.1
45	MANITOL	CANADA	2888.5	150.0	193.0	105.0	30.0	22.1
1	ECONZA 55	COLOMBIA	2888.5	139.0	189.0	69.0	31.0	11.0
		GRAND MEAN	4264.6	139.5	188.9	75.8	38.2	27.7
		STANDARD ERROR OF GRAND MEAN	42.2					
		COEFFICIENT OF VARIATION	12.1%					
		LSD VARIETY MEANS 5 PC	845.2					

CORRELATIONS

YIELD	KG/HA				
DAYS TO	FLOWER	-0.31*			
DAYS TO	MATURITY	-0.35*	0.28*		
HEIGHT	CM.	-0.49**	0.29*	0.25	
1000 GRN	WGT GRMS	0.22	-0.47**	-0.16	-0.34*
POWDERY	MILDEW	0.05	-0.18	-0.08	-0.22 0.23

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 47 MIDDLE EAST IRAN KUZESTAN

COLLEGE OF AGR., JUNDI-SHAPOR UNI.
COOPERATORS DR. EARMAN EHDAIE

LATITUDE	031 00 N	DATE PLANTED	11/22/72	NITROGEN	140.0 KG/HA
LONGITUDE	049 00 E	DATE HARVESTED	05/01/73	PHOSPHORUS	070.0 KG/HA
ELEVATION	+000026 M.ABOVE S.L.	AMOUNT OF MOISTURE	0101 MM	POTASSIUM	000.0 KG/HA

NORMAL WEATHER CONDITIONS DURING THE TEST. NO DISEASE DEVELOPMENT. NO INSECT, BIRD OR PEST PROBLEMS. LOCAL CHECK SHOWER. >>> KERNELS PER SPIKE. >>>= SPIKES IN 1 MT.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS		>>>
43	CHANAB 70	PAKISTAN	5711.6	107.0	116.6	43.3	32.0	79.3
30	PAZERA-2152	ISRAEL	5618.3	103.0	100.3	43.3	35.6	83.0
18	BITIC 62	MEXICO	5453.3	110.0	114.6	40.6	35.3	77.3
28	YECORA 70	MEXICO	5441.6	102.6	75.6	44.0	34.6	74.0
44	MEXICANO 1481	PORTUGAL	5420.0	115.3	114.3	38.0	39.0	69.0
25	MEXICO 120	AUSTRALIA	5356.3	106.0	72.6	40.6	27.6	64.3
26	INIA 66	MEXICO	5311.6	101.0	103.3	45.3	42.3	79.0
46	KALYANSONA 227	INDIA	5301.6	110.0	115.0	34.0	41.3	67.6
31	CAJEME 71	MEXICO	5226.3	110.0	84.3	45.3	29.3	83.0
10	HIRA	INDIA	5121.6	101.0	72.0	35.3	33.0	71.3
4	TANORI 71	MEXICO	5065.0	101.0	100.0	41.3	35.6	78.3
27	SONORA 64-K1. REND.	ARGENTINA	5053.3	102.0	103.3	34.6	29.3	80.0
22	ZAMBEZI	RHODESIA	5001.6	111.0	103.0	34.6	41.0	79.3
21	BENJAMIN 62	MEXICO	4951.6	111.0	108.0	37.3	32.3	80.0
38	UP 301	INDIA	4855.0	103.0	77.6	40.6	31.6	74.0
42	CIZA 155	EGYPT	4806.3	109.0	119.0	42.6	35.3	93.6
16	ET-2256	TUNISIA	4756.3	107.0	105.3	42.0	28.0	85.6
14	MEX 226	IRAQ	4741.6	103.0	104.3	42.0	29.0	85.6
36	JARAL 'S'	ARGENTINA	4661.6	108.0	98.3	36.0	36.6	81.6
15	LR64-NICB x AN 3E	AUSTRALIA	4660.0	114.3	91.3	35.3	31.0	73.6
35	PUELCLEN	CHILE	4626.6	107.0	120.0	36.0	29.6	94.0
35	CHECTI LERMA	INDIA	4580.0	107.3	101.0	34.6	30.0	76.6
40	VICTOR I	ITALY	4551.6	114.0	93.3	35.3	42.3	67.0
24	TOBARI 66	MEXICO	4530.0	100.0	108.0	37.3	35.6	75.6
19	BE-INIA	MEXICO	4500.0	102.0	76.6	41.3	35.3	64.3
46	NAYAB 70	PAKISTAN	4456.3	111.0	114.3	40.6	45.3	63.6
34	ET-2281	TUNISIA	4426.6	102.0	98.0	36.0	33.3	77.3
12	VICAM 71	MEXICO	4410.0	107.0	88.3	32.6	35.3	62.3
20	POTAM 70	MEXICO	4360.0	104.6	95.6	40.6	33.6	70.3
29	PATO ARGENTINO	ARGENTINA	4350.0	108.0	103.0	29.3	36.0	72.6
6	T-6'-2-W	TUNISIA	4345.0	110.0	115.6	37.3	32.0	95.0
17	ARIANA 66	TUNISIA	4325.0	115.6	121.6	38.0	34.6	82.3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4285.0	99.0	85.0	30.0	34.6	85.3
7	ET 2288	TUNISIA	4281.6	100.0	99.3	36.0	31.6	77.6
23	CALILAC	MEXICO	4211.6	111.0	105.6	34.0	34.0	54.6
9	TOCUIFEN 'S'	CHILE	4170.0	112.0	95.0	30.6	33.6	69.3
32	LUNDI	RHODESIA	4143.3	104.3	87.3	40.6	33.0	64.0
3	NARC 63	COLOMBIA	4071.6	102.0	116.3	37.3	31.6	84.0
41	SONALIKA	INDIA	3463.3	95.0	104.3	48.6	26.6	68.3
1	BONZA 55	COLOMBIA	3353.3	108.0	130.0	29.3	23.3	87.3
33	CABOTO	ARGENTINA	3283.3	111.0	125.6	28.6	27.6	82.6
45	PIAMONTES	ARGENTINA	3211.6	120.0	119.0	30.0	27.6	69.0
37	MANITOU / INSENSITIVE /	CANADA	3183.3	102.0	120.3	29.3	24.3	75.3
13	MARA > SUPREMO-MENTANA-MOP	CHILE	3173.3	108.0	122.3	36.0	30.0	61.3
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3113.3	116.0	114.0	38.0	26.3	79.0
47	CARAZINHO	BRAZIL	3110.0	114.0	122.0	37.3	30.6	65.0
2	CHRIS	U.S.A.	2963.3	111.0	124.0	29.3	25.3	64.0
8	ERA	U.S.A.	2716.6	128.0	90.3	28.3	30.0	62.0
5	IAS 20 IASSUL	BRAZIL	2115.0	114.0	141.3	35.3	21.6	68.3
49	MANITOU	CANADA	1816.6	105.0	123.6	20.0	19.0	87.6
		GRAND MEAN	4335.0	107.8	104.4	36.7	32.3	75.3
		STANDARD ERROR OF GRAND MEAN	36.7	0.1	0.4	0.1	0.3	1.0
		COEFFICIENT OF VARIATION	10.3%	1.1%	5.7%	5.9%	13.8%	16.7%
		LSD VARIETY MEANS 5 PC	734.0	2.0	9.7	3.5	7.3	20.5

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS	>>>
DAYS TO FLOWER	-0.30*				
HEIGHT CM.	-0.47**	0.28*			
1000 GRN WGT GRMS	0.62**	-0.35*	-0.27*		
>>>	0.65**	-0.03	-0.30*	0.34*	
>>>	0.16	-0.25	0.25	0.06	-0.16

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 48 MIDDLE EAST IRAN SAFIABAD

SAFIABAD AGRICULTURAL RESEARCH CENTER
COOPERATORS S.A. THIES AND M. MAJIFOUR

LATITUDE 032 16'N
LONGITUDE 048 25'E
ELEVATION 00083 M.ABOVE S.L.

DATE PLANTED 11/28/72
DATE HARVESTED 04/28/73
AMOUNT OF MOISTURE 0243 MM

NITROGEN 125.0 KG/HA
PHOSPHORUS 090.0 KG/HA
POTASSIUM 000.0 KG/HA

WEATHER CONDITIONS NOT REPORTED. DISEASE DEVELOPMENT NOT REPORTED. POOR GRASSY WEED CONTROL. SOME WILD OAT PATCHES. LOCAL CHECK NOT REPORTED. INIA 66 AND PLELOLEN LOST AT PLANTING.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	SHATTERING
43	CHANAB 70	PAKISTAN	8288.0	81.0	103.3	152.0	106.6	33.3	5.0
31	CAJEME 71	MEXICO	7865.8	81.0	106.6	150.0	81.6	38.3	5.0
16	ET-2254	TUNISIA	7532.5	80.3	102.3	148.0	105.0	30.0	5.0
46	KALYANSONA 227	INDIA	7465.9	80.3	108.0	152.0	103.3	66.6	5.0
15	BE-INIA	MEXICO	7321.4	81.6	99.3	150.0	80.0	5.0	5.0
19	LR64-NICE X AN 3E	AUSTRALIA	7165.9	81.0	107.6	154.0	91.6	35.0	5.0
18	PITIC 62	MEXICO	6954.8	75.0	104.3	153.0	98.3	73.3	5.0
22	ZAMBEZI	RHODESIA	6899.3	79.3	102.3	153.0	100.0	51.6	5.0
24	INIA 66	MEXICO	6865.9	83.5	96.0	-	95.0	55.0	-
26	YECORA 70	MEXICO	6821.5	80.0	99.0	148.0	78.3	27.5	5.0
10	HIRA	INDIA	6799.3	77.0	94.3	150.0	76.6	6.6	5.0
48	NAYAB 70	PAKISTAN	6788.1	78.6	103.0	152.0	103.3	41.6	5.0
24	TOPARI 66	MEXICO	6777.0	81.3	95.6	150.0	100.0	10.0	10.0
29	MEXICO 120	AUSTRALIA	6743.7	78.6	103.6	153.0	71.6	10.0	5.0
4	TANORI 71	MEXICO	6710.4	81.6	95.3	149.0	91.6	6.6	5.0
20	POTAM 70	MEXICO	6688.2	78.3	94.0	150.0	98.3	21.6	5.0
36	JARAL 'S'	ARGENTINA	6643.7	77.3	105.6	152.0	101.6	50.0	5.0
12	VICAM 71	MEXICO	6588.2	78.3	105.3	150.0	80.0	5.0	2.0
23	CALIDAD	MEXICO	6477.1	80.6	100.0	153.0	98.3	60.0	5.0
27	SONORA 64-K1. REND.	ARGENTINA	6466.0	81.0	100.3	150.0	100.0	38.3	5.0
40	VICTOR 1	ITALY	6421.5	79.0	110.6	154.0	93.3	35.0	5.0
32	LONDI	RHODESIA	6399.3	78.6	98.3	146.0	88.3	10.0	5.0
34	ET-2261	TUNISIA	6366.0	80.6	96.6	153.0	100.0	40.0	5.0
28	PATO ARGENTINO	ARGENTINA	6321.5	80.6	105.6	151.0	100.0	63.3	5.0
41	SONALIKA	INDIA	6232.7	81.0	93.6	150.0	106.6	41.6	10.0
21	PENJAMO 62	MEXICO	6210.4	80.3	102.6	150.0	106.6	66.6	5.0
35	CHECTI LERMA	INDIA	6210.4	82.0	104.6	152.0	103.3	36.6	5.0
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	6077.1	77.0	95.0	155.0	85.0	13.3	5.0
38	LP 301	INDIA	6054.9	79.0	103.0	153.0	75.0	5.0	5.0
44	MEXICANO 1481	PORTUGAL	6032.7	73.3	109.6	153.0	108.3	63.3	10.0
14	MEX 226	IRAQ	6021.6	81.3	95.3	152.0	103.3	26.6	2.0
9	TOCLIFEN 'S'	CHILE	6021.6	78.5	105.0	156.0	96.6	38.3	2.0
42	CIZA 155	EGYPT	5799.4	80.0	103.6	154.0	120.0	66.6	5.0
17	ARIANA 66	TUNISIA	5732.7	78.3	109.3	153.0	120.0	46.6	5.0
30	HAZERA-2152	ISRAEL	5477.2	78.0	98.0	148.0	95.0	43.3	5.0
3	NAPC 63	COLOMBIA	5342.9	80.6	96.6	155.0	113.3	40.0	15.0
6	T-64-2-W	TUNISIA	4977.2	78.3	104.3	154.0	110.0	35.0	5.0
7	ET 2266	TUNISIA	4810.6	80.0	96.3	152.0	101.6	26.6	5.0
39	PLELOLEN	CHILE	4432.8	79.5	105.0	-	122.6	72.6	-
1	ECONZA 55	COLOMBIA	4421.7	77.0	103.3	152.0	121.6	56.6	5.0
8	ERA	U.S.A.	4399.5	75.0	126.6	164.0	110.0	35.0	2.0
47	CARAZINHO	BRAZIL	4244.0	78.6	110.3	151.0	125.0	80.0	5.0
13	MARA X SUPPEMO-MENTANA-MCM	CHILE	4232.9	79.0	111.6	154.0	123.3	70.0	5.0
33	CABECIO	ARGENTINA	3966.2	80.0	109.3	154.0	128.3	73.3	5.0
49	FIAMENTES	ARGENTINA	3866.2	79.6	110.3	151.0	126.6	73.3	10.0
2	CHRIS	U.S.A.	3388.5	78.3	105.3	156.0	131.6	76.6	15.0
5	IAS 20 IASSLL	BRAZIL	3088.5	76.0	111.3	154.0	140.0	70.0	10.0
37	MANITOL / INSENSITIVE /	CANADA	3066.3	78.6	97.6	152.0	121.6	46.6	10.0
45	MANITOL	CANADA	2388.6	73.0	128.3	168.0	131.6	78.3	10.0
50	LOCAL CHECK / 6.6 CPS. / PACKET /		-	-	-	-	-	-	0.0
		GRAND MEAN	5874.8	79.1	103.6	152.4	103.4	42.7	5.9
		STANDARD ERROR OF GRAND MEAN	64.6	0.0	0.3		0.3	1.2	
		COEFFICIENT OF VARIATION	13.3%	0.9%	3.5%		4.6%	35.0%	
		LSD VARIETY MEANS 5 PC	1280.8	1.2	6.0		7.8	24.5	

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.59**					
DAYS TO	FLOWER	0.31*	0.84**				
DAYS TO MATURITY		0.28*	0.50**	0.56**			
HEIGHT	CM.	-0.11	0.62**	0.75**	0.36**		
LODGING		-0.28*	0.21	0.43**	0.02	0.72**	
SHATTERING		-0.17	0.21	0.24	0.46**	0.46**	0.26

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 49 MIDDLE EAST IRAQ BAGHDAD

ABU-GHARAIB EXPERIMENT STATION
COOPERATORS H. AL-JEEDURI, S. AL-HASSANI AND M. AZIZ

LATITUDE	033 20'N	DATE PLANTED	11/17/71	NITROGEN	060.0 KG/HA
LONGITUDE	044 24'E	DATE HARVESTED	05/10/72	PHOSPHORUS	040.0 KG/HA
ELEVATION	+000024 M.ABOVE S.L.	AMOUNT OF MOISTURE	0646 MM	POTASSIUM	000.0 KG/HA

NORMAL RAINS. COLDER AND PROLONGED WINTER. A FEW FROSTS. MILD ATTACK OF LEAF AND STEM RUST. NO INSECT OR WEED PROBLEMS. BIRD DAMAGE NEAR MATURITY. L SAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS
44	MEXICANO 1481	PORTUGAL	1226.6	74.6	127.0	103.0	39.0
46	NAYAB 70	PAKISTAN	1180.0	75.9	124.0	103.0	37.0
12	VICAM 71	MEXICO	1093.3	74.6	121.0	70.0	30.0
43	CHANAB 70	PAKISTAN	1050.6	77.2	123.0	98.0	41.0
18	PITIC 62	MEXICO	1080.0	72.3	126.0	108.0	36.0
4	TANORI 71	MEXICO	1073.3	77.2	117.0	90.0	36.0
10	PERA	INDIA	1033.3	75.9	117.0	73.0	36.0
16	ET-2256	TUNISIA	1030.0	77.2	124.0	100.0	39.0
47	CARAZINHO	BRAZIL	1013.3	77.2	126.0	70.0	41.0
42	CIZE 155	EGYPT	1010.0	77.2	124.0	110.0	44.0
11	JARAL 'S' / LFE-SK-PARA	RHODESIA	1006.6	70.7	116.0	80.0	26.0
22	ZAMBEZI	RHODESIA	1003.3	75.9	124.0	93.0	34.0
19	LR64-MICR X BN 3E	AUSTRALIA	986.6	76.5	127.0	90.0	33.0
46	KALYANSONA 227	INDIA	976.6	77.2	126.0	100.0	33.0
36	JARAL 'S'	ARGENTINA	970.0	74.6	126.0	93.0	34.0
30	HAZERA-2152	ISRAEL	960.0	72.0	122.0	93.0	37.0
26	INIA 66	MEXICO	946.6	76.5	121.0	95.0	39.0
14	MEX 222	IRAQ	933.3	76.5	124.0	100.0	42.0
31	CAJEME 71	MEXICO	930.0	75.9	124.0	83.0	40.0
50	LOCAL CHECK / 6.5 CMS. / BASKET /		926.6	75.9	124.0	98.0	34.0
27	SONORA 64-R1. SEND.	ARGENTINA	923.3	77.2	124.0	103.0	36.0
21	FENJANG 62	MEXICO	916.6	73.3	124.0	98.0	36.0
3	NARO 63	COLOMBIA	913.3	74.6	120.0	100.0	33.0
32	LONDI	RHODESIA	910.0	72.0	122.0	85.0	35.0
23	CALILAO	MEXICO	906.6	76.5	123.0	90.0	33.0
20	POTAM 70	MEXICO	906.6	74.6	116.0	88.0	35.0
17	ARIANA 66	TUNISIA	893.3	77.2	135.0	70.0	41.0
40	VICTOR I	ITALY	893.3	75.9	134.0	85.0	37.0
28	BATC ARGENTINA	ARGENTINA	883.3	84.9	125.0	95.0	30.0
28	YECORA 70	MEXICO	876.6	74.6	120.0	80.0	40.0
41	SONALIKA	INDIA	875.0	77.2	117.0	100.0	44.0
15	EE-INIA	MEXICO	873.3	77.2	121.0	72.0	37.0
6	T-64-2-W	TUNISIA	873.3	77.2	130.0	103.0	40.0
29	MEXICO 120	AUSTRALIA	843.3	74.6	123.0	70.0	34.0
24	TOBARI 66	MEXICO	843.3	76.5	121.0	98.0	33.0
38	LR 301	INDIA	840.0	72.0	124.0	73.0	33.0
7	ET 2288	TUNISIA	830.0	75.9	116.0	93.0	34.0
9	TOGLIFEN 'S'	CHILE	823.3	75.9	121.0	85.0	29.0
35	KULGLEN	CHILE	813.3	75.9	125.0	105.0	35.0
25	CHECTI LERMA	INDIA	806.6	76.5	126.0	93.0	35.0
33	CABECIO	ARGENTINA	740.0	77.2	130.0	120.0	32.0
8	ERA	U.S.A.	740.0	76.5	143.0	88.0	30.0
1	BONZA 55	COLOMBIA	716.6	75.9	126.0	116.0	34.0
45	PIAMONTES	ARGENTINA	686.6	78.9	128.0	113.0	34.0
34	ET-2281	TUNISIA	683.3	74.6	120.0	88.0	34.0
2	CHRIS	U.S.A.	670.0	76.5	124.0	115.0	30.0
37	MANITOU / INSENSITIVE /	CANADA	633.3	77.2	121.0	108.0	31.0
45	MANITOU	CANADA	563.3	74.6	127.0	115.0	23.0
13	MARA > SUPREMO-MENTANA-MCM	CHILE	513.3	77.2	131.0	113.0	39.0
5	IAS 20 IASSUL	BRAZIL	116.6	72.0	129.0	120.0	36.0
		GRAND MEAN	875.5	76.1	124.1	94.6	35.3
		STANDARD ERROR OF GRAND MEAN	7.5				
		COEFFICIENT OF VARIATION	10.6%				
		LSD VARIETY MEANS 5 PC	152.9				

CORRELATIONS

YIELD	KG/HA				
TEST	WEIGHT	0.04			
DAYS TO	FLOWER	-0.27	0.20		
HEIGHT	CM.	-0.41**	0.13	0.20	
1000 GRN	WGT GRMS	0.26	0.08	0.02	-0.04

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 50 MIDDLE EAST ISRAEL R.C.S. DE GAT

HAZERA SEEDS LTD BREEDING SECTION.
COOPERATORS SEM.Y. ATSMONIC.FRIEDMAN AND Z. EYAL.

LATITUDE 031 37'N
LONGITUDE 034 47'E
ELEVATION +00120 M.ABOVE S.L.

DATE PLANTED 11/21/71
DATE HARVESTED 05/05/72
AMOUNT OF MOISTURE 0513 MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 075.0 KG/HA
POTASSIUM 000.0 KG/HA

HOT SPELLS CAUSED PREMATURE RIPENING. HEAVY LEAF RUST AND SEPTORIA. LATE DEVELOPMENT OF STEM RUST. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
27	SONORA 64-K1. REND.	ARGENTINA	7072.9	79.0	98.6	-	110.0	35.0	36.2
10	HIRA	INDIA	7031.2	79.1	89.6	-	88.3	1.6	38.4
4	TANORI 71	MEXICO	6687.4	80.9	90.3	-	106.6	16.6	38.8
20	ELTAN 70	MEXICO	6552.0	77.7	90.0	-	95.0	60.0	38.1
21	CAJEME 71	MEXICO	6427.0	80.0	104.3	-	93.3	40.0	46.1
80	HAZERA-2152	ISRAEL	6355.8	77.7	96.3	60S	106.6	3.3	40.0
26	INIA 66	MEXICO	6354.1	81.6	93.0	20S	108.3	8.3	42.5
28	YECORA 70	MEXICO	6145.8	79.5	95.3	-	81.6	3.3	41.6
21	PERJAMO 62	MEXICO	6114.5	80.0	95.0	-	118.3	96.6	39.0
7	ET 2268	TUNISIA	6031.2	81.9	93.3	-	113.3	43.3	36.2
15	EE-INIA	MEXICO	6020.8	80.0	97.3	-	88.3	0.0	37.5
41	SONALIKA	INDIA	5985.5	78.7	85.0	-	110.0	30.0	47.8
24	TOBARI 66	MEXICO	5916.6	81.6	95.0	-	110.0	31.6	38.7
14	MEX 226	IRAQ	5916.6	80.2	98.3	-	115.0	63.3	39.9
25	MEXICO 120	AUSTRALIA	5864.5	79.3	100.6	50S	85.0	6.6	37.4
16	ET-2298	TUNISIA	5791.6	79.7	104.3	-	118.3	56.6	40.7
22	ZAMBEZI	RHODESIA	5760.4	77.4	98.3	-	106.6	36.6	28.4
36	JARAL "S"	ARGENTINA	5697.9	76.5	106.0	-	108.3	3.3	31.3
23	CALIBAL	MEXICO	5666.6	81.2	100.0	-	113.3	100.0	35.2
11	JARAL "S" / LEE-SK-MARA	RHODESIA	5624.9	76.4	92.6	-	96.6	18.3	29.9
19	LR64-NIDB X AN 3E	AUSTRALIA	5593.7	77.5	111.3	50S	108.3	21.6	27.3
35	CHECTI LERMA	INDIA	5479.1	79.3	98.6	-	106.6	23.3	29.5
38	LR 301	INDIA	5456.3	74.7	100.3	-	81.6	0.0	33.0
18	FITIL 62	MEXICO	5302.0	70.3	103.3	-	113.3	93.3	32.4
3	NARC 63	COLOMBIA	5291.6	78.5	95.6	-	126.6	60.0	37.1
5	TOCUIPEN "S"	CHILE	5208.3	77.3	103.6	-	106.6	8.3	30.0
34	ET-2281	TUNISIA	5166.6	80.8	95.6	40S	105.0	26.6	37.6
46	NAVAL 70	PAKISTAN	5145.8	77.5	101.6	-	121.6	35.0	37.5
25	FATL ARGENTINO	ARGENTINA	5114.5	79.7	100.0	-	111.6	35.0	28.4
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5052.0	78.3	104.6	-	111.6	53.3	36.5
6	T-64-2-4	TUNISIA	5052.0	79.6	103.0	80S	123.3	60.0	38.7
32	LERDI	RHODESIA	5052.0	78.5	97.0	-	95.0	0.0	34.5
46	KALYANSONA 227	INDIA	4729.1	74.3	104.6	10S	108.3	93.3	28.2
39	PLELOLEN	CHILE	4718.7	79.9	104.0	-	139.3	96.6	34.8
40	VICTOR I	ITALY	4489.5	75.2	120.3	20S	105.0	1.0	32.6
43	CHANAE 70	PAKISTAN	4479.1	74.7	103.6	-	111.6	20.0	33.0
37	ARIANA 66	TUNISIA	4343.7	80.0	121.3	80S	140.0	96.6	35.9
44	MEXICANO 1481	PORTUGAL	4322.9	70.1	111.3	60S	120.0	100.0	27.5
14	VICAM 71	MEXICO	4302.0	72.4	101.3	-	81.6	0.0	24.9
37	MANITOU / INSENSITIVE /	CANADA	3833.3	80.9	96.0	-	150.0	100.0	34.1
2	CHRIS	U.S.A.	3666.6	80.3	104.6	-	151.6	100.0	33.2
33	CRECTO	ARGENTINA	3572.9	80.4	112.4	-	140.0	100.0	30.3
13	MARA X SUFFENG-MENTANA-MCM	CHILE	3469.5	78.6	114.6	60S	138.3	93.3	34.1
1	ECNZA 55	COLOMBIA	3447.9	74.7	105.3	-	136.6	86.6	32.7
5	IAS 20 IASSUL	BRAZIL	3385.4	77.5	112.3	-	149.3	90.0	40.5
42	GIZA 155	EGYPT	3312.4	76.5	103.6	-	133.3	93.3	33.3
47	CARAZINHO	BRAZIL	3249.9	77.8	112.6	-	149.3	100.0	34.5
8	ERA	U.S.A.	3135.4	74.3	132.3	-	121.6	1.6	23.2
45	PIAMONTES	ARGENTINA	2645.8	78.4	112.6	-	131.6	96.6	33.6
48	MANITOU	CANADA	2281.2	77.7	137.0	30S	146.6	93.3	25.5
		GRAND MEAN	5067.6	78.1	103.1	11.1	114.7	48.6	34.8
		STANDARD ERROR OF GRAND MEAN	43.2	0.1	0.1		0.4	1.7	0.2
		COEFFICIENT OF VARIATION	10.4%	1.6%	2.0%		4.9%	43.4%	7.1%
		LSD VARIETY MEANS 5 PC	864.2	2.0	3.9		9.0	34.5	4.0

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.30*					
DAYS TO	FLOWER	-0.74**	-0.22*				
LEAF	RUST	-0.09	-0.03	0.30*			
HEIGHT	CM.	-0.70**	0.10	0.50**	0.10		
LODGING		-0.54**	0.00	0.32*	0.08	0.79**	
1000 GRN WGT GRMS		0.51**	0.53**	-0.51**	-0.01	-0.13	-0.07

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 51 MIDDLE EAST JORDAN JORDAN

DEIR ALLA
COOPERATORS I.I. KARISH, A.H. SUAE AND J. A. CLAIBI

LATITUDE 032 12°N
LONGITUDE 035 37°E
ELEVATION +00242 M.ABOVE S.L.

DATE PLANTED 11/27/71
DATE HARVESTED 05/22/72
AMOUNT OF MOISTURE 0242 MM

NITROGEN 042.0 KG/HA
PHOSPHORUS 000.0 KG/HA
POTASSIUM 000.0 KG/HA

MODERATELY DRY WITH LATE RAINS. MODERATE DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS
15	EE-INIA	MEXICO	4632.8	82.0	133.0	10	70.0	36.8
35	CHACII LERMA	INDIA	4610.6	84.0	134.3	0	50.0	31.1
45	MEXICO 120	AUSTRALIA	4459.5	83.0	133.6	10	61.6	32.2
10	HIRA	INDIA	4310.5	73.3	131.0	25	68.3	35.0
12	VICAM 71	MEXICO	4277.3	55.6	134.3	10	63.3	30.3
4	TANORI 71	MEXICO	4244.0	76.0	131.0	10	50.0	37.6
22	ZAMBEZI	RHODESIA	4032.9	83.0	135.0	25	63.3	33.0
18	PITIC 62	MEXICO	4010.7	64.3	134.3	25	50.0	34.5
31	CAJEME 71	MEXICO	3955.1	57.0	134.3	0	76.6	43.5
28	YECORA 70	MEXICO	3844.0	84.3	133.6	10	65.6	38.2
11	JARAL "S" / LRF-SK-BAR4	RHODESIA	3844.0	78.0	131.0	10	73.3	28.5
26	INIA 66	MEXICO	3777.3	80.0	132.3	10	63.3	36.2
14	MEX 226	IRAQ	3766.2	64.3	134.3	10	58.3	36.5
7	ET 2288	TUNISIA	3760.7	75.3	131.6	10	50.0	33.2
48	NAYAB 70	PAKISTAN	3677.4	65.6	135.0	25	50.0	38.5
25	PATO ARGENTINO	ARGENTINA	3666.2	80.3	133.6	25	60.0	27.8
30	HAZERA-2152	ISRAEL	3655.1	80.0	132.3	25	53.3	37.7
41	PENJAMO 62	MEXICO	3655.1	64.3	133.6	10	65.3	33.5
34	ET-2281	TUNISIA	3655.1	76.0	131.6	0	51.6	35.5
38	LR 301	INDIA	3644.0	52.0	133.0	0	63.3	35.5
39	PUELCUEN	CHILE	3521.8	65.6	136.3	0	53.3	34.8
43	CHANAB 70	PAKISTAN	3510.7	66.0	134.3	10	66.6	35.1
36	JARAL "S"	ARGENTINA	3366.3	91.0	143.0	10	50.0	29.2
24	TOBARI 66	MEXICO	3366.3	78.6	131.6	10	80.0	34.0
42	CIZA 155	EGYPT	3355.2	66.3	135.0	0	53.3	35.5
20	CALIDAD	MEXICO	3332.9	84.0	133.0	10	58.3	32.7
46	KALYANSONA 227	INDIA	3332.9	65.6	136.0	10	65.3	31.5
27	SONORA 64-KI. REND.	ARGENTINA	3199.6	84.6	134.3	25	76.3	31.0
19	LR64-NICB X AN 3E	AUSTRALIA	3199.6	85.3	135.0	25	80.0	28.0
5	TOCUIEN "S"	CHILE	3155.2	85.0	142.0	10	55.0	26.8
17	ARIANA 66	TUNISIA	3144.1	54.6	144.0	40	116.6	38.1
44	MEXICANO 1481	PORTUGAL	3144.1	85.0	140.6	25	50.0	34.8
16	ET-2256	TUNISIA	3133.0	65.6	133.6	10	66.6	37.0
20	PLTAM 70	MEXICO	3077.4	76.6	131.0	10	73.3	36.0
33	CABECIO	ARGENTINA	3066.3	91.0	142.0	0	115.0	29.8
40	VICTOR I	ITALY	3010.8	57.3	150.0	25	78.3	25.5
32	LONDI	RHODESIA	2955.2	53.3	134.3	10	73.3	33.2
13	MARA X SUPREMO-MENTANA-MCR	CHILE	2877.4	54.3	140.0	10	111.6	30.7
41	SONALIKA	INDIA	2821.9	74.0	133.0	0	65.0	45.3
6	T-64-2-W	TUNISIA	2677.5	66.0	136.3	65	50.0	36.5
2	CHRIS	U.S.A.	2666.3	91.0	143.6	0	110.0	28.0
8	ERA	U.S.A.	2655.2	111.0	142.0	0	50.0	23.5
3	NARC 63	COLOMBIA	2488.6	76.6	131.6	25	88.3	31.6
1	BONZA 55	COLOMBIA	2455.3	67.6	138.0	10	51.6	28.2
37	MANITOU / INSENSITIVE /	CANADA	2421.9	81.6	133.0	0	56.6	26.5
49	PIAMONTES	ARGENTINA	2377.5	92.0	142.0	10	101.6	27.0
47	CAMAZINHO	BRAZIL	2310.8	92.0	139.3	0	106.6	29.7
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2255.3	52.0	142.0	25	110.0	27.3
5	IAS 20 IASSUL	BRAZIL	2177.5	55.3	139.3	25	120.0	28.1
45	MANITOU	CANADA	683.2	113.3	152.0	0	100.0	24.1
		GRAND MEAN	3305.2	86.2	136.4	13.5	87.5	32.8
		STANDARD ERROR OF GRAND MEAN	45.1	0.3	0.2	0.5	0.3	
		COEFFICIENT OF VARIATION	16.7%	5.1%	2.4%	66.4%	5.2%	
		LSD VARIETY MEANS 5 PC	503.0	7.2	5.3	19.1	7.4	

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.
DAYS TO FLOWER	-0.60**				
DAYS TO MATURITY	-0.52**	0.87**			
LEAF RUST	-0.05	-0.04	0.03		
HEIGHT CM.	-0.50**	0.51**	0.53**	0.13	
1000 GRN WGT GRMS	0.46**	-0.56**	-0.54**	0.15	-0.28*

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 52 MIDDLE EAST LEBANON BEQA'A

AGRIC. RESEARCH AND EDUCATION CENTER-A.U.B.
COOPERATORS F.'NASR AND W. KHAYRALLAH.

