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Individual tables of results are provided for each test site, together with a simple analysis of variance and a correlation analysis of the characteristics recorded. A summary table is provided testing the average value, over all test sites, of each character recorded.

The top yielding variety over all locations in both IDYN's was the Mexican cultivar Cocorit C-71 with 4,492 kg/ha in the second and 4,292 kg/ha in the third.

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Texts in English, Spanish and French
Textos en inglés, español y francés
Textes en Anglais, Espagnol et Francais

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SECOND AND THIRD INTERNATIONAL DURUM YIELD NURSERY (1970-71 & 1971-72)

Abstract

The Second and Third International Durum Yield Nurseries (IDYN) were composed of 25 cultivars each. Results were obtained from 33 cooperators for the Second IDYN and 40 cooperators for the Third IDYN.

Individual tables of results are provided for each test site, together with a simple analysis of variance and a correlation analysis of the characteristics recorded. A summary table is provided testing the average value, over all test sites, of each character recorded.

The top yielding variety over all locations in both IDYN's was the Mexican cultivar Cocorit C-71 with 4,492 kg/ha in the second and 4,292 kg/ha in the third.

Introduction

The International Durum Yield Nursery Program started in 1969-1970. The response of the cooperators was so encouraging that it was decided to continue sending this nursery. The second IDYN was sent during 1970-71 and the third during 1971-72.

This report presents the results of the Second and Third IDYN. The objectives of these yield nurseries are: (1) to obtain basic information on the adaptation, yield potential, and disease and pests resistance of durum wheat cultivars, (2) to provide durum cultivars which might be immediately introduced into potentially high production areas, (3) to make possible the use of parental material in accelerated breeding in national programs, and (4) to bring together for evaluation promising breeding materials on a worldwide basis in the framework of international cooperation.

Materials and Methods

Seed of durum wheat cultivars and experimental lines for the Second and Third IDYN were produced in increase plots during the 1969-70 and 1970-71 growing seasons, respectively, at Ciudad Obregón, Sonora (Centro de Investigaciones Agrícolas del Noroeste) México. The seed was treated with Vitavax (registered trademark for 5, 6-dihydro-2-methyl-1, 4-oxathiin-3-carboxanilide) disinfectant prior to packeting.

There were 25 cultivars in each of the Second and Third IDYN, which included 23 durum wheats, 1 bread wheat, and a local check variety.

The experimental plots consisted of six rows, 2.5 meters long, 30 cms apart, with three replications. Ten square meters per replication were harvested.

NOTE: Recording books in duplicate, general notes to be taken and the instruction bulletin for the management of the international yield nurseries were included for each nursery site.

The cultivars and experimental lines entered for testing in the Second IDYN were:

GAB-125: A dwarf mutant of Garigliano an old Italian variety. Top yielding variety in the International Mutant Durum Wheat Trials from 1965-1968. This line has become commercial variety under the name of Castelnuovo.

WELLS: Sentry [(LD 379-LD 357) LD 389]. A tall light-sensitive variety. It has a good level of stem rust resistance. The seed is small. At one time it was grown extensively in the U.S.A.

LEEDS: Br 180 x Wells. A North Dakota variety grown extensively in the United States. It possesses a good level of stem rust resistance as well as resistance to some leaf spotting diseases. It is light sensitive.

CAPEITI: Widely grown durum variety representative of the present commercial varieties used in Italy. Its broad adaptation became apparent in the International Mutant Durum Wheat Trials.

TEHUACAN 60: Caravaça 1 - LD-357 x Capelli D-255-1C-1R-3M. The last tall durum variety released for cultivation in Mexico. It has remained resistant to the three rusts in Mexico for more than 12 years.

S-9: A promising experimental dwarf line from India.

61-130 x LEEDS = (D6654): A promising experimental line from the North Dakota program.

GERARDO VZ 466 = Alex x Giorgio: A dwarf Durum from Italy carrying Norin 10 dwarfing genes. Its yield potential is presently being assessed under wide testing.

JORI C-69: Barrigon Yaqui $^2{}_E$ - Tehuacan 60 x Tacur $_E$ 21570-9M-6R-1M. A dwarf Norin 10 derivative recently released for cultivation in Mexico.

ANHINGA "S": (Tremez Molle$_E$ - Tehuacan 60^2) (Zenati-Bouteille x Wells)^2 22234-52M-3Y-1M-0Y. It is an early light insensitive Mexican semi-dwarf. This experimental line carries a Norin 10 dwarfing gene different from all the other Mexican dwarf durums included in this trial.

BRANT "S": [(Beladi$_E$-Tehuacan 60^2) (Zenati-Bouteille x Wells)] (Tremez Molle$_E$ - Tehuacan 60^2 / Zenati-Bouteille x Wells) 24102-9Y-3M-0Y. A promising Norin 10 dwarf derivative with moderately good yield under Mexican conditions.

CRANE "S" (A): [(Barrigon Yaqui$^2{}_E$ - Tehuacan 60 x Stewart 63) (Zenati-Bouteille x Wells)] [(Tremez Molle$_E$ - Tehuacan 60^2) (Zenati-Bouteille x Wells)] 23005-33M-1R-3M-0Y. One of the promising crosses in the INIA-CIMMYT program. It is also a Norin 10 dwarf derivative.

CRANE "S" (B): [(Barrigon Yaqui$^2{}_E$ - Tehuacan 60 x Stewart 63) (Zenati-Bouteille x Wells)] [(Tremez Molle$_E$ - Tehuacan 60^2) (Zenati-Bouteille x Wells)] 23055-56M-5Y-1M-0Y. Another promising selection from the same cross as Crane "S" (A). Both lines had yielded consistently

high in the Mexican yield trials for three consecutive years.

OVIACHIC C-65: Sinai # 2_E x Tehuacan 60 D 10224b-8Y-3C-1Y. The first dwarf durum Norin 10 derivative released for cultivation in Mexico. It is a moderately good yielder with partial light insensitivity.

Triticum dicoccum Var. Vernum: (Tremez $Molle_E$ - Tehuacan 60^2 / Zenati-Bouteille x Wells) 23636-1M-6R. A promising dwarf durum line from the INIA-CIMMYT program.

HERCULES: The most extensively grown durum variety in Canada. It is partially light insensitive. It is medium susceptible to leaf rust in most areas where it has been tested.

(Triticum $glutinosum_E$ - Tehuacan 60^2 / Lakota)(Beladi 116_E - Tehuacan 60^2). A promising experimental dwarf line selected from the INIA-CIMMYT program.

64W 5102-948: A promising light insensitive dwarf durum line.

66W-5101: A promising light insensitive dwarf durum line.

INIA 66: Lerma Rojo 64 x Sonora 64 19008-83M-100Y-100M-100Y-100C. A bread wheat control. It was jointly released by the INIA-CIMMYT collaborative wheat program. It was one of the earliest and most widely grown varieties in Mexico. Since it is widely adapted, it is used as a standard to measure the adaptation of the durum varieties.

(Barrigon $Yaqui^2{}_E$ - $Tacur_E$ x Tehuacan 60^4) (Barrigon $Yaqui^2{}_E$ - Tehuacan 60 x Stewart 63 / Anhinga "S") 27591-6M-4Y-0M. A promising Norin 10 dwarf derivative with good yield potential under Mexican conditions. This line was included in the Third IDYN with the new name Jori S x Crane S.

GANSO "S": (Buck Balcarce x Barrigon $Yaqui^2{}_E$ - Tehuacan 60) (Durum Buck x Tremez $Molle_E$ - Tehuacan 60 / Lakota) 27666-4M-1Y-0M.

A promising dwarf line with good yield level under Mexican conditions.

COCORIT C-71: = Rojo de Alicante$_E$ - Tehuacan 60^4 x Stewart 63/ Anhinga "S". 27617-18M-6Y-0M. The most widely adapted, high yielding, disease resistant dwarf durum selected from the INIA-CIMMYT collaborative breeding program.

GARZA "S": = (Barrigon Yaqui$^2{}_E$ - Tehuacan 60)^2 (Zenati-Bouteille x Wells). 22232-3M-3Y-1M-0Y. A Mexican semi-dwarf line possessing good yield potential and wide adaptation.

Local check.

The cultivars and experimental lines entered in the Third IDYN, which were not included in the Second IDYN, were as follows:

CAJEME 71: Ciano S* x Sonora 64-Klein Rendidor/Siete Cerros 23584-26Y-2M-3Y-2M-0Y. Released in Mexico during 1971 as a commercial variety. A sister line to Yecora F 70, it is a triple dwarf variety with red kernel and strong gluten. It is resistant to stem rust and leaf rust.

COCORIT S: Rojo de Alicante$_E$ - Tehuacan 60^4 x Stewart 63 / Anhinga S 27617-21M-300Y-0B. A selection from the same cross as Cocorit C-71. It is widely adapted and possesses a good level of stem and leaf rust resistance.

GERARDO 565: A promising Italian dwarf selection.

GERARDO 574: A promising Italian dwarf selection.

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* S = "S" (Sib selection)

D 6647: A promising selection from the North Dakota program.

QUILAFEN: LD 357_E - Tehuacan 60^2 14540-1C-1Y-1C. A dwarf variety from Chile selected from a Mexican cross. It is partially light sensitive.

PARANA 66/270: Candeal Durumbuck [(Durum # 2_E - Tehuacan 60) Lakota] 12:61-8T-6T-3T-1B-2T-2B. A dwarf Argentinian selection that has shown broad spectrum of resistance to the three rusts and *Septoria tritici* over most of the durum areas of the world.

BD 58-25A: Kyperounda-Mohmoudi 981. This line has been released under the name of INRAT 69 in Tunisia. It possesses a good level of resistance to *Septoria tritici* under North African conditions.

HARKOVSKAIA: A tall Russian land variety. It is susceptible to stem rust in some areas.

HILBA: A tall land variety received from Lebanon.

Data Summarization

The metric system and percentages were chosen as the units of measurement for presentation. When possible other systems were converted to the appropriate standard before computations were made. Every effort was made to assure the correctness of such conversions, as well as the accuracy of translations of terms from other languages and interpretation of supplementary information. CIMMYT, however, takes full responsibility for any errors that may have been made. Data were neither analyzed, nor are presented, for traits when no differential effect was observed.

Yield data were requested from the four center rows of a six-row plot. Yields were converted from the units reported by the cooperator to kilograms per hectare (kg/ha). For readers more accustomed to yield in bushels per acre, 1,000 kg/ha is approximately 15 bushels per acre for wheat.

Both test weights and 1,000 grain weights were requested because some cooperators do not have test weight equipment. The weights are reported in kilograms per hectoliter (kg/hl) and 1,000 grain weights are reported in grams. For readers more accustomed to test weights expressed in pounds per bushel, 75 kg/hl is roughly equivalent to 60 pounds per bushel.

Disease[1] notes were requested from cooperators when differential reactions were observed. Rust reactions were most commonly recorded with the international rust scale noting the percentage leaf area infected and reaction type (i.e. lesion size). For statistical analyses these rust notes were converted to a coefficient of infection as used by Dr. W.Q. Loegering (USDA International Spring Wheat Rust Nursery 1959). This coefficient is calculated by multiplying the percentage of infection by a "response value" assigned to each infection type. Thus, the coefficient combines both the amount of infection and the reaction type. The response values are given in the following table:

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[1] For simplicity of reporting, all plant diseases are referred to by one common name. The following common names have been selected, followed by the causal agent in parentheses. Stem rust (*Puccinia graminis tritici*); leaf rust (*Puccinia recondita*); stripe rust (*Puccinia striiformis*); mildew (*Erisiphe graminis tritici*) and Septoria (*Septoria spp*). For this last disease, distinction between the causal species has not always been possible from information supplied by cooperators.

Reaction Type	Abbreviation	Response value
0		0.0
Very resistant and resistant	VR and R	0.2
Moderately resistant	MR	0.4
Intermediate	M or X	0.6
Moderately susceptible	MS	0.8
Susceptible	S and VS	1.0

As examples, 20MS is expressed as (20 x 0.8) = 16.0 and 10MR is expressed as (10 x 0.4) = 4.0. Ranges of reaction are averaged, such that 5R - 15S becomes 6.0: $\frac{5 + 15}{2} = 10$ and $\frac{0.2 + 1.0}{2} = 0.6$ with 6.0 the product of (10x0.6).

When cooperators reported only percentage of rust, the value was used directly. Numerical rust scales were converted to percent. Alphameric symbols that could not be transformed were only listed for the first replication and excluded from the overall summary.

Numerical rust equivalents can be 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 the coefficients are more difficult to use in visualizing the response of a particular variety. The mean rust reaction by location is presented with its related statistics 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. Thus, these means provide a relative location comparison and a reflection of the extent 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 could be transformed to percent. In those instances where the scale used by the cooperator could not be converted to percent, the scales values are given. The percentage values were not transformed to $\sqrt{X\% + 1}$, as had been done previously. While some may consider transformation necessary, comprehension of the mean of a transformation is difficult. It was felt that it would be better to present values which were more readily comparable to the field scores used by collaborators.

The grand mean of each trait was calculated and are presented with

pertinent statistics in the tables. Previously, error estimates were calculated indirectly as residuals. Since incomplete data sets are often reported, indirect estimations of the error variance can give biased or even negative values. Therefore, estimated error variances were computed directly for all traits reported. This value was then used to calculate a standard error ratio of the grand mean, a coefficient of variation (the ratio of the standard deviation to the grand mean expressed as a percentage) and the least significant difference (LSD) at the 5% level. The coefficient of variation is useful as a unit basis comparison of variation between locations. The LSD_{05} can be used to compare two variety means at the same location.

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 populations 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.

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 computational detail.

Results and Discussion

Thirty-three and forty cooperators returned data to CIMMYT on the Second and Third IDYN. T. Fig. 2 and figure 4 present the reporting locations and indicate the corresponding table number. The growing season and elevation at each site for both IDYN's are presented in figures 1 and 3 respectively. The test sites included 22 countries in the Second IDYN and 25 in the Third IDYN.

Tables 34 and 41 present the overall mean values for yield and other agronomic characters in the Second and Third IDYN. It is hoped that this expanded summaries will serve as a guide on the performance of individual varieties over a wide range of conditions.

Compared with the First IDYN which had a mean yield of 2965 kg/ha, yields in the Second IDYN increased by 736 kg/ha and in the Third IDYN by 643 kg/ha.

The top yielding variety over all locations in both IDYN's was the Mexican cultivar Cocorit C-71 with 4492 kg/ha in the second, and 4292 kg/ha in the third.

An examination of specific locations (tables 1-33 for the Second IDYN and tables 1-40 in the Third IDYN) gives an information on the behavior of the experimental material under a set of unique climatic conditions and disease problems thus helping in the identification of breeding material for specific breeding programs or as direct varieties and finally as parents. The varieties are ranked in descending order for mean yield.

The variety Crane "S" (B) ranged third in both IDYN's with an overall mean yield of 4128 kg/ha and 4246 kg/ha in the Second and Third IDYN, respectively. A sister line from Crane "S" (B), Crane "S" (A), ranged fourth and sixth in the Second and Third IDYN, respectively. However, the overall mean value was almost identical 4080 kg/ha and 3999 kg/ha in the Second and Third IDYN's, respectively.

The top six varieties in the Second IDYN and the top eight varieties in the Third IDYN were of Mexican origin. This clearly indicates the good yielding ability the broad adaptability and disease resistance of some Mexican material.

SEGUNDO Y TERCER ENSAYO INTERNACIONAL DE RENDIMIENTO DE TRIGOS CRISTALINOS (IDYN)

1970-71 y 1971-72

Resumen

El segundo y tercer ensayos internacionales de trigo cristalino (IDYN) estuvieron compuestos por 25 cultivares cada uno. Se obtuvieron resultados de 33 cooperadores para el Segundo IDYN y de 40 cooperadores para el Tercer IDYN.

Se presentan cuadros de resultados para cada sitio de prueba, junto con un análisis de varianza simple y un análisis de correlación de las características registradas. Se presenta también un cuadro de resumen con los valores medios, para todos los sitios, de cada característica registrada.

La variedad de mayor rendimiento en todas localidades y en ambos ensayos fué el cultivar mexicano Cocorit C-71, con 4,492 kg/ha en el segundo IDYN y con 4,292 kg/ha en el tercer IDYN.

Introducción

El Ensayo Internacional de Rendimiento de Trigos Cristalinos se inició en el ciclo 1969-1970. La respuesta de los cooperadores ha sido tan alentadora que se decidió continuar con el envío de este ensayo.

El segundo IDYN se envió durante 1970-71 y el tercero durante 1971-72.

Este documento presenta los resultados del segundo y tercer IDYN. Los objetivos de estos ensayos de rendimiento son:

1) Obtener información básica sobre el comportamiento de cultivares de trigo cristalino con respecto a adaptación, potencial de rendimiento y resistencia a plagas y enfermedades; 2) Suministrar cultivares de trigo cristalino que pudieran servir como introducciones inmediatas en áreas con alto potencial de producción; 3) Facilitar el uso de material parental en programas nacionales de mejoramiento, y 4) Conjuntar y evaluar materiales promisorios de mejoramiento a nivel mundial dentro de un marco de cooperación internacional.

Materiales y Métodos

La semilla de los cultivares y líneas experimentales de trigo para el segundo y tercer IDYN se produjo en parcelas de multiplicación en el Centro de Investigaciones Agrícolas del Noroeste (CIANO , Cd. Obregón, Sonora), México, durante los ciclos de 1969-70 y 1970-71, respectivamente. Antes de empacarse la semilla fué tratada con el desinfectante Vitavax.

En el segundo y tercer IDYN hubo 25 cultivares, que incluyeron 23 trigos cristalinos, un trigo harinero y una variedad testigo local.

Las parcelas experimentales consistieron en seis surcos de 2.5 m. de largo y 30 cm. de separación, con tres repeticiones. El área cosechada fué de 10 metros cuadrados por repetición.

Nota: En los envíos a cada sitio se incluyeron libros de registro por duplicado, hojas para las notas generales que se tomarían y un folleto de instrucciones para el manejo del ensayo internacional de rendimiento.

Los cultivares y líneas experimentales que entraron a prueba en el segundo IDYN fueron:

GAB-125: Mutante enano de Garigliano, una vieja variedad italiana. Fué la variedad de mayor rendimiento en los Ensayos Internacionales de Trigos Cristalinos Mutantes de 1965 a 1968. Esta línea se transformó en variedad comercial con el nombre de Castelnuovo.

WELLS: Sentry [(LD 379-LD 357) LD 389]. Variedad alta, sensible al fotoperíodo. Tiene un buen nivel de resistencia a la roya del tallo. Su grano es pequeño. En cierta época se le sembró extensamente en los Estados Unidos.

LEEDS: Br 180 x Wells. Variedad de North Dakota, sembrada extensamente en los Estados Unidos. Posee un buen nivel de resistencia a la roya del tallo y es resistente a algunas manchas de la hoja. Es sensible a la duración del día.

CAPEITI: Variedad cristalina extensamente sebrada y representativa de las actuales variedades comerciales usadas en Italia. Su amplia adaptación se manifestó en los Ensayos Internacionales de Trigos Cristalinos Mutantes.

TEHUACAN 60: Caravaca 1-LD-357 x Capelli D-255-1C-1R-3M. La última variedad alta de trigo cristalino distribuída comercialmente en México. Ha retenido su resistencia a las tres royas en México por más de 12 años.

S-9: Línea experimental prometedora de trigo cristalino, procedente de la India.

G1-130 x LEEDS = (D 6654): Línea experimental prometedora de trigo cristalino, procedente del programa de North Dakota.

GERARDO VZ 466= Alex x Giorgio: Trigo cristalino experimental italiano que lleva los genes Norin 10 para enanismo. En la actualidad se evalúa su potencial de rendimiento mediante pruebas en numerosos lugares.

JORI C-69: Barrigón $Yaqui^2_E$ - Tehuacán 60 x $Tacur_E$ 21570-9M-6R-1M. Un derivado de Norin 10 recientemente distribuído en México para siembras comerciales.

ANHINGA "S": (Tremez Molle$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells)^2 22234-52M-3Y-1M-0Y. Trigo mexicano semienano, insensible a la luz. Esta linea experimental lleva un gene Norin 10 para enanismo diferente a los que portan todos los demás cristalinos enanos mexicanos incluídos en este ensayo.

BRANT "S": [(Beladi$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells)] / (Tremez Molle$_E$ - Tehuacán 60^2/Zenati - Bouteille x Wells) 24102-9Y-3M-0Y. Un derivado prometedor de Norin 10 enano con un rendimiento moderado bajo las condiciones de México.

CRANE "S" (A): [Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63) (Zenati - Bouteille x Wells)] / [(Tremez Molle$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells] / 23005-33M-1R-3M-0Y. Es uno de los cruzamientos prometedores del programa INIA-CIMMYT. Es también un derivado de Norin 10 enano.

CRANE "S" (B): [(Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63) (Zenati - Bouteille x Wells)] / [(Tremez Molle$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells)] / 23055-56M-5Y-1M-0Y. Es otra selección prometedora de la misma cruza de donde resulto Crane "S"(A). Ambas líneas han tenido altos rendimientos consistentemente en los ensayos de rendimiento de México por tres años consecutivos.

OVIACHIC C-65: Sinai #2$_E$ x Tehuacán 60 D 10224b-8Y-3C-1Y. El primer cristalino enano derivado de Norin 10 que se distribuyó para su cultivo en México. Tiene rendimientos moderadamente buenos y es parcialmente sensible al fotoperíodo.

Triticum dicoccum Var. Vernum: (Tremez Molle$_E$ - Tehuacán 60^2/ Zenati - Bouteille x Wells) 23636-1M-6R. Línea enana de cristalino promisorio, procedente del programa INIA-CIMMYT.

HERCULES: Es la variedad de trigo cristalino que más se siembra en Canadá. Es parcialmente sensible al fotoperíodo. Es moderadamente susceptible a la roya de la hoja en la mayoría de las regiones donde se ha probado.

(Triticum glutinosum$_E$ - Tehuacán 60^2/Lakota) (Beladi 116$_E$ - Tehuacán 60^2): Una línea enana experimental prometedora seleccionada del programa INIA-CIMMYT.

64W 5102-948: Línea enana prometedora de trigo cristalino, insensible al fotoperíodo.

66W - 5101: Línea enana prometedora de trigo cristalino, insensible al fotoperíodo.

INIA 66: Lerma Rojo 64 x Sonora 64 19008-83M-100Y-100Y-100C. Trigo harinero testigo. Fué distribuído conjuntamente por el programa cooperativo INIA-CIMMYT. Fué una de las primeras variedades y de los trigos más extensamente sembrados en México. Puesto que tiene amplia adaptación, se usó como estándar para medir la adaptación de las variedades cristalinas.

(Barrigón Yaqui$^2{}_E$ - Tacur$_E$ x Tehuacán 60^4) (Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63/Anhinga "S") 27591-6M-4Y-0M. Un enano prometedor derivado de Norin 10 con buen potencial de rendimiento bajo las condiciones de México. Esta línea fué incluída en el tercer IDYN con el nuevo nombre de Jori S x Crane S.

GANSO "S": (Buck Balcarce x Barrigón Yaqui$^2{}_E$ - Tehuacán 60) (Durum Buck x Tremez Molle$_E$ - Tehuacán 60/Lakota) 27666-4M-1Y-1Y-0M. Línea enana prometedora con buen nivel de rendimiento bajo las condiciones de México.

COCORIT C-71: = Rojo de Alicante$_E$ - Tehuacán 60^4 x Stewart 63/Anhinga "S". 27617-18M-6Y-0M. Este es el trigo cristalino enano con mayor adaptación, más alto rendimiento y mayor resistencia a las enfermedades. Se seleccionó del programa cooperativo INIA-CIMMYT.

GARZA "S": = (Barrigón Yaqui$^2{}_E$ - Tehuacán 60)^2 (Zenati - Bouteille x Wells). 22232-3M-3Y-1M-0Y. Línea mexicana semienana, con buen potencial de rendimiento y amplia adaptación.

Testigo local.

Los cultivares y líneas experimentales que entraron en el Tercer IDYN y que no fueron incluídos en el Segundo fueron los siguientes:

CAJEME 71: CIANO S* x Sonora 64 - Klein rendidor/Siete Cerros 23584-26Y-2M-3Y-2M-0Y. Distribuída en México durante 1971 como variedad comercial. Es una línea hermana de Yécora F70, triple enana, con grano rojo y gluten fuerte. Es resistente a la roya del tallo y a la roya de la hoja.

COCORIT S: Rojo de Alicante$_E$ - Tehuacán 60^4 x Stewart 63/ Anhinga S. 27617-21M-300Y-0B. Selección de la misma cruza que Cocorit C-71. Tiene amplia adaptación y posee un buen nivel de resistencia a la roya del tallo y a la roya de la hoja.

GERARDO 565: Selección italiana enana prometedora.

GERARDO 574: Selección italiana enana prometedora.

D 6647: Selección prometedora del programa de North Dakota.

QUILAFEN: LD 357$_E$ - Tehuacán 60^2 14540-1C-1Y-1C. Variedad Chilena enana seleccionada a partir de una cruza mexicana. Es parcialmente sensible al fotoperiodo.

PARANA 66/270: Candeal Durumbuck /(Durum #2$_E$ - Tehuacán 60^2) Lakota / 12:61-8T-6T-3T-1B-2T-2B. Selección argentina enana que ha mostrado un amplio espectro de resistencia a las tres royas y a Septoria tritici en la mayoría de las áreas productoras de trigo cristalino del mundo.

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* S = "S" (selección hermana)

BD 58-25A: Kyperounda-Mohmoudi 981. Esta línea se ha distribuído bajo el nombre de INRAT 69 en Túnez. Posee un buen nivel de resistencia a *Septoria tritici* bajo las condiciones de Norafrica.

HARKOVSKAIA: Variedad rusa alta. Es susceptible a la roya del tallo en algunas regiones.

HILBA: Variedad alta procedente de Líbano.

Resumen de los datos

Para la presentación como unidades de medición se escogieron el sistema métrico decimal y porcentajes. Siempre que fué posible, otros sistemas se convirtieron al estándar apropiado antes de hacer la computación. Se hizo lo posible por asegurar la corrección de tales conversiones, así como la precisión de las traducciones de los términos de otros idiomas y la interpretación de la información suplementaria. Sin embargo, el CIMMYT asume la responsabilidad plena de cualquier error que se tenga. Los datos no se analizaron ni se presentan cuando no se observó un efecto diferencial.

Se solicitaron los datos correspondientes a los cuatro surcos centrales de las parcelas de seis surcos. Los rendimientos se convirtieron de las unidades reportadas por el cooperador a kilogramos por hectárea (kg/ha). Para los lectores acostumbrados al rendimiento en bushels por acre, 1,000 kg/ha equivalen aproximadamente a 15 bushels de trigo por acre.

Se solicitó a los cooperadores tanto el peso hectolítrico como el peso de los 1,000 granos debido a que algunos de ellos no tienen equipo para determinar el peso específico. Los pesos específicos se reportan en kilogramos por hectolítro (kg/hl) y el peso de 1,000 granos se reporta en gramos. Para los lectores acostumbrados a los pesos específicos expresados en libras por bushel, 75 kg/hl equivale a grosso modo a 60 libras por bushel.

Se solicitaron notas sobre enfermedades a los cooperadores cuando observaran reacciones diferenciales 1/. Las reacciones a la roya se registraron más comúnmente con la escala internacional de roya anotando el porcentaje de área foliar infectada y el tipo de reacción (es decir: el tamaño de la lesión).

1/ Para facilitar la información, a todas las enfermedades se les refiere por un nombre común. Se han adoptado los siguientes nombres comunes, seguidos por el agente casual entre paréntesis: roya del tallo (Puccinia graminis tritici), roya de la hoja (Puccinia recondita); roya lineal (Puccinia striiformis); mildiú (Erisiphe graminis tritici); cornezuelo (Claviceps purpurea), y Septoria (Septoria spp.). En esta última enfermedad, no ha sido siempre posible distinguir las especies causales (S. tritici and S. nodorum) de la información proporcionada por los cooperadores.

Para el análisis estadístico estas notas de roya se convirtieron a un coeficiente de infección, según lo usa el Dr. W.Q. Loegering (USDA International Spring Wheat Rust Nursery, 1959). Este equivalente numérico se calcula multiplicando el porcentaje de infección por un "valor de respuesta" que se asigna a cada tipo de infección. Luego, el coeficiente combina tanto la cantidad de infección como el tipo de infección. Los valores de respuesta se dan en el cuadro siguiente:

Tipo de reacción	Abreviatura	Valor de respuesta
0		0.0
Muy resistente y resistente	VR y R	0.2
Moderadamente resistente	MR	0.4
Intermedia	M ó X	0.6
Moderadamente susceptible	MS	0.8
Susceptible	S y VS	1.0

Como ejemplos, 20 MS se expresa como (20 x 0.8) = 16.0, y 10 MR se expresa como (10 x 0.4) = 4.0. Los rangos de reacción se promedian, de manera que 5R-15S se transforma en 6.0: $\frac{5 + 15}{2} = 10$ y $\frac{0.2 + 1.0}{2} = 0.6$ y el producto de 10 x 0.6 viene a ser 6.0.

Cuando los cooperadores reportaron únicamente el porcentaje de roya, el valor fué usado directamente. Las escalas numéricas para la roya se convirtieron a porcentaje. Los símbolos alfaméricos que no se puedieron transformar sólo se enlistaron para la primera repetición y se excluyeron del resumen general.

Los equivalentes numéricos de la roya se pueden analizar estadísticamente y correlacionar con otras características (con rendimiento, por ejemplo). Sin embargo, para la presentación tabular en este informe, se dan las notas de la escala estándar de roya de la primera repetición en cada sitio, puesto que los equivalentes numéricos son más difíciles de emplear al visualizar la respuesta de una variedad en particular. La reacción media a la roya por localidad se presenta con su estadística relacionada como un índice de la cantidad de roya en esa localidad. Valores de la media de roya relativamente bajos indican una

baja incidencia y/o virulencia del patógeno. Medias más altas son indicativas de una mayor incidencia y/o virulencia. Esta medias suministran comparación relativa de las localidades y una reflexión de la magnitud del patógeno en ese ensayo bajo las condiciones ambientales que existían.

Siempre que fué posible se analizaron otros índices de comportamiento varietal y éstos se presentan en los cuadros. La mayoría de estos valores fueron porcentajes. Varios índices se pudieron transformar a porcentajes. En los casos en que la escala utilizada por el cooperador no se pudo convertir a porcentaje, se dan los valores. Ningún valor de porcentaje o equivalente numérico se transformó a $\sqrt{X\% + 1}$, según se hizo antes. Mientras que algunos p dieron considerar necesaria la transformación, la comprensión de la media de transformación es difícil. Se pensó que sería mejor presentar los valores más fácilmente comparables con las calificaciones de campo usadas por los colaboradores.

Se calculó la gran media de cada característica y esa información se presenta en los cuadros junto con las estadísticas pertinentes. Previamente, se calcularon indirectamente como residuales los estimados del error. Puesto que a menudo se reportan series de datos incompletos, las estimaciones indirectas de la varianza del error se computaron directamente para todas las características reportadas. Este valor se usó luego para calcular una razón de error estándar de la gran media, un coeficiente de variación (la razón de la desviación estándar a la gran media, expresada como porcentaje) y la diferencia mínima significativa (DMS) al nivel de 5%. El coeficiente de variación es útil como unidad base de comparación de la variación entre localidades. La DMS_{05} se puede usar para comparar dos medias de variedades en la misma localidad.

Mediante los estudios de correlación se puede obtener algunas veces introspección de los factores que influyan en el rendimiento. Se hicieron correlaciones sobre todos los pares posibles de factores por localidad, utilizando el valor medio de la característica reportada. Se computaron correlaciones sobre las medias de la repetición más que de los valores originales debido a que algunos tipos de datos se reportaron únicamente para una repetición. El tamaño de la población es más bién pequeño para este tipo de análisis y pudieran encontrarse algunas correlaciones espurias. Se recomiendan reservas al interpretar estos valores. Muchos investigadores encuentran interesantes y útiles las correlaciones, y por tanto éstas se presentan como parte del cuadro de resumen para cada localidad, aunque se deben advertir sus limitaciones.

Las medias generales para las localidades se computaron para cada variable y se presentan aquí cuando el número de observaciones justificó su inclusión. Se espera que este resumen ampliado sea útil como fuente general de información sobre el comportamiento varietal. Como excepción de los datos sobre roya, las unidades reportadas son las que se utilizan a través de todo este informe.

En el análisis y resumen de estos datos únicos se encontraron muchos problemas. Nuestro intento ha sido dar al lector la máxima cantidad posible de información útil y no confundir el panorama con excesivos detalles de la computación.

Resultados y discusión

Treinta y cuatro y cuarenta cooperadores retornaron datos sobre el Segundo y Tercer IDYN al CIMMYT. La fig. 2 y la fig. 4 presentan las localidades de donde se recibieron datos e indican el número de cuadro correspondiente. El ciclo de cultivo y ubicación de cada sitio para ambos ensayos se presentan en los Cuadros 2 y 4, respectivamente. Los sitios de prueba abarcaron 22 países en el Segundo IDYN y 25 en el Tercer IDYN.

Los Cuadros 34 y 41 presentan los promedios generales de rendimiento y otras características agronómicas del Segundo y Tercer IDYN. Se espera que éstos resumenes sirvan como guía sobre el comportamiento de variedades individuales sobre una amplia gama de condiciones.

Comparados con el primer IDYN que tuvo un rendimiento medio de 2,965 kg/ha para todas las localidades, el segundo IDYN aumentó en 736 kg/ha y el tercero en 643 kg/ha.

La variedad más rendidora en todas las localidades en ambos ensayos fué el cultivar mexicano Cocorit C-71 con 4,492 kg/ha en el segundo IDYN y 4,292 kg/ha en el tercero.

Un exámen de las localidades específicas (Cuadros 1-33 para el segundo IDYN y Cuadros 1-40 para el tercer IDYN) dá información sobre el comportamiento del material experimental bajo una serie de condiciones climáticas y de problemas de enfermedades, y por tanto ayuda a la identificación de materiales para programas específicos de mejoramiento o como variedades de uso directo y finalmente como material parental. Las variedades se presentan en orden descendente con respecto al rendimiento medio.

La variedad Crane "S" (B) figuró en tercer lugar en ambos ensayos con un rendimiento medio de 4,128 kg/ha y 4,246 kg/ha respectivamente. Una línea hermana de Crane "S" (B), Crane "S" (A), figuró en cuarto y sexto lugar en el segundo y tercer IDYN respectivamente. Sin embargo, el rendimiento medio fué casi idéntico: 4,080 kg/ha en el segundo IDYN y 3,999 en el tercero.

Las seis variedades más rendidoras del segundo IDYN y las 8 más rendidoras del tercero son de origen mexicano. Esto indica claramente la buena capacidad de rendimiento y la amplia adaptación y resistencia a las enfermedades del material mexicano.

DEUXIEME ET TROISIEME PEPINIERES INTERNATIONAUX DE RENDEMENT DES BLES DURS (IDYN)

1970-71 et 1971-72

Résumé

Les deuxième et troisième essais internationaux de rendement de blé dur (IDYN) comportaient 25 varétés chacun. Les résultats ont été retournes par 33 coopérateurs pour le Deuxième IDYN, et de 40 pour le Troisieme (IDYN).

Les résultats pour chaque localité d'essai sont présentés par des tableaux, avec une analyse de variance simple et une analyse de corrélation des caractéristiques enrigestrées. Un tableau résume également pour toutes les régions, les valeuis moyennes de chaque caractéristique relevée.

Dans toutes les localités et dan les 2 essais le blé mexicain Cocorit-71 a été le meillent du point de une rendement, avec 4,492 kg/ha au a été le meilleur du point de une rendement, avec 4,492 kg/ha au deuxiéme IDYN et 4,292 kg/ha au troisiéme.

Introduction

L'Essai International de Rendement de Blés Durs a débuté au course de la campagne 1969-1970. La réponse des coopérateurs fut si encourageante que on a décidé de poursuivre l'envoi de cette essai.

Le deuxième IDYN a été envoyé durant 1970-71 et le troisième durant 1971-72.

Ce document présente les résultats des deuxième et troisième IDYN. Les objectifs de ces essais de rendement sont:

1) Obtenir une information de base sur le comportement des cultures de blé dur du point de une adaptation, potentiel de rendement et résistance aux maladies; 2) Fournir de variétés de blé dur de haut potentiel de production capables de servir comme introductions immédiates sur des zones de cultures; 3) Faciliter leur ussage en tant que matériel génétique (progeniteurs) dans des programmes nationaux d'amélioration; et 4) Réunir et évaluer les matériels prometteurs d'amélioration au niveau mondial dans le cadre de la coopération internationale

Materiels et Methodes

La semence des cultures et lignées expérimentales de blé pour le deuxième et troisième IDYN a été produit dans des parcelles de multiplication, au Centre de Recherches Agricoles du Nord-Ouest (CIANO, Cd. Obregón, Sonora), Mexique, au cours des années 1969-70 et 1970-71, respectivement. Avant d'être emballée la semence fut traitée au désinfectant Vitavax.

Il y a eu 25 cultures pour le deuxième et troisième IDYN, comprenant 23 blés durs, un blé tendre et une variété locale témoin.

Les parcelles expérimentales étaient constituées de six rangs de 2.5 m de long et espacés de 30 cm, en trois répétitions. La superfi-

Nota: Les envois pour chaque localité étaient accompagnés de registré en double exemplare des feuilles pour les notes générales qui devaient etre prises, et des instructions pour la conduit de l'essai international de rendement

Les cultures et lignées expérimentales mises à l'épreuve dans le deuxième IDYN ont été:

GAB - 125: Mutation naine de Garigliano, une variété italienne ancienne. Ce fut la variété ou meilleur rendement dans les pepinieres internationaux de blés Durs Mutents de 1965 à 1968. Cette lignée s'est transformée en variété commerciale sous le nom de Castelnuovo.

WELLS: Sentry [(LD-379-LD 357) LD 389]. Variété haute, sensible au photoperiodisme. Possède bonne résistance à la rouille noire. Son grain est petit. A certaines époques elle etait intensément semé aux Etats-Unis.

LEEDS: Br 180 x Wells. Variété du North Dakota, semée intensément aux Etats-Unis. Possède un bon pouvoir de résistance à la rouille noire et est résistant à quelques rouilles brunes. Est sensible à la durée du jour.

CAPEITI: Variété dur amplement semée, et représentative des variétés actuelles commerciales utilisées en Italie. Sa grande adaptation sést manifestée lors des Pepiniéres Internationaux de Blés Durs Mutants.

TEHUACAN 60: Caravaca 1-LD-357 x Capelli D-255-1C-1R-3M. La dernière variété haute de blé dur distribuée commercialmente au Mexique. A maintenu sa résistance aux trois rouilles au Mexique pendant plus 12 ans.

S-9 : Lignée expérimentale prometteuse de blé dur provenant de l'Inde.

Gl-130 x LEEDS = (D 6654): Lignée expérimentale prometteuse de blé dur, originaire du programme de North Dakota.

GERARDO VZ 466: Alex c Giorgio: Blé dur expérimental italien qui contient les gènes Norin 10 pour le nanisme. Actuellement on évalue son potentiel de rendement au moyen d'essais dans de nombreux endroits.

JORI C-69: Barrigón Yaqui^{2}E - Tehuacán 60 x TacurE 21570-9M-6R-1M. Un dérivé de Norin 10 récemment distribué au Mexique pour des semailles commerciales.

ANHINGA "S": (Tremez MolleE - Tehuacán 60^2) (Zenati - Bouteille x Wells)^2 22234-52M-3Y-1M-OY. Blé mexicain semi-nain, insensible à la lumière. Cette lignée expérimentale contient un gène Norin 10 pour le nanisme différent de ceux contenus par tous les autres blés durs nains mexicains inclus dans cet pepinière.

BRANT "S": [(BeladiE - Tehuacán 60^2) (Zenati - Bouteille x Wells)] (Tremex MolleE - Tehuacán 60^2/Zenati - Bouteille x Wells) 24102-9Y-3M-OY. Un dérivé prometteur de Norin 10 nain, avec un rendement modéré sous les conditions du Mexique.

CRANE "S" (A): [Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63) (Zenati - Bouteille x Wells)] [Tremez Molle$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells)] 23005-33M-1R-3M-OY. Cést un des croisement prometteurs du programme INIA-CIMMYT. Il est aussi un dérivé de Norin 10 nain.

CRANE "S" (B): [(Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63) (Zenati - Bouteille x Wells)] [(Tremez Molle$_E$ - Tehuacán 60^2) (Zenati - Bouteille x Wells)] 23055-56M-5Y-1M-OY. Cést une autre sélection prometteuse du même croisement dont est issu Crane "S" (A). Ces deux lignées ont donné des rendements élevés consistants lors des essais de rendement au Mexique pendant trois ans consécutifs.

OVIACHIC C - 65: Siani # 2_E x Tehuacán 60 D 10224b-8Y-3C-1Y. Le premier blé dur nain dérivé de Norin 10 qui est distribué pour sa culture au Mexique. Il a des rendements moyens, et est partiellement sensible au photopériodisme.

Triticum diococcum Var. Vernum: (Tremez Molle$_E$ - Tehuacán 60^2/Zenati - Bouteille x Wells) 23636-1M-6R. Lignée naine de ble dur prometteuse, provenant du programme INIA - CIMMYT.

HERCULES: C'est la variété de blé dur la plus semée au Canada. Est partiellement sensible au photopériodisme. Modérément susceptible à la rouille brune dans la majorité des régions ou elle a été testée.

(Triticum glutinosum$_E$ - Tehuacán 60^2/ Lakota) Beladi 116$_E$ - Tehuacán 60^2: Une lignée naine expérimentale prometteuse, sélectionnée du programme INIA - CIMMYT.

64 W 5102-948: Lignée naine prometteuse de blé dur, insensible à la photopériode.

66 W - 5101 : Lignée naine prometteuse de blé dur, insensible à la photopériode.

INIA 66: Lerma Rojo 64 x Sonora 64 9008-83M-100Y-100Y-100C. Blé tendre témoin. Il a été distribué conjointement pour le programme coopératif INIA-CIMMYT. A été l'une des premières variétés permi les blés les plus semés au Mexique. Etant donné sa grande adaptation, il est utilisé comme standard pour mesurer l'adaptation des variétés de blé dur.

(Barrigón Yaqui$^2{}_E$ - Tacur$_E$ x Tehuacán 60^4) (Barrigón Yaqui$^2{}_E$ - Tehuacán 60 x Stewart 63/Anhinga "S") 27591-6M-4Y-OM. Un nain prometteur derivant de Norin 10, présente un bon potentiel de rendement sous les conditions du Mexique. Cette lignée fut incluse dans le troisième IDYN sous les nouveau nom de Jori S x Crane S.

GANSO "S": (Buck Balcarce x Barrigón Yaqui $^2{}_E$ - Tehuacán 60) (Durum Buck x Tremex Molle$_E$ - Tehuacán 60/Lakota) 27666-4M-1Y-1Y-OM. Lignée naine prometteuse, avec un bon niveau de rendement sous les conditions du Mexique.

COCORIT C-71: Rojo de Alicante$_E$ - Tehuacán 60^4 x Stewart 63/ Anhinga "S"). 27617-18M-6Y-OM. Celui-ci est le blé dur nain de meilleure adaptation, plus haut rendement et plus grande résistance aux maladies. A été sélectionné du programme coopératif INIA-CIMMYT.

GARZA"S" : = (Barrigón Yaqui$^2{}_E$ - Tehuacán 60)^2 (Zenati - Bouteille x Wells). 22232-3M-3Y-1M-OY. Lignée mexicaine, semi-naine, avec un bon potentiel de rendement et une grande adaptation.

Varieté local

Les variétés et lignées expérimentales introduites dans le Troisième IDYN, et qui n'étaient pas incluses dans le Deuxième, furent les suivantes:

CAJEME 71: CIANO S x Sonora 64 - Klein rendidor/Siete Cerros 23584-26Y-2M-3Y-2M-OY. Distribuée au Mexique en 1971 comme variété commerciale. Cést une lignée soeur de Yécora F70, triple naine, avec un grain rouge et gluten fort. Résistante à la rouille noire et la rouille brune.

COCORIT S : Rojo de Alicante$_E$ - Tehuacán 60^4 x Stewart 63/Anhinga S. 27617-21M-300Y-OB. Sélection du meme croisement que Cocorit C-71. A une grande adaptation et possède un bon niveau de résistance aux rouilles noire et brune.

GERARDO 565: Sélection italienne naine prometteuse.

GERARDO 574: Sélection italienne naine prometteuse.

D 6647: Sélection prometteuse du programme de North Dakota.

QUILAFEN: LD 357_E - Tehuacán 60^2 14540-1C-1Y-1C. Variété chilienne naine sélectionnée à partir de'un croisement mexicain. Est partiellement sensible à la photopériode.

PARANA 66/270: Candeal Durumbuck / (Durum # 2_E - Tehuacán 60^2) Lakota / 12:61-8T-6T-3T-1B-2T-2B. Sélection argentine naine qui a montré un large spectre de résistance aux trois rouilles et à *Septoria tritici* dans la majeure partie des superficies productrices de blé dur du monde.

BD 58-25A: Kyperounda-Mohmoudi 981. Cette lignée a été distribuée en Tunisia sous le nom de INRAT 69. Possède un bon pouvoir de résistance à *Septoria tritici* sous les conditions de l'Afrique du Nord.

HARKOVSKAIA: Variété russe haute. Est susceptible à la rouille noire dans certaines régions.

HILBA: Variété haute provenant du Liban.

S = "S" (sélection soeur)

Résume des Donnees

Pour la présentation de ce travail on a choisi comme unités de mesure le système métrique décimale et les pourcentages. Chaque fois que cela était possible, d'autres systèmes furent convertis au standard approprié avant de faire la programmation. Tout le possible a été fait pour s'assurer de l'exactitude de telles conversions, ainsi que pour la précision des traductions des termes d'autres langues, et l'interprétation de l'information supplémentaire. Cependant, le CIMMYT prend la pleine responsabilité de n'importe quelle erreur qu'il pourrait y avoir. Les données n'ont pas éte analysés ni présentées lorsqu'on n'observait pas un effet différentiel.

On a sollicité les données correspondantes aux quatre rangs centraux des parcelles de six rangs. Les rendements ont été convertis dus unités reportées par le coopérateur en kilogrammes par hectare (kg/ha). Pour les lecteurs habitués au rendement en boisseaux par acre, 1,000 kg/ha correspondent approximativement à 15 boisseaux de blé par acre.

On a demandé aux coopérateurs aussi bien le poids hectolitrique que le poids des 1,000 grains car certains n'étaient pas équipés pour déterminer le poids spécifique. Les poids spécifiques furent reportés en kilogrammes par hectolitre (kg/hl), et le poids de 1,000 grains en grammes. Pour les lecteurs habitués aux poids spécifiques exprimés en livres par boisseaux 75 kg/hl correspondent grosso modo à 60 livres par boisseaux.

On a sollicité des notes sur les maladies aux coopérateurs quand on observait des réactions différentielles 1/. Les réactions à la rouille ont été enregistrées plus communément à l'échelle internationale de rouille en annotant le pourcentage de la surface foliaire et le type de réaction (c'est-à-dire: la taille de la lésion).

Pour l'analyse statistique ces notes de rouille ont été converties en un coëfficient d'infection, comme le fait le Dr. W. Q. Loegering (USDA International Spring Wheat Rust Nursery, 1959). Cet équivalent numérique se calcule en multipliant le pourcentage d'infection par une "valeur de réponse" qui est assignée à chaque d'infection. Ensuite, le coëfficient combine tant la quantité de l'infection que le type de l'infection. Les valeurs de réponse son données dans le tableau suivant:

1/ Pour faciliter l'information, toutes les maladies son référées par un nom commun. On a adopté les noms communs suivants, suivis de l'agent responsable entre parenthèses: ruille noire (Puccinia graminis tritici); rouille brune (Puccinia recondita); rouille jaune (Puccinia striiformis); mildiu (Erisiphe graminis tritici); ergot de seigle (Claviceps purpurea); et septoriose (Septorio spp.) Pour cette dernière maladie, it n'a pas toujours été possible de distinguer les espèces causales (S. tritici et S. nodorum) de l'information fournie par le coopérateurs.

Type de réaction	Abréviation	Valeur de réponse
0		0.0
Très résistant et résistant	VR et R	0.2
Modérément résistant	MR	0.4
Intermédiaire	M ou X	0.6
Modérément susceptible	MS	0.8
Susceptible	S et VS	1.0

Par exemple, 20 MS s'exprime ainsi (20 x 0.8) = 16.0, et 10 MR: (10 x 0.4) = 4.0. Les rangs de réaction sont divisés par 2, de manière que 5R-15S se transforme en 6.0 : $\frac{5+15}{2} = 10$ et $\frac{0.2+1.0}{2} = 0.6$ et le produit de 10 x 0.6 devient 6.0.

Quand les coopérateurs reportaient uniquement le pourcentage de rouille, la valeur etait utilisée directement. Les échelles numériques pour la rouille etaient converties en pourcentage. Les symboles alphamériques qui n'ont pu etre transformés, ont été pris seulement pour la première répétition, et ont été exclus du résumé général.

Les équivalents numériques de la rouille peuvent s'analyser statistiquement et etre mis en corrélation avec d'autres caractéristiques (avec le rendement par exemple). Cependant, pour la présentation tabulaire de cette information, nous donnons les notes de l'échelle standard de rouille de la première répétition de chaque localite vu que les équivalents numériques sont plus difficiles d'emploi pour examiner la réponse dúne variété en particulier. La réaction moyenne à la rouille par localité est présentée avec sa statistique, en relation avec un indice de la quantité de rouille dans cette localité. Les valeurs de la moyenne de rouille relativement basses indiquent une faible incidence et/ou virulence du pathogene. Les moyennes plus hautes sont indicatrices d'une grande incidence et/ou virulence. Ces moyennes fournissent une comparaison relative entre les localités et une idée l'importance du pathogène dans cet essai, sous les conditions ambiantes existantes.

Chaque fois que cela a été possible d'autres indices de comportement variétal ont été analysés, et ceux-ci figurent dans les tableaux. La majorité de ces valeurs furent des pourcentages. Plusieurs indices purent etre transformés en pourcentages. Dans les cas où l'échelle utilisée par le coopérateur ne pouvait etre convertie, on donne les valeurs. Aucune valeur de pourcentage ou équivalent numérique a été transformé à $\sqrt{X\% + 1}$, comme cela avait été fait auparavant. Bien que certains puissent considérer la transformation nécessaire, la compréhension de la moyenne de transformation est difficile. On a pensé qu'il serait mieux de présenter les valeurs plus facilement comparables avec les qualifications de terrain utilisées par les collaborateurs.

On a calculé la grande moyenne de chaque caractéristique, et celle-ci figure dans les tableaux avec les statistiques pertinentes. Auparavant, on a calculé indirectement comme résiduelles les estimations de l'erreur. Puisque parfois des séries de donnés incomplètes sont reportées, les estimations indirectes de la variance de l'erreur ont été calculées directement pour toutes les caractéristiques reportées. Cette veleur est utilisée ensuite pour calculer une raison d'erreur standard de la grande moyenne, un coëfficient de variation (la raison de la déviation standard à la grande moyenne, exprimée en pourcentage) et la différence minima significative (DMS) au niveau de 5%. Le coëfficient de variation est utile comme unité de base de comparaison de la variation entre localités. La DMS_{05} peut s'utiliser pour comparer deux moyennes de variétés dans la même localité.

Au moyen des études de corrélation on peut quelquefois obtenir une introspection des facteurs influant sur le rendement. On a effectué des corrélations sur toutes les paires possibles de facteurs par localité, en utilisant la valeur moyenne de la caractéristique reportée. On a calculé plus de corréla tions sur les moyennes de la répétition que sur les valeurs originales vu que quelques types de données étaient reportés uniquement pour une répétition. L'importance de la population est bien petit pour ce genre d'analyses, et on pourra rencontrer quelques corrélations erronées. Il est recommandé de faire quelques réserves pour l'interprétation des ces valeurs. De nombreux chercheurs trouveront intéressantes et utiles les corrélations, et c'est pour cette raison qu'elles font partie du tableau recapitulable pour chaque localité, tout en étant overtis de leurs limites.

Les moyennes générales pour les localités ont été calculées pour chaque variable, et sont présentées ici quand le nombre d'observations est juge suffisant. On espère que ce vaste résumé sera utile comme source générale d'information sur le comportement variétal. A l'exception des données sur la rouille, les unités reportées sont les mêmes utilisées au cours de toute cette documentation.

On a recontré plusieurs difficultés pour l'analyse et le résumé de ces données. Notre intention a été de donner au lecteur le maximum possible d'information utile, et ne pas troubler l'ensemble avec des détails excessifs sur la computation.

Resultats et Discussion

Trente quatre et quarente coopérateurs ont retourné des données pour les Deuxième et Troisième IDYN au CIMMYT. Les figs. 2 et 4 présentent les localités d'où ont été reçues les données, et indiquent le numéro du tableau correspondant. Le cycle de culture et le lieu de chaque site pour les deux essais figurent dans les Figs. 1 et 3, respeectivement. Les essais ont été efféctue dans 22 pays pour le Deuxième IDYN et 25 pour le Troisième IDYN.

Les tableaux 34 et 41 donnent les moyennes générales de rendement ainsi que d'autres caractéristiques agronomiques des Deuxième et Troisième IDYN. On espère que ces résumés pourront servir de guide pour le comportement des variétés individuelles sous une vaste gamme de conditions.

En comparaison avec le premier IDYN qui eut un rendement moyen de 2, 965 kg/ha pour toutes les localités, le deuxième IDYN a augmenté de 736 kg/ha et le troisième de 643 kg/ha.

La variété la plus rentable dans toutes les localités et pour le deux essais, a éte la varieté mexicaine Cocorit C-71, avec 4, 492 kg/ha pour le deuxième IDYN et 4, 292 kg/ha pour le troisième.

Un examen des localités spécifiques (tableaux 1-33 pour le deuxième IDYN et tableaux 1-40 pour le troisième IDYN) donne une information sur le comportement du matériel expérimental, sous una série de conditions climatiques et des problèmes de maladies, et pour cela aide à l'identification de matériels pour des programmes spécifiques d'amélioration, ou bien comme variétés à usage directe et finalement comme matériel de parenté. Les variétés sont presentées par ordre décroissant par rapport au rendement moyen.

La variété Crane "S" (B) figure en troisième place dans les deux essais avec un rendement moyen de 4, 128 kg/ha et 4, 246 kg/ha , respectivement. Une lignée soeur de Crane "S" (B), Crane "S" (A), figure respectivement en quatrième et sixième place pour les deuxième et troisième IDYN. Cependant, le rendement moyen est presque identique: 4, 080 kg/ha pour le deuxième IDYN et 3, 999 pour le troisième.

Les six variétés les plus rentables pour le deuxième IDYN, et les huit les plus rentables pour le troisième, sont d'origine mexicaine. Ceci indique clairement la bonne capacité de rendement et la grande adaptation et résistance aux malaides du matériel mexicain.

TABLES 2nd IDYN

FIGURE 1

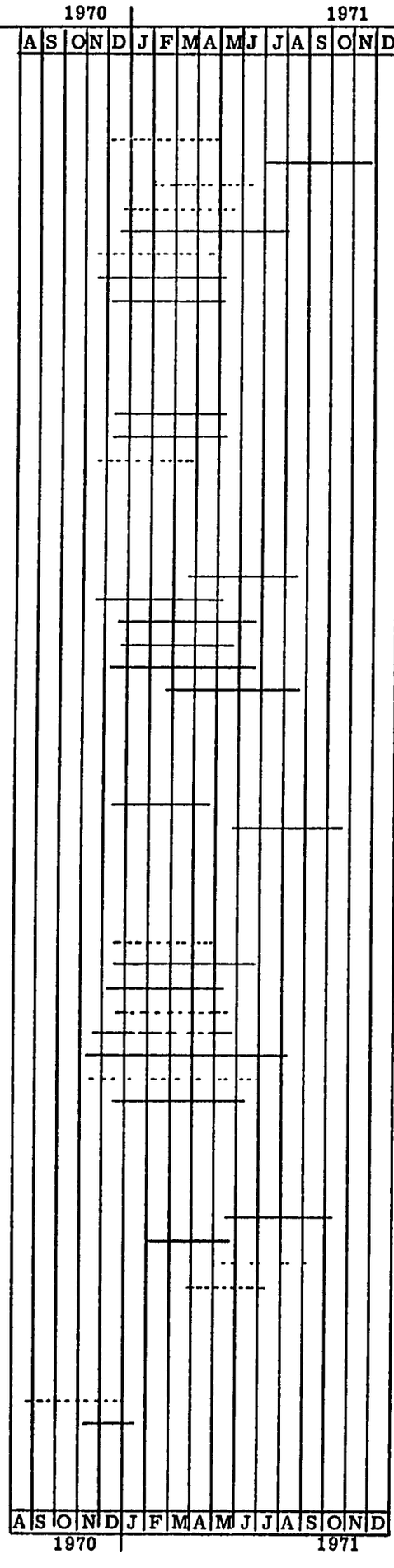
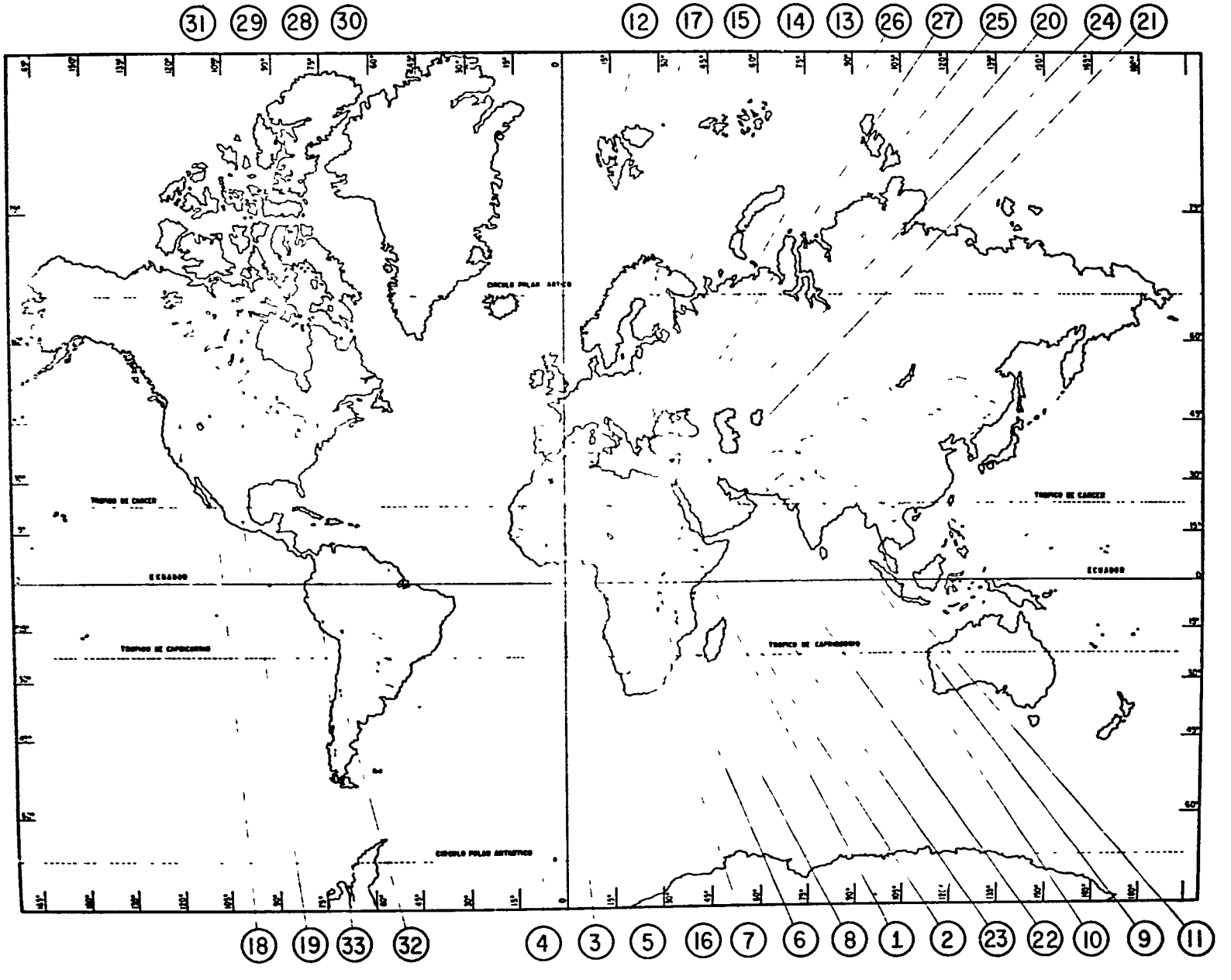


Table No.		ELEVATION (meters)
	AFRICA	
1	Bahtim, Egypt *	21
2	Shoa, Ethiopia	2390
3	Beni Mellal, Morocco *	500
4	Merchouch, Morocco *	398
5	Sahel-Bou-Tahar, Morocco	150
6	Ariana, Tunisia *	161
7	Beja, Tunisia	161
8	Koudiat, Tunisia	134
	ASIA	
9	M. Pradesh, India (Indore)	600
10	M. Pradesh, India (Powarkheda)	980
11	Punjab, Pakistan *	213
	EUROPE	
12	Cambridge, England	18
13	Thessaloniki, Greece	10
14	Bari, Italy	360
15	Rome, Italy	76
16	Alentejo, Portugal	208
17	Logroño, Spain	1050
	MESOAMERICA	
18	Sonora, Mexico	40
19	Mexico, Mexico	2249
	MIDDLE EAST	
20	Koma-Tou-Yialou, Cyprus *	40
21	Karaj, Iran	1300
22	Baghdad, Iraq	34
23	Bet Dagan, Israel *	28
24	Tel-Amara, Lebanon	940
25	Eskisehir, Turkey	789
26	Izmir, Turkey *	12
27	Adapazari, Turkey	33
	NORTH AMERICA	
28	Saskatchewan, Canada	502
29	California, U.S.A.	16
30	North Dakota, U.S.A. *	294
31	Washington, U.S.A. *	390
	SOUTH AMERICA	
32	Santiago, Chile	390
33	Lima, Peru	238

* Dotted lines are approximated dates

FIGURE 2


31
29
28
30
12
17
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14
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26
27
25
20
24
21
CIRCULO POLAR ARTICO
TROPICO DE CANCER
ECUADOR
TROPICO DE CAPRICORNIO
CIRCULO POLAR ANTARTICO
TROPICO DE CANCER
ECUADOR
TROPICO DE CAPRICORNIO
18
19
33
32
4
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11

TABLE 1 AFRICA EGYPT BAHTIM

KALUBIEH EXPERIMENT STATION.
COOPERATORS DR. M.M. SADEK AND STAFF WHEAT R. SECN.

LATITUDE	030 00'N	DATE PLANTED	12/06/70	NITROGEN	145.0 KG/HA
LONGITUDE	031 00'E	DATE HARVESTED	--/--/--	PHOSPHORUS	015.8 KG/HA
ELEVATION	+00021 M.ABOVE S.L.	AMOUNT OF MOISTURE	-- ---MM	POTASSIUM	---.- KG/HA

NORMAL WEATHER. GOOD DEVELOPMENT OF STEM AND LEAF RUST. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK GIZA 155. LODGING SCALE: R= RESISTANT S= SUSCEPTIBLE, MS= MODERATE SUSCEPTIBLE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
24	GARZA "S"	MEXICO	7872.1	81.0	152.0	10MR	10MR	85.0	R	55.5
23	COCORIT C 71	MEXICO	7644.4	80.1	150.0	5MS	10MR	95.0	R	51.0
11	ERAAT "S"	MEXICO	7516.6	79.5	143.0	5MR	5MR	85.0	R	54.3
8	GERARDO VZ 466	ITALY	7349.9	81.3	150.0	5MR	5MS	95.0	R	53.8
22	GANSO "S"	MEXICO	7149.9	78.7	151.0	30S	5MR	85.0	R	66.0
9	JORI C-69	MEXICO	7122.1	80.5	149.0	20MS	TRMR	90.0	R	65.5
18	66W-5101		7038.8	80.7	150.0	5MR	10MR	85.0	R	55.0
19	INIA 66 (BREAD WHEAT)	MEXICO	7011.0	83.5	142.0	TRR	0	105.0	R	48.5
17	64W 5102-948		6961.0	81.0	150.0	5MS	10MS	75.0	R	58.0
12	CRANE "S" (E)	MEXICO	6949.9	82.1	144.0	10MS	TRR	80.0	R	52.1
10	ANHINGA "S"	MEXICO	6899.9	83.5	143.0	5MS	0	105.0	MS	57.1
14	T. DIC. VAR. VERNUM	MEXICO	6649.9	82.1	150.0	30S	5R	80.0	R	48.6
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	6544.4	80.0	151.0	5MR	5MR	100.0	R	51.1
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	6505.5	80.0	150.0	10MR	TRR	80.0	R	59.3
1	GAB-125	ITALY	6477.7	81.0	150.0	5R	30MS	120.0	S	59.2
6	S-9	INDIA	6288.8	81.1	149.0	10MS	R-MS	65.0	R	45.2
20	CRANE "S" (A)	MEXICO	6127.7	81.5	143.0	20MS	20MS	80.0	R	50.1
25	LOCAL CHECK		6066.6	81.5	149.0	60S	TRMR	125.0	MS	53.3
7	61-130 X LEEDS	U.S.A.	6061.0	80.0	150.0	10MS	0	90.0	R	39.5
15	HERCULES	CANADA	5611.0	82.0	147.0	60S	5R	145.0	MS	43.0
13	EVIACHIC C-65	MEXICO	5566.6	79.7	149.0	30S	20MR	70.0	R	57.5
4	CAPEITI	ITALY	5494.4	82.7	143.0	20MS	30MS	125.0	S	54.2
5	TEHUACAN 60	MEXICO	5244.4	81.7	149.0	10MR	5MR	145.0	MS	55.7
3	LEEDS	U.S.A.	4472.2	82.3	151.0	20MR	TRR	145.0	R	39.0
2	WELLS	U.S.A.	3588.8	80.3	152.0	20MR	TRR	145.0	S	32.5
		GRAND MEAN	6408.6	81.1	148.2	13.2	4.5	100.0		52.2
		STANDARD ERROR OF GRAND MEAN	99.7							
		COEFFICIENT OF VARIATION	13.4%							
		LSD VARIETY MEANS 5 PC	1411.3							

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
TEST WEIGHT	-0.13							
DAYS TO MATURITY	-0.13	-0.54**						
LEAF RUST	-0.23	0.02	0.01					
STEM RUST	-0.06	0.07	-0.20	-0.10				
HEIGHT CM.	-0.65**	0.35	0.03	0.22	0.00			
LODGING	0.00	0.00	0.00	0.00	0.00	0.00		
1000 GRN WGT GRMS	0.61**	-0.21	-0.06	-0.03	0.21	-0.40*	0.00	

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

TABLE 2 AFRICA ETHIOPIA SHOA

HOLETTA RESEARCH STATION
COOPERATORS KIDARE TERFAI AND DIRTO F.F.

LATITUDE 009 00 N
LONGITUDE 038 30 E
ELEVATION +02390 M.ABOVE S.L.

DATE PLANTED 07/01/71
DATE HARVESTED 11/27/71
AMOUNT OF MOISTURE 0789 MM

NITROGEN 060.0 KG/HA
PHOSPHORUS 026.4 KG/HA
POTASSIUM ---.- KG/HA

JULY AND SEPTEMBER VERY WET. DRYING WINDS IN OCTOBER AND NOVEMBER. FROSTS IN NOVEMBER AND DECEMBER. HIGH SEPTORIA DEVELOPMENT. GOOD STEM, STRIPE AND LEAF RUST DEVELOPMENT. INSECT OR PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK PURPLE 3.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA TRITICI
7	61-130 X LEEDS	U.S.A.	3876.2	77.5	98.6	149.0	60MS	0	50S	79.0	35.0	21.6
23	COCORIT C 71	MEXICO	3836.2	79.0	75.0	138.3	0	0	90S	79.0	40.0	53.3
5	TEHLACAN 60	MEXICO	3532.9	80.3	87.6	146.6	5MS	0	30S	128.3	49.5	33.3
8	GERARDO VZ 466	ITALY	3435.2	76.3	83.6	146.0	TMS	0	30S	86.6	43.5	66.6
11	GRANT "S"	MEXICO	3378.5	74.2	82.0	146.0	0	0	70S	73.0	35.5	33.3
22	GANSO "S"	MEXICO	3235.2	75.0	85.6	146.6	10MS	0	90S	80.0	53.5	30.0
4	CAPEITI	ITALY	3091.9	79.3	79.0	144.6	10MS	0	90S	106.6	36.5	26.6
20	CRANE "S" (A)	MEXICO	2969.7	76.6	76.6	140.3	0	0	30S	72.6	33.0	55.5
18	66W-5101		2914.1	77.0	92.3	145.0	10MS	0	40S	75.0	31.5	53.3
10	ANHINGA "S"	MEXICO	2876.3	77.6	75.3	141.0	80S	0	70S	97.0	36.0	50.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2818.6	73.6	83.3	146.0	25MS	0	80S	69.3	40.0	36.6
24	GARZA "S"	MEXICO	2640.8	75.3	82.0	144.0	TMS	0	50S	70.0	31.0	53.3
13	CVIACHIC C-65	MEXICO	2505.2	74.6	97.6	147.6	5MS	0	90S	71.6	35.5	30.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2563.0	76.6	92.3	146.6	10MS	0	40S	89.6	40.0	40.0
3	LEEDS	U.S.A.	2516.4	77.0	94.0	147.6	25MS	5S	90S	129.3	30.5	30.0
1	GAB-125	ITALY	2503.0	77.3	85.0	144.3	25MS	5S	50S	101.6	40.5	50.0
9	JORI C-69	MEXICO	2496.4	77.0	81.0	143.6	40MS	0	50S	69.3	35.5	66.5
2	WELLS	U.S.A.	2445.3	74.1	98.3	148.3	80S	0	90S	131.6	26.0	16.6
14	T. DIC. VAR. VERNUM	MEXICO	2408.6	72.6	85.6	145.6	100S	0	90S	77.3	25.5	50.0
15	HERCULES	CANADA	2331.9	72.6	89.0	147.6	100S	0	10S	133.3	29.5	36.6
25	LOCAL CHECK		2165.3	72.0	78.3	138.3	0	30S	2S	118.3	30.0	80.0
19	INIA 66 (BREAD WHEAT)	MEXICO	1713.1	74.8	68.0	129.0	0	0	0	81.0	25.5	100.0
12	CRANE "S" (E)	MEXICO	1670.9	67.3	79.0	141.0	10MS	0	40S	69.3	26.5	80.0
17	64A 51C2-54E		1403.1	66.6	89.3	144.3	5MS	0	10S	63.0	25.0	80.0
6	S-9	INDIA	1139.8	67.3	80.3	141.6	0	0	60S	64.0	21.5	76.6
		GRAND MEAN	2661.1	74.9	84.8	143.9	15.4	1.6	53.8	88.6	34.2	50.0
	STANDARD ERROR OF GRAND MEAN		54.5		0.2	0.1	2.3	0.4	2.1	0.6		2.2
	COEFFICIENT OF VARIATION		17.7%		2.0%	0.7%	132.2%	239.6%	34.9%	6.2%		39.3%
	LSD VARIETY MEANS 5 PC		771.9		2.8	1.6	33.3	6.4	30.7	9.0		32.1

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS
TEST WEIGHT	0.79**								
DAYS TO FLOWER	0.16	0.05							
DAYS TO MATURITY	0.34	0.12	0.83**						
STRIPE RUST	-0.04	-0.05	0.42*	0.42*					
LEAF RUST	0.04	0.10	-0.20	-0.15	-0.24				
STEM RUST	0.20	0.05	0.40*	0.58**	0.28	-0.23			
HEIGHT CM.	0.12	0.32	0.25	0.22	0.45*	0.39*	-0.06		
1000 GRN WGT GRMS	0.72**	0.62**	0.06	0.29	-0.21	0.04	0.10	0.[illegible]	
SEPTORIA TRITICI	-0.60**	-0.49**	-0.65**	-0.78**	-0.44*	0.02	-0.67	-0.[illegible]	

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

TABLE 3 AFRICA MOROCCO BENI MELLAL

COTONNIERE.
COOPERATORS ARISTEO ACOSTA

LATITUDE	032 20'N	DATE PLANTED	01/30/71	NITROGEN	170.0 KG/HA
LONGITUDE	006 17' W	DATE HARVESTED	--/--/--	PHOSPHORUS	026.4 KG/HA
ELEVATION	+00500 M.ABOVE S.L.	AMOUNT OF MOISTURE	0899 MM	POTASSIUM	049.8 KG/HA

FAIRLY WELL RAINFALL DISTRIBUTION. SHORT CYCLE DUE TO TEMPERATURES ON LATE MAY AND JUNE. NO DISEASE DEVELOPMENT. INSECT OR PEST PROBLEMS NOT REPORTED. HEAVY INFESTATION OF WEEDS AND WILD OATS. LOCAL CHECK BD 2777.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	LODGING
20	CRANE "S" (A)	MEXICO	3112.7	80.0	80.0	0.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2608.5	-	75.0	0.0
10	ANHINGA "S"	MEXICO	2498.8	77.0	110.0	0.0
12	CRANE "S" (E)	MEXICO	2487.6	84.0	75.0	0.0
19	INIA 66 (BREAD WHEAT)	MEXICO	2459.9	75.0	85.0	0.0
7	61-130 X LEEDS	U.S.A.	2365.4	-	80.0	0.0
3	LEEDS	U.S.A.	2354.3	-	140.0	0.0
25	LOCAL CHECK		2279.3	85.0	130.0	70.0
11	ERANT "S"	MEXICO	2082.1	81.0	70.0	0.0
1	GAB-125	ITALY	2029.3	-	100.0	0.0
23	COCORIT C 71	MEXICO	2007.1	82.0	80.0	0.0
5	TEHUACAN 60	MEXICO	1900.1	84.0	145.0	0.0
9	CFI C-69	MEXICO	1873.7	83.0	70.0	0.0
8	GERARDO VZ 466	ITALY	1748.7	83.0	80.0	0.0
14	T. DIC. VAR. VERNUM	MEXICO	1729.3	-	75.0	0.0
24	GARZA "S"	MEXICO	1668.1	-	75.0	0.0
6	S-9	INDIA	1587.6	84.0	60.0	0.0
2	BELLS	U.S.A.	1569.5	-	160.0	0.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	1445.9	-	85.0	0.0
15	HERCULES	CANADA	1422.3	86.0	125.0	80.0
18	66W-5101		1366.7	-	70.0	0.0
13	CVIACHIC C-65	MEXICO	1352.8	83.0	70.0	50.0
22	GANSO "S"	MEXICO	1337.6	-	85.0	0.0
17	64W 5102-948		1109.8	-	65.0	0.0
4	CAPEITI	ITALY	989.6	-	125.0	0.0
		GRAND MEAN	1895.5	76.2	92.5	8.0
		STANDARD ERROR OF GRAND MEAN	52.7			
		COEFFICIENT OF VARIATION	23.7%			
		LSD VARIETY MEANS 5 PC	736.4			

CORRELATIONS

	YIELD KG/HA		
DAYS TO FLOWER	0.31		
HEIGHT CM.	-0.00	-0.06	
LODGING	-0.13	0.37	0.26

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

MERCHOUCH.
COOPERATORS ARISTEC ACOSTA

LATITUDE	033 33'N	DATE PLANTED	12/28/70	NITROGEN	150.0 KG/HA
LONGITUDE	006 42'W	DATE HARVESTED	--/--/--	PHOSPHORUS	026.4 KG/HA
ELEVATION	+00398 M.ABOVE S.L.	AMOUNT OF MOISTURE	0700 MM	POTASSIUM	049.8 KG/HA

HIGHER TEMPERATURES DURING FEBRUARY. LOWER TEMPERATURES DURING APRIL, MAY AND JUNE. EXCESS OF RAINFALL. GOOD DEVELOPMENT OF SEPTORIA. INSECT OR PEST PROBLEMS NOT REPORTED. HEAVY INFESTATION OF WILD OATS AND WEEDS. LOCAL CHECK BD 2777.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	SEPTORIA TRITICI
12	CRANE "S" (B)	MEXICO	2208.5	100.0	75.0	30.0
25	LOCAL CHECK		2154.3	110.0	100.0	20.0
11	ERANT "S"	MEXICO	2143.2	98.0	65.0	30.0
19	INIA 66 (BREAD WHEAT)	MEXICO	2097.3	84.0	75.0	40.0
10	ANHINGA "S"	MEXICO	2039.7	98.0	90.0	25.0
18	66W-5101		1939.7	110.0	80.0	30.0
14	T. DIC. VAR. VERNUM	MEXICO	1802.9	105.0	85.0	30.0
7	61-130 X LEEDS	U.S.A.	1679.3	-	80.0	25.0
8	GERARDO VZ 466	ITALY	1633.4	-	85.0	40.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	1629.2	-	95.0	25.0
22	GANSO "S"	MEXICO	1570.9	110.0	90.0	30.0
20	CRANE "S" (A)	MEXICO	1554.2	98.0	70.0	25.0
13	CVIACHIC C-65	MEXICO	1531.3	-	80.0	40.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	1504.2	100.0	80.0	30.0
9	JOFI C-69	MEXICO	1345.9	100.0	70.0	30.0
23	COCORIT C 71	MEXICO	1345.9	100.0	75.0	30.0
24	GARZA "S"	MEXICO	1323.0	105.0	75.0	20.0
6	S-9	INDIA	1198.7	104.0	65.0	30.0
17	64W 5102-948		843.1	104.0	75.0	45.0
15	HERCULES	CANADA	-	-	115.0	20.0
5	TEHUACAN 60	MEXICO	-	-	115.0	25.0
4	CAPEITI	ITALY	-	104.0	90.0	20.0
3	LEEDS	U.S.A.	-	-	125.0	15.0
2	WELLS	U.S.A.	-	-	125.0	15.0
1	GAB-125	ITALY	-	110.0	105.0	15.0
		GRAND MEAN	1660.2	102.3	87.3	27.3
		STANDARD ERROR OF GRAND MEAN	65.6			
		COEFFICIENT OF VARIATION	25.0%			
		LSD VARIETY MEANS 5 PC	678.4			

CORRELATIONS

	YIELD KG/HA			
DAYS TO FLOWER	0.37			
HEIGHT CM.	0.68**	-0.56**		
SEPTORIA TRITICI	0.50**	0.11	-0.63**	

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

TABLE 5 AFRICA MOROCCO SAHEL-BOU-TAHAR

COOPERATORS MR. CLYDE SEARL AND THE STUDENTS

LATITUDE	034 00'N	DATE PLANTED	12/15/70	NITROGEN	150.0 KG/HA
LONGITUDE	006 00' W	DATE HARVESTED	08/02/71	PHOSPHORUS	----- KG/HA
ELEVATION	+00150 M.ABOVE S.L.	AMOUNT OF MOISTURE	1500 MM	POTASSIUM	----- KG/HA

RAINFALL UNTIL FIRST WEEK OF JUNE. FEW NIGHTS AT FREEZING POINT. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED AND PESTS WERE PROBLEM. LOCAL CHECK BD 2777.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	1000 GRN WGT GRMS
10	ANHINGA "S"	MEXICO	5208.7	100.0	150.0	42.0
12	CRANE "S" (B)	MEXICO	4500.3	100.0	150.0	43.0
4	CAPEITI	ITALY	4458.6	110.0	160.0	38.0
5	TEHLACAN 60	MEXICO	4375.3	130.0	180.0	49.0
3	LEEDS	U.S.A.	4166.9	150.0	200.0	41.0
11	ERANT "S"	MEXICO	3875.3	100.0	150.0	45.0
20	CRANE "S" (A)	MEXICO	3875.3	120.0	170.0	32.0
15	HERCULES	CANADA	3625.2	130.0	180.0	41.0
1	GAB-125	ITALY	3521.1	130.0	180.0	40.0
7	E1-130 X LEEDS	U.S.A.	3416.9	130.0	180.0	37.0
19	INIA 66 (BREAD WHEAT)	MEXICO	3416.9	100.0	150.0	38.0
22	GANSO "S"	MEXICO	3375.2	130.0	180.0	41.0
9	JOFI C-69	MEXICO	3333.5	150.0	200.0	46.0
2	WELLS	U.S.A.	3291.9	150.0	200.0	31.0
23	COCORIT C 71	MEXICO	3208.5	115.0	165.0	39.0
14	T. DIC. VAR. VERNUM	MEXICO	3104.4	115.0	165.0	24.0
16	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	3000.2	130.0	180.0	33.0
18	66W-5101		3000.2	125.0	175.0	38.0
13	CVIACHIC C-65	MEXICO	2833.5	130.0	180.0	35.0
8	GERARDO VZ 466	ITALY	2833.5	140.0	190.0	31.0
6	S-9	INDIA	2708.5	115.0	165.0	31.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2625.2	125.0	170.0	41.0
25	LOCAL CHECK		2583.5	180.0	230.0	47.0
24	GARZA "S"	MEXICO	2375.1	125.0	175.0	36.0
17	64W 51C2-546		2250.1	130.0	180.0	30.0
		GRAND MEAN	3398.5	126.3	176.1	37.9

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

CORRELATIONS

	YIELD KG/HA		
DAYS TO FLOWER	-0.40*		
DAYS TO MATURITY	-0.39*	0.99**	
1000 GRN WGT GRMS	0.42*	0.12	0.11

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

TABLE 6 AFRICA TUNISIA ARIANA

COOPERATORS ACPP AND INRAT

LATITUDE	036 40'N	DATE PLANTED	11/21/70	NITROGEN	132.0 KG/HA
LONGITUDE	009 10'E	DATE HARVESTED	--/--/--	PHOSPHORUS	012.0 KG/HA
ELEVATION	+00161 M.ABOVE S.L.	AMOUNT OF MOISTURE	0555 MM	POTASSIUM	---.- KG/HA

WEATHER CONDITIONS NOT REPORTED. GOOD DEVELOPMENT OF SEPTORIA. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK D5825A

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	LEAF RUST	STEM RUST	HEIGHT CM.	POWDERY MILDEW	SEPTORIA TRITICI
11	BRANT "S"	MEXICO	3884.0	30S	TMS	80.0	9.0	72.0
19	INIA 66 (BREAD WHEAT)	MEXICO	3860.0	TMR	0	95.0	9.0	40.0
12	CRANE "S" (B)	MEXICO	3610.6	5MS	0	75.0	9.0	50.0
9	JORI C-69	MEXICO	3478.6	10MS	T	85.0	9.0	24.0
10	ANHINGA "S"	MEXICO	3388.0	10S	0	110.0	9.0	24.0
8	GERARDO VZ 466	ITALY	3313.3	5MS	5S	90.0	7.1	40.0
4	CAPEITI	ITALY	3313.3	50S	5MS	105.0	7.1	50.0
20	CRANE "S" (A)	MEXICO	3305.3	60S	0	80.0	7.1	70.0
18	66W-5101		3232.0	90MS	0	75.0	9.0	70.0
7	61-130 X LEEDS	U.S.A.	2996.0	60S	T	80.0	3.5	16.0
25	LOCAL CHECK		2985.3	5S	TMS	115.0	6.3	0.0
3	LEEDS	U.S.A.	2937.3	60S	0	125.0	1.7	24.0
16	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	2776.0	70MS	10S	90.0	7.1	50.0
1	GAB-125	ITALY	2774.6	70S	5S	110.0	9.0	70.0
6	S-9	INDIA	2677.3	10MS	0	65.0	0.0	70.0
17	64W 5102-948		2650.0	50S	0	75.0	9.0	80.0
13	OVIACHIC C-65	MEXICO	2617.3	50S	5S	80.0	9.0	60.0
14	T. DIC. VAR. VERNUM	MEXICO	2477.3	80S	0	75.0	9.0	70.0
2	WELLS	U.S.A.	2346.6	60S	0	120.0	1.7	30.0
5	TEPOACAN 60	MEXICO	2212.0	5MS	0	125.0	9.0	72.0
15	HERCULES	CANADA	2074.6	80S	5MS	125.0	3.5	50.0
		GRAND MEAN	2995.7	39.0	1.5	94.2	7.2	49.1
		STANDARD ERROR OF GRAND MEAN	41.4					
		COEFFICIENT OF VARIATION	10.9%					
		LSD VARIETY MEANS 5 PC	533.2					

CORRELATIONS

YIELD	KG/HA					
LEAF	RUST	-0.45*				
STEM	RUST	-0.20	0.24			
HEIGHT	CM.	-0.35	0.04	0.09		
POWDERY MILDEW		0.38*	-0.17	0.08	-0.22	
SEPTORIA TRITICI		-0.17	0.27	0.09	-0.41*	0.30

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

TABLE 7 AFRICA TUNISIA BEJA

COOPERATORS ACPP AND INRAT

LATITUDE	036 40°N	DATE PLANTED	11/21/70	NITROGEN	090.0 KG/HA
LONGITUDE	009 10°E	DATE HARVESTED	05/03/71	PHOSPHORUS	045.0 KG/HA
ELEVATION	+00161 M.ABOVE S.L.	AMOUNT OF MOISTURE	----- MM	POTASSIUM	---.- KG/HA

WEATHER CONDITIONS NOT REPORTED. GOOD DEVELOPMENT OF SEPTORIA. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK DS825A.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	POWDERY MILDEW	SEPTORIA TRITICI
18	66W-5101		3922.6	163.0	30MS	0	75.0	7.1	8.0
25	LOCAL CHECK		3817.3	158.0	40MS	0	105.0	8.0	7.0
10	ANHINGA "S"	MEXICO	3796.0	150.0	80S	0	100.0	7.1	8.0
20	CRANE "S" (A)	MEXICO	3746.6	149.0	30S	0	80.0	9.0	8.0
12	CRANE "S" (E)	MEXICO	3693.3	151.0	30MS	60S	75.0	9.0	8.0
11	BRANT "S"	MEXICO	3577.3	149.0	30MS	0	70.0	7.1	8.0
4	CAPEITI	ITALY	3536.0	154.0	40MS	80S	110.0	9.0	7.0
9	JORI C-69	MEXICO	3464.0	152.0	40S	0	80.0	9.0	8.0
19	INIA 66 (BREAD WHEAT)	MEXICO	3344.0	142.0	10MR	0	90.0	8.0	8.0
8	GERARDO VZ 466	ITALY	3306.6	158.0	0	0	85.0	6.3	7.0
1	GAB-125	ITALY	3249.3	153.0	0	30MS	95.0	9.0	7.0
7	61-130 X LEEDS	U.S.A.	3164.0	161.0	60MS	0	80.0	4.0	1.5
17	64W 5102-94E		2972.0	157.0	30MS	0	70.0	9.0	8.0
6	S-9	INDIA	2909.3	154.0	0	40S	65.0	9.0	8.0
14	T. DIC, VAR. VERNUM	MEXICO	2902.6	154.0	0	0	80.0	9.0	7.0
16	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	2880.0	163.0	80S	0	85.0	8.0	8.0
5	TEHLACAN 60	MEXICO	2476.0	164.0	90S	30MS	116.0	9.0	7.0
3	LEEDS	U.S.A.	2285.3	-	60MS	40S	115.0	0.0	5.5
13	CVIACHIC C-65	MEXICO	2126.6	163.0	0	0	70.0	9.0	7.0
15	HERCULES	CANADA	1892.0	153.0	30MR	0	0.0	6.3	4.7
2	BELLS	U.S.A.	1892.0	-	40MS	40MS	115.0	5.5	4.7
		GRAND MEAN	3097.7	156.1	29.2	14.2	88.0	7.5	6.9
		STANDARD ERROR OF GRAND MEAN	48.4						
		COEFFICIENT OF VARIATION	12.4%						
		LSD VARIETY MEANS 5 PC	627.7						

CORRELATIONS

YIELD	KG/HA					
DAYS TO MATURITY		0.46*				
LEAF	RUST	0.04	-0.11			
STEM	RUST	-0.06	-0.31	0.00		
HEIGHT	CM.	0.16	-0.42*	0.40*	0.34	
POWDERY MILDEW		0.32	0.68**	-0.21	-0.02	-0.15
SEPTORIA TRITICI		0.46*	0.31	-0.06	-0.01	0.05	0.61**

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

TABLE 8 AFRICA TUNISIA KOUDIAT

BOU SALEM
COOPERATORS ACPP AND INRAT

LATITUDE 036 35' N
LONGITUDE 009 00'E
ELEVATION +00134 M.ABOVE S.L.