LATITUDE	033 56'N	DATE PLANTED	11/10/71	NITROGEN	080.0 KG/HA
LONGITUDE	036 05'E	DATE HARVESTED	07/01/72	PHOSPHORUS	080.0 KG/HA
ELEVATION	01000 M.ABOVE S.L.	PERCENT OF MOISTURE	0458 MP	POTASSIUM	000.0 KG/HA

FAVORABLE RAIN DISTRIBUTION. NO DISEASE DEVELOPMENT. INSECT AND PEST PROBLEMS NOT REPORTED. WEEDS WERE CONTROLLED BY HAND. LOCAL CHECK NAJAH.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3843.3	156.0	80.0
41	SONALIKA	INDIA	3653.3	156.0	55.4
12	VICAM 71	MEXICO	3603.3	161.0	59.3
43	CHENAB 70	PAKISTAN	3553.3	157.0	84.3
30	HAZERA-2152	ISRAEL	3553.3	158.0	81.3
40	VICTOR I	ITALY	3513.3	168.0	73.6
28	VECORA 70	MEXICO	3493.3	157.0	65.0
25	MEXICO 120	AUSTRALIA	3453.3	158.0	60.0
31	CAJEME 71	MEXICO	3483.3	158.0	67.3
4	TANORI 71	MEXICO	3426.6	156.0	84.6
10	FIFA	INDIA	3333.3	157.0	66.6
32	LONDI	RHODESIA	3333.3	158.0	78.3
18	FITIC 62	MEXICO	3220.0	145.0	52.3
44	MEXIBAND 1481	GUATEMALA	3313.3	165.0	85.3
14	MEX 228	IRAQ	3293.3	163.0	85.0
19	LERA-NICP X AN 3E	AUSTRALIA	3250.0	162.0	74.3
46	MALYANSONA 227	INDIA	3216.6	168.0	84.6
5	TOCUIFEN 'S'	CHILE	3186.6	158.0	75.6
36	JARAL 'S'	ARGENTINA	3170.0	159.0	80.6
23	CALICAO	MEXICO	3160.0	161.0	83.3
20	ROTAM 70	MEXICO	3150.0	155.0	78.0
27	SONORA 64-K1. REND.	ARGENTINA	3092.3	159.0	85.6
35	HUELGUEN	CHILE	3066.6	164.0	100.0
26	INIA 66	MEXICO	3076.6	155.0	86.3
38	LR 301	INDIA	3053.3	158.0	80.0
48	NAYAB 70	PAKISTAN	3020.0	161.0	84.0
16	ET-2256	TUNISIA	2966.6	161.0	88.0
7	ET 2288	TUNISIA	2950.0	156.0	85.0
15	EE-INIA	MEXICO	2943.3	158.0	85.4
3	NAFC 63	COLOMBIA	2910.0	158.0	59.0
17	ANIANA 66	TUNISIA	2880.0	170.0	100.6
34	ET-2281	TUNISIA	2803.3	159.0	81.3
39	CHECTI LERMA	INDIA	2793.3	143.0	85.3
22	ZAMBEZI	RHODESIA	2793.3	164.0	85.0
24	TOCAMI 66	MEXICO	2736.6	158.0	85.0
6	T-64-2-W	TUNISIA	2700.0	170.0	55.6
1	BONZA 55	COLOMBIA	2660.0	165.0	58.0
29	FATC ARGENTINO	ARGENTINA	2660.0	165.0	81.4
13	MARA X SUPREMO-MENTANA-MCM	CHILE	2646.6	165.0	107.0
42	CIZA 155	EGYPT	2643.3	155.0	48.6
8	ERA	U.S.A.	2636.6	171.0	82.3
50	LOCAL CHECK / 6.6 CMS. / BACKET /		2483.3	155.0	108.0
21	BENJAMIN 62	MEXICO	2326.6	155.0	80.6
2	CHRIS	U.S.A.	2300.0	163.0	108.3
33	CABECIO	ARGENTINA	2260.0	164.0	111.0
37	MANITOU / INSENSITIVE /	CANADA	2246.6	157.0	100.0
45	FIAMENTES	ARGENTINA	2103.3	168.0	107.6
47	CARAZINHO	BRAZIL	2053.3	165.0	113.3
9	IAS 20 IASSLL	BRAZIL	1936.6	170.0	115.6
49	MANITOU	CANADA	1426.6	175.0	106.6
		GRAND MEAN	2944.2	161.7	87.3
		STANDARD ERROR OF GRAND MEAN	32.3		0.4
		COEFFICIENT OF VARIATION	13.48		8.59
		LSD VARIETY MEANS 5 PC	647.8		8.4

CORRELATIONS

YIELD KG/HA		
DAYS TO FLOWER	-0.51**	
HEIGHT CM.	-0.69**	0.48**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 53 MIDDLE EAST LEBANON TEL - AMARA

ACRICULTURAL RESEARCH INSTITUTE
COOPERATORS MICHEL AEI ABOUN AND STAFF.

LATITUDE C33 55'N DATE PLANTED 11/08/71 NITROGEN 150.0 KG/HA
LONGITUDE C35 28'E DATE HARVESTED 06/14/72 PHOSPHORUS C33.0 KG/HA
ELEVATION +00900 M.ABOVE S.L. AMOUNT OF MOISTURE 0560 MM POTASSIUM C00.0 KG/HA

GOOD WEATHER IN VEGETATIVE PERIOD AND HEADING. DRY IN MAY-JUNE. DISEASE DEVELOPMENT RESTRICTED. LATE ATTACK OF YELLOW RUST DID DAMAGE. INSECT AND PEST PROBLEMS NOT REPORTED. WILD OATS HAND WEEDED. LOCAL CHECK MEXIPAK 65.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4524.9	77.5	180.0	213.0	40MS	10MS	100.0	34.0
48	NAVAB 70	PAKISTAN	3653.6	75.6	176.0	210.0	5MS	5MS	105.0	31.0
46	KALYANSONA 227	INDIA	3647.4	75.5	179.0	213.0	10MS	5MS	95.0	30.0
4	TANORI 71	MEXICO	3406.7	77.0	169.0	205.0	TR-R	0	90.0	32.5
44	MEXICANO 1481	PORTUGAL	3156.9	71.5	176.0	206.0	30MS	10MS	100.0	32.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3024.1	74.5	169.0	207.0	20MS	TR-MR	70.0	25.0
5	IAS 20 IASSUL	BRAZIL	2956.2	74.0	180.0	208.0	0	0	125.0	33.0
6	T-64-2-W	TUNISIA	2888.3	73.7	176.0	212.0	0	5MR	110.0	33.5
8	ERA	U.S.A.	2604.4	75.3	182.0	212.0	TR-R	TR-R	90.0	28.0
37	MANITOU / INSENSITIVE /	CANADA	2579.7	75.3	174.0	205.0	TR-R	0	105.0	26.0
1	BONZA 55	COLOMBIA	2542.7	72.7	176.0	210.0	TR-R	5MS	120.0	27.0
2	CHRIS	U.S.A.	2505.6	77.1	175.0	207.0	10MS	0.0	0.0	0.0
49	PIAMONTES	ARGENTINA	2481.0	78.5	178.0	209.0	TR-R	TR-MR	125.0	30.0
3	NARO 63	COLOMBIA	2474.8	74.2	173.0	205.0	TR-R	5MS	110.0	32.0
42	LUNDI	RHODESIA	2369.9	76.5	174.0	206.0	0	5MS	65.0	30.5
45	MANITOU	CANADA	2369.9	73.8	185.0	212.0	0	0	125.0	25.0
35	PUELCHEN	CHILE	2357.5	74.0	176.0	209.0	TR-R	TR-R	105.0	32.0
12	VICAM 71	MEXICO	2295.8	70.7	175.0	206.0	40MS	TR-R	55.0	28.0
18	FITIC 62	MEXICO	2295.8	66.9	176.0	210.0	TR-R	TR-R	80.0	29.0
40	VICTOR I	ITALY	2283.5	70.1	177.0	208.0	5MR	5MR	70.0	28.0
29	MEXICO 120	AUSTRALIA	2246.4	72.6	174.0	206.0	TR-R	0	45.0	28.0
10	HIRA	INDIA	2203.2	75.1	174.0	209.0	TR-MS	TR-MR	55.0	33.0
7	EI 2288	TUNISIA	2160.0	78.0	167.0	205.0	TR-R	0	90.0	30.0
15	LR64-NICB × AN 38	AUSTRALIA	2086.0	75.8	176.0	206.0	TR-R	0	55.0	30.0
17	AFIANA 66	TUNISIA	2079.8	76.1	178.0	213.0	0.0	0	105.0	33.0
36	JARAL 'S'	ARGENTINA	2036.6	72.1	175.0	207.0	10MS	TR-R	80.0	26.5
22	ZAMBEZI	RHODESIA	2024.3	74.3	177.0	209.0	TR-MR	TR-MR	70.0	27.0
41	SONALIKA	INDIA	2018.1	75.0	170.0	206.0	TR-R	0	95.0	37.0
28	VECORA 70	MEXICO	1999.6	71.8	176.0	205.0	TR-R	TR R	55.0	30.0
43	CHANAE 70	PAKISTAN	1950.2	71.2	174.0	206.0	0	5MR	75.0	30.0
47	CARAZINHO	BRAZIL	1937.9	75.9	176.0	210.0	10MS	TR-MR	120.0	33.0
27	SONORA 64-K1. REND.	ARGENTINA	1832.9	72.7	170.0	205.0	TR-R	TR-R	80.0	30.0
16	EI-2290	TUNISIA	1826.8	73.5	174.0	208.0	TR-R	0	80.0	30.0
38	UP 301	INDIA	1826.8	70.6	176.0	208.0	TR-MR	TR-R	50.0	30.0
39	CHECTI LERMA	INDIA	1808.2	74.9	176.0	208.0	TR-R	TR-R	80.0	30.0
13	MARA × SUPREMO-MENTANA-MCM	CHILE	1765.0	75.2	177.0	210.0	TR-R	5MR	100.0	31.0
31	CAJEME 71	MEXICO	1734.2	72.2	175.0	205.0	5R	0	50.0	28.0
14	MEX 220	IRAQ	1728.0	73.0	175.0	208.0	TR-R	TR-R	85.0	30.0
35	PATO ARGENTINO	ARGENTINA	1721.8	73.5	176.0	206.0	TR-R	TR-MR	75.0	24.0
20	POTAM 70	MEXICO	1651.0	72.2	167.0	204.0	TR-R	0	70.0	28.0
30	HAZERA-2152	ISRAEL	1598.4	71.9	169.0	204.0	TR-R	0	65.0	33.0
9	TOCLIFEN 'S'	CHILE	1505.8	74.0	174.0	211.0	5MS	0	75.0	27.0
26	INIA 66	MEXICO	1495.7	76.5	168.0	204.0	TR-R	5MR	75.0	30.0
34	EI-2281	TUNISIA	1495.7	73.5	177.0	208.0	0	TR-R	70.0	26.0
21	PERJAMO 62	MEXICO	1444.1	74.0	172.0	205.0	TR-R	0	65.0	32.0
42	GIZA 155	EGYPT	1431.8	74.2	173.0	208.0	0	TR-MR	95.0	30.0
33	CABECIC	ARGENTINA	1314.5	74.1	176.0	208.0	0	0	105.0	26.0
19	BE-INIA	MEXICO	1296.0	74.5	175.0	208.0	TR-R	TR-R	50.0	28.0
24	TOCAFI 66	MEXICO	1191.1	72.6	176.0	207.0	TR-R	TR-R	70.0	23.0
23	CALIDAC	MEXICO	962.7	74.5	176.0	208.0	TR-R	0	60.0	25.0
		GRAND MEAN	2185.6	74.0	174.8	207.7	3.1	1.0	83.4	29.4

STANDARD ERROR OF GRAND MEAN 48.2
COEFFICIENT OF VARIATION 27.0%
LSD VARIETY MEANS 5 PC 964.7

CORRELATIONS

YIELD KG/HA							
TEST WEIGHT	0.27						
DAYS TO FLOWER	0.25	-0.02					
DAYS TO MATURITY	0.42**	0.14	0.69**				
STRIPE RUST	0.53**	-0.01	0.10	0.18			
LEAF RUST	0.63**	0.09	0.18	0.28*	0.52**		
HEIGHT CM.	0.33*	0.21	0.28*	0.47**	-0.03	0.28*	
1000 GRN WGT GRMS	0.15	-0.02	-0.09	0.12	-0.03	0.22	0.51

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

ADANA EXPERIMENT STATION
COOPERATORS EFCL ALKLS

LATITUDE 036 50'N
LONGITUDE 035 20'E
ELEVATION +00020 M.ABOVE S.L.

DATE PLANTED 11/15/71
DATE HARVESTED 05/25/72
AMOUNT OF MOISTURE 0283 MM

NITROGEN 080.0 KG/HA
PHOSPHORUS 055.0 KG/HA
POTASSIUM 000.0 KG/HA

DRY WEATHER IN MARCH AND APRIL. GOOD RAINS IN MAY AND LATE APRIL. LOW DISEASE DEVELOPMENT. INSECT AND PEST PROBLEMS NOT REPORTED. GRASS PROBLEMS, ESPECIALLY PHALARIS. LOCAL CHECK MARA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	LODGING	SEPTORIA SPP.	PLANT STAND
14	MEX 226	IRAQ	5582.4	78.3	23.3	70.2	-
5	TOCLIFEN 'S'	CHILE	4761.7	75.5	0.0	70.2	80.0
15	EE-INIA	MEXICO	4707.5	78.3	0.0	88.7	-
22	ZAMBEZI	RHODESIA	4603.4	76.1	30.0	88.7	-
4	TANORI 71	MEXICO	4570.1	76.0	0.0	56.1	70.0
18	FITIC 62	MEXICO	4465.5	71.1	36.6	73.5	70.0
7	BT 228E	TUNISIA	4457.6	77.5	1.6	85.0	-
16	ET-228E	TUNISIA	4415.5	78.0	6.6	81.3	-
12	VICAR 71	MEXICO	4332.6	74.6	0.0	88.7	-
48	NAYAB 70	PAKISTAN	4070.1	75.5	20.0	52.4	-
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3888.8	75.5	0.0	52.4	-
50	LOCAL CHECK / 6.6 CRS. / PACKET /		3749.3	75.0	33.3	40.6	-
10	FIRA	INDIA	3678.5	76.8	0.0	85.0	-
19	LR64-NIOB X AN 3E	AUSTRALIA	3657.7	78.2	6.6	55.4	80.0
47	CARRAINFO	BRAZIL	3491.1	76.1	36.5	48.0	-
6	T-64-2-W	TUNISIA	3478.6	73.8	46.6	85.0	-
46	KALYANSONA 227	INDIA	3355.2	77.8	43.3	81.3	-
2	OFFIS	U.S.A.	3345.2	74.8	63.3	51.7	-
13	MARA X SUPREMO-MONTANA-MCM	CHILE	3251.1	75.6	50.0	33.2	-
20	FOTAM 70	MEXICO	3220.3	76.2	0.0	81.3	-
35	OFFOTI LERMA	INDIA	3124.5	0.0	10.0	56.1	-
1	ECOZA 55	COLOMBIA	3112.0	71.5	53.3	77.6	-
17	ARIANA 66	TUNISIA	3049.5	78.2	36.6	36.5	-
5	IAS 20 IASSUL	BRAZIL	2987.0	74.2	63.3	36.5	-
44	MEXICANO 1481	PORTUGAL	2957.8	0.0	76.6	85.0	-
49	DIAMONTES	ARGENTINA	2916.1	75.5	73.3	48.0	-
21	PERJANO 62	MEXICO	2916.1	74.7	26.6	81.3	-
40	VICTOR I	ITALY	2903.7	0.0	23.3	51.7	-
43	CHANAB 70	PAKISTAN	2887.0	0.0	3.3	88.7	-
3	NARO 63	COLOMBIA	2882.8	76.0	21.6	88.7	-
25	PATO ARGENTINO	ARGENTINA	2845.3	0.0	26.6	36.5	-
31	CAJEME 71	MEXICO	2832.8	0.0	1.6	66.5	80.0
42	GIZA 155	EGYPT	2803.7	0.0	40.0	55.8	-
8	ERA	U.S.A.	2751.2	74.3	53.3	44.3	-
29	MEXICO 120	AUSTRALIA	2720.3	0.0	0.0	62.8	80.0
24	TOBARI 66	MEXICO	2678.7	0.0	0.0	77.6	-
36	JARAL 'S'	ARGENTINA	2653.7	0.0	0.0	44.3	-
28	YECORA 70	MEXICO	2637.0	0.0	0.0	85.0	70.0
30	MAZURA-2152	ISRAEL	2632.9	0.0	13.3	88.7	-
38	LR 301	INDIA	2345.4	0.0	3.3	81.3	80.0
33	CAECTO	ARGENTINA	2278.8	0.0	76.6	70.2	-
27	SONORA 64-K1. REND.	ARGENTINA	2253.8	0.0	6.6	62.8	-
32	LUNDI	RHODESIA	2237.1	0.0	0.0	52.4	-
26	INIA 66	MEXICO	2166.3	0.0	6.6	73.5	80.0
41	SONALIKA	INDIA	2026.8	0.0	16.6	56.1	-
34	ET-2281	TUNISIA	2020.5	0.0	3.3	44.3	-
39	KLELOLEN	CHILE	1956.0	0.0	43.3	77.6	-
23	CALICAO	MEXICO	1924.6	0.0	36.6	51.7	-
45	MANITOL	CANADA	1612.2	74.5	63.3	51.7	-
37	MANITOL / INSENSITIVE /	CANADA	1508.0	0.0	40.0	77.6	-
		GRAND MEAN	3156.5	42.5	24.7	71.4	76.6
		STANDARD ERROR OF GRAND MEAN			1.2	1.1	
		COEFFICIENT OF VARIATION			62.0%	15.0%	
		LSD VARIETY MEANS 5 PC			25.0	22.2	

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.6744				
LODGING		-0.20	0.18			
SEPTORIA	SPP.	0.20	-0.06	-0.3844		
PLANT	STAND	0.08	-0.12	-0.3944	0.09	

* = SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 55 MIDDLE EAST TURKEY ADAPAZARI

AGRICULTURAL RESEARCH STATION, ADAPAZARI.
COOPERATORS SADETTIN DEMIROZ.

LATITUDE	040 47'N	DATE PLANTED	12/28/71	NITROGEN	160.0 KG/HA
LONGITUDE	025 38'E	DATE HARVESTED	07/06/72	PHOSPHORUS	080.0 KG/HA
ELEVATION	00033 M.ABOVE S.L.	AMOUNT OF MOISTURE	0646 MM	POTASSIUM	040.0 KG/HA

WEATHER USUALLY UNDER RAINY CONDITIONS. NATURAL EPIPHYTOTICS. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK MENTANA.

IETY EP	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	SHATTER-ING	1000 GRN WGT GRMS
	BENJAMO 62	MEXICO	6516.0	70.7	139.0	153.0	0	10MS	95.0	76.6	1.6	40.5
	CHANAB 70	PAKISTAN	6321.5	70.6	140.0	151.0	0	40S	86.6	76.6	5.0	42.9
	INIA 66	MEXICO	6159.3	74.1	144.0	155.0	0	0	90.0	73.3	0.0	45.6
	VICAM 71	MEXICO	6154.9	66.0	141.0	154.0	0	0	65.0	36.6	3.3	38.1
	BT 2266	TUNISIA	6154.9	72.0	132.0	154.0	0	TR	90.0	75.0	0.0	41.3
	CAPAZINHO	BRAZIL	6121.6	73.1	133.0	151.0	0	0	120.0	76.6	0.0	43.0
	POTAM 70	MEXICO	6110.4	68.5	133.0	153.0	0	TR	90.0	73.3	3.3	44.0
	KALYANSONA 227	INDIA	6110.4	70.3	135.0	151.0	0	40S	91.6	66.6	0.0	33.5
	BE-INIA	MEXICO	6071.6	71.5	141.0	153.0	0	TR	70.0	30.0	0.0	44.3
	TOCUIPEN 'S'	CHILE	5559.3	72.1	134.0	153.0	0	0	81.6	70.0	0.0	34.3
	LR64-NICB X AN 3E	AUSTRALIA	5577.1	71.5	133.0	154.0	0	60S	83.3	63.3	1.6	33.2
	PUELCUEN	CHILE	5566.0	72.3	131.0	152.0	0	0	111.6	60.0	0.0	44.0
	SONALIKA	INDIA	5521.6	71.0	142.0	152.0	0	TR	94.6	63.3	0.0	49.3
	CAJEME 71	MEXICO	5521.6	73.9	128.0	153.0	0	0	71.6	66.6	0.0	45.6
	MEXICANO 1481	PORTUGAL	5471.6	68.7	138.0	151.0	0	80S	86.6	63.3	0.0	36.4
	PIPA	INDIA	5438.2	65.7	139.0	154.0	0	10MS	68.3	56.6	0.0	41.7
	HAZERA-2152	ISRAEL	5354.9	68.9	137.0	151.0	30S	90S	81.6	70.0	0.0	41.4
	MAPA X SUPREMO-MENTANA-MCM	CHILE	5659.4	71.9	132.0	155.0	0	70S	110.0	60.0	1.6	40.0
	YECORA 70	MEXICO	5677.2	65.5	139.0	151.0	0	0	60.0	63.3	0.0	46.5
	IAS 20 IASSUL	BRAZIL	5671.6	70.6	131.0	153.0	0	0	133.6	66.6	0.0	35.9
	T-64-2-W	TUNISIA	5654.9	71.4	129.0	153.0	0	80S	100.0	83.3	0.0	40.5
	FITIC 62	MEXICO	5643.8	68.9	134.0	153.0	0	90S	100.0	53.3	0.0	36.4
	LR 301	INDIA	5643.8	70.5	143.0	151.0	0	0	65.0	18.3	0.0	44.8
	MEXICO 120	AUSTRALIA	5559.4	72.7	128.0	152.0	0	30MS	64.0	40.0	0.0	41.6
	VICTOR 1	ITALY	5538.3	65.9	143.0	165.0	0	60S	78.3	66.6	0.0	32.5
	NAYAB 70	PAKISTAN	5310.5	65.7	134.0	166.0	0	100S	96.6	60.0	0.0	41.7
	NARC 63	COLOMBIA	5259.4	65.5	138.0	151.0	0	80S	110.0	68.3	1.6	39.1
	CABECIC	ARGENTINA	5266.1	75.9	128.0	150.0	0	0	120.0	83.3	0.0	35.2
	CHHOTI LERMA	INDIA	5255.0	75.3	135.0	155.0	0	TR	101.6	63.3	0.0	41.4
	PATO ARGENTINO	ARGENTINA	5249.4	67.9	145.0	155.0	5MR	20MS	91.6	66.6	0.0	36.0
	BT-2256	TUNISIA	5159.4	72.2	138.0	153.0	0	0	93.3	60.0	0.0	44.2
	CALILAC	MEXICO	5110.5	75.1	138.0	154.0	0	50S	86.6	76.6	0.0	37.2
	JARAL 'S' / LEE-SK-MARA	INDONESIA	5055.0	72.2	137.0	152.0	0	5MS	73.3	66.6	0.0	32.5
	TANORI 71	MEXICO	4966.1	74.9	134.3	153.3	10MR	0	80.0	63.3	0.0	42.7
	MEX 226	IRAQ	4866.1	73.4	141.0	152.0	0	0	100.0	53.3	0.0	43.7
	LUNDI	INDONESIA	4843.9	71.4	139.0	152.0	0	60S	73.3	66.6	0.0	33.6
	AFIANA 66	TUNISIA	4677.3	75.0	140.0	154.0	0	60S	103.3	73.3	0.0	40.0
	ERA	U.S.A.	4677.3	72.3	140.0	153.0	0	0	93.3	70.0	0.0	30.6
	ZAMBEZI	RHODESIA	4638.4	70.3	144.0	154.0	40S	5MS	91.6	72.3	0.0	32.6
	BONZA 55	COLOMBIA	4605.0	70.1	133.0	166.0	5MS	60S	121.6	53.3	0.0	38.2
	SONORA 64-K1. REND.	ARGENTINA	4493.9	72.3	134.0	152.0	0	0	91.6	63.3	0.0	40.2
	BT-2281	TUNISIA	4466.2	72.1	135.0	152.0	0	60S	85.0	73.3	0.0	37.5
	CHRIS	U.S.A.	4368.4	74.6	139.0	150.0	0	0	128.3	53.3	0.0	35.1
	TOBARI 66	MEXICO	4177.3	75.0	132.0	154.0	0	0	80.0	66.6	0.0	40.1
	PIAMONTES	ARGENTINA	3977.3	74.5	134.0	151.0	0	40S	115.0	60.0	0.0	37.3
	PANTOL / INSENSITIVE /	CANADA	3666.2	72.1	139.6	152.6	0	TR	95.0	60.0	0.0	33.5
	JARAL 'S'	ARGENTINA	3668.5	72.3	140.0	156.0	0	5MR	86.6	76.6	0.0	39.3
	CIZA 155	EGYPT	3259.6	70.2	132.0	153.0	0	80S	106.6	91.6	0.0	41.3
	PANTOL	CANADA	3144.1	72.1	134.0	165.0	5MR	0	128.3	50.0	0.0	30.0
	LOCAL CHECK / 6.6 CMS. / PACKET /		2555.2	65.8	128.0	151.0	0	80S	91.6	63.3	0.0	31.4
		GRAND MEAN	5224.3	71.6	136.8	152.4	1.7	27.9	92.6	70.5	0.3	39.2
		STANDARD ERROR OF GRAND MEAN	41.7	0.1	0.0	0.0	0.0	0.7	0.8	0.9	0.1	0.2
		COEFFICIENT OF VARIATION	9.7%	2.9%	0.4%	0.0%	67.0%	32.1%	11.0%	16.4%	512.7%	6.5%
		LSD VARIETY MEANS 5 PC	835.8	3.4	0.5	0.3	1.8	14.6	16.6	18.9	3.0	4.1

CORRELATIONS

YIELD KG/HA										
TEST WEIGHT	-0.08									
DAYS TO FLOWER	0.17	-0.01								
DAYS TO MATURITY	0.11	0.22	0.08							
STRIPE RUST	-0.04	-0.19	0.22	0.02						
LEAF RUST	-0.09	-0.40**	-0.25	-0.26	0.07					
HEIGHT CM.	-0.28*	0.22	-0.38**	-0.21	-0.04	0.03				
LODGING	-0.22	0.11	-0.37**	-0.15	0.02	0.25	0.70			
SHATTERING	0.35*	-0.32*	0.03	0.05	-0.07	0.08	-0.09	-0.03		
1000 GRN WGT GRMS	0.44**	0.12	0.06	0.16	-0.14	-0.20	-0.18	-0.32*	0.10	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 56 MIDDLE EAST TURKEY IZMIR

REGIONAL AGRICULTURAL RESEARCH INSTITUTE.
COOPERATORS DR. B.DEVECIOGLU, N.DINCER, C.KONZAK.

LATITUDE 038 35'N
LONGITUDE 027 04'E
ELEVATION 00012 M.ABOVE S.L.

DATE PLANTED 11/03/71
DATE HARVESTED 06/10/72
AMOUNT OF MOISTURE 0427 MM

NITROGEN 150.0 KG/HA
PHOSPHORUS 080.0 KG/HA
POTASSIUM 000.0 KG/HA

RAINFALL 200 MM. LESS THAN THE NORMAL. LOW RAINFALL IN MARCH AND APRIL. VERY SEVERE STRIPE AND STEM RUST, MODERATE SEPTORIA AND LEAF RUST. INSECT PROBLEM NOT REPORTED. WEEDS AND BIRDS WERE PROBLEMS. LOCAL CHECK BENJAMO 62. GRAIN TYPE SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	HEIGHT CM.	LODGING	GRAIN TYPE
43	CHANAB 70	PAKISTAN	5488.3	139.0	40S-60S	110.0	-	3
30	HAZERA-2152	ISRAEL	5471.6	135.0	20S-20S	113.0	-	2
20	POTAM 70	MEXICO	5116.6	132.0	10S-60S	95.0	-	B2+
24	TOBARI 66	MEXICO	5166.6	136.0	5S-10S	112.0	-	2
10	PIRA	INDIA	5031.6	134.0	30S-60S	80.0	-	B2
23	CALIDAC	MEXICO	4975.0	140.0	30S-60S	105.0	40.0	2-
42	CIZA 155	EGYPT	4918.3	142.0	0	116.0	-	B2-
28	YECORA 70	MEXICO	4868.3	135.0	5S-10S	90.0	-	B2+
41	SONALIKA	INDIA	4816.6	132.0	10S-20S	115.0	-	B2+
29	MEXICO 120	AUSTRALIA	4803.3	137.0	60S-80S	95.0	-	B2-
19	LR64-NIOP X AN 3E	AUSTRALIA	4743.3	142.0	00	96.0	-	2-
25	FATC ARGENTINO	ARGENTINA	4715.0	141.0	0	105.0	70.0	2-
21	BENJAMO 62	MEXICO	4620.0	140.0	60S-80S	110.0	80.0	2-
15	EE-INIA	MEXICO	4608.3	136.0	10MS	90.0	-	B2+
2	CHRIS	U.S.A.	4555.0	146.0	20S-40S	117.0	100.0	2-
12	MARA X SUPREMO-MENTANA-MGM	CHILE	4583.3	141.0	TRMS-TMS	127.0	40.0	2
7	BT 2288	TUNISIA	4515.0	133.0	60S-80S	118.0	-	2
35	HUELGUEN	CHILE	4456.6	143.0	20S-20S	120.0	60.0	2
17	ARIANA 66	TUNISIA	4443.3	142.0	TRMSTMS	128.0	60.0	2+
6	T-64-2-W	TUNISIA	4435.0	142.0	5S-5S	121.0	80.0	2-
31	CALEME 71	MEXICO	4426.6	160.0	5S-20S	80.0	-	2+
50	LOCAL CHECK / 6.6 CMS. / PACHET /		4388.3	142.0	40S-60S	110.0	20.0	2
37	MANITOU / INSENSITIVE /	CANADA	4271.6	135.0	60S-100S	123.0	-	2-
44	MEXICANO 1481	PORTUGAL	4246.6	143.0	40S-60S	113.0	50.0	2=
4	TANORI 71	MEXICO	4226.6	136.0	5S-10S	105.0	-	2
46	INIA 66	MEXICO	4158.3	133.0	TR-20S	105.0	-	2+
36	LR 3C1	INDIA	4161.6	139.0	TR-20S	85.0	-	B2+
1	BONZA 55	COLOMBIA	4138.3	140.0	10S-20S	118.0	50.0	2-
40	VICTOR I	ITALY	4088.6	147.0	30S-30S	103.0	-	2-
5	TOLLIFER 'S'	CHILE	4080.0	140.0	20S-30S	110.0	40.0	2-
27	SONORA 64-K1. REND.	ARGENTINA	4076.3	139.0	80S-100S	110.0	-	3
22	ZAMBEZI	PAKISTAN	4006.6	140.0	80S-100S	105.0	-	4
11	JARAL 'S' / LEE-SK-MARA	PAKISTAN	3951.6	133.0	80S-100S	100.0	-	4
45	PIAMONTES	ARGENTINA	3546.6	149.0	60S-60S	123.0	50.0	2
12	VICAM 71	MEXICO	3848.3	137.0	30MS-80S	85.0	-	B2
8	EFA	U.S.A.	3833.3	155.0	60S-60S	110.0	50.0	3
48	NAYAB 70	PAKISTAN	3800.0	142.0	30S-40S	117.0	40.0	2
14	MEX 226	IRAQ	3533.3	139.0	60S-100S	118.0	-	2=
34	BT-2281	TUNISIA	3490.0	140.0	10S-20S	100.0	-	B2
18	PITIC 62	MEXICO	3460.0	140.0	30S-60S	116.0	80.0	2=
46	KALYANSONA 227	INDIA	3370.0	147.0	80S-100S	108.0	50.0	2-
35	CHECTI LERMA	INDIA	3303.3	142.0	5S-5S	115.0	-	B2
3	NARC 63	COLOMBIA	3271.6	134.0	1-10MR	120.0	100.0	B2
47	CARAZINHO	BRAZIL	3156.3	143.0	20S-60S	125.0	100.0	B2
16	BT-2258	TUNISIA	3055.0	140.0	60S-100S	114.0	70.0	3
33	CABECTO	ARGENTINA	3038.3	143.0	60S-100S	126.0	80.0	2-
32	LUNDI	PAKISTAN	2901.6	137.0	40S-60S	90.0	-	2-
9	IAS 20 IASSLL	BRAZIL	2645.0	148.0	10S-10S	130.0	100.0	2-
49	MANITOU	CANADA	2643.3	108.0	40S-100S	120.0	60.0	B2=
36	JARAL 'S'	ARGENTINA	2590.0	142.0	60S-80S	100.0	-	2=
		GRAND MEAN	4124.4	139.6	38.0	108.9	72.6	
		STANDARD ERROR OF GRAND MEAN	105.2					
		COEFFICIENT OF VARIATION	31.2%					
		LSD VARIETY MEANS 5 PC	2104.3					

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	-0.02				
STRIPE	RUST	-0.32*	-0.08			
HEIGHT	CM.	-0.23	0.02	0.02		
LODGING		-0.35**	0.26	0.02	0.55**	
GRAIN	TYPE	0.00	0.00	0.00	0.00	0.00

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 57 NORTH AMERICA CANADA ALBERTA

EDMONTON.
COOPERATORS DR. N.C. ERICCS.