DATE PLANTED 12/04/70
DATE HARVESTED 05/04/71
AMOUNT OF MOISTURE 0586 MM

NITROGEN 099.0 KG/HA
PHOSPHORUS 057.5 KG/HA
POTASSIUM ----.-- KG/HA

WEATHER CONDITIONS NOT REPORTED. GOOD DEVELOPMENT OF SEPTORIA. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK D5825A.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	POWDERY MILDEW	SEPTORIA TRITICI
11	BRANT "S"	MEXICO	3537.3	140.0	30MR	30MS	75.0	0.0	7.0
10	ANHINGA "S"	MEXICO	3509.3	140.0	0	TR	115.0	0.0	6.0
20	CRANE "S" (A)	MEXICO	3458.6	136.0	0	30 S	80.0	0.0	8.0
4	CAPEITI	ITALY	3209.3	141.0	0	0	115.0	2.3	2.0
25	LOCAL CHECK		3098.6	142.0	0	0	110.0	6.3	4.7
19	INIA 66 (BREAD WHEAT)	MEXICO	3026.6	129.0	0	0	85.0	0.0	7.0
18	66W-5101		3000.0	145.0	0	30MS	75.0	0.0	6.0
8	GERARDO VZ 466	ITALY	2818.6	144.0	0	40S	85.0	0.0	7.0
6	S-S	INDIA	2805.3	142.0	0	30S	60.0	9.0	6.0
9	LORI C-69	MEXICO	2904.0	141.0	0	20MS	80.0	9.0	7.0
12	CRANE "S" (B)	MEXICO	2724.0	140.0	0	30S	70.0	0.0	7.0
13	CVIACHIC C-65	MEXICO	2517.3	148.0	0	30MS	65.0	9.0	7.0
14	T. DIC. VAR. VERNUM	MEXICO	2486.6	143.0	0	30MR	90.0	0.0	7.0
17	64W 5102-94E		2482.6	142.0	0	40S	65.0	0.0	6.0
1	GAB-125	ITALY	2470.6	145.0	20MR	0	110.0	4.7	5.0
5	TEPUACAN 60	MEXICO	2437.3	149.0	40MR	T	135.0	0.0	6.0
15	HERCULES	CANADA	2241.3	148.0	0	0	130.0	0.0	4.0
16*	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	2212.0	143.0	0	40S	95.0	0.0	6.0
7	61-130 X LEEDS	U.S.A.	2192.0	120.0	0	T	80.0	0.0	4.0
3	LEEDS	U.S.A.	2072.0	120.0	0	TR	130.0	0.0	4.0
2	WELLS	U.S.A.	1952.0	151.0	0	0	130.0	0.0	4.0
		GRAND MEAN	2716.9	140.6	1.7	14.7	93.3	1.9	5.8
	STANDARD ERROR OF GRAND MEAN		49.5						
	COEFFICIENT OF VARIATION		14.3%						
	LSD VARIETY MEANS 5 PC		636.5						

CORRELATIONS

YIELD KG/HA							
DAYS TO MATURITY	-0.03						
LEAF RUST	0.08	0.21					
STEM RUST	0.13	0.24	-0.17				
HEIGHT CM.	-0.26	0.07	0.26	-0.74**			
POWDERY MILDEW	0.06	0.19	-0.13	0.02	-0.25		
SEPTORIA TRITICI	0.30	0.12	0.06	0.67**	-0.66**	0.01	

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

TABLE 9 ASIA INDIA M. PRADESH

INDORE WHEAT BREED. SUBSTATION
COOPERATORS DR. UPADHYAYA, R.S THAKUR, R.C. BHAVSAR.

LATITUDE 026 00'N
LONGITUDE 076 00'E
ELEVATION +00600 M.ABOVE S.L.

DATE PLANTED 12/31/70
DATE HARVESTED --/--/--
AMOUNT OF MOISTURE -----%

NITROGEN 087.0 KG/HA
PHOSPHORUS 051.5 KG/HA
POTASSIUM ---.- KG/HA

CLEAR AND DRY WEATHER DURING SOWING. NO DISEASE DEVELOPMENT. NO INSECT OR PEST PROBLEMS. HAND WEEDING. LOCAL CHECK HD 4501. HEIGHT SCALE 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
23	COCORIT C 71	MEXICO	7199.9	83.0	73.0	136.0	F2	50.0
24	GARZA "S"	MEXICO	6966.6	81.5	79.0	139.0	F2	42.0
20	CRANE "S" (E)	MEXICO	6422.1	84.0	71.0	138.0	F2	42.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	6255.5	90.5	78.0	136.0	F2	45.5
4	CAPEITI	ITALY	6211.0	85.0	82.0	138.0	MT	52.0
22	GANSO "S"	MEXICO	6077.7	82.0	87.0	149.0	F1	57.1
10	ANLINGA "S"	MEXICO	5999.9	86.5	71.0	140.0	F1	58.0
6	S-C	INDIA	5899.9	81.0	80.0	132.0	F2	39.1
9	JORI C-69	MEXICO	5766.6	83.5	78.0	137.0	F2	52.0
11	ERANT "S"	MEXICO	5677.7	83.0	74.0	142.0	E2	48.0
18	66W-5101		5544.4	82.5	87.0	150.0	E2	44.3
8	GERARDO VZ 466	ITALY	5644.4	81.5	82.0	136.0	F1	46.0
25	LOCAL CHECK		5611.0	79.0	74.0	141.0	F2	40.7
17	64W 5102-948		5533.3	80.5	83.0	137.0	F2	48.0
19	INIA 66 (BREAD WHEAT)	MEXICO	5399.9	84.5	70.0	136.0	E2	42.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	5166.6	83.5	86.0	148.0	F1	44.0
1	GAB-125	ITALY	4944.4	82.0	82.0	132.0	MT	51.7
13	CVIACHIC C-65	MEXICO	4844.4	81.0	86.0	154.0	F2	41.5
12	CRANE "S" (E)	MEXICO	4666.6	82.0	75.0	139.0	E2	42.0
14	T. DIC. VAR. VERNUM	MEXICO	4622.2	84.0	73.0	142.0	F2	38.3
5	TEHLACAN 60	MEXICO	4599.9	82.5	85.0	138.0	T	52.0
15	HERCULES	CANADA	4377.7	82.5	76.0	141.0	T	43.5
7	61-130 X LEEDS	U.S.A.	4311.0	80.0	85.0	153.0	F1	36.0
3	LEEDS	U.S.A.	4055.5	85.5	89.0	155.0	T	40.0
2	WELLS	U.S.A.	3499.9	84.0	40.0	152.0	T	33.1
		GRAND MEAN	5415.9	82.5	77.7	141.6		45.1

STANDARD ERROR OF GRAND MEAN 130.1
COEFFICIENT OF VARIATION 20.8%
LSD VARIETY MEANS 5 PC 1841.2

CORRELATIONS

	YIELD KG/HA				
TEST WEIGHT	-0.06				
DAYS TO FLOWER	0.17	-0.26			
DAYS TO MATURITY	-0.51**	0.07	0.05		
HEIGHT CM.	0.00	0.00	0.00	0.00	
1000 GRN WGT GRMS	0.47*	0.23	0.33	-0.35	0.00

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

TABLE 10 ASIA INDIA M. PRADESH

WHEAT REASERCH STN. VIDYALAYA, POWARKHEDA.
COOPERATORS DR. S.P SINGH, WHEAT BREEDER

LATITUDE 022 44' N
LONGITUDE 077 42'E
ELEVATION +00980 M.ABOVE S.L.

DATE PLANTED 11/11/70
DATE HARVESTED / /
AMOUNT OF MOISTURE MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 060.0 KG/HA
POTASSIUM 040.0 KG/HA

FAVORABLE WEATHER. GOOD DEVELOPMENT OF STEM RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NP 404.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS
25	LOCAL CHECK		5582.7	79.3	129.6	0	25X	106.0	58.3
17	64W 5102-S4E		5499.4	84.3	125.0	0	10S	79.3	33.6
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	5082.8	80.0	125.0	0	5S	110.0	53.0
9	JORI C-69	MEXICO	4999.4	80.0	122.6	TRR	5R	86.3	54.0
23	COCORIT C 71	MEXICO	4749.5	79.3	121.3	0	TRR	92.0	52.6
8	GERARDO VZ 466	ITALY	4749.5	82.6	133.0	TRS	40S	87.6	54.0
10	ANHINGA "S"	MEXICO	4532.8	70.3	115.0	0	TZR	104.0	52.3
20	CRANE "S" (A)	MEXICO	4495.5	68.6	119.0	0	5S	79.3	45.0
15	HERCULES	CANADA	4499.5	87.0	132.3	10S	5X	124.0	46.6
22	GANSO "S"	MEXICO	4499.5	86.3	135.3	TRS	5X	90.0	63.3
18	66W-5101		4082.9	88.6	133.6	TRR	10X	82.0	50.3
19	INIA 66 (BREAD WHEAT)	MEXICO	4066.2	69.6	111.0	0	0	95.6	43.3
12	CRANE "S" (B)	MEXICO	3999.5	78.6	79.3	0	TRR	79.3	45.5
11	ERANT "S"	MEXICO	3999.5	79.6	119.0	5R	5S	81.0	45.6
1	GAB-125	ITALY	3916.2	83.0	124.0	0	40S	110.6	55.0
6	S-5	INDIA	3832.9	77.3	119.0	0	25S	65.3	43.3
3	LEEDS	U.S.A.	3749.6	99.3	136.5	5R	25S	127.6	38.0
24	GARZA "S"	MEXICO	3582.9	82.3	135.6	0	5X	80.0	47.3
4	CAFEITI	ITALY	3582.9	82.0	120.0	0	25S	115.6	54.3
7	61-130 X LEEDS	U.S.A.	3249.6	104.6	132.0	0	10X	80.0	37.6
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3166.3	94.3	138.3	TRR	10S	87.0	48.0
5	TEHLACAN 60	MEXICO	2999.6	94.6	137.3	0	40S	128.6	55.0
2	WELLS	U.S.A.	2833.0	107.0	145.3	0	10X	128.6	30.0
13	CVIACHIC C-65	MEXICO	1916.4	93.0	123.3	0	25S	76.3	46.6
14	T. DIC. VAR. VERNUM	MEXICO	1416.5	81.3	123.0	TRS	TRR	75.6	46.0
		GRAND MEAN	3965.5	84.7	125.4	0.1	7.3	94.8	48.0
	STANDARD ERROR OF GRAND MEAN		65.7	0.3	1.7	0.1	0.9	1.3	0.6
	COEFFICIENT OF VARIATION		11.9%	3.2%	12.0%	629.0%	117.6%	12.2%	11.4%
	LSD VARIETY MEANS 5 PC		774.7	4.4	24.6	1.9	14.0	19.0	8.9

CORRELATIONS

	YIELD KG/HA					
DAYS TO FLOWER	-0.45*					
DAYS TO MATURITY	-0.12	0.61**				
LEAF RUST	0.08	0.07	0.12			
STEM RUST	-0.05	0.29	0.32	-0.12		
HEIGHT CM.	0.06	0.35	0.36	0.32	0.15	
1000 GRN WGT GRMS	0.28	-0.38	-0.05	-0.06	0.13	0.05

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

TABLE 11 ASIA PAKISTAN PUNJAB

AGRIC. RES. INSTITUTE. LYALLPUR
COOPERATORS CEREAL BOTANIST.

LATITUDE	031 30'N	DATE PLANTED	10/27/70	NITROGEN	090.0 KG/HA
LONGITUDE	073 10' E	DATE HARVESTED	--/--/--	PHOSPHORUS	060.0 KG/HA
ELEVATION	+00213 M.ABOVE S.L.	AMOUNT OF MOISTURE	0511 MM	POTASSIUM	---.- KG/HA

DRY WEATHER DURING TEST. NO DISEASE DEVELOPMENT. NO INSECT OR PEST PROBLEMS. WEEDS CONTROLLED BY HAND. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	LODGING
19	INIA 66 (BREAD WHEAT)	MEXICO	4955.5	123.0	100.0	5.0
12	CRANE "S" (B)	MEXICO	4355.5	127.0	81.0	20.0
25	LOCAL CHECK		4311.0	128.0	95.0	0.0
20	CRANE "S" (A)	MEXICO	4256.6	127.0	80.0	5.0
10	ANFINCA "S"	MEXICO	4244.4	127.0	105.0	5.0
24	GARZA "S"	MEXICO	4222.2	127.0	86.0	6.6
15	HERCULES	CANADA	4211.0	126.0	131.0	30.0
3	LEEDS	J.S.A.	4199.9	129.0	139.0	5.0
4	CAPEITI	ITALY	4088.8	127.0	109.0	70.0
7	61-130 X LEEDS	J.S.A.	4066.6	129.0	91.0	0.0
11	ERANT "S"	MEXICO	4044.4	127.0	75.0	0.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3999.9	129.0	79.0	5.0
17	66W 51C2-546		3955.5	127.0	78.0	0.0
8	GERARDO VZ 466	ITALY	3911.1	127.0	95.0	5.0
14	T. DIC. VAR. VERNUM	MEXICO	3888.8	129.0	90.0	90.0
[illegible]	JORI C-69	MEXICO	3888.8	126.0	90.0	5.0
23	COCORIT C 71	MEXICO	3866.6	126.0	90.0	20.0
18	66W-5101		3788.8	127.0	85.0	0.0
2	WELLS	J.S.A.	3755.5	129.0	133.0	5.0
1	GAB-125	ITALY	3755.5	126.0	108.0	5.0
22	GANSO "S"	MEXICO	3666.6	128.0	89.0	5.0
6	S-9	INDIA	3555.5	126.0	61.0	0.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3355.5	129.0	100.0	40.0
13	CVIACHIC C-65	MEXICO	3222.2	126.0	88.0	0.0
5	TEHUACAN 60	MEXICO	2324.4	127.0	139.0	15.0
	GRAND MEAN		3916.0	127.1	96.7	13.6
	STANDARD ERROR OF GRAND MEAN		71.4		0.0	1.2
	COEFFICIENT OF VARIATION		15.7%		0.5%	77.8%
	LSD VARIETY MEANS 5 PC		1010.3		0.9	17.3

CORRELATIONS

	YIELD KG/HA		
DAYS TO FLOWER	-0.21		
HEIGHT CM.	-0.19	0.13	
LODGING	-0.04	0.21	0.16

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

TABLE 12 EUROPE ENGLAND CAMBRIDGE

PLANT BREEDING INST. TRUMPINGTON.
COOPERATORS R.S. GREGORY.

LATITUDE 052 12' N
LONGITUDE 000 08' E
ELEVATION +00018 M.ABOVE S.L.

DATE PLANTED 03/25/71
DATE HARVESTED 08/17/71
AMOUNT OF MOISTURE 0281 MM

NITROGEN 089.5 KG/HA
PHOSPHORUS 010.6 KG/HA
POTASSIUM 019.9 KG/HA

CLIMATE AS USUAL GOOD DEVELOPMENT OF STRIPE RUST. NO INSECT PROBLEM.
SOME EARLY BIRD DAMAGE. PROBLEMS WITH PERENNIAL WEEDS LOCAL CHECK
KLEIBER.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	HEIGHT CM.	POWDERY MILDEW
12	CRANE "S" (B)	MEXICO	4633.6	85.3	95.0	139.0	0	76.0	70.2
20	CRANE "S" (A)	MEXICO	4125.5	85.3	87.0	134.6	TR	73.3	44.3
8	GEPARDO VZ 466	ITALY	3790.7	82.1	91.0	137.6	30MR	81.0	44.3
23	COCORIT C 71	MEXICO	3775.0	83.5	93.0	139.3	5MR	82.6	59.1
5	TEHUACAN 60	MEXICO	3740.3	86.0	91.0	136.6	TMR	105.3	59.1
11	ERANT "S"	MEXICO	3629.2	83.0	89.0	138.0	2MR	72.0	48.0
4	CAPEITI	ITALY	3574.4	81.8	87.6	134.6	10MR	94.6	55.5
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3404.1	82.5	89.6	139.3	TR	74.6	62.6
10	ANHINGA "S"	MEXICO	3368.5	84.5	92.0	140.6	2MR	89.3	44.3
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3316.7	84.0	92.0	138.0	TR	80.6	48.0
22	GANSO "S"	MEXICO	3295.9	80.3	90.3	141.0	5MR	76.0	73.9
18	65W-5101		3239.6	84.1	92.6	142.3	2MR	68.0	48.0
25	LOCAL CHECK		3163.0	84.3	101.3	142.6	10MS	106.0	48.0
1	GAB-125	ITALY	3104.8	81.8	90.3	135.0	40MR	87.3	70.2
2	BELLS	U.S.A.	2956.7	84.6	94.3	134.0	60S	115.3	44.3
19	INIA 66 (BREAD WHEAT)	MEXICO	2921.1	87.5	76.3	129.0	2MR	79.3	70.2
3	LEEDS	U.S.A.	2700.4	83.6	95.6	133.3	30MS	112.6	44.3
24	GARZA "S"	MEXICO	2666.3	79.8	96.6	144.3	5MR	71.3	44.3
13	CVIACHIC C-65	MEXICO	2503.4	83.5	97.3	140.3	0	72.6	59.1
6	S-9	INDIA	2340.5	82.3	95.3	141.6	10MR	62.0	73.9
15	HERCULES	CANADA	2214.5	77.3	92.6	130.6	60S	110.0	44.3
17	64W 5102-948		2102.0	80.0	92.3	144.0	5MR	66.6	55.5
7	61-130 X LEEDS	U.S.A.	2076.8	77.6	94.3	134.3	40MS	82.0	44.3
9	LORI C-69	MEXICO	1884.2	77.3	94.3	145.0	0	76.0	48.0
14	T. DIC. VAR. VERNUM	MEXICO	1636.9	85.6	96.6	138.6	0	82.0	55.5
		GRAND MEAN	3046.6	82.7	92.3	138.1	7.4	83.8	54.9
		STANDARD ERROR OF GRAND MEAN	99.4	0.1	0.2	0.1	0.7	0.3	0.6
		COEFFICIENT OF VARIATION	28.2%	1.6%	2.6%	1.0%	84.2%	3.0%	9.7%
		LSD VARIETY MEANS 5 PC	1406.3	2.2	4.0	2.3	10.1	4.2	8.7

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	HEIGHT CM.
TEST WEIGHT	0.48*					
DAYS TO FLOWER	-0.29	-0.24				
DAYS TO MATURITY	-0.11	-0.21	0.54**			
STRIPE RUST	-0.28	-0.32	0.14	-0.54**		
HEIGHT CM.	0.01	0.10	0.15	-0.51**	0.68**	
POWDERY MILDEW	0.07	0.15	-0.27	0.08	-0.33*	-0.38

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

TABLE 13 EUROPE GREECE THESSALONIKI

PLANT BREEDING INSTITUTE.
COOPERATORS ELPIS A. SKORDA.

LATITUDE	040 38' N	DATE PLANTED	11/20/70	NITROGEN	090.0 KG/HA
LONGITUDE	022 57'E	DATE HARVESTED	05/07/71	PHOSPHORUS	022.0 KG/HA
ELEVATION	+00010 M.ABOVE S.L.	AMOUNT OF MOISTURE	----- MM	POTASSIUM	---.- KG/HA

DRY DURING AUTUMN AND WET DURING SPRING. SUMMER WAS WARM AND THE PLANTS RIPED RAPIDLY. LIGHT ATTACK OF STRIPE AND LEAF RUST. 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	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	YELLOW LEAVS
20	CRANE "S" (A)	MEXICO	4450.1	79.2	122.0	158.3	0	0	107.3	13.3	40.8	23.5
13	CVIACHIC C-65	MEXICO	4353.1	78.8	125.5	162.6	0	35MR	112.6	66.6	45.0	22.1
14	T. DIC. VAR. VERNUM	MEXICO	4302.5	78.5	126.6	163.0	30VS	0	88.5	23.3	40.3	25.9
23	COCORIT C 71	MEXICO	3975.3	77.4	126.0	163.6	0	5R	97.0	0.0	46.1	22.1
12	CRANE "S" (E)	MEXICO	3963.2	79.7	123.3	159.6	5MS	5MR	95.0	0.0	43.3	18.4
21	(BYZE-TACE X TC4) (BYZE-TC X STW 63)/AA"S"	MEXICO	3757.1	77.2	125.0	160.3	0	0	85.6	0.0	52.8	18.4
18	66W-5101		3460.2	78.9	127.0	163.0	0	0	90.3	6.6	45.5	25.9
10	ANHINGA "S"	MEXICO	3434.1	80.0	126.6	162.0	0	5MR	131.3	50.0	41.8	18.4
8	GERARDO VZ 466	ITALY	3405.7	79.2	125.5	163.3	0	0	116.6	20.0	49.3	25.9
6	S-6	INDIA	3393.5	77.0	126.0	163.6	10MR	0	102.3	33.3	40.3	51.7
17	64W 5102-94E		3326.9	76.3	126.3	161.3	0	5R	86.0	33.3	42.1	22.1
11	ERAAT "S"	MEXICO	3296.6	76.9	121.0	162.6	0	10MR	95.3	0.0	43.6	33.2
19	INIA 66 (BREAD WHEAT)	MEXICO	3211.7	79.6	122.3	160.3	0	0	97.3	13.3	40.5	22.1
24	GARZA "S"	MEXICO	3114.8	77.6	125.6	164.0	0	5MR	111.6	10.0	44.0	36.9
7	E1-130 X LEEDS	U.S.A.	3066.3	78.6	126.6	164.6	0	5MR	107.0	13.3	41.1	36.9
16	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	3048.1	78.4	128.3	162.6	0	5MR	110.0	33.3	50.0	29.5
5	TEHLACAN 6C	MEXICO	3023.9	78.8	125.0	162.6	0	0	117.3	40.0	47.3	22.1
15	HERCULES	CANADA	2763.3	79.6	127.3	162.6	25MR	50MR	109.3	33.3	39.3	40.6
9	JORI C-65	MEXICO	2678.5	77.1	125.0	162.0	0	0	94.3	0.0	47.8	36.9
2	BELLS	U.S.A.	2554.2	74.3	127.3	163.0	0	0	116.0	60.0	29.3	11.0
4	CAFEITI	ITALY	2533.0	75.9	124.3	162.0	0	5MR	110.3	66.6	37.6	29.5
22	GANSO "S"	MEXICO	2381.5	72.9	124.6	162.3	0	0	95.3	0.0	62.6	33.2
3	LEEDS	U.S.A.	2375.5	79.5	124.0	164.6	0	30MR	112.0	66.6	37.0	29.5
25	LOCAL CHECK		2193.7	79.6	127.0	162.3	0	20MR	140.0	33.3	44.8	18.4
1	GAB-T25	ITALY	2084.6	72.3	127.5	164.6	0	10MR	105.6	36.6	40.8	29.5
		GRAND MEAN	3211.5	77.7	125.6	162.3	0.7	3.4	105.5	26.1	44.4	27.6
		STANDARD ERROR OF GRAND MEAN	83.6	0.1	0.3	0.3	0.4	0.6	2.4	4.7	0.5	2.2
		COEFFICIENT OF VARIATION	22.5%	2.0%	2.2%	1.9%	504.4%	155.9%	19.8%	157.3%	10.4%	70.4%
		LSD VARIETY MEANS 5 PC	1183.1	2.6	4.5	5.2	4.1	8.7	34.1	67.1	7.5	31.9

CORRELATIONS

	YIELD KG/HA								
TEST WEIGHT	0.42*								
DAYS TO FLOWER	-0.25	-0.07							
DAYS TO MATURITY	-0.44*	-0.28	0.51**						
STRIPE RUST	0.29	0.11	0.06	0.07					
LEAF RUST	-0.12	0.19	0.35	0.26	0.30				
HEIGHT CM.	-0.33	0.28	0.29	0.27	-0.27	0.20			
LODGING	-0.25	0.03	0.41*	0.32	-0.00	0.20	0.55		
1000 GRN WGT GRMS	0.08	-0.15	-0.19	-0.22	-0.19	-0.28	-0.35	-0.59**	
YELLOW LEAVS	-0.17	-0.11	-0.03	0.33	0.12	0.15	-0.18	-0.16	0.03

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

TABLE 14 EUROPE ITALY BARI

INSTITUTE OF PLANT BREEDING
COOPERATORS G.SCARASCIA-MUGNOZZA AND G.PACUCCI.

LATITUDE	040 07 N	DATE PLANTED	12/21/70	NITROGEN	080.0 KG/HA
LONGITUDE	016 08 E	DATE HARVESTED	06/29/71	PHOSPHORUS	100.0 KG/HA
ELEVATION	+00360 M.ABOVE S.L.	AMOUNT OF MOISTURE	0490 MM	POTASSIUM	---.- KG/HA

FAVORABLE WEATHER. FAIR DEVELOPMENT OF STRIPE AND LEAF RUST. INSECT AND PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK APPULO.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
19	INIA 66 (BREAD WHEAT)	MEXICO	4014.0	83.5	139.0	177.0	15	10	95.0	6.6	44.2
8	GERARDO VZ 466	ITALY	3798.5	81.1	149.6	187.6	10	10	88.3	0.0	45.1
7	61-130 X LEEDS	U.S.A.	3551.8	79.8	151.0	189.0	25	0	86.6	0.0	34.8
22	GANSO "S"	MEXICO	3544.0	77.3	150.3	187.6	10	5	85.0	0.0	51.4
10	ZARAGOZA "S"	MEXICO	3091.9	83.5	146.0	189.0	15	15	111.6	66.6	43.1
9	JORI C-69	MEXICO	2999.6	74.7	148.3	188.3	5	5	80.0	0.0	40.5
3	LEEDS	U.S.A.	2733.0	81.8	151.3	188.0	25	0	125.0	33.3	36.0
5	TEHLACAN 6C	MEXICO	2620.8	73.0	151.6	188.6	25	25	138.3	13.3	40.2
14	T. DIC. VAR. VERNUM	MEXICO	2615.2	74.4	152.0	189.0	25	15	83.3	0.0	30.2
11	ERANT "S"	MEXICO	2596.4	72.5	145.0	184.0	30	30	93.3	0.0	31.2
23	COCORIT C 71	MEXICO	2588.6	76.4	147.0	187.3	25	15	86.6	0.0	35.4
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2451.9	71.6	147.6	[illegible]	25	25	76.6	0.0	35.9
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2433.0	77.3	151.0	187.3	40	25	93.3	0.0	37.0
17	64W 5102-94E		2369.7	71.9	153.0	186.0	5	5	68.3	0.0	35.5
4	CAPEITI	ITALY	2340.8	78.9	147.0	189.0	25	10	115.0	33.3	35.3
15	HERCULES	CANADA	2310.8	74.5	148.3	184.0	15	10	131.6	60.0	35.3
2	BELLS	U.S.A.	2280.8	78.1	152.6	188.3	25	0	128.3	20.0	29.7
24	GARZA "S"	MEXICO	2129.7	75.2	149.6	188.6	10	5	80.0	0.0	34.7
1	GAB-125	ITALY	2122.0	72.2	152.0	187.6	25	20	118.3	46.6	34.1
25	LOCAL CHECK		1977.5	76.4	150.3	188.6	25	15	101.6	6.6	36.2
20	CRANE "S" (A)	MEXICO	1969.8	72.5	143.6	184.0	40	30	78.3	0.0	27.9
18	66W-5101		1939.8	75.5	150.6	186.3	35	25	75.0	0.0	33.7
12	CRANE "S" (B)	MEXICO	1939.8	68.2	150.6	185.3	25	15	85.0	0.0	29.5
13	CUIACHIC C-65	MEXICO	1299.8	70.0	151.3	184.0	40	25	75.0	0.0	30.6
6	S-5	INDIA	1250.9	57.7	150.6	184.0	25	25	71.6	0.0	24.5
		GRAND MEAN	2514.4	75.8	149.1	186.5	21.0	11.5	94.4	11.4	35.7
	STANDARD ERROR OF GRAND MEAN		49.9	0.1	0.0	0.1	0.6	0.8	0.5	1.8	0.2
	COEFFICIENT OF VARIATION		17.2%	2.2%	0.3%	0.8%	27.4%	62.9%	5.3%	136.5%	5.2%
	LSD VARIETY MEANS 5 PC		706.9	2.7	0.3	2.4	9.4	11.8	8.2	25.5	3.0

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
TEST WEIGHT	0.76**								
DAYS TO FLOWER	-0.36	-0.28							
DAYS TO MATURITY	-0.00	0.18	0.62**						
STRIPE RUST	-0.73**	-0.54**	0.19	-0.11					
LEAF RUST	-0.64**	-0.65**	-0.02	-0.29	0.65**				
HEIGHT CM.	0.12	0.46*	0.08	0.23	-0.15	-0.42*			
LODGING	0.03	0.33	-0.06	0.14	-0.17	-0.30	0.74		
1000 GRN WGT GRMS	0.78**	0.67**	-0.21	0.09	-0.75**	-0.39*	0.17	0.13	

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

TABLE 15 EUROPE ITALY ROME

FOGGIA.
COOPERATORS CEREALS EXPERIMENT INSTITUTE OF ROME

LATITUDE 045 28'N
LONGITUDE 015 32'E
ELEVATION +00076 M.ABOVE S.L.

DATE PLANTED 12/28/70
DATE HARVESTED 05/27/71
AMOUNT OF MOISTURE 0353 MM

NITROGEN 054.0 KG/HA
PHOSPHORUS 053.0 KG/HA
POTASSIUM ----.- KG/HA

DRY SOIL DURING SOWING PERIOD. GOOD RAINFALL DISTRIBUTION FROM JANUARY TO MAY. LODGING CAUSED BY RAINS. VERY HIGH DEVELOPMENT OF LEAF RUST. INSECT, WEED OR PEST PROBLEMS NOT REPORTED. LOCAL CHECK CAPPELLI.

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	POWDERY MILDEW
19	INIA 66 (BREAD WHEAT)	MEXICO	4621.7	82.6	127.6	163.6	0	0	100.0	3.3	39.4	100.0
9	JORI C-69	MEXICO	4416.2	82.0	128.6	170.3	100MS	30MR	81.6	0.0	49.6	100.0
22	GANSO "S"	MEXICO	4207.3	80.3	130.0	173.0	5R	40MR	83.3	3.3	55.6	100.0
23	COCORIT C 71	MEXICO	4135.1	76.7	127.3	169.0	100S	5R	88.3	66.6	44.4	100.0
10	ANFINGA "S"	MEXICO	4130.6	83.0	127.3	171.3	100S	0	115.0	90.0	45.0	83.3
11	BRANT "S"	MEXICO	4100.6	74.6	127.0	172.6	100S	80MS	83.3	53.3	37.7	100.0
7	61-130 X LEEDS	U.S.A.	3577.4	81.8	133.5	172.0	100S	0	91.6	0.0	41.6	81.6
8	GERARDO VZ 466	ITALY	3499.6	81.0	130.6	173.6	0	80MS	92.6	36.6	45.6	100.0
12	CRANE "S" (B)	MEXICO	3482.9	78.1	127.6	169.6	100S	80MS	83.3	30.0	39.8	100.0
21	(BY2E-TACE X TC4) (BY2E-TC X STW 63)/AA"S"	MEXICO	3454.0	77.3	128.3	168.6	100S	5R	76.6	0.0	44.2	100.0
24	GARZA "S"	MEXICO	3408.5	80.7	129.3	171.3	100S	20R	81.6	23.3	39.0	100.0
18	66W-5101		3394.1	80.1	129.3	173.6	100S	40MR	81.0	20.0	42.4	100.0
4	CAPEITI	ITALY	3220.7	82.2	127.0	170.0	100S	70MS	119.6	100.0	42.3	100.0
20	CRANE "S" (A)	MEXICO	2938.5	78.2	126.0	167.6	100S	40MR	77.6	3.3	36.0	63.3
17	64B 51C2-94E		2856.3	79.5	129.6	171.6	100S	40MR	76.6	0.0	43.8	100.0
16	(T. GLE-TC2/LAK) (BELL 116E-TC2)	IRAN	2660.8	80.6	132.6	172.3	100S	40MR	89.0	6.6	47.4	100.0
6	S-9	INDIA	2534.1	78.4	130.3	168.0	100S	80S	53.0	0.0	36.6	100.0
14	T. DIC. VAR. VERNUM	MEXICO	2500.8	79.2	130.6	169.3	100S	5R	86.6	26.6	37.5	100.0
1	GAB-125	ITALY	2458.6	79.7	132.6	171.0	100S	80S	114.0	100.0	46.6	100.0
2	WELLS	U.S.A.	2418.6	77.6	133.0	169.3	100S	0	133.3	96.6	32.9	86.6
3	LEEDS	U.S.A.	2398.6	80.3	133.0	170.0	100S	0	134.6	100.0	35.0	100.0
5	TEHLACAN 6C	MEXICO	2307.5	82.5	132.6	170.3	100S	60MS	141.6	93.3	47.2	100.0
15	HERCULES	CANADA	2237.5	78.9	132.3	170.0	100S	0	136.3	100.0	39.2	100.0
25	LOCAL CHECK		2014.2	81.8	133.3	174.3	100S	80MS	138.3	93.3	52.9	100.0
13	CVIACHIC C-65	MEXICO	1838.7	75.9	132.5	171.3	100S	40MR	72.6	0.0	39.9	100.0
		GRAND MEAN	3152.5	79.7	130.1	170.5	84.9	20.2	97.6	41.8	42.4	96.5
	STANDARD ERROR OF GRAND MEAN		57.4	0.2	0.4	0.2	0.4	1.6	0.4	2.5	0.3	1.2
	COEFFICIENT OF VARIATION		15.7%	2.1%	2.7%	1.2%	4.5%	70.6%	4.2%	53.1%	6.9%	10.8%
	LSD VARIETY MEANS 5 PC		812.1	2.8	5.8	3.4	6.5	23.3	6.8	36.3	4.8	17.0

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
TEST WEIGHT	0.16								
DAYS TO FLOWER	-0.63**	0.13							
DAYS TO MATURITY	-0.15	0.06	0.34						
LEAF RUST	-0.48*	-0.26	0.12	0.06					
STEM RUST	-0.22	-0.09	0.12	0.33	-0.05				
HEIGHT CM.	-0.36	0.39*	0.44*	0.05	0.11	-0.10			
LODGING	-0.32	0.14	0.23	0.11	0.27	0.05	0.87		
1000 GRN WGT GRMS	0.20	-0.42*	0.10	0.50**	-0.31	0.21	0.05	-0.03	
POWDERY MILDEW	-0.03	-0.01	0.19	0.17	-0.16	0.33	0.01	0.07	0.28

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

TABLE 16 EUROPE PORTUGAL ALENTEJO

ESTACAO DE MELHORAMENTO DE PLANTAS.
COOPERATORS M.T. BARRADAS AND F. BAGULHO.

LATITUDE	038 53' N	DATE PLANTED	12/04/70	NITROGEN	130.0 KG/HA
LONGITUDE	007 09' W	DATE HARVESTED	06/25/71	PHOSPHORUS	018.5 KG/HA
ELEVATION	+00208 M.ABOVE S.L.	AMOUNT OF MOISTURE	0446 MM	POTASSIUM	039.8 KG/HA

GOOD RAINFALL DISTRIBUTION. DECEMBER AND JANUARY UNUSUALLY COLD. FEBRUARY AND MARCH DRIER THAN NORMAL. APRIL, MAY AND JUNE COOLER AND WETER THAN NORMAL. VERY SEVERE ATTACK OF SEPTORIA. NO INSECT OR WEED PROBLEMS. LIGHT BIRD PROBLEMS. LOCAL CHECK AMARELEJO X12.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	SEPTORIA SPP.	WNTR HRDNS	STEM RUST
23	COCORIT C 71	MEXICO	2586.6	82.6	136.6	199.3	93.5	40.0	51.5	8	1	0
3	LEECS	U.S.A.	2545.9	84.8	144.3	200.6	150.3	49.3	44.2	2	1	TR
14	T. DIC. VAR. VERNUM	MEXICO	2533.9	83.5	138.6	200.0	96.5	20.0	45.1	8	1	0
18	66W-5101		2474.9	84.7	141.6	200.0	87.3	9.3	53.8	9	1	5S
7	61-130 X LEECS	U.S.A.	2460.3	83.4	157.5	201.6	97.6	11.0	51.9	5	2	TR
20	CRANE "S" (A)	MEXICO	2427.6	83.2	130.3	192.3	89.0	13.3	49.1	8	1	0
13	CVIACHIC C-65	MEXICO	2426.9	81.3	144.0	201.5	87.0	9.3	49.5	9	2	50S
8	GERARDO VZ 466	ITALY	2319.5	82.0	139.5	199.6	103.6	20.3	55.9	2	2	0
1	GAB-125	ITALY	2284.3	84.1	144.3	200.6	123.6	58.3	56.9	7	1	0
22	GANSO "S"	MEXICO	2272.4	79.7	139.5	201.3	97.5	28.0	61.9	8	1	0
11	BRANT "S"	MEXICO	2246.6	81.8	130.6	197.5	90.3	17.6	53.1	8	1	5MR
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2240.0	82.3	133.6	198.6	89.3	17.3	60.0	8	1	0
12	CRANE "S" (B)	MEXICO	2236.3	82.4	137.3	200.0	95.3	20.0	53.5	8	1	5R
10	ANFINCA "S"	MEXICO	2223.3	84.9	135.3	198.3	129.0	59.0	52.3	6	1	0
19	INIA 66 (BREAD WHEAT)	MEXICO	2211.6	85.8	122.6	186.5	110.0	22.3	52.2	8	1	0
15	HERCULES	CANADA	2130.6	83.8	143.3	198.5	142.3	60.0	48.5	8	1	0
25	LOCAL CHECK		2123.9	80.8	147.0	203.3	142.0	49.6	49.6	5	0.0	5S
5	TEPLACAN 6C	MEXICO	2102.3	85.3	143.0	200.3	149.3	30.3	63.4	5	1	5MR
2	BELLS	U.S.A.	2014.3	82.9	147.6	201.6	153.0	56.6	41.7	4	2	0
6	S-9	INDIA	1959.6	82.3	138.0	198.3	73.3	2.6	54.7	8	1	0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	1937.6	82.4	144.3	201.5	97.6	16.3	52.7	8	1	TS
24	GARZA "S"	MEXICO	1853.9	82.4	139.0	200.0	88.0	1.6	50.5	8	1	0
4	CAPEITI	ITALY	1774.3	83.2	135.3	199.6	130.6	62.3	46.9	4	1	10MR
17	(4) 51C2-54E		1706.3	79.2	141.3	203.0	82.6	12.3	51.6	9	1	50S
9	JORI C-65	MEXICO	1579.5	81.4	137.6	200.0	91.3	16.0	63.4	7	2	5MR
		GRAND MEAN	2191.0	82.9	139.9	199.3	107.7	28.1	52.6			5.7
		STANDARD ERROR OF GRAND MEAN	37.5	0.1	0.4	0.2	0.5	1.5	0.5			1.3
		COEFFICIENT OF VARIATION	14.7%	1.0%	2.8%	1.0%	4.5%	47.9%	8.3%			189.6%
		LSD VARIETY MEANS 5 PC	527.0	1.4	6.5	3.3	8.0	22.0	7.1			17.9

CORRELATIONS

	YIELD KG/HA									
TEST WEIGHT	0.34									
DAYS TO FLOWER	0.05	-0.14								
DAYS TO MATURITY	-0.14	-0.48*	0.78**							
HEIGHT CM.	-0.00	0.43*	0.27	0.12						
LODGING	0.01	0.30	0.12	0.11	0.84**					
1000 GRN WGT GRMS	-0.18	-0.15	-0.11	0.00	-0.28	-0.30				
SEPTORIA SPP.	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
WNTR HRDNS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
STEM RUST	-0.01	-0.30	0.27	0.30	-0.06	-0.08	-0.26	0.00	0.00	

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

TABLE 17 EUROPE SPAIN LOGROÑO

MEJORA GENETICA DE PLANTAS, MONTEMEDIANO.
COOPERATORS P. DE LA HERA.

LATITUDE	042 11'N	DATE PLANTED	02/26/71	NITROGEN	130.0 KG/HA
LONGITUDE	001 01'E	DATE HARVESTED	08/27/71	PHOSPHORUS	050.0 KG/HA
ELEVATION	+01050 M.ABOVE S.L.	AMOUNT OF MOISTURE	0387 MM	POTASSIUM	---.- KG/HA

PRECIPITATIONS HIGHER THAN NORMAL DURING VEGETATION PERIOD. EXCELENT CONDITIONS AT THE END. NO 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	HEIGHT CM.
9	JORI C-69	MEXICO	4253.8	128.0	161.6	93.6
19	INIA 66 (BREAD WHEAT)	MEXICO	4027.1	115.0	156.6	100.0
8	GERARDO VZ 456	ITALY	3947.1	125.0	161.6	100.0
20	CRANE "S" (A)	MEXICO	3840.4	119.6	154.6	87.0
12	CRANE "S" (B)	MEXICO	3778.2	128.0	166.0	91.5
10	ANHINGA "S"	MEXICO	3751.5	124.6	170.3	94.0
17	64W 5102-948		3560.4	126.6	172.3	66.6
11	BRANT "S"	MEXICO	3422.6	124.3	166.3	83.0
23	COCORIT C 71	MEXICO	3235.9	125.0	174.3	95.0
18	66W-5101		3155.9	125.0	170.0	66.6
14	T. DIC. VAR. VERNUM	MEXICO	3067.0	129.3	179.6	88.5
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3040.3	127.3	169.6	97.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3031.4	123.0	168.0	85.5
1	GAB-125	ITALY	2845.2	129.0	170.3	99.6
13	OVIACHIC C-65	MEXICO	2355.8	121.0	167.0	85.3
24	GARZA "S"	MEXICO	2329.1	120.3	166.3	86.0
4	CAPEITI	ITALY	2320.2	124.6	166.3	109.6
25	LOCAL CHECK		2240.2	130.0	180.6	110.0
5	TEHUACAN 60	MEXICO	2222.4	126.6	170.3	70.0
6	S-9	INDIA	2098.0	128.0	165.3	96.0
2	WELLS	U.S.A.	1991.3	128.3	176.3	116.0
7	61-130 X LEEDS	U.S.A.	1973.5	130.6	175.0	113.5
22	GANSO "S"	MEXICO	1929.1	124.3	170.0	81.3
15	HERCULES	CANADA	1849.1	125.0	172.0	122.0
3	LEEDS	U.S.A.	1617.9	127.3	174.3	117.6
		GRAND MEAN	2875.5	125.4	169.4	93.8
		STANDARD ERROR OF GRAND MEAN	16.8	0.0	0.1	0.2
		COEFFICIENT OF VARIATION	5.0%	0.5%	0.6%	2.3%
		LSD VARIETY MEANS 5 PC	238.7	1.1	1.8	3.5

CORRELATIONS

	YIELD KG/HA		
DAYS TO FLOWER	-0.29		
DAYS TO MATURITY	-0.53**	0.64**	
HEIGHT CM.	-0.42*	0.21	0.24

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

TABLE 18 MESOAMERICA MEXICO SONORA

CIANO
COOPERATORS CIMMYT WHEAT STAFF.

LATITUDE	27 20'N	DATE PLANTED	11/17/71	NITROGEN	120.0 KG/HA
LONGITUDE	109 54'W	DATE HARVESTED	04/20/72	PHOSPHORUS	045.0 KG/HA
ELEVATION	+00040 M.ABOVE S.L.	AMOUNT OF MOISTURE	1000 MM	POTASSIUM	---.- KG/HA

WEATHER CONDITIONS NOT REPORTED. LEAF RUST DEVELOPMENT ON SUSCEPTIBLE VARIETIES. CHEMICAL CONTROL OF APHIDS. HAND WEEDING. PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.
23	COCORIT C 71	MEXICO	8727.7	80.6	134.0	1TR	0.9
12	CRANE "S" (B)	MEXICO	8144.5	81.6	138.3	0	0.8
11	ERANT "S"	MEXICO	7880.6	82.0	134.3	TMS	0.8
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	7818.1	90.6	140.0	0	0.9
20	CRANE "S" (A)	MEXICO	7811.2	77.0	134.0	0	0.8
10	ANHINGA "S"	MEXICO	7720.9	78.6	131.6	1TR	1.1
9	JORI C-69	MEXICO	7519.6	87.3	135.6	1TR	0.9
14	T. DIC. VAR. VERNUM	MEXICO	7457.1	91.0	141.6	1TR	0.9
8	GERARDO VZ 466	ITALY	7415.4	92.6	144.3	1TR	1.0
24	GARZA "S"	MEXICO	7276.6	89.0	140.3	0	0.8
18	66W-5101		7200.2	99.3	146.6	0	0.9
19	INIA 66 (BREAD WHEAT)	MEXICO	7040.5	75.6	131.6	80S	0.9
6	S-9	INDIA	6943.3	83.0	136.0	1TR	0.7
22	GANSO "S"	MEXICO	6915.5	99.6	148.0	0	1.0
7	61-130 X LEERS	U.S.A.	6880.8	109.6	151.6	TMS	0.9
17	(44 51C2-54E		6853.0	90.3	141.0	TR	0.7
5	TEHUACAN 60	MEXICO	6721.1	96.0	144.3	0	1.5
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	6485.0	103.3	146.3	TMS	1.0
2	WELLS	U.S.A.	6248.9	111.0	153.3	1TR	1.5
15	HERCULES	CANADA	6172.6	100.0	142.0	0	1.4
13	CVIACHIC C-65	MEXICO	6054.5	105.3	147.0	5MS	0.9
1	GAB-125	ITALY	6005.9	97.6	141.3	1TR	1.2
4	CAPEITI	ITALY	5804.6	90.6	139.6	0	1.3
3	LEECS	U.S.A.	5679.6	107.6	149.0	1TR	1.5
25	LOCAL CHECK		-	-	-		-
	GRAND MEAN		6751.1	88.7	135.6	3.5	1.0
	STANDARD ERROR OF GRAND MEAN		65.9	0.2	0.3	0.2	0.0
	COEFFICIENT OF VARIATION		8.4%	2.4%	2.3%	65.5%	4.0%
	LSD VARIETY MEANS 5 PC		932.9	3.6	5.1	3.8	0.0

CORRELATIONS

	YIELD KG/HA				
DAYS TO FLOWER	0.60**				
DAYS TO MATURITY	0.79**	0.95**			
LEAF RUST	0.03	-0.11	-0.01		
HEIGHT CM.	0.35	0.76**	0.71**	-0.03	

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

TABLE 19 MESCAMERICA MEXICO MEXICO

EL BATAN
COOPERATORS CIMMYT WHEAT STAFF.

LATITUDE	019 31'N	DATE PLANTED	05/26/71	NITROGEN	150.0 KG/HA
LONGITUDE	098 53'W	DATE HARVESTED	10/23/71	PHOSPHORUS	100.0 KG/HA
ELEVATION	+02249 M.ABOVE S.L.	AMOUNT OF MOISTURE	500 MM	POTASSIUM	---.- KG/HA

WEATHER CONDITIONS NOT REPORTED. HEAVY DEVELOPMENT OF STRIPE AND LEAF RUST ON SUSCEPTIBLE VARIETIES. INSECT AND PEST PROBLEMS NOT REPORTED. HAND WEEDING. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING
12	CRANE "S" (E)	MEXICO	6089.2	62.4	132.3	1R	10MS	78.3	15.0
19	INIA 66 (BREAD WHEAT)	MEXICO	5936.5	53.6	121.3	5MR	10MS	88.3	0.0
10	ANHINGA "S"	MEXICO	5415.7	60.6	128.3	TMR	TMR	103.3	58.3
23	COCORIT C 71	MEXICO	4978.3	62.6	130.3	10MR	5R	90.0	26.6
20	CRANE "S" (B)	MEXICO	4901.9	62.3	131.0	TMR	20MR	81.6	13.3
6	S-S	INDIA	4846.4	64.0	128.0	10MS	30MS	68.3	0.0
11	ERANT "S"	MEXICO	4700.6	67.6	131.6	5MR	1TR	81.6	0.0
24	GARZA "S"	MEXICO	4527.0	65.3	96.0	10MS	1TR	78.3	33.3
8	GERARDO VZ 466	ITALY	4381.2	55.3	133.0	5MR	5MR	86.6	93.3
14	T. DIC. VAR. VERNUM	MEXICO	3450.8	55.0	131.3	5MR	40MR	86.6	95.0
1	GAB-125	ITALY	3214.7	67.6	133.0	40MS	5MS	108.3	88.3
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3131.4	65.3	125.0	10MR	5MR	81.6	51.6
3	LEEDS	U.S.A.	3034.2	76.0	145.6	30MS	20MR	141.6	85.6
7	61-130 X LEEDS	U.S.A.	2895.3	78.6	142.0	20S	5MR	90.0	0.0
4	CAPEITI	ITALY	2798.1	66.0	131.0	10MS	5MR	113.3	96.6
2	WELLS	U.S.A.	2721.7	80.0	145.3	50MS	20MS	136.6	86.6
17	64W 5102-948		2541.2	67.0	130.3	20MS	5MR	75.0	0.0
5	TEPUACAN 6C	MEXICO	2541.2	67.3	131.6	5MR	10MS	128.3	95.0
18	66W-5101		2242.6	69.3	125.0	TR	1R	85.0	80.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2076.0	66.6	128.6	10MR	1R	88.3	60.0
9	JORI C-69	MEXICO	2013.5	64.3	125.0	5MR	10MS	76.6	31.6
22	GANSO "S"	MEXICO	1930.2	67.6	126.6	10MS	10MS	90.0	85.5
15	HERCULES	CANADA	1222.0	73.0	128.3	90S	1R	136.6	96.6
13	CVIACHIC C-65	MEXICO	1041.4	81.0	140.0	TR	30MS	83.3	8.3
		GRAND MEAN	3443.0	67.4	130.0	15.5	6.1	94.9	50.1
		STANDARD ERROR OF GRAND MEAN	78.9	0.1	2.0	1.4	1.0	0.6	2.4
		COEFFICIENT OF VARIATION	19.4%	2.0%	13.2%	76.3%	144.5%	5.5%	41.1%
		LSD VARIETY MEANS 5 PC	1093.6	2.2	28.1	19.4	14.5	8.5	33.6

CORRELATIONS

YIELD	KG/HA	
DAYS TO	FLOWER	-0.67**

DAYS TO MATURITY		-0.24	0.56**				
STRIPE	RUST	-0.39*	0.54**	0.36			
LEAF	RUST	0.17	-0.08	0.08	-0.19		
HEIGHT	CM.	-0.32	0.43*	0.43*	0.74**	-0.29	
LODGING		-0.40*	0.18	0.13	0.38*	-0.23	0.66**

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

TABLE 20 MIDDLE EAST CYPRUS KOMA-TOU YIALOU

COOPERATORS DR. A. HADJICHRISTODOULOU

LATITUDE	034 08'N	DATE PLANTED	12/15/70	NITROGEN	040.8 KG/HA
LONGITUDE	035 26'E	DATE HARVESTED	--/--/--	PHOSPHORUS	014.4 KG/HA
ELEVATION	+00040 M.ABOVE S.L.	AMOUNT OF MOISTURE	0454 MM	POTASSIUM	---.- KG/HA

HEAVY RAINS DURING FEBRUARY AND APRIL. VERY LOW RAINFALL IN JANUARY AND MARCH. DEVELOPMENT OF LEAF RUST AND SEPTORIA. NO INSECT PROBLEM. WILD OATS WEEDED BY HAND. SOME BIRD DAMAGE. LOCAL CHECK KYPEROUNDA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA SPP.
4	CAPEITI	ITALY	3577.4	81.6	100.3	35S	86.6	47.8	20.0
25	LOCAL CHECK		3525.2	80.5	113.6	15MS	104.3	41.8	40.0
14	T. DIC. VAR. VERNUM	MEXICO	3368.5	79.3	97.0	10MR	71.6	40.3	50.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3257.4	77.6	123.0	15MS	92.6	48.8	50.0
9	.CRI C-65	MEXICO	3063.0	79.1	91.6	5R	78.3	49.5	80.0
7	61-130 X LEECS	U.S.A.	3018.5	78.6	123.0	15MS	96.0	44.5	40.0
23	COCORIT C 71	MEXICO	2987.4	77.3	86.3	10MR	75.0	47.5	50.0
8	GERARDO VZ 466	ITALY	2977.4	77.5	113.0	10MR	89.0	47.0	60.0
10	ANINGA "S"	MEXICO	2849.7	54.1	87.6	5R	88.3	31.1	50.0
18	66W-5101		2820.8	77.3	116.3	15MS	79.0	44.6	50.0
22	GANSO "S"	MEXICO	2808.6	75.3	112.3	10MR	79.0	58.0	46.6
20	CRANE "S" (A)	MEXICO	2706.3	79.1	85.3	10MR	70.0	43.3	40.0
1	GAB-125	ITALY	2618.6	78.0	120.0	5R	93.6	49.8	50.0
13	CUIACHIC C-65	MEXICO	2566.4	76.0	122.0	15MS	76.6	47.3	60.0
3	LEECS	U.S.A.	2544.1	81.3	119.3	40S	94.3	42.6	30.0
15	HERCULES	CANADA	2460.8	79.3	114.3	20S	102.3	43.6	40.0
5	TEHUACAN 60	MEXICO	2444.1	80.0	121.0	40S	111.6	50.3	40.0
6	S-9	INDIA	2410.8	77.5	95.3	10MR	58.3	41.0	73.3
11	BRANT "S"	MEXICO	2388.6	77.0	91.6	10MR	78.3	44.8	40.0
2	WELLS	U.S.A.	2241.9	77.6	122.6	15MS	112.6	35.8	30.0
17	64A 51C2-S4E		2173.1	25.8	98.0	5R	75.0	41.0	60.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2087.5	78.0	97.0	10MR	65.0	41.5	46.6
12	CRANE "S" (B)	MEXICO	1952.0	77.1	87.6	10MR	61.5	39.5	60.0
24	GARZA "S"	MEXICO	1884.2	77.3	99.0	10MR	73.3	43.1	60.0
19	INIA 66 (BREAD WHEAT)	MEXICO	1083.2	26.5	85.3	5R	78.3	38.8	20.0
		GRAND MEAN	2632.6	73.1	104.9	10.0	83.6	44.1	47.4
		STANDARD ERROR OF GRAND MEAN	97.5	1.8	0.2		1.5	0.7	1.5
		COEFFICIENT OF VARIATION	32.0%	21.7%	2.1%		15.9%	14.1%	29.4%
		LSD VARIETY MEANS 5 PC	1379.6	26.0	3.6		21.7	10.1	22.8

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF RUST	HEIGHT CM.	1000 GRN WGT GRMS
TEST WEIGHT	0.52**					
DAYS TO FLOWER	0.26	0.35				
LEAF RUST	0.21	0.33	0.49**			
HEIGHT CM.	0.24	0.15	0.68**	0.55**		
1000 GRN WGT GRMS	0.32	0.37	0.35	0.19	0.05	
SEPTORIA SPP.	0.05	0.09	-0.16	-0.50**	-0.48*	0.12

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

TABLE 21 MIDDLE EAST IRAN KARAJ

KARAJ PLANT BREEDING CENTER
COOPERATORS M.A. VAHABIAN, T. MAHLOOJI.

LATITUDE	035 47'N	DATE PLANTED	12/16/70	NITROGEN	120.0 KG/HA
LONGITUDE	050 00'E	DATE HARVESTED	06/28/71	PHOSPHORUS	012.0 KG/HA
ELEVATION	+01300 M.ABOVE S.L.	AMOUNT OF MOISTURE	0300 MM	POTASSIUM	---.- KG/HA

NORMAL WINTER. WARM AT EARLY SPRING AND COOL BEFORE HARVESTING. NO DISEASE DEVELOPMENT. NO INSECT PROBLEM. HAND WEEDING. PEST PROBLEMS NOT REPORTED. LOCAL CHECK ((MY54 X N10-B X T. GL) TC2 (YT54 X N10-B X BALL 1166) TC2).

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	FROST DAMAGE
5	JORI C-65	MEXICO	6533.3	140.3	189.3	25S	0	86.6	0.0	20.0	53.1	0.0
23	COCORIT C 71	MEXICO	6080.0	140.3	186.3	0	0	91.6	0.0	46.6	46.3	0.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	5853.3	142.3	189.3	0	10MS	96.6	0.0	13.3	46.6	0.0
18	66W-5101		5580.0	141.6	189.3	10S	0	80.0	0.0	20.0	47.3	0.0
11	ERANT "S"	MEXICO	5466.6	138.3	182.6	0	10S	85.0	0.0	40.0	46.8	0.0
15	HERCULES	CANADA	5400.0	142.0	182.6	0	0	118.3	46.6	26.6	43.0	0.0
22	GANSO "S"	MEXICO	5333.3	141.0	188.6	0	0	91.6	0.0	20.0	64.3	2.6
14	T. DIC. VAR. VERNUM	MEXICO	5333.3	141.0	184.3	0	0	86.6	0.0	20.0	39.1	0.0
8	GERARDO VZ 466	ITALY	5280.0	140.6	182.0	0	10S	91.6	0.0	20.0	51.5	0.6
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	5160.0	140.3	185.6	0	0	85.0	0.0	33.3	49.0	1.0
12	CRANE "S" (B)	MEXICO	5013.3	143.3	185.3	0	0	88.3	0.0	40.0	43.5	0.6
10	ZARINCA "S"	MEXICO	4866.6	137.6	181.6	0	0	108.3	6.6	53.3	46.3	0.0
24	GARZA "S"	MEXICO	4866.6	141.0	191.0	0	10S	86.6	0.0	26.6	45.1	2.6
17	64W 5102-948		4853.3	142.0	189.6	0	0	86.6	0.0	6.6	43.1	2.6
20	CRANE "S" (A)	MEXICO	4813.3	136.0	185.6	0	20S	85.0	0.0	6.6	43.5	3.6
19	INIA 66 (BREAD WHEAT)	MEXICO	4733.3	132.6	181.3	0	0	98.3	0.0	53.3	40.3	0.0
7	E1-130 X LEECS	U.S.A.	4333.3	142.0	186.6	0	0	85.0	0.0	20.0	41.5	0.0
1	GAB-125	ITALY	4320.0	143.0	181.3	0	0	100.0	13.3	33.3	46.8	0.0
3	LEECS	U.S.A.	4293.3	142.6	183.0	0	0	118.3	60.0	46.6	36.5	0.0
4	CAPEITI	ITALY	4166.6	141.3	183.3	0	0	103.3	0.0	33.3	45.1	0.0
13	CVIZCHIC C-65	MEXICO	4120.0	142.0	181.0	5S	10S	76.6	0.0	20.0	44.5	2.3
5	TEHLACAN 6C	MEXICO	4093.3	142.3	182.6	0	0	116.6	33.3	33.3	51.3	0.6
2	WELLS	U.S.A.	4066.6	143.6	182.3	0	0	108.3	13.3	40.0	30.1	0.0
6	S-5	INDIA	4066.6	141.0	184.3	0	0	73.3	0.0	26.6	35.5	3.3
25	LOCAL CHECK		3840.0	141.6	185.3	0	0	95.0	0.0	13.3	47.3	2.3
		GRAND MEAN	4901.8	140.7	184.0	1.6	2.7	93.7	6.1	28.5	45.4	0.9
	STANDARD ERROR OF GRAND MEAN		111.5	0.1	0.3	0.0	0.3	0.7	0.9	1.7	0.2	0.1
	COEFFICIENT OF VARIATION		19.7%	0.9%	1.6%	34.6%	30.0%	6.7%	140.8%	52.4%	5.4%	95.0%
	LSD VARIETY MEANS 5 PC		1577.8	2.0	4.4	0.0	1.3	10.3	14.1	24.4	4.0	1.4

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS
DAYS TO FLOWER	-0.19								
DAYS TO MATURITY	0.45*	0.15							
STRIPE RUST	0.49**	0.01	0.33						
STEM RUST	0.05	-0.26	0.04	-0.08					
HEIGHT CM.	-0.20	0.15	-0.41*	-0.24	-0.29				
LODGING	-0.20	0.32	-0.39	-0.13	-0.22	0.80**			
SHATTERING	-0.08	-0.31	-0.53**	-0.19	-0.40*	0.45*	0.27		
1000 GRN WGT GRMS	0.40*	-0.01	0.36	0.26	0.04	-0.13	-0.21	-0.31	
FROST DAMAGE	-0.29	-0.05	0.31	-0.15	0.45*	-0.46*	-0.28	-0.53**	0.17

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

TABLE 22 MIDDLE EAST IRAQ BAGHDAD

BEL GHRAIB EXPT. STATION
COOPERATORS HAMID HAMAD AL-JIBOJRI

LATITUDE	033 20'N	DATE PLANTED	12/06/70	NITROGEN	080.0 KG/HA
LONGITUDE	044 24' E	DATE HARVESTED	05/10/71	PHOSPHORUS	017.4 KG/HA
ELEVATION	+00034 M.ABOVE S.L.	AMOUNT OF MOISTURE	----- MM	POTASSIUM	---.- KG/HA

RAINFALL BELOW NORMAL. COLD WINTER WITH FEW FROSTY NIGHTS. CROP GROWTH REMAINED BELOW NORMAL IN GENERAL. NO DISEASE DEVELOPMENT. SOME INSECT AND PEST PROBLEMS. HAND WEEDING. 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
25	LOCAL CHECK		3121.9	74.6	104.0	146.0	85.0	41.0
19	INIA 66 (BREAD WHEAT)	MEXICO	2977.4	79.7	94.0	142.0	75.0	42.0
4	CAPEITI	ITALY	2933.0	78.5	99.0	147.0	90.0	43.0
12	CRANE "S" (E)	MEXICO	2888.5	75.9	98.0	142.0	70.0	42.0
23	COCORIT C 71	MEXICO	2816.3	75.9	101.0	146.0	85.0	46.0
10	ANFINGA "S"	MEXICO	2760.8	78.5	96.0	142.0	70.0	43.0
11	ERANT "S"	MEXICO	2610.8	77.2	96.0	142.0	65.0	40.0
9	JORI C-69	MEXICO	2571.9	77.2	98.0	146.0	80.0	48.0
15	HERCULES	CANADA	2477.5	75.9	113.0	155.0	110.0	36.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2421.9	74.6	102.0	144.0	80.0	52.0
1	GAB-125	ITALY	2344.2	70.7	105.0	147.0	80.0	38.0
20	CRANE "S" (A)	MEXICO	2288.6	77.2	94.0	142.0	75.0	41.0
6	S-9	INDIA	2244.2	74.6	101.0	146.0	60.0	37.0
13	OVIACHIC C-65	MEXICO	2221.9	73.3	111.0	155.0	75.0	40.0
24	GARZA "S"	MEXICO	2188.6	75.9	107.0	155.0	70.0	47.0
22	GANSO "S"	MEXICO	2144.2	70.7	107.0	155.0	85.0	53.0
14	T. DIC. VAR. VERNUM	MEXICO	2088.6	74.6	104.0	146.0	75.0	35.0
16	(T. GLC-TC2/LAK)(BELL 116E-TC2)	IRAN	2072.0	74.6	113.0	155.0	90.0	46.0
8	GERARDO VZ 466	ITALY	1994.2	70.7	103.0	146.0	80.0	37.0
17	64W 5102-948		1899.8	72.0	102.0	146.0	70.0	48.0
18	66W-5101		1844.2	75.9	111.0	155.0	85.0	42.0
3	LEEDS	U.S.A.	1755.3	65.6	108.0	155.0	110.0	22.0
5	TEHUACAN 6C	MEXICO	1610.9	66.9	109.0	145.0	100.0	39.0
7	E1-130 X LEEDS	U.S.A.	1256.5	69.4	111.0	155.0	70.0	25.0
2	WELLS	U.S.A.	1011.0	59.2	110.0	155.0	115.0	16.0
	GRAND MEAN		2262.2	73.6	103.8	148.3	82.0	39.9
	STANDARD ERROR OF GRAND MEAN		69.6					
	COEFFICIENT OF VARIATION		26.6%					
	LSD VARIETY MEANS 5 PC		985.1					

CORRELATIONS

YIELD KG/HA

TEST WEIGHT	0.80**				
DAYS TO FLOWER	-0.62**	-0.55**			
DAYS TO MATURITY	-0.57**	-0.45*	0.87**		
HEIGHT CM.	-0.33	-0.56**	0.53**	0.47*	
1000 GRN WGT GRMS	0.58**	0.66**	-0.33	-0.31	-0.44*

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

TABLE 23 MIDDLE EAST ISRAEL BET DAGAN

VOLCANI INSTITUTE OF AGR. RESEARCH.
COOPERATORS DR. J. EPHRAT AND J. KAGAN.

LATITUDE	32 01'N	DATE PLANTED	01/15/71	NITROGEN	114.0 KG/HA
LONGITUDE	34 49'E	DATE HARVESTED	--/--/--	PHOSPHORUS	021.0 KG/HA
ELEVATION	+00020 M.ABOVE S.L.	AMOUNT OF MOISTURE	0781 MM	POTASSIUM	---.- KG/HA

ABUNDANT LATE PRECIPITATIONS IN APRIL. HEAVY ATTACK OF STRIPE, LEAF AND STEM RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK ZENATI BOUTEILLE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
12	CRANE "S" (B)	MEXICO	7346.6	77.3	80.3	0	VS	0	83.6	0.0	36.5
21	(BYZE-TACE X TC4)(BYZE-TC X STW 63)/AA"S"	MEXICO	7286.6	79.3	81.0	0	VS	S	83.3	0.0	46.7
9	JORI C-69	MEXICO	6730.0	79.8	80.6	0	S	0	79.3	13.3	49.5
23	COCORIT C 71	MEXICO	6603.3	77.1	78.5	0	S	VS	86.3	0.0	40.8
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	6603.3	80.6	90.0	VS	S	S	99.3	0.0	44.4
20	CRANE "S" (A)	MEXICO	6400.0	77.4	74.6	0	VS	VS	79.6	0.0	36.5
19	INIA 66 (BREAD WHEAT)	MEXICO	6353.3	86.5	71.0	0	0	0	91.6	0.0	41.9
22	GANSO "S"	MEXICO	6310.0	74.9	87.0	0	VS	S	85.6	0.0	52.5
18	66W-5101		6173.3	81.3	93.0	0	VS	S	87.3	0.0	45.8
10	ANHINGA "S"	MEXICO	6113.3	82.6	79.6	MS	S	0	110.3	76.6	47.4
14	T. DIC. VAR. VERNUM	MEXICO	6080.0	75.7	85.0	VS	S	0	92.3	0.0	31.4
24	GARZA "S"	MEXICO	5920.0	78.2	80.0	0	VS	VS	73.3	0.0	39.7
8	GERARDO VZ 466	ITALY	5870.0	79.6	86.6	0	VS	VS	90.0	13.3	44.5
11	ERANT "S"	MEXICO	5856.6	77.8	79.3	0	VS	VS	78.6	0.0	38.4
17	64W 51C2-54E		5583.3	77.3	83.3	0	VS	VS	83.0	0.0	41.8
13	(VIECHIC C-65	MEXICO	5213.3	76.7	88.3	0	VS	VS	89.3	0.0	39.8
25	LOCAL CHECK		5113.3	81.8	79.3	S	VS	VS	120.0	83.3	54.3
6	S-9	INDIA	4833.3	69.5	81.3	MS	VS	VS	73.0	0.0	25.4
7	61-130 X LEEDS	U.S.A.	4740.0	79.9	91.0	VS	0	0	91.5	0.0	33.2
3	LEEDS	U.S.A.	4593.3	83.5	91.0	VS	0	0	123.3	86.6	37.1
2	BELLS	U.S.A.	4573.3	80.3	94.3	VS	0	TR.S	119.0	53.3	23.3
5	TEHUACAN 60	MEXICO	4503.3	81.1	88.6	0	S	S	127.3	83.3	45.3
1	GAB-125	ITALY	4180.0	76.1	89.6	0	VS	VS	111.6	93.3	37.2
4	CAPEITI	ITALY	4076.6	79.9	81.0	0	S	VS	112.0	96.6	34.5
15	HERCULES	CANADA	3803.3	78.9	89.3	VS	S	0	123.0	86.6	33.8
		GRAND MEAN	5538.3	79.9	83.9				95.9	27.4	40.4
		STANDARD ERROR OF GRAND MEAN	57.2	0.1	0.1				0.5	1.4	0.3
		COEFFICIENT OF VARIATION	8.7%	1.8%	1.0%				4.5%	45.6%	6.4%
		LSD VARIETY MEANS 5 PC	809.0	2.3	1.4				7.1	20.4	4.2

CORRELATIONS

YIELD	KG/HA									
TEST	WEIGHT	-0.00								
DAYS TO	FLOWER	-0.43*	-0.35							
STRIPE	RUST	0.00	0.00	0.00						
LEAF	RUST	0.00	0.00	0.00	0.00					
STEM	RUST	0.00	0.00	0.00	0.00	0.00				
HEIGHT	CM.	-0.66**	0.49**	0.45*	0.00	0.00	0.00			
LODGING		-0.71**	0.34	0.25	0.00	0.00	0.00	0.90		
1000 GRN WGT	GRMS	0.43*	0.36	-0.19	0.00	0.00	0.00	0.00	-0.00	

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

TABLE 24 MIDDLE EAST LEBANON TEL-AMARA

COOPERATORS G. KINGMA AND M. ABI ANTOUN.

LATITUDE	037 62'N	DATE PLANTED	11/20/70	NITROGEN	120.0 KG/HA
LONGITUDE	040 00'E	DATE HARVESTED	05/27/71	PHOSPHORUS	060.0 KG/HA
ELEVATION	+00940 M.ABOVE S.L.	AMOUNT OF MOISTURE	0625 MM	POTASSIUM	---.- KG/HA

FAVORABLE WEATHER. COOL WINTER. WET IN FEBRUARY AND APRIL. DRY IN MAY AND JUNE. LATE DISEASE DEVELOPMENT. INSECT OR PEST PROBLEMS NOT REPORTED. WILD OATS PULLED BY HAND. LOCAL CHECK HOURANI X BISKRI BOUTEILLE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.
18	66W-5101		8310.2	84.1	151.0	187.0	10MS	0	5MS	75.0
23	COCORIT C 71	MEXICO	7288.1	84.1	152.0	187.0	0	0	20S	80.0
13	CVIACHIC C-65	MEXICO	7065.9	80.5	150.0	188.0	5MS	20S	20MS	75.0
24	GARZA "S"	MEXICO	6999.2	81.5	152.0	189.0	5MS	5S	10S	75.0
12	CRANE "S" (B)	MEXICO	6910.4	84.1	153.0	183.0	0	0	5MS	80.0
21	(BY2E-TACF X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	6888.1	80.0	151.0	187.0	TR	0	5MS	75.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	6832.6	83.1	151.0	187.0	5R	0	5MS	95.0
8	GERARDO VZ 466	ITALY	6810.4	83.0	151.0	186.0	5MS	15S	5S	90.0
14	T. DIC. VAR. VERNUM	MEXICO	6743.7	79.8	152.0	188.0	0	0	5MS	80.0
20	CRANE "S" (A)	MEXICO	6710.4	83.5	145.0	183.0	TR	5S	15MS	75.0
9	JORI C-69	MEXICO	6566.0	85.1	148.0	184.0	5R	0	TR	80.0
11	ERANT "S"	MEXICO	6521.5	82.7	148.0	183.0	5R	0	10MS	75.0
22	GANSO "S"	MEXICO	6410.4	81.5	150.0	187.0	20MS	0	10MS	75.0
7	E1-130 X LEEDS	U.S.A.	6088.2	84.5	152.0	186.0	60S	0	5MS	85.0
6	S-S	INDIA	5988.2	81.5	150.0	184.0	TR	15S	20S	65.0
1	GAR-125	ITALY	5921.6	82.0	151.0	180.0	15S	0	0	110.0
2	WELLS	U.S.A.	5543.8	80.0	153.0	188.0	5R	0	0	135.0
5	TEHLACAN 6C	MEXICO	5432.7	86.0	151.0	184.0	10MS	0	5MS	120.0
3	LEEDS	U.S.A.	5432.7	85.0	152.0	183.0	20S	0	TR	125.0
15	HERCULES	CANADA	5421.6	84.6	152.0	184.0	5R	0	TR	115.0
4	CAPEITI	ITALY	5399.4	86.2	148.0	183.0	15S	20S	10S	90.0
17	64W 5102-948		5221.6	82.2	153.0	188.0	15R	0	5MS	70.0
10	ANHINGA "S"	MEXICO	5221.6	86.7	146.0	184.0	5MS	0	5MS	95.0
25	LOCAL CHECK		5177.2	79.1	153.0	185.0	0	5S	20S	110.0
19	INIA 66 (BREAD WHEAT)	MEXICO	4777.2	84.5	143.0	180.0	5MS	0	0	85.0
		GRAND MEAN	6227.3	83.0	150.3	185.1	6.8	3.3	6.6	89.3
	STANDARD ERROR OF GRAND MEAN		102.9							
	COEFFICIENT OF VARIATION		14.3%							
	LSD VARIETY MEANS 5 PC		1455.2							

CORRELATIONS

	YIELD KG/HA						
TEST WEIGHT	-0.18						
DAYS TO FLOWER	0.18	-0.39*					
DAYS TO MATURITY	0.45*	-0.48*	0.54**				
STRIPE RUST	-0.12	0.25	0.10	-0.06			
LEAF RUST	0.04	-0.09	-0.12	0.05	-0.05		
STEM RUST	0.20	-0.31	0.04	0.21	-0.19	0.53**	
HEIGHT CM.	-0.52**	0.12	0.26	-0.22	0.09	-0.22	-0.3

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

TABLE 25 MIDDLE EAST TURKEY ESKISEHIR

PLANT BREEDING EXPT. STATION.
OPERATORS MR. RIFAT GEREK AND MR. H. KUTLUK.

LATITUDE	036 45'N	DATE PLANTED	11/10/70	NITROGEN	030.0 KG/HA
LONGITUDE	030 95'E	DATE HARVESTED	08/02/71	PHOSPHORUS	026.4 KG/HA
ELEVATION	+00789 M.ABOVE S.L.	AMOUNT OF MOISTURE	0345 MM	POTASSIUM	---.- KG/HA

RAINY IN FALL, VERY RAINY IN WINTER AND SPRING, LATE SUMMER. LATE AND HEAVY DEVELOPMENT OF STRIPE RUST. FAVORABLE LEAF RUST DEVELOPMENT. INSECT AND PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK KUNDURU-1149.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
25	LOCAL CHECK		5143.9	82.8	204.0	244.0	TRR	20S	138.3	43.3	47.2
2	WELLS	U.S.A.	4194.0	83.0	202.0	238.6	60S	10S	123.3	3.3	29.0
1	GAB-125	ITALY	4099.5	81.6	200.3	242.0	20S	20MS	105.6	16.6	45.1
14	T. DIC. VAR. VERNUM	MEXICO	3966.2	84.3	204.3	240.0	5MR	10MS	71.6	0.0	36.9
23	COCORIT C 71	MEXICO	3777.3	82.9	200.0	240.0	10MS	5MS	75.0	0.0	41.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3766.2	81.3	200.6	239.3	10MS	5MS	70.0	0.0	41.7
12	CRANE "S" (E)	MEXICO	3460.7	82.1	202.0	238.6	0	5MR	68.3	0.0	41.5
20	CRANE "S" (A)	MEXICO	3277.4	82.2	193.3	238.6	10MS	5MS	66.6	0.0	39.1
4	CAFETTI	ITALY	3221.8	83.8	198.0	240.0	10MS	2MS	100.0	5.0	40.1
13	CVIACHIC C-65	MEXICO	3216.3	82.5	201.0	239.3	0	5MS	66.6	0.0	44.7
9	JORI C-69	MEXICO	2933.0	82.5	201.3	240.0	10MS	0	73.3	0.0	46.5
3	LEEDS	U.S.A.	2866.3	83.2	201.0	238.0	10MR	5S	118.3	0.0	34.2
18	66W-S101		2810.8	83.3	201.0	239.3	10MR	5MR	66.6	0.0	41.8
8	GERARDO VZ 466	ITALY	2783.0	82.6	197.3	242.6	0	0	80.0	0.0	48.9
7	61-130 X LEEDS	U.S.A.	2783.0	83.6	205.0	238.6	0	0	66.6	0.0	38.8
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2749.7	83.1	200.6	240.6	0	10S	78.3	0.0	43.7
10	ANHINGA "S"	MEXICO	2649.7	84.6	199.6	241.3	0	0	86.6	0.0	40.6
5	TEHUACAN 60	MEXICO	2555.2	84.3	201.0	240.0	10MR	0	111.6	10.0	45.3
22	GANSO "S"	MEXICO	2544.1	78.2	200.0	244.0	0	0	75.0	0.0	51.9
24	GARZA "S"	MEXICO	2499.7	81.2	204.3	241.3	0	0	70.0	0.0	35.1
15	HERCULES	CANADA	2394.2	82.1	200.0	238.0	10MR	10MR	115.6	0.0	37.4
6	S-9	INDIA	2388.6	82.6	201.6	238.0	10S	10S	58.3	0.0	36.3
17	64A 5102-948		2094.2	79.5	204.3	243.3	5MR	0	58.3	0.0	37.0
11	BRANT "S"	MEXICO	1944.2	81.4	199.0	239.3	0	0	60.0	0.0	40.7
19	INIA 66 (BREAD WHEAT)	MEXICO	1255.4	81.5	194.0	237.3	10MS	0	68.3	0.0	36.3
	GRAND MEAN		3015.0	82.4	200.7	240.1	11.0	4.5	82.9	3.1	40.8
	STANDARD ERROR OF GRAND MEAN		39.7	0.0	0.0	0.2	0.3	0.2	0.5	0.2	0.1
	COEFFICIENT OF VARIATION		11.4%	0.4%	0.2%	0.9%	69.1%	53.4%	5.2%	71.3%	2.9%
	LSD VARIETY MEANS 5 PC		542.5	0.6	0.6	3.8	12.2	3.9	7.1	3.6	1.9

CORRELATIONS

YIELD KG/HA									
TEST WEIGHT	0.26								
DAYS TO FLOWER	0.39*	0.05							
DAYS TO MATURITY	0.24	-0.37	0.24						
STRIPE RUST	0.21	-0.01	-0.25	-0.23					
LEAF RUST	0.65**	0.20	0.23	-0.02	0.25				
HEIGHT CM.	0.48*	0.29	0.06	0.13	0.39*	0.58**			
LODGING	0.60**	0.09	0.21	0.46*	0.11	0.56**	0.64		
1000 GRN WGT GRMS	0.11	-0.19	-0.15	0.59**	-0.36	-0.09	-0.02	0.30	

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

TABLE 26 MIDDLE EAST TURKEY IZMIR

AGRIC. RESEARCH AND INTRODUCTION CENTER.
COOPERATORS BASRI DEVECIOGLU, NAIM DINCER, C. KONAK.

LATITUDE	033 35'N	DATE PLANTED	11/10/70	NITROGEN	015.0 KG/HA
LONGITUDE	027 04'E	DATE HARVESTED	--/--/--	PHOSPHORUS	008.0 KG/HA
ELEVATION	+00012 M.ABOVE S.L.	AMOUNT OF MOISTURE	0500 MM	POTASSIUM	---.- KG/HA

WEATHER CONDITIONS NOT REPORTED. HEAVY DEVELOPMENT OF SEPTORIA TRITICI. INSECT AND WEED PROBLEMS NOT REPORTED. NO PEST PROBLEM. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA TRITICI
8	GERARDO VZ 466	ITALY	5380.0	79.7	162.0	101.3	54.3	55.5
23	COCORIT C 71	MEXICO	5306.6	77.6	131.0	87.6	46.5	59.1
11	BRANT "S"	MEXICO	5113.3	76.5	155.0	81.0	43.2	59.1
7	CI-130 X LEEDS	U.S.A.	4976.0	79.3	165.0	99.0	39.0	48.0
5	TEHUACAN 60	MEXICO	4513.3	83.5	168.0	145.0	48.0	51.7
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	4465.3	77.5	138.0	90.3	52.0	48.0
3	LEEDS	U.S.A.	4326.6	83.1	167.0	149.0	36.0	51.7
24	GARZA "S"	MEXICO	4286.6	79.0	142.0	86.3	44.5	55.4
2	WELLS	U.S.A.	4233.3	79.8	169.0	153.0	27.0	51.7
10	ANFINCA "S"	MEXICO	4084.0	82.0	165.0	104.0	47.0	62.8
1	GAB-125	ITALY	4037.3	80.5	166.0	127.6	46.0	48.0
14	T. DIC. VAR. VERNUM	MEXICO	3876.0	77.8	138.0	83.6	39.2	62.8
4	CAFEITI	ITALY	3820.0	80.8	150.0	118.0	44.2	33.2
20	CRANE "S" (A)	MEXICO	3793.3	76.7	132.0	80.6	37.0	70.2
18	66W-5101		3786.6	79.8	163.0	87.0	43.2	59.1
12	CRANE "S" (B)	MEXICO	3746.6	76.7	166.0	80.6	45.5	73.9
13	CVIACHIC C-65	MEXICO	3613.3	78.1	163.0	92.6	44.5	55.4
15	HERCULES	CANADA	3533.3	81.6	165.0	135.3	38.5	51.7
25	LOCAL CHECK		3426.6	81.5	169.0	152.3	42.0	40.6
6	S-9	INDIA	3248.0	75.4	137.0	76.3	35.5	66.5
19	INIA 66 (BREAD WHEAT)	MEXICO	2973.3	81.3	154.6	86.0	37.5	77.6
9	JORI C-69	MEXICO	2962.6	78.1	138.0	84.0	62.0	51.7
22	GANSO "S"	MEXICO	2756.0	77.6	165.0	98.0	67.5	55.4
17	64W 5102-948		2753.3	75.4	138.0	80.0	42.2	70.2
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2513.3	73.5	169.0	108.3	42.5	55.4
		GRAND MEAN	3901.0	78.9	155.4	103.4	44.3	56.6
		STANDARD ERROR OF GRAND MEAN	95.1		0.2	0.6	0.0	1.0
		COEFFICIENT OF VARIATION	21.1%		1.4%	5.5%	0.1%	15.5%
		LSD VARIETY MEANS 5 PC	1345.1		3.7	9.3	0.1	14.3

CORRELATIONS

	YIELD KG/HA				
TEST WEIGHT	0.27				
DAYS TO FLOWER	0.04	0.43*			
HEIGHT CM.	0.09	0.68**	0.60**		
1000 GRN WGT GRMS	-0.07	-0.09	-0.06	-0.25	
SEPTORIA TRITICI	-0.22	-0.37	-0.27	-0.61**	-0.16

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

TABLE 27 MIDDLE EAST TURKEY ADAPAZARI

AGRICULTURAL RESEARCH STATION. SAKARYA.
COOPERATORS SADETTIN DEMIROZ

LATITUDE	040 47'N	DATE PLANTED	12/22/70	NITROGEN	---.- KG/HA
LONGITUDE	029 38'E	DATE HARVESTED	06/15/71	PHOSPHORUS	---.- KG/HA
ELEVATION	+00033 M.ABOVE S.L.	AMOUNT OF MOISTURE	0405 MM	POTASSIUM	---.- KG/HA

USUALLY NO RAINS. MILD WINTER. VERY HEAVY RAINS AND HAIL DAMAGE IN MAY AND JUNE. DEVELOPMENT OF LEAF RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK MENTANA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING
12	CRANE "S" (E)	MEXICO	128.0	172.0	20S	78.6	90.0
23	COCORIT C 71	MEXICO	128.0	169.0	5MR	89.6	90.0
11	ERANT "S"	MEXICO	127.6	173.0	15S	79.3	75.0
10	ANHINGA "S"	MEXICO	126.6	173.0	25S	91.0	90.0
9	JORI C-69	MEXICO	126.3	173.0	0	81.0	88.3
24	GARZA "S"	MEXICO	126.3	170.0	50S	91.6	81.6
18	66W-5101		126.3	175.0	40S	75.0	48.3
1	GAB-125	ITALY	126.0	172.0	5MR	104.3	85.6
7	61-130 X LEEDS	J.S.A.	126.0	176.0	30S	93.3	13.3
17	64W 5102-948		126.0	176.0	0	84.6	28.3
3	LEEDS	J.S.A.	125.6	175.0	50S	111.3	85.0
22	GANSO "S"	MEXICO	125.6	176.0	0	82.6	73.3
6	S-9	INDIA	125.6	174.0	50S	74.6	18.3
2	WELLS	U.S.A.	125.3	171.0	40S	117.6	86.6
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	125.3	174.0	30S	93.0	43.3
15	HERCULES	CANADA	125.3	171.0	80VS	102.3	91.6
14	T. DIC. VAR. VERNUM	MEXICO	125.3	172.0	40S	77.0	81.6
5	TEHLACAN 60	MEXICO	125.0	170.0	40S	121.3	90.0
4	CAPEITI	ITALY	125.0	174.0	30S	97.6	88.3
8	GERARDO VZ 466	ITALY	124.6	174.0	0	90.3	86.6
20	CRANE "S" (A)	MEXICO	124.6	170.0	20S	75.3	81.6
13	CVIACHIC C-65	MEXICO	124.6	172.0	30S	82.0	33.3
25	LOCAL CHECK		124.3	170.0	25S	102.0	91.6
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	123.6	170.0	20S	91.0	70.0
19	INIA 66 (BREAD WHEAT)	MEXICO	122.6	169.0	0	94.6	48.3
	GRAND MEAN		125.6	172.4	26.9	91.2	70.4
	STANDARD ERROR OF GRAND MEAN		0.2		1.6	1.0	1.5
	COEFFICIENT OF VARIATION		1.6%		52.2%	9.6%	18.3%
	LSD VARIETY MEANS 5 PC		3.2		23.0	14.3	21.6

CORRELATIONS

	DAYS TO FLOWER			
DAYS TO MATURITY	0.24			
LEAF RUST	-0.09	-0.06		
HEIGHT CM.	-0.26	-0.25	0.11	
LODGING	0.15	-0.45*	-0.10	0.35

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

TABLE 28 NORTH AMERICA CANADA SASKATCHEWAN

REGINA RESEARCH STN.CANADA DEPARTMENT OF AGRICULTURE.
COOPERATORS E.D. MALLOUGH

LATITUDE	052 00'N	DATE PLANTED	05/19/71	NITROGEN	004.9 KG/HA
LONGITUDE	104 00'N	DATE HARVESTED	10/06/71	PHOSPHORUS	021.5 KG/HA
ELEVATION	+00502 M.ABOVE S.L.	AMOUNT OF MOISTURE	-----MM	POTASSIUM	---.- KG/HA

GOOD MOISTURE CONDITIONS AT SEEDING TIME. DRY COOL WEATHER DURING GROWING SEASON. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK STEW, 63.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
2	WELLS	U.S.A.	2165.4	84.2	60.3	102.3	88.3	31.0
12	CRANE "S" (B)	MEXICO	2117.3	82.3	61.0	104.0	66.3	40.5
25	LOCAL CHECK		2050.5	81.7	61.6	103.0	102.6	47.0
7	61-130 X LEECS	U.S.A.	1986.9	85.5	61.0	105.0	71.0	38.5
11	ERANT "S"	MEXICO	1935.6	81.0	59.6	105.6	64.0	43.0
10	ANHIAGA "S"	MEXICO	1915.2	84.9	56.3	104.6	78.5	50.5
1	GAB-125	ITALY	1894.8	81.0	59.0	105.0	74.3	46.0
15	HERCULES	CANADA	1894.8	83.0	57.6	101.3	83.6	41.0
9	JORI C-69	MEXICO	1883.4	83.6	58.3	104.0	61.0	42.5
13	CVIACHIC C-66	MEXICO	1881.8	80.4	62.6	106.3	66.3	48.5
19	INIA 66 (BREAD WHEAT)	MEXICO	1879.3	83.0	53.3	101.0	69.3	42.0
18	66W-5101		1858.1	83.0	61.0	104.0	61.0	44.0
4	CAFEITI	ITALY	1832.9	83.6	60.3	108.0	78.3	44.5
6	S-9	INDIA	1785.6	83.6	60.0	102.3	54.3	34.5
20	CRANE "S" (A)	MEXICO	1727.7	84.2	56.3	101.6	62.0	43.0
22	GANSO "S"	MEXICO	1722.9	78.5	60.3	104.6	66.3	55.5
3	LEECS	U.S.A.	1714.7	84.2	59.3	102.0	88.3	37.5
17	64W 51C2-S4E		1697.6	79.7	61.0	105.0	59.3	42.5
23	COCORIT C 71	MEXICO	1697.6	83.0	60.3	105.0	75.0	45.0
5	TEHLACAN 60	MEXICO	1654.4	82.3	59.3	103.3	90.6	44.0
24	GARZA "S"	MEXICO	1630.8	77.8	61.3	108.3	62.6	41.0
14	T. DIC. VAR. VERNUM	MEXICO	1611.2	84.9	60.3	104.6	64.6	36.5
8	GERARDO VZ 466	ITALY	1577.0	81.7	57.0	103.3	67.6	49.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	1462.1	79.7	59.3	104.0	59.3	37.5
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	1462.1	81.7	58.6	105.6	70.0	43.0
	GRAND MEAN		1801.6	82.3	59.4	104.1	71.5	42.7
	STANDARD ERROR OF GRAND MEAN		31.1		0.1	0.2	0.5	
	COEFFICIENT OF VARIATION		14.9%		1.9%	1.7%	4.3%	
	LSD VARIETY MEANS 5 PC		439.8		1.8	2.9	7.4	