LATITUDE 053 34'N DATE PLANTED 05/11/72 NITROGEN 007.0 KG/HA
LONGITUDE 113 31'W DATE HARVESTED 09/12/72 PHOSPHORUS 018.0 KG/HA
ELEVATION +00676 M.ABOVE S.L. AMOUNT OF MOISTURE 0984 MM POTASSIUM 000.0 KG/HA

DRY WEATHER IN MAY. COOL AND VERY DAMP DURING THE REST OF THE SEASON. NO SERIOUS DISEASE EXCEPT A HEAVY LEAF RUST. INSECT OR PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK NEEPAWA.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
36	JARAL 'S'	ARGENTINA	7830.9	80.4	53.6	111.3	85.3	39.0
21	BENJAMIN 62	MEXICO	7221.4	81.7	53.6	112.3	84.0	42.5
35	CHECTI LERMA	INDIA	7195.2	83.0	52.6	113.3	82.6	37.5
4	TANORI 71	MEXICO	7077.1	81.0	47.6	106.0	74.0	37.0
25	PATO ARGENTINO	ARGENTINA	7026.0	83.6	50.0	115.0	76.5	36.0
8	ERA	U.S.A.	6960.4	82.0	59.3	113.3	85.3	35.0
18	PITIC 62	MEXICO	6854.0	73.3	59.6	118.3	93.3	33.5
44	MEXICANO 1481	PORTUGAL	6770.9	77.2	58.6	115.6	88.6	38.0
14	MEX 226	IRAQ	6735.9	83.0	50.0	113.0	87.0	43.5
28	VECORA 70	MEXICO	6700.9	79.7	49.3	109.6	60.3	44.0
42	CIZA 155	EGYPT	6695.1	81.0	53.6	118.3	92.6	44.5
39	PELELGEN	CHILE	6652.2	81.0	56.3	114.3	98.6	39.0
41	SONALIKA	INDIA	6673.2	81.7	48.3	114.3	81.0	50.0
46	KALYANSONA 227	INDIA	6654.3	79.1	56.0	117.3	81.6	35.0
27	SONORA 64-K1. REND.	ARGENTINA	6569.7	82.3	49.3	110.6	83.3	41.5
30	MAZURA-2152	ISRAEL	6546.4	78.5	57.3	114.6	82.6	38.5
34	ET-2281	TUNISIA	6534.7	82.3	50.6	116.6	82.6	38.5
1	BONZA 55	COLOMBIA	6429.7	79.1	61.3	119.3	118.3	37.0
3	NARC 63	COLOMBIA	6423.9	79.7	47.6	106.3	91.6	40.5
43	CHANAB 70	PAKISTAN	6410.8	82.3	48.6	110.3	79.0	42.0
16	ET-2296	TUNISIA	6353.9	81.7	56.6	113.3	91.0	42.5
7	ET 2288	TUNISIA	6305.8	82.3	50.3	111.6	79.0	38.0
20	POTAM 70	MEXICO	6302.9	81.0	45.6	103.6	72.6	45.0
47	CARAZINHO	BRAZIL	6221.2	80.4	66.3	120.6	127.0	42.0
45	PIAMONTES	ARGENTINA	6100.2	83.0	62.3	118.0	114.0	38.5
29	MEXICO 120	AUSTRALIA	6053.6	78.5	57.6	114.0	62.0	36.5
31	CALENE 71	MEXICO	5963.2	80.4	57.0	113.6	69.6	50.1
13	MARA X SUPREMO-MENTANA-MCM	CHILE	5951.5	79.7	68.3	120.0	115.0	37.0
6	T-64-3-W	TUNISIA	5944.2	77.8	55.3	123.3	95.0	39.5
24	TOBARI 66	MEXICO	5916.5	82.3	52.6	111.0	80.6	40.0
38	LR 301	INDIA	5907.8	79.7	53.0	108.0	85.3	43.0
5	TOCUIFEN 'S'	CHILE	5877.1	81.0	48.3	115.0	74.0	37.0
10	PIRA	INDIA	5872.8	79.1	47.6	107.6	58.6	39.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	5855.3	77.2	50.6	112.6	67.0	29.5
22	ZAMBEZI	RHODESIA	5776.5	78.5	52.6	113.3	76.6	31.5
48	NAYAB 70	PAKISTAN	5770.7	79.7	48.3	109.0	85.0	42.5
40	VICTOR I	ITALY	5762.0	76.5	70.0	123.3	78.3	31.5
26	INIA 66	MEXICO	5712.4	83.6	48.0	109.3	75.0	44.0
19	LR64-N108 X AN 3E	AUSTRALIA	5556.4	78.5	56.3	114.6	72.6	28.5
33	CABECIC	ARGENTINA	5547.6	81.7	65.0	121.3	121.6	33.5
32	LUNDI	RHODESIA	5530.1	77.8	54.6	113.3	69.3	37.5
12	VICAM 71	MEXICO	5482.0	77.8	53.6	107.0	55.3	34.5
37	MANITOU / INSENSITIVE /	CANADA	5461.6	83.0	50.0	111.3	97.3	34.5
5	IAS 20 IASSUL	BRAZIL	5461.6	79.1	63.0	114.3	134.3	40.5
15	EE-INIA	MEXICO	5445.6	82.3	49.0	110.3	58.6	39.5
2	CHRIS	U.S.A.	5435.4	81.0	56.3	118.0	110.3	32.5
45	MANITOU	CANADA	5327.5	81.7	56.3	111.6	98.6	33.0
50	LOCAL CHECK / 6.6 OPS. / PACKET		5213.8	82.3	57.0	113.0	107.6	35.5
23	CALIDAD	MEXICO	5174.4	82.3	51.0	110.3	72.6	36.5
17	ARIANA 66	TUNISIA	-	-	82.0	-	92.0	0.0
		GRAND MEAN	6165.5	80.5	55.0	113.6	85.5	38.4
	STANDARD ERROR OF GRAND MEAN		63.2		0.0	0.1	0.3	
	COEFFICIENT OF VARIATION		12.3%		2.1%	1.8%	4.3%	
	LSD VARIETY MEANS 5 PC		1251.5		1.8	3.3	6.0	

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.
TEST WEIGHT	0.81**				
DAYS TO FLOWER	-0.52**	-0.60**			
DAYS TO MATURITY	0.80**	0.93**	-0.37**		
HEIGHT CM.	-0.07	-0.03	0.53**	0.05	
1000 GRN WGT GRMS	0.73**	0.78**	-0.55**	0.65**	-0.09

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 58 NORTH AMERICA CANADA MANITOBA

DEPT. OF AGRICULTURAL RESEARCH STATION.
COOPERATORS A. B. CAMPBELL.

LATITUDE 050 00'N
LONGITUDE 097 00'W
ELEVATION +00235 M.ABOVE S.L.

DATE PLANTED 05/06/72
DATE HARVESTED 05/11/72
AMOUNT OF MOISTURE 0203 MM

NITROGEN 000.0 KG/HA
PHOSPHORUS 000.0 KG/HA
POTASSIUM 000.0 KG/HA

INADEQUATE RAINFALL FOR BEST YIELDS. TEMPERATURES IN MAY AND JUNE ABOVE NORMAL, IN JULY AND AUGUST BELOW NORMAL. RUST READINGS ARE FROM INOCULATED AND IRRIGATED DISEASE NURSERY. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK CLEANED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	SHATTERING HEAD	1000 GRN WGT GRMS
26	INIA 66	MEXICO	1446.3	83.5	95.0	40M	TR	68.6	22.1	20.0	10.0	44.1
31	CAJEME 71	MEXICO	1424.6	82.3	99.6	TR-5MR	5M	39.3	10.4	1.0	1.0	46.7
28	YECORA 70	MEXICO	1396.5	79.8	98.0	5M	5MR	55.6	14.7	1.0	1.0	43.6
30	MAZURA-2152	ISRAEL	1379.4	81.0	98.4	TR	30M	72.6	22.1	0.0	0.0	40.2
15	EE-INIA	MEXICO	1375.5	82.3	94.6	1R	TR	52.3	14.7	1.0	1.0	43.0
12	VICAM 71	MEXICO	1355.8	80.4	96.3	TR	TR	53.0	14.7	1.0	1.0	37.2
38	LR 301	INDIA	1345.3	81.0	94.6	1R	TR	50.3	11.0	1.0	1.0	42.7
42	CIZA 155	EGYPT	1329.0	82.3	98.6	TR-10MR	1R	86.6	25.8	0.0	0.0	42.8
8	ERA	U.S.A.	1325.7	83.5	98.6	TR	TR	76.0	25.8	0.0	0.0	38.0
41	SONALIKA	INDIA	1321.1	82.3	97.0	40MR	TR	72.0	22.1	1.0	1.0	46.2
36	JARAL 'S'	ARGENTINA	1315.1	81.0	97.6	1R	50M	70.0	22.1	0.0	0.0	40.2
25	FATO ARGENTINO	ARGENTINA	1294.2	83.5	95.0	TR	5M	65.0	22.1	0.0	0.0	32.7
35	CHOTI LERMA	INDIA	1287.7	82.9	97.3	TR-30M	TR	75.6	25.8	1.0	1.0	41.5
16	ET-2256	TUNISIA	1270.6	82.5	97.3	1R	30MR	77.6	22.1	0.0	0.0	45.0
4	TANORI 71	MEXICO	1266.0	82.3	94.0	5MR	5R	70.0	14.7	10.0	10.0	40.0
40	VICTOR 1	ITALY	1264.7	79.1	105.0	TR	40M	68.3	22.1	0.0	0.0	35.6
39	FLEILEN	CHILE	1256.2	81.0	99.0	1R-30MR	TR	85.6	25.8	0.0	0.0	39.1
44	MEXICANO 1481	PORTUGAL	1256.9	78.5	100.3	1R-20M	40M	79.0	29.5	0.0	0.0	37.3
0	LOCAL CHECK / 6.6 CMS. / PACKET /		1254.9	82.3	98.6	TR	TR	93.3	29.5	0.0	0.0	37.2
34	ET-2281	TUNISIA	1245.7	82.9	97.6	TR-10M	1R	72.6	22.1	0.0	0.0	39.6
32	LUNDI	RHODESIA	1236.6	79.9	95.0	TR	20M	62.0	11.0	0.0	0.0	39.6
43	CHANAE 70	PAKISTAN	1221.5	81.0	95.6	3M	70S	70.3	22.1	1.0	1.0	39.8
46	NAYAB 70	PAKISTAN	1205.8	81.0	95.0	70S	80S	72.0	22.1	0.0	0.0	42.8
47	SONORA 64-K1. REND.	ARGENTINA	1198.6	82.9	92.6	1R-5MR	5R	72.0	22.1	20.0	20.0	41.5
10	PIRA	INDIA	1196.6	81.6	93.6	30M	50S	53.3	22.1	1.0	1.0	40.8
21	PENJAMO 62	MEXICO	1194.6	81.0	96.6	1R-10MR	50S	76.3	36.9	1.0	1.0	41.1
20	POTAM 70	MEXICO	1188.1	82.3	88.3	5R-20MR	5R-20M	68.0	14.7	10.0	10.0	45.0
46	KALYANSONA 227	INDIA	1186.1	82.9	96.3	5MR	30M	76.6	22.1	1.0	1.0	40.2
3	NARC 63	COLOMBIA	1176.9	79.8	90.0	1R-20MR	2R	84.0	22.1	20.0	10.0	36.8
6	T-64-2-W	TUNISIA	1168.4	81.0	101.0	3MR	50MR	91.6	22.1	0.0	0.0	40.0
7	ET 2288	TUNISIA	1165.8	82.3	96.3	1R	20M	75.0	22.1	1.0	1.0	38.5
9	TOCLIFEN 'S'	CHILE	1159.9	82.9	97.0	1R	20MR	68.0	14.7	0.0	0.0	36.5
23	CALICAO	MEXICO	1152.0	83.5	93.3	5M	50MR	72.0	29.5	1.0	1.0	38.2
15	LR64-NICB X AN 3E	AUSTRALIA	1136.3	82.3	98.0	10M-50M	60M	70.0	18.4	0.0	0.0	34.5
14	MEX 228	IRAQ	1129.1	83.5	93.6	3M	30M	73.6	22.1	5.0	5.0	43.3
18	PITIC 62	MEXICO	1108.8	77.3	99.3	5M	40M	78.6	25.8	0.0	0.0	38.5
13	MARA X SUPREME-MENTANA-MCM	CHILE	1097.0	81.0	102.3	1R	10M	97.3	36.9	1.0	1.0	40.0
22	ZAMBEZI	RHODESIA	1081.9	82.3	98.3	20M	60S	71.3	22.1	0.0	0.0	37.0
24	TOBARI 66	MEXICO	1076.7	83.5	96.3	TR	2R	72.0	22.1	0.0	0.0	40.8
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	1055.7	79.8	93.0	20M	TR	57.6	11.0	1.0	1.0	32.0
1	BONZA 55	COLOMBIA	1055.0	81.0	101.0	TR	TR	98.3	25.8	0.0	0.0	37.5
45	FLAMENTES	ARGENTINA	1030.8	82.3	99.0	TR	20M	94.0	29.5	0.0	0.0	38.3
29	MEXICO 120	AUSTRALIA	992.1	80.4	99.0	TR	70S	52.3	14.7	0.0	0.0	35.3
37	MANITOU / INSENSITIVE /	CANADA	954.8	81.0	93.0	50M	40M	87.6	40.6	0.0	0.0	32.5
5	IAS 20 IASSUL	BRAZIL	954.8	77.3	98.3	TR	40M	103.3	51.7	5.0	5.0	38.3
7	CHRIS	U.S.A.	949.5	81.6	99.0	1M	TR	101.6	55.4	0.0	0.0	33.2
17	ARIANA 66	TUNISIA	942.3	79.8	125.0	TR	TR	98.3	22.1	0.0	0.0	33.5
47	CARAZINHO	BRAZIL	902.3	81.0	105.0	1R	10M	102.0	40.6	0.0	0.0	41.1
33	CABOTO	ARGENTINA	882.0	80.4	104.3	TR	20M	102.0	40.6	0.0	0.0	33.1
45	MANITOU	CANADA	851.9	81.0	97.3	50M	5M	97.6	33.2	0.0	0.0	33.3
		GRAND MEAN	1181.4	81.4	97.7	5.8	15.2	76.1	24.5	2.0	1.6	39.5
	STANDARD ERROR OF GRAND MEAN		9.1		0.0			0.1	0.4			
	COEFFICIENT OF VARIATION		9.5%		1.0%			2.6%	22.4%			
	LSD VARIETY MEANS 5 PC		183.4		1.6			3.3	9.0			

CORRELATIONS

YIELD KG/HA										
TEST WEIGHT	0.27*									
DAYS TO MATURITY	-0.30*	-0.29*								
LEAF RUST	-0.07	0.00	-0.20							
STEM RUST	-0.15	-0.19	-0.07	0.40**						
HEIGHT CM.	-0.61**	-0.17	0.45**	-0.03	-0.18					
LODGING	-0.55**	-0.18	0.22	0.02	0.01	0.78**				
SHATTERING	0.16	0.11	-0.37**	0.03	-0.20	-0.06	-0.10			
SHATTERING HEAD	0.12	0.13	-0.38**	-0.02	-0.19	-0.08	-0.11	0.93**		
1000 GRN WGT GRMS	0.59**	0.31*	-0.24	-0.02	-0.03	-0.28*	-0.27	0.18	0.21	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 59 NORTH AMERICA CANADA SASKATCHEWAN

SASKATOON, UNIVERSITY.
COOPERATORS C.R. FLCHES.

LATITUDE	052 00'N	DATE PLANTED	05/04/72	NITROGEN	006.0 KG/HA
LONGITUDE	106 00'W	DATE HARVESTED	08/26/72	PHOSPHORUS	012.0 KG/HA
ELEVATION	00500 M.ABOVE S.L.	AMOUNT OF MOISTURE	0172 MM	POTASSIUM	000.0 KG/HA

TEMPERATURES IN MAY AND JUNE ABOVE NORMAL. COOL IN JULY AND EARLY PART OF AUGUST. MODERATE DISEASE DEVELOPMENT. LIGHT BIRD DAMAGE IN ISOLATED PLOTS OF REP. 3. LOCAL CHECK NOT REPORTED. LEAF RUST SCALE: R= TR-5%, R- = 5% - 20%, MR= 20% - 40%, MS= 40% - 60%, S= 60% - 100%.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
44	MEXICANO 1481	PORTUGAL	4025.7	83.9	54.6	108.3	S	72.3	14.7	51.6
40	VICTOR I	ITALY	3774.5	83.6	64.6	113.3	MS	59.3	11.0	40.3
18	FITIC 62	MEXICO	3738.6	83.3	55.3	106.3	MR	66.3	18.4	43.5
17	ARIANA 66	TUNISIA	3681.2	78.2	-	-	S	83.6	-	39.2
35	HUELGUEN	CHILE	3668.7	84.6	53.0	102.6	MR	76.6	11.0	44.1
19	LR64-NIOB X AN 38	AUSTRALIA	3622.0	86.2	54.3	101.0	S	61.3	11.0	43.0
6	T-64-2-W	TUNISIA	3609.5	83.6	56.0	108.6	MS	76.0	11.0	49.8
36	JARAL 'S'	ARGENTINA	3564.4	83.6	52.3	104.3	R	63.3	11.0	45.5
13	MARA X SUPREMO-MENTANA-MCM	CHILE	3562.8	82.1	63.3	111.6	MR	92.0	11.0	43.0
1	ECONZA 55	COLOMBIA	3440.8	83.3	55.3	108.6	MS	89.6	11.0	45.3
8	ERA	U.S.A.	3356.5	86.8	55.6	107.0	R	66.3	11.0	42.5
30	MAZURA-2152	ISRAEL	3274.0	84.6	54.3	107.3	MR	67.3	11.0	51.5
46	KALYANSONA 227	INDIA	3216.6	85.5	54.0	102.6	MS	64.3	22.1	46.8
24	TOBARI 66	MEXICO	3216.6	84.6	51.3	101.0	R	67.0	14.7	45.6
25	PATO ARGENTINO	ARGENTINA	3177.1	85.9	51.3	100.6	R	60.6	14.7	41.0
22	ZAMBEZI	RHODESIA	3155.6	84.9	52.0	100.0	S	63.6	14.7	41.5
42	GIZA 155	EGYPT	3146.6	83.6	51.0	105.6	S	71.3	14.7	47.3
29	MEXICO 120	AUSTRALIA	3137.7	84.6	54.6	109.6	R	45.3	11.0	44.5
34	ET-2281	TUNISIA	3117.9	85.5	50.6	102.3	MR	63.3	11.0	47.8
31	CAJEME 71	MEXICO	3100.0	84.9	55.0	103.3	R	56.0	11.0	55.5
28	YECORA 70	MEXICO	3087.4	84.9	50.0	96.3	R	48.0	11.0	49.8
49	PIAMONTES	ARGENTINA	3078.5	85.1	56.0	108.3	MR	85.0	11.0	43.5
35	CHECTI LERMA	INDIA	3006.7	85.1	51.6	99.3	S	67.3	14.7	42.3
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3003.1	84.6	52.3	102.3	MS	79.0	22.1	37.0
9	TOGUIFEN 'S'	CHILE	2997.7	85.5	49.6	104.3	R	60.6	11.0	43.8
12	VICAM 71	MEXICO	2983.4	82.6	53.6	103.0	R	45.0	11.0	42.0
2	CHRIS	U.S.A.	2967.2	84.6	53.6	106.3	MS	81.3	22.1	38.5
47	CARAZINHO	BRAZIL	2954.7	82.3	61.3	110.3	R	94.6	18.4	45.3
41	SONALIKA	INDIA	2931.3	83.6	49.6	100.0	MS	62.6	22.1	58.5
48	NAYAB 70	PAKISTAN	2929.6	82.9	50.3	98.3	MS	61.3	22.1	47.0
5	IAS 20 IASSUL	BRAZIL	2872.1	81.7	60.0	109.0	R-MS	94.3	22.1	43.0
21	BENJAMO 62	MEXICO	2863.2	83.9	51.6	98.6	MR	61.3	25.8	47.5
45	MANITOU	CANADA	2814.7	84.2	53.6	105.0	MS	77.6	25.8	36.3
16	ET-2296	TUNISIA	2721.4	84.9	54.3	106.0	MR	72.6	18.4	52.5
23	CALIDAD	MEXICO	2708.9	84.6	50.6	97.3	MR	64.0	14.7	40.5
43	CHANAB 70	PAKISTAN	2705.3	84.6	49.0	98.0	MS	62.3	11.0	48.0
26	INIA 66	MEXICO	2690.9	85.9	49.6	98.0	MS	64.3	18.4	47.6
4	TANORI 71	MEXICO	2673.0	85.5	47.3	94.6	MS	60.0	11.0	43.2
7	ET 2288	TUNISIA	2664.0	85.1	51.6	95.6	MR	66.6	11.0	43.5
3	NORD 63	COLOMBIA	2617.4	83.0	48.6	96.6	S	69.0	11.0	44.5
10	HIRA	INDIA	2610.2	84.6	48.6	100.3	R	46.6	18.4	45.5
38	LR 301	INDIA	2592.3	83.9	51.3	96.3	-	43.0	11.0	51.5
33	CABECTO	ARGENTINA	2583.3	81.0	61.6	113.0	R	93.6	22.1	34.0
14	MEX 226	IRAQ	2504.4	85.1	50.0	98.3	MR	68.0	14.7	49.3
32	LUNDI	RHODESIA	2468.5	81.7	52.6	98.3	MR	55.0	11.0	43.6
27	SONORA 64-K1. REND.	ARGENTINA	2461.3	84.6	50.3	99.0	MS	65.6	11.0	46.3
15	EE-INIA	MEXICO	2375.2	84.9	51.0	98.3	R-	44.6	11.0	48.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2373.4	82.1	49.6	97.6	S	51.0	11.0	37.0
37	MANITOU / INSENSITIVE /	CANADA	2262.2	84.2	50.3	99.0	S	71.3	25.8	34.5
20	POTAM 70	MEXICO	1908.8	82.6	46.6	93.6	MS	59.3	11.0	47.0
		GRAND MEAN	3000.3	84.1	53.0	102.7		66.8	14.6	44.8
		STANDARD ERROR OF GRAND MEAN	29.7		0.0	0.1		0.2	0.2	
		COEFFICIENT OF VARIATION	12.1%		1.6%	1.8%		5.3%	24.8%	
		LSD VARIETY MEANS 5 PC	595.7		1.4	3.0		5.8	5.9	

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
TEST WEIGHT	-0.00							
DAYS TO FLOWER	0.03	0.35*						
DAYS TO MATURITY	-0.01	0.45**	0.56**					
LEAF RUST	0.00	0.00	0.00	0.00				
HEIGHT CM.	0.25	-0.34*	0.05	0.01	0.00			
LODGING	-0.23	0.12	0.37**	0.35**	0.00	0.23		
1000 GRN WGT GRMS	0.08	0.22	0.04	0.10	0.00	-0.28*	-0.15	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 60 NORTH AMERICA U.S.A. ALASKA

INSTITUTE OF AGRICULTURAL SCIENCES.
COOPERATORS R. L. TAYLOR.

LATITUDE	061 34'N	DATE PLANTED	05/26/72	NITROGEN	012.0 KG/HA
LONGITUDE	145 16'W	DATE HARVESTED	--/--/--	PHOSPHORUS	115.0 KG/HA
ELEVATION	+002.00 M.ABOVE S.L.	AMOUNT OF MOISTURE	0227 MM	POTASSIUM	024.0 KG/HA

GENERALLY GOOD GROWING CONDITIONS. LAST PART OF TEST NOT HARVESTED BECAUSE OF ADDITIONAL WIND DAMAGE. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK BASSER.

NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS
19	LR64-N108 x AN 3E	AUSTRALIA	2129.7	73.3	207.3	251.6	70.2	0.3	4.0	42.5
40	VICTOR I	ITALY	2076.4	73.3	212.3	235.3	52.4	6.6	2.3	31.8
6	T-64-2-W	TUNISIA	1733.1	75.2	207.6	253.0	62.1	0.6	2.3	45.1
35	FLELOLEN	CHILE	1706.4	76.5	207.0	247.0	77.8	1.0	1.0	41.0
36	JARAL 'S'	ARGENTINA	1683.1	77.2	206.3	250.0	78.7	0.0	0.6	44.3
30	HAZERA-2152	ISRAEL	1659.8	74.0	206.0	247.0	68.5	0.0	9.0	44.2
45	FIAMENTES	ARGENTINA	1653.1	75.1	205.0	248.0	54.8	1.0	5.3	41.0
18	FITIC 62	MEXICO	1616.5	76.5	208.0	245.0	61.2	1.6	0.6	35.0
2	CHRIS	U.S.A.	1585.8	76.5	207.3	245.3	52.2	7.6	9.0	35.1
1	ECONZA 55	COLOMBIA	1566.5	63.7	205.3	250.6	54.8	10.0	2.6	42.8
29	MEXICO 120	AUSTRALIA	1523.1	75.5	207.0	248.3	48.2	0.0	1.3	42.1
22	ZAMBEZI	RHODESIA	1523.1	76.5	204.0	248.6	72.8	0.0	4.3	35.8
24	TOLUCA 66	MEXICO	1466.5	78.5	203.6	245.6	74.5	0.3	23.6	43.0
41	SONALIKA	INDIA	1425.8	77.2	200.6	246.3	75.3	0.0	5.0	51.6
35	CHHOTI LERMA	INDIA	1366.5	75.7	205.6	246.0	76.1	0.3	0.6	42.5
12	VICAM 71	MEXICO	1366.5	66.8	204.0	245.6	45.7	0.0	2.3	44.5
46	KALYANSONA 227	INDIA	1345.8	79.1	208.6	248.3	77.0	0.6	14.6	42.2
44	MEXICANO 1481	FORTICAL	1343.1	77.8	207.0	253.6	75.3	1.0	3.0	44.5
42	GIZA 155	EGYPT	1323.2	77.2	199.6	251.3	73.6	0.6	1.0	41.0
32	LUNDI	RHODESIA	1305.8	74.0	204.0	243.0	55.8	0.0	1.3	38.6
10	HIRA	INDIA	1306.5	73.3	200.6	246.6	50.7	0.0	18.6	36.6
8	ERA	U.S.A.	1246.5	78.5	206.6	245.0	60.9	0.0	1.0	37.3
33	CABOTO	ARGENTINA	1226.5	79.1	205.6	249.6	104.9	1.6	5.3	34.1
50	LOCAL CHECK / 6.6 CMS. / PACKET /		1173.2	75.9	208.3	243.0	53.1	2.3	46.6	26.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	1129.8	74.6	201.3	246.3	57.5	0.0	4.3	33.7
34	ET-2281	TUNISIA	1116.5	77.2	203.6	249.6	67.7	0.0	4.0	44.5
15	EB-INIA	MEXICO	1103.2	75.9	204.3	246.3	50.7	0.0	9.0	43.5
3	NAFC 63	COLOMBIA	1076.5	77.8	199.3	246.0	66.3	0.6	60.0	42.5
21	FENJANC 62	MEXICO	1063.2	77.2	204.6	248.0	72.8	1.0	20.3	44.7
5	TOCLIFEN 'S'	CHILE	1049.8	75.2	198.0	251.0	66.0	0.0	66.6	35.0
25	PATO ARGENTINO	ARGENTINA	993.2	79.1	201.3	245.0	66.8	0.0	8.0	40.3
4	TANORI 71	MEXICO	989.9	76.5	199.3	246.3	67.7	0.0	7.3	40.3
48	NAYAB 70	PAKISTAN	973.2	77.2	200.3	248.0	71.1	0.0	9.3	44.2
23	CALICAO	MEXICO	966.5	77.8	201.0	244.6	74.5	0.3	13.6	41.7
7	ET 2288	TUNISIA	936.5	75.9	200.6	246.6	69.4	0.3	3.6	37.2
45	MANITOU	CANADA	913.2	77.2	203.6	244.6	77.0	1.3	4.0	30.3
20	FOTAM 70	MEXICO	883.2	75.9	197.6	246.3	66.0	0.3	68.3	45.1
26	INIA 66	MEXICO	859.9	68.8	199.6	246.0	71.1	0.0	40.0	39.0
37	MANITOU / INSENSITIVE /	CANADA	846.5	76.5	201.0	243.6	77.8	0.6	4.0	31.2
13	MARA x SUPREMO-MENTANA-MCM	CHILE	826.5	77.2	212.6	256.0	100.7	10.0	35.0	37.1
28	YECORA 70	MEXICO	813.2	75.9	202.6	243.3	48.2	0.0	4.6	45.5
47	CARAZINHO	BRAZIL	776.5	77.2	210.3	254.0	59.0	0.6	43.3	39.8
38	LF 301	INDIA	776.5	77.2	204.0	245.3	44.0	0.0	5.0	44.5
9	IAS 20 IASSUL	BRAZIL	753.2	77.2	177.6	250.0	57.3	23.6	21.6	37.8
31	CAJEME 71	MEXICO	729.9	76.5	205.6	244.0	51.6	0.0	20.6	52.6
16	ET-2256	TUNISIA	589.9	-	206.3	247.6	81.2	0.0	21.6	43.3
27	SONORA 64-K1. REND.	ARGENTINA	579.9	-	203.6	246.0	72.8	0.0	55.0	37.8
43	CHANAE 70	PAKISTAN	556.6	-	199.3	246.0	73.6	0.0	80.0	36.8
14	MEX 226	IRAQ	473.2	-	202.3	245.3	68.5	0.0	21.6	37.2
17	ARIANA 66	TUNISIA	-	-	216.6	-	57.3	0.0	0.3	-
		GRAND MEAN	1186.6	76.1	204.1	247.4	73.1	1.4	15.9	40.4
	STANDARD ERROR OF GRAND MEAN				0.6	0.4	0.5	0.4	1.1	
	COEFFICIENT OF VARIATION				4.0%	2.0%	11.1%	328.1%	88.4%	
	LSD VARIETY MEANS 5 PC				13.2	6.2	13.3	8.0	23.0	

CORRELATIONS

YIELD KG/HA								
TEST WEIGHT	0.55**							
DAYS TO FLOWER	0.24	-0.09						
DAYS TO MATURITY	0.40**	0.43**	-0.31*					
HEIGHT CM.	-0.07	-0.09	0.15	-0.18				
LODGING	0.02	0.11	-0.34*	0.07	0.42**			
SHATTERING	-0.41**	-0.32*	-0.27	0.11	0.15	0.01		
1000 GRN WGT GRMS	0.34*	0.37**	-0.26	0.76**	-0.34*	-0.10	0.00	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 61 NORTH AMERICA U.S.A. ARIZONA

YUMA
COOPERATORS DR. R. W. FOMIG, K. CLEAS AND W. ALTHALS

LATITUDE	32° 40'N	DATE PLANTED	12/06/71	NITROGEN	129.0 KG/HA
LONGITUDE	114 36'W	DATE HARVESTED	05/17/72	PHOSPHORUS	123.0 KG/HA
ELEVATION	+00055 M.ABOVE S.L.	AMOUNT OF MOISTURE	---- MM	POTASSIUM	000.0 KG/HA

TEMPERATURES BELOW NORMAL IN DECEMBER AND JANUARY. NORMAL TO ABOVE FROM FEBRUARY TO HARVEST. NO FROST DAMAGE. NO INSECT, WEED OR PEST PROBLEMS.
LOCAL CHECK NOT REPORTED. SHATTERING SCALE NOT REPORTED. XX AND XXX = GRAIN NOTES.
GRAIN NOTES ARE APPEARANCE, TEXTURE, COLOR AND FORM.
APPEARANCE, E= EXCELLENT, VG= VERY GOOD, G= GOOD, F= FAIR AND P= POOR.
TEXTURE IS HARD OR SOFT. COLOR IS RED, WHITE OR MIXED. FORM IS WINTER OR SPRING.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	XX	XXX
36	JARAL 'S'	ARGENTINA	7220.0	78.5	109.0	96.0	11.0	3	38.5	GH	RS
35	CHECTI LERMA	INDIA	6880.6	82.2	112.0	102.0	22.1	2	40.7	VGH	RW
43	CHANAE 70	PAKISTAN	6616.7	80.6	107.0	90.0	22.1	2	43.0	VGH	WW
46	KALYANSONA 227	INDIA	6570.7	81.9	109.0	93.0	44.3	3	34.1	VGH	WS
22	ZAMBEZI	RHODESIA	6450.1	81.4	108.0	99.0	22.1	2	37.1	VGH	RW
16	FITIC 62	MEXICO	6444.8	78.6	108.0	102.0	44.3	2	39.0	CH	WW
6	ERA	U.S.A.	6429.2	74.0	127.0	111.0	22.1	3	34.0	FH	RS
19	LR64-NIOB X AN 36	AUSTRALIA	6351.9	82.8	113.0	90.0	22.1	2	36.1	VGH	RW
31	CAJEME 71	MEXICO	6266.1	81.3	112.0	81.0	11.0	3	43.3	VGH	RW
48	NAVAE 70	PAKISTAN	6065.5	80.3	108.0	93.0	22.1	2	44.7	VGH	RW
4	TANORI 71	MEXICO	5986.5	80.3	106.0	96.0	11.0	2	40.3	VGH	RW
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5956.2	81.0	110.0	90.0	22.1	3	37.3	VGH	WS
14	MEX 226	IRAQ	5931.0	80.9	107.0	108.0	33.2	2	42.1	VGH	RW
44	MEXICANO 1481	PORTUGAL	5905.3	77.2	113.0	87.0	77.6	2	36.0	FH	RW
7	BT 2288	TUNISIA	5705.3	80.5	106.0	96.0	22.1	3	35.3	CH	RS
41	SONALIKA	INDIA	5575.1	79.7	106.0	105.0	22.1	4	54.3	EH	WW
42	GIZA 155	EGYPT	5575.1	81.3	107.0	111.0	66.5	2	45.3	GH	WS
34	BT-2281	TUNISIA	5467.5	80.0	108.0	90.0	22.1	2	35.1	GS	WW
21	BENJAMIN 62	MEXICO	5401.5	81.4	107.0	93.0	66.5	3	40.0	GH	RS
24	TORRI 66	MEXICO	5366.8	81.5	108.0	102.0	22.1	2	37.1	VGH	RW
18	BT-2256	TUNISIA	5246.6	80.8	106.0	102.0	22.1	3	51.5	VGH	RW
17	ARIANA 66	TUNISIA	5326.0	79.6	116.0	123.0	66.5	2	40.0	GS	RS
8	T-64-2-W	TUNISIA	5306.0	78.1	112.0	128.0	55.5	3	31.7	GH	RS
35	FLELGLEN	CHILE	5056.9	79.5	112.0	114.0	77.6	3	38.3	GH	RW
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	5036.9	79.1	103.0	84.0	22.1	4	33.1	VGH	RS
40	VICTOR I	ITALY	4900.7	79.6	117.0	87.0	22.1	3	39.0	GH	RW
30	MAZEMA-2152	ISRAEL	4716.7	80.3	106.0	93.0	22.1	3	45.7	VGS	RW
32	LONDI	RHODESIA	4706.2	78.2	105.0	84.0	22.1	1	45.5	VGH	RS
29	MEXICO 120	AUSTRALIA	4471.9	90.3	109.0	85.0	11.0	2	47.5	GS	WW
5	TORLIFEN 'S'	CHILE	4465.8	81.5	109.0	93.0	11.0	2	32.7	GH	RS
27	SONORA 64-K1. PEND.	ARGENTINA	4362.5	79.1	106.0	90.0	22.1	4	40.5	VGH	RW
3	NAPO 63	COLOMBIA	4305.2	83.2	105.0	123.0	22.1	7	40.0	GS	WW
26	INIA 66	MEXICO	4278.3	83.3	105.0	90.0	11.0	3	46.0	EH	RW
28	YECORA 70	MEXICO	4141.2	81.2	108.0	72.0	11.0	2	44.1	VGH	WW
12	VICAM 71	MEXICO	4101.2	79.5	116.0	78.0	11.0	4	35.7	GS	WS
47	CARAZINHO	BRAZIL	3932.0	79.0	113.0	109.0	99.8	3	39.1	GS	RS
25	FATC ARGENTINO	ARGENTINA	3859.1	81.3	116.0	102.0	33.2	2	29.5	GH	WS
23	CALICAO	MEXICO	3846.1	81.5	109.0	99.0	22.1	3	35.5	VGH	WS
1	ECONZA 55	COLOMBIA	3836.5	78.1	107.0	120.0	77.6	3	39.5	GS	WW
49	FIAMENTES	ARGENTINA	3720.2	81.2	112.0	114.0	55.5	4	37.7	EH	RS
20	ROTAM 70	MEXICO	3620.4	79.9	101.0	90.0	11.0	5	44.0	VGS	WW
33	CAECTO	ARGENTINA	3533.6	78.2	115.0	117.0	88.7	2	31.5	CH	RW
2	CHRIS	U.S.A.	3496.0	78.7	111.0	126.0	99.8	2	32.7	GH	RS
10	PIRA	INDIA	3463.3	80.4	106.0	78.0	11.0	2	41.5	VGH	RW
13	MARA > SUPREMO-MENTANA-MOP	CHILE	3345.2	79.7	116.0	117.0	66.5	8	38.3	FH	RW
15	EB-INIA	MEXICO	3169.9	82.4	108.0	72.0	11.0	2	42.3	VGH	WW
45	MANITOU	CANADA	3013.6	70.7	128.0	108.0	88.7	2	22.5	PH	RS
37	MANITOU / INSENSITIVE /	CANADA	2745.4	77.9	106.0	111.0	59.8	3	31.7	GH	WW
38	UP 301	INDIA	2576.2	79.0	111.0	72.0	11.0	2	37.1	CH	RW
5	IAS 20 IASSUL	BRAZIL	2070.1	0.0	112.0	126.0	59.8	7	40.7	CH	RW
		GRAND MEAN	4850.5	78.3	109.9	98.3	37.9		39.0		

STANDARD ERROR OF GRAND MEAN 80.3
COEFFICIENT OF VARIATION 15.2%
LSD VARIETY MEANS 5 PC 1206.0

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	XX	XXX
TEST WEIGHT	0.34*								
DAYS TO FLOWER	-0.08	-0.16							
HEIGHT CM.	-0.05	-0.29*	0.25						
LODGING	-0.35**	-0.37**	0.32*	0.67**					
SHATTERING	0.00	0.00	0.00	0.00	0.00				
1000 GRN WGT GRMS	0.18	0.03	-0.52**	-0.26	-0.37**	0.00			
XX	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
XXX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 62 NORTH AMERICA U.S.A. CALIFORNIA

UNIVERSITY OF CALIF. DAVIS.
COOPERATORS C. C. CLAUSEN AND F. E. VOOT.