CORRELATIONS

YIELD KG/HA

TEST WEIGHT	0.33				
DAYS TO FLOWER	0.13	-0.29			
DAYS TO MATURITY	-0.18	-0.41*	0.53**		
HEIGHT CM.	0.35	0.25	0.01	-0.24	
1000 GRN WGT GRMS	-0.09	-0.39*	-0.08	0.27	0.04

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

TABLE 29 NORTH AMERICA U.S.A. CALIFORNIA

UNIVERSITY OF CALIF.AT DAVIS
COOPERATORS C. QUALSET, J. RUPERT, H. VOGT, M.TOPSEN

LATITUDE	032 32'N	DATE PLANTED	02/01/71	NITROGEN	056.0 KG/HA
LONGITUDE	121 45' W	DATE HARVESTED	05/20/71	PHOSPHORUS	---.- KG/HA
ELEVATION	+00016 M.ABOVE S.L.	AMOUNT OF MOISTURE	0106 MM	POTASSIUM	---.- KG/HA

LATE PLANTING. COOL PERIOD DURING HEADING AND AFTER. DEVELOPMENT OF STRIPE AND LEAF RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK BRIGGS BARLEY.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
12	CRANE "S" (B)	MEXICO	7787.6	98.6	136.3	0	1	83.3	0.0	46.8
23	COCORIT C 71	MEXICO	7277.4	95.3	137.0	0	5	86.6	1.6	47.3
14	T. DIC. VAR. VERNUM	MEXICO	7232.5	98.6	137.0	0	1	84.6	0.0	36.0
20	CRANE "S" (A)	MEXICO	6716.7	90.0	134.6	0	2	78.0	3.3	40.5
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	6324.3	95.6	137.0	0	0	81.6	0.0	48.3
24	GARZA "S"	MEXICO	6133.6	95.0	138.0	3	2	80.0	0.0	42.0
25	LOCAL CHECK		6094.4	85.0	127.6	0	0	95.6	80.0	39.0
10	ANFINGA "S"	MEXICO	5909.4	92.3	135.6	2	0	108.6	26.6	42.6
11	ERANT "S"	MEXICO	5881.3	92.3	137.3	3	1	76.3	3.3	45.5
9	JORI C-69	MEXICO	5853.3	94.0	137.6	2	1	84.0	1.6	52.8
6	S-9	INDIA	5836.5	97.3	136.6	5	1	69.6	0.0	38.5
13	OVIACHIC C-65	MEXICO	5477.7	99.0	137.3	1	2	79.0	0.0	41.8
19	INIA 66 (BREAD WHEAT)	MEXICO	5472.0	86.3	127.6	10	2	95.6	1.6	41.2
18	66W-5101		5388.0	98.0	136.3	2	1	79.3	0.0	45.5
2	WELLS	U.S.A.	5331.9	100.3	137.0	15	0	133.6	33.3	27.8
7	E1-130 X LEEDS	U.S.A.	5281.4	102.0	137.6	20	1	79.6	0.0	39.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	5180.5	99.3	138.0	2	0	89.6	1.6	43.2
22	GANSO "S"	MEXICO	5130.0	97.6	137.3	1	2	83.6	0.0	52.0
8	GERARDO VZ 466	ITALY	4917.0	98.3	137.0	0	2	82.3	3.3	44.5
5	TEPLACAN 60	MEXICO	4412.4	98.0	135.6	0	0	132.6	50.0	42.8
3	LEEDS	U.S.A.	4087.2	98.3	136.3	3	1	131.0	30.0	37.8
17	64W 5102-948		4081.6	98.6	137.6	10	0	71.6	0.0	45.0
4	CAPEITI	ITALY	4059.2	92.0	136.3	0	0	107.3	41.6	35.5
15	HERCULES	CANADA	3644.3	96.0	132.0	10	1	133.6	41.6	37.1
1	GAB-125	ITALY	3549.0	98.0	135.3	2	0	115.3	43.3	41.5
	GRAND MEAN		5482.3	95.8	135.8	4.9	2.8	93.7	14.5	42.2
	STANDARD ERROR OF GRAND MEAN		80.6	0.1	0.1	0.4	0.5	0.4	2.6	
	COEFFICIENT OF VARIATION		12.7%	1.1%	0.8%	87.8%	157.4%	4.0%	156.9%	
	LSD VARIETY MEANS 5 PC		1140.7	1.7	1.9	7.0	7.2	6.2	37.2	

CORRELATIONS

YIELD	KG/HA							
DAYS TO	FLOWER	-0.18						
DAYS TO	MATURITY	0.06	0.73**					
STRIPE	RUST	-0.41*	0.12	-0.26				
LEAF	RUST	0.34	-0.48*	-0.40*	-0.27			
HEIGHT	CM.	-0.52**	0.03	-0.27	0.21	-0.30		
LODGING		-0.42*	-0.32	-0.53**	-0.06	0.20	0.72**	
1000 GRN WGT	GRMS	0.22	-0.03	0.22	-0.23	-0.01	-0.50**	-0.45

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

TABLE 30 NORTH AMERICA U.S.A. N. DAKOTA

LANGDON.
COOPERATORS J.S.QUICK,R.E.NOWATZKI

LATITUDE	046 54 N	DATE PLANTED	05/14/71	NITROGEN	---.- KG/HA
LONGITUDE	096 48 W	DATE HARVESTED	--/--/--	PHOSPHORUS	---.- KG/HA
ELEVATION	+00294 M.ABOVE S.L.	AMOUNT OF MOISTURE	0252 MM	POTASSIUM	---.- KG/HA

NORMAL PLANTING DATE. EXCELLENT MOISTURE. HIGH YIELD AND GOOD DURUM QUALITY WAS PRODUCED BY COOL TEMPERATURES. NO DISEASE DEVELOPMENT. NO INSECT OR PEST PROBLEMS. WEED PROBLEM. LOCAL CHECK NOT REPORTED. LEAF SPOT SCALE: 0-4; 0= NIL, 4= VERY SEVERE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	LEAF SPOT	HEIGHT CM.	1000 GRN WGT GRMS
2	WELLS	U.S.A.	4220.0	81.9	58.0	1.5	114.3	34.5
14	T. DIC. VAR. VERNUM	MEXICO	4179.6	76.5	58.0	2.0	77.3	39.3
25	LOCAL CHECK		3983.9	81.0	58.0	2.0	113.3	39.3
7	61-130 X LEEDS	U.S.A.	3914.0	77.2	59.3	4.0	80.0	43.7
15	HERCULES	CANADA	3654.9	81.9	58.3	2.0	107.3	46.5
5	TEHUACAN 60	MEXICO	3611.2	79.3	58.3	1.0	108.0	52.2
20	CRANE "S" (A)	MEXICO	3595.9	76.7	55.6	3.5	70.6	36.1
3	LEEDS	U.S.A.	3595.9	81.5	57.6	1.5	112.0	41.6
12	CRANE "S" (B)	MEXICO	3575.2	73.1	59.0	3.5	71.6	40.2
10	ANHINGA "S"	MEXICO	3543.5	80.0	57.6	3.0	92.3	45.3
1	GAB 125	ITALY	3424.3	78.0	58.0	2.5	91.3	48.7
23	COCORIT C 71	MEXICO	3320.5	75.0	58.3	2.5	83.6	39.5
4	CAPEITI	ITALY	3177.3	79.5	58.3	3.0	93.3	43.5
19	INIA 66 (BREAD WHEAT)	MEXICO	3172.9	82.7	54.0	2.5	76.3	45.2
11	BRANT "S"	MEXICO	3087.7	72.2	58.0	3.5	71.6	38.1
6	S-9	INDIA	2927.0	73.5	58.3	4.0	64.3	33.5
13	CVIACHIC C-65	MEXICO	2742.3	70.9	59.6	2.5	71.6	44.1
16	(T. GLE-TC2/LAK)(B.LL 116E-TC2)	IRAN	2723.7	74.2	59.3	3.0	82.0	44.2
9	JORI C-69	MEXICO	2647.2	76.3	58.6	3.5	71.0	46.2
24	GARZA "S"	MEXICO	2625.3	73.5	58.3	2.5	71.6	40.3
8	GERARDO VZ 466	ITALY	2588.2	74.4	57.6	4.0	71.0	46.2
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	2508.4	71.4	57.6	3.5	66.0	40.3
22	GANSO "S"	MEXICO	2467.9	70.3	59.3	3.5	75.6	49.5
18	66W-5101		2427.5	72.5	58.6	3.0	70.0	43.3
17	641 5102-546		1959.7	68.2	60.0	4.0	67.3	39.3
		GRAND MEAN	3187.0	76.1	58.1	55.4	82.9	42.5
		STAND ERROR OF GRAND MEAN	59.2	0.3	0.0	2.2	0.4	
		COEFFICIENT OF VARIATION	16.1%	3.8%	1.4%	34.5%	4.5%	
		LSD VARIETY MEANS 5 PC	838.4	4.7	1.3	31.2	6.1	

CORRELATIONS

	YIELD KG/HA				
TEST WEIGHT	0.73**				
DAYS TO FLOWER	-0.25	-0.53**			
STRIPE RUST	-0.54**	-0.65**	0.32		
HEIGHT CM.	0.65**	0.78**	-0.06	-0.72**	
1000 GRN WGT GRMS	-0.16	0.12	0.08	-0.20	0.17

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

TABLE 31 NORTH AMERICA U.S.A. WASHINGTON

STATE UNIV. OTHELLO.
COOPERATORS C.F.KONZAK,M.A.DAVIS,E.DONALDSON.

LATITUDE	046 57 N	DATE PLANTED	03/29/71	NITROGEN	064.8 KG/HA
LONGITUDE	119 20 W	DATE HARVESTED	--/--/--	PHOSPHORUS	---.- KG/HA
ELEVATION	+00390 M.ABOVE S.L.	AMOUNT OF MOISTURE	0609 MM	POTASSIUM	---.- KG/HA

SPRING MONTHS COOLER THAN NORMAL. NORMAL PRECIPITATION. SEVERE POWDERY MILDEW INFECTION ON SUSCEPTIBLE VARIETIES. INSECT AND PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW
18	66W-5101		7899.1	82.7	70.0	65.0	51.0	20.0
2	WELLS	U.S.A.	7832.5	83.5	72.0	105.0	39.6	40.0
23	COCORIT C 71	MEXICO	7632.5	82.5	70.0	62.5	51.1	40.0
25	LOCAL CHECK		7499.2	82.5	72.0	67.5	39.2	20.0
5	TEWUACAN 60	MEXICO	7465.9	83.0	68.0	95.0	55.6	40.0
1	GAB-125	ITALY	7332.5	81.5	70.0	77.5	54.3	30.0
14	T. DIC. VAR. VERNUM	MEXICO	7265.9	83.7	70.0	65.0	43.8	60.0
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	7199.2	80.5	70.0	62.5	52.3	30.0
7	61-130 X LEEDS	U.S.A.	7165.9	83.3	71.0	70.0	49.7	30.0
10	ANHINGA "S"	MEXICO	6999.2	84.2	69.0	75.0	52.5	40.0
16	(T, GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	6932.6	82.8	69.0	75.0	56.1	40.0
15	HERCULES	CANADA	6765.9	83.2	70.0	90.0	55.3	40.0
4	CAPEITI	ITALY	6665.9	82.5	69.0	85.0	52.5	20.0
3	LEEDS	U.S.A.	6532.6	83.3	72.0	107.5	46.5	20.0
19	INIA 66 (BREAD WHEAT)	MEXICO	6532.6	83.8	67.0	67.5	46.5	60.0
22	GANSO "S"	MEXICO	6499.3	79.7	69.0	62.5	60.0	50.0
9	JORI C-69	MEXICO	6366.0	83.0	71.0	62.5	53.1	40.0
8	GERARDO VZ 466	ITALY	6132.7	81.5	70.0	67.5	55.5	40.0
24	GARZA "S"	MEXICO	6032.7	82.0	70.0	62.5	50.5	40.0
12	CRANE "S" (B)	MEXICO	5799.4	80.3	71.0	62.5	47.0	60.0
20	CRANE "S" (A)	MEXICO	5599.4	82.8	69.0	62.5	50.5	40.0
13	CUIACHIC C-65	MEXICO	5432.7	81.0	70.0	60.0	47.5	50.0
11	ERANT "S"	MEXICO	5332.7	80.7	69.0	65.0	51.7	60.0
6	S-9	INDIA	5132.8	81.2	69.0	55.0	45.5	60.0
17	64W 51C2-948		4599.5	81.0	72.0	62.5	51.0	40.0
		GRAND MEAN	6589.9	82.2	69.9	71.6	50.6	40.3

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

CORRELATIONS

	YIELD KG/HA				
TEST WEIGHT	0.45*				
DAYS TO FLOWER	0.05	-0.02			
HEIGHT CM.	0.42*	0.46*	0.18		
1000 GRN WGT GRMS	-0.07	-0.26	-0.37	-0.10	
POWDERY MILDEW	-0.43*	-0.24	-0.39*	-0.40*	-0.05

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

TABLE 32 SOUTH AMERICA CHILE SANTIAGO

EXPTL. STATION LAS VEGAS HUELQUEN
COOPERATORS JUSTO MAYORGA V.

LATITUDE 033 51'S
LONGITUDE 070 41'W
ELEVATION +00390 M.ABOVE S.L.

DATE PLANTED 08/22/70
DATE HARVESTED --/--/--
AMOUNT OF MOISTURE 0105 MM

NITROGEN ---.- KG/HA
PHOSPHORUS 009.6 KG/HA
POTASSIUM 008.2 KG/HA

MILD AND SHORT WINTER. LONG SPRING AND SUMMER. WARM AND CLOUDY DAYS. INCIDENCE OF STRIPE AND STEM RUST. REGULAR INCIDENCE OF APHIDS. SOME WEEDS. NO PEST PROBLEM. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS
14	T. DIC. VAR. VERNUM	MEXICO	6523.3	82.8	55.3	112.0	0	0	78.6	37.6
23	COCORIT C 71	MEXICO	5836.6	83.3	65.3	111.0	0	0	85.6	35.1
19	INIA 66 (BREAD WHEAT)	MEXICO	5776.6	84.1	59.5	110.0	5R	0	90.6	38.0
18	66W-5101		5750.0	83.8	71.3	118.3	0	0	76.6	39.3
7	61-130 X LEEDS	U.S.A.	736.6	84.6	74.0	123.3	15MR	0	83.6	38.3
2	WELLS	U.S.A.	5716.6	84.1	76.0	123.6	50S	0	132.6	32.1
9	JORI C-69	MEXICO	5656.6	84.0	69.3	115.0	0	0	79.6	40.6
10	ANFINGA "S"	MEXICO	5183.3	84.0	53.6	119.0	0	0	97.0	39.3
3	LEEDS	U.S.A.	5140.0	82.5	72.3	123.6	10MR	0	131.6	35.5
4	CAFEITI	ITALY	5090.0	83.8	54.6	119.0	5R	0	111.0	39.6
25	LOCAL CHECK		4943.3	83.8	74.0	124.3	5R	10MR	124.0	42.1
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	4910.0	83.3	71.3	118.6	5R	0	86.6	41.3
22	GANSO "S"	MEXICO	4891.6	82.0	69.6	114.0	5R	0	78.0	45.0
13	CVIACHIC C-65	MEXICO	4836.6	84.0	72.0	122.6	5R	10MR	72.6	40.6
20	CRANE "S" (A)	MEXICO	4656.6	84.1	61.0	112.0	0	0	73.0	38.6
11	BRANT "S"	MEXICO	4576.6	82.3	62.3	115.0	0	0	71.3	35.6
8	GERARDO VZ 466	ITALY	4566.6	84.1	59.3	122.0	5R	0	79.6	40.6
12	CRANE "S" (B)	MEXICO	4553.3	84.1	69.3	117.3	0	0	73.0	38.6
17	64W 5102-94E		4156.6	84.6	72.3	118.3	5R	5R	70.0	39.8
15	HERCULES	CANADA	4060.0	84.6	69.6	115.3	40S	0	116.6	36.8
1	GAB-125	ITALY	3920.0	83.3	70.6	122.0	10MR	25MS	104.0	39.6
24	GARZA "S"	MEXICO	3763.3	82.6	68.3	114.0	5R	0	71.3	40.0
5	TEHUACAN 60	MEXICO	3593.3	84.3	70.6	121.0	5R	0	116.0	41.1
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3480.0	82.8	69.3	112.3	0	0	67.0	40.3
6	S-9	INDIA	3030.0	84.0	69.3	121.6	5R	10MR	61.0	38.1
		GRAND MEAN	4814.3	83.6	68.8	117.8	7.8	1.3	89.2	39.3
		STANDARD ERROR OF GRAND MEAN	150.9	0.1	0.1	0.2	1.0	0.5	0.7	0.1
		COEFFICIENT OF VARIATION	28.9%	1.1%	2.3%	1.8%	117.9%	341.3%	7.5%	3.9%
		LSD VARIETY MEANS 5 PC	2276.0	1.6	2.6	3.6	15.0	7.7	11.0	2.5

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	-0.01						
DAYS TO	FLOWER	-0.09	0.14					
DAYS TO	MATURITY	-0.14	0.29	0.71**				
STRIPE	RUST	0.21	0.21	0.39*	0.31			
STEM	RUST	-0.48*	0.07	0.19	0.37	-0.15		
HEIGHT	CM.	0.17	0.12	0.31	0.45*	0.62**	-0.07	
1000 GRN	WGT GRMS	-0.23	-0.25	-0.07	-0.14	-0.76**	0.02	-0.39

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

TABLE 33 SOUTH AMERICA PERU LIMA

UNIVERSIDAD NACIONAL AGRARIA, LA MOLINA.
COOPERATORS M. ROMERO LOLI, L. LAVADO, R. MONT.

LATITUDE 012 05'S
LONGITUDE 076 57'W
ELEVATION 000238 M.ABOVE S.L.

DATE PLANTED 09/03/70
DATE HARVESTED 01/15/71
AMOUNT OF MOISTURE -- --MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 080.0 KG/HA
POTASSIUM ---.- KG/HA

HIGH HUMIDITY AND COOL WEATHER UNTIL RIPENING. VERY SATISFACTORY DISEASE DEVELOPMENT. INSECT AND WEED PROBLEMS NOT REPORTED. BIRD DAMAGE. LOCAL CHECK CHUMPI.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	POWDERY MILDEW
19	INIA 66 (BREAD WHEAT)	MEXICO	3801.8	81.1	54.0	112.6	-	0	91.6	42.0	83.3
1	GAB-125	ITALY	3736.2	79.3	69.3	122.0	10S	60S	110.0	50.0	66.6
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	3588.5	77.1	53.0	122.6	0	70S	75.0	48.0	70.0
7	EL-130 X LEEDS	U.S.A.	3459.6	79.7	32.6	127.0	10MS	0	75.5	42.0	43.3
8	GERARDO VZ 466	ITALY	3357.4	77.3	72.6	122.6	0	60S	81.0	51.7	53.3
10	ANHINGA "S"	MEXICO	3279.6	80.3	56.0	114.0	-	20S	100.0	50.3	73.5
18	66W-5101		3199.6	79.0	75.6	120.6	10MS	80S	76.6	44.7	66.6
15	HERCULES	CANADA	3053.0	80.7	77.6	124.0	40S	30S	148.3	45.1	53.3
2	BELLS	U.S.A.	3005.2	73.7	82.0	126.6	40S	20S	140.0	47.1	56.6
9	JORI C-69	MEXICO	2979.7	77.3	59.6	114.0	0	50S	73.3	48.0	80.0
24	GARZA "S"	MEXICO	2976.3	79.7	60.0	120.0	0	60S	73.3	47.7	76.6
22	GANSO "S"	MEXICO	2974.1	75.1	71.3	121.3	0	80S	81.6	56.7	76.6
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	2796.3	77.1	75.0	121.3	5MS	70S	96.6	46.6	66.6
3	LEEDS	U.S.A.	2786.3	80.3	80.6	125.3	60S	0	143.3	38.6	53.3
4	CAFEITI	ITALY	2756.3	80.3	65.0	119.3	50S	80S	115.0	48.0	43.3
11	BRANT "S"	MEXICO	2709.7	75.5	65.3	119.3	10S	40S	75.0	49.0	56.6
14	T. DIC. VAR. VERNUM	MEXICO	2673.0	78.1	61.3	113.0	-	40S	75.0	41.7	76.6
5	TEHLACAN 6C	MEXICO	2517.5	79.1	73.6	122.0	20MS	60S	146.6	54.0	70.0
20	CRANE "S" (8)	MEXICO	2460.8	80.0	55.6	114.0	-	50S	73.3	41.1	76.6
17	66W 5102-946		2023.1	77.1	62.0	116.6	0	70S	63.3	43.1	90.0
13	CVIACHIC C-65	MEXICO	1956.4	73.5	82.0	129.0	20MS	80S	76.6	43.5	43.3
12	CRANE "S" (8)	MEXICO	1905.3	75.0	53.0	110.0	-	0	55.0	42.5	90.0
23	COCORIT C	MEXICO	1783.1	79.3	56.6	112.6	-	10MS	73.3	49.1	76.6
6	S-S	INDIA	1762.0	79.3	59.6	112.6	-	40S	56.5	43.0	90.0
25	LOCAL CHECK		0.0	0.0	0.0	0.0	TS	90S	120.0	0.0	63.3
		GRAND MEAN	2817.1	78.2	67.8	119.3	9.9	46.2	92.3	46.6	68.7
	STANDARD ERROR OF GRAND MEAN		57.1		0.2	0.3	1.0	0.9	0.6		1.1
	COEFFICIENT OF VARIATION		17.2%		2.6%	2.3%	93.0%	18.6%	5.5%		14.7
	LSD VARIETY MEANS 5 PC		792.3		2.9	4.6	15.1	14.0	3.4		15.7

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.71**						
DAYS TO	FLOWER	0.44**	0.80**					
DAYS TO	MATURITY	0.72**	0.96**	0.91**				
LEAF	RUST	0.18	0.17	0.51**	0.27			
STEM	RUST	-0.24	-0.32	-0.09	-0.21	-0.15		
HEIGHT	CM.	0.05	-0.14	0.13	-0.10	0.75**	0.04	
1000 GRN	WGT GRMS	0.69**	0.39**	0.76**	0.90**	0.09	-0.05	-0.09
POWDERY	MILDEW	-0.15	0.08	-0.35	-0.09	-0.50**	-0.15	-0.44

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

TABLE 34

MEAN OVERALL LOCATIONS FOR YIELD, AGRONOMIC AND DISEASE DATA FOR THE SECOND INTERNATIONAL DURUM YIELD NURSERY.

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

MOYENNE DE TOUS LES EMPLACEMENTS POUR LE RENDEMENT ET LES DONNEES AGRONOMIQUES ET DES MALADIES DU DEUXIEME PEPINIERE INTERNATIONALE DE BLES DURS.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST
23	COCORIT C 71	MEXICO	4492.04	79.84	102.52	154.64	11.34	11.32	10.67
10	ANFINGA "S"	MEXICO	4174.29	81.44	101.49	152.75	12.47	16.15	10.00
12	CRANE "S" (B)	MEXICO	4128.17	78.71	104.18	150.97	10.81	11.97	16.53
20	CRANE "S" (A)	MEXICO	4080.03	80.30	99.61	151.78	13.52	18.23	14.22
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	4045.77	78.27	102.03	155.41	15.26	13.54	20.45
11	ERANT "S"	MEXICO	4034.85	73.47	102.72	153.06	9.95	12.37	21.34
8	GERARDO VZ 466	ITALY	3985.53	79.78	104.23	157.24	13.30	2.33	20.17
19	INIA 66 (BREAD WHEAT)	MEXICO	3941.38	79.88	96.33	146.92	10.34	6.66	0.06
18	66W-5101		3905.84	80.32	106.86	157.94	14.80	17.52	17.52
9	JORI C-69	MEXICO	3898.91	80.13	105.03	155.68	15.04	11.45	10.77
14	T. DIC. VAR. VERNUM	MEXICO	3812.38	79.97	102.80	155.56	11.64	19.55	13.44
24	GARZA "S"	MEXICO	3784.99	79.01	102.72	156.52	9.21	13.68	15.15
22	GANSO "S"	MEXICO	3771.79	77.36	105.79	159.09	12.85	4.35	21.38
7	61-130 X LEEDS	U.S.A.	3706.60	80.23	106.71	158.78	29.74	18.68	9.50
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	3550.76	79.76	104.20	158.59	13.06	19.50	22.56
4	CAPEITI	ITALY	3534.36	81.62	101.37	154.29	13.69	21.16	28.61
25	LOCAL CHECK		3493.15	76.09	105.83	148.97	6.74	22.18	17.25
1	GAB-125	ITALY	3475.15	79.07	106.52	156.19	19.19	15.36	21.06
5	TEHUACAN 6C	MEXICO	3305.94	81.36	106.23	157.19	8.02	21.81	20.29
6	S-9	INDIA	3300.77	77.90	104.40	153.64	16.03	17.40	26.89
3	LEEDS	U.S.A.	3298.88	81.54	105.82	152.39	21.20	22.89	15.94
2	WELLS	U.S.A.	3268.68	79.45	105.77	154.36	33.35	19.65	15.13
17	64W 5102-948		3258.61	74.68	104.00	156.90	16.20	14.21	17.40
13	CVIACHIC C-65	MEXICO	3228.85	78.04	107.67	158.73	13.06	19.77	26.25
15	HERCULES	CANADA	3179.74	80.42	105.70	156.27	28.62	24.76	14.71
	SUMMARY MEANS OVER VARIETIES		3701.72	79.35	104.02	154.94	15.21	15.99	17.35

CONT'D. TABLE 34

MEAN OVERALL LOCATIONS FOR YIELD, AGRONOMIC AND DISEASE DATA FOR THE SECOND INTERNATIONAL DURUM YIELD NURSERY.

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

MOYENNE DE TOUS LES EMPLACEMENTS POUR LE RENDEMENT ET LES DONNEES AGRONOMIQUES ET DES MALADIES DU DEUXIEME PEPINIERE INTERNATIONALE DE BLES DURS.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	HEIGTH CM.	LODGING	SHATTER-ING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA TRITICI	SEPTORIA SPP.	FROST DAMAGE	LEAF SPOT
23	COCORIT C 71	MEXICO	81.70	20.42	46.67	45.26	58.97	47.51	50.00	0.0	62.5
10	ANHINGA "S"	MEXICO	97.26	44.38	53.33	45.93	37.23	29.32	50.00	0.0	75.0
12	CRANE "S" (E)	MEXICO	74.91	14.58	40.00	42.15	48.33	41.50	60.00	0.67	87.5
20	CRANE "S" (A)	MEXICO	74.97	11.11	6.67	40.38	34.37	39.66	40.00	3.67	87.5
21	(BY2E-TACE X TC4)(BY2E-TC X STW 63)/AA"S"	MEXICO	75.63	9.78	33.33	46.72	55.72	38.26	46.67	1.00	87.5
11	BRANT "S"	MEXICO	73.89	12.64	40.00	43.90	41.57	34.92	40.00	0.0	87.5
8	GERARDO VZ 466	ITALY	84.57	23.22	20.00	47.37	35.90	36.03	60.00	0.67	100.0
19	INIA 66 (BREAD WHEAT)	MEXICO	85.52	8.39	53.33	41.24	47.23	45.45	20.00	0.0	62.5
18	66W-5101		74.84	13.69	20.00	44.32	35.85	37.76	50.00	0.0	75.0
9	CORI C-69	MEXICO	76.82	13.00	20.00	50.09	42.16	31.24	80.00	0.0	75.0
14	T. DIC. VAR. VERNUM	MEXICO	77.83	29.06	20.00	37.78	44.31	37.82	50.00	0.0	50.0
24	GARZA "S"	MEXICO	75.80	13.06	26.67	42.80	55.27	42.94	60.00	2.67	62.5
22	GANSO "S"	MEXICO	80.30	16.36	20.00	56.15	75.17	38.50	46.67	2.67	87.5
7	61-130 X LEECS	U.S.A.	82.49	3.15	20.00	39.46	29.57	19.39	40.00	0.0	100.0
16	(T. GLE-TC2/LAK)(BELL 116E-TC2)	IRAN	87.90	19.00	13.33	45.27	38.57	30.75	50.00	0.0	75.0
4	CAPEITI	ITALY	102.70	55.06	33.33	43.64	33.92	23.16	20.00	0.0	75.0
25	LOCAL CHECK		109.08	50.12	13.33	42.57	36.03	25.43	40.00	2.33	50.0
1	GAB-125	ITALY	100.81	41.03	33.33	45.13	41.40	32.52	50.00	0.0	62.5
5	TEHLACAN 60	MEXICO	118.44	46.14	33.33	49.00	41.03	32.52	40.00	0.67	25.0
6	S-9	INDIA	64.82	4.53	26.67	37.23	48.86	42.88	73.33	3.33	100.0
3	LEECS	U.S.A.	120.49	48.56	46.67	37.49	32.79	21.73	30.00	0.0	37.5
2	WELLS	U.S.A.	122.25	42.92	40.00	31.71	33.59	20.38	30.00	0.0	37.5
17	64W 5102-948		70.00	6.17	5.67	42.63	44.96	48.55	60.00	2.67	100.0
13	CVIACHIC C-65	MEXICO	74.87	13.97	20.00	43.39	39.93	33.25	60.00	2.33	62.5
15	HERCULES	CANADA	113.54	60.55	25.67	41.18	35.39	27.88	40.00	0.0	50.0
	SUMMARY MEANS OVER VARIETIES		88.18	25.31	28.53	43.35	42.09	33.73	47.47	0.91	71.0

FIGURE 3

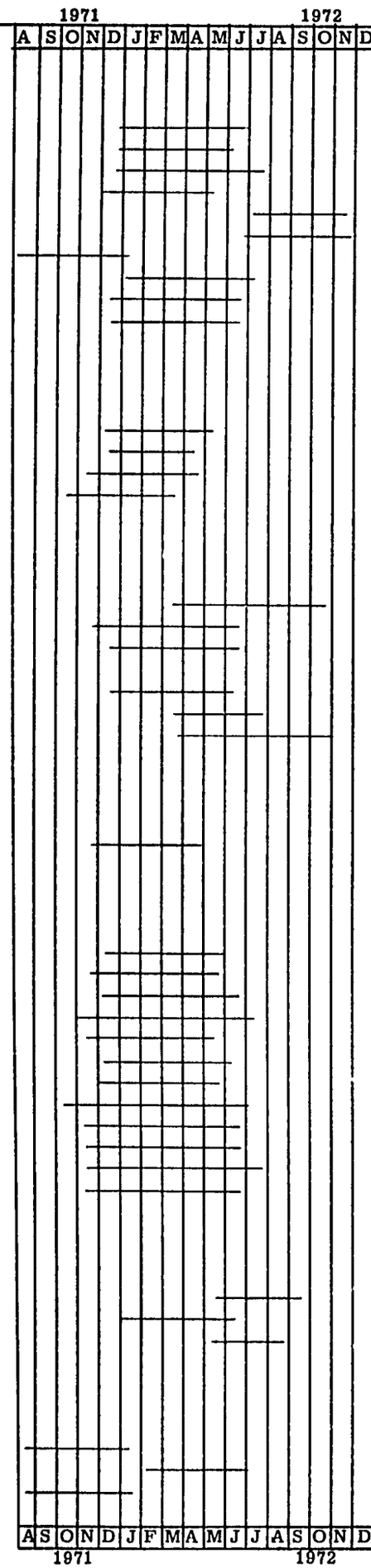


Table No.		ELEVATION (meters)
	AFRICA	
1	Baraki, Algeria	10
2	Guelma, Algeria	250
3	Setif, Algeria	1074
4	Giza, Egypt	21
5	Asmara, Ethiopia	2325
6	Shoa, Ethiopia (Holetta)	2400
7	Shoa, Ethiopia (Debre Zeit)	1860
8	Fes, Morocco	400
9	Kenitra, Morocco	84
10	Marrakech, Morocco	464
	ASIA	
11	M. Pradesh, India (Indore)	600
12	M. Pradesh, India (Powarkheda)	299
13	Punjab, Pakistan	213
14	Sind, Pakistan	19
	EUROPE	
15	Cambridgeshire, England	18
16	Thessaloniki, Greece	10
17	Rome, Italy I	76
18	Rome, Italy II	150
19	Alentejo, Portugal	208
20	Judetul Cluj, Romania	428
21	Logroño, Spain	1030
	MESOAMERICA	
22	Sonora, Mexico	40
	MIDDLE EAST	
23	Nicosia, Cyprus	500
24	Dezful, Iran	83
25	Gorgan, Iran	105
26	Karaj, Iran	1300
27	Baghdad, Iraq	34
28	Bet Dagan, Israel	28
29	Jordan, Jordan	242
30	Beqa'a, Lebanon	1000
31	Tel-Amara, Lebanon	900
32	Adana, Turkey	20
33	Ankara, Turkey	840
34	Izmir, Turkey	12
	NORTH AMERICA	
35	Saskatchewan, Canada	508
36	California, U.S.A.	15
37	North Dakota, U.S.A.	895
	SOUTH AMERICA	
38	Buenos Aires, Argentina	130
39	Ancash, Peru	2600
40	Santiago, Chile	629

TABLE 1 AFRICA ALGERIA BARAKI

BARAKI CNRA STATION.
COOPERATORS INRAA CEREAL PROJECT AND CIMMYT.

LATITUDE 036 05'N	DATE PLANTED	12/29/71	NITROGEN	120.0 KG/HA
LONGITUDE 003 10'E	DATE HARVESTED	06/27/72	PHOSPHORUS	090.0 KG/HA
ELEVATION +00010 M.ABOVE S.L.	AMOUNT OF MOISTURE	0748 MM	POTASIUM	000.0 KG/HA

COOL, CLOUDY, RAINY WEATHER THROUGHOUT THE WINTER AND SPRING. HEAVY ATTACK OF SEPTORIA. GOOD DEVELOPMENT OF STRIPE RUST. HEAVY ATTACK OF CUTWORM. HEAVY WILD OATS AND OXALIS PROBLEMS. PEST PROBLEMS NOT REPORTED.
FUSARIUM SCALE: S = SUSCEPTIBLE, MS = MODERATELY SUSCEPTIBLE, R = RESISTANT.
LOCAL CHECK BIDI 17.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	LEAF RUST	HEIGHT CM.	SEPTORIA SPP.	FUSARIUM
8	CAJEME 71	MEXICO	7346.6	79.0	-	80.0	88.7	-
17	PARANA 66/270	ARGENTINA	6080.0	78.0	1P	87.5	44.3	MS
7	CRANE S (B)	MEXICO	5986.6	70.5	80S	87.5	99.8	S
11	COCORIT C 71	MEXICO	5960.0	71.0	80S	90.0	77.6	S
9	CRANE S (A)	MEXICO	5533.3	71.5	80S	85.0	99.8	S
6	BRANT S	MEXICO	5306.6	72.0	80S	82.5	99.8	S
18	BD 58-25A	TUNISIA	5240.0	76.5	80MS	130.0	77.6	R
10	JORI S X CRANE S	MEXICO	5093.3	70.0	60MS	82.5	99.8	S
24	GANSO S	MEXICO	5000.0	73.0	10MR	92.5	44.3	R
22	T. DIC. VAR. VERNUM	MEXICO	4973.3	70.0	100S	92.5	88.7	S
3	CAPEITI	ITALY	4760.0	77.5	80S	120.0	88.7	R
5	ANHINGA S	MEXICO	4733.3	87.5	60S	112.5	99.8	S
12	COCORIT S	MEXICO	4586.6	72.0	60MS	110.0	88.7	S
13	GERARDO 565	ITALY	4200.0	71.5	60MS	102.5	99.8	MS
14	GERARDO 574	ITALY	3986.6	69.5	60S	87.5	77.6	S
16	QUILAFEN	CHILE	3733.3	68.0	100S	92.5	88.7	R
1	GAB-125	ITALY	3413.3	75.0	80S	112.5	99.8	R
2	LEEDS	U.S.A.	3133.3	77.5	20S	132.5	88.7	R
21	61-130 X LEEDS	U.S.A.	2893.3	-	80S	95.0	66.5	R
15	D 6647	U.S.A.	2640.0	70.5	80S	87.5	77.6	MS
23	HERCULES	CANADA	2280.0	69.5	100S	140.0	99.8	R
25	LOCAL CHECK		1880.0	71.0	100S	117.5	99.8	R
4	JORI C-69	MEXICO	1500.0	72.0	60MS	87.5	99.8	S
20	HILBA	LEBANON	1373.3	59.0	-	115.0	99.8	R
19	HARKOVSKAIA	U.S.S.R.	1240.0	0.0	100S	155.0	66.5	R
		GRAND MEAN	4114.9	72.6	76.5	103.0	86.5	
	STANDARD ERROR OF GRAND MEAN		84.9		1.9	0.6		
	COEFICIENT OF VARIATION		17.7		20.6	4.4		
	LSD VARIETY MEANS 5 PC		1192.9		25.8	7.5		

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.47*				
LEAF	RUST	-0.23	-0.18			
HEIGHT	CM.	-0.53**	-0.46*	0.21		
SEPTORIA	SPP.	-0.14	0.18	0.43*	0.03	
FUSARIUM		0.00	0.00	0.00	0.00	0.00

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

TABLE 2 AFRICA ALGERIA GUELMA

STATION EXPERIMENTALE DE GUELMA.
COOPERATORS M. KEBABSA.

LATITUDE 036 30'N
LONGITUDE 007 30'E
ELEVATION +00250 M.ABOVE S.L.

DATE PLANTED 12/29/71
DATE HARVESTED 05/21/72
AMOUNT OF MOISTURE 0510 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 085.0 KG/HA
POTASIUM 050.0 KG/HA

HEAVY RAINS DURING GERMINATION. COOL TEMPERATURES THROUGH TILLERING. GOOD MOISTURE THROUGHOUT CROP DEVELOPMENT TO MATURITY. GOOD DEVELOPMENT OF LEAF RUST. LATE DEVELOPMENT OF STEM RUST AND SEPTORIA. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK BIDI 17.

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	SEPTORIA TRITICI
22	T. DIC. VAR. VERNUM	MEXICO	4896.6	81.0	103.0	165.0	10CS	0	88.3	0.0	41.5	88.7
8	CAJEME 71	MEXICO	4793.3	79.6	99.0	161.0	TRR	0	78.3	0.0	55.8	77.6
9	CRANE S (A)	MEXICO	4426.6	80.3	99.6	164.3	60MS	0	80.0	0.0	43.6	77.6
15	D 6647	U.S.A.	4416.6	82.3	117.6	169.0	30MS	0	85.0	0.0	45.8	55.5
7	CRANE S (B)	MEXICO	4413.3	80.0	104.3	163.0	60MS	0	80.0	0.0	47.9	88.7
12	COCORIT S	MEXICO	4246.6	83.0	117.0	172.3	80S	0	103.3	0.0	54.2	66.5
18	BD 58-25A	TUNISIA	4183.3	81.5	108.3	168.0	30MR	TR	110.0	70.2	51.7	55.5
10	JORI S X CRANE S	MEXICO	4183.3	78.8	105.0	164.6	80S	0	80.0	0.0	52.2	88.7
3	CAPEITI	ITALY	4139.9	82.0	102.0	154.0	80S	0	110.0	92.4	46.1	66.5
17	PARANA 66/270	ARGENTINA	4119.9	81.1	115.3	174.0	10MR	0	90.0	0.0	58.2	55.5
11	COCORIT C 71	MEXICO	4079.9	79.1	100.0	163.6	60MS	40S	80.0	0.0	47.5	77.6
1	GAB-125	ITALY	4023.3	81.0	116.0	173.0	80S	10MS	108.3	70.2	51.7	77.6
21	61-130 X LEEDS	U.S.A.	4006.6	82.0	119.6	173.0	60MS	0	86.6	0.0	44.1	0.0
16	QUILAFEN	CHILE	3976.6	82.0	116.6	168.6	20MS	0	83.3	3.6	48.7	22.1
14	GERARDO 574	ITALY	3765.6	81.1	108.6	167.6	60MS	0	85.0	0.0	49.2	77.6
13	GERARDO 565	ITALY	3763.3	80.8	117.6	174.0	100S	0	93.3	0.0	54.1	55.5
5	ANHINGA S	MEXICO	3743.3	82.0	99.6	164.0		60S	106.6	22.1	48.1	88.7
2	LEEDS	U.S.A.	3573.3	83.1	119.0	174.0	80S	0	126.6	44.3	39.5	22.1
24	GANSO S	MEXICO	3563.3	78.5	106.6	166.0	80S	0	98.3	0.0	57.0	33.2
6	BRANT S	MEXICO	3509.9	79.0	99.6	164.0	80MS	0	81.6	0.0	46.9	-
4	JORI C-69	MEXICO	3466.6	81.0	104.6	164.0	80S	TR	80.0	11.0	54.3	-
23	HERCULES	CANADA	3436.6	81.6	115.0	166.0	80S	0	133.3	81.3	47.5	77.6
25	LOCAL CHECK		3153.3	81.0	114.6	174.0	40S	0	120.0	99.8	51.1	66.5
19	HARKOVSKAIA	U.S.S.R.	3129.9	82.5	123.3	171.0	60S	40S	141.6	70.2	38.3	77.6
20	HILBA	LEBANON	1769.9	75.3	116.0	170.0	60S	50S	121.6	55.4	52.3	0.0
		GRAND MEAN	3871.3	80.8	109.9	167.5	54.4	7.9	98.0	24.8	49.1	68.0
	STANDARD ERROR OF GRAND MEAN		60.5	0.0	0.4	0.4			0.6	2.0	0.3	
	COEFICIENT OF VARIATION		13.5	0.8	3.8	2.3			5.4	70.3	6.0	
	LSD VARIETY MEANS 5 PC		855.7	1.1	6.8	6.4			8.7	28.5	4.8	

CORRELATIONS

YIELD KG/HA										
TEST WEIGHT	0.39*									
DAYS TO FLOWER	0.37	0.35								
DAYS TO MATURITY	-0.30	0.21	0.82**							
LEAF RUST	-0.15	-0.07	0.12	0.02						
STEM RUST	-0.48*	-0.26	-0.03	-0.02	-0.21					
HEIGHT CM.	-0.57**	0.21	0.53**	0.32	0.18	0.34				
LODGING	-0.44*	0.14	0.28	0.05	0.09	0.16	0.82			
1000 GRN WGT GRMS	-0.04	-0.37	-0.10	0.06	-0.16	-0.16	-0.27	-0.18		
SEPTORIA TRITICI	0.41*	0.11	-0.55**	-0.45*	0.06	-0.01	-0.20	-0.04	-0.00	

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

TABLE 3 AFRICA ALGERIA SETIF

SETIF INRAA STATION.
COOPERATORS INRAA CEREAL PROJECT OF GOVT. AND CIMMYT

LATITUDE	035 06'N	DATE PLANTED	12/25/71	NITROGEN	100.0 KG/HA
LONGITUDE	006 08'E	DATE HARVESTED	07/19/72	PHOSPHORUS	096.0 KG/HA
ELEVATION	+01074 M.ABOVE S.L.	AMOUNT OF MOISTURE	0611 MM	POTASIUM	050.0 KG/HA

UNUSUALLY WET YEAR WITH MANY DAYS OF FREEZING WEATHER. EARLY DEVELOPMENT OF STRIPE RUST. LATE DEVELOPMENT OF LEAF RUST. SAWFLY DAMAGE. WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK HEDBA 3. XX= SAWFLY.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	STRIPE RUST	LEAF RUST	HEIGHT CM.	XX
1	GAB-125	ITALY	5506.6	81.5	40S	20MS	105.0	10
12	COCORIT S	MEXICO	5500.0	84.0	60S	60S	85.0	5
16	QUILAFEN	CHILE	5453.3	80.5	80S	10MR	75.0	R
22	T. DIC. VAR. VERNUM	MEXICO	5400.0	80.5	1R	1R	80.0	R
7	CRANE S (B)	MEXICO	5380.0	78.0	80S	60S	80.0	R
11	COCORIT C 71	MEXICO	5153.3	80.5	20MR	40S	80.0	5
17	PARANA 66/270	ARGENTINA	5093.3	82.0	1R	1R	75.0	R
25	LOCAL CHECK		5086.6	81.0	40S	30S	130.0	5
3	CAPEITI	ITALY	4960.0	83.5	80S	80S	100.0	15
10	JORI S X CRANE S	MEXICO	4846.6	77.0	40S	80S	70.0	5
5	ANHINGA S	MEXICO	4633.3	84.0	1R	60S	110.0	15
24	GANSO S	MEXICO	4600.0	78.5	40S	40S	80.0	TR
4	JORI C-69	MEXICO	4586.6	80.5	60S	20MS	75.0	TR
13	GERARDO 565	ITALY	4560.0	79.5	1R	60S	75.0	TR
14	GERARDO 574	ITALY	4520.0	81.0	80S	TR	70.0	TR
18	BD 58-25A	TUNISIA	4386.6	81.0	20S	20MS	100.0	5
19	HARKOVSKAIA	U.S.S.R.	4386.6	83.0	80S	40MS	140.0	5
8	CAJEME 71	MEXICO	4173.3	80.5	-	-	70.0	5
23	HERCULES	CANADA	4146.6	81.5	1P	50S	120.0	15
9	CRANE S (A)	MEXICO	4066.6	82.0	80S	80S	75.0	10
20	HILBA	LEBANON	3664.0	76.0	80S	60S	125.0	5
2	LEEDS	U.S.A.	3640.0	83.0	1R	60S	125.0	15
15	D 6647	U.S.A.	3573.3	78.5	1P	10MS	80.0	R
21	61-130 X LEEDS	U.S.A.	3440.0	81.0	1R	20MS	75.0	R
6	BRANT S	MEXICO	1682.6	80.0	80S	20MS	70.0	5
		GRAND MEAN	4497.5	80.7	41.8	32.5	90.7	
		STANDARD ERROR OF GRAND MEAN	78.6		1.7	2.1		
		COEFICIENT OF VARIATION	15.1		29.0	44.4		
		LSD VARIETY MEANS 5 PC	1111.9		19.8	23.6		

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.16				
STRIPE	RUST	0.04	-0.11			
LEAF	RUST	-0.04	0.00	0.15		
HEIGHT	CM.	0.00	0.27	0.05	0.32	
XX		0.00	0.00	0.00	0.00	0.00

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

TABLE 4 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 05/13/72
AMOUNT OF MOISTURE ---- MM

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

NORMAL WEATHER CONDITIONS. SATISFACTORY LEAF RUST. INSECT AND PEST PROBLEMS NOT REPORTED. WEEDS CONTROLLED BY HAND. SHATTERING SCALE NOT REPORTED. LOCAL CHECK GIZA 155.

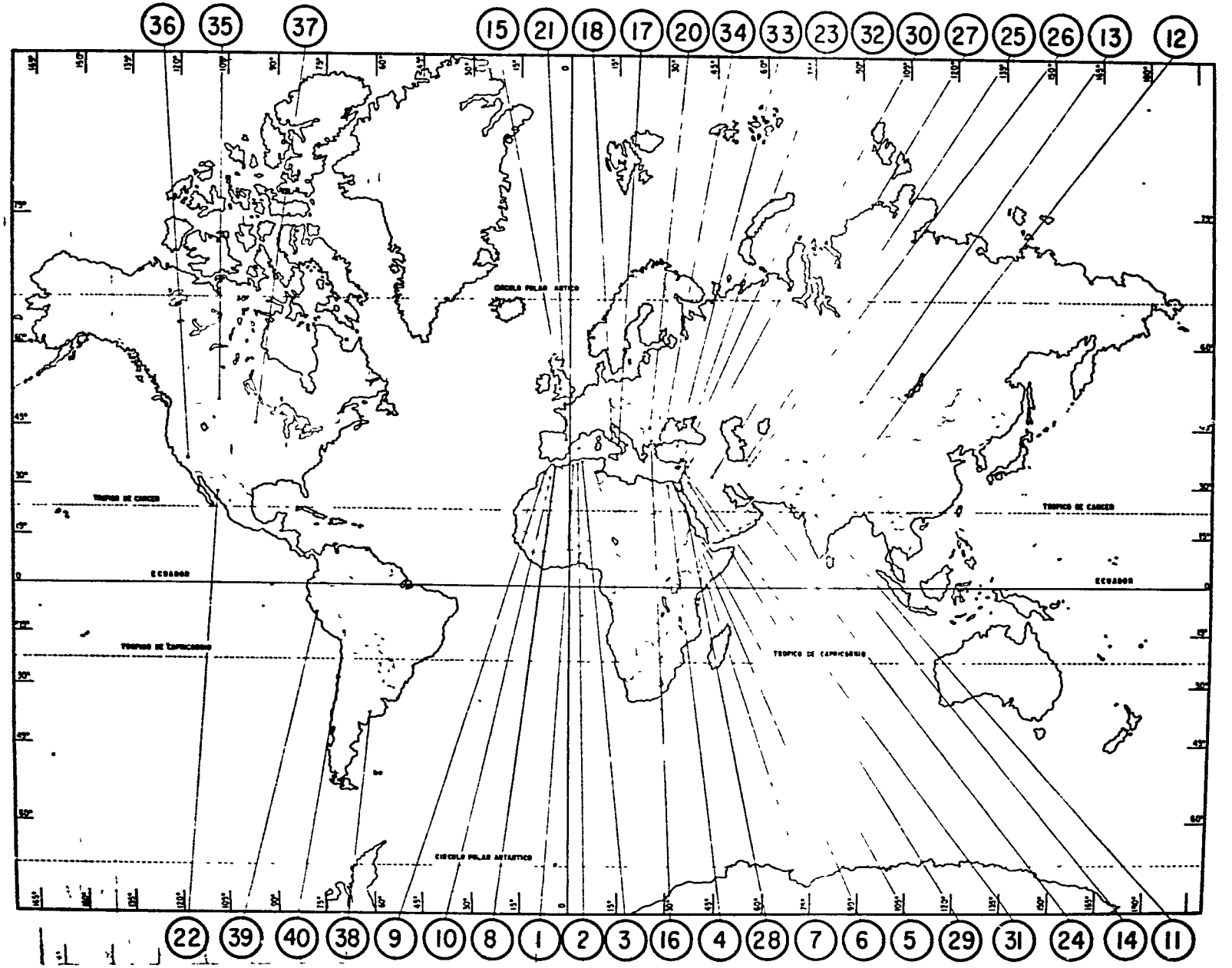
VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS
4	JORI C-65	MEXICO	5677.2	81.5	100.0	156.0	16.0	85.0	8.3	R	58.5
5	ANHINGA S	MEXICO	5649.4	81.5	99.0	154.0	0.0	120.0	46.6	S	51.1
9	CRANE S (A)	MEXICO	5527.2	79.7	94.0	154.0	1.0	85.0	10.0	R	42.0
8	CAJEME 71	MEXICO	5488.3	80.1	102.0	154.0	0.0	80.0	33.3	S	46.6
10	JORI S X CRANE S	MEXICO	5321.6	79.5	102.0	154.0	0.0	85.0	6.6	R	52.0
25	LOCAL CHECK		5310.5	82.0	93.0	151.0	50.0	125.0	25.0	R	45.2
6	BRANT S	MEXICO	5238.3	80.0	100.0	155.0	0.0	85.0	6.6	R	48.1
21	61-130 X LEEDS	U.S.A.	4593.9	79.1	119.0	162.0	4.0	90.0	0.0	S	38.1
22	T. DIC. VAR. VERNUM	MEXICO	4577.3	80.0	107.0	155.0	10.0	85.0	60.0	R	39.0
11	COCORIT C 71	MEXICO	4493.9	79.5	99.0	154.0	0.0	95.0	36.6	S	44.7
24	GANSO S	MEXICO	4332.8	78.5	109.0	160.0	50.0	90.0	3.3	R	61.8
7	CRANE S (B)	MEXICO	4271.7	79.5	100.0	154.0	4.0	90.0	56.6	R	45.7
15	D 6647	U.S.A.	4216.2	78.5	116.0	162.0	0.0	90.0	10.0	R	37.7
16	QUILAFEN	CHILE	3805.1	78.7	112.0	162.0	8.0	95.0	3.3	R	37.0
12	COCORIT S	MEXICO	3516.3	80.5	112.0	162.0	0.0	110.0	40.0	S	49.0
17	PARANA 66/270	ARGENTINA	3471.8	80.0	111.0	162.0	0.0	80.0	0.0	R	50.7
1	GAB-125	ITALY	3394.1	79.6	112.0	162.0	0.0	135.0	90.0	R	54.6
14	GERARDO 574	ITALY	3310.7	76.3	104.0	159.0	0.0	85.0	0.0	R	40.6
13	GERARDO 565	ITALY	3160.7	78.3	115.0	162.0	2.0	100.0	0.0	R	43.8
2	LEEDS	U.S.A.	2827.4	80.3	116.0	162.0	8.0	160.0	63.3	R	32.7
18	BD 58-25A	TUNISIA	2644.1	80.5	106.0	154.0	0.0	125.0	66.6	R	47.2
3	CAPEITI	ITALY	2255.3	80.5	101.0	162.0	4.0	130.0	93.3	MS	40.7
20	HILBA	LEBANON	2038.6	76.1	112.0	157.0	20.0	135.0	95.0	R	53.6
23	HERCULES	CANADA	1622.0	79.3	111.0	151.0	40.0	140.0	93.3	R	37.7
19	HARKOVSKAIA	U.S.S.R.	1233.2	79.1	117.0	159.0	5.0	155.0	73.3	R	37.1
	GRAND MEAN		3919.1	79.6	106.7	157.5	8.9	106.1	36.8		45.4
	STANDARD ERROR OF GRAND MEAN		40.1						2.2		
	COEFICIENT OF VARIATION		8.8						53.0		
	LSD VARIETY MEANS 5 PC		567.6						31.9		

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.41*							
DAYS TO	FLOWER	-0.59**	-0.43*						
DAYS TO	MATURITY	-0.34	-0.29	0.70**					
LEAF	RUST	-0.06	0.04	-0.08	-0.25				
HEIGHT	CM.	-0.68**	0.08	0.30	0.06	0.22			
LODGING		-0.60**	0.05	0.10	-0.14	0.08	0.76**		
SHATTERING		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000 GRN	WGT GRMS	0.33	0.09	-0.25	-0.13	0.20	-0.24	-0.11	0.00

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

FIGURE 4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CIRCULO POLAR ARTICO
TROPICO DE CANCER
ECUADOR
TROPICO DE CAPRICORNIO
CIRCULO POLAR ANTARTICO
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TABLE 5 AFRICA ETHIOPIA ASMARA

SEMBEL-ASMARA EXPERIMENT STATION.
COOPERATORS GHEBREZGHIABIER HAGOS.

LATITUDE 015 02'N
LONGITUDE 039 19'W
ELEVATION +02325 M.ABOVE S.L.

DATE PLANTED 07/07/72
DATE HARVESTED 11/19/72
AMOUNT OF MOISTURE 0317 MM

NITROGEN ---.- KG/HA
PHOSPHORUS ---.- KG/HA
POTASIUM ---.- KG/HA

HEAVY DAMAGE BY HAILSTORM. NEGLIGIBLE RUST INFECTION. 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.
25	LOCAL CHECK		1272.0	73.0	97.0	67.3
24	GANSO S	MEXICO	838.6	74.5	94.0	60.3
4	JORI C-69	MEXICO	811.0	70.6	93.0	52.3
6	BRANT S	MEXICO	775.6	71.5	94.0	52.0
12	COCORIT S	MEXICO	750.0	75.5	96.0	51.0
5	ANHINGA S	MEXICO	744.6	66.0	91.6	53.6
1	GAB-125	ITALY	666.3	70.6	95.3	60.0
3	CAPEITI	ITALY	622.3	67.0	-	46.3
16	QUILAFEN	CHILE	605.3	80.0	102.6	47.6
9	CRANE S (A)	MEXICO	600.0	69.6	96.0	50.3
17	PAPANA 66/270	ARGENTINA	572.0	77.0	96.5	47.6
20	HILBA	LEBANON	550.0	73.0	97.0	57.0
7	CRANE S (B)	MEXICO	538.6	69.0	96.0	50.6
22	T. DIC. VAR. VERNUM	MEXICO	533.3	74.3	95.5	46.6
10	JORI S X CRANE S	MEXICO	516.6	68.3	94.0	52.3
14	GERARDO 574	ITALY	516.6	65.5	102.0	44.6
11	COCORIT C 71	MEXICO	472.0	67.6	92.6	53.6
23	HERCULES	CANADA	411.0	74.3	96.5	50.6
2	LEEDS	U.S.A.	372.3	78.0	97.3	55.0
8	CAJEME 71	MEXICO	355.6	78.0	0.0	46.3
21	61-130 X LEEDS	U.S.A.	327.6	84.3	109.0	46.6
18	BD 58-25A	TUNISIA	200.0	78.0	93.0	45.0
15	D 6647	U.S.A.	161.0	78.3	99.3	43.6
19	HARKOVSKAIA	U.S.S.R.	128.0	82.6	102.0	47.3
13	GERARDO 565	ITALY	92.0	79.0	99.0	46.0
		GRAND MEAN	537.3	73.8	96.7	50.9
		STANDARD ERROR OF GRAND MEAN	41.2	0.7	0.6	0.8
		COEFICIENT OF VARIATION	66.5	8.1	5.0	14.4
		LSD VARIETY MEANS 5 PC	583.5	9.8	8.0	11.9

CORRELATIONS

YIELD	KG/HA			
DAYS TO	FLOWER	-0.48*		
DAYS TO	MATURITY	0.06	-0.03	
HEIGHT	CM.	0.73**	-0.28	0.10

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

TABLE 6 AFRICA ETHIOPIA SHOA

HOLETTA RESEARCH STATION.
COOPERATORS ZACHARIAS RUSSOM, ET AL.

LATITUDE 009 03'N
LONGITUDE 038 30'E
ELEVATION +02400 M.ABOVE S.L.

DATE PLANTED 06/29/72
DATE HARVESTED 11/27/72
AMOUNT OF MOISTURE 0627 MM

NITROGEN 060.0 KG/HA
PHOSPHORUS 026.0 KG/HA
POTASIUM 000.0 KG/HA

RAINFALL LOWER THAN NORMAL. GOOD GROWING SEASON. GOOD SEPTORIA AND STEM RUST DEVELOPMENT FROM NATURAL INFECTION. NO INSECT PROBLEM. CHEMICAL CONTROL OF WEEDS. PEST PROBLEMS NOT REPORTED. LOCAL CHECK IAR/T/105.
XX= GRAIN MARBLING.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA TRITICI	XX
25	LOCAL CHECK		3656.6	49.0	69.5	120.0	40MR	20S	112.5	45.0	66.5	0.0
8	CAJEME 71	MEXICO	2549.3	-	90.0	126.0	0	20MR	77.5	34.0	88.7	10.0
16	QUILAFEN	CHILE	2700.0	77.0	81.0	138.5	0	80VS	87.5	37.0	49.9	5.0
12	COCORIT S	MEXICO	2686.6	78.0	79.0	130.0	0	60S	100.0	42.0	83.2	10.0
17	PARANA 66/270	ARGENTINA	2638.3	78.0	77.5	139.5	0	40VS	90.0	47.0	38.8	5.0
18	BD 58-25A	TUNISIA	2626.6	78.0	82.0	135.0	2MS	30S	120.0	41.0	11.0	3.0
11	COCORIT C 71	MEXICO	2576.6	-	70.0	125.5	0	20VS	87.5	41.0	61.0	75.0
1	GA8-125	ITALY	2446.6	76.0	74.5	128.5	25MS	40VS	117.5	38.0	61.0	40.0
3	CAPEITI	ITALY	2423.3	79.0	70.5	136.0	0	80VS	110.0	38.0	38.8	40.0
24	GANSO S	MEXICO	2223.3	-	76.5	133.0	80MS	60VS	90.0	53.0	44.3	10.0
15	D 6647	U.S.A.	2220.0	75.0	90.5	144.5	0	90VS	87.5	29.0	61.0	50.0
6	BRANT S	MEXICO	2193.3	73.0	75.0	125.5	10MS	60VS	77.5	34.0	72.1	75.0
9	CRANE S (A)	MEXICO	2141.6	-	67.5	121.0	6MR	60VS	87.5	36.0	72.1	60.0
21	61-130 X LEEDS	U.S.A.	1998.3	-	90.5	144.5	5MR	80S	85.0	37.0	66.5	60.0
4	JORI C-69	MEXICO	1921.6	76.0	71.0	127.5	0	80VS	82.5	41.0	99.8	1.0
5	ANHINGA S	MEXICO	1896.6	77.0	68.5	122.0	40MS	50VS	112.5	36.0	77.6	90.0
22	T. DIC. VAR. VERNUM	MEXICO	1718.3	74.0	76.0	123.5	65MS	80VS	87.5	28.0	72.1	75.0
23	HERCULES	CANADA	1695.0	0.0	81.0	132.5	80MS	50VS	132.5	32.0	77.6	60.0
10	JORI S X CRANE S	MEXICO	1438.3	-	76.0	125.0	5MS	40VS	82.5	37.0	88.7	2.0
14	GERARDO 574	ITALY	1338.3	-	75.5	123.0	0	90VS	82.5	31.0	88.7	50.0
19	HARKOVSKAIA	U.S.S.R.	1066.6	0.0	90.0	143.5	80MS	70VS	140.0	45.0	55.4	90.0
2	LEEDS	U.S.A.	985.0	0.0	82.5	135.5	10MS	70VS	130.0	21.0	77.6	90.0
13	GERARDO 565	ITALY	946.6	-	85.0	141.5	0	90VS	95.0	26.0	66.5	50.0
7	CRANE S (B)	MEXICO	886.6	-	69.5	120.0	5MS	80VS	77.5	21.0	44.3	50.0
20	HILBA	LEBANON	806.6	0.0	73.5	122.5	100S	50VS	130.0	26.0	44.3	-
		GRAND MEAN	2007.1	74.6	77.6	130.5	16.1	60.5	99.2	35.8	64.3	41.7
		STANDARD ERROR OF GRAND MEAN	45.9		0.4	0.3	2.9	1.4	0.5		3.5	
		COEFICIENT OF VARIATION	19.8		4.1	1.8	118.7	17.4	4.2		39.1	
		LSD VARIETY MEANS 5 PC	649.9		5.2	4.0	31.4	17.2	6.8		41.1	

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.71**									
DAYS TO	FLOWER	-0.08	-0.09								
DAYS TO	MATURITY	-0.03	0.03	0.75**							
STRIPE	RUST	-0.43*	-0.47*	0.02	-0.09						
STEM	RUST	-0.57**	-0.20	0.06	0.26	-0.12					
HEIGHT	CM.	-0.19	-0.30	0.09	0.18	0.59**	-0.19				
1000 GRN	WGT GRMS	0.61**	0.30	-0.08	0.14	-0.17	-0.45*	0.00			
SEPTORIA	TRITICI	-0.10	-0.05	-0.01	-0.31	-0.01	0.17	-0.27	-0.18		
XX		-0.41*	-0.08	0.06	0.07	0.17	0.42*	0.17	-0.37	0.18	

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

TABLE 7 AFRICA ETHIOPIA SHOA

DEBRE ZEIT AGRIC. EXPERIMENT STATION
COOPERATORS TAREKE BERHE.

LATITUDE 008 55'N DATE PLANTED 08/06/71 NITROGEN 060.0 KG/HA
LONGITUDE 038 58'E DATE HARVESTED 01/05/72 PHOSPHORUS 040.0 KG/HA
ELEVATION +01860 M.ABOVE S.L. AMOUNT OF MOISTURE 0468 MM POTASIUM 000.0 KG/HA

FREQUENT DESSICATING WINDS AT THE TIME OF SEED DEVELOPMENT CONTRIBUTED TO LOWER YIELDS. EXCELLENT DEVELOPMENT OF STEM AND LEAF RUSTS. GOOD DEVELOPMENT OF SEPTORIA. INSECT AND WEED PROBLEMS NOT REPORTED. SLIGHT BIRD DAMAGE. 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.
11	COCORIT C 71	MEXICO	4541.6	62.3	63.0	142.0	10MR	10S	76.6
12	COCORIT S	MEXICO	3343.3	60.6	79.3	149.3	5MS	10S	101.6
4	JORI C-69	MEXICO	3008.3	40.6	64.0	143.6	25S	15S	76.6
10	JORI S X CRANE S	MEXICO	2805.0	54.0	72.6	145.3	10MR	10S	81.6
17	PARANA 66/270	ARGENTINA	2670.0	40.3	87.3	153.0	TMR	5S	78.3
5	ANHINGA S	MEXICO	2181.6	40.0	63.0	147.0	25S	15S	83.3
14	GERARDO 574	ITALY	2081.6	19.0	76.0	153.0	15MS	35S	75.0
8	CAJEME 71	MEXICO	1930.0	18.3	76.0	153.0	10MR	25S	73.3
16	QUILAFEN	CHILE	1893.3	19.0	85.6	153.0	25MS	10S	81.6
6	BRANT S	MEXICO	1818.3	16.6	70.0	145.3	25S	60S	73.3
24	GANSO S	MEXICO	1778.3	19.6	77.6	147.0	10MS	35S	75.0
1	GAB-125	ITALY	1775.0	18.6	73.3	143.6	10S	60S	90.0
3	CAPEITI	ITALY	1770.0	40.3	70.0	153.0	10MR	30S	95.0
7	CRANE S (B)	MEXICO	1651.6	18.0	63.0	142.0	80S	80S	70.0
23	HERCULES	CANADA	1263.3	20.3	85.0	151.0	25MS	35MS	95.0
22	T. DIC. VAR. VERNUM	MEXICO	1223.3	18.6	66.0	142.0	15MS	95S	70.0
18	BD 58-25A	TUNISIA	1113.3	20.3	88.6	153.0	0	0	100.0
9	CRANE S (A)	MEXICO	685.0	17.3	63.0	142.0	95S	95S	63.3
15	D 6647	U.S.A.	566.6	15.6	105.0	153.0	25MS	5S	78.3
21	61-130 X LEEDS	U.S.A.	403.3	0.0	105.0	153.0	10MS	25S	73.3
25	LOCAL CHECK		391.6	0.0	63.0	142.0	1R	100S	85.0
13	GERARDO 565	ITALY	278.3	0.0	99.0	153.0	15MS	80S	88.3
2	LEEDS	U.S.A.	116.6	0.0	102.3	153.0	40S	60S	101.6
20	HILBA	LEBANON	23.3	0.0	72.6	142.0	100.0	100S	100.0
19	HARKOVSKAIA	U.S.S.R.	13.3	0.0	114.3	153.0	60S	60S	110.0
		GRAND MEAN	1573.0	22.3	79.3	148.2	29.1	40.4	83.8
	STANDARD ERROR OF GRAND MEAN		94.7	3.0	0.3	0.2	2.8	2.4	1.0
	COEFICIENT OF VARIATION		52.1	17.3	3.9	1.2	68.4	42.5	11.1
	LSD VARIETY MEANS 5 PC		1340.1	42.9	5.0	3.0	32.6	28.1	15.2

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.91**					
DAYS TO	FLOWER	-0.50**	-0.45*				
DAYS TO	MATURITY	-0.20	-0.16	0.76**			
LEAF	RUST	-0.35	-0.27	-0.23	-0.41*		
STEM	RUST	-0.48*	-0.49**	-0.39*	-0.62**	0.64**	
HEIGHT	CM.	-0.26	-0.10	0.45*	0.35	-0.02	0.11

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

TABLE 8 AFRICA MOROCCO FES

DOUIET EXPERIMENT STATION.
COOPERATORS CHAMI BOUBKER, M. BAREK AND C. SEARL.

LATITUDE 034 00'N
LONGITUDE 005 00'W
ELEVATION +00400 M.ABOVE S.L.

DATE PLANTED 01/02/72
DATE HARVESTED 07/02/72
AMOUNT OF MOISTURE 0252 MM

NITROGEN 150.0 KG/HA
PHOSPHORUS 000.0 KG/HA
POTASIUM 000.0 KG/HA

EXCELLENT SEEDBED CONDITION. WARM WEATHER DURING MARCH AND APRIL. LACK OF RAIN. HEAVY ATTACK OF SEPTORIA. INSECT AND PEST PROBLEMS NOT REPORTED CHEMICAL CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS	SEPTORIA SPP.
6	BRANT S	MEXICO	4951.7	108.0	79.3	39.0	5
12	COCORIT S	MEXICO	4868.4	113.0	86.6	48.6	4
7	CRANE S (B)	MEXICO	4843.4	108.0	80.6	37.0	5
11	COCORIT C 71	MEXICO	4654.5	108.0	80.0	38.3	4
10	JORI S X CRANE S	MEXICO	4408.4	108.0	70.6	41.6	4
5	ANHINGA S	MEXICO	4348.9	112.3	115.0	40.3	5
9	CRANE S (A)	MEXICO	4280.8	108.0	64.0	32.0	5
8	CAJEME 71	MEXICO	4211.4	108.0	65.0	44.0	4
13	GERARDO 565	ITALY	3896.1	122.0	101.0	42.6	6
15	D 6647	U.S.A.	3886.4	122.0	84.6	35.6	5
21	61-130 X LEEDS	U.S.A.	3879.4	122.0	78.6	36.3	3
14	GERARDO 574	ITALY	3823.9	122.0	69.3	42.3	6
22	T. DIC. VAR. VERNUM	MEXICO	3604.4	122.0	81.6	31.3	3
16	QUILAFEN	CHILE	3498.8	122.0	74.3	35.5	5
24	GANSO S	MEXICO	3430.8	122.0	79.3	51.3	7
4	JORI C-69	MEXICO	3344.7	105.0	73.3	37.3	5
18	BD 58-25A	TUNISIA	3197.4	113.0	108.3	35.6	5
25	LOCAL CHECK		3100.2	122.0	110.0	31.0	6
17	PARANA 66/270	ARGENTINA	2741.8	122.0	79.3	36.3	7
3	CAPEITI	ITALY	2708.5	122.0	92.0	29.6	7
2	LEEDS	U.S.A.	2704.3	130.0	131.6	33.0	7
23	HERCULES	CANADA	2591.8	122.0	107.6	37.6	5
1	GAB-125	ITALY	2359.9	122.0	102.0	33.0	7
19	HARKOVSKAIA	U.S.S.R.	1909.8	122.0	135.0	28.0	6
20	HILBA	LEBANON	1901.5	113.0	119.3	40.3	6
		GRAND MEAN	3568.3	116.8	90.7	37.5	
		STANDARD ERROR OF GRAND MEAN	72.0	0.0	0.5	0.3	
		COEFICIENT OF VARIATION	17.4	0.1	5.1	9.1	
		LSD VARIETY MEANS 5 PC	1018.9	0.3	7.6	5.5	

CORRELATIONS

YIELD	KG/HA				
DAYS TO MATURITY		-0.57**			
HEIGHT	CM.	-0.62**	0.42*		
1000 GRN WGT	GRMS	0.44*	-0.27	-0.33	
SEPTORIA	SPP.	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 STATION.
COOPERATORS ARISTEO ACOSTA ET AL.

LATITUDE 034 13'N
LONGITUDE 005 43'W
ELEVATION +00084 M.ABOVE S.L.

DATE PLANTED 12/16/71
DATE HARVESTED 06/20/72
AMOUNT OF MOISTURE 0454 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 057.0 KG/HA
POTASIUM 039.0 KG/HA

GOOD WEATHER UNTIL END OF MARCH. DRY PERIOD DURING FIRST PART OF APRIL. LATE RAINS. LODGING CAUSED BY CRACKED SOIL AND STRONG WINDS. SOME LEAF RUST ON SPECIAL NURSERIES. INSECT AND PEST PROBLEMS NOT REPORTED. MECHANICAL AND CHEMICAL CONTROL OF WEEDS. LOCAL CHECK BD 2777.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	1000 GRN WGT GRMS
8	CAJEME 71	MEXICO	4850.3	45.0
12	COCORIT S	MEXICO	3653.0	52.0
7	CRANE S (B)	MEXICO	3600.2	43.0
6	BRANT S	MEXICO	3483.6	44.0
11	COCORIT C 71	MEXICO	3478.0	50.0
9	CRANE S (A)	MEXICO	3466.9	42.0
18	BD 58-25A	TUNISIA	3353.0	46.0
5	ANHINGA S	MEXICO	3333.5	47.0
24	GANSO S	MEXICO	3183.5	45.0
17	PARANA 66/270	ARGENTINA	3083.5	51.0
16	QUILAFEN	CHILE	3064.1	44.0
15	D 6647	U.S.A.	2930.7	37.0
4	JORI C-69	MEXICO	2889.1	47.0
10	JORI S X CRANE S	MEXICO	2872.4	49.0
21	61-130 X LEEDS	U.S.A.	2855.7	34.0
22	T. DIC. VAR. VERNUM	MEXICO	2844.6	38.0
25	LOCAL CHECK		2783.5	39.0
14	GERARDO 574	ITALY	2700.2	43.0
1	GAB-125	ITALY	2675.2	48.0
3	CAPEITI	ITALY	2655.7	40.0
23	HERCULES	CANADA	2152.9	39.0
2	LEEDS	U.S.A.	2111.2	38.0
13	GERARDO 565	ITALY	1900.1	50.0
20	HILBA	LEBANON	1491.7	43.0
19	HARKOVSKAIA	U.S.S.R.	1361.2	27.0
		GRAND MEAN	2911.0	43.2
		STANDARD ERROR OF GRAND MEAN	56.9	
		COEFICIENT OF VARIATION	16.9	
		LSD VARIETY MEANS 5 PC	804.8	

CORRELATIONS

YIELD KG/HA	
1000 GRN WGT GRMS	0.43*

TABLE 10 AFRICA MOROCCO MARRAKECH

MENARA STATION.
COOPERATORS ABDESLAM HAMDALI, A. SAFRAOUI, A. ACOSTA.

LATITUDE 031 37'N
LONGITUDE 008 01'W
ELEVATION +00464 M.ABOVE S.L.

DATE PLANTED 12/17/71
DATE HARVESTED 06/20/72
AMOUNT OF MOISTURE 0214 MM

NITROGEN 096.0 KG/HA
PHOSPHORUS 090.0 KG/HA
POTASIUM 096.0 KG/HA

GOOD WEATHER EXCEPT FOR A SLIGHT RISE OF TEMPERATURES TOWARDS THE END OF THE SEASON. CONSIDERABLE LEAF FIRING. NO INSECT, WEED OR PEST PROBLEMS. SEPTORIA SCALE NOT REPORTED. LOCAL CHECK BD 2777.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	SEPTORIA SPP.
6	BRANT S	MEXICO	9366.6	79.5	102.0	152.0	0.0	20.0	40.0	0.0	1
12	COCORIT S	MEXICO	8283.3	81.7	110.0	158.0	0.0	10.0	115.0	0.0	1
11	COCORIT C 71	MEXICO	8266.6	81.1	97.0	150.0	0.0	5.0	100.0	0.0	1
9	CRANE S (A)	MEXICO	7966.6	83.0	97.0	150.0	0.0	10.0	95.0	0.0	1
16	QUILAFEN	CHILE	7266.6	81.2	104.0	152.0	0.0	5.0	100.0	0.0	2
10	JORI S X CRANE S	MEXICO	6933.3	79.3	104.0	152.0	0.0	5.0	90.0	0.0	1
21	61-130 X LEEDS	U.S.A.	6749.9	81.6	110.0	158.0	10.0	20.0	0.0	0.0	TR
15	D 6647	U.S.A.	6666.6	81.0	108.0	154.0	8.0	10.0	95.0	0.0	1
4	JORI C-69	MEXICO	6533.3	81.6	104.0	153.0	0.0	20.0	95.0	0.0	2
13	GERARDO 565	ITALY	6466.6	78.0	110.0	158.0	5.0	20.0	110.0	0.0	1
17	PARANA 66/270	ARGENTIN.	6283.3	81.1	104.0	153.0	0.0	1.3	90.0	0.0	2
14	GERARDO 574	ITALY	6166.6	80.1	104.0	153.0	0.0	10.0	90.0	0.0	3
8	CAJEME 71	MEXICO	6133.3	82.2	102.0	145.0	0.0	0.0	95.0	0.0	2
24	GANSO S	MEXICO	6133.3	79.1	104.0	153.0	0.0	10.0	100.0	0.0	1
7	CRANE S (B)	MEXICO	5699.9	78.8	102.0	152.0	0.0	10.0	95.0	0.0	1
22	T. DIC. VAR. VERNUM	MEXICO	5116.6	81.8	104.0	152.0	0.0	2.0	100.0	11.0	3
23	HERCULES	CANADA	5116.6	81.0	102.0	150.0	4.0	40.0	140.0	55.5	2
5	ANHINGA S	MEXICO	4466.6	83.1	102.0	152.0	0.0	30.0	115.0	77.6	2
18	BD 58-25A	TUNISIA	3933.3	77.6	102.0	150.0	0.0	4.0	125.0	77.6	2
2	LEEDS	U.S.A.	3766.6	79.8	108.0	154.0	0.0	30.0	145.0	66.5	2
3	CAPEITI	ITALY	3699.9	78.5	104.0	152.0	0.0	60.0	-	99.8	3
1	GAB-125	ITALY	2933.3	77.8	104.0	152.0	0.0	20.0	125.0	99.8	2
19	HARKOVSKAIA	U.S.S.R.	2766.6	78.5	110.0	158.0	8.0	5.0	135.0	77.6	1
20	HILBA	LEBANON	2533.3	71.7	104.0	152.0	40.0	30.0	120.0	77.6	3
25	LOCAL CHECK		2400.0	66.0	104.0	153.0	0.0	20.0	-	99.8	TR
		GRAND MEAN	5665.9	79.4	104.2	152.7	3.0	15.8	105.6	29.7	

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

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.59**							
DAYS TO	FLOWER	-0.18	-0.08						
DAYS TO	MATURITY	-0.01	-0.08	0.82**					
STRIPE	RUST	-0.33	-0.38*	0.20	0.15				
LEAF	RUST	-0.37	-0.21	0.06	0.06	0.21			
HEIGHT	CM.	-0.25	0.29	-0.01	-0.12	0.06	0.12		
LODGING		-0.87**	-0.55**	0.03	-0.03	0.21	0.56**	0.24	
SEPTORIA	SPP.	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 11 ASIA INDIA M PRADESH

WHEAT BREEDING SUB-STATION, I.A.R.I., INDORE.
COOPERATORS DR. Y.P. UPADHYAYA ET AL.

LATITUDE 023 00'N DATE PLANTED 12/12/71 NITROGEN 134.0 KG/HA
LONGITUDE 076 00'E DATE HARVESTED 05/10/72 PHOSPHORUS 067.0 KG/HA
ELEVATION +0060 M.ABOVE S.L. AMOUNT OF MOISTURE ---- MM POTASIUM 000.0 KG/HA

DRY SEASON THROUGHOUT TEST. FROST INCIDENCE AT ABOUT 60TH DAY OF CROP STAGE. SLOW DISEASE DEVELOPMENT. INSECTS AND WEEDS NOT REPORTED. RAT DAMAGE REDUCED PLOT YIELDS. EAR SIZE SCALE: L = LONG, M = MEDIUM, S = SMALL. DENSITY SCALE: D = DENSE, MD = MED. DENSE, ML = MED. LACK, L = LACKS. PLANT VIGOR SCALE: G = GOOD, VG = VERY GOOD, VVG = VERY VERY GOOD. LOCAL CHECK NOT REPORTED. XXX = DENSITY.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	STEM RUST	LODGING	1000 GRN WGT GRMS	EAR SIZE	XXX	PLANT VIGOR
25	LOCAL CHECK		5763.4	-	83.0	126.0	-	-	1-2	40.0	ML	D	VG
5	ANHINGA S	MEXICO	5215.0	-	80.0	126.0	-	-	3-4	50.7	M	D	VG
4	JORI C-69	MEXICO	5064.5	86.5	80.0	120.0	-	0.0	1-2	52.0	L	D	G
22	T. DIC. VAR. VERNUM	MEXICO	4870.5	86.1	87.0	122.0	-	-	3-4	42.0	L	MD	VG
11	COCORIT C 71	MEXICO	4817.1	86.1	84.0	121.0	-	-	2-3	46.3	L	MD	VG
12	COCORIT S	MEXICO	4817.1	87.0	94.0	128.0	0.0	6.0	2-3	52.3	L	MD	M
24	GANSO S	MEXICO	4806.4	83.0	83.0	124.0	4.0	24.0	1-2	60.0	ML	D	VG
7	CRANE S (B)	MEXICO	4784.5	86.0	85.0	120.0	-	-	2-3	44.0	L	D	G
10	JORI S X CRANE S	MEXICO	4565.8	85.5	85.0	120.0	10.0	6.0	2-3	52.0	M	MD	M
6	BRANT S	MEXICO	4462.3	83.5	86.0	119.0	0.0	0.0	1-2	48.0	MM	D	M
3	CAPEITI	ITALY	4451.6	86.5	83.0	122.0	-	0.0	5-6	52.0	S	D	G
9	CRANE S (A)	MEXICO	4311.8	86.5	83.0	118.0	0.0	2.0	1-2	42.0	M	D	G
16	QUILAFEN	CHILE	4258.0	83.5	97.0	130.0	2.0	20.0	1-2	44.0	M	MD	G
1	GAB-125	ITALY	4150.5	-	80.0	132.0	0.0	0.0	4-5	52.0	S	D	G
15	D 6647	U.S.A.	4075.2	83.0	95.0	127.0	2.0	30.0	1-2	36.0	M	MD	G
14	CERARDO 574	ITALY	3903.2	0.0	89.0	124.0	30.0	20.0	2-3	45.5	M	MD	M
17	PARANA 66/270	ARGENTINA	3752.6	86.0	91.0	128.0	2.0	20.0	2-3	50.3	L	D	G
23	HERCULES	CANADA	3591.3	85.0	91.0	128.0	0.0	0.0	2-3	46.0	M	MD	G
13	GERARDO 565	ITALY	3580.6	83.0	97.0	132.0	40.0	30.0	1-2	48.7	M	MD	M
21	61-130 X LEEDS	U.S.A.	3204.2	88.0	99.0	128.0	20.0	30.0	2-3	38.0	L	MD	VG
2	LEEDS	U.S.A.	3150.5	0.0	96.0	140.0	0.0	0.0	2-3	36.0	M	MD	M
8	CAJEME 71	MEXICO	2774.1	83.0	88.0	122.0	0.0	0.0	2-3	40.0	L	ML	VVG
19	HARKOVSKAIA	U.S.S.R.	2225.8	83.0	98.0	134.0	0.0	20.0	4-5	38.0	L	MD	M
20	HILWA	LEBANON	2161.2	83.0	91.0	127.0	20.0	40.0	5-6	53.1	L	MD	VG
18	BC 58-25A	TUNISIA	1784.5	86.0	86.0	127.0	0.0	0.0	4-5	50.0	S	D	VG
		GRAND MEAN	4021.5	85.1	88.5	125.7	7.5	13.3		46.3			

STANDARD ERROR OF GRAND MEAN 85.0
COEFICIENT OF VARIATION 18.3
LSD VARIETY MEANS 5 PC 1202.2

CORRELATIONS

YIELD	KG/HA											
TEST	WEIGHT	0.12										
DAYS TO	FLOWER	-0.50**	-0.00									
DAYS TO	MATURITY	-0.45*	-0.45*	0.60**								
LEAF	RUST	-0.20	-0.16	0.34	0.12							
STEM	RUST	-0.31	0.09	0.60**	0.30	0.63**						
LODGING		0.00	0.00	0.00	0.00	0.00	0.00					
1000 GRN	WGT GRMS	0.20	0.11	-0.51**	-0.25	0.04	-0.04	0.00				
EAR	SIZE	0.00	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	0.00		
PLANT	VIGOR	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 12 ASIA INDIA M PRADESH

WHEAT RESEARCH STATION, POWARKHEDA.
COOPERATORS DR. S.P. SINGH AND R.R. SHEOPNIA.

LATITUDE 022 44'N
LONGITUDE 077 42'E
ELEVATION +00299 M.ABOVE S.L.

DATE PLANTED 12/14/71
DATE HARVESTED 04/15/72
AMOUNT OF MOISTURE 0520 MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 060.0 KG/HA
POTASIUM 040.0 KG/HA

FAVORABLE WEATHER CONDITIONS FOR WHEAT GROWTH DURING TEST. NEGLIGIBLE DISEASE DEVELOPMENT. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK NP 404.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
4	JORI C-69	MEXICO	6507.2	82.0	108.0	82.0	45.6
5	ANHINGA S	MEXICO	6072.4	70.0	101.0	100.0	44.1
25	LOCAL CHECK		5927.5	82.0	101.0	106.0	49.3
3	CAPEITI	ITALY	5463.7	90.0	118.0	111.0	46.0
7	CRANE S (B)	MEXICO	5289.8	72.0	101.0	73.0	35.6
9	CRANE S (A)	MEXICO	5246.3	68.0	101.0	79.0	36.5
10	JORI S X CRANE S	MEXICO	5217.3	90.0	118.0	71.0	36.8
1	CAB-125	ITALY	5014.4	90.0	118.0	106.0	49.3
16	QUILAFEN	CHILE	4898.5	91.0	118.0	61.0	43.0
11	COCORIT C 71	MEXICO	4811.5	70.0	101.0	84.0	35.3
6	BRANT S	MEXICO	4681.1	72.0	101.0	87.0	34.6
18	BD 56-25A	TUNISIA	4275.3	91.0	118.0	92.0	44.3
14	CERARDO 574	ITALY	4144.9	90.0	118.0	66.0	41.3
12	COCORIT S	MEXICO	4057.9	90.0	118.0	87.0	47.8
22	T. DIC. VAR. VERNUM	MEXICO	3971.0	73.0	105.0	82.0	34.5
17	PARANA 66/270	ARGENTINA	3913.0	91.0	118.0	64.0	49.1
24	GANSO S	MEXICO	3681.1	92.0	118.0	89.0	54.8
8	CAJEME 71	MEXICO	3637.6	90.0	118.0	68.0	30.5
20	HILBA	LEBANON	3318.8	92.0	118.0	119.0	48.0
23	HERCULES	CANADA	2782.6	92.0	118.0	125.0	39.3
2	LEEDS	U.S.A.	2434.7	101.0	123.0	110.0	37.0
13	GERARDO 565	ITALY	2405.7	101.0	123.0	78.0	51.0
19	HARKOVSKAIA	U.S.S.R.	2347.8	72.0	105.0	138.0	34.1
21	61-130 X LEEDS	U.S.A.	1246.3	102.0	122.0	70.0	40.6
15	C 6647	U.S.A.	1246.3	72.0	105.0	59.0	41.6
		GRAND MEAN	4103.7	85.0	112.5	88.2	42.0
	STANDARD ERROR OF GRAND MEAN		96.3				0.2
	COEFICIENT OF VARIATION		20.3				4.7
	LSD VARIETY MEANS 5 PC		1363.1				3.2

CORRELATIONS

YIELD	KG/HA				
DAYS TO	FLOWER	-0.36			
DAYS TO	MATURITY	-0.40*	0.95**		
HEIGHT	CM.	-0.01	-0.00	-0.02	
1000 GRN	WGT GRMS	0.09	0.43*	0.36	0.08

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

TABLE 13 ASIA PAKISTAN PUNJAB

PUNJAB AGRICULTURAL RESEARCH INSTITUTE.
COOPERATORS CEREAL BOTANIST

LATITUDE 031 30'N	DATE PLANTED	11/13/71	NITROGEN	050.0	KG/HA
LONGITUDE 073 10'E	DATE HARVESTED	04/27/72	PHOSPHORUS	060.0	KG/HA
ELEVATION +00213 M.ABOVE S.L.	AMOUNT OF MOISTURE	0421 MM	POTASIUM	000.0	KG/HA

WEATHER REMAINED NORMAL. BAD YEAR FOR RUST EPIDEMIC. INSECT AND PEST PROBLEMS NOT REPORTED. HAND WEEDING. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	LEAF RUST	HEIGHT CM.	LODGING
25	LOCAL CHECK		5599.4	74.0	103.0	5R	93.0	0.0
8	CAJEME 71	MEXICO	5243.9	67.0	100.0	0	86.0	0.0
10	JORI S X CRANE S	MEXICO	5221.6	67.0	105.0	0	86.0	0.0
1	GAB-125	ITALY	5110.5	78.0	108.0	0	136.0	50.0
12	COCORIT S	MEXICO	5066.1	78.0	109.0	0	101.0	0.0
3	CAPEITI	ITALY	5021.7	67.0	103.0	0	122.0	80.0
17	PARANA 66/270	ARGENTIN	4899.5	78.0	110.0	0	92.0	0.0
5	ANHINGA S	MEXICO	4821.7	53.0	95.0	0	104.0	0.0
24	GANSO S	MEXICO	4799.5	76.0	109.0	5R	85.0	0.0
6	BRANT S	MEXICO	4721.7	60.0	94.0	0	85.0	0.0
11	COCORIT C 71	MEXICO	4721.7	56.0	103.0	0	96.0	0.0
21	61-130 X LEEDS	U.S.A.	4655.0	82.0	109.0	10R	92.0	0.0
7	CRANE S (B)	MEXICO	4655.0	53.0	97.0	0	86.0	0.0
18	BD 58-25A	TUNISIA	4621.7	73.0	101.0	0	131.0	0.0
16	QUILAFEN	CHILE	4566.1	80.0	111.0	10R	90.0	0.0
15	D 6647	U.S.A.	4521.7	78.0	109.0	10R	93.0	0.0
23	HERCULES	CANADA	4510.6	77.0	106.0	5R	159.0	70.0
4	JORI C-69	MEXICO	4399.5	65.0	106.0	0	90.0	0.0
22	T. DIC. VAR. VERNUM	MEXICO	4310.6	71.0	103.0	0	88.0	0.0
13	GERARDO 565	ITALY	4155.1	81.0	111.0	10R	101.0	0.0
2	LEEDS	U.S.A.	4132.9	78.0	106.0	5R	152.0	10.0
14	GERARDO 574	ITALY	3877.3	72.0	108.0	0	85.0	0.0
9	CRANE S (A)	MEXICO	3477.4	46.0	96.0	0	81.0	0.0
19	HARKOVSKAIA	U.S.S.R.	3432.9	82.0	109.0	0	160.0	0.0
20	HILBA	LEBANON	2633.0	80.0	101.0	25S	149.0	100.0
		GRAND MEAN	4527.0	70.8	104.4	1.4	105.7	12.3

STANDARD ERROR OF GRAND MEAN 67.1
COEFICIENT OF VARIATION 12.8
LSD VARIETY MEANS 5 PC 949.1

CORRELATIONS

YIELD	KG/HA					
DAYS TO	FLOWER	-0.07				
DAYS TO	MATURITY	0.02	0.80**			
LEAF	RUST	-0.60**	0.26	-0.06		
HEIGHT	CM.	-0.37	0.42*	0.13	0.33	
LODGING		-0.27	0.20	-0.04	0.61**	0.62**

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

TABLE 14 ASIA PAKISTAN SIND

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

LATITUDE 025 02'N
LONGITUDE 063 38'E
ELEVATION +00015 M.ABOVE S.L.