LATITUDE	038 32'N	DATE PLANTED	01/01/72	NITROGEN	045.0 KG/HA
LONGITUDE	121 45'W	DATE HARVESTED	06/15/72	PHOSPHORUS	000.0 KG/HA
ELEVATION	+00015 M.ABOVE S.L.	AMOUNT OF MOISTURE	0225 MM	POTASSIUM	000.0 KG/HA

COOL, DAMP EARLY SEASON. HOT, NO RAINS FROM MARCH. HEAVY STRIPE AND LEAF RUSTS. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK RANCHA 50.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	HEIGHT CM.	LODGING %
4	TANORI 71	MEXICO	9395.7	80.3	98.3	143.3	0	111.5	0.0
22	ZAMBEZI	RHODESIA	9384.3	78.6	107.6	153.0	0	103.5	2.5
31	CAJEME 71	MEXICO	9246.3	79.0	106.0	146.6	0	89.0	0.0
28	YECORA 70	MEXICO	9217.6	79.4	105.6	147.0	0	85.0	0.0
20	PITAM 70	MEXICO	9217.6	79.1	98.3	146.0	30MR	102.5	0.0
19	LR64-NICB x AN 3E	AUSTRALIA	8987.7	79.7	110.0	152.6	0	95.5	2.5
38	LF 301	INDIA	8982.0	78.1	108.0	149.6	10T	78.5	0.0
10	PIRA	INDIA	8930.3	76.3	100.3	148.0	2R	83.0	0.0
16	E1-2298	TUNISIA	8826.8	80.1	102.3	147.0	2T	111.0	0.0
41	SONALIKA	INDIA	8642.9	79.1	97.6	146.3	10R	111.5	5.0
14	MEX 226	IRAQ	8579.7	79.7	104.6	147.3	10T	113.5	0.0
27	SONORA 64-K1. REND.	ARGENTINA	8545.2	79.4	102.3	147.6	20MS	110.5	0.0
43	CHANAB 70	PAKISTAN	8290.1	79.2	102.6	148.3	30MR	110.0	2.5
15	EE-INIA	MEXICO	8378.6	80.6	101.0	146.6	0	86.0	0.0
12	VICAM 71	MEXICO	8321.1	77.4	107.6	139.0	10R	75.0	0.0
26	INIA 66	MEXICO	8194.7	81.2	96.0	143.0	2T	110.5	5.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	8028.0	76.9	99.0	146.6	0	93.5	10.0
29	MEXICO 120	AUSTRALIA	7913.1	78.7	101.0	147.0	0	78.0	0.0
48	NAMAE 70	PAKISTAN	7913.1	78.5	108.0	150.3	40MS	114.0	2.5
24	TOBARI 66	MEXICO	7890.1	80.8	98.6	146.3	0	113.0	2.5
21	FENJARO 62	MEXICO	7821.2	77.8	106.3	148.3	60S	110.5	5.0
30	HAZERA-2152	ISRAEL	7763.7	76.9	99.0	145.3	0	100.5	0.0
23	CALICAO	MEXICO	7706.2	80.8	106.3	147.3	0	107.5	7.5
6	T-64-2-W	TUNISIA	7591.3	77.6	108.3	149.6	0	117.5	5.0
34	E1-2281	TUNISIA	7585.5	80.3	103.6	148.3	0	104.0	2.5
7	E1 2288	TUNISIA	7579.8	79.2	98.3	145.3	0	106.5	2.5
18	PITIC 62	MEXICO	7505.1	73.6	107.3	147.0	0	109.0	2.5
25	PATO ARGENTINO	ARGENTINA	7309.7	78.5	109.3	148.6	0	107.5	0.0
5	TOCLIFEN 'S'	CHILE	7223.5	76.7	107.0	149.6	0	99.5	0.0
40	VICTOR I	ITALY	7074.1	76.3	112.6	151.0	40MS	97.5	5.0
36	JARAL 'S'	ARGENTINA	7016.6	76.4	107.3	145.6	80S	100.0	0.0
32	LUNDI	RHODESIA	6987.9	75.0	103.3	147.3	80S	92.0	2.5
39	HUELGUEN	CHILE	6850.2	79.1	110.0	147.6	2R	120.0	2.5
44	MEXICANO 1481	PORTUGAL	6792.5	73.8	110.0	149.3	10R	107.0	2.5
42	GIZA 155	EGYPT	6556.9	78.7	107.6	148.6	0	123.0	27.5
3	NAPO 63	COLOMBIA	6522.4	77.6	100.0	145.3	0	135.5	80.0
35	CHECTI LERMA	INDIA	6298.3	78.3	107.3	150.3	60T	104.5	0.0
46	KALYANSONA 227	INDIA	6269.6	74.2	112.0	152.3	90S	110.5	0.0
8	ERA	U.S.A.	6252.3	75.9	124.0	155.0	5R	115.5	0.0
17	ARIANA 66	TUNISIA	6085.7	79.1	109.6	150.0	0	121.0	7.5
45	PIAMONTES	ARGENTINA	5873.0	79.9	111.3	148.0	0	125.0	15.0
1	BONZA 55	COLOMBIA	5792.6	76.1	102.6	148.0	2T	122.5	70.0
47	CARAZINHO	BRAZIL	5648.9	77.8	110.0	146.6	60T	127.0	25.0
13	MARA x SUPREMO-MENTANA-MCM	CHILE	5327.1	78.2	112.6	148.6	0	121.5	20.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		5269.6	76.7	95.0	138.3	100T	127.5	80.0
2	CHRIS	U.S.A.	5080.0	77.7	109.3	148.6	0	128.5	85.0
33	GAEOTO	ARGENTINA	5057.0	79.1	110.3	147.6	0	125.0	35.0
37	MANITOU / INSENSITIVE /	CANADA	4867.4	78.5	101.3	141.3	2R	127.5	95.0
9	IAS 20 IASSUL	BRAZIL	4022.6	74.1	119.0	149.3	20T	129.0	45.0
49	MANITOU	CANADA	3804.2	73.8	126.0	154.3	5R	138.5	95.0
		GRAND MEAN	7291.2	78.0	106.0	147.7	9.0	108.7	15.0
		STANDARD ERROR OF GRAND MEAN	47.5		0.0	0.2		0.3	0.9
		COEFFICIENT OF VARIATION	7.9%		1.0%	1.9%		3.0%	61.2%
		LSD VARIETY MEANS 5 PC	950.1		1.8	4.5		5.4	15.0

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.49**					
DAYS TO	FLOWER	-0.51**	-0.48**				
DAYS TO	MATURITY	-0.11	-0.26	0.69**			
STRIPE	RUST	-0.05	-0.36**	0.07	0.12		
HEIGHT	CM.	-0.70**	-0.14	0.27*	0.08	-0.10	
LODGING		-0.71**	-0.28*	0.12	-0.16	-0.16	0.66**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 63 NORTH AMERICA U.S.A. N. DAKOTA

FARGO, NORTH DAKOTA STATE UNIVERSITY.
COOPERATORS F. C. FRIEBERG.

LATITUDE 046 54'N DATE PLANTED 05/05/72 NITROGEN 150.0 KG/HA
LONGITUDE 096 48'W DATE HARVESTED 08/14/72 PHOSPHORUS 100.0 KG/HA
ELEVATION +00273 M.ABOVE S.L. AMOUNT OF MOISTURE 0162 MM POTASSIUM 000.0 KG/HA

MID-LATE SEEDING IN WET SOIL CONDITIONS. LEAF RUST APPEARED AT HEADING.
LATE STEM RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK WALDRON.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING
5	IAS 20 IASSUL	BRAZIL	2082.1	78.7	55.4	5MR	0	102.4	44.3	20.0
4	TAPORI 71	MEXICO	2006.0	78.5	49.6	4CS	TR	69.4	11.0	1.0
8	BPA	U.S.A.	1872.4	75.5	55.4	10MS	0	71.1	11.0	0.0
27	SONORA 64-R1. REND.	ARGENTINA	1806.4	80.2	50.3	4CS	0	71.9	16.6	1.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		1762.7	78.9	54.3	TMR	0	90.5	11.0	1.0
47	CARAZINHO	BRAZIL	1708.5	76.5	65.0	5MR	0	89.7	16.6	5.0
25	PATO ARGENTINO	ARGENTINA	1702.1	80.4	50.3	TMR	TMR	63.5	11.0	0.0
24	TOEAPI 60	MEXICO	1675.7	76.5	51.6	TR	0	65.4	11.0	0.0
36	JARAL 'S'	ARGENTINA	1675.6	75.7	53.3	4CS	TR	67.7	11.0	0.0
41	SONALIKA	INDIA	1675.2	76.0	49.3	7CS	TMR	71.9	11.0	0.0
14	MEX 226	IRAQ	1674.1	80.2	50.6	4CS	5MR	71.9	11.0	1.0
35	CHECK I LERMA	INDIA	1655.5	76.5	52.3	8CS	0	73.6	11.0	0.0
39	PLELGLEN	CHILE	1656.2	77.6	53.0	5CS	0	85.5	22.1	1.0
23	CALIEAL	MEXICO	1647.2	81.2	50.3	4CS	TR	74.5	27.7	0.0
48	NAYAB 70	PAKISTAN	1632.6	72.5	50.3	5CS	5CS	70.2	11.0	5.0
26	INIA 66	MEXICO	1622.5	80.2	49.6	8CS	TR	61.8	11.0	5.0
38	LR 301	INDIA	1607.5	73.7	51.3	2CS	0	50.7	11.0	10.0
2	CHRIS	U.S.A.	1602.3	80.4	57.3	3CMS	0	94.8	27.7	1.0
45	PIAMONTES	ARGENTINA	1585.5	75.5	60.3	5MR	10S	91.4	27.7	0.0
46	KALYANSONA 227	INDIA	1564.2	75.2	53.6	6CS	TMR	70.2	11.0	0.0
20	POTAM 70	MEXICO	1520.5	76.3	45.3	3CS	0	61.8	11.0	0.0
34	ET-2281	TUNISIA	1499.2	76.5	51.3	5OS	TMR	66.8	11.0	0.0
43	CHANAE 70	PAKISTAN	1486.9	73.7	52.0	3CS	60S	70.2	11.0	0.0
37	MANITOL / INSENSITIVE /	CANADA	1482.4	75.3	51.0	7CS	TMR	88.8	27.7	1.0
3	NAPO 63	COLOMBIA	1466.7	76.7	48.3	8CS	5MR	81.2	27.7	5.0
7	BT 2288	TUNISIA	1445.3	80.6	51.3	TMR	0	71.1	11.0	0.0
28	YECORA 70	MEXICO	1410.6	74.0	51.3	TMR	0	51.6	11.0	0.0
15	BE-INIA	MEXICO	1402.7	75.5	52.6	2CMS	TR	47.4	11.0	0.0
33	CAECIC	ARGENTINA	1356.3	79.7	64.3	TR-20S	0	90.5	11.0	1.0
9	TOCUIPEN 'S'	CHILE	1367.0	77.4	50.3	TR	0	63.5	16.6	1.0
21	BENJAMIN 62	MEXICO	1364.8	73.7	54.0	3CS	40S	72.8	22.1	0.0
16	ET-2256	TUNISIA	1372.5	77.2	59.0	5OS	10MS	72.8	11.0	0.0
42	GIZA 155	EGYPT	1356.8	76.9	53.3	8CS	TR	82.9	16.6	0.0
30	HAZERA-2152	ISRAEL	1356.8	68.8	57.6	8OS	30S	70.2	11.0	0.0
32	LUNDI	RHODESIA	1352.3	74.2	52.6	4CS	TMR	56.7	11.0	0.0
45	MANITOL	CANADA	1320.9	78.0	57.3	6CS	0	90.5	22.1	1.0
22	ZAMBEZI	RHODESIA	1316.6	74.0	51.3	10OS	5MR	66.8	11.0	0.0
1	GONZA 55	COLOMBIA	1263.1	71.4	61.0	0.0	0.0	86.3	16.6	0.0
11	JARAL 'S' / LEE-SK-MAMA	RHODESIA	1156.7	65.0	51.0	10OS	TR	55.8	11.0	0.0
31	CAJEME 71	MEXICO	1176.5	74.6	63.3	TMR	0	60.1	11.0	0.0
10	PIKA	INDIA	1165.0	74.0	53.6	5OS	20S	46.5	11.0	0.0
12	VICAM 71	MEXICO	1137.0	71.2	57.3	5MR	0	47.4	11.0	0.0
44	MEXICANO 1481	PORTUGAL	1121.3	62.4	57.0	10OS	60S	71.9	11.0	0.0
40	VICTOR I	ITALY	1082.0	65.4	65.0	8CS	40S	61.8	11.0	0.0
13	MARA > SUPREMO-MENTANA-MCM	CHILE	1063.0	73.5	66.6	30MS	30S	95.5	22.1	5.0
19	LR64-N108 X AN 3E	AUSTRALIA	1057.4	71.4	56.6	5OS	40S	65.1	11.0	0.0
6	T-64-2-W	TUNISIA	1026.0	69.0	61.0	10OS	TMR	83.8	11.0	1.0
18	FITIC 62	MEXICO	962.1	58.7	60.3	6CS	70S	72.8	11.0	0.0
29	MEXICO 120	AUSTRALIA	728.8	64.1	62.0	10MS	80S	46.5	11.0	0.0
17	ARIANA 66	TUNISIA	-	-	75.6	5OS	0	99.9	11.0	0.0
		GRAND MEAN	1452.0	75.1	55.4	41.6	11.9	72.3	14.8	1.3
	STANDARD ERROR OF GRAND MEAN		12.4	0.1	0.1			0.2	0.4	
	COEFFICIENT OF VARIATION		10.3%	1.6%	2.5%			4.1%	27.9%	
	LSD VARIETY MEANS 5 PC		245.0	1.9	2.2			4.9	6.7	

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.79**							
DAYS TO	FLOWER	-0.62**	-0.64**						
LEAF	RUST	-0.24	-0.17	-0.12					
STEM	RUST	-0.33*	-0.22	0.15	0.16				
HEIGHT	CM.	0.06	-0.11	0.42**	-0.00	-0.15			
LODGING		0.26	0.20	0.04	-0.13	-0.15	0.59**		
SHATTERING		0.32*	0.11	0.04	-0.15	-0.04	0.29*	0.56	

'*' SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE LEVEL

TABLE 64 NORTH AMERICA U.S.A. ICARDA

ABERDEEN BRANCH EXPERIMENT STATION.
COOPERATORS CONALD W. SLADEMAN.

LATITUDE 042 56'N DATE PLANTED 04/17/72 NITROGEN 000.0 KG/HA
LONGITUDE 112 50'W DATE HARVESTED --/--/-- PHOSPHORUS 000.0 KG/HA
ELEVATION +01341 M.ABOVE S.L. AMOUNT OF MOISTURE 0000 MM POTASSIUM 000.0 KG/HA

IDEAL WEATHER CONDITIONS. NO DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.
44	MEXICANO 1481	FOREIGN	7303.9	77.8	63.3	83.8
18	PITIC 62	MEXICO	7021.1	76.5	64.0	84.6
46	KALYANSONA 227	INDIA	6775.9	80.1	63.3	82.1
36	JARAL 'S'	ARGENTINA	6756.7	78.6	61.6	77.0
8	ERA	U.S.A.	6663.4	81.4	67.6	82.9
19	LR64-NILO X AN 3E	AUSTRALIA	6551.0	80.8	61.6	71.9
28	PATO ARGENTINO	ARGENTINA	6338.5	80.5	62.0	76.1
31	CAUEME 71	MEXICO	6146.4	77.3	63.0	85.1
42	CIZA 155	EGYPT	6115.2	78.8	60.3	86.3
34	ET-2281	TUNISIA	6054.3	79.0	62.0	80.4
39	PUELCHEN	CHILE	5946.5	78.6	65.0	101.5
35	CHECTI LERMA	INDIA	5923.0	79.7	62.0	80.4
17	ARIANA 66	TUNISIA	5918.4	77.3	77.3	110.0
16	ET-2256	TUNISIA	5869.9	78.7	60.6	81.2
4	TANORI 71	MEXICO	5841.8	77.8	58.3	72.8
14	MEX 226	IRAQ	5832.5	78.6	59.6	82.1
47	CARAZINHO	BRAZIL	5723.1	78.5	65.0	108.3
24	TOBARI 66	MEXICO	5712.2	79.6	60.0	77.0
43	CHANAB 70	PAKISTAN	5655.9	78.5	58.6	72.8
22	ZAMBEZI	RHODESIA	5626.3	79.2	63.0	82.9
9	TOBLIFEN 'S'	CHILE	5540.4	79.5	59.6	75.3
29	MEXICO 120	AUSTRALIA	5436.8	76.9	62.5	96.7
5	IAS 20 IASSLL	BRAZIL	5424.9	75.4	77.3	121.9
20	POTAM 70	MEXICO	5423.2	77.3	56.6	71.1
26	YECORA 70	MEXICO	5412.3	76.7	62.3	80.1
27	SONORA 64-K1. SEAD.	ARGENTINA	5410.7	78.2	59.6	77.8
21	BENJAMIN 62	MEXICO	5350.4	76.7	62.0	81.2
48	NAYAB 70	PAKISTAN	5385.7	77.9	59.6	86.3
7	ET 2288	TUNISIA	5362.3	78.8	59.6	81.2
13	MARA X SUPREMO-MENTANA-MCM	CHILE	5318.6	78.5	76.6	105.8
23	CALICAO	MEXICO	5312.3	79.5	61.3	78.7
10	PIRA	INDIA	5253.0	76.0	57.3	55.0
30	MAZURA-2152	ISRAEL	5238.9	77.4	61.3	72.6
41	SONALIKA	INDIA	5220.1	76.7	59.0	80.4
33	CABECIO	ARGENTINA	5181.1	78.2	66.0	107.5
26	INIA 66	MEXICO	5017.1	79.1	58.0	73.6
1	ECONZA 55	COLOMBIA	5015.5	76.5	62.3	57.3
6	T-64-2-W	TUNISIA	4987.4	76.4	64.0	53.1
2	CHRIS	U.S.A.	4896.8	77.6	64.0	104.1
32	LUNDI	RHODESIA	4875.6	74.1	62.6	69.4
3	NARO 63	COLOMBIA	4845.3	76.9	59.0	88.0
37	MANITOU / INSENSITIVE /	CANADA	4756.2	76.7	60.0	91.4
49	PIAMONTES	ARGENTINA	4715.6	78.7	64.0	93.9
45	MANITOU	CANADA	4695.3	76.9	65.0	103.2
12	VICAM 71	MEXICO	4682.8	74.3	62.0	55.8
40	VICTOR I	ITALY	4546.9	74.7	65.3	68.5
15	EE-INIA	MEXICO	4476.2	76.7	59.0	56.7
38	LP 301	INDIA	4295.4	75.4	62.6	55.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	4237.7	74.1	58.0	59.2
50	LOCAL CHECK / 6.8 CMS. / PACKET /		-	-	63.0	-
		GRAND MEAN	5513.0	77.7	62.6	81.2
		STANDARD ERROR OF GRAND MEAN	73.7		0.0	0.2
		COEFFICIENT OF VARIATION	16.2%		1.3%	3.8%
		LSD VARIETY MEANS 5 PC	1461.1		1.3	5.1

CORRELATIONS

YIELD	KG/HA			
TEST	WEIGHT	0.79**		
DAYS TO	FLOWER	0.05	-0.02	
HEIGHT	CM.	0.50**	0.60**	0.48**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 65 NORTH AMERICA U.S.A. MINNESOTA

ST. PAUL.
COOPERATORS DR. ROBERT REINER & FARCLK A.EL SAYED.

LATITUDE	045 00'N	DATE PLANTED	05/04/72	NITROGEN	020.0 KG/HA
LONGITUDE	093 10'W	DATE HARVESTED	08/30/72	PHOSPHORUS	000.0 KG/HA
ELEVATION	000254 M.ABOVE S.L.	AMOUNT OF MOISTURE	0372 MM	POTASSIUM	000.0 KG/HA

GOOD TEMPERATURES DURING GROWING SEASON. IN MAY, JUNE AND AUGUST PRECIPITATION WAS LESS THAN NORMAL. LEAF RUST VERY WELL DEVELOPED. STEM RUST TRACES. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK MN 11-64-33.

NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING
50	LOCAL CHECK / 6.6 GMS. / PACKET		2524.9	68.8	54.0	TR	0	84.0	51.0
8	ERA	U.S.A.	2366.0	70.7	55.0	10S	0	78.0	25.5
24	TOCAPI 66	MEXICO	2258.8	70.7	46.0	TR	0	78.0	36.0
9	TOCUIPEN 'S'	CHILE	2216.0	65.5	45.0	20S	20MS-S	74.0	14.4
7	BI 2266	TUNISIA	2214.2	70.7	46.0	20S	20S	68.0	14.4
36	JARAL 'S'	ARGENTINA	2149.9	60.5	47.0	40S	TMR	77.0	17.7
35	CHOTI LERMA	INDIA	2135.2	45.5	45.0	60S	0	78.0	22.1
39	KLEGLEN	CHILE	2067.8	70.0	46.0	20S	TR	88.0	47.7
27	SONORA 64-K1. REND.	ARGENTINA	1952.8	48.1	45.0	10S	TR	75.0	28.8
16	ET-2258	TUNISIA	1869.5	65.0	53.0	40S	TMR	84.0	39.9
41	SONALIKA	INDIA	1862.4	62.3	46.0	40S	TR	77.0	44.3
14	MEX 226	IRAQ	1854.5	65.5	44.0	40S	40MS	80.0	14.4
4	TANORI 71	MEXICO	1885.6	64.3	43.0	40S	TR	65.0	28.8
23	CALICAE	MEXICO	1853.5	72.0	46.0	40S	20MS	71.0	58.8
42	GIZA 155	EGYPT	1835.6	63.0	48.0	40S	TR	88.0	44.3
26	INIA 66	MEXICO	1751.0	68.1	46.0	60S	TR	72.0	11.0
28	YECORA 70	MEXICO	1787.4	60.5	45.0	TS	0	64.0	11.0
46	KALYANSONA 227	INDIA	1760.0	58.5	48.0	40S	TR	74.0	22.1
37	MANITOU / INSENSITIVE	CANADA	1762.4	65.5	46.0	40S	TR-5S	97.0	62.1
15	EE-INIA	MEXICO	1685.6	55.5	46.0	40S	0	60.0	11.0
31	CAJEME 71	MEXICO	1678.5	66.2	56.0	TS	0	66.0	11.0
34	ET-2281	TUNISIA	1608.0	58.5	44.0	5R-MR	TR	71.0	22.1
38	LR 301	INDIA	1599.9	59.1	46.0	40S	TR	52.0	11.0
22	ZANDEZI	RHODESIA	1530.3	61.0	46.0	40S	40MS-S	73.0	25.5
10	HIRA	INDIA	1482.1	43.6	43.0	40S	20MS	60.0	11.0
2	CHRIS	U.S.A.	1482.1	70.7	52.0	40S	0	105.0	73.2
19	LR64-NICB X AN 3E	AUSTRALIA	1462.4	65.5	51.0	60S	40S	70.0	22.1
6	T-64-2-W	TUNISIA	1455.3	64.2	55.0	60S	TR	55.0	25.5
21	BENJAMIN 62	MEXICO	1446.3	63.0	48.0	40S	60S	80.0	33.2
48	NAMAE 70	PAKISTAN	1430.3	59.8	46.0	60S	40MS-S	78.0	25.5
43	CHANAB 70	PAKISTAN	1419.5	56.5	46.0	40S	80S	74.0	17.7
30	PAZERA-2152	ISRAEL	1408.9	58.5	49.0	40S	40S	80.0	14.4
32	LUNDI	RHODESIA	1407.1	57.8	47.0	60S	10S	61.0	11.0
5	IAS 20 IASSUL	BRAZIL	1378.5	62.3	57.0	5S	TS	105.0	88.7
45	MANITOU	CANADA	1358.8	68.1	53.0	60S	TR	92.0	73.2
3	NARC 63	COLOMBIA	1353.5	59.1	43.0	20SC		85.0	47.7
25	PATO ARGENTINO	ARGENTINA	1326.7	59.8	46.0	40S	20MS	70.0	39.9
33	CAECIO	ARGENTINA	1289.2	70.0	58.0	TMR-TS	5MR	104.0	55.5
47	CARAZINHO	BRAZIL	1242.8	66.2	36.0	5S	TMR	120.0	77.6
20	POTAM 70	MEXICO	1224.9	61.7	41.0	60S	5MR	70.0	14.4
18	PITIC 62	MEXICO	1183.8	56.5	51.0	60S	60S	80.0	66.5
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	1166.0	59.1	46.0	40S	TMR	68.0	11.0
1	BONZA 55	COLOMBIA	1103.5	61.0	67.0	40S	0	105.0	51.0
40	VICTOR I	ITALY	1053.5	61.7	66.0	40S	5S	77.0	11.0
49	FIAMENTES	ARGENTINA	1048.1	61.7	56.0	10S	10S	108.0	66.5
44	MEXICANO 1481	PORTUGAL	1044.6	53.3	53.0	60S	TR	75.0	51.0
12	VICAM 71	MEXICO	964.2	52.7	49.0	10S	0	58.0	11.0
13	MARA X SUPREMO-MENTANA-MCM	CHILE	796.4	63.6	67.0	20S	5S	101.0	55.5
29	MEXICO 120	AUSTRALIA	714.2	53.3	57.0	40S	60S	62.0	11.0
17	ARIANA 66	TUNISIA	671.4	66.8	49.0	5S	0	102.0	11.0
		GRAND MEAN	1565.1	63.5	49.5	32.7	11.3	79.7	33.1

STANDARD ERROR OF GRAND MEAN 18.4
COEFFICIENT OF VARIATION 14.3%
LSD VARIETY MEANS 5 PC 366.3

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.55**				
DAYS TO	FLOWER	-0.33*	-0.07			
LEAF	RUST	-0.14	-0.25	-0.05		
STEM	RUST	-0.21	-0.30*	-0.07	0.29*	
HEIGHT	CM.	-0.21	0.31*	0.34*	-0.23	-0.19
LODGING		-0.09	0.22	0.21	-0.12	-0.14 0.74**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

BOZEMAN
COOPERATORS F. H. MCNEAL AND M. A. BERG.

LATITUDE	046 00'N	DATE PLANTED	04/27/72	NITROGEN	000.0 KG/HA
LONGITUDE	111 00'W	DATE HARVESTED	11/05/72	PHOSPHORUS	000.0 KG/HA
ELEVATION	4014.3 M.ABOVE S.L.	AMOUNT OF MOISTURE	0102 MM	POTASSIUM	000.0 KG/HA

WEATHER CONDITIONS ABOUT NORMAL. NO DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.
16	PITIC 62	MEXICO	2055.5	76.1	187.0	82.3
8	ERA	U.S.A.	1992.2	80.4	189.3	77.3
19	LR64-NICB X AN 3E	AUSTRALIA	1918.6	81.3	184.4	72.0
35	CHECK1 LERMA	INDIA	1906.1	80.9	183.0	78.6
6	T-64-2-K	TUNISIA	1896.2	78.3	187.0	90.0
39	FLEUGLER	CHILE	1881.0	80.0	187.0	87.3
36	JARAL 'S'	ARGENTINA	1834.3	79.1	183.3	74.6
13	MARA X SUPREMO-MONTANA-MCM	CHILE	1802.0	77.8	182.0	104.3
22	ZAMBEZI	RHODESIA	1800.2	80.5	184.6	75.6
34	ET-2281	TUNISIA	1785.0	80.8	181.6	76.3
46	MALYANSKA 227	INDIA	1776.0	80.3	187.0	84.0
25	PATO ARGENTINO	ARGENTINA	1772.4	81.7	183.3	73.0
50	LOCAL CHECK / 6.6 CMS. / PACHET /		1746.4	79.2	189.3	81.0
44	MEXICANO 1481	PORTUGAL	1724.9	76.1	187.0	79.0
12	VICAM 71	MEXICO	1724.9	76.5	184.6	58.3
38	UF 301	INDIA	1715.0	78.2	182.6	58.0
21	BENJAMIN 62	MEXICO	1708.7	78.6	184.6	80.6
31	CAJEME 71	MEXICO	1691.7	79.6	185.0	58.6
42	CIZA 155	EGYPT	1667.5	79.4	182.0	90.3
3	NAPO 63	COLOMBIA	1663.9	77.0	180.3	87.6
28	YECORA 70	MEXICO	1653.1	79.7	182.0	80.0
41	SONALIKA	INDIA	1651.3	77.9	179.6	80.3
24	TOBARI 66	MEXICO	1636.8	80.5	182.0	78.0
40	VICTOR I	ITALY	1634.3	76.5	189.6	69.0
2	CHRIS	U.S.A.	1618.1	78.8	189.3	105.3
15	BB-INIA	MEXICO	1616.3	79.6	181.3	86.0
9	TOBLIFEN 'S'	CHILE	1616.3	78.7	180.6	71.0
29	MEXICO 120	AUSTRALIA	1611.9	79.7	184.6	55.0
1	BONZA 55	COLOMBIA	1593.0	77.7	184.3	103.0
30	HAZERA-2152	ISRAEL	1588.5	78.2	182.3	70.6
4	TANORI 71	MEXICO	1565.7	77.8	178.0	75.3
14	MEX 220	IRAQ	1567.9	79.1	180.0	80.6
7	BT 2288	TUNISIA	1550.0	80.0	180.3	78.6
33	CABECO	ARGENTINA	1544.6	77.9	188.6	104.0
18	ET-2259	TUNISIA	1529.3	79.5	180.6	79.3
43	CHANAB 70	PAKISTAN	1519.5	80.1	180.3	75.6
26	INIA 66	MEXICO	1511.4	79.9	180.0	74.0
23	CALICAL	MEXICO	1506.0	80.0	181.0	76.3
48	SAHAR 70	PAKISTAN	1505.1	78.5	180.0	78.0
17	BRIANA 66	TUNISIA	1481.8	74.1	-	104.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	1480.9	76.3	180.0	62.6
27	SONORA 64-K1. REND.	ARGENTINA	1469.2	79.0	179.6	77.3
47	CARAZINHO	BRAZIL	1467.4	77.3	188.0	106.0
5	IAS 20 IASSUL	BRAZIL	1461.2	73.8	190.0	117.3
10	PIRA	INDIA	1460.3	78.2	179.0	57.0
32	LUNDI	RHODESIA	1432.5	75.2	181.0	61.0
45	MANITOU	CANADA	1420.7	77.8	187.0	102.0
49	PIAMONTES	ARGENTINA	1382.2	78.2	187.0	95.0
37	MANITOU / INSENSITIVE /	CANADA	1357.1	78.2	180.0	93.0
20	POTAM 70	MEXICO	1182.2	77.8	177.0	88.6
		GRAND MEAN	1633.9	78.6	183.5	79.9
		STANDARD ERROR OF GRAND MEAN	12.3		0.0	0.2
		COEFFICIENT OF VARIATION	9.2%		0.2%	3.2%
		LSD VARIETY MEANS 5 PC	247.4		0.8	4.2

CORRELATIONS

YIELD KG/HA				
TEST WEIGHT	0.34*			
DAYS TO FLOWER	0.18	0.34*		
HEIGHT CM.	-0.06	-0.27*	-0.16	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 67 NORTH AMERICA U.S.A. WASHINGTON

DRY LAND RESEARCH STATION, LIND.
COOPERATORS E. LONALDSON, M.MACARTISL AND C.F.KONZAK

LATITUDE	046 58'N	DATE PLANTED	03/27/72	NITROGEN	050.0 KG/HA
LONGITUDE	118 38'W	DATE HARVESTED	08/14/72	PHOSPHORUS	000.0 KG/HA
ELEVATION	000462 M.ABOVE S.L.	AMOUNT OF MOISTURE	0453 MM	POTASSIUM	000.0 KG/HA

COOL WEATHER AFTER SOWING. WARM PERIOD IN MAY FORCED GROWTH IN EARLIER VARIETIES. JULY RAIN HAD NEGLIGIBLE VALUE. NO DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GMS
8	BRA	U.S.A.	1292.5	74.8	70.0	50.0	29.1
19	BR64-NICE X AN 3E	AUSTRALIA	1242.9	76.5	71.0	47.0	31.9
8	T-64-2-W	TUNISIA	1207.2	74.5	70.0	55.0	35.0
25	CHRISTI LERMA	INDIA	1170.5	77.5	67.0	47.0	30.1
44	MEXICANO 1481	POPTICAL	1165.5	73.8	71.0	47.0	32.0
22	ZAMBEZI	RHODESIA	1163.6	77.0	68.0	47.0	36.5
46	NA YANSONA 227	INDIA	1162.4	77.5	69.0	50.0	30.5
42	GIZA 15'	EGYPT	1115.0	78.5	67.0	50.0	34.7
17	ARIANA 66	TUNISIA	1051.1	74.5	79.0	62.0	32.6
40	VICTOR I	ITALY	1075.2	73.5	74.0	42.0	29.7
18	FITIC 62	MEXICO	1073.3	71.5	71.0	52.0	28.0
39	PUELLUEN	CHILE	1070.3	75.3	73.0	52.0	32.0
24	TLEARI 66	MEXICO	1014.9	76.0	67.0	47.0	28.0
47	CARAZINHO	BRAZIL	1002.5	74.0	72.0	60.0	32.3
14	MEX 226	INAG	997.5	77.5	67.0	50.0	41.0
16	ET-2256	TUNISIA	991.9	77.1	64.0	47.0	35.5
49	PIAMONTES	ARGENTINA	984.0	75.6	70.0	57.0	28.6
33	CABECIC	ARGENTINA	972.1	75.3	73.0	57.0	26.3
25	FATC ARGENTINO	ARGENTINA	962.2	78.1	68.0	42.0	42.1
13	MARA X SUPREMO-MENTANA-MCM	CHILE	946.3	74.8	65.0	55.0	35.6
5	IAS 20 IASSUL	BRAZIL	947.3	70.5	65.0	62.0	29.1
21	FENJAMO 62	MEXICO	940.4	76.6	67.0	47.0	35.5
41	SONALIKA	INDIA	934.4	75.3	66.0	47.0	41.8
2	CHRIS	U.S.A.	871.9	73.3	70.0	55.0	24.2
34	ET-2281	TUNISIA	849.1	74.6	69.0	45.0	31.5
38	LR 301	INDIA	839.2	77.1	67.0	35.0	39.6
32	LUNDI	RHODESIA	830.2	73.5	69.0	40.0	30.2
9	TOCLIFEN 'S'	CHILE	837.2	76.3	67.0	45.0	30.3
36	JARAL 'S'	ARGENTINA	831.2	75.6	68.0	45.0	30.5
23	CALICAO	MEXICO	816.3	79.0	66.0	42.0	38.2
48	NAYAB 70	PAKISTAN	798.5	75.6	65.0	45.0	36.0
7	ET 2288	TUNISIA	788.6	77.3	65.0	45.0	35.3
4	TANORI 71	MEXICO	771.7	77.5	65.0	40.0	34.0
31	CAJEME 71	MEXICO	760.5	77.0	67.0	40.0	37.3
30	PAZERA-2152	ISRAEL	729.1	79.0	67.0	42.0	35.0
45	MANITOU	CANADA	692.4	71.5	74.0	57.0	24.2
1	CONZA 55	COLOMBIA	681.4	73.0	67.0	50.0	28.6
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	660.6	73.8	67.0	40.0	31.5
26	NECOPA 70	MEXICO	648.7	77.5	68.0	37.0	37.1
43	CHANAB 74	PAKISTAN	637.8	77.3	66.0	45.0	35.2
3	NARC 63	COLOMBIA	616.0	75.1	66.0	50.0	29.5
12	VICAM 71	MEXICO	617.0	75.1	65.0	32.0	33.3
27	SONORA 64-K1. REND.	ARGENTINA	612.0	77.1	69.0	47.0	37.0
37	MANITOU / INSENSITIVE /	CANADA	609.0	74.3	66.0	52.0	25.5
10	PINA	INDIA	591.2	74.3	65.0	37.0	33.2
29	MEXICO 120	AUSTRALIA	587.2	77.0	65.0	35.0	36.5
15	LE-INIA	MEXICO	483.1	78.0	65.0	35.0	45.0
20	PLATA 70	MEXICO	479.1	77.0	65.0	45.0	37.0
28	INIA 66	MEXICO	354.8	79.1	65.0	42.0	36.3
		GRAND MEAN	666.5	75.8	68.1	46.8	33.5
		STANDARD ERROR OF GRAND MEAN	12.1				
		COEFFICIENT OF VARIATION	17.0%				
		LSD VARIETY MEANS 5 PC	241.3				

CORRELATIONS

YIELD	KG/HA				
TEST	WEIGHT	-0.11			
DAYS TO	FLOWER	0.56**	-0.40**		
HEIGHT	CM.	0.47**	-0.48**	0.45**	
1000 GRN	WGT GRMS	-0.17	0.66**	-0.46**	-0.50**

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 68 NORTH AMERICA U.S.A. WASHINGTON

WASHINGTON STATE UNIVERSITY-PULLMAN
COOPERATORS DR. C. F. MONZAK AND M. A. DAVIS.