DATE PLANTED 10/28/71
DATE HARVESTED 03/22/72
AMOUNT OF MOISTURE 0613 MM

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

COMPARATIVELY SHORT AND WARM WINTER. NEGLIGIBLE RAINS DURING THE GROWING PERIOD. ABUNDANCE OF LEAF AND STEM RUSTS. 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.	1000 GRN WGT GRMS
3	CAPEITI	ITALY	3934.4	81.3	76.0	109.0	25S	5S	114.2	55.0
8	CAJEME 71	MEXICO	3746.6	77.3	82.0	120.0	5MS	40S	71.1	51.0
12	COCORIT S	MEXICO	3651.1	77.7	105.0	145.0	5S	40S	101.5	51.0
1	CAB-125	ITALY	3526.6	77.4	102.0	138.0	10S	40S	134.5	47.0
4	JORI C-65	MEXICO	3526.6	79.7	67.0	104.0	10MS	10S	91.4	66.0
10	JORI S X CRANE S	MEXICO	3494.4	78.7	82.0	124.0	10S	25S	76.1	60.0
25	LOCAL CHECK		3494.4	79.7	67.0	118.0	5MS	10S	76.1	59.5
24	GANSO S	MEXICO	3365.9	76.4	67.0	116.0	0.0	0.0	96.5	68.5
11	COCORIT C 71	MEXICO	3305.5	77.3	61.0	105.0	5S	25S	78.7	59.5
23	HERCULES	CANADA	2959.9	80.0	90.0	133.0	40S	10MS	144.6	51.0
7	CRANE S (B)	MEXICO	2833.3	77.3	61.0	98.0	5MS	10S	68.5	52.5
22	T. DIC. VAR. VERNUM	MEXICO	2802.2	80.6	96.0	132.0	5MS	40S	91.3	47.5
6	BRANT S	MEXICO	2675.5	77.4	72.0	104.0	10MS	40S	68.5	55.0
14	GERARDO 574	ITALY	2392.2	77.2	108.0	141.0	5MS	25S	88.8	47.0
17	PARANA 66/270	ARGENTINA	2361.1	76.5	102.0	141.0	0.0	0.0	93.8	49.0
18	BC 58-25A	TUNISIA	2361.1	77.4	107.0	145.0	10MS	60S	116.7	49.0
16	CUILAFEN	CHILE	2361.1	75.2	102.0	143.0	40S	10S	83.7	42.5
15	C 6647	U.S.A.	2233.3	74.7	102.0	139.0	25S	5MS	93.8	33.5
9	CRANE S (A)	MEXICO	2172.2	-	61.0	92.0	25MS	60S	66.0	53.0
5	ANHINGA S	MEXICO	2172.2	80.5	59.0	99.0	0.0	0.0	76.1	59.5
21	61-130 X LEEDS	U.S.A.	2141.1	75.1	74.0	122.0	5MS	-	83.7	34.0
2	LEEDS	U.S.A.	2139.9	76.8	110.0	142.0	5S	10S	152.3	29.5
13	GERARDO 565	ITALY	1667.7	73.7	98.0	138.0	25S	25S	99.0	44.5
20	HILEA	LEBANON	1258.8	67.3	106.0	140.0	80VS	55VS	134.5	45.0
19	HARKOVSKAIA	U.S.S.R.	346.6	0.0	105.0	139.0	60S	80S	137.1	21.5
		GRAND MEAN	2677.1	77.2	86.4	125.0	18.0	31.5	97.6	49.2
	STANDARD ERROR OF GRAND MEAN		55.8							
	COEFICIENT OF VARIATION		18.0							
	LSD VARIETY MEANS 5 PC		789.3							

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.65**						
DAYS TO	FLOWER	-0.38	-0.27					
DAYS TO	MATURITY	-0.31	-0.23	0.95**				
LEAF	RUST	-0.57**	-0.54**	0.37	0.31			
STEM	RUST	-0.43*	-0.49**	0.33	0.21	0.56**		
HEIGHT	CM.	-0.29	-0.34	0.63**	0.60**	0.49**	0.26	
1000 GRN	WGT GRMS	0.69**	0.58**	-0.65**	-0.58**	-0.43*	-0.26	-0.47

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

TABLE 15 EUROPE ENGLAND CAMBRIDGESHIRE

PLANT BREEDING INSTITUTE, CAMBRIDGE.
COOPERATORS R.S. GREGORY.

LATITUDE 052 11'N	DATE PLANTED	03/15/72	NITROGEN	133.0	KG/HA
LONGITUDE 000 07'E	DATE HARVESTED	08/26/72	PHOSPHORUS	015.0	KG/HA
ELEVATION +00018 M.ABOVE S.L.	AMOUNT OF MOISTURE	0177 MM	POTASIUM	029.0	KG/HA

COOL, CLOUDY AND RATHER DRY WEATHER. GOOD DEVELOPMENT OF STEM AND STRIPE RUSTS. INSECT AND PEST PROBLEMS NOT REPORTED. SOME WEED PROBLEMS NEAR HARVEST. LOCAL CHECK PARIS COVE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	HEIGHT CM.	LODGING	POWDERY MILDEW
22	T. DIC. VAR. VERNUM	MEXICO	5433.3	102.3	5MS	77.3	13.3	51.7
13	GERARDO 565	ITALY	5129.3	101.3	5MS	93.0	20.0	40.6
25	LOCAL CHECK		5066.6	104.3	1S	107.0	0.0	22.1
11	COCORIT C 71	MEXICO	4616.0	98.6	2MS	82.6	26.6	40.6
5	ANHINGA S	MEXICO	4573.3	97.3	1MS	89.3	26.6	44.3
9	CRANE S (A)	MEXICO	4497.3	94.0	1R	73.6	13.3	55.4
16	QUILAFEN	CHILE	4438.6	100.0	2MR	77.3	0.0	59.1
19	HARKOVSKAIA	U.S.S.R.	4341.3	98.3	2S	128.6	93.3	40.6
6	BRANT S	MEXICO	4233.3	97.3	0	70.3	0.0	55.4
7	CRANE S (B)	MEXICO	4217.3	97.3	0	77.6	6.6	73.9
12	COCORIT S	MEXICO	3950.6	96.3	5MR	91.0	40.0	51.7
14	GERARDO 574	ITALY	3944.0	101.6	2MS	73.0	0.0	62.8
17	PARANA 66/270	ARGENTINA	3886.6	97.6	TRR	73.3	0.0	70.2
24	CANSO S	MEXICO	3866.6	99.0	1R	76.3	20.0	66.5
3	CAPEITI	ITALY	3682.6	96.0	2MS	88.0	26.6	51.7
18	BO 58-25A	TUNISIA	3602.6	96.3	2MR	94.0	20.0	14.7
4	JORI C-69	MEXICO	3576.0	100.3	1MS	75.6	0.0	62.8
1	GAB-125	ITALY	3508.0	99.0	1MS	90.0	53.3	33.2
10	JORI S X CRANE S	MEXICO	3454.6	100.3	1R	73.0	13.3	55.4
23	HERCULES	CANADA	3108.0	98.6	10MR	106.3	40.0	36.9
2	LEEDS	U.S.A.	2962.6	101.6	5MS	101.6	13.3	51.7
21	61-130 X LEEDS	U.S.A.	2602.6	102.6	5MS	84.6	0.0	48.0
15	C 6647	U.S.A.	2734.6	101.3	5MS	84.3	0.0	22.1
8	CAJEME 71	MEXICO	2522.6	91.6	0	71.6	0.0	51.7
20	HILBA	LEBANON	1864.0	95.3	40S	97.6	73.3	62.8
		GRAND MEAN	3840.5	98.7	3.0	86.3	19.9	49.1
		STANDARD ERROR OF GRAND MEAN	90.1	0.1	0.1	0.5	1.4	1.2
		COEFICIENT OF VARIATION	20.3	1.6	54.6	5.4	62.1	22.4
		LSD VARIETY MEANS 5 PC	1274.4	2.6	2.7	7.6	20.3	18.0

CORRELATIONS

	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	HEIGHT CM.	LODGING	POWDERY MILDEW
DAYS TO FLOWER	0.29					
STRIPE RUST	-0.52**	-0.14				
HEIGHT CM.	-0.02	0.16	0.23			
LODGING	-0.13	-0.26	0.45*	0.70**		
POWDERY MILDEW	-0.04	-0.21	0.11	-0.52**	-0.15	

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

TABLE 16 EUROPE GREECE THESSALONIKI

PLANT BREEDING INSTITUTE.
COOPERATORS ELPIS SKORDA

LATITUDE 040 38'N
LONGITUDE 022 57'E
ELEVATION +0001C M.ABOVE S.L.

DATE PLANTED 11/25/71
DATE HARVESTED 06/19/72
AMOUNT OF MOISTURE 0358 MM

NITROGEN 010.0 KG/HA
PHOSPHORUS 004.0 KG/HA
POTASIUM 000.0 KG/HA

WET AND MILD WEATHER DURING AUTUMN AND WINTER. WET AND WARM SPRING. UNKNOWN DISEASE DEVELOPMENT. SYMPTOMS: YELLOW LEAVES WHICH DRIED VERY EARLY IN THE SEASON. INSECT AND PEST PROBLEMS NOT REPORTED. CHEMICAL CONTROL OF WEEDS. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
6	BRANT S	MEXICO	3242.0	73.8	160.0	80.6	53.1
12	COCORIT S	MEXICO	3126.9	78.2	163.0	103.0	55.6
18	BD 58-25A	TUNISIA	2896.6	76.3	160.0	100.3	49.0
22	T. DIC. VAR. VERNUM	MEXICO	2896.6	78.6	160.3	84.0	41.0
14	GERARDO 574	ITALY	2787.5	78.7	162.0	81.6	51.5
10	JORI S X CRANE S	MEXICO	2745.1	75.3	159.0	80.3	52.1
11	COCORIT C 71	MEXICO	2702.7	75.8	161.0	86.0	36.5
5	ANHINGA S	MEXICO	2654.2	78.2	160.3	99.0	50.1
9	CRANE S (A)	MEXICO	2623.9	76.7	159.0	78.3	53.1
25	LOCAL CHECK		2605.7	77.0	162.0	99.0	55.1
7	CRANE S (B)	MEXICO	2575.4	77.1	159.3	77.0	50.1
1	GAB-125	ITALY	2539.1	79.0	161.3	107.0	53.3
15	D 6647	U.S.A.	2484.5	78.5	160.3	76.0	43.1
4	JORI C-69	MEXICO	2460.3	77.0	160.3	85.3	57.0
23	HERCULES	CANADA	2405.8	80.2	161.3	121.0	45.0
17	PARANA 66/270	ARGENTIN	2363.3	79.1	164.6	82.3	56.5
21	61-130 X LEEDS	U.S.A.	2363.3	78.3	161.3	83.3	45.6
13	GERARDO 565	ITALY	2351.2	78.1	163.0	86.6	57.6
3	CAPEITI	ITALY	2339.1	79.7	161.6	105.3	49.5
24	GANSO S	MEXICO	2211.8	73.7	163.0	84.0	63.8
16	QUILAFEN	CHILE	2139.1	79.4	161.0	81.0	47.0
19	HARKOVSKAIA	U.S.S.R.	2011.9	79.3	164.3	124.3	38.8
20	HILBA	LEBANON	1945.2	76.1	160.3	112.0	51.1
2	LEEDS	U.S.A.	1927.0	81.1	162.3	113.0	39.5
8	CAJEME 71	MEXICO	1739.2	76.5	157.0	66.3	51.3
	GRAND MEAN		2485.5	77.7	161.1	91.8	49.6
	STANDARD ERROR OF GRAND MEAN		56.3	0.0	0.1	0.4	0.7
	COEFICIENT OF VARIATION		19.6	0.8	0.9	4.5	13.0
	LSD VARIETY MEANS 5 PC		796.7	1.0	2.3	6.7	10.6

CORRELATIONS

YIELD	KG/HA				
TEST	WEIGHT	-0.29			
DAYS TO	MATURITY	-0.07	0.38*		
HEIGHT	CM.	-0.17	0.44*	0.46*	
1000 GRN	WGT GRMS	0.12	-0.43*	0.06	-0.26

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

TABLE 17 EUROPE

ITALY

ROME I

INSTITUTO SPERIMENTALE PER LA CEREALICOLTURA.
COOPERATORS JOSE VALLECA.

LATITUDE 041 28'N
LONGITUDE 015 32'E
ELEVATION +00076 M.ABOVE S.L.

DATE PLANTED 12/23/71
DATE HARVESTED 06/22/72
AMOUNT OF MOISTURE 0280 MM

NITROGEN 044.0 KG/HA
PHOSPHORUS 056.0 KG/HA
POTASIUM ---.- KG/HA

MILD WINTER WITH ABUNDANT RAINS. **SIROCCO** WINDS AFFECTED NEGATIVELY SEED MATURITY. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK GIORGIO 451. XX= SHRINKING.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	POWDERY MILDEW	XX
11	CODORIT C 71	MEXICO	5683.8	79.5	113.6	162.3	100S	10/S	45MR	85.0	0.0	10.0	46.8	51.6	4.1
8	CAJEME 71	MEXICO	5622.7	81.6	107.6	160.0	100MR	0	0	79.6	0.0	80.0	50.2	33.3	3.0
9	CRANE S (A)	MEXICO	5311.6	77.6	108.3	162.0	100S	100S	60MR	81.3	50.0	0.0	39.1	41.6	5.6
10	JORI S X CRANE S	MEXICO	5202.8	77.2	114.3	163.3	100S	100S	40MR	80.0	0.0	0.0	45.5	100.0	4.6
6	BRANT S	MEXICO	5186.1	78.2	111.3	162.6	100S	100S	55MS	79.3	0.0	0.0	43.4	66.6	4.7
7	CRANE S (B)	MEXICO	5160.5	78.3	114.6	163.0	100S	100S	60MR	78.6	0.0	0.0	39.8	100.0	4.9
12	CODORIT S	MEXICO	5157.2	80.3	119.6	167.0	100S	100S	50MR	105.0	0.0	0.0	46.6	100.0	4.0
24	GANSO S	MEXICO	5149.4	78.4	118.6	166.6	100MS	0	50MS	83.3	0.0	6.6	57.1	100.0	2.5
25	LOCAL CHECK		5125.4	76.6	119.6	166.3	100MR	0	60MR	74.3	0.0	3.3	44.1	41.6	7.3
17	PARANA 66/270	ARGENTINA	5099.4	80.4	119.6	168.6	100MR	0	0	86.3	0.0	6.0	50.3	100.0	2.5
4	JORI C-69	MEXICO	4890.6	80.3	114.6	164.0	100S	100S	50MR	77.6	0.0	0.0	50.9	100.0	2.6
18	BC 58-25A	TUNISIA	4883.9	79.6	118.0	163.6	100MR	100S	50MR	114.3	8.3	10.0	43.6	33.3	2.0
16	GUILAFEN	CHILE	4779.5	79.5	121.3	167.3	100S	100S	65MR	80.0	0.0	0.0	38.3	100.0	5.5
3	CAPEITI	ITALY	4699.5	84.3	112.0	166.0	100S	100S	50MR	111.3	8.3	0.0	47.6	100.0	1.0
14	CERARDO 574	ITALY	4620.6	78.2	118.6	167.3	100MR	100R	50MR	77.3	0.0	0.0	41.3	100.0	5.2
5	ANHINGA S	MEXICO	4533.9	83.3	114.3	164.6	100MS	100S	0	111.6	8.3	6.6	48.5	41.6	1.8
15	C 6647	U.S.A.	4402.8	80.2	123.6	164.6	100MR	100S	0	89.6	0.0	0.0	37.1	25.0	6.1
22	T. DIC. VAR. VERNUM	MEXICO	4258.4	77.4	116.3	162.6	100S	100S	0	82.3	0.0	0.0	36.8	100.0	13.1
1	GAB-125	ITALY	4096.2	80.0	121.0	164.0	100S	100S	65MS	102.3	25.0	3.3	45.2	100.0	2.5
13	GERARDO 565	ITALY	3807.3	78.5	124.6	168.3	100MR	100MS	0	86.6	0.0	0.0	48.8	100.0	4.0
2	LEEDS	U.S.A.	3771.8	81.7	123.3	164.6	100S	100S	0	125.3	16.6	10.0	33.4	50.0	2.9
21	61-130 X LEEDS	U.S.A.	3734.0	79.0	123.6	164.0	100S	100S	0	87.6	0.0	10.0	35.6	33.3	10.0
19	MARKOVSKAIA	U.S.S.R.	3522.9	78.0	123.6	164.3	100MR	100S	50MS	137.3	8.3	0.0	53.0	66.6	4.8
23	HERCULES	CANADA	3151.9	80.0	119.3	161.3	100S	100S	55S	132.6	33.3	0.0	38.7	16.6	3.8
20	HILEA	LEBANON	2485.3	73.0	121.6	163.0	100S	0	0	122.6	66.6	6.6	46.5	83.3	6.7
		GRAND MEAN	4575.2	79.3	117.7	164.4	76.4	74.7	18.6	95.0	8.9	6.1	43.5	72.9	4.6
	STANDARD ERROR OF GRAND MEAN		42.7	0.1	0.1	0.2	2.3	1.4	1.5	0.5	1.3	0.9	0.1	3.4	0.1
	COEFICIENT OF VARIATION		8.0	1.4	1.0	1.1	26.6	16.9	71.8	4.8	128.3	138.3	3.4	41.4	35.9
	LSD VARIETY MEANS 5 PC		605.0	1.8	2.0	3.1	33.3	20.7	21.8	7.5	18.8	13.8	2.4	49.4	2.7

CORRELATIONS

YIELD	KG/HA												
TEST	WEIGHT	0.26											
DAYS TO	FLOWER	0.65**	-0.20										
DAYS TO	MATURITY	0.01	0.10	0.52**									
STRIPE	RUST	-0.23	-0.06	-0.07	-0.31								
LEAF	RUST	-0.13	0.24	0.05	-0.18	0.61**							
STEM	RUST	-0.01	-0.14	-0.00	0.01	0.39*	0.20						
HEIGHT	CM.	-0.66**	0.16	0.35	-0.12	0.31	0.22	0.14					
LODGING		-0.54**	-0.36	-0.00	-0.35	0.41*	-0.04	0.15	0.48*				
SHATTERING		0.24	0.22	-0.37	-0.41*	-0.37	-0.44*	-0.31	-0.10	-0.08			
1000 GRN	WGT GRMS	0.39*	0.12	-0.32	0.22	-0.21	-0.52**	-0.00	-0.28	-0.13	0.25		
POWDERY MILDEW		0.17	-0.14	0.00	0.45*	0.08	-0.03	0.38	-0.29	-0.22	-0.32	0.37	
XX		-0.23	-0.56**	0.19	-0.16	0.08	0.06	-0.24	-0.27	0.00	-0.15	-0.51**	-0.06

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

TABLE 18 CURCPE ITALY ROME II

LABORATORIO APPLICAZIONI AGRICOLTURA.
COOPERATORS PROF. A. BOZZINI.

LATITUDE 041 28'N
LONGITUDE 015 32'E
ELEVATION +00150 M.ABOVE S.L.

DATE PLANTED 12/10/71
DATE HARVESTED 07/04/72
AMOUNT OF MOISTURE 0620 MM

NITROGEN 100.0 KG/HA
PHOSPHORUS 100.0 KG/HA
POTASIUM 000.0 KG/HA

UNUSUAL, RATHER WET WEATHER WITH RAINS IN MAY, JUNE AND JULY. NORMAL DEVELOPMENT OF CROPS. VERY LOW MILDEW AND RUST ATTACK. INSECT AND PEST PROBLEMS NOT REPORTED. HEAVY INFESTATION OF WEEDS, WEEDED BY HAND. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	HEIGHT CM.	LODGING
8	CAJEME 71	MEXICO	6882.6	83.3	112.6	61.6	0.0
5	ANHINGA S	MEXICO	6621.5	83.7	117.3	116.0	0.0
11	COCORIT C 71	MEXICO	6088.2	79.0	118.0	88.6	0.0
7	CRANE S (B)	MEXICO	6038.2	78.4	121.3	82.6	0.0
13	GERARDO 565	ITALY	5966.0	79.3	129.6	93.3	0.0
18	BD 58-25A	TUNISIA	5860.5	82.1	122.3	114.0	6.6
22	T. DIC. VAR. VERNUM	MEXICO	5821.6	80.2	125.0	85.6	0.0
12	COCORIT S	MEXICO	5638.3	82.3	128.6	105.3	0.0
9	CRANE S (A)	MEXICO	5610.5	77.3	115.0	77.6	0.0
10	JORI S X CRANE S	MEXICO	5393.8	77.3	119.6	82.0	0.0
14	GERARDO 574	ITALY	5127.2	79.8	124.3	78.6	0.0
6	BRANT S	MEXICO	5010.6	76.7	116.0	75.3	0.0
25	LOCAL CHECK		4860.6	82.6	128.3	83.0	0.0
17	PARANA 66/270	ARGENTINA	4632.8	78.9	127.6	61.0	0.0
24	GANSO S	MEXICO	4610.6	76.2	124.0	85.3	0.0
16	QUILAFEN	CHILE	4593.9	79.9	127.6	82.6	0.0
4	JORI C-69	MEXICO	4582.8	79.0	121.3	79.6	0.0
3	CAPEITI	ITALY	4221.7	82.3	119.0	119.0	6.6
1	GAB-125	ITALY	4155.1	79.7	125.0	121.0	40.0
23	HERCULES	CANADA	4066.2	81.4	125.0	132.3	40.0
15	D 6647	U.S.A.	3688.5	81.6	128.3	86.0	0.0
2	LEEDS	U.S.A.	3488.5	82.4	125.3	142.6	33.3
21	61-130 X LEEDS	U.S.A.	3399.6	82.0	128.3	85.0	0.0
19	HARKOVSKAIA	U.S.S.R.	3183.0	79.6	128.3	152.0	60.0
20	HILBA	LEBANON	2055.3	74.0	126.0	129.0	73.3
		GRAND MEAN	4863.9	80.0	123.3	97.5	10.3
		STANDARD ERROR OF GRAND MEAN	62.8	0.1	0.0	0.8	0.8
		COEFICIENT OF VARIATION	11.1	1.2	0.5	7.1	70.2
		LSD VARIETY MEANS 5 PC	888.8	1.6	1.2	11.3	11.9

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	HEIGHT CM.
TEST WEIGHT	0.26			
DAYS TO MATURITY	-0.52**	0.05		
HEIGHT CM.	-0.51**	0.14	0.30	
LODGING	-0.69**	-0.24	0.26	0.80**

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

TABLE 19 EUROPE PORTUGAL ALENTEJO

ESTACAO DE MELHORAMENTO DE PLANTAS.
COOPERATORS M. T. BARRADAS AND F. BAGULHO.

LATITUDE 038 53'N
LONGITUDE 007 05'W
ELEVATION +00206 M.ABOVE S.L.

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

NITROGEN 120.0 KG/HA
PHOSPHORUS 027.0 KG/HA
POTASIUM 040.0 KG/HA

DRY AUTUMN CAUSED LATE SOWING. FAVORABLE CLIMATIC CONDITIONS DURING WINTER. VERY DRY SPRING. SOME LINES ABNORMALLY INFECTED BY MILDEW NEAR MATURITY. HEAVY ATTACK OF CEPHUS FLY. WEED AND PEST PROBLEMS NOT REPORTED. SHATTERING SCALE NOT REPORTED. NECK BREAK SCALE: 1 = LOW RESISTANCE, 2 = MEDIUM RESISTANCE, 3 = HIGH RESISTANCE. LOCAL CHECK AMARALEJO X 12.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING	SHATTERING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA SPP.	NECK BREAK
8	CAJEME 71	MEXICO	4256.6	83.5	121.0	166.6	71.6	4.6	1	47.8	0.0	59.1	2
7	CRANE S (B)	MEXICO	4215.5	80.3	125.3	170.6	77.0	12.6	3	42.1	30.0	33.2	1
6	BRANT S	MEXICO	4207.7	80.5	121.6	170.0	72.6	9.6	3	41.7	80.0	25.8	1
10	JORI S X CRANE S	MEXICO	4055.5	78.9	126.0	170.6	74.0	16.0	3	45.9	0.0	16.6	1
9	CRANE S (A)	MEXICO	3978.8	82.3	122.3	168.0	71.3	11.0	3	42.8	66.6	22.1	2
4	JORI C-65	MEXICO	3951.1	81.9	127.0	171.0	74.3	10.6	3	52.3	0.0	16.6	1
11	COCORIT C 71	MEXICO	3846.6	83.3	125.0	171.6	81.0	18.0	3	42.9	13.3	14.7	1
24	GANSO S	MEXICO	3638.8	79.6	130.0	174.6	83.3	10.0	3	66.7	53.3	27.7	1
3	CAPEITI	ITALY	3628.8	84.6	127.0	175.0	58.6	21.6	3	47.9	0.0	16.6	3
14	GERARDO 574	ITALY	3599.9	82.1	130.0	175.3	73.6	6.3	3	47.0	0.0	22.1	1
5	ANHINGA S	MEXICO	3585.5	83.9	125.6	171.0	93.6	22.6	3	46.6	0.0	22.1	1
20	HILBA	LEBANON	3526.6	75.6	135.6	170.6	113.0	33.3	3	44.3	30.0	25.8	2
18	BC 58-25A	TUNISIA	3511.1	81.5	134.3	175.3	99.0	17.3	3	48.8	0.0	22.1	1
12	COCORIT S	MEXICO	3395.5	82.7	135.3	176.6	98.6	21.0	3	52.8	0.0	22.1	2
17	PARANA 66/270	ARGENTINA	3292.2	82.8	135.0	176.0	81.0	8.3	3	52.3	26.6	14.7	1
1	GAB-125	ITALY	3271.1	81.8	134.6	175.6	100.3	21.0	3	50.6	40.0	16.6	2
22	T. DIC. VAR. VERNUM	MEXICO	3247.7	81.9	129.0	170.3	78.0	17.3	3	40.9	53.3	16.6	1
13	GERARDO 565	ITALY	3222.2	80.5	136.6	178.6	89.6	14.3	3	54.4	26.6	14.7	2
25	LOCAL CHECK		3172.2	83.1	141.3	180.0	114.3	21.0	3	47.7	0.0	29.5	1
16	QUILAPEN	CHILE	3132.2	82.9	134.6	175.0	81.0	9.3	3	46.3	0.0	22.1	2
21	61-130 X LEEDS	U.S.A.	3076.6	81.0	136.0	175.6	77.0	10.3	3	38.1	0.0	14.7	2
15	D 6647	U.S.A.	2996.6	80.5	136.6	175.3	80.0	11.3	3	38.0	0.0	22.1	1
2	LEEDS	U.S.A.	2874.4	82.9	136.0	177.6	115.3	20.3	2	37.0	0.0	14.7	3
23	HERCULES	CANADA	2388.8	82.3	133.6	175.0	113.6	22.3	3	45.3	0.0	14.7	2
19	HARKOVSKAIA	U.S.S.R.	2143.3	81.2	138.3	177.0	128.6	20.0	3	36.5	0.0	11.0	3
		GRAND MEAN	3450.2	81.7	131.1	173.7	85.6	15.3		46.3	16.7	21.6	
		STANDARD ERROR OF GRAND MEAN	67.2	0.0	0.1	0.1	0.5	0.3			2.8	1.0	
		COEFICIENT OF VARIATION	16.8	0.8	0.7	0.5	4.8	18.6			145.8	37.0	
		LSD VARIETY MEANS 5 PC	551.6	1.1	1.5	1.6	7.1	4.7			40.0	13.0	

CORRELATIONS

YIELD	KG/HA										●	
TEST	WEIGHT	-0.07										
DAYS TO	FLOWER	-0.79**	-0.14									
DAYS TO	MATURITY	-0.70**	0.14	0.86**							●	
HEIGHT	CM.	-0.70**	-0.01	0.65**	0.56**							
LODGING		-0.33	-0.22	0.34	0.18	0.75**					●	
SHATTERING		0.00	0.00	0.00	0.00	0.00	0.00					
1000 GRN	WGT GRMS	0.24	-0.01	-0.01	0.13	-0.12	-0.14	0.00				
POWDERY	MILDEW	0.34	-0.30	-0.36	-0.37	-0.31	-0.14	0.00	0.12			
SEPTORIA	SPP.	0.53**	0.00	-0.38*	-0.46*	-0.28	-0.32	0.00	0.15	0.04		
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 20 -EUROPE ROMANIA JUDETUL 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 058.0 KG/HA
PHOSPHORUS 054.0 KG/HA
POTASIUM 000.0 KG/HA

DRY SEASON AT PLANTING TIME. MARCH AND JULY EXCESSIVELY DRY. YIELD LEVEL DETERMINED BY PRECIPITATION IN APRIL AND MAY. GOOD DEVELOPMENT OF POWDERY MILDEW AND SEPTORIA. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK M.I.A. XX= NO. OF EARS.

VARIETY NUMBER	VARIETY OR 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 NODORUM	XX
7	CRANE S (B)	MEXICO	4010.7	76.5	55.6	104.0	0	66.0	0.0	43.3	37.6	10.0	234.6
15	D 6647	U.S.A.	3959.5	79.2	61.0	106.0	0	70.0	0.0	45.6	5.2	10.0	264.3
22	T. DIC. VAR. VERNUM	MEXICO	3852.5	76.9	58.0	104.0	0	66.6	0.0	42.5	21.4	10.0	330.0
5	ANHINGA S	MEXICO	3811.8	77.5	54.0	108.0	0	68.3	0.0	49.3	26.0	10.0	227.0
11	COCORIT C 71	MEXICO	3758.5	75.6	55.6	103.0	0	72.3	0.0	47.1	29.1	20.0	238.6
16	QUILAFEN	CHILE	3681.8	77.0	58.0	106.0	0	71.3	0.0	50.5	26.7	20.0	150.6
6	BRANT S	MEXICO	3656.2	77.0	54.6	105.0	0	63.3	0.0	49.6	25.9	10.0	190.0
9	CRANE S (A)	MEXICO	3629.6	76.0	52.3	104.0	5	65.0	0.0	41.1	24.2	30.0	210.6
21	61-130 X LEEDS	U.S.A.	3472.5	78.5	61.0	105.0	0	67.6	0.0	45.0	6.0	10.0	265.6
18	BD 58-25A	TUNISIA	3350.7	76.2	57.0	103.0	5	55.3	6.6	49.1	13.6	20.0	195.0
8	CAJEME 71	MEXICO	3037.4	72.7	54.0	100.0	0	62.0	0.0	39.0	29.0	10.0	263.3
2	LEEDS	U.S.A.	2991.9	79.2	59.0	105.0	0	110.0	13.3	43.0	10.0	10.0	243.0
24	CANSO S	MEXICO	2923.0	73.7	56.0	105.0	0	67.0	0.0	58.0	24.3	10.0	168.6
17	PARANA 66/270	ARGENTINA	2918.5	75.5	58.0	109.0	0	61.6	0.0	51.0	34.1	20.0	200.3
12	COCORIT S	MEXICO	2917.4	77.2	58.0	108.0	5	76.6	0.0	53.5	22.1	10.0	160.3
14	CERARDO 574	ITALY	2901.9	76.3	55.6	106.0	5	62.3	0.0	44.8	21.9	10.0	181.3
1	GAB-125	ITALY	2786.3	74.7	55.3	105.0	5	51.0	3.3	52.0	25.7	10.0	165.3
10	JORI S X CRANE S	MEXICO	2754.1	73.5	55.0	104.0	0	62.6	0.0	51.6	31.8	10.0	199.0
3	CAPEITI	ITALY	2719.7	76.5	54.6	105.0	10	87.3	31.6	45.1	16.5	30.0	227.0
25	LOCAL CHECK		2700.8	71.4	62.0	105.0	40	89.0	3.3	39.5	5.0	10.0	182.6
23	HERCULES	CANADA	2673.0	78.5	55.6	103.0	0	104.6	30.0	49.1	13.6	10.0	156.6
19	HARKOVSKAIA	U.S.S.R.	2607.5	76.1	61.0	106.0	0	127.0	43.3	46.0	19.5	20.0	214.6
4	JORI C-69	MEXICO	2182.0	75.2	55.3	108.0	0	62.3	0.0	52.1	30.2	10.0	190.3
20	HILBA	LEBANON	2162.0	69.3	55.0	99.0	100	105.6	56.6	43.3	45.5	30.0	216.6
13	GERARDO 565	ITALY	1732.0	73.3	61.0	108.0	0	73.6	0.0	47.6	14.9	10.0	143.6
	GRAND MEAN		3087.7	75.8	56.9	105.0	7.9	78.7	7.5	47.1	22.4	14.3	211.1
	STANDARD ERROR OF GRAND MEAN		58.5	0.0	0.0		0.3	0.4	1.0	0.1	0.9		3.3
	COEFICIENT OF VARIATION		16.4	0.4	0.6		39.1	4.5	123.3	2.3	38.0		13.5
	LSD VARIETY MEANS 5 PC		827.7	0.5	0.5		5.0	5.8	15.1	1.7	13.9		46.8

CORRELATIONS

YIELD	KG/HA											
TEST	WEIGHT	0.51**										
DAYS TO	FLOWER	-0.13	0.18									
DAYS TO	MATURITY	-0.02	0.40*	0.35								
STEM	RUST	-0.36	-0.64**	-0.06	-0.48*							
HEIGHT	CM.	-0.31	0.09	0.24	-0.19	0.35						
LODGING		-0.43*	-0.15	-0.00	-0.41*	0.66**	0.77**					
1000 GRN	WGT GRMS	-0.15	0.09	-0.11	0.47*	-0.27	-0.12	-0.18				
POWDERY	MILDEW	-0.04	-0.45*	-0.63**	-0.21	0.32	-0.22	0.12	0.18			
SEPTORIA	NODORUM	-0.06	-0.19	-0.27	-0.25	0.49*	0.24	0.54	-0.19	0.28		
XX		0.56**	0.26	0.06	-0.30	-0.05	-0.12	-0.03	-0.54**	-0.04	0.03	

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

TABLE 21 EUROPE SPAIN LOGROÑO

MEJORA GENETICA DE PLANTAS.
COOPERATORS DE LA HERA JR.

LATITUDE 042 11'N	DATE PLANTED	03/27/72	NITROGEN	060.0	KG/HA
LONGITUDE 001 01'W	DATE HARVESTED	09/03/72	PHOSPHORUS	030.0	KG/HA
ELEVATION +01030 M.ABOVE S.L.	AMOUNT OF MOISTURE	0417 MM	POTASIUM	030.0	KG/HA

NO YIELD DATA DUE TO A HEAVY HAILSTORM. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.
8	CAJEME 71	MEXICO	113.3	136.0	60.0
25	LOCAL CHECK		108.0	156.3	95.0
24	GANSO S	MEXICO	104.6	147.3	65.0
23	HERCULES	CANADA	104.3	147.0	103.3
13	GERARDO 565	ITALY	104.3	149.3	75.0
7	CRANE S (B)	MEXICO	104.0	148.6	63.3
22	T. DIC. VAR. VERNUM	MEXICO	103.3	141.3	70.0
21	61-130 X LEEDS	U.S.A.	103.0	144.6	70.0
2	LEEDS	U.S.A.	102.6	149.0	101.6
15	D 6647	U.S.A.	102.6	147.3	71.6
12	COCORIT S	MEXICO	102.3	151.3	75.0
11	COCORIT C 71	MEXICO	102.3	147.3	70.0
4	JORI C-69	MEXICO	102.3	146.0	60.0
14	GERARDO 574	ITALY	102.0	145.3	60.0
16	QUILAFEN	CHILE	101.6	144.6	60.0
5	ANFINGA S	MEXICO	101.0	151.0	78.3
19	HARKOVSKAIA	U.S.S.R.	101.0	145.3	120.0
6	BRANT S	MEXICO	101.0	149.3	61.6
17	PARANA 66/270	ARGENTINA	100.6	151.3	65.0
20	HILBA	LEBANON	100.0	140.6	101.6
9	CRANE S (A)	MEXICO	99.6	145.0	65.0
3	CAPEITI	ITALY	99.6	150.0	85.0
18	BC 58-25A	TUNISIA	99.0	143.3	85.0
10	JORI S X CRANE S	MEXICO	98.3	145.3	65.0
1	CAB-125	ITALY	98.0	143.6	76.6
	GRAND MEAN		102.3	146.6	76.1
	STANDARD ERROR OF GRAND MEAN		0.6	0.2	0.2
	COEFICIENT OF VARIATION		5.5	1.2	3.1
	LSD VARIETY MEANS 5 PC		9.2	2.9	3.8

CORRELATIONS

DAYS TO FLOWER		
DAYS TO MATURITY	-0.10	
HEIGHT CM.	-0.09	0.13

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

TABLE 22 MESCAMERICA MEXICO SONORA

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

LATITUDE 027 20'N
LONGITUDE 109 54'W
ELEVATION +00040 M.ABOVE S.L.

DATE PLANTED 11/28/71
DATE HARVESTED 04/30/72
AMOUNT OF MOISTURE ---- MM

NITROGEN 120.0 KG/HA
PHOSPHORUS 040.0 KG/HA
POTASIUM 000.0 KG/HA

MILDER WINTER THAN AVERAGE. 4-DAY HOT SPELL IN MID-MARCH FORCED RIPENING IN ALL VARIETIES. FAIR DISEASE DEVELOPMENT ALTHOUGH STEM RUST WAS PREVALENT OVER THE SEASON. 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	STEM RUST	HEIGHT CM.	LODGING
9	CRANE S (A)	MEXICO	6450.3	78.6	130.0	TRMR	TRR	85.0	0.0
6	BRANT S	MEXICO	6262.8	82.0	130.0	5MS	TRR	76.3	0.0
7	CRANE S (B)	MEXICO	5957.3	84.0	132.0	TRMR	TRR	90.0	0.0
5	ANHINGA S	MEXICO	5922.6	80.0	127.0	TRMS	TRR	120.0	13.3
11	COCORIT C 71	MEXICO	5651.8	82.3	135.0	TRR	TRR	95.0	0.0
10	JORI S X CRANE S	MEXICO	5637.9	87.0	140.0	TRMR	TRR	90.0	0.0
4	JORI C-69	MEXICO	5457.4	87.6	130.0	TRMS	TRR	90.0	0.0
22	T. DIC. VAR. VERNUM	MEXICO	5318.5	87.0	132.0	10S	TRR	100.0	3.3
12	COCORIT S	MEXICO	4950.5	104.0	152.0	TRR	TRR	95.0	0.0
24	GANSO S	MEXICO	4943.6	102.6	142.0	TRMS	TRR	100.0	3.3
8	CAJEME 71	MEXICO	4825.6	91.0	139.0	10MS	TRR	79.3	0.0
16	QUILAFEN	CHILE	4821.4	105.0	158.0	TRMR	TRR	90.6	0.0
17	PARANA 66/270	ARGENTINA	4665.9	106.0	150.0	TRR	TRR	90.0	0.0
15	D 6647	U.S.A.	4575.6	106.6	158.0	TRR	TRR	90.6	0.0
21	61-130 X LEEDS	U.S.A.	4520.1	108.0	158.0	TRMR	TRR	90.0	0.0
14	GERARDO 574	ITALY	4047.9	102.0	155.0	TRMS	TRR	86.0	0.0
13	GERARDO 565	ITALY	3791.0	108.3	159.0	TRMR	TRR	100.0	0.0
3	CAPEITI	ITALY	3714.6	90.0	134.0	TRMS	TRR	115.0	40.0
18	BD 58-25A	TUNISIA	3707.7	97.0	149.0	TRMR	TRR	120.0	56.6
23	HERCULES	CANADA	3679.9	103.6	146.0	5S	TRR	140.0	93.3
25	LOCAL CHECK		3679.9	105.0	152.0	5MS	TRR	90.0	0.0
1	GAB-125	ITALY	2950.9	100.3	143.0	TRR	TRS	110.0	63.3
2	LEEDS	U.S.A.	2916.1	104.0	147.0	TRMS	TRR	140.0	90.0
20	HILBA	LEBANON	1242.8	103.0	158.0	TRMR	10S	140.6	100.0
19	HARKOVSKAIA	U.S.S.R.	562.4	108.6	160.0	5MR	40S	150.0	100.0
		GRAND MEAN	4410.2	96.5	144.6	2.4	2.5	102.9	22.5
		STANDARD ERROR OF GRAND MEAN	49.8	0.2		0.7	0.3	0.2	2.0
		COEFICIENT OF VARIATION	9.7	1.8		244.0	130.2	1.8	77.8
		LSD VARIETY MEANS 5 PC	704.5	2.9		9.8	5.4	3.0	28.6

CORRELATIONS

YIELD	KG/HA						
DAYS TO	FLOWER	-0.67**					
DAYS TO	MATURITY	-0.65**	0.92**				
LEAF	RUST	0.00	0.04	-0.11			
STEM	RUST	-0.68**	0.27	0.31	-0.10		
HEIGHT	CM.	-0.75**	0.30	0.24	0.24	0.56**	
LODGING		-0.80**	0.32	0.26	0.25	0.55**	-0.93**

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

TABLE 23 MIDDLE EAST CYPRUS NICOSIA

ATHIENOU AGRIC. EXPERIMENT STATION
COOPERATORS A. HADJICHRISTODOULOU ET AL.