LATITUDE 046 42'N
LONGITUDE 117 08'W
ELEVATION 000076 M.ABOVE S.L.

DATE PLANTED 04/30/72
DATE HARVESTED 09/01/72
AMOUNT OF MOISTURE 0602 MM

NITROGEN 055.0 KG/HA
PHOSPHORUS 000.0 KG/HA
POTASSIUM 000.0 KG/HA

COOLER TEMPERATURES DURING APRIL AND MAY. PRECIPITATION ABOVE NORMAL 4''
EMERGENCE MUCH DELAYED. DISEASE DEVELOPMENT NOT REPORTED. WEEDS WERE
CONTROLLED WITH CONTACT HERBICIDE. LOCAL CHECK NOT REPORTED. ARIANA 66
VERY LATE VARIETY.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS	PLANT STAND
36	JARAL 'S'	ARGENTINA	2665.0	77.1	58.0	80.0	39.6	73.3
42	GIZA 155	EGYPT	2650.2	77.8	60.0	102.5	45.0	70.0
44	MEXICANO 1481	PORTUGAL	2644.5	73.2	57.0	80.0	39.1	76.6
34	E1-2281	TUNISIA	2609.7	76.5	60.0	77.5	40.0	75.0
8	ERA	U.S.A.	2557.7	76.5	63.0	80.5	35.8	80.0
18	FITIC 62	MEXICO	2499.8	74.5	60.0	82.5	38.3	63.3
24	TOEARI 66	MEXICO	2494.0	78.5	56.0	75.0	39.8	80.0
22	ZAMBEZI	INDONESIA	2482.4	79.0	59.0	82.5	38.3	75.0
19	LR64-NICR X AN 3E	AUSTRALIA	2465.1	76.5	58.0	70.0	36.3	78.3
28	YECORA 70	MEXICO	2424.6	77.8	59.0	65.0	47.0	71.6
25	MEXICO 120	AUSTRALIA	2424.6	75.8	59.0	62.5	40.3	78.3
31	COJERE 71	MEXICO	2401.4	77.1	58.0	65.0	49.6	75.0
30	HAZERA-2152	ISRAEL	2401.4	75.8	59.0	77.5	42.0	75.0
10	PIRA	INDIA	2395.6	77.1	47.0	57.5	44.7	71.6
40	VICTOR I	ITALY	2384.1	74.0	62.0	75.0	37.2	68.3
14	MEX 220	IRAQ	2378.3	76.5	47.0	85.5	45.5	81.6
6	1-64-2-W	TUNISIA	2360.9	70.7	60.0	90.0	44.7	78.3
43	CHANAB 70	PAKISTAN	2343.5	76.5	46.0	77.5	46.1	75.0
7	E1 2288	TUNISIA	2320.4	77.1	47.0	82.5	41.6	75.0
41	SONALIKA	INDIA	2314.6	76.5	58.0	87.5	53.5	71.6
46	KALYANSONA 227	INDIA	2306.5	77.1	61.0	82.5	36.7	75.0
35	CHOTI LERMA	INDIA	2308.8	78.5	47.0	85.0	38.6	76.6
16	E1-2256	TUNISIA	2233.5	77.8	47.0	77.5	44.1	86.6
45	PIAMONTES	ARGENTINA	2204.7	75.2	60.0	110.0	37.6	76.6
21	PENJAMO 62	MEXICO	2193.1	75.8	60.0	82.5	42.5	73.3
23	CALICAO	MEXICO	2181.5	79.7	47.0	82.5	38.5	80.0
5	TOCUIPEN 'S'	CHILE	2181.5	77.8	47.0	75.0	37.0	75.0
4	TANORI 71	MEXICO	2165.9	77.1	46.0	75.0	40.5	75.0
27	SONORA 64-K1. REND.	ARGENTINA	2123.7	77.1	57.0	85.0	41.5	76.6
32	LUNDI	INDONESIA	2117.9	74.5	59.0	67.5	38.5	75.0
12	VICAM 71	MEXICO	2094.7	73.3	57.0	57.5	39.6	75.0
3	NAPO 63	COLOMBIA	2066.9	76.0	47.0	55.5	40.0	65.0
38	LR 301	INDIA	2063.1	77.1	58.0	60.0	48.0	75.0
20	POTAM 70	MEXICO	2077.4	77.1	47.0	72.5	48.0	75.0
1	ECONZA 55	COLOMBIA	2060.0	77.1	61.0	100.0	42.0	76.6
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2042.5	76.5	63.0	100.0	35.5	75.0
11	JARAL 'S' / LRE-SK-PARA	INDONESIA	2042.6	74.0	47.0	82.5	34.3	70.0
48	NAYAB 70	PAKISTAN	2036.9	77.1	57.0	80.0	46.3	68.3
15	EE-INIA	MEXICO	2036.9	77.1	47.0	60.0	46.3	73.3
13	MARA X SUPREMO-MENTANA-MCM	CHILE	2013.7	76.5	63.0	102.5	43.3	70.0
39	HUELGUEN	CHILE	1955.8	77.1	59.0	97.5	40.2	65.0
33	CABOTO	ARGENTINA	1955.8	77.1	61.0	112.5	34.3	76.6
28	PATO ARGENTINO	ARGENTINA	1938.5	79.0	46.0	72.5	34.7	75.0
49	MANITOU	CANADA	1793.8	75.8	61.0	110.0	36.2	60.0
2	CHRIS	U.S.A.	1764.9	76.5	54.0	110.0	33.0	71.6
37	MANITOU / INSENSITIVE /	CANADA	1730.2	75.8	47.0	107.5	33.8	70.0
47	CARAZINHO	BRAZIL	1631.8	75.8	61.0	112.5	39.8	75.0
26	INIA 66	MEXICO	1631.8	79.0	46.0	72.5	48.0	53.3
17	ARIANA 66	TUNISIA	1631.8	70.7	76.0	100.0	35.6	76.6
5	IAS 20 IASSUL	BRAZIL	775.4	73.2	64.0	115.5	38.5	76.6
		GRAND MEAN	2172.9	76.5	55.7	83.5	40.8	73.7
		STANDARD ERROR OF GRAND MEAN	25.7					0.5
		COEFFICIENT OF VARIATION	14.4%					8.4%
		LSD VARIETY MEANS 5 PC	514.1					10.1

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.25				
DAYS TO	FLOWER	-0.05	-0.47**			
HEIGHT	CM.	-0.46**	-0.17	0.36**		
1000 GRN	WGT GRMS	0.19	0.20	-0.17	-0.35*	
PLANT	STAND	0.23	0.03	0.04	-0.10	-0.07

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 69 OCEANIA AUSTRALIA QUEENSLAND

QUEENSLAND WHEAT RESEARCH INSTITUTE.
COOPERATORS J. SHEPPARD.

LATITUDE	027 30'S	DATE PLANTED	06/15/72	NITROGEN	044.4 KG/HA
LONGITUDE	151 27'E	DATE HARVESTED	11/20/72	PHOSPHORUS	000.0 KG/HA
ELEVATION	+00666 M.ABOVE S.L.	AMOUNT OF MOISTURE	---- MM	POTASSIUM	000.0 KG/HA

ABNORMAL DRY PERIOD DURING INITIAL GROWTH. POTTER WEATHER FOLLOWED FLOWERING. GOOD RAINFALL AT THE GRAIN-FILLING STAGE. RAPID RUST DEVELOPMENT. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
35	HUELGUEN	CHILE	4478.6	102.6	136.6	TRR	96.6	3.0	35.8
46	KALYANSONA 227	INDIA	4454.0	107.3	140.0	10S	86.6	0.0	31.5
50	LOCAL CHECK / 6.6 CMS. / PACKET /		4417.1	96.3	126.6	10MS	98.3	4.0	37.0
35	CHOCTI LERMA	INDIA	4395.3	98.3	139.3	TRR	81.3	0.0	34.0
44	MEXICANO 1481	PORTUGAL	4226.9	104.3	142.0	40MS	90.6	3.0	37.5
45	FIAMENTES	ARGENTINA	4199.4	104.3	141.3	TRR	104.3	45.0	37.5
42	CIZA 153	EGYPT	4061.1	101.0	140.6	TRR	93.3	0.0	35.5
19	LR64-NIUB X AN 3E	AUSTRALIA	4033.7	101.0	138.6	TRR	68.3	0.0	34.0
25	FATC ARGENTINO	ARGENTINA	3903.1	106.3	141.0	TRR	81.6	0.0	32.3
48	NAYAE 70	PAKISTAN	3748.7	99.6	139.6	10S	87.6	0.0	39.2
47	CARAZINHO	BRAZIL	3742.1	104.3	140.0	TRR	110.0	45.0	41.6
34	ET-2281	TUNISIA	3696.7	103.6	137.0	5MR	78.3	0.0	38.8
40	VICTOR I	ITALY	3656.9	106.0	141.6	TRR	66.0	0.0	34.6
13	MARA X SUPREME-MENTANA-MCM	CHILE	3566.9	407.6	140.6	TRR	106.6	40.0	40.7
18	FITIC 62	MEXICO	3497.9	104.6	139.6	TRR	83.3	0.0	33.3
3	NAPO 63	COLOMBIA	3474.2	97.3	135.0	TRR	95.0	0.0	34.0
33	CABECIO	ARGENTINA	3397.5	106.0	140.6	TRR	105.0	40.0	32.5
17	ARIANA 66	TUNISIA	3391.9	108.0	141.0	5S	96.6	0.0	37.3
4	TAPORI 71	MEXICO	3347.4	97.6	133.0	TRR	76.6	0.0	34.8
9	TOLUIFEN 'S'	CHILE	3344.5	104.3	139.6	TRR	82.6	0.0	33.5
38	LR 341	INDIA	3332.2	102.3	136.0	5MR	62.6	0.0	30.6
43	CHANAE 70	PAKISTAN	3317.1	98.6	140.0	-	83.3	0.0	37.0
31	CAJEME 71	MEXICO	3297.2	103.0	136.0	TRR	66.6	0.0	40.1
36	JARAL 'S'	ARGENTINA	3248.0	99.6	140.0	TRR	81.6	0.0	33.5
21	FENJANO 62	MEXICO	3207.3	98.0	136.0	TRR	80.0	0.0	34.1
6	T-64-2-W	TUNISIA	3151.4	100.0	140.0	30MS	88.3	0.0	36.5
23	CALIDAD	MEXICO	3135.3	101.0	133.6	TRR	80.0	0.0	33.3
24	TOEARI 66	MEXICO	3135.3	98.6	135.3	TRR	75.0	0.0	33.0
22	ZANEZI	RHODESIA	3096.5	105.0	140.3	10MR	81.3	0.0	33.7
27	SONORA 64-K1. REND.	ARGENTINA	2956.3	97.0	129.3	TRR	78.3	0.0	37.0
1	ECNZA 55	COLOMBIA	2947.9	101.0	131.6	-	95.0	0.0	36.0
7	ET 2266	TUNISIA	2934.6	97.0	135.0	TRR	80.0	0.0	34.0
14	MEX 626	IRAQ	2893.9	99.0	131.0	TRR	82.3	0.0	41.0
16	ET-2296	TUNISIA	2876.9	97.6	131.0	TRR	78.3	0.0	40.7
41	SONALIKA	INDIA	2816.2	97.0	136.6	TRR	81.6	0.0	42.5
30	HAZERA-2152	ISRAEL	2815.3	100.0	133.6	20MR	75.0	0.0	36.7
26	INIA 66	MEXICO	2802.1	99.0	135.3	TRR	78.3	0.0	36.5
12	VICAM 71	MEXICO	2693.2	104.6	138.3	TRR	97.6	0.0	32.2
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2665.8	97.3	129.0	TRR	99.0	0.0	28.8
2	CHRIS	U.S.A.	2621.3	104.0	139.6	TRR	106.6	6.0	31.8
28	YECORA 70	MEXICO	2570.1	102.0	131.0	TRR	65.3	0.0	36.2
15	EE-INIA	MEXICO	2482.1	99.6	131.6	TRR	98.3	0.0	39.8
32	LERMI	RHODESIA	2409.2	98.3	134.6	TRR	63.3	0.0	35.0
37	MANITOU / INSENSITIVE /	CANADA	2359.0	98.6	133.3	TRR	99.3	10.0	29.5
29	MEXICO 120	AUSTRALIA	2337.3	97.6	131.0	TRR	86.6	0.0	36.6
5	IAS 20 IASSLL	BRAZIL	2310.8	101.0	134.0	TRR	120.0	3.0	36.8
10	FIFA	INDIA	2278.6	96.6	131.6	TRR	99.3	0.0	36.7
20	POTAM 70	MEXICO	2238.8	99.0	130.0	TRR	71.6	0.0	37.2
45	MANITOU	CANADA	-	124.3	159.3	0	105.0	0.0	0.0
8	ERA	U.S.A.	-	124.0	159.6	-	80.0	-	-
		GRAND MEAN	3183.4	108.0	137.1	2.1	82.6	4.0	35.0
		STANDARD ERROR OF GRAND MEAN	60.5	6.0	0.2		0.4		
		COEFFICIENT OF VARIATION	22.9%	68.4%	1.5%		6.4%		
		LSD VARIETY MEANS 5 PC	1191.4	120.7	4.0		8.7		

CORRELATIONS

YIELD	KG/HA						
DAYS TO	FLOWER	0.01					
DAYS TO	MATURITY	-0.30*	0.19				
LEAF	RUST	0.28	-0.04	0.10			
HEIGHT	CM.	0.14	0.25	0.32*	0.12		
LODGING		0.20	0.45**	0.18	-0.08	0.52**	
1000 GRN	WGT GRMS	0.66**	0.01	-0.71**	0.10	-0.06	0.14

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 70 OCEANIA NEW ZEALAND MANAWATU

CROP RESEARCH DIVISION, PALMERSTON NORTH.
COOPERATORS DR. J.P. MCEWAN.

LATITUDE 040 23'S
LONGITUDE 175 37'E
ELEVATION 4----- M.ABOVE S.L.

DATE PLANTED 09/25/71
DATE HARVESTED 02/15/72
AMOUNT OF MOISTURE 0400 MM

NITROGEN ---.- KG/HA
PHOSPHORUS 030.0 KG/HA
POTASSIUM ---.- KG/HA

WET SPRING DELAYED SEEDING. FAVOURABLE WEATHER CONDITIONS. EARLY APPEARANCE OF LEAF RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK RAVEN.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	LODGING	SHATTERING
15	LR64-NICH X AN 3E	AUSTRALIA	4354.1	64.2	75.0	50S-TR	73.6	13.3	0.0
8	ERA	U.S.A.	4346.9	63.5	79.0	0	92.0	13.3	0.0
18	PITIC 62	MEXICO	3567.4	60.0	72.3	20MR	92.6	13.3	0.0
35	CHECTI LERMA	INDIA	3835.5	64.5	68.3	TR	82.6	13.3	0.0
36	JARAL 'S'	ARGENTINA	3805.4	62.5	70.6	0	81.3	20.0	6.6
46	KALYANSONA 227	INDIA	3772.0	63.7	73.0	50S	81.3	13.3	6.6
25	FATL ARGENTINO	ARGENTINA	3772.0	64.5	70.5	TR	81.6	6.6	6.6
12	VICAM 71	MEXICO	3673.9	61.5	71.0	0	61.3	0.0	0.0
14	MEX 226	IRAQ	3322.2	63.7	66.3	0	91.0	6.6	6.6
17	ARIANA 66	TUNISIA	3314.8	60.5	83.6	30S	118.6	20.0	0.0
44	MEXICANO 1481	PORTUGAL	3259.2	60.8	74.0	50S	87.6	13.3	0.0
38	LR 301	INDIA	3187.9	60.2	67.6	0	60.0	0.0	0.0
39	PUELCUEN	CHILE	3173.1	62.7	70.6	0	108.6	20.0	20.0
16	ET-2256	TUNISIA	3157.4	63.8	70.0	0	89.3	0.0	0.0
31	CALENE 71	MEXICO	3152.8	62.5	71.6	0	73.0	0.0	0.0
34	ET-2281	TUNISIA	3072.2	64.8	70.0	50S	81.0	6.6	0.0
32	LLANI	RHODESIA	2942.6	60.7	67.0	5MR	67.3	0.0	0.0
6	T-64-2-W	TUNISIA	2939.9	60.0	72.6	70S	99.3	13.3	13.3
40	VICTOR I	ITALY	2913.9	62.8	81.3	10MR	76.6	0.0	0.0
21	FERJANE 62	MEXICO	2869.5	62.8	70.0	10MR	82.0	20.0	20.0
33	CABECIO	ARGENTINA	2855.6	64.3	75.0	0	115.3	26.6	13.3
45	PIAMONTES	ARGENTINA	2826.9	63.1	76.3	5MR	112.3	20.0	0.0
23	CALICAO	MEXICO	2826.0	63.8	70.3	0	86.6	6.6	0.0
29	MEXICO 120	AUSTRALIA	2809.3	62.2	73.6	50S	80.6	6.6	0.0
22	ZAMBEZI	RHODESIA	2794.5	62.1	72.0	70S	79.3	20.0	0.0
7	BT 2288	TUNISIA	2780.7	63.5	65.0	0	86.6	13.3	0.0
5	TUCUPEN 'S'	CHILE	2702.0	62.7	69.6	5MR	74.3	6.6	6.6
48	NAYAB 70	PAKISTAN	2660.3	62.1	70.0	70S	81.0	13.3	6.6
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	2533.5	61.3	66.3	30MS	87.6	0.0	6.6
13	MARA > SUPREMO-MENTANA-MCM	CHILE	2500.2	63.5	82.3	30MS	106.6	26.6	53.3
30	PAZERA-2152	ISRAEL	2426.1	61.3	71.0	70S	73.3	20.0	0.0
18	EE-INIA	MEXICO	2410.4	62.5	65.0	0	59.3	0.0	0.0
47	CARAJINHO	BRAZIL	2384.5	62.8	77.0	TR	119.3	46.6	20.0
42	GIZA 153	EGYPT	2304.9	60.8	69.0	50S	96.6	20.0	6.6
26	YECORA 70	MEXICO	2274.3	62.6	69.3	0	60.0	6.6	0.0
27	SONORA 64-K1. PEND.	ARGENTINA	2150.3	63.2	67.3	1MR	82.6	20.0	0.0
41	SONALIKA	INDIA	2134.5	62.0	66.0	0	82.3	20.0	6.6
50	LOCAL CHECK / 6.6 GMS. / PACKET /		2114.2	62.1	73.6	70S	109.3	40.0	6.6
45	MANITOU	CANADA	2105.8	63.1	79.3	0	112.3	40.0	0.0
1	ECUZA 55	COLOMBIA	2008.6	60.8	71.6	30MS	104.6	26.6	13.3
24	TOBARI 66	MEXICO	1997.5	63.2	70.0	0	77.6	20.0	0.0
43	CHANAB 70	PAKISTAN	1992.9	63.3	66.0	50S	72.0	20.0	6.6
10	PUSA	INDIA	1885.5	59.6	65.0	70S	60.3	6.6	13.3
20	POTAM 70	MEXICO	1635.6	62.0	66.3	0	75.3	13.3	13.3
3	NARC 63	COLOMBIA	1603.2	61.5	67.0	20MS	95.0	13.3	46.6
2	CHRIS	U.S.A.	1579.1	62.1	74.3	0	112.6	33.3	6.6
37	MANITOU / INSENSITIVE /	CANADA	1555.1	62.0	67.6	0	98.6	26.6	0.0
4	TANORI 71	MEXICO	1530.1	61.3	65.6	TR	86.0	13.3	0.0
26	INIA 66	MEXICO	1511.6	63.1	67.3	TR	70.0	6.6	0.0
5	IAS 20 IASSUL	BRAZIL	784.0	52.2	75.6	0	123.3	40.0	100.0
		GRAND MEAN	2651.0	62.2	71.2	14.5	86.2	15.3	8.1
	STANDARD ERROR OF GRAND MEAN		51.7		0.1	0.5	0.4	0.7	0.7
	COEFFICIENT OF VARIATION		23.5%		2.8%	81.6%	6.0%	63.8%	117.0%
	LSD VARIETY MEANS 5 PC		1034.6		3.2	15.4	5.5	15.9	15.5

CORRELATIONS

YIELD KG/HA							
TEST WEIGHT	0.39**						
DAYS TO FLOWER	0.25	-0.02					
LEAF RUST	0.02	-0.16	0.17				
HEIGHT CM.	-0.16	-0.19	0.57**	-0.03			
LODGING	-0.38**	-0.18	0.40**	0.06	0.77**		
SHATTERING	-0.40**	-0.56**	0.18	0.01	0.48**	0.41**	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 71 SOUTH AMERICA ARGENTINA BUENOS AIRES

ESTACION EXPERIMENTAL-REGIONAL AGROPECUARIA BALCARCE.
COOPERATORS INGS. E. F. ERNIE ET AL.

LATITUDE 037 45'S DATE PLANTED 08/19/71 NITROGEN 036.0 KG/HA
LONGITUDE 058 18'W DATE HARVESTED 12/24/72 PHOSPHORUS 094.0 KG/HA
ELEVATION 00130 M.ABOVE S.L. AMOUNT OF MOISTURE 0904 MM POTASSIUM 000.0 KG/HA

NORMAL FROM GERMINATION UNTIL END OF OCTOBER. NOVEMBER WAS DRY WITH TEMPERATURES ABOVE NORMAL WITH SOME FROST. AS USUAL, YELLOW RUST WAS THE IMPORTANT DISEASE. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NOT REPORTED. SEPTORIA SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	SHATTERING	SEPTORIA SPP.	FROST DAMAGE
19	LR64-NIOB X AN 3E	AUSTRALIA	4577.3	80.1	76.0	117.0	TR.	10MS-S	86.6	-	5.0	3	2.3
4	TANORI 71	MEXICO	4044.0	77.8	64.0	104.0	TR	TR	90.0	-	8.3	2	-
29	MEXICO 120	AUSTRALIA	3959.5	76.7	73.0	120.0	TR	TR	63.3	-	5.0	2	6.6
15	BE-INIA	MEXICO	3866.2	75.6	68.0	108.0	TR.	TR.	70.0	-	5.0	3	8.3
22	ZAMBEZI	RHODESIA	3721.8	81.0	67.0	107.0	5MS	TR	90.0	-	6.6	3	11.6
10	HIRA	INDIA	3666.2	76.0	64.0	104.0	TR.	20MS	68.3	-	11.6	2	2.3
12	VICAM 71	MEXICO	3632.9	72.5	70.0	109.0	50MS	-	61.6	-	11.6	1	4.0
38	LF 301	INDIA	3610.7	72.9	73.0	119.0	TR	-	66.6	-	5.0	3	8.3
18	PITIC 62	MEXICO	3610.7	73.3	75.0	117.0	TR	TR.	96.6	-	5.0	2	3.6
7	BT 22EE	TUNISIA	3610.7	81.0	63.0	105.0	TR.	5MS	93.3	5.0	5.0	2	6.6
34	BT-2281	TUNISIA	3588.5	79.8	70.0	117.0	0	TRR	93.3	-	5.0	2	5.0
28	YECORA 70	MEXICO	3521.8	72.7	69.0	111.0	10MS	TR	66.6	5.0	20.0	3	11.6
30	NAZERA-2152	ISRAEL	3510.7	75.8	72.0	119.0	10MS	TR	88.3	-	5.0	2	6.6
24	TOBARI 66	MEXICO	3499.6	79.0	70.0	117.0	10MS	-	91.6	10.0	-	3	18.3
25	PATC ARGENTINO	ARGENTINA	3444.0	80.7	71.0	118.0	5MR	TR	91.6	-	-	1	8.3
41	SONALIKA	INDIA	3344.1	78.7	68.0	110.0	10MS	5MS	98.3	-	15.0	3	10.0
26	INIA 66	MEXICO	3344.1	76.7	68.0	110.0	TR-5MS	20MS	90.0	-	8.3	2	11.6
44	MEXICANO 1481	PORTUGAL	3299.6	76.3	74.0	118.0	TRMS	30MS	91.6	-	-	2	5.0
35	CHOCII LERMA	INDIA	3255.2	82.1	71.0	118.0	10MS	30MS	95.0	5.0	-	2	8.3
8	ERA	U.S.A.	3188.5	81.2	83.0	120.0	20MS	TR	88.3	-	-	3	6.6
42	GIZA 155	EGYPT	3166.3	80.5	71.0	118.0	TRMS	10S	110.0	5.0	-	3	8.3
14	MEX 226	IRAQ	3155.2	78.3	67.0	107.0	30MS	TR-1R	96.6	-	11.6	2	5.0
46	NAYAB 70	PAKISTAN	3144.1	76.3	69.0	104.0	10MS	5MS	93.3	-	20.0	3	6.6
31	CAJEME 71	MEXICO	3133.0	75.1	73.0	120.0	TR	-	73.3	-	26.6	2	6.6
9	TOCLIFEN 'S'	CHILE	3010.8	78.7	67.0	107.0	10MS	-	88.3	-	8.3	2	10.0
21	PENJAMO 62	MEXICO	2988.5	76.5	68.0	108.0	TR.	TR-5MS	93.3	-	13.3	2	20.0
36	JARAL 'S'	ARGENTINA	2988.5	79.6	71.0	118.0	40MS	-	88.3	-	-	3	18.3
6	T-64-2-W	TUNISIA	2877.4	77.8	75.0	117.0	5MS	10MS	108.3	-	5.0	3	-
32	LUNDI	RHODESIA	2810.8	74.0	71.0	118.0	70S	TR	83.3	5.0	7.5	1	-
39	HUELGUEN	CHILE	2666.3	80.1	75.0	118.0	TR	TR.	108.3	5.0	-	1	5.3
43	CHANAB 70	PAKISTAN	2544.1	78.1	65.0	112.0	10MS	20MS	91.6	-	26.6	3	5.0
20	POTAM 70	MEXICO	2533.0	70.5	66.0	106.0	10MS	-	83.3	20.0	20.0	3	8.3
27	SONORA 64-K1. REND.	ARGENTINA	2477.5	76.7	69.0	111.0	40MS	-	90.0	-	20.0	1	6.6
23	CALICAL	MEXICO	2466.4	78.7	70.0	117.0	10MS	-	91.6	0.0	26.6	2	15.0
40	VICTOR I	ITALY	2421.9	72.7	66.0	121.0	5MS	5MS	76.6	-	-	2	0.0
16	BT-2296	TUNISIA	2399.7	77.8	68.0	108.0	10MS	-	90.0	-	16.6	4	6.6
17	ARIANA 66	TUNISIA	2399.7	79.4	91.0	130.0	TR	20S	93.3	-	-	4	1.0
33	GAUCHO	ARGENTINA	2366.4	80.7	77.0	120.0	30MS	-	108.3	5.0	-	1	10.0
50	LOCAL CHECK / 6.6 CMS. / PACKET		2277.5	-	64.0	100.0	50S	-	86.6	-	-	2	11.6
47	CARAZINHO	BRAZIL	2244.2	79.2	82.0	120.0	10MS	5MS	106.6	-	-	2	6.6
1	BONZA 55	COLOMBIA	2233.1	77.2	74.0	117.0	10MS	TR	110.0	30.0	5.0	2	13.3
46	KALYANSONA 227	INDIA	2210.8	79.4	74.0	119.0	20MS	-	93.3	40.0	30.0	3	6.6
3	NARO 63	COLOMBIA	2088.6	75.1	64.0	104.0	TR	5MS	105.0	18.3	15.0	1	10.0
2	CHRIS	U.S.A.	1966.4	79.2	75.0	117.0	40MS	-	106.6	10.0	10.0	1	11.6
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	1933.1	69.3	64.0	104.0	95S	-	76.6	10.0	5.0	-	-
13	PARA X SUPREMO-MENTANA-MCM	CHILE	1833.1	79.4	62.0	120.0	10MR	-	101.6	15.0	7.6	1	6.6
37	MANITOL / INSENSITIVE /	CANADA	1499.8	75.8	69.0	111.0	90MS	-	101.6	40.0	-	-	-
49	FIAMENTES	ARGENTINA	1444.2	81.0	78.0	116.0	10MS	TR	103.3	20.0	-	2	8.3
45	MANITOL	CANADA	1355.4	78.1	86.0	121.0	70S	-	95.0	-	-	-	-
5	IAS 20 IASSUL	BRAZIL	-	-	60.0	120.0	50MS	-	111.6	-	66.6	2	6.6
		GRAND MEAN	2917.8	77.5	72.0	113.9	15.1	4.1	90.9	13.7	13.2		8.1
	STANDARD ERROR OF GRAND MEAN		34.5				0.3	0.1	0.3	0.5	1.0		0.2
	COEFFICIENT OF VARIATION		14.3%				26.4%	52.2%	5.2%	29.5%	79.3%		35.0%
	LSD VARIETY MEANS 5 PC		684.6				6.5	3.5	7.7	6.6	17.1		4.6

CORRELATIONS

YIELD	KG/HA											
TEST	WEIGHT	0.41**										
DAYS TO	FLOWER	-0.36**	0.04									
DAYS TO	MATURITY	-0.17	0.17	0.84**								
STRIPE	RUST	-0.50**	-0.32*	-0.03	-0.12							
LEAF	RUST	0.17	0.15	0.09	0.11	-0.30*						
HEIGHT	CM.	-0.51**	-0.02	0.24	0.20	-0.01	0.08					
LODGING		-0.41**	0.09	-0.03	-0.00	0.24	-0.18	0.28				
SHATTERING		-0.35**	-0.44**	-0.12	-0.11	0.03	-0.13	0.01	0.02			
SEPTORIA	SPP.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
FROST	DAMAGE	0.06	-0.03	-0.26	-0.10	-0.28*	-0.19	0.10	0.01	0.07	0.00	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 72 SOUTH AMERICA ARGENTINA BUENOS AIRES

ESTACION EXPERIMENTAL REGIONAL AGROPECUARIA PERGAMINO
COOPERATORS A. CALZOLARI, C. ELLIOFF AND F. CONTA.

LATITUDE 034 56'S — DATE PLANTED 07/07/72 — NITROGEN 000.0 KG/HA
LONGITUDE 060 33'W — DATE HARVESTED 12/14/72 — PHOSPHORUS 000.0 KG/HA
ELEVATION 00065 M.ABOVE S.L. — AMOUNT OF MOISTURE 0471 MM — POTASSIUM 000.0 KG/HA

BEST CONDITIONS DURING THE GROWING SEASON. SEVERAL PROSTS AFFECTED EARLY VARIETIES. GOOD DEVELOPMENT OF FLOURISH AND SEPTORIA. CHEMICAL CONTROL OF INSECTS. LOCAL CHECK NOT REPORTED. FUSARIUM SCALE NOT REPORTED. FUSARIUM: SI= YES.

	VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA TRITICI	SEPTORIA NODORUM	FUSARIUM	FROST DAMAGE
5	TOGLIFEN 'S'		CHILE	2577.5	74.0	108.0	155.0	1S	90.0	26.0	38.8	11.0	SI	0.0
28	FATO ARGENTINO		ARGENTINA	2544.1	75.8	103.0	153.0	20S	92.5	28.0	27.7	11.0	SI	11.0
36	JERAL 'S'		ARGENTINA	2510.8	68.9	106.0	156.0	1S	90.0	28.0	44.3	16.6	SI	0.0
27	SONORA 64-K1, PERO.		ARGENTINA	2010.9	46.6	104.0	151.0	10S	97.5	24.0	44.3	11.0	SI	16.6
45	MANITOL		CANADA	1888.6	68.6	102.0	156.0	60S	135.0	24.0	36.8	0.0	NO	0.0
8	ERA		U.S.A.	1888.4	71.3	87.0	155.0	1S	105.0	22.0	38.8	0.0	NO	0.0
47	CARAZINHO		BRAZIL	1833.1	74.5	-	156.0	80S	115.0	28.0	27.7	11.0	NO	11.0
17	ARIANA 66		TUNISIA	1777.5	77.6	113.0	155.0	20S	117.5	32.0	16.6	22.1	NO	11.0
25	MEXICO 120		AUSTRALIA	1722.0	66.8	103.0	150.0	100S	65.0	24.0	77.6	11.0	SI	55.5
45	FLAMENTES		ARGENTINA	1710.5	70.8	110.0	156.0	40S	105.0	28.0	22.1	11.0	NO	0.0
14	MEX 226		IRAQ	1710.9	72.0	104.0	151.0	80S	100.0	28.0	55.5	11.0	SI	55.5
46	KALYANSONA 227		INDIA	1655.8	64.8	108.0	156.0	80S	97.5	20.0	45.5	11.0	SI	0.0
38	LP 361		INDIA	1588.7	59.2	105.0	152.0	T	67.5	24.0	72.1	11.0	SI	88.7
21	PENJAMO 62		MEXICO	1688.7	72.0	105.0	150.0	60S	100.0	28.0	44.3	11.0	NO	16.6
22	ZAMBEZI		RHODESIA	1666.9	42.3	104.0	150.0	T	90.0	20.0	49.9	11.0	SI	11.0
4	CHRIS		U.S.A.	1666.9	70.3	108.0	154.0	60S	110.0	20.0	88.7	22.1	SI	0.0
13	PARA X SUPREMO-MENTANA-MCP		CHILE	1666.4	66.8	113.0	161.0	30S	110.0	24.0	16.6	11.0	SI	0.0
43	CHANAE 70		PAKISTAN	1644.2	64.6	104.0	152.0	100S	90.0	24.0	66.5	11.0	SI	11.0
6	T-64-2-W		TUNISIA	1544.2	71.3	108.0	157.0	100S	112.5	24.0	45.5	22.1	SI	11.0
9	IAS 20 IASSUL		BRAZIL	1533.1	72.2	111.0	155.0	100S	120.0	26.0	11.0	11.0	SI	0.0
18	PITIC 62		MEXICO	1533.1	61.9	106.0	150.0	100S	92.5	24.0	55.5	11.0	SI	16.6
32	LUNDI		RHODESIA	1477.6	73.6	104.0	152.0	50S	82.5	26.0	88.7	11.0	SI	27.7
23	GABOTO		ARGENTINA	1477.6	75.4	108.0	156.0	0	105.0	24.0	27.7	11.0	SI	0.0
12	VICAM 71		MEXICO	1444.2	65.0	106.0	151.0	0	65.0	22.0	83.2	11.0	SI	22.1
35	PELELLEN		CHILE	1444.2	68.2	105.0	156.0	80S	95.0	22.0	66.5	22.1	SI	11.0
7	ET 2268		TUNISIA	1433.1	71.3	101.0	151.0	80S	97.5	24.0	88.7	11.0	SI	77.6
1	BONZA 55		COLOMBIA	1355.8	66.0	106.0	157.0	100S	100.0	24.0	66.5	11.0	SI	11.0
40	VICTOR 1		ITALY	1348.7	67.7	110.0	152.0	40S	80.0	22.0	38.8	11.0	NO	0.0
34	ET-2281		TUNISIA	1355.4	73.1	105.0	150.0	100S	82.5	24.0	61.0	11.0	SI	66.5
15	LR64-MICR X AN 38		AUSTRALIA	1333.1	55.6	107.0	155.0	100S	85.0	18.0	44.3	0.0	SI	0.0
31	CAMPO 71		MEXICO	1288.7	70.0	105.0	150.0	70S	75.0	28.0	49.9	11.0	SI	77.6
3	NAPO 63		COLOMBIA	1266.5	67.7	101.0	152.0	100S	105.0	24.0	66.5	16.6	SI	66.5
19	EE-INIA		MEXICO	1255.4	70.5	102.0	150.0	60S	72.5	32.0	33.2	11.0	SI	88.7
16	ET-2256		TUNISIA	1222.0	70.5	105.0	151.0	60S	100.0	26.0	44.3	11.0	SI	22.1
30	HAZERA-2152		ISRAEL	1177.6	67.3	104.0	150.0	100S	90.0	26.0	66.5	11.0	SI	33.2
24	TLAXCALA 66		MEXICO	1166.5	74.0	103.0	151.0	10S	92.5	28.0	22.1	16.6	SI	66.5
22	CALICAO		MEXICO	1166.5	70.9	105.0	151.0	100S	90.0	26.0	72.1	22.1	SI	49.5
37	MANITOL / INSENSITIVE /		CANADA	1110.9	75.4	103.0	152.0	100S	80.0	24.0	77.6	11.0	SI	16.6
48	NAYAB 70		PAKISTAN	1055.8	68.2	104.0	152.0	90S	100.0	26.0	49.9	11.0	SI	22.1
20	PETAN 70		MEXICO	1088.7	65.1	103.0	151.0	90S	82.5	30.0	72.1	11.0	SI	77.6
26	YECORA 70		MEXICO	999.8	69.5	103.0	151.0	1S	70.0	28.0	88.7	11.0	SI	72.1
44	MEXICANO 1481		PORTUGAL	999.8	59.2	105.0	152.0	80S	97.5	22.0	61.0	16.6	NO	0.0
4	TANORI 71		MEXICO	877.6	71.8	100.0	150.0	100S	105.0	28.0	44.3	16.6	SI	44.3
11	JERAL 'S' / LPE-SK-PARA		RHODESIA	866.5	42.3	101.0	151.0	5S	75.0	18.0	88.7	11.0	SI	83.2
10	PIRA		INDIA	833.2	68.5	102.0	151.0	100S	70.0	24.0	66.5	11.0	SI	88.7
42	GIZA 155		EGYPT	777.6	72.2	105.0	152.0	80S	105.0	22.0	55.5	16.6	SI	0.0
39	GAMOTI LERMA		INDIA	755.4	65.2	103.0	150.0	80S	90.0	20.0	61.0	11.0	SI	11.0
41	SONALIKA		INDIA	722.1	66.0	101.0	151.0	80S	92.5	28.0	72.1	11.0	SI	88.7
28	INIA 66		MEXICO	244.4	70.0	101.0	151.0	100S	90.0	28.0	55.5	16.6	SI	99.8
50	LOCAL CHECK 6.6 CMS. PACKET			0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0		0.0
			GRAND MEAN	1432.2	69.1	104.9	152.6	59.7	93.4	24.8	54.1	12.3		31.4
			STANDARD ERROR OF GRAND MEAN	32.8				0.7	0.3		1.7	0.2		1.0
			COEFFICIENT OF VARIATION	27.8%				11.7%	3.1%		31.9%	24.0%		31.8%
			LSD VARIETY MEANS 5 PC	650.9				11.4	4.8		28.2	4.8		16.3

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA TRITICI	SEPTORIA NODORUM	FUSARIUM	FROST DAMAGE
TEST WEIGHT	0.20										
DAYS TO FLOWER	-0.04	-0.17									
DAYS TO MATURITY	0.46**	0.14	-0.04								
LEAF RUST	-0.43**	-0.09	-0.06	-0.14							
HEIGHT CM.	0.23	0.32*	-0.08	0.57**	0.15						
1000 GRN WGT GRMS	0.07	0.56**	-0.13	-0.13	-0.04	0.06					
SEPTORIA TRITICI	-0.36**	-0.33*	0.07	-0.44**	0.20	-0.52**	-0.32				
SEPTORIA NODORUM	-0.15	0.22	0.05	0.03	0.12	0.05	0.15	0.11			
FUSARIUM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
FROST DAMAGE	-0.50**	-0.05	-0.02	-0.25**	0.06	-0.53**	0.33	0.41**	0.07	0.00	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 73 SOUTH AMERICA ARGENTINA CORDOBA

ESTACION EXPERIMENTAL REGIONAL AGROPEC. MARCOS JUAREZ
COOPERATORS ROGELIO J. PECANTE AND JORGE E. NISI.

LATITUDE 032 42'S DATE PLANTED 07/10/72 NITROGEN 000.0 KG/HA
LONGITUDE 062 07'W DATE HARVESTED 12/04/72 PHOSPHORUS 000.0 KG/HA
ELEVATION 00110 M.ABOVE S.L. AMOUNT OF MOISTURE 0445 MM POTASSIUM 000.0 KG/HA

FAVORABLE HUMID CONDITIONS DURING WHOLE GROWING SEASON. INTENSE ATTACK OF HUCCINIA RECONDITA AND SEPTORIA SP. REDUCTION OF YIELD DUE TO LOW TEMPERATURE. CHEMICAL CONTROL OF APHIDS. LOCAL CHECK MARCOS JUAREZ INTA.

NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	SEPTORIA SPP.	FUSARIUM	FROST DAMAGE
25	FATC ARGENTINO	ARGENTINA	3221.8	80.5	95.0	140.0	5MS	85.0	0.0	25.5	0.0	1.0	0.0
16	ET-2256	TUNISIA	3068.5	79.0	96.0	136.0	15MR	90.0	0.0	32.7	44.3	0.0	-
50	LOCAL CHECK / 6.6 CMS. / PACKET		2999.6	78.1	99.0	136.0	5MR	90.0	0.0	25.2	44.3	0.0	0.0
5	TOGLIFEN 'S'	CHILE	2999.6	77.8	100.0	146.0	0	80.0	0.0	24.8	11.0	5.0	-
21	FERJARC 62	MEXICO	2921.9	75.1	100.0	136.0	70S	95.0	0.0	28.2	44.3	1.0	-
27	SONORA 64-K1. REND.	ARGENTINA	2910.8	78.3	95.0	136.0	10MR	90.0	0.0	25.2	44.3	0.0	0.0
36	JARAL 'S'	ARGENTINA	2768.6	75.4	100.0	143.0	0	80.0	0.0	26.4	11.0	0.0	0.0
14	MEX 226	IRAQ	2766.3	78.7	95.0	136.0	60MS	90.0	0.0	30.5	22.1	0.0	-
24	TOBARI 66	MEXICO	2677.5	80.3	95.0	140.0	10S	80.0	0.0	30.1	11.0	0.0	0.0
7	BT 2288	TUNISIA	2666.3	78.1	93.0	136.0	20S	90.0	0.0	28.4	66.5	0.0	20.0
31	CAJEME 71	MEXICO	2644.1	75.0	97.0	137.0	TS	65.0	0.0	31.2	44.3	0.0	20.0
33	CAEOTO	ARGENTINA	2466.6	80.5	103.0	143.0	0	105.0	10.0	25.5	0.0	1.0	0.0
47	CARAZINHO	BRAZIL	2355.3	77.8	102.0	145.0	60S	110.0	40.0	25.0	0.0	1.0	0.0
22	ZAMBEZI	RHODESIA	2288.6	74.2	100.0	136.0	0	85.0	0.0	21.9	22.1	1.0	5.0
23	CALICAO	MEXICO	2288.6	80.5	96.0	140.0	80S	90.0	5.0	28.3	22.1	0.0	0.0
28	YECORA 70	MEXICO	2277.5	74.7	94.0	135.0	TMS	70.0	0.0	32.4	44.3	0.0	80.0
5	IAS 20 IASSUL	BRAZIL	2210.8	75.8	104.0	143.0	50S	115.0	20.0	25.6	11.0	5.0	-
45	FIAMONTES	ARGENTINA	2177.5	80.1	102.0	142.0	10MR	105.0	10.0	26.2	0.0	1.0	0.0
2	CHRIS	U.S.A.	2133.1	76.3	102.0	140.0	10S	105.0	10.0	23.3	11.0	0.0	-
37	MANITOU / INSENSITIVE /	CANADA	2122.0	77.4	95.0	136.0	60S	110.0	60.0	24.0	44.3	0.0	0.0
34	ET-2281	TUNISIA	2077.5	76.3	92.0	140.0	80S	85.0	0.0	25.6	22.1	0.0	10.0
3	NAPO 63	COLOMBIA	2022.0	76.0	92.0	136.0	60MS	90.0	10.0	29.6	22.1	0.0	-
35	HUELQUEN	CHILE	1977.5	76.3	102.0	137.0	40MS	110.0	20.0	27.0	22.1	0.0	0.0
4	TANORI 71	MEXICO	1955.3	76.7	91.0	136.0	80S	85.0	0.0	22.3	44.3	0.0	60.0
25	CHOTTI LERMA	INDIA	1922.0	81.0	95.0	136.0	100S	85.0	0.0	23.4	44.3	0.0	10.0
30	HAZERA-2152	ISRAEL	1922.0	73.1	91.0	136.0	100S	85.0	0.0	30.8	44.3	1.0	10.0
32	LUNDI	RHODESIA	1855.3	72.9	96.0	136.0	70MS	70.0	0.0	25.3	66.5	1.0	0.0
38	LF 301	INDIA	1766.4	72.5	95.0	135.0	0	60.0	0.0	26.3	66.5	0.0	60.0
12	VICAM 71	MEXICO	1766.4	68.2	99.0	136.0	TS	55.0	0.0	22.9	77.6	0.0	10.0
20	FOTAM 70	MEXICO	1755.3	72.7	91.0	136.0	TS	70.0	0.0	32.5	88.7	0.0	60.0
18	FITIC 62	MEXICO	1744.2	63.7	100.0	140.0	80S	85.0	0.0	19.5	22.1	5.0	-
15	EE-INIA	MEXICO	1733.1	73.8	94.0	136.0	50MS	60.0	0.0	25.1	55.5	0.0	-
29	MEXICO 120	AUSTRALIA	1710.9	68.6	94.0	136.0	100S	60.0	0.0	22.8	77.6	0.0	40.0
6	T-64-2-W	TUNISIA	1655.3	74.7	102.0	143.0	80MS	105.0	0.0	27.0	33.2	5.0	-
48	NAYAB 70	PAKISTAN	1644.2	70.2	96.0	136.0	80S	85.0	0.0	26.3	55.5	0.0	40.0
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	1599.8	72.0	91.0	136.0	40S	70.0	0.0	22.4	66.5	0.0	50.0
44	MEXICANO 1481	PORTUGAL	1588.7	68.0	100.0	136.0	100S	80.0	20.0	21.4	44.3	1.0	0.0
17	ARIANA 66	TUNISIA	1577.6	74.2	109.0	147.0	5MS	100.0	0.0	24.6	0.0	-	-
13	PARA X SUPREMO-MENTANA-MCM	CHILE	1544.2	74.5	104.0	143.0	40MS	95.0	10.0	20.5	33.2	0.0	-
46	KALYANSONA 227	INDIA	1522.0	69.8	102.0	136.0	80S	70.0	0.0	19.0	33.2	5.0	0.0
41	SONALIKA	INDIA	1466.5	76.3	91.0	136.0	50S	85.0	0.0	36.3	66.5	0.0	80.0
43	CHANAB 70	PAKISTAN	1466.5	68.5	95.0	135.0	100S	80.0	0.0	20.1	55.5	1.0	10.0
40	VICTOR 1	ITALY	1455.4	65.2	104.0	141.0	80S	65.0	0.0	20.1	44.3	1.0	0.0
1	ECONZA 55	COLOMBIA	1455.4	68.2	100.0	136.0	80S	95.0	0.0	19.5	44.3	1.0	-
8	ERA	U.S.A.	1410.9	65.1	114.0	147.0	0	95.0	0.0	18.0	11.0	0.0	-
42	GIZA 155	EGYPT	1344.3	74.5	99.0	140.0	80S	95.0	5.0	25.3	22.1	5.0	0.0
19	LR64-MCB X AN 3E	AUSTRALIA	1233.2	70.9	103.0	141.0	70S	70.0	0.0	18.7	66.5	5.0	-
26	INIA 66	MEXICO	1099.8	76.7	91.0	134.0	100S	85.0	0.0	33.7	66.5	0.0	70.0
10	PIRA	INDIA	977.6	66.8	90.0	136.0	80S	65.0	0.0	21.1	66.5	0.0	50.0
45	MANITOU	CANADA	822.1	67.3	118.0	147.0	30MS	105.0	0.0	21.3	11.0	0.0	0.0
		GRAND MEAN	2002.0	74.3	98.1	138.5	44.1	85.5	4.3	25.7	31.5	0.5	15.8

STANDARD ERROR OF GRAND MEAN 17.4
COEFFICIENT OF VARIATION 10.6%
LSD VARIETY MEANS 5 PC 349.7

CORRELATIONS

YIELD	KG/HA											
TEST	WEIGHT	0.67**										
DAYS TO	FLOWER	-0.16	-0.21									
DAYS TO	MATURITY	-0.02	0.04	0.77**								
LEAF	RUST	-0.48**	-0.34*	-0.27	-0.28*							
HEIGHT	CM.	0.16	0.42**	0.43**	0.45**	-0.05						
LODGING		0.05	0.20	0.10	0.11	0.08	0.51**					
1000 GRN	WGT GRMS	0.43*	0.57**	-0.47**	-0.28*	-0.24	0.04	-0.02				
SEPTORIA	SPP.	-0.32*	-0.37**	-0.56**	-0.70**	0.27*	-0.65**	-0.24	0.11			
FUSARIUM		-0.10	-0.15	0.25	0.30*	0.22	0.11	-0.00	-0.31*	-0.19		
FROST	DAMAGE	-0.30*	-0.16	-0.55**	-0.44**	0.09	-0.44**	-0.22	0.24	0.58**	-0.30*	

* SIGNIFICANT AT THE 5 LEVE ** SIGNIFICANT AT THE 1 LEVEL

TABLE 74 SOUTH AMERICA ARGENTINA TUCUMAN

ESTACION EXPERIMENTAL AGRICOLA DE TUCUMAN.
COOPERATORS INCS. IVO E. GRANERCS AND RAUL RICCI.

LATITUDE	026 28'S	DATE PLANTED	09/23/72	NITROGEN	050.0 KG/HA
LONGITUDE	064 66'W	DATE HARVESTED	--/--/--	PHOSPHORUS	050.0 KG/HA
ELEVATION	+00400 M.ABOVE S.L.	AMOUNT OF MOISTURE	0245 MM	POTASSIUM	000.0 KG/HA

RAINFALL ABOVE NORMAL. MORE LOW TEMPERATURES THAN PREVIOUS YEARS. PLANT HEIGHT READING HIGHER THAN NORMAL. FOR THE FIRST TIME PUCCINIA GRAMINIS RECONDITA AND ERISIPHE SPP. WERE PREVALENT. PRESENCE OF INSECTS. LOCAL CHECK CIANO 67.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
22	7AMEC21	RHODESIA	11400.0	79.6	95.0	-	33.8
15	E -INIA	MEXICO	11366.6	77.6	75.0	-	34.4
36	JARAL 'S'	ARGENTINA	11333.3	79.8	100.0	-	31.1
16	FITIC 62	MEXICO	11333.3	75.8	100.0	-	34.5
48	NAYAB 70	PAKISTAN	11000.0	79.0	110.0	-	29.0
21	PENJAMO 62	MEXICO	10600.0	76.0	105.0	-	40.1
16	ET-2296	TUNISIA	10566.6	79.0	105.0	-	43.2
15	LR64-NIOB X AN 3E	AUSTRALIA	10566.6	81.0	65.0	-	30.8
46	KALYANSONA 227	INDIA	10366.6	80.3	100.0	-	34.7
4	TANORI 71	MEXICO	10166.6	75.1	100.0	-	39.2
20	POTAM 70	MEXICO	10166.6	74.5	80.0	-	40.2
41	SONALIKA	INDIA	10100.0	74.7	105.0	10.0	61.2
42	GIZA 155	EGYPT	10000.0	79.8	125.0	-	44.7
29	MEXICO 120	AUSTRALIA	10000.0	76.3	70.0	-	36.2
27	SONORA 64-K1. REND.	ARGENTINA	10000.0	76.7	100.0	-	39.1
50	LOCAL CHECK / 6.6 CMS. / PACKET /		9866.6	76.3	100.0	-	38.3
26	INIA 66	MEXICO	9500.0	77.8	100.0	-	43.7
25	FATC ARGENTINO	ARGENTINA	9400.0	81.6	100.0	-	33.3
30	MAZURA-2152	ISRAEL	9333.3	74.7	100.0	-	39.2
40	VICTOR I	ITALY	9333.3	80.3	100.0	-	35.3
14	MEX 226	IRAQ	9200.0	77.0	95.0	-	54.5
32	LUNDI	RHODESIA	9166.6	75.1	85.0	-	50.3
10	HIRA	INDIA	9000.0	75.4	65.0	-	40.0
17	ARIANA 66	TUNISIA	9000.0	82.1	125.0	-	34.0
31	CAJEME 71	MEXICO	8833.3	80.1	85.0	-	43.8
43	CHANAB 70	PAKISTAN	8800.0	78.7	105.0	-	44.3
3	NARC 63	COLOMBIA	8700.0	76.0	110.0	-	35.6
7	BT 2288	TUNISIA	8666.6	77.6	90.0	-	32.2
28	YECORA 70	MEXICO	8400.0	76.5	70.0	-	35.3
6	T-84-2-4	TUNISIA	8500.0	79.0	95.0	-	41.6
35	CHECTI LERMA	INDIA	8300.0	79.8	100.0	-	42.5
9	TOCLIFEN 'S'	CHILE	8100.0	78.5	80.0	-	29.4
34	ET-2281	TUNISIA	7866.6	79.2	90.0	-	39.5
24	TOBARI 66	MEXICO	7833.3	79.2	100.0	-	34.5
39	KLEBGLEN	CHILE	7500.0	80.1	105.0	27.5	38.1
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	7500.0	75.6	70.0	-	29.0
12	VICAM 71	MEXICO	7033.3	74.0	60.0	-	34.2
38	LR 301	INDIA	7000.0	74.5	70.0	-	35.3
44	MEXICANO 1481	PORTUGAL	6733.3	77.6	105.0	-	30.5
13	MARA X SUPREMO-MENTANA-MON	CHILE	6600.0	81.2	115.0	-	37.4
37	MANITOU / INSENSITIVE /	CANADA	6600.0	77.8	120.0	20.0	30.9
23	CALICAO	MEXICO	5566.6	79.6	95.0	25.0	33.3
1	ECONZA 55	COLOMBIA	6233.3	76.0	100.0	-	38.6
49	FIAMENTES	ARGENTINA	5166.6	81.2	125.0	40.0	34.3
8	ERA	U.S.A.	5066.6	78.7	85.0	-	24.4
33	CABECO	ARGENTINA	4900.0	79.8	135.0	60.0	32.0
2	CHRIS	U.S.A.	4200.0	76.5	105.0		32.0
47	CARAZINHO	BRAZIL	3900.0	80.5	120.0	51.6	37.0
45	MANITOU	CANADA	2700.0	70.2	115.0	55.0	21.0
5	IAS 20 IASSUL	BRAZIL	2533.3	77.2	115.0	-	38.9
		GRAND MEAN	8343.5	78.0	97.7	39.0	37.4
		STANDARD ERROR OF GRAND MEAN	122.6			5.6	
		COEFFICIENT OF VARIATION	17.9%			66.4%	
		LSD VARIETY MEANS 5 PC	2452.1			42.4	

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	HEIGHT CM.	LODGING
TEST WEIGHT	0.05			
HEIGHT	-0.28*	0.35**		
LODGING	-0.64**	0.03	0.45**	
1000 GRN WGT GRMS	0.34*	-0.08	0.01	-0.27

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 75 SOUTH AMERICA BRAZIL RIO GRANDE DO SUL

CENTRO DE EXPERIMENTACAO E PESQUISAS, CRUZ ALTA.
COOPERATORS WHEAT STAFF.

LATITUDE	028 38'S	DATE PLANTED	06/16/72	NITROGEN	053.0 KG/HA
LONGITUDE	053 36'W	DATE HARVESTED	11/10/72	PHOSPHORUS	221.0 KG/HA
ELEVATION	+00472 M.ABOVE S.L.	AMOUNT OF MOISTURE	1420 MM	POTASSIUM	000.0 KG/HA

MANY RAINS, SOME LOW TEMPERATURES AND SEVERAL DAYS WITH STRONG WINDS.
SEVERE DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL
CHECK NOT REPORTED. HEIGHT SCALE NOT REPORTED.

VARIETY NUMBER	VARIETY OR PROSS	ORIGIN	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	SEPTORIA TRITICI	SEPTORIA NODORUM
5	IAS 20 IASSUL	BRAZIL	107.0	30S	E2	-	-
13	MARA X SUPREMO-MENTANA-MON	CHILE	105.0	30MS	E3	50.0	-
36	JARAL 'S'	ARGENTINA	101.0	0	E3	75.0	-
47	CARAZINHO	BRAZIL	101.0	30S	E2	75.0	-
33	CAEOTO	ARGENTINA	98.0	0	E2	75.0	100.0
42	GIZA 155	EGYPT	96.0	20S	E4	100.0	100.0
9	TOCUJREN 'S'	CHILE	96.0	-	E3	-	-
19	LR64-NIOB X AN 3E	AUSTRALIA	94.0	30S	E4	100.0	100.0
43	CHANAE 70	PAKISTAN	94.0	0	E3	100.0	100.0
31	CAJEME 71	MEXICO	94.0	0	E3	75.0	100.0
18	PITIC 62	MEXICO	94.0	10S	E3	100.0	100.0
2	CHRIS	U.S.A.	94.0	30MS	E2	75.0	100.0
44	MEXICANO 1481	PORTUGAL	92.0	80S	E3	100.0	100.0
21	FERJANC 62	MEXICO	91.0	10S	E3	100.0	100.0
6	T-64-2-W	TUNISIA	91.0	30S	E3	50.0	100.0
48	NAYAB 70	PAKISTAN	91.0	40S	E3	100.0	100.0
46	KALYANSONA 227	INDIA	91.0	-	E3	100.0	100.0
39	HUELGUEN	CHILE	91.0	50S	E3	50.0	-
23	CALILAC	MEXICO	86.0	80S	E3	-	-
29	MEXICO 120	AUSTRALIA	86.0	T	E4	25.0	100.0
28	YECORA 70	MEXICO	86.0	0	E3	50.0	100.0
27	SONORA 64-KI. REND.	ARGENTINA	86.0	TR	E3	75.0	100.0
22	ZAMBEZI	RHODESIA	86.0	0	E3	50.0	100.0
38	LR 301	INDIA	86.0	0	E4	75.0	-
37	MANITOU / INSENSITIVE /	CANADA	85.0	30S	E3	75.0	-
35	CHECTI LERMA	INDIA	86.0	80S	E3	75.0	100.0
16	ET-2256	TUNISIA	86.0	20S	E3	100.0	100.0
14	MEX 226	IRAQ	86.0	30MS	E3	75.0	100.0
12	VICAM 71	MEXICO	84.0	-	E4	75.0	100.0
15	EE-INIA	MEXICO	84.0	0	E4	75.0	100.0
25	FATO ARGENTINO	ARGENTINA	81.0	0	E3	25.0	50.0
24	TOEAFI 66	MEXICO	81.0	0	E3	50.0	100.0
10	PIFA	INDIA	81.0	TR	E4	75.0	75.0
41	SONALIKA	INDIA	81.0	80S	E3	100.0	100.0
7	ET 2288	TUNISIA	81.0	-	E3	100.0	-
34	ET-2281	TUNISIA	81.0	10MR	E3	25.0	-
32	LUNDI	RHODESIA	81.0	10MR	E3	25.0	100.0
30	HAZERA-2152	ISRAEL	81.0	30S	E4	25.0	50.0
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	81.0	-	E4	75.0	100.0
17	ARIANA 66	TUNISIA	79.0	-	E2	-	-
26	INIA 66	MEXICO	78.0	50S	E3	25.0	50.0
20	POTAM 70	MEXICO	78.0	TR	E3	100.0	100.0
3	NARO 63	COLOMBIA	78.0	20S	E3	75.0	100.0
4	TANORI 71	MEXICO	78.0	20MS	E3	100.0	100.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		-	-	E2	-	-
49	PIAMONTES	ARGENTINA	-	TR	E2	-	-
45	MANITOU	CANADA	-	60S	-	50.0	-
40	VICTOR 1	ITALY	-	50S	E4	-	-
8	ORA	U.S.A.	-	-	-	-	-
1	ELNZA 53	COLOMBIA	-	20MS	E3	75.0	100.0
		GRAND MEAN	86.0	18.8		71.4	94.6

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
LSD VARIETY MEANS 5 PC

CORRELATIONS

	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	SEPTORIA TRITICI	SEPTORIA NODORUM
LEAF RUST	-0.01				
HEIGHT CM.	0.00	0.00			
SEPTORIA TRITICI	0.41**	0.02	0.00		
SEPTORIA NODORUM	0.30*	-0.07	0.00	0.60**	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 76 SOUTH AMERICA BRAZIL RIO GRANDE DO SUL

JULIO DE CASTILHOS
COOPERATORS WHEAT STAFF

LATITUDE	029 13'S	DATE PLANTED	07/03/72	NITROGEN	052.0 KG/HA
LONGITUDE	053 40'W	DATE HARVESTED	11/15/72	PHOSPHORUS	114.0 KG/HA
ELEVATION	400500 M.ABOVE S.L.	AMOUNT OF MOISTURE	1400 MM	POTASSIUM	030.0 KG/HA

VERY HEAVY RAINS. FULL FROSTS AT HEADING TIME FOLLOWED BY HOT DAYS WITH STRONG WINDS. DISEASE, INSECT, WEEDS OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK IAS-52.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	LEAF RUST	POWDERY MILDEW
31	CAJEME 71	MEXICO	1577.4	89.0	TMS	-
10	HIRA	INDIA	1551.5	79.0	10S	-
7	ET 2266	TUNISIA	1370.1	87.0	10MS-S	66.5
14	MEX 226	IRAQ	1307.1	87.0	10S	-
27	SONORA 64-K1. PERO.	ARGENTINA	1270.1	67.0	5MS-S	33.2
32	LLANCI	ECUADOR	1247.9	87.0	5MS	33.2
26	YECORA 70	MEXICO	1233.0	89.0	T-S	33.2
28	INIA 66	MEXICO	1233.0	84.0	20S	66.5
41	SONALIKA	INDIA	1155.3	84.0	20S	66.5
24	TOBARI 66	MEXICO	1136.8	87.0	TMS	-
6	T-64-2-W	TUNISIA	1077.5	87.0	5MS-S	-
21	FENJAME 62	MEXICO	1070.1	91.0	5MS-S	66.5
16	ET-2266	TUNISIA	1022.0	89.0	5MS-S	33.2
50	LOCAL CHECK / 6.6 CMS. / PACKET /		1018.3	99.0	30S	66.5
9	IAS 20 IASSLL	BRAZIL	995.3	-	30S	-
49	FIAMENTES	ARGENTINA	947.9	95.0	10MS-S	33.2
47	CARAZINHO	BRAZIL	940.5	95.0	20S	33.2
29	MEXICO 120	AUSTRALIA	922.0	89.0	T-10S	33.2
33	CARDIC	ARGENTINA	914.6	95.0	TMS	66.5
1	BLANCA 55	COLOMBIA	903.5	91.0	10S	-
4	TANORI 71	MEXICO	892.4	77.0	TMR	66.5
38	LR 301	INDIA	888.7	84.0	TR	33.2
30	HAZERA-2152	ISRAEL	873.9	84.0	40S	66.5
37	MANITOU / INSENSITIVE /	CANADA	810.9	87.0	20S	66.5
23	CALILAO	MEXICO	759.1	87.0	60S	66.5
25	PATO ARGENTINO	ARGENTINA	759.1	89.0	TR	66.5
43	CHANAB 70	PAKISTAN	736.8	91.0	TMS	-
12	VICAM 71	MEXICO	723.1	89.0	TMS	66.5
3	NAPO 63	COLOMBIA	703.5	79.0	20S	66.5
36	JORAL 'S'	ARGENTINA	699.8	94.0	TR	33.2
44	MEXICANO 1481	PORTUGAL	696.1	93.0	60S	-
22	ZAMBEZI	RHODESIA	681.3	87.0	TR	33.2
11	JORAL 'S' / LEE-SK-MARA	RHODESIA	659.1	79.0	20S	66.5
20	POTAM 70	MEXICO	655.4	87.0	5S	-
34	ET-2261	TUNISIA	629.5	90.0	10S	-
35	CHHOTI LERMA	INDIA	585.0	88.0	40S	-
15	BB-INDIA	MEXICO	570.2	87.0	TMR	66.5
9	TOCUIFEN 'S'	CHILE	562.8	96.0	TMR	33.2
13	MARA X SUPREMO-MENTANA-MCN	CHILE	544.3	-	10S	-
48	NAYAB 70	PAKISTAN	470.2	91.0	30S	33.2
2	CHRIS	U.S.A.	429.5	91.0	10S	-
39	HUELGUEN	CHILE	377.7	90.0	10S	-
19	LR64-NICB X AN 3E	AUSTRALIA	377.7	95.0	20S	66.5
46	KALYANSONA 227	INDIA	374.0	92.0	20S	-
17	ARIANA 66	TUNISIA	314.7	-	TMS	-
40	VICTOR I	ITALY	299.9	-	20S	-
18	FITIC 62	MEXICO	162.9	92.0	30S	-
8	ERA	U.S.A.	137.0	-	5MS	0.0
42	GIZA 155	EGYPT	85.1	93.0	5MR-MS	33.2
45	MANITOU	CANADA	59.2	-	-	-
		GRAND MEAN	787.7	88.7	12.5	49.9

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
LSD VARIETY MEANS 5 PC

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	LEAF RUST
DAYS TO FLOWER	0.36**		
LEAF RUST	-0.05	0.05	
POWDERY MILDEW	0.21	0.36**	0.06

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 77 SOUTH AMERICA BRAZIL RIO GRANDE DO SUL

ESTACAO EXPERIMENTAL DE PASSO FUNDO
COOPERATORS F.A. LANGER AND S. R. COTTO.

LATITUDE	028 00'S	DATE PLANTED	06/23/72	NITROGEN	090.0 KG/HA
LONGITUDE	052 00'W	DATE HARVESTED	11/20/72	PHOSPHORUS	300.0 KG/HA
ELEVATION	+00700 M.ABOVE S.L.	AMOUNT OF MOISTURE	1200 MM	POTASSIUM	120.0 KG/HA

BAD WEATHER CONDITIONS DUE TO EXCESSIVE RAINS. HEAVY FROSTS. HEAVY ATTACK OF SEPTORIA, CIBEREFELA AND HELMINTHOSPORIUM. INSECT, WEED OR POST PROBLEMS NOT REPORTED. LOCAL CHECK IAS 59.

NUMBER	VARIETY	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW	PLANT STAND
5	IAS 20 IASSUL		BRAZIL	1591.6	73.3	101.0	151.0	50	100.0	25.5	40.0	100.0
50	LOCAL CHECK / 6.6 CMS. / PACKET			1366.6	65.7	94.0	150.0	40	95.0	21.6	0.0	100.0
33	CABOTO		ARGENTINA	1333.3	73.3	94.0	150.0	0	85.0	18.1	60.0	100.0
49	PIAMONTES		ARGENTINA	1233.3	73.3	94.0	150.0	30	80.0	21.3	60.0	100.0
31	CAJEME 71		MEXICO	1208.3	66.0	89.0	133.0	5	60.0	19.2	40.0	100.0
47	CARAZINHO		BRAZIL	1075.0	68.7	94.0	150.0	60	90.0	21.0	60.0	100.0
36	JARAL 'S'		ARGENTINA	1050.0	66.0	94.0	135.0	0	65.0	15.5	20.0	100.0
24	TOBARI 66		MEXICO	1033.3	71.5	82.0	136.0	1	65.0	19.6	20.0	100.0
25	PATO ARGENTINO		ARGENTINA	1016.6	68.3	84.0	133.0	1	60.0	15.0	20.0	100.0
17	ARIANA 66		TUNISIA	941.6	72.5	75.0	150.0	10	70.0	18.5	20.0	100.0
2	CHRIS		U.S.A.	883.3	67.6	94.0	136.0	5	80.0	15.5	40.0	100.0
48	NAYAB 70		PAKISTAN	850.0	66.0	87.0	136.0	30	70.0	18.1	20.0	100.0
26	INIA 66		MEXICO	816.6	73.1	80.0	133.0	15	70.0	19.5	40.0	100.0
18	FITIC 62		MEXICO	800.0	66.0	94.0	136.0	40	70.0	13.8	40.0	91.6
19	LR64-NICB x AN 3E		AUSTRALIA	783.3	67.3	97.0	136.0	50	55.0	15.0	40.0	100.0
44	MEXICANO 1481		PORTUGAL	766.6	66.0	90.0	139.0	60	75.0	16.2	60.0	100.0
21	PENJAMO 62		MEXICO	766.6	66.0	87.0	136.0	20	65.0	16.0	20.0	100.0
23	CALIBAE		MEXICO	733.3	67.8	84.0	133.0	50	70.0	15.7	80.0	100.0
10	HIRA		INDIA	708.3	66.0	77.0	133.0	20	60.0	17.3	20.0	91.6
13	MARA x SUPREMO-MENTANA-MCM		CHILE	708.3	70.6	73.0	150.0	10	80.0	21.0	0.0	100.0
20	POTAM 70		MEXICO	687.5	67.3	77.0	133.0	1	70.0	21.1	0.0	100.0
32	LERDI		RHODESIA	687.5	66.0	84.0	133.0	10	60.0	16.5	20.0	91.6
28	YECORA 70		MEXICO	683.3	66.0	80.0	133.0	10	60.0	15.7	40.0	100.0
43	CHANAB 70		PAKISTAN	641.6	66.0	88.0	136.0	5	70.0	14.6	0.0	100.0
34	BT-2281		TUNISIA	641.6	66.0	80.0	136.0	30	65.0	15.7	20.0	100.0
16	BT-2256		TUNISIA	633.3	66.0	87.0	133.0	2	65.0	16.2	80.0	100.0
29	MEXICO 120		AUSTRALIA	525.0	66.0	87.0	133.0	5	50.0	16.6	20.0	100.0
40	VICTOR I		ITALY	625.0	67.3	73.0	0.0	20	45.0	16.8	20.0	100.0
7	BT 2266		TUNISIA	625.0	68.3	80.0	133.0	10	70.0	16.3	40.0	100.0
9	TOCUIPEN 'S'		CHILE	616.6	66.0	97.0	150.0	5	60.0	14.0	20.0	100.0
46	KALYANSONA 227		INDIA	583.3	66.0	88.0	133.0	20	65.0	12.2	20.0	100.0
1	BONZA 55		COLOMBIA	550.3	66.0	87.0	133.0	5	80.0	14.6	20.0	100.0
41	SONALIKA		INDIA	550.0	67.3	77.0	133.0	10	70.0	9.5	20.0	100.0
4	TANORI 71		MEXICO	541.6	66.0	80.0	133.0	0	65.0	16.0	40.0	100.0
6	T-64-2-W		TUNISIA	541.6	66.0	87.0	136.0	5	80.0	15.5	20.0	100.0
39	PUELCHEN		CHILE	541.6	66.0	87.0	133.0	5	70.0	15.2	60.0	100.0
3	NARC 63		COLOMBIA	525.0	66.0	80.0	133.0	10	75.0	14.3	40.0	100.0
30	HAZERA-2152		ISRAEL	525.0	66.0	84.0	133.0	30	65.0	14.3	20.0	100.0
27	SONORA 64-K1. REND.		ARGENTINA	516.6	66.0	0.0	0.0	1	65.0	14.0	0.0	100.0
37	MANITOU / INSENSITIVE /		CANADA	491.6	66.5	82.0	133.0	10	65.0	15.5	0.0	100.0
8	ERA		U.S.A.	487.5	66.0	129.0	-	20	-	13.1	0.0	100.0
35	CHECTI LERMA		INDIA	458.3	66.0	87.0	133.0	40	60.0	12.5	0.0	100.0
14	MEX 626		IRAQ	433.3	66.0	82.0	133.0	5	70.0	15.8	40.0	100.0
38	LF 301		INDIA	416.6	66.0	82.0	133.0	0	50.0	13.1	20.0	100.0
15	EE-INIA		MEXICO	358.3	66.0	81.0	133.0	1	60.0	13.0	40.0	100.0
12	VILAM 71		MEXICO	316.6	66.0	80.0	133.0	1	50.0	12.2	100.0	100.0
11	JARAL 'S' / LPE-SK-PARA		RHODESIA	308.3	66.0	80.0	133.0	10	60.0	10.2	20.0	100.0
22	ZAMBEZI		RHODESIA	300.0	66.0	89.0	133.0	0	55.0	10.0	20.0	100.0
42	GIZA 155		EGYPT	296.6	66.0	90.0	139.0	5	65.0	15.7	20.0	91.6
45	MANITOU		CANADA	166.6	66.0	-	-	30	107.0	9.8	60.0	100.0
			GRAND MEAN	701.0	67.3	86.5	134.0	16.9	68.5	15.9	31.0	95.3
			STANDARD ERROR OF GRAND MEAN	22.5								0.3
			COEFFICIENT OF VARIATION	38.7%								4.1%
			LSD VARIETY MEANS 5 PC	444.0								6.7

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.68**							
DAYS TO	FLOWER	0.34*	0.12						
DAYS TO	MATURITY	0.34*	0.22	0.52**					
LEAF	RUST	0.31*	0.15	0.14	0.03				
HEIGHT	CM.	0.37**	0.39**	-0.32*	0.31*	0.28*			
1000 GRN	WGT GRMS	0.76**	0.66**	0.24	0.30*	0.24	0.36**		
POWDERY	MILDEW	0.07	0.11	-0.00	0.13	0.11	0.23	0.00	
PLANT	STAND	0.07	0.17	-0.04	-0.07	-0.03	0.06	0.00	0.07

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 76 SOUTH AMERICA CHILE SANTIAGO

LA PLATINA EXPERIMENT STATION.
COOPERATORS 1. RAMIREZ ET AL.

LATITUDE	032 27'S	DATE PLANTED	06/11/71	NITROGEN	025.0 KG/HA
LONGITUDE	070 38'W	DATE HARVESTED	01/21/72	PHOSPHORUS	053.0 KG/HA
ELEVATION	000625 M.ABOVE S.L.	AMOUNT OF MOISTURE	0066 MM	POTASSIUM	000.0 KG/HA

DRY WITH HIGH TEMPERATURES IN LATE SPRING AND EARLY SUMMER. GOOD DEVELOPMENT OF STRIPE AND STEM RUSTS. POOR DEVELOPMENT OF LEAF RUST. CHEMICAL CONTROL OF INSECTS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	STEM RUST	HEIGHT CM.	LODGING
27	SONORA 64-K1. REND.	ARGENTINA	4405.1	76.0	0	10S	81.6	3.3
35	CHECTI LERMA	INDIA	4294.0	80.0	0	TR	83.3	1.6
15	LR64-NICB X AN 3E	AUSTRALIA	4166.2	84.0	0	40S	78.3	1.6
43	CHANAB 70	PAKISTAN	4068.4	78.0	5R	10S	83.3	1.6
50	LOCAL CHECK / 6.5 CMS. / PACKET /		3994.0	84.0	0	TR	71.6	0.0
16	ET-2296	TUNISIA	3855.1	80.0	0	TMR	81.6	1.6
4	TANORI 71	MEXICO	3749.6	77.0	0	10S	75.0	1.6
44	MEXICANO 1481	GUATEMALA	3749.6	84.0	10MS	50S	81.6	8.3
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	3727.4	76.0	10MR	5S	70.0	0.0
15	EE-INIA	MEXICO	3632.9	77.0	0	5MS	58.3	0.0
31	CAJEME 71	MEXICO	3571.8	80.0	0	10S	60.0	0.0
42	CIZA 155	EGYPT	3571.8	79.0	0	5MS	56.6	11.6
35	PLELGLEN	CHILE	3560.7	84.0	0	20S	101.6	3.3
22	ZARELZI	RHODESIA	3555.1	82.0	0	20S	60.0	5.0
30	HAZERA-2152	ISRAEL	3555.1	78.0	5R	40S	70.0	0.0
10	PIRA	INDIA	3527.4	76.0	5R	40S	60.0	0.0
26	INIA 66	MEXICO	3499.6	76.0	0	20MS	78.3	1.6
28	YECORA 70	MEXICO	3444.0	78.0	0	10S	55.6	0.0
34	ET-2261	TUNISIA	3432.9	78.0	0	TR	76.6	3.3
12	VICAM 71	MEXICO	3405.2	80.0	0	0	55.0	0.0
18	PITIC 62	MEXICO	3394.1	82.0	0	80S	83.3	6.6
36	LF 301	INDIA	3366.3	80.0	0	TR	55.0	0.0
14	MEX 226	IRAQ	3316.3	79.0	TR	TR	81.6	6.6
48	NAYAB 70	PAKISTAN	3305.2	78.0	5MS	60S	78.3	0.0
29	MEXICO 120	AUSTRALIA	3260.7	78.0	10S	40S	56.6	0.0
24	TOBARI 66	MEXICO	3255.2	81.0	0	TR	83.3	0.0
2	NORP 63	COLOMBIA	3244.1	76.0	0	10S	53.3	10.0
46	KALYANSONA 227	INDIA	3205.2	83.0	5S	40S	80.0	3.3
23	CALICAE	MEXICO	3160.5	79.0	0	TMR	85.0	1.6
21	FERJANC 62	MEXICO	3163.0	78.0	0	5R	81.6	21.6
20	POTAM 70	MEXICO	3163.0	76.0	0	10S	70.0	3.3
41	SONALIKA	INDIA	3094.1	76.0	5R	70S	65.0	8.3
25	PATC ARGENTINO	ARGENTINA	3077.4	84.0	0	TR	76.6	1.6
1	ECONZA 55	COLOMBIA	3005.2	85.0	0	10S	106.6	10.0
5	TOLLIFEN 'S'	CHILE	2999.6	83.0	0	10S	75.0	1.6
33	CAECIL	ARGENTINA	2944.1	88.0	0	20S	68.3	10.0
45	MANITOL	CANADA	2805.2	95.0	0	10S	85.0	0.0
6	T-64-2-W	TUNISIA	2805.2	85.0	5R	70S	90.0	1.6
7	ET 2268	TUNISIA	2738.6	77.0	0	5S	80.0	3.3
32	LLANO	RHODESIA	2727.5	76.0	30S	40S	71.6	0.0
13	MAPA X SUPREMO-MENTANA-MCM	CHILE	2677.5	90.0	0	30S	68.3	0.0
37	MANITOL / INSENSITIVE /	CANADA	2633.0	76.0	10MR	TR	100.0	11.6
49	PIAMONTES	ARGENTINA	2621.9	86.0	0	40S	95.0	6.6
47	CARAZINHO	BRAZIL	2549.7	86.0	20MS	5R	101.6	6.6
8	EPA	U.S.A.	2521.9	93.0	0	0	71.6	0.0
9	CHRIS	U.S.A.	2483.0	87.0	0	TR	100.0	8.3
17	ARIANA 66	TUNISIA	2321.9	95.0	0	40MS	83.3	0.0
36	JARAL 'S'	ARGENTINA	2227.5	82.0	80S	TR	78.3	0.0
40	VICTOR 1	ITALY	2155.3	91.0	30S	50S	66.6	0.0
5	IAS 20 IASSUL	BRAZIL	1011.0	87.0	20S	20S	101.6	16.6
		GRAND MEAN	3201.7	81.6	4.3	20.3	80.0	3.6
	STANDARD ERROR OF GRAND MEAN		55.6				0.4	0.2
	COEFFICIENT OF VARIATION		22.8%				7.1%	95.5%
	LSD VARIETY MEANS 5 PC		1152.5				5.4	5.7

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	STEM RUST	HEIGHT CM.	LODGING
DAYS TO FLOWER	-0.45**					
STRIPE RUST	-0.44**	0.06				
STEM RUST	-0.10	0.16	0.10			
HEIGHT CM.	-0.31*	0.31*	-0.02	-0.02		
LODGING	-0.27	-0.03	-0.07	-0.03	0.61**	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 79 SOUTH AMERICA CHILE SANTIAGO

ESTACION EXPERIMENTAL LAS VEGAS.
COOPERATORS JUSTO MAYORGA V.

LATITUDE 033 51'S DATE PLANTED 07/21/72 NITROGEN 008.0 KG/HA
LONGITUDE 070 41'W DATE HARVESTED 11/15/72 PHOSPHORUS 010.0 KG/HA
ELEVATION 000039 M.ABOVE S.L. AMOUNT OF MOISTURE 0829 MM POTASSIUM 000.0 KG/HA

HEAVY RAINS DURING MAY, JUNE, AUGUST AND SEPTEMBER. MILD WINTER. HOT SPRING AND LONG SUMMER WITH CLOUDY DAYS. HEAVY PUCCINIA, STRIIFORMIS, RECONDITA, GRAMINIS, MILDEW AND SEPTORIA. HEAVY INFESTATION OF APHIDS. LOCAL CHECK HUELGUEN. LEAF, STEM, STRIPE RUST AND POWDERY MILDEW SCALES NOT REPORTED.

VARIETY NUMBER	VARIETY OF CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA SPP.
21	PENJAMO 62	MEXICO	5350.0	83.0	83.0	136.0	0	MR	100.0	29.0	0	0
18	FITIC 62	MEXICO	5260.0	79.0	90.0	136.0	MR	0	105.0	26.0	MR	MS
30	MAZURKA-2152	ISRAEL	4850.0	83.0	84.0	134.0	MS	MS	90.0	30.0	0	0
46	MALVANSONA 227	INDIA	4800.0	83.0	92.0	138.0	S	MR	100.0	26.0	0	R
19	LR64-NIGB X AN 3E	AUSTRALIA	4760.0	83.0	92.0	136.0	MR	12	86.0	25.0	0	0
43	CHANAB 70	PAKISTAN	4670.0	82.0	84.0	136.0	MS	S	95.0	26.0	0	R
9	TOCUIFEN 'S'	CHILE	4360.0	81.0	94.0	140.0	0	0	90.0	26.0	0	MR
42	CIZA 155	EGYPT	4260.0	81.0	92.0	140.0	T	R	90.0	29.0	0	R
26	INIA 66	MEXICO	4250.0	83.0	82.0	134.0	MR	R	90.0	28.0	0	0
12	VICAM 71	MEXICO	4220.0	84.0	86.0	138.0	MR	0	65.0	26.0	R	R
28	YECORA 70	MEXICO	4150.0	85.0	81.0	136.0	R	MR	68.0	33.0	0	0
4	TANORI 71	MEXICO	4160.0	85.0	80.0	130.0	MR	MR	80.0	29.0	R	0
10	PIFA	INDIA	4120.0	83.0	94.0	130.0	MR	S	75.0	29.0	0	0
25	FATO ARGENTINO	ARGENTINA	4110.0	53.0	84.0	136.0	R	0	95.0	24.0	0	R
16	ET-2256	TUNISIA	4080.0	84.0	83.0	136.0	MR	R	97.0	29.0	MR	MR
23	CALICAO	MEXICO	4050.0	83.0	84.0	134.0	MR	R	95.0	29.0	0	MR
3	NARO 63	COLOMBIA	4030.0	82.0	81.0	136.0	R	MR	106.0	27.0	0	0
29	MEXICO 120	AUSTRALIA	4010.0	83.0	84.0	134.0	S	MS	65.0	27.0	0	0
39	HUELGUEN	CHILE	4000.0	82.0	86.0	136.0	0	MR	93.0	29.0	R	MS
35	CHOTTI LERMA	INDIA	3760.0	85.0	86.0	134.0	MR	MR	86.0	27.0	0	MR
14	MEX 226	IRAQ	3750.0	84.0	83.0	136.0	T	0	100.0	30.0	0	MR
44	MEXICANO 1481	PORTUGAL	3730.0	80.0	92.0	138.0	S	MS	105.0	27.0	R	0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3640.0	81.0	88.0	138.0	MR	MR	126.0	24.0	R	MS
11	JORAL 'S' / LEE-SK-MARA	RHODESIA	3640.0	82.0	79.0	136.0	S	R	80.0	22.0	0	MR
24	TOCORI 66	MEXICO	3590.0	83.0	82.0	135.0	T	0	97.0	26.0	0	MR
22	ZAMBEZI	RHODESIA	3550.0	83.0	86.0	138.0	0	MR	96.0	24.0	0	R
6	T-64-2-W	TUNISIA	3540.0	82.0	88.0	139.0	0	MR	115.0	25.0	0	0
49	PIAMONTES	ARGENTINA	3490.0	83.0	93.0	136.0	R	0	125.0	24.0	MR	MR
36	JORAL 'S'	ARGENTINA	3450.0	82.0	86.0	136.0	S	0	85.0	25.0	0	0
17	AFIANA 66	TUNISIA	3390.0	83.0	98.0	140.0	T	0	115.0	27.0	0	0
47	CAPAZINHO	BRAZIL	3390.0	81.0	90.0	136.0	MS	MR	125.0	25.0	MR	MR
5	IAS 20 IASSLL	BRAZIL	3350.0	81.0	92.0	138.0	MS	R	140.0	26.0	MR	0
7	ET 2266	TUNISIA	3340.0	83.0	81.0	136.0	0	0	95.0	28.0	0	MR
31	CAJEME 71	MEXICO	3300.0	85.0	84.0	134.0	0	MR	75.0	31.0	MR	0
2	CHRIS	U.S.A.	3270.0	81.6	96.0	140.0	MR	0	130.0	23.0	R	MR
13	MARA X SUPREMO-MENTANA-MCM	CHILE	3250.0	83.0	93.0	140.0	0	R	130.0	26.0	R	R
8	ERA	U.S.A.	3230.0	82.0	99.0	142.0	0	0	105.0	26.0	0	0
15	EE-INIA	MEXICO	3150.0	85.0	83.0	137.0	R	MR	70.0	30.0	0	MR
27	SONORA 64-K1. REND.	ARGENTINA	3140.0	85.0	79.0	130.0	MR	MS	90.0	30.0	0	0
20	FOTAM 70	MEXICO	3120.0	84.0	84.0	137.0	MR	0	99.0	24.0	0	MR
41	SONALIKA	INDIA	3100.0	82.0	78.0	130.0	MR	S	100.0	36.0	0	MR
48	NAYAB 70	PAKISTAN	3050.0	84.0	86.0	134.0	S	MR	105.0	29.0	MR	MR
45	MANITOU	CANADA	3050.0	80.0	102.0	142.0	S	0	125.0	23.0	MR	0
33	CAECTO	ARGENTINA	2990.0	82.0	90.0	138.0	MR	R	125.0	23.0	0	R
1	ECONZA 55	COLOMBIA	2880.0	81.0	86.0	138.0	MR	0	125.0	26.0	MR	MR
34	ET-2281	TUNISIA	2840.0	83.0	83.0	130.0	0	0	85.0	28.0	0	MR
38	LF 301	INDIA	2810.0	84.0	84.0	134.0	MR	0	55.0	30.0	MR	MR
37	MANITOU / INSENSITIVE /	CANADA	2750.0	82.0	83.0	134.0	S	0	105.0	23.0	0	MR
32	LUNDI	RHODESIA	2740.0	81.0	83.0	130.0	MR	R	81.0	25.0	0	MR
40	VICTOR I	ITALY	2670.0	81.0	92.0	138.0	0	0	65.0	23.0	0	R
		GRAND MEAN	3694.0	82.0	86.8	136.0			96.8	26.8		

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
LSD VARIETY MEANS 5 PC

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	-0.08									
DAYS TO	FLOWER	-0.03	-0.08								
DAYS TO	MATURITY	0.05	-0.13	0.67**							
STRIPE	RUST	0.00	0.00	0.00	0.00						
LEAF	RUST	0.00	0.00	0.00	0.00	0.00					
HEIGHT	CM.	-0.14	-0.13	0.44**	0.45**	0.00	0.00				
1000 GRN	WGT GRMS	0.16	0.29*	-0.43**	-0.47**	0.00	0.00	-0.37			
POWDERY	MILDEW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
SEPTORIA	SPP.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 6C SOUTH AMERICA COLOMBIA CLADINAMARCA

TIERRITATA.
COOPERATORS F. LOPEZ, F. ZAPATA AND F. VARELA.

LATITUDE 004 35'N DATE PLANTED 03/14/72 NITROGEN 000.0 KG/HA
LONGITUDE 074 04'W DATE HARVESTED 09/26/72 PHOSPHORUS 000.0 KG/HA
ELEVATION 4020M ABOVE S.L. AMOUNT OF MOISTURE 0400 MM POTASSIUM 000.0 KG/HA

DRY SEASON. FAIR DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS
REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OF ORIGIN	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	P.STRIPE HEAD	LEAF RUST	HEIGHT CM.	LODGING	LOOC CRN WGT GRMS	SEPTORIA SPP.	ROOT ROT
26	INIA 66	MEXICO	7060.3	74.9	73.0	165.0	30MR	5	TR	96.6	0.0	53.3	-	40.0
20	FEDAP 70	MEXICO	6527.0	72.7	72.0	167.3	20MR	10	10MR	86.3	0.0	48.0	-	33.3
31	CALENE 71	MEXICO	6849.3	72.1	81.0	166.6	40MR	20	T	90.0	0.0	46.0	-	40.0
23	FERJAPC 62	MEXICO	6843.7	72.1	78.3	172.6	5MR	0	10MR	101.6	40.0	50.6	-	33.3
15	CE-INIA	MEXICO	6421.5	72.7	76.0	165.3	20MR	5	20MS	75.0	0.0	53.6	-	40.0
28	VECCPA 70	MEXICO	6121.8	71.9	75.0	164.0	20MR	20	5R	75.0	0.0	43.3	-	33.3
41	SONALIKA	INDIA	5910.5	70.8	71.6	165.3	50MS	20	0	98.3	0.0	52.3	-	46.6
7	EI 2288	TUNISIA	5843.8	74.9	74.0	171.3	5R	15	T	100.6	16.6	37.3	-	40.0
4	TANORI 71	MEXICO	5777.1	73.3	71.0	161.6	20MR	5	0	95.0	0.0	45.3	-	40.0
24	TCEANI 66	MEXICO	5662.7	76.0	77.3	166.0	TR	5	0	105.0	0.0	41.0	-	33.3
34	EI-2281	TUNISIA	5431.6	73.2	77.6	170.6	10R	10	0	92.0	0.0	40.0	-	46.6
38	LR 301	INDIA	5310.1	70.5	78.0	164.0	30MR	20	10MS	66.6	0.0	44.3	-	33.3
37	AFIANA 50	TUNISIA	5226.1	-	100.0	178.3	0	0	10MR	131.6	3.3	10.3	30.0	20.0
47	CANAZINHO	BRAZIL	4561.7	67.0	68.6	131.6	20MR	20	0	136.6	61.6	36.3	-	40.0
35	LR64-NIOB X RM 3E	AUSTRALIA	4355.0	70.4	84.0	171.6	15MR	10	5MR	88.3	0.0	37.6	-	40.0
5	TOCUIHEN "S"	CHILE	4743.9	71.0	77.0	165.6	5R	20	T	88.3	0.0	34.6	-	40.0
25	CHECTI LERMA	INDIA	4455.5	72.4	78.3	167.3	40MR	30	0	98.3	0.0	35.0	-	46.6
23	CALICAC	MEXICO	4671.7	72.2	77.0	162.0	10S-MR	10	0	100.3	56.6	40.6	-	33.3
3	NAFC 63	COLOMBIA	4488.4	73.1	72.0	142.0		10	50MS	110.0	0.0	45.0	-	40.0
6	T-64-2-W	TUNISIA	4488.4	71.3	85.6	172.6	MR	5	20MR	110.6	0.0	51.0	-	53.3
43	CHANAE 70	PAKISTAN	4422.8	70.5	77.3	164.3	20MR	80	20MS	100.3	0.0	40.6	-	66.6
45	FAIC ARGENTINO	ARGENTINA	4332.5	72.9	77.0	165.6	TR	0	0	96.6	40.0	33.0	-	53.3
27	SONORA 64-K1. REND.	ARGENTINA	4182.9	72.1	75.6	166.3	20MR	60	0	100.0	1.6	28.3	-	53.3
10	HIRA	INDIA	4136.4	54.8	73.6	160.0	90S	100	-	73.3	0.0	35.6	-	40.0
30	HAZERA-2152	ISRAEL	4036.4	66.2	76.6	164.0	40MR	60	T	91.6	0.0	40.3	-	33.3
35	PUELCCEN	CHILE	3845.6	70.1	85.3	168.0	20MR	5	0	115.0	50.0	39.3	-	66.6
46	NAYAL 70	PAKISTAN	3821.9	65.6	78.6	168.3	40MS	40	0	105.0	0.0	45.0	-	53.3
42	GIZA 155	EGYPT	3766.2	73.1	82.0	167.0	TR	0	0	110.3	16.6	45.3	-	60.0
22	LUNCI	INDONESIA	3432.9	64.7	76.0	165.0	10MR	10	0	81.6	0.0	33.6	30.0	66.6
16	EI-2256	TUNISIA	3344.1	67.6	75.3	145.3	20MR-MS	60	10MS	105.0	6.6	42.6	-	60.0
50	LOCAL CHECK / 6.6 GMS. / PACKET /		3310.7	73.05	73.3	163.3	TR	5	30MS	86.5	0.0	47.3	10.0	40.0
44	MEXICANO 1481	MONTCEAL	3255.2	61.9	82.3	167.0	80S	80	-	105.0	0.0	36.0	-	40.0
48	MALVANSLNA 227	INDIA	3255.2	67.2	82.0	171.6	60S	50	0	95.0	13.3	31.3	-	40.0
14	MEN 226	IRAQ	3177.4	64.0	75.0	172.6	60MR-MS	50	50MS	105.0	6.6	33.3	-	66.6
33	CARCIC	ARGENTINA	2945.7	67.5	87.0	170.0	40MS	50	0	125.0	50.0	31.3	-	80.0
1	ELNZA 55	COLOMBIA	2905.2	67.6	84.3	171.6	MR	5	10MS-MR	115.0	54.6	37.0	-	46.6
5	IAS 20 IASSCL	BRAZIL	2888.5	70.7	87.6	165.0	40MS	20	T	138.3	86.6	41.6	-	33.3
40	VICTOR I	ITALY	2766.3	65.5	95.6	176.6	5MR	0	0	90.0	10.0	37.6	-	46.6
11	CARAL "S" / LEE-SK-PARA	PHILIPPINES	2727.5	90.7	74.0	160.0	70S	80	-	78.3	0.0	22.6	-	60.0
2	CHRIS	U.S.A.	2671.9	68.8	81.6	171.0	50-MR	10	0	131.6	54.6	34.3	-	53.3
44	ZAMBEZI	RHODESIA	2655.2	65.0	80.3	171.6	90S	80	TMS	90.0	0.0	45.3	-	53.3
18	FITIC 62	MEXICO	2588.6	64.9	84.3	165.6	70S	100	5R	100.6	63.3	47.6	-	40.0
37	PANITOL / INSENSITIVE /	CANADA	2488.6	72.5	76.0	164.0	50MS	30	-	120.0	50.0	37.6	-	53.3
8	EFA	U.S.A.	2166.4	61.3	100.0	178.3	50MS	50	0	103.3	20.0	6.3	-	46.6
45	PIAMLATES	ARGENTINA	2130.1	66.7	90.3	167.3	30MR	20	0	123.3	40.0	37.0	-	60.0
12	VICAP 71	MEXICO	2044.2	62.5	81.3	167.3	90S	80	-	71.6	0.0	35.3	-	46.6
26	CARAL "S"	ARGENTINA	1974.2	66.0	81.6	172.0	80S	80	0	101.6	0.0	31.3	-	73.3
13	MAPA X SLEREMO-MENTANA-MCM	CHILE	1283.2	45.5	97.0	176.0	10R	10	10MR	116.3	83.3	33.3	40.0	60.0
49	PANITOL	CANADA	1054.3	62.8	100.0	174.3	70S	90	0	136.3	30.0	26.6	-	53.3
29	MEXICO 120	AUSTRALIA	780.2	40.2	83.3	160.0	90S	100	-	65.0	0.0	28.0	-	53.3
		GRAND MEAN	4017.5	70.20	80.9	168.3	24.0	34.8	2.4	101.1	20.1	38.0	27.4	51.9
	STANDARD ERROR OF GRAND MEAN		80.0	45.6	0.1	0.3	1.3	1.2	0.3	0.5	1.6	0.4		1.1
	COEFFICIENT OF VARIATION		24.4%	501.0%	2.8%	2.3%	67.2%	43.6%	160.1%	6.5%	101.8%	15.2%		27.0%
	LSD VARIETY MEANS 5 PC		1600.8	582.2	3.7	6.3	26.4	24.8	6.5	10.8	33.5	5.4		22.9

CORRELATIONS

YIELD	KG/HA											
TEST	WEIGHT	0.40**										
DAYS TO	FLOWER	-0.50**	-0.38*									
DAYS TO	MATURITY	-0.10	-0.42**	0.70**								
STRIPE	RUST	-0.47**	-0.33*	-0.05	-0.25*							
P.STRIPE	HEAD	-0.47**	-0.68**	0.01	-0.05	0.75**						
LEAF	RUST	0.02	-0.09	-0.27*	-0.16	-0.22	-0.03					
HEIGHT	CM.	-0.21	-0.16	0.51**	0.44**	-0.24	-0.12	-0.04				
LODGING		0.34*	0.05	0.42**	0.21	-0.13	-0.08	-0.20	0.62**			
100 GRN	WGT GRMS	0.57**	0.60**	-0.55**	-0.43**	-0.31*	-0.34*	0.20	-0.14	-0.15		
SEPTORIA	SPP.	-0.15	-0.62**	0.32*	0.31*	-0.13	-0.15	0.03	0.11	0.05	-0.27*	
ROOT	ROT	-0.61**	-0.30*	0.05	-0.10	0.62**	0.63**	-0.07	-0.00	0.20	-0.23	-0.05

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 81 SOUTH AMERICA ECUADOR PICHINCHA

SANTA CATALINA
COOPERATORS INIAP STAFF.

LATITUDE 000 22'S DATE PLANTED 02/07/72 NITROGEN 030.0 KG/HA
LONGITUDE 078 33'W DATE HARVESTED 08/24/72 PHOSPHORUS 090.0 KG/HA
ELEVATION +03058 M.ABOVE S.L. AMOUNT OF MOISTURE 0850 MM POTASSIUM 030.0 KG/HA

WEATHER CONDITIONS NOT REPORTED. NORMAL DISEASE DEVELOPMENT. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST HEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	P.STRIPE HEAD	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA SPP.
25	PATO ARGENTINO	ARGENTINA	4417.0	73.5	81.6	179.0	5MS	1	0	95.0	25.6	11.6
7	ET 2288	TUNISIA	4271.1	73.8	81.6	185.0	40MS	30	0	98.6	26.6	15.0
28	YECORA 70	MEXICO	3903.0	67.5	79.3	179.0	60MS	20	0	78.0	29.3	15.0
3	NAPO 63	COLOMBIA	3555.8	64.9	78.0	179.0	TMS	1	10MS	111.6	23.6	20.0
31	CAJEME 71	MEXICO	3409.9	70.1	91.0	179.0	60MS	20	0	89.6	29.0	20.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3403.0	72.6	92.0	187.0	15MS	5	0	112.3	23.0	15.0
6	T-64-2-W	TUNISIA	3333.5	67.0	92.0	184.0	TMR	10	TMS	113.0	29.3	10.0
35	HUELQUEN	CHILE	3243.3	71.0	91.6	179.0	40MS	20	0	123.3	24.0	20.0
24	TOPARI 66	MEXICO	3208.5	73.7	86.3	181.0	50MS	5	0	100.0	24.3	16.6
45	PIAMONTES	ARGENTINA	3097.4	70.1	91.0	183.0	20MS	15	TMS	129.3	27.3	8.3
20	POTAM 70	MEXICO	2896.0	63.1	77.0	179.0	40MS	20	0	84.3	22.6	10.0
23	CALICAO	MEXICO	2889.1	69.5	86.3	184.0	60MS	15	0	98.0	20.6	13.3
10	PIRA	INDIA	2875.2	61.7	77.3	184.0	80MS	60	0	70.6	21.0	10.0
18	PITIC 62	MEXICO	2805.7	60.0	91.6	179.0	60MS	10	0	106.6	19.6	15.0
34	BT-2281	TUNISIA	2743.2	71.6	79.0	179.0	40MS	20	10MS	94.6	23.0	20.0
8	ERA	U.S.A.	2527.9	67.0	91.6	184.3	50MS	1	0	111.0	18.0	25.0
19	LR64-N10B X AN 3E	AUSTRALIA	2444.6	64.3	91.6	183.0	50MS	20	0	90.6	19.0	13.3
32	LUNDI	RHODESIA	2416.8	61.3	83.3	178.0	40MS	30	0	80.0	20.0	16.6
1	BONZA 55	COLOMBIA	2375.1	66.3	92.0	184.0	40MS	20	TMS	126.6	21.3	16.6
44	MEXICANO 1481	GUATEMALA	2187.6	64.5	92.0	184.0	60MS	10	TMS	110.0	20.3	11.6
9	TECUIFEN 'S'	CHILE	2152.9	64.8	87.0	182.0	30MS	30	0	85.3	18.6	10.0
38	LF 301	INDIA	2027.9	60.8	87.3	179.0	80MS	80	0	70.6	18.0	11.6
4	TANORI 71	MEXICO	2014.0	61.6	79.3	184.0	60MS	30	TMS	86.6	18.6	15.0
5	IAS 20 IASSUL	BRAZIL	1798.7	65.3	92.0	185.6	50MS	20	0	150.0	26.6	16.6
37	MANITOU / INSENSITIVE /	CANADA	1750.1	67.6	80.3	184.0	40MS	30	0	116.0	21.3	20.0
30	MAZURA-2152	ISRAEL	1687.6	61.1	86.3	183.0	TMS	1	5MS	83.6	19.3	16.6
29	MEXICO 120	AUSTRALIA	1645.9	63.0	92.0	183.0	60MS	15	0	66.0	20.3	10.0
16	BT-2296	TUNISIA	1618.1	60.6	91.3	182.0	80MS	70	0	97.3	21.3	10.0
33	CABOTO	ARGENTINA	1611.2	69.6	92.3	187.0	30MS	20	0	131.3	18.3	13.3
26	INIA 66	MEXICO	1520.9	64.1	77.0	177.0	100MS	60	0	90.0	16.0	8.3
15	EE-INIA	MEXICO	1493.1	63.8	81.6	179.0	80MS	60	0	66.6	19.0	18.3
41	SONALIKA	INDIA	1451.5	58.3	77.0	181.0	90S	70	0	98.3	22.3	8.3
2	CHRIS	U.S.A.	1437.6	65.6	93.0	187.0	10MS	1	0	133.3	17.0	10.0
21	PERJAMO 62	MEXICO	1333.4	61.0	85.3	181.0	80S	40	0	96.6	21.6	16.6
42	GIZA 155	EGYPT	1298.7	66.6	85.3	119.3	40MS	10	0	121.3	21.0	30.0
46	NAYAB 70	PAKISTAN	1215.3	60.6	87.0	179.0	80S	60	0	96.0	19.6	8.3
22	ZAMBEZI	RHODESIA	1152.8	60.5	88.6	179.0	60MS	50	0	93.0	17.0	18.3
14	MEX 226	IRAQ	1132.0	51.6	86.6	184.0	80MS	80	0	105.3	17.0	11.6
27	SONORA 64-K1. REND.	ARGENTINA	1104.2	54.3	85.0	183.0	50MS	80	0	96.6	19.6	8.3
45	MANITOU	CANADA	986.1	68.0	92.0	196.0	20MS	0	0	122.0	16.0	15.0
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	979.2	55.8	78.0	185.0	70MS	70	0	82.3	10.3	11.6
12	VICAM 71	MEXICO	868.1	58.6	88.3	181.0	70MS	60	0	68.3	18.3	16.6
47	CARAZINHO	BRAZIL	784.7	62.6	92.6	184.0	60MS	40	0	137.3	21.0	8.3
13	PARA X SUPREMO-MENTANA-MCP	CHILE	770.8	68.5	91.0	183.0	0	0	TMS	102.6	20.3	33.3
17	ARIANA 66	TUNISIA	709.7	76.5	93.6	209.0	0	0	0	94.6	38.3	15.0
35	CHHOTI LERMA	INDIA	555.5	55.8	86.3	181.0	100S	100	0	83.3	11.6	13.3
36	JARAL 'S'	ARGENTINA	513.9	53.8	92.0	185.0	100MS	90	0	90.0	11.3	10.0
40	VICTOR I	ITALY	456.3	63.0	91.0	179.0	60MS	0	TMS	75.6	18.0	13.3
43	CHANAB 70	PAKISTAN	416.6	52.6	84.6	184.0	100MS	90	0	94.0	14.0	10.0
46	KALYANSONA 227	INDIA	268.0	60.1	93.0	187.0	80S	70	0	90.0	12.6	11.6
	GRAND MEAN		1975.2	64.2	87.1	181.8	44.8	34.4	0.5	99.0	20.6	14.4
	STANDARD ERROR OF GRAND MEAN		37.3	0.2	0.1	1.1	0.3	0.2	0.0	0.4	0.1	0.3
	COEFFICIENT OF VARIATION		23.1%	4.8%	1.8%	8.0%	9.5%	9.6%	226.0%	5.5%	11.7%	31.6%
	LSD VARIETY MEANS 5 PC		747.1	5.1	2.6	23.9	6.9	5.4	1.8	9.0	3.9	7.4

CORRELATIONS

YIELD	KG/HA										
TEST	HEIGHT	0.59**									
DAYS TO	FLOWER	-0.16	0.20								
DAYS TO	MATURITY	-0.06	0.05	0.13							
STRIPE	RUST	-0.43**	-0.69**	-0.27*	-0.09						
P.STRIPE	HEAD	-0.47**	-0.76**	-0.28*	0.02	0.84**					
LEAF	RUST	0.21	0.09	-0.31*	-0.03	-0.31*	-0.23				
HEIGHT	CM.	0.08	0.31*	0.41**	-0.01	-0.37**	-0.36**	0.04			
1000 GRN	WGT GRMS	0.56**	0.69**	0.08	0.09	-0.49**	-0.52**	0.09	0.20		
SEPTORIA	SPP.	0.07	0.35**	0.07	-0.38**	-0.36**	-0.42**	0.23	0.13	0.13	

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 82 SOUTH AMERICA PERU ANCASH

UNIVERSIDAD NACIONAL AGRARIA
COOPERATORS MARINO ROMERO LOLI ET AL

LATITUDE 09S 10'S DATE PLANTED 02/02/72 NITROGEN 080.0 KG/HA
LONGITUDE 077 40'W DATE HARVESTED 07/01/72 PHOSPHORUS 060.0 KG/HA
ELEVATION 03200 M.ABOVE S.L. AMOUNT OF MOISTURE 0000 MM POTASSIUM 000.0 KG/HA

HEAVY RAINS FROM PLANTING TO GRAIN FORMING STAGE. GOOD INFECTIONS OF STEM, LEAF AND STRIPE RUST. SCATTERED INFESTATION BY APHIDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	STRIPE RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS
6	T-64-2-W	TUNISIA	4018.3	75.5	68.3	0	30S	105.0	40.7
1	BONZA 55	COLOMBIA	3882.2	75.4	72.0	0	80S	115.0	37.3
21	FERJANG 62	MEXICO	3666.4	78.3	64.6	10S	40S	70.0	40.4
22	ZAMBEZI	RHODESIA	3641.9	77.5	65.0	0	30S	65.0	153.5
27	SONORA 64-K1. REND.	ARGENTINA	3571.1	76.3	64.0	0	20S	-	36.0
4	TANORI 71	MEXICO	3514.1	78.1	56.4	0	30S	75.0	39.0
35	GHOTI LERMA	INDIA	3356.1	77.7	66.0	50S	10S	70.0	41.2
19	LR64-NIGB X AN 3E	AUSTRALIA	3311.3	75.3	70.0	10S	40S	70.0	36.3
43	CHANAB 70	PAKISTAN	3305.9	77.0	64.6	0	70S	70.0	42.1
50	LOCAL CHECK / 6.6 CPS. / PACHET /		3215.5	75.9	57.4	0	10S	90.0	39.4
3	MARC 63	COLOMBIA	3147.4	76.3	59.6	0	50S	110.0	38.1
2	CHRIS	U.S.A.	3136.3	75.0	66.0	0	10S	115.0	34.2
16	ET-2250	TUNISIA	2565.6	76.9	68.0	0	30S	95.0	45.0
39	PLELGLEN	CHILE	2566.9	73.3	65.0	0	80S	100.0	37.0
26	INIA 66	MEXICO	2656.5	77.5	61.3	40S	50S	70.0	40.1
14	MEX 226	IRAQ	2618.2	77.7	64.6	TS	40S	80.0	40.7
42	GIZA 155	EGYPT	2725.2	76.7	67.6	0	60S	80.0	42.5
41	SONALIKA	INDIA	2697.4	75.8	58.0	30S	80S	75.0	50.5
23	CALICAL	MEXICO	2650.2	78.6	65.0	0	30S	60.0	37.1
5	TOCLIFEN 'S'	CHILE	2637.7	75.9	65.0	0	60S	65.0	32.2
25	FATO ARGENTINO	ARGENTINA	2589.0	77.8	66.0	TS	30S	65.0	33.7
11	JARAL 'S' / LEE-SK-PARA	RHODESIA	2569.6	75.7	56.6	0	20S	55.0	30.5
24	TOBARI 66	MEXICO	2516.8	78.6	65.0	0	10S	70.0	39.5
15	EE-INIA	MEXICO	2504.3	76.7	63.3	0	40S	50.0	38.2
48	NAYAB 70	PAKISTAN	2429.3	75.4	66.0	20S	80S	85.0	41.2
36	JARAL 'S'	ARGENTINA	2405.7	72.2	65.3	50S	0	75.0	30.8
30	HAZERA-2152	ISRAEL	2404.3	68.7	66.3	0	90S	75.0	36.3
46	KALYANSONA 227	INDIA	2372.8	76.3	70.6	5S	30S	65.0	37.5
10	PIRA	INDIA	2351.5	75.8	58.0	0	80S	55.0	37.1
12	VICAM 71	MEXICO	2262.6	73.5	65.0	0	60S	45.0	37.1
47	CAPAZINHO	BRAZIL	2248.7	76.7	76.3	10S	50S	110.0	39.3
5	IAS 20 IASSLL	BRAZIL	2247.4	74.5	73.0	5S	60S	130.0	37.6
38	LF 301	INDIA	2216.2	76.6	65.0	0	40S	45.0	42.8
33	CABCIO	ARGENTINA	2207.1	77.9	74.3	0	30S	110.0	32.5
34	ET-2281	TUNISIA	2207.1	76.9	67.0	0	30S	70.0	36.8
17	ARIANA 66	TUNISIA	2189.0	75.4	60.0	0	70S	105.0	37.4
13	MARA > SUPREMO-MENTANA-MCP	CHILE	2130.7	74.5	60.3	0	80S	105.0	31.3
31	CAJEME 71	MEXICO	2072.3	-	70.6	0	60S	60.0	43.6
37	MANITOU / INSENSITIVE /	CANADA	2037.6	75.0	62.6	30S	20S	100.0	32.7
7	ET 2288	TUNISIA	1927.9	75.4	66.0	0	10S	80.0	38.0
20	FOTAN 70	MEXICO	1739.0	72.9	60.3	0	70S	70.0	41.1
29	MEXICO 120	AUSTRALIA	1736.2	69.7	65.0	0	90S	50.0	29.3
45	FIMENTES	ARGENTINA	1605.8	75.9	76.6	0	50S	105.0	32.7
8	ERA	U.S.A.	1535.0	67.8	76.0	5S	30S	75.0	29.1
44	MEXICANO 1481	GUATEMALA	1447.3	65.9	70.0	0	90S	85.0	29.8
28	YECORA 70	MEXICO	1361.2	-	64.3	0	70S	60.0	39.5
32	LLADI	RHODESIA	1104.2	72.7	67.0	60S	90S	65.0	28.8
18	FITIL 62	MEXICO	866.1	57.5	75.3	0	80S	85.0	22.5
49	MANITOU	CANADA	715.3	66.9	72.3	0	30S	90.0	25.1
40	VICTOR 1	ITALY	516.0	52.0	61.3	0	100S	60.0	16.2
		GRAND MEAN	2454.0	74.4	67.4	7.3	48.9	79.1	38.6
	STANDARD ERROR OF GRAND MEAN		82.0	0.1	0.1		1.0		2.3
	COEFFICIENT OF VARIATION		40.9%	2.5%	3.6%		21.2%		74.8%
	LSD VARIETY MEANS 5 PC		1640.7	3.1	3.5		14.9		47.3

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.39**					
DAYS TO	FLOWER	-0.42**	-0.14				
STRIPE	RUST	-0.02	0.08	-0.08			
STEM	RUST	-0.26	-0.16	0.18	-0.12		
HEIGHT	CM.	0.03	0.15	0.39**	-0.02	0.15	
1000 GRN	WGT GRMS	0.40**	0.07	-0.22	-0.06	-0.12	-0.07

* SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 83 SOUTH AMERICA PERU LIMA

ESTACION EXPERIMENTAL AGRICOLA, LA MOLINA.
COOPERATORS CARLOS LLOSA E. J. MENDOZA F. C. ROJAS L

LATITUDE 012 00'S DATE PLANTED 06/24/72 NITROGEN 000.0 KG/HA
LONGITUDE 077 00'W DATE HARVESTED 12/13/72 PHOSPHORUS 000.0 KG/HA
ELEVATION 00251 M.ABOVE S.L. AMOUNT OF MOISTURE ---- MM POTASSIUM 000.0 KG/HA

WEATHER CONDITIONS NOT REPORTED. MAIN DISEASE PUCCINIA RECONDITA.
CHEMICAL CONTROL OF INSECTS. BIRD ATTACK. LOCAL CHECK NOT REPORTED.
DAYS TO MATURITY: P= VERY EARLY; SP= EARLY; ST= SEMI-LATE; T= LATE;

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	LEAF RUST	LODGING	1000 GRN WGT GRMS
36	JARAL 'S'	ARGENTINA	3447.0	77.4	T	5S	0.0	30.0
46	KALYANSONA 227	INDIA	3014.0	79.2	P	5S	0.0	41.5
31	CAJERE 71	MEXICO	2593.0	80.3	MT	5S	0.0	46.5
50	LOCAL CHECK / 6.6 CMS. / PACKET /		2768.0	80.7	T	10S	0.0	35.2
16	ET-2256	TUNISIA	2716.0	82.1	ST	5S	0.0	47.0
30	FARERA-2152	ISRAEL	2705.0	80.1	SP	40S	0.0	44.3
42	GIZA 155	EGYPT	2644.0	79.2	SP	10S	0.0	44.7
19	LR64-NICB X AN 3E	AUSTRALIA	2626.0	79.6	P	40S	0.0	31.6
14	MEX 226	IRAQ	2485.0	81.5	P	5S	0.0	40.0
9	TUCUPEN 'S'	CHILE	2473.0	76.3	ST	0	0.0	31.5
18	PITIC 62	MEXICO	2375.0	74.5	T	40S	0.0	35.0
35	CHHOTI LERMA	INDIA	2364.0	80.7	SP	0	0.0	33.5
44	MEXICANO 1481	POPTLOAL	2351.0	75.8	P	60S	0.0	36.0
6	ERA	U.S.A.	2333.0	76.5	MT	0	0.0	26.6
21	BENJAMIN 62	MEXICO	2262.0	80.3	P	30S	0.0	37.0
28	YECORA 70	MEXICO	2184.0	80.3	P	0	0.0	38.0
25	MEXICO 120	AUSTRALIA	2168.0	79.0	P	40S	0.0	34.3
1	BONZA 55	COLOMBIA	2157.0	75.8	P	40S	0.0	35.0
5	IAS 20 IASSUL	BRAZIL	2100.0	80.7	SP	0	50.0	42.5
6	T-64-2-M	TUNISIA	2096.0	77.2	SP	40S	0.0	40.0
15	EE-INIA	MEXICO	2081.0	81.0	SP	0	0.0	48.3
43	CHENAB 70	PAKISTAN	2073.0	78.1	SP	60S	0.0	35.1
27	SONORA 64-K1. REND.	ARGENTINA	2024.0	79.0	P	0	0.0	33.8
48	NAYAB 70	PAKISTAN	2004.0	79.0	SP	T	0.0	39.0
22	ZAMBEZI	RHODESIA	1935.0	79.0	P	0	0.0	28.1
12	VICAM 71	MEXICO	1931.0	79.2	SP	0	0.0	37.3
49	FIAMENTES	ARGENTINA	1920.0	80.7	ST	T	0.0	31.8
4	TANORI 71	MEXICO	1832.0	80.3	SP	0	0.0	36.0
24	TLEAMI 66	MEXICO	1825.0	80.5	P	0	0.0	33.5
36	LR 301	INDIA	1820.0	77.6	P	0	0.0	34.6
13	MARA X SUPREMO-MENTANA-MCM	CHILE	1788.0	81.5	T	40S	0.0	46.0
33	CAECIC	ARGENTINA	1685.0	81.0	T	0	60.0	30.5
40	VICTOR I	ITALY	1645.0	78.5	T	40S	0.0	42.0
39	FLEUCLEN	CHILE	1418.0	77.6	P	0	0.0	35.7
32	LUNDI	RHODESIA	1602.0	79.5	P	20S	0.0	34.5
41	SONALIKA	INDIA	1562.0	74.3	P	0	0.0	45.5
17	ARIANA 66	TUNISIA	1553.0	79.0	MT	20S	0.0	31.5
26	INIA 66	MEXICO	1534.0	81.9	P	0	0.0	37.1
7	ET 2288	TUNISIA	1526.0	79.8	P	60S	0.0	32.1
2	CERES	U.S.A.	1471.0	79.4	P	0	40.0	38.5
8	NAPO 63	COLOMBIA	1384.0	79.6	SP	60S	60.0	32.0
47	CAPAZINHO	BRAZIL	1353.0	78.3	T	0	60.0	35.0
37	MANITOU / INSENSITIVE /	CANADA	1249.0	77.2	P	-	0.0	28.3
34	ET-2281	TUNISIA	1201.0	78.5	P	5S-T	0.0	31.3
10	PIRA	INDIA	1233.0	76.0	P	60S	0.0	22.0
23	CALICAO	MEXICO	1204.0	80.7	P	0	0.0	31.0
20	POTAM 70	MEXICO	1035.0	76.3	P	0	0.0	37.5
25	FATO ARGENTINA	ARGENTINA	1020.0	81.0	P	0	0.0	27.6
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	990.0	76.7	P	60S	0.0	22.0
45	MANITOU	CANADA	900.0	73.6	MT	0	0.0	25.0
		GRAND MEAN	1941.3	78.9		17.1	5.7	35.5

STANDARD ERROR OF GRAND MEAN
COEFFICIENT OF VARIATION
USE VARIETY MEANS 5 PC

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	LEAF RUST	LODGING	1000 GRN WGT GRMS
TEST WEIGHT	0.23					
DAYS TO MATURITY	0.00	0.00				
LEAF RUST	-0.05	-0.28*	0.00			
LODGING	-0.16	0.14	0.00	-0.04		
1000 GRN WGT GRMS	0.44**	0.39**	0.00	-0.18	0.01	

SIGNIFICANT AT THE 5 LEVEL ** SIGNIFICANT AT THE 1 LEVEL

TABLE 84

MEAN OVER ALL LOCATIONS FOR YIELD, AGRONOMIC AND DISEASE DATA FOR THE EIGHTH INTERNATIONAL SPRING WHEAT YIELD NURSERY.

PROMEDIO DE TODOS LOS LUGARES PARA RENDIMIENTO, DATOS AGRONOMICOS Y DE ENFERMEDADES DEL OCTAVO ENSAYO INTERNACIONAL DE RENDIMIENTO DE TRIGOS DE PRIMAVERA.

MOYENNE DE TOUTES LES LOCALITES POUR RENDEMENT, DONNEES AGRONOMIQUES ET DES MALADIES POUR LA HUITIEME PEPINIERE INTERNATIONALE DE RENDEMENT DE BLE DE PRINTEMPS.

NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	P.STRIPE HEAD	LEAF RUST	STEM RUST	HEIGTH CM.	LODGING	SHATTER-ING	SHATTERING HEAD
15	LR64 NIOB X AN 3E	AUSTRALIA	4156.07	76.71	97.64	145.79	9.25	12.50	35.53	40.62	78.66	13.75	5.22	0.0
4	TANORI 71	MEXICO	4128.70	77.37	87.91	139.78	5.45	22.50	12.84	10.54	83.46	10.22	7.19	10.00
46	KALYANSONA 227	INDIA	4017.30	75.83	96.68	145.95	36.84	81.67	23.29	16.54	87.81	26.14	12.58	1.00
21	PENJAMO 62	MEXICO	4008.21	76.21	93.55	142.48	25.13	21.00	12.92	24.88	88.41	28.66	8.03	1.00
43	CHANAB 70	PAKISTAN	3995.28	74.03	92.13	143.37	28.00	90.00	30.63	33.21	88.24	13.06	16.14	1.00
35	CHECII LERMA	INDIA	3965.74	76.37	94.17	143.73	25.26	75.00	21.70	8.51	87.53	14.27	1.03	1.00
31	CAJEME 71	MEXICO	3956.13	74.70	97.75	144.24	5.39	26.67	3.41	15.79	71.75	11.65	10.11	1.00
14	MEX 228	IRAQ	3953.77	77.42	91.27	141.95	25.34	85.00	11.48	16.06	90.29	16.43	7.94	5.00
22	ZAMBEZI	RHODESIA	3932.01	75.75	93.88	144.26	32.74	58.33	14.41	19.36	83.50	15.91	2.50	0.0
16	BT 2256	TUNISIA	3917.83	77.15	94.58	142.54	26.22	63.33	5.89	14.58	90.45	18.76	6.33	0.0
30	MAZURKA-2152	ISRAEL	3896.17	72.48	91.33	142.09	11.54	17.17	35.33	36.02	82.65	16.36	2.36	0.0
41	SONALIKA	INDIA	3865.67	74.59	87.66	141.75	16.22	48.33	18.29	22.61	85.63	15.07	3.81	1.00
18	PITIC 62	MEXICO	3864.76	71.66	97.62	145.13	17.41	56.67	31.53	35.52	92.70	25.83	2.28	0.0
50	LOCAL CHECK / 6.6 CMS. / PACKET /		3853.37	76.29	95.87	144.54	19.52	6.00	31.75	24.44	98.72	25.61	6.36	0.0
5	TOCLIFEN "S"	CHILE	3837.69	76.77	94.46	146.61	11.12	19.17	2.61	21.20	80.93	12.06	8.52	0.0
27	SONORA 64-K1. REND.	ARGENTINA	3835.95	75.41	85.81	138.22	32.49	53.33	4.18	12.77	87.12	12.73	13.08	20.00
20	PETAP 70	MEXICO	3807.69	75.48	86.75	139.82	16.59	25.00	9.56	17.12	78.53	15.60	12.42	10.00
28	YECORA 70	MEXICO	3804.78	73.99	90.79	141.78	13.37	26.67	5.72	17.60	66.86	8.95	6.64	1.00
15	BB INIA	MEXICO	3764.73	76.66	90.75	141.56	10.37	35.83	10.67	5.55	66.20	6.82	4.67	1.00
26	INIA 66	MEXICO	3755.22	76.65	88.25	139.68	15.67	35.83	24.72	13.95	85.43	13.71	7.79	10.00
36	JARAL "S"	ARGENTINA	3752.86	73.38	96.14	144.45	54.11	96.67	8.14	17.23	84.48	13.67	1.73	0.0
7	BT 2288	TUNISIA	3751.44	77.56	88.84	142.17	14.73	15.17	7.57	12.34	87.78	14.11	4.22	1.00
24	TEBARI 66	MEXICO	3740.61	76.80	91.31	142.73	7.96	8.33	1.36	9.81	87.10	14.58	4.52	0.0
10	HIRA	INDIA	3709.74	75.72	87.54	140.55	22.94	65.00	24.04	26.50	64.19	7.56	6.92	1.00
44	MEXICANO 1481	PORTUGAL	3655.61	71.23	96.43	145.88	24.09	45.83	43.86	42.55	92.25	36.82	6.15	0.0
42	GIZA 155	EGYPT	3654.02	75.13	94.18	145.05	11.03	5.83	26.19	13.18	101.67	33.13	1.45	0.0
25	FATC ARGENTINO	ARGENTINA	3673.69	76.15	94.15	143.82	4.63	1.17	5.50	16.47	84.28	15.54	6.00	0.0
46	NAYAB 70	PAKISTAN	3658.68	75.44	93.63	144.10	21.04	66.67	38.51	40.73	91.74	14.47	8.64	0.0
29	MEXICO 120	AUSTRALIA	3653.90	72.29	94.06	143.16	31.10	56.67	21.32	42.64	62.28	7.70	8.19	0.0
34	BT 2281	TUNISIA	3628.17	75.51	91.26	144.09	5.62	15.83	32.19	13.82	83.51	12.52	1.94	0.0
6	T-64-2-W	TUNISIA	3609.23	75.20	97.22	145.51	1.49	10.00	36.27	33.73	100.67	20.28	4.11	0.0
36	LP 301	INDIA	3582.51	72.76	93.00	142.43	12.09	45.83	5.64	9.30	64.03	5.29	6.17	1.00
39	HUELCLEN	CHILE	3568.34	74.82	95.70	142.50	8.13	15.83	11.65	14.30	103.35	26.85	5.43	0.0
12	VICAM 71	MEXICO	3564.72	73.35	95.00	142.94	34.74	61.67	2.72	9.06	82.34	6.28	7.22	1.00
3	NAFC 63	COLOMBIA	3456.44	75.46	88.27	139.59	4.19	4.67	34.86	15.83	100.54	29.27	16.61	10.00
23	CALICAR	MEXICO	3491.39	76.44	92.70	142.60	21.51	13.33	16.56	12.11	86.24	25.42	6.97	1.00
32	LUNDI	RHODESIA	3485.92	72.59	91.61	141.65	38.91	30.00	17.74	14.41	74.73	8.95	5.10	0.0
11	JARAL "S" / LEE-SK-MARA	RHODESIA	3431.01	73.80	87.49	140.10	44.93	70.00	20.88	3.76	72.49	10.28	4.17	1.00
40	VICTOR I	ITALY	3417.95	72.07	105.10	145.33	18.17	1.67	28.03	41.76	78.90	15.49	4.64	0.0
8	ERA	U.S.A.	3285.79	75.37	107.77	153.26	20.56	17.83	1.77	2.63	90.06	16.97	3.64	0.0
17	ARIANA 66	TUNISIA	3146.85	76.64	108.01	154.50	0.56	0.17	18.56	24.10	106.22	24.31	4.12	0.0
1	BONZA 55	COLOMBIA	3077.60	73.85	97.26	145.10	11.77	15.00	22.03	19.93	110.25	43.24	2.89	0.0
47	CAPAZINHO	BRAZIL	3044.78	75.51	100.42	146.24	17.47	29.17	11.41	27.21	115.17	56.74	12.00	0.0
13	MAPA X SUPREMO-MENTANA-MCN	CHILE	2958.38	76.28	107.83	148.13	2.53	5.00	20.79	24.14	105.52	37.50	16.75	1.00
33	GABOTO	ARGENTINA	2927.46	76.13	101.45	148.58	31.85	51.67	1.85	15.52	114.36	50.49	4.54	0.0
45	PIAMONTES	ARGENTINA	2855.69	77.85	100.50	145.76	10.66	23.33	12.49	20.83	110.06	45.45	2.67	0.0
2	CHRIS	U.S.A.	2821.08	76.98	97.65	145.67	11.72	7.17	7.08	10.39	112.23	52.46	5.56	0.0
37	PARITOL / INSENSITIVE /	CANADA	2750.42	74.91	91.12	140.83	37.31	26.67	19.72	17.09	103.87	56.00	2.42	0.0
9	IAS 20 IASSUL	BRAZIL	2652.10	72.94	101.25	144.77	20.50	25.00	9.29	27.58	122.49	57.04	32.00	5.00
49	PARITOL	CANADA	2126.57	72.31	108.50	154.72	32.83	38.33	13.96	17.94	116.95	44.52	4.73	0.0
	SUMMARY MEANS OVER VARIETIES		3572.22	75.16	94.94	144.05	20.28	34.33	17.68	20.57	85.41	23.33	7.08	1.67

CONT'D. TABLE 84

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA TRITICI	SEPTORIA NODORUM	SEPTORIA SPP.	FUSARIUM	ROOT ROT	LEAF FIRE	FROST DAMAGE	NECK BREAK	PLANT STAND	SED. INDEX
15	LR64 NIOB X AN 3E	AUSTRALIA	31.10	36.70	41.10	44.67	43.02	25.10	40.00	25.00	11.88	1.67	87.33	32.00
4	TANORI 71	MEXICO	36.36	52.61	43.60	52.27	57.36	32.07	60.00	25.00	45.90	0.0	85.67	66.00
46	KALYANSONA 227	INDIA	32.53	11.45	52.15	40.53	46.72	36.20	60.00	25.00	9.99	3.67	88.33	42.00
21	FENJAPC 62	MEXICO	36.79	38.44	56.10	46.33	37.87	27.47	33.33	25.00	25.78	0.0	87.92	27.00
43	CHANAB 70	PAKISTAN	36.79	35.06	49.58	55.03	49.02	31.17	66.67	25.00	14.85	0.0	88.75	41.00
35	CHHOTI LERMA	INDIA	33.42	30.67	40.68	48.31	46.64	22.20	46.67	25.00	10.13	1.33	87.08	27.00
31	CAJEME 71	MEXICO	41.31	34.06	39.57	47.07	40.74	33.30	40.00	0.0	34.42	0.0	84.67	65.00
14	MEX 226	IRAQ	38.54	37.73	39.29	47.53	42.10	38.22	66.67	25.00	31.27	0.0	90.42	46.00
22	ZAMBEZI	RHODESIA	33.23	35.54	40.82	51.14	50.65	36.10	53.33	25.00	17.12	0.0	87.92	64.00
18	ET-2256	TUNISIA	39.16	46.74	42.77	48.52	39.22	35.77	60.00	25.00	15.79	0.0	92.08	52.00
30	HAZERA-2152	ISRAEL	37.98	31.45	49.98	38.92	45.72	29.53	33.33	50.00	20.82	0.67	85.00	31.00
41	SONALIKA	INDIA	44.42	33.31	48.67	55.58	54.35	33.30	46.67	25.00	45.52	0.0	85.42	35.00
18	FITIC 62	MEXICO	32.19	26.71	44.71	44.48	41.48	30.03	60.00	25.00	17.87	0.67	79.33	22.00
50	LOCAL CHECK / 6.5 CMS. / PACKET /		35.57	25.75	63.33	28.12	33.85	17.27	40.00	25.00	7.59	1.00	86.67	39.00
9	TOCUIFEN 'S'	CHILE	30.87	20.30	26.28	28.20	44.51	31.27	40.00	50.00	14.43	4.00	86.00	49.00
27	SONORA 64 K1. REND.	ARGENTINA	35.66	26.63	39.85	48.58	44.19	33.30	53.33	25.00	14.15	5.33	88.33	45.00
20	FOTAP 70	MEXICO	38.68	31.40	54.70	45.78	55.64	32.30	33.33	50.00	44.83	0.0	87.50	42.00
28	YECORA 70	MEXICO	38.32	36.95	44.70	50.34	48.34	43.17	53.33	25.00	51.13	1.67	84.00	67.00
15	BE-INIA	MEXICO	37.65	44.45	64.57	56.45	58.74	41.53	40.00	25.00	43.48	0.0	87.08	66.00
26	INIA 66	MEXICO	38.45	51.80	29.29	49.16	50.44	33.30	40.00	25.00	53.72	0.0	80.33	65.00
36	JARAL 'S'	ARGENTINA	31.75	31.15	53.53	33.57	38.25	29.60	73.33	25.00	11.06	2.67	87.92	47.00
7	ET 2288	TUNISIA	34.57	27.10	57.20	32.79	57.07	29.60	40.00	25.00	34.42	0.0	86.25	55.00
24	TOBARI 66	MEXICO	34.92	28.40	26.38	39.42	41.83	25.90	33.33	50.00	33.26	0.0	89.58	57.00
10	HIRA	INDIA	34.75	25.07	55.73	41.73	45.11	32.07	60.00	25.00	57.31	0.0	85.42	61.00
44	MEXICANO 1481	PORTUGAL	34.23	53.56	45.26	42.07	41.76	26.23	60.00	50.00	4.02	2.67	88.75	16.00
42	GIZA 155	EGYPT	39.40	21.20	46.38	41.40	44.34	21.40	60.00	25.00	12.26	0.0	82.75	33.00
25	FATC ARGENTINO	ARGENTINA	30.48	39.94	20.69	35.04	26.56	29.93	53.33	25.00	16.88	4.33	88.33	52.00
48	NAYAB 70	PAKISTAN	38.11	43.15	56.15	44.48	45.75	37.00	53.33	25.00	25.54	0.0	85.83	64.00
29	MEXICO 120	AUSTRALIA	33.33	45.09	33.17	46.52	50.13	37.00	53.33	25.00	30.17	0.0	87.00	21.00
34	ET-2281	TUNISIA	34.79	25.08	25.01	32.86	34.88	28.37	46.67	25.00	30.57	3.33	86.67	40.00
6	T-64-2-W	TUNISIA	36.82	34.49	30.82	47.75	40.92	33.73	53.33	25.00	22.20	0.0	88.33	21.00
38	LF 301	INDIA	36.34	32.67	47.62	39.67	48.52	30.83	33.33	50.00	47.61	0.67	84.67	63.00
39	PELELCLEN	CHILE	35.08	38.67	37.48	51.66	47.18	20.97	66.67	50.00	12.43	1.67	85.42	42.00
12	VICAP 71	MEXICO	32.04	61.53	55.73	47.67	54.57	40.70	66.67	25.00	13.67	0.33	88.33	70.00
3	NARC 63	COLOMBIA	34.50	43.88	43.73	54.57	47.83	33.30	40.00	25.00	36.63	0.0	85.33	42.00
23	CALICAE	MEXICO	33.51	61.67	34.05	40.41	40.19	24.67	33.33	25.00	28.26	0.0	89.58	66.00
32	LUNDI	RHODESIA	35.03	23.61	53.37	48.80	56.27	27.47	66.67	50.00	27.75	4.00	83.33	54.00
11	JARAL 'S' / LEE-SK-MARA	RHODESIA	27.93	30.45	51.78	51.33	57.23	35.77	60.00	50.00	55.52	0.0	87.08	64.00
40	VICTOR 1	ITALY	31.29	39.59	17.39	23.58	36.28	17.60	46.67	25.00	8.32	3.33	86.67	31.00
8	ERA	U.S.A.	28.27	16.87	20.73	23.02	31.49	16.03	46.67	50.00	5.92	4.33	90.42	42.00
17	AFIANA 66	TUNISIA	33.32	28.92	25.55	27.68	25.34	44.40	20.00	50.00	10.20	0.0	88.33	28.00
1	ECUZA 55	COLOMBIA	33.19	21.10	41.23	45.16	44.24	25.00	46.67	25.00	16.78	5.00	84.58	35.00
47	CARAZINHO	BRAZIL	37.01	52.00	37.02	29.16	23.46	25.00	60.00	0.0	7.22	0.33	88.75	24.00
13	PAPA X SUPREMO-PENTANA-PCM	CHILE	35.37	11.49	22.50	33.75	38.76	20.07	60.00	25.00	8.39	2.67	87.08	25.00
33	GAUCTO	ARGENTINA	30.22	42.28	32.35	41.77	27.72	17.60	80.00	25.00	7.12	0.67	87.08	37.00
45	FIAPCONTES	ARGENTINA	33.95	32.51	16.29	24.94	26.01	18.83	60.00	25.00	4.86	8.33	88.33	60.00
2	CHRIS	U.S.A.	29.85	40.70	47.62	47.53	30.89	16.03	53.33	25.00	12.52	4.00	85.83	61.00
37	PARITOL / INSENSITIVE /	CANADA	29.53	38.86	46.51	36.27	41.42	17.27	53.33	50.00	16.65	7.67	87.08	47.00
5	IAS 20 IASSUL	BRAZIL	35.55	32.38	8.14	26.42	21.67	15.23	53.33	25.00	13.32	0.0	85.17	26.00
49	PARITOL	CANADA	25.23	45.07	28.88	23.46	32.57	18.50	53.33	75.00	3.70	4.67	83.33	52.00
	SUMMARY MEANS OVER VARIETIES		34.61	35.31	40.96	42.44	42.55	28.72	51.87	31.00	23.12	1.61	86.66	45.60

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