LATITUDE 033 25'N	DATE PLANTED	12/09/71	NITROGEN	041.0 KG/HA
LONGITUDE 035 08'E	DATE HARVESTED	05/31/72	PHOSPHORUS	033.0 KG/HA
ELEVATION +00500 M.ABOVE S.L.	AMOUNT OF MOISTURE	0184 MM	POTASIUM	000.0 KG/HA

VERY DRY WEATHER. PROLONGED DROUGHT AT BENDING TIME. LOW YIELDING. EXTREMELY LOW INCIDENCE OF DISEASE DEVELOPMENT. NO INSECT PROBLEM. HAND WEEDING. PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.	1000 GRN WGT GRMS
5	ANHINGA S	MEXICO	1299.8	123.3	62.6	52.5
20	HILBA	LEBANON	1272.0	-	55.3	40.5
18	BD 58-25A	TUNISIA	1255.4	125.3	60.6	46.5
22	T. DIC. VAR. VERNUM	MEXICO	1254.3	0.0	55.6	42.3
16	QUILAFEN	CHILE	1244.3	0.0	51.0	44.3
25	LOCAL CHECK		1199.8	127.6	58.0	37.3
2	LEEDS	U.S.A.	1155.4	0.0	62.6	39.8
12	COCORIT S	MEXICO	1122.1	129.5	56.0	49.6
14	GERARDO 574	ITALY	1113.2	128.5	56.0	45.8
17	PARANA 66/270	ARGENTINA	1110.9	130.0	53.3	48.5
23	HERCULES	CANADA	1088.7	128.3	67.3	42.6
6	BRANT S	MEXICO	1038.7	122.6	52.0	46.8
13	GERARDO 565	ITALY	1033.2	-	52.3	50.8
15	D 6647	U.S.A.	1033.2	0.0	49.3	34.3
1	GAB-125	ITALY	1011.0	-	58.3	44.0
7	CRANE S (B)	MEXICO	996.5	-	49.3	40.5
24	GANSO S	MEXICO	994.3	127.0	53.0	59.6
10	JORI S X CRANE S	MEXICO	977.6	127.6	50.0	46.6
8	CAJEME 71	MEXICO	972.1	-	46.3	43.8
9	CRANE S (A)	MEXICO	972.1	-	54.3	44.1
21	61-130 X LEEDS	U.S.A.	965.4	-	48.0	36.3
11	COCORIT C 71	MEXICO	899.9	-	58.0	44.3
4	JORI C-69	MEXICO	842.1	127.0	46.3	48.3
3	CAPEITI	ITALY	777.6	125.3	51.0	45.3
19	HARKOVSKAIA	U.S.S.R.	711.0	0.0	62.6	37.8
		GRAND MEAN	1053.6	126.1	54.7	44.7
		STANDARD ERROR OF GRAND MEAN	33.2	0.1	0.7	0.3
		COEFICIENT OF VARIATION	27.3	0.9	12.4	7.2
		LSD VARIETY MEANS 5 PC	470.1	1.9	11.1	5.2

CORRELATIONS

YIELD	KG/HA			
DAYS TO	FLOWER	-0.13		
HEIGHT	CM.	0.30	0.02	
1000 GRN	WGT GRMS	0.05	0.49*	-0.00

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

TABLE 24 MIDDLE EAST IRAN DEZFULL

SAFIABAD AGRICULTURAL RESEARCH STATION.
COOPERATORS S. A. THIES AND M. KHAJIPOUR.

LATITUDE 032 16'N	DATE PLANTED	11/26/71	NITROGEN	125.0	KG/HA
LONGITUDE 048 25'E	DATE HARVESTED	05/26/72	PHOSPHORUS	090.0	KG/HA
ELEVATION +00083 M.ABOVE S.L.	AMOUNT OF MOISTURE	0483 MM	POTASIUM	000.0	KG/HA

GENERALLY NORMAL WEATHER. VERY LATE STRIPE RUST DEVELOPMENT. INSECT OR PEST PROBLEMS NOT REPORTED. POOR WEED CONTROL. GRASSY WEEDS WERE HEAVY. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	HEIGHT CM.	LODGING
8	CAJEME 71	MEXICO	7110.3	80.0	121.0	161.0	71.6	5.0
12	COCORIT S	MEXICO	6654.8	80.6	129.3	164.0	110.0	16.6
9	CRANE S (A)	MEXICO	6759.3	80.6	119.0	158.0	78.3	6.6
7	CRANE S (B)	MEXICO	6532.6	78.6	121.3	161.0	76.3	6.6
10	JORI S X CRANE S	MEXICO	6210.4	78.3	120.3	160.0	81.6	5.0
11	COCORIT C 71	MEXICO	6132.7	80.0	123.3	160.0	95.0	8.3
24	CANSO S	MEXICO	5968.2	77.6	124.6	163.0	90.0	10.0
4	JORI C-65	MEXICO	5621.6	81.6	120.6	157.0	85.0	6.6
22	T. DIC. VAR. VERNUM	MEXICO	5599.4	80.0	122.0	158.0	80.0	8.3
21	61-130 X LEEDS	U.S.A.	5554.9	76.3	129.0	169.0	98.3	8.3
3	CAPEITI	ITALY	5499.4	81.6	121.6	159.0	113.3	43.3
6	BRANT S	MEXICO	5421.6	79.0	122.3	161.0	78.3	6.6
16	QUILAPEN	CHILE	5310.5	78.3	126.6	162.0	95.0	6.6
15	D 6647	U.S.A.	5266.1	76.6	149.3	168.0	95.0	5.0
17	PARANA 66/270	ARGENTINA	5032.8	77.3	130.3	162.0	85.0	6.6
14	CERARDO 574	ITALY	4932.8	76.0	124.6	160.0	80.0	6.6
23	HERCULES	CANADA	4810.6	80.3	127.3	164.0	138.3	23.3
18	BC 58-25A	TUNISIA	4566.2	78.0	126.3	161.0	118.3	28.3
13	CERARDO 565	ITALY	4543.9	75.0	127.6	165.0	103.3	11.6
1	GAB-125	ITALY	4532.8	78.0	125.0	162.0	118.3	51.6
2	LEEDS	U.S.A.	4532.8	78.6	128.3	169.0	141.6	30.0
5	ANHINGA S	MEXICO	4066.2	83.0	122.0	161.0	105.0	18.3
20	HILBA	LEBANON	3788.5	71.0	127.3	165.0	126.6	76.6
19	HARKOVSKAIA	U.S.S.R.	3166.3	78.6	130.3	165.0	143.3	55.0
	GRAND MEAN		5328.1	78.5	125.8	162.2	00.4	18.8
	STANDARD ERROR OF GRAND MEAN		97.3	0.1	0.8		0.7	1.3
	COEFICIENT OF VARIATION		15.5	1.8	5.5		6.4	61.5
	LSD VARIETY MEANS 5 PC		1348.8	2.3	11.4		10.4	18.9

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.35				
DAYS TO	FLOWER	-0.30	-0.39*			
DAYS TO	MATURITY	-0.36	-0.49*	0.71**		
HEIGHT	CM.	-0.69**	-0.12	0.30	0.54**	
LODGING		-0.64**	-0.32	0.07	0.24	0.76**

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

TABLE 25 MIDDLE EAST IRAN GORGAN

GORGAN EXPERIMENTAL STATION.
COOPERATORS B. SADRI 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	050.0 KG/HA
ELEVATION +00105 M.ABOVE S.L.	AMOUNT OF MOISTURE	0365 MM	POTASIUM	000.0 KG/HA

VERY COLD WINTER WITH SNOW. GOOD DEVELOPMENT OF MILDEW. 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.	LODGING	1000 GRN WGT GRMS	POWDERY MILDEW
21	61-130 X LEEDS	U.S.A.	5377.2	145.0	188.0	84.0	0.0	38.0	100.0
15	D 6647	U.S.A.	5210.5	145.0	188.0	88.0	0.0	40.0	100.0
12	COCORIT S	MEXICO	5021.7	145.0	188.0	93.0	0.0	45.0	0.0
13	GERARDO 565	ITALY	4899.5	146.0	195.0	94.0	-	46.0	0.0
9	CRANE S (A)	MEXICO	4743.9	141.0	190.0	77.0	50.0	43.0	50.0
17	PARANA 66/270	ARGENTINA	4710.6	145.0	193.0	77.0	0.0	50.0	50.0
14	GERARDO 574	ITALY	4643.9	144.0	188.0	74.0	0.0	39.0	100.0
6	BRANT S	MEXICO	4621.7	142.0	188.0	68.0	-	42.0	50.0
4	JORI C-69	MEXICO	4566.2	143.0	189.0	76.0	0.0	46.0	100.0
10	JORI S X CRANE S	MEXICO	4532.8	143.0	190.0	63.0	-	46.0	50.0
3	CAPEITI	ITALY	4466.2	139.0	189.0	79.0	75.0	37.0	100.0
8	CAJEME 71	MEXICO	4466.2	140.0	191.0	69.0	-	47.0	50.0
23	HERCULES	CANADA	4399.5	144.0	188.0	120.0	-	42.0	0.0
5	ANHINGA S	MEXICO	4377.3	142.0	190.0	84.0	25.0	45.0	100.0
7	CRANE S (B)	MEXICO	4344.0	142.0	189.0	66.0	-	39.0	50.0
2	LEEDS	U.S.A.	4066.2	145.0	189.0	109.0	-	37.0	50.0
22	T. DIC. VAR. VERNUM	MEXICO	4055.1	144.0	188.0	72.0	-	35.0	0.0
16	QUILAFEN	CHILE	4021.8	146.0	193.0	73.0	0.0	40.0	100.0
11	COCORIT C 71	MEXICO	3888.4	143.0	188.0	67.0	25.0	45.0	50.0
24	GANSO S		3799.6	144.0	193.0	74.0	0.0	56.0	100.0
18	BD 58-25A	TUNISIA	3655.1	143.0	188.0	105.0	-	40.0	50.0
25	LOCAL CHECK		3610.7	141.0	191.0	96.0	100.0	40.0	100.0
1	GAB-125	ITALY	3055.2	143.0	189.0	93.0	100.0	46.0	100.0
19	HARKOVSKAIA	U.S.S.R.	2488.6	146.0	188.0	120.0	-	44.0	50.0
20	HILBA	LEBANON	2144.2	145.0	190.0	73.0	100.0	34.0	100.0
		GRAND MEAN	4206.6	143.4	189.6	83.7	61.6	42.4	64.0
	STANDARD ERROR OF GRAND MEAN		71.0						
	COEFICIENT OF VARIATION		14.6						
	LSD VARIETY MEANS 5 PC		1005.0						

CORRELATIONS

YIELD	KG/HA						
DAYS TO	FLOWER	-0.09					
DAYS TO	MATURITY	0.02	0.14				
HEIGHT	CM.	-0.22	0.32	-0.18			
LODGING		-0.64**	-0.12	-0.29	0.53**		
1000 GRN	WGT GRMS	0.11	0.00	0.47*	-0.08	-0.44*	
POWDERY MILDEW		-0.18	-0.18	0.04	-0.24	-0.07	-0.04

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

KARAJ BREEDING CENTER.
COOPERATORS M. A. VAHABIAN, T. MAHLOOJI.

LATITUDE 035 48'N
LONGITUDE 050 38'E
ELEVATION +01300 M.ABOVE S.L.

DATE PLANTED 10/30/71
DATE HARVESTED 06/10/72
AMOUNT OF MOISTURE 0312 MM

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

VERY COLD WINTER AND SPRING. PRECIPITATION ABOVE NORMAL. GOOD INFECTION OF STEM AND STRIPE RUST. INSECT OR WEED PROBLEMS NOT REPORTED. SOME BIRD DAMAGE. LOCAL CHECK YT54-N10BXLD357/TC2. 1-46-22547/E.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	STRIPE RUST	STEM RUST	HEIGHT CM.
12	COCORIT S	MEXICO	5199.4	59.9	179.6	10MS	5S	105.0
15	D 6647	U.S.A.	4655.0	46.8	178.0	25S	-	90.0
8	CAJEME 71	MEXICO	4543.9	46.5	175.0	25S	50S	75.0
19	HARKOVSKAIA	U.S.S.R.	4399.5	45.6	178.3	50S	10S	141.6
22	T. DIC. VAR. VERNUM	MEXICO	4366.2	46.3	179.6	1S	-	80.0
7	CRANE S (B)	MEXICO	4188.4	50.3	180.0	10S	-	81.6
11	COCORIT C 71	MEXICO	4177.3	55.1	178.3	10S	10MS	83.3
23	HERCULES	CANADA	4021.8	47.4	176.0	10S	-	118.3
2	LEEDS	U.S.A.	3977.3	40.5	178.3	25S	-	123.3
25	LOCAL CHECK		3932.9	43.7	178.6	-	10MS	85.0
1	GAB-125	ITALY	3555.1	49.4	178.6	25S	50S	103.3
10	JORI S X CRANE S	MEXICO	3477.4	56.0	178.3	25S	5S	86.6
16	QUILAFEN	CHILE	3321.8	50.1	179.0	5MS	TS	81.6
3	CAPEITI	ITALY	3310.7	47.6	179.0	10S	25S	101.6
21	61-130 X LEEDS	U.S.A.	3299.6	44.4	178.6	50S	-	91.6
14	GERARDO 574	ITALY	3266.3	49.4	179.6	10S	25S	78.3
5	ANHINGA S	MEXICO	3077.4	47.4	178.6	10S	N	91.6
9	CRANE S (A)	MEXICO	2944.1	47.4	177.3	-	25S	73.3
13	GERARDO 565	ITALY	2855.2	54.6	180.0	25S	10S	88.3
6	BRANT S	MEXICO	2744.1	47.4	178.3	10S	75S	71.6
20	HILBA	LEBANON	2721.9	46.8	178.0	50S	25S	113.3
4	JORI C-69	MEXICO	2666.3	56.6	179.3	75S	10S	75.0
24	GANSO S	MEXICO	2266.4	65.0	178.0	35S	10S	73.3
17	PARANA 66/270	ARGENTINA	1577.6	53.2	182.0	10S	-	73.3
18	BD 58-25A	TUNISIA	1188.7	49.2	180.0	25S	10S	80.0
		GRAND MEAN	3429.4	49.9	178.6	23.0	21.1	90.6
		STANDARD ERROR OF GRAND MEAN	100.7	0.2	0.1	1.6	1.4	0.6
		COEFICIENT OF VARIATION	25.4	5.0	0.5	56.4	50.8	6.6
		LSD VARIETY MEANS 5 PC	1424.6	4.0	1.6	21.2	17.5	9.7

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	-0.20				
DAYS TO	MATURITY	-0.38*	0.24			
STRIPE	RUST	-0.26	0.21	-0.00		
STEM	RUST	-0.16	-0.22	-0.24	-0.12	
HEIGHT	CM.	0.39*	-0.34	-0.20	0.17	-0.22

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

ABU-GHARAIB
COOPERATORS H. AL-JEBOLRI, S. AL-HASSANI AND M. AZIZ

LATITUDE 033 20'N
LONGITUDE 044 24'E
ELEVATION +00034 M.ABOVE S.L.

DATE PLANTED 11/17/71
DATE HARVESTED 05/15/72
AMOUNT OF MOISTURE 0146 MM

NITROGEN 080.0 KG/HA
PHOSPHORUS 040.0 KG/HA
POTASIUM 000.0 KG/HA

NORMAL RAINS. COLD AND PROLONGED WINTER. FROST ON FEW NIGHTS IN JANUARY. MILD ATTACK OF LEAF RUST. RARE APPEARANCE OF STEM RUST. INSECT PROBLEM NOT REPORTED. TWO HAND WEEDINGS. SOME BIRD DAMAGE AT MATURITY. LODGING SCALE NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
25	LOCAL CHECK		7154.8	58.0	0.0	100.0	2	40.0
21	61-130 X LEEDS	U.S.A.	6577.1	62.0	138.0	88.0	2	34.0
1	GAB-125	ITALY	6577.1	61.0	137.0	108.0	2	43.0
5	ANHINGA S	MEXICO	6577.1	64.0	128.0	105.0	2	47.0
3	CAPEITI	ITALY	6325.2	63.0	129.0	115.0	1	46.0
24	GANSO S	MEXICO	6221.5	61.0	0.0	98.0	1	62.0
12	COCORIT S	MEXICO	6177.1	64.0	128.0	106.0	2	53.0
18	BD 58-25A	TUNISIA	6117.8	60.0	132.0	108.0	2	42.0
8	CAJEME 71	MEXICO	6088.2	60.0	125.0	83.0	1	41.0
4	JORI C-69	MEXICO	5851.2	63.0	126.0	88.0	1	48.0
2	LEEDS	U.S.A.	5821.6	64.0	142.0	75.0	2	36.0
13	GERARDO 565	ITALY	5777.1	61.0	146.0	93.0	1	53.0
17	PARANA 66/270	ARGENTINA	5629.0	63.0	139.0	85.0	1	48.0
7	CRANE S (B)	MEXICO	5614.2	61.0	125.0	80.0	1	39.0
15	D 6647	U.S.A.	5584.6	63.0	139.0	85.0	1	36.0
6	BRANT S	MEXICO	5569.8	58.0	128.0	85.0	1	39.0
11	COCORIT C 71	MEXICO	5554.9	59.0	126.0	95.0	-	43.0
10	JORI S X CRANE S	MEXICO	5317.9	60.0	131.0	85.0	1	45.0
23	HERCULES	CANADA	5273.5	-	0.0	133.0	2	-
14	GERARDO 574	ITALY	5155.0	-	136.0	83.0	1	-
16	QUILAFEN	CHILE	5125.4	61.0	140.0	93.0	1	40.0
22	T. DIC. VAR. VERNUM	MEXICO	4295.8	-	132.0	90.0	1	-
20	HILBA	LEBANON	4177.3	0.0	-	130.0	5	0.0
19	HARKOVSKAIA	U.S.S.R.	4147.7	0.0	-	130.0	2	0.0
9	CRANE S (A)	MEXICO	3984.7	58.0	-	85.0	1	36.0
		GRAND MEAN	5627.8	61.2	133.4	97.0		43.3

STANDARD ERROR OF GRAND MEAN 91.0
COEFICIENT OF VARIATION 14.0
LSD VARIETY MEANS 5 PC 1287.0

CORRELATIONS

YIELD	KG/HA					
TEST	WEIGHT	0.66**				
DAYS TO	FLOWER	-0.28	-0.16			
HEIGHT	CM.	-0.13	-0.43*	-0.27		
LODGING		0.00	0.00	0.00	0.00	
1000 GRN WGT GRMS		0.67**	0.92**	-0.26	-0.33	0.00

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

TABLE 28 MIDDLE EAST ISRAEL BET-DAGAN

AGRICULTURAL RESEARCH ORGANIZATION, VOLCANI CENTER.
COOPERATORS DR. J. EPHRAT AND J. KAGAN.

LATITUDE 032 01'N DATE PLANTED 12/03/71 NITROGEN 110.0 KG/HA
LONGITUDE 034 49'E DATE HARVESTED 06/05/72 PHOSPHORUS 050.0 KG/HA
ELEVATION +00028 M.ABOVE S.L. AMOUNT OF MOISTURE 0624 MM POTASIUM 000.0 KG/HA

MORE RAINFALL THAN THE LONG-TERM AVERAGE. GOOD DEVELOPMENT OF LEAF RUST.
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	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS
8	CAJEME 71	MEXICO	7146.6	85.1	101.3	150.0	0	0	86.6	26.6	50.3
7	CRANE S (B)	MEXICO	7146.6	82.7	102.0	152.0	0	10MS	89.0	0.0	47.6
4	JORI C-69	MEXICO	6813.3	84.9	102.3	154.6	0	10MS	91.6	0.0	60.5
12	COCORIT S	MEXICO	6780.0	85.9	113.6	159.0	0	40S	108.0	6.6	55.4
9	CRANE S (A)	MEXICO	6666.6	82.3	99.0	157.3	0	5MS	90.3	0.0	42.2
10	JORI S X CRANE S	MEXICO	6633.3	84.1	102.3	153.0	0	5MS	89.0	0.0	55.9
15	C 6647	U.S.A.	6520.0	83.3	118.0	162.3	0	80VS	95.6	0.0	42.3
1	COCORIT C 71	MEXICO	6520.0	83.1	102.0	151.3	0	0	95.0	0.0	49.4
16	QUILAFEN	CHILE	6513.3	83.1	114.3	159.6	5S	20S	98.0	0.0	46.9
13	GERARDO 565	ITALY	6410.0	83.9	114.6	162.6	0	80VS	107.6	0.0	57.1
14	CERARDO 574	ITALY	6333.3	83.1	109.6	158.0	0	80VS	89.3	0.0	46.0
17	PARANA 66/270	ARGENTINA	6213.3	85.9	112.3	162.3	0	10MS	91.3	0.0	62.2
18	EC 58-25A	TUNISIA	5593.3	83.9	109.3	157.3	0	0	134.6	26.6	49.3
3	CAPEITI	ITALY	5553.3	87.3	102.6	153.3	0	0	128.3	46.6	49.2
6	BRANT S	MEXICO	5553.3	83.5	102.6	155.0	0	30MS	83.0	0.0	53.0
1	CAB-125	ITALY	5260.0	84.5	111.6	159.0	0	57S	125.3	46.6	55.6
23	HERCULES	CANADA	5146.6	80.9	113.6	157.3	40S	50S	144.0	26.6	43.8
22	T. DIC. VAR. VERNUM	MEXICO	5036.6	82.3	109.3	155.0	5S	10MS	85.6	0.0	59.0
5	ANHINGA S	MEXICO	5000.0	86.5	102.6	154.6	0	10MS	116.3	6.6	53.9
24	GANSO S	MEXICO	4813.3	82.3	111.0	159.6	100VS	40S	88.3	26.6	70.0
19	HARKOVSKAIA	U.S.S.R.	4370.0	85.7	117.3	158.0	5S	30S	162.3	73.3	42.5
21	61-130 X LEEDS	U.S.A.	4220.0	84.1	120.3	163.3	5S	30S	90.6	0.0	43.1
25	LOCAL CHECK		4036.6	84.7	101.0	156.3	20S	10MS	138.0	53.3	62.7
2	LEEDS	U.S.A.	3890.0	86.3	113.6	158.0	0	10MS	145.0	53.3	40.2
20	HILBA	LEBANON	3483.3	78.9	112.6	153.0	8VS	10MS	131.0	100.0	49.0
		GRAND MEAN	5666.1	84.0	108.7	156.6	31.8	20.0	108.1	19.7	50.7
	STANDARD ERROR OF GRAND MEAN		57.2	0.0	0.1	0.1	3.3	1.7	0.7	2.9	0.1
	COEFICIENT OF VARIATION		8.7	0.8	1.1	0.9	90.5	75.3	6.1	129.2	2.6
	LSD VARIETY MEANS 5 PC		809.8	1.1	2.0	2.4	47.0	24.6	10.9	41.6	2.1

CORRELATIONS

YIELD	KG/HA								
TEST	WEIGHT	0.10							
DAYS TO	FLOWER	-0.34	-0.10						
DAYS TO	MATURITY	-0.19	0.12	0.82**					
STRIPE	RUST	-0.38*	-0.30	0.49*	0.42*				
LEAF	RUST	0.11	-0.11	0.45*	0.53**	0.54**			
HEIGHT	CM.	-0.61**	0.16	0.27	0.08	0.04	-0.02		
LODGING		-0.70**	-0.07	0.16	-0.13	0.23	-0.21	0.77	
1000 GRN	WGT GRMS	0.09	0.18	-0.24	0.10	0.22	-0.06	-0.16	-0.03

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

TABLE 29 MIDDLE EAST JORDAN JORDAN

DEIR ALLA STATION.
COOPERATORS I.J.KAKISH, A.H.SHAB AND J. A. QUHIWI.

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

DATE PLANTED 12/01/71
DATE HARVESTED 05/22/72
AMOUNT OF MOISTURE 0342 MM

NITROGEN C42.0 KG/HA
PHOSPHORUS ---.- KG/HA
POTASIUM ---.- KG/HA

MODERATELY HOT WEATHER 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	STEM RUST	HEIGHT CM.	1000 GRN WGT GRMS
8	CAJEME 71	MEXICO	5166.1	85.0	136.0	0	0	68.3	49.2
6	BRANT S	MEXICO	4755.0	84.6	143.0	10	0	70.0	44.6
9	CRANE S (A)	MEXICO	4555.0	81.6	139.6	25	0	70.0	44.6
12	COCORIT S	MEXICO	4532.8	111.0	149.3	100	40	98.3	48.5
10	JORI S X CRANE S	MEXICO	4505.0	87.0	144.6	100	0	70.0	52.0
11	COCORIT C 71	MEXICO	4443.9	81.3	135.6	10	0	73.3	49.5
24	GANSO S	MEXICO	4399.5	109.3	154.0	100	10	95.0	51.7
16	QUILAFEN	CHILE	4355.1	113.0	162.0	100	10	85.0	36.0
7	CRANE S (B)	MEXICO	4188.4	81.3	133.0	25	0	63.3	46.2
21	61-130 X LEEDS	U.S.A.	4144.0	112.0	160.6	100	0	83.3	30.0
18	BD 58-25A	TUNISIA	4132.9	104.0	154.0	25	25	115.0	44.3
22	T. DIC. VAR. VERNUM	MEXICO	4132.9	86.0	140.6	65	0	65.0	39.0
17	PARANA 66/270	ARGENTINA	4021.8	113.0	162.0	40	0	83.3	44.2
15	D 6647	U.S.A.	4010.7	113.0	155.6	100	10	81.6	29.5
13	GERARDO 565	ITALY	3899.6	103.6	162.0	65	25	90.0	45.5
4	JORI C-69	MEXICO	3888.4	85.6	143.0	25	0	75.0	53.6
14	GERARDO 574	ITALY	3799.6	109.3	136.0	65	65	85.0	35.0
1	GAB-125	ITALY	3688.5	109.6	154.0	10	20	120.0	44.6
20	HILBA	LEBANON	3621.8	112.0	154.0	25	100	123.3	46.3
2	LEEDS	U.S.A.	3621.8	112.0	162.0	25	0	126.6	31.3
3	CAPEITI	ITALY	3521.8	94.0	150.0	65	0	113.3	44.0
25	LOCAL CHECK		3377.4	91.0	141.3	100	0	105.0	40.1
5	ANHINGA S	MEXICO	3177.4	84.6	140.6	10	0	86.6	52.3
23	HERCULES	CANADA	2744.1	112.0	152.6	65	0	126.6	38.0
19	HARKOVSKAIA	U.S.S.R.	2710.8	113.6	156.6	25	100	130.0	36.3
		GRAND MEAN	3975.8	99.5	148.9	36.9	18.5	92.1	43.1
	STANDARD ERROR OF GRAND MEAN		93.5	0.3	0.7	2.5	1.0	0.5	
	COEFICIENT OF VARIATION		20.3	3.4	4.2	59.2	49.2	5.0	
	LSD VARIETY MEANS 5 PC		1323.3	5.5	10.3	35.7	14.9	7.6	

CORRELATIONS

YIELD	KG/HA						
DAYS TO	FLOWER	-0.36					
DAYS TO	MATURITY	-0.28	0.82**				
LEAF	RUST	-0.05	0.35	0.32			
STEM	RUST	-0.39*	0.49*	0.23	-0.16		
HEIGHT	CM.	-0.70**	0.64**	0.55**	-0.02	0.55**	
1000 GRN	WGT GRMS	0.30	-0.55**	-0.44*	-0.34	-0.13	-0.27

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

TABLE 30 MIDDLE EAST LEBANON . BEQA'A

AGRIC. RESEARCH AND EDUCATION CENTER A.U.B.
COOPERATORS H. NASR AND W. KHAYRALLAH.

LATITUDE 033 55'N
LONGITUDE 036 05'E
ELEVATION +01000 M.ABOVE S.L.

DATE PLANTED 10/10/71
DATE HARVESTED 07/01/72
AMOUNT OF MOISTURE 0458 MM

NITROGEN 080.0 KG/HA
PHOSPHORUS 080.0 KG/HA
POTASIUM 000.0 KG/HA

FAVORABLE RAIN DISTRIBUTION. SUBSTANTIAL RAIN ON MAY 2. NO DISEASE DEVELOPMENT. INSECT AND PEST PROBLEMS NOT REPORTED. WEEDS WERE CONTROLLED BY HAND. LOCAL CHECK SENATOR CAPPELLI.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	HEIGHT CM.
8	CAJEME 71	MEXICO	4746.6	161.0	74.3
4	JORI C-69	MEXICO	3493.3	167.0	81.6
12	COCORIT S	MEXICO	3493.3	171.0	95.0
18	BD 59-25A	TUNISIA	3346.6	164.0	107.0
11	COCORIT C 71	MEXICO	3303.3	170.0	91.6
9	CRANE S (A)	MEXICO	3276.6	163.0	82.3
14	GERARDO 574	ITALY	3263.3	164.0	79.0
3	CAPEITI	ITALY	3193.3	169.0	104.3
7	CRANE S (B)	MEXICO	3150.0	168.0	84.0
6	BRANT S	MEXICO	3126.6	163.0	81.3
1	GAB-125	ITALY	3076.6	171.0	100.6
10	JORI S X CRANE S	MEXICO	3066.6	164.0	84.3
2	LEEDS	U.S.A.	3043.3	170.0	120.6
13	GERARDO 565	ITALY	3020.0	172.0	83.3
23	HERCULES	CANADA	3003.3	172.0	120.6
17	PARANA 66/270	ARGENTINA	2976.6	171.0	79.0
21	61-130 X LEEDS	U.S.A.	2966.6	173.0	84.0
5	ANHINGA S	MEXICO	2910.0	170.0	111.0
24	GANSO S	MEXICO	2803.3	172.0	87.3
16	QUILAFEN	CHILE	2780.0	171.0	77.6
22	T. DIC. VAR. VERNUM	MEXICO	2626.6	175.0	81.6
15	D 6647	U.S.A.	2620.0	171.0	80.0
20	HILBA	LEBANON	2526.6	173.0	114.0
19	HARKOVSKAIA	U.S.S.R.	2520.0	173.0	125.0
25	LOCAL CHECK		2510.0	176.0	119.3
		GRAND MEAN	3073.3	169.3	93.9
		STANDARD ERROR OF GRAND MEAN	39.2		0.3
		COEFICIENT OF VARIATION	11.0		3.4
		LSD VARIETY MEANS 5 PC	555.0		5.2

CORRELATIONS

YIELD KG/HA			
DAYS TO FLOWER		-0.71**	
HEIGHT CM.		-0.37	0.41*

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

TABLE 31 MIDDLE EAST LEBANON TEL - AMARA

AGRIC. RESEARCH INSTITUTE.
COOPERATORS M. ABI-ANTOUN, A. CHAABAN, G. KINGMA.

LATITUDE 033 55'N
LONGITUDE 035 29'E
ELEVATION +00900 M.ABOVE S.L.

DATE PLANTED 11/10/71
DATE HARVESTED 06/20/72
AMOUNT OF MOISTURE 0560 MM

NITROGEN 150.0 KG/HA
PHOSPHORUS 033.0 KG/HA
POTASSIUM ---.- KG/HA

GOOD WEATHER IN GROWING PERIOD AND HEADING TIME. DRY IN MAY AND JUNE.
DISEASE DEVELOPMENT RESTRICTED. INSECT AND PEST PROBLEMS NOT REPORTED.
WILD OATS HAND WEEDED. LOCAL CHECK HAURANI 27.

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
25	LOCAL CHECK		2728.6	82.0	174.0	207.0	TRR	5MS	105.0	42.0
5	ANHINGA S	MEXICO	2666.8	81.0	176.0	208.0	0	0	105.0	42.0
3	CAPEITI	ITALY	2407.5	81.5	178.0	209.0	TRR	5MR	105.0	41.0
6	BRANT S	MEXICO	2395.2	74.9	175.0	209.0	TRR	5MR	80.0	40.0
21	61-130 X LEEDS	U.S.A.	2160.6	76.8	181.0	212.0	20MS	TRR	85.0	35.0
11	COCORIT C 71	MEXICO	2024.8	74.0	176.0	207.0	TRR	0	85.0	40.5
1	GAB-125	ITALY	1975.4	75.6	178.0	206.0	TRMR	0	100.0	40.0
17	PARANA 66/270	ARGENTINA	1963.1	76.6	177.0	211.0	TRR	0	80.0	42.5
24	GANSO S	MEXICO	1814.9	70.7	177.0	210.0	TRR	TRMR	80.0	45.5
18	BD 58-25A	TUNISIA	1728.5	74.3	174.0	210.0	TRR	0	100.0	38.0
15	D 6647	U.S.A.	1728.5	76.8	180.0	212.0	0	0	85.0	37.0
22	T. DIC. VAR. VERNUM	MEXICO	1679.1	73.2	181.0	210.0	TRMR	5MS	80.0	33.5
2	LEEDS	U.S.A.	1666.7	80.2	176.0	209.0	0	0	120.0	33.0
12	COCORIT S	MEXICO	1654.4	75.8	178.0	210.0	0	0	95.0	43.0
10	JORI S X CRANE S	MEXICO	1654.4	73.5	180.0	210.0	5S	0	75.0	39.0
9	CRANE S (A)	MEXICO	1629.7	74.8	175.0	207.0	TRR	0	70.0	37.0
16	QUILAFEN	CHILE	1605.0	76.6	177.0	211.0	TRR	0	80.0	40.0
7	CRANE S (B)	MEXICO	1568.0	70.8	180.0	210.0	0	0	75.0	41.0
4	JORI C-69	MEXICO	1506.2	75.3	180.0	208.0	0	0	80.0	41.0
23	HERCULES	CANADA	1469.2	77.7	177.0	208.0	TRMR	5MS	115.0	36.0
8	CAJEME 71	MEXICO	1419.8	71.8	174.0	209.0	TRR	0	55.0	33.0
14	GERARDO 574	ITALY	1197.6	70.9	175.0	210.0	0	TRR	75.0	36.5
19	HARKOVSKAIA	U.S.S.R.	987.7	80.0	183.0	211.0	5MS	0	130.0	36.0
13	GERARDO 565	ITALY	777.8	73.5	180.0	211.0	5MS	0	75.0	43.0
20	HILBA	LEBANON	679.0	70.0	182.0	210.0	5MS	0	100.0	37.0
		GRAND MEAN	1723.5	75.5	177.7	209.3	1.3	0.6	89.3	38.8

STANDARD ERROR OF GRAND MEAN 53.0
COEFICIENT OF VARIATION 26.6
LSD VARIETY MEANS 5 PC 750.7

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.55**						
DAYS TO	FLOWER	-0.45*	-0.10					
DAYS TO	MATURITY	-0.36	-0.18	0.48*				
STRIPE	RUST	-0.09	-0.00	0.49*	0.44*			
LEAF	RUST	0.32	0.30	-0.11	-0.26	-0.16		
HEIGHT	CM.	0.10	0.66**	0.15	-0.13	0.00	0.23	
1000 GRN	WGT GRMS	0.29	0.02	-0.08	-0.11	-0.23	-0.12	-0.08

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

ADANA, EXPERIMENT STATION.
COOPERATORS EROL ALKUS

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
POTASIUM ---.- KG/HA

COOL WINTER IN MARCH AND MOST OF APRIL, DRY IN LATE APRIL AND WET MAY CAUSED BELOW AVERAGE CROP. LATE DEVELOPMENT OF SEPTORIA. INSECT AND PEST PROBLEMS NOT REPORTED. PHALARIS IN SOME PLOTS. LOCAL CHECK LERMA ROJO 64

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	LODGING	SEPTORIA SPP.	PLANT STAND
3	CAPEITI	ITALY	4694.8	80.2	50.0	11.0	-
7	CRANE S (B)	MEXICO	4611.4	79.0	3.3	22.1	-
5	ANHINGA S	MEXICO	4458.6	81.5	30.0	25.8	-
8	CAJEME 71	MEXICO	4319.7	78.2	0.0	48.0	80.0
18	BC 56-25A	TUNISIA	4319.7	80.0	10.0	14.7	-
9	CRANE S (A)	MEXICO	4298.9	80.0	0.0	11.0	80.0
22	T. DIC. VAR. VERNUM	MEXICO	4292.0	80.0	6.6	22.1	80.0
15	D 6647	U.S.A.	4278.1	79.8	0.0	25.8	80.0
16	QUILAFEN	CHILE	4236.4	79.8	0.0	22.1	0.0
25	LOCAL CHECK		4229.5	79.2	11.6	59.1	0.0
12	COCORIT S	MEXICO	4194.7	79.3	50.0	25.8	0.0
1	GAB-125	ITALY	4125.3	80.0	73.3	29.5	-
6	BRANT S	MEXICO	3986.4	76.5	0.0	33.2	73.3
11	COCORIT C 71	MEXICO	3903.0	77.7	8.3	22.1	80.0
24	GANSO S	MEXICO	3833.6	0.0	0.0	25.8	75.0
21	61-130 X LEEDS	U.S.A.	3694.7	79.2	0.0	14.7	-
17	PARANA 66/270	ARGENTINA	3639.1	80.0	0.0	11.0	70.0
4	JORI C-69	MEXICO	3514.1	80.1	0.0	25.8	80.0
2	LEEDS	U.S.A.	3347.4	81.0	33.3	18.4	-
19	HARKOVSKAIA	U.S.S.R.	3333.5	81.2	16.6	14.7	-
23	HERCULES	CANADA	3139.1	81.5	13.3	25.8	80.0
14	GERARDO 574	ITALY	3014.1	76.7	0.0	22.1	73.3
20	HILBA	LEBANON	2861.3	73.5	80.0	59.1	0.0
10	JORI S X CRANE S	MEXICO	2764.1	-	0.0	48.0	65.0
13	GERARDO 565	ITALY	2562.7	77.1	3.3	18.4	-
		GRAND MEAN	3826.1	79.1	15.5	26.3	76.0
	STANDARD ERROR OF GRAND MEAN		67.7		1.5	2.2	1.3
	COEFICIENT OF VARIATION		15.3		84.0	75.5	9.1
	LSD VARIETY MEANS 5 PC		558.0		21.4	32.4	11.3

CORRELATIONS

YIELD	KG/HA				
TEST	WEIGHT	0.04			
LODGING		0.01	0.12		
SEPTORIA	SPP.	-0.17	-0.05	0.22	
PLANT	STAND	-0.09	-0.16	-0.72**	-0.19

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

TABLE 33 MIDDLE EAST TURKEY ANKARA

WHEAT RESEARCH AND TRAINING CENTER.
COOPERATORS A. DEMIRLICAKMAK, Y. ERGUN AND K. YAKAR.

LATITUDE 040 00'N DATE PLANTED 11/15/71 NITROGEN 080.0 KG/HA
LONGITUDE 033 50'E DATE HARVESTED 07/25/72 PHOSPHORUS 065.0 KG/HA
ELEVATION +00840 M.ABOVE S.L. AMOUNT OF MOISTURE 0349 MM POTASIUM 000.0 KG/HA

LATE RAIN STARTING. VERY COLD WINTER WITH SOME SNOW. MARCH AND APRIL VERY DRY. MAY AND JUNE RAINFALL ABOVE AVERAGE. HEAVY ATTACK OF STEM RUST. SOME LEAF AND STRIPE RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK BERKMEN.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	STRIPE RUST	LEAF RUST	STEM RUST
25	LOCAL CHECK		2521.0	77.0	0	0	70S
18	BD 58-29A	TUNISIA	2465.4	78.0	0	0	60S
2	LEEDS	U.S.A.	2326.5	79.5	30S	0	10MS
7	CRANE S (B)	MEXICO	2308.5	76.3	40S	0	40S
3	CAPEITI	ITALY	2125.1	79.5	30S	0	5MR
23	HERCULES	CANADA	2000.1	78.6	10S	20MS	20MR
21	61-130 X LEEDS	U.S.A.	1944.5	75.1	[illegible]	0	80S
12	COCORIT S	MEXICO	1923.7	74.7	[illegible]	20MS	20S
19	HARKOVSKAIA	U.S.S.R.	1923.7	80.5	20S	0	10MS
15	D 6647	U.S.A.	1909.8	78.3	20S	0	10MS
4	JORI C-69	MEXICO	1798.7	77.0	0	10MS	20MS
24	GANSO S	MEXICO	1777.9	77.3	0	10MS	20S
14	CERARDO 574	ITALY	1770.9	80.2	0	0	50S
10	JORI S X CRANE S	MEXICO	1618.1	79.6	25S	0	12.0
6	BRANT S	MEXICO	1562.6	76.3	30S	0	60S
16	CUILAFEN	CHILE	1534.8	77.1	0	0	60S
11	COCORIT C 71	MEXICO	1514.0	75.7	40S	0	20MS
1	GAB-125	ITALY	1458.4	74.0	30S	0	10MS
9	CRANE S (A)	MEXICO	1423.7	76.3	30S	0	70S
17	PARANA 66/270	ARGENTINA	1416.7	-	20MS	0	70S
5	ANHINGA S	MEXICO	1319.5	76.3	30S	0	50S
20	HILBA	LEBANON	1250.0	0.0	0.0	0.0	60.0
13	GERARDO 565	ITALY	1041.7	72.8	0	0	70S
22	T. DIC. VAR. VERNUM	MEXICO	909.7	0.0	10MS	0	40S
8	CAJEME 71	MEXICO	804.2	76.0	10MS	0	70S
		GRAND MEAN	1706.0	73.8	13.6	1.3	40.6
		STANDARD ERROR OF GRAND MEAN	42.5		0.9	0.3	1.1
		COEFICIENT OF VARIATION	21.4		57.6	217.6	23.1
		LSD VARIETY MEANS 5 PC	597.4		12.8	4.8	15.3

CORRELATIONS

YIELD	KG/HA				
TEST	WEIGHT	0.45*			
STRIPE	RUST	0.13	0.21		
LEAF	RUST	0.17	0.13	-0.22	
STEM	RUST	-0.37	-0.24	-0.51**	-0.39*

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

TABLE 34 MIDDLE EAST TURKEY IZMIR

REGIONAL AGRICULTURAL RESEARCH INSTITUTE.
COOPERATORS B. DEVECIOCLU, N. DINCER AND C. KONAK

LATITUDE	038 35'N	DATE PLANTED	11/13/71	NITROGEN	150.0 KG/HA
LONGITUDE	027 04'G	DATE HARVESTED	06/20/72	PHOSPHORUS	080.0 KG/HA
ELEVATION	+00012 M.ABOVE S.L.	AMOUNT OF MOISTURE	0427 MM	POTASIUM	000.0 KG/HA

LOW RAINFALL, ESPECIALLY IN MARCH AND APRIL. VERY SEVERE STRIPE RUST. MODERATE SEPTORIA, STEM AND LEAF RUSTS. INSECT PROBLEM NOT REPORTED. WEEDS AND BIRDS WERE PROBLEMS. LOCAL CHECK PENJAMO 62. XX= GRAIN TYPE.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING	XX
6	BRANT S	MEXICO	4355.0	139.0	40.0	10.0	60.0	80.0	0.0	2
7	CRANE S (B)	MEXICO	4306.6	139.0	0.0	0.0	0.0	84.0	30.0	2
11	COCORIT C 71	MEXICO	4026.6	139.0	10.0	30.0	10.0	89.0	65.0	2
2	LEEDS	U.S.A.	3966.6	148.0	30.0	10.0	10.0	122.0	-	2
25	LOCAL CHECK		3923.3	137.0	0.0	10.0	0.0	101.0	70.0	2
17	PARANA 66/270	ARGENTINA	3893.3	149.0	5.0	5.0	5.0	86.0	-	2
9	CRANE S (A)	MEXICO	3660.0	138.0	-	-	-	80.0	60.0	2
22	T. DIC. VAR. VERNUM	MEXICO	3630.0	144.0	-	40.0	30.0	85.0	70.0	3
5	ANHINGA S	MEXICO	3440.0	140.0	40.0	20.0	20.0	96.0	30.0	2
8	CAJEME 71	MEXICO	3358.3	136.0	0.0	60.0	20.0	85.0	2.0	2
3	CAPEITI	ITALY	3150.0	144.0	10.0	20.0	20.0	110.0	10.0	2
16	QUILAFEN	CHILE	3146.6	149.0	5.0	50.0	40.0	87.0	0.0	2
12	COCORIT S	MEXICO	3080.0	149.0	5.0	46.0	10.0	101.0	-	2
14	GERARDO 574	ITALY	2941.6	148.0	-	10.0	10.0	80.0	-	3
23	HERCULES	CANADA	2926.6	146.0	20.0	10.0	5.0	117.0	-	2
15	D 6647	U.S.A.	2885.0	149.0	40.0	30.0	20.0	89.0	-	4
1	GAB-125	ITALY	2876.6	148.0	30.0	20.0	20.0	103.0	-	2
21	61-130 X LEEDS	U.S.A.	2830.0	149.0	20.0	60.0	40.0	84.0	0.0	2
4	JORI C-69	MEXICO	2806.6	140.0	30.0	20.0	60.0	81.0	0.0	2
13	GERARDO 565	ITALY	2688.3	149.0	30.0	20.0	30.0	100.0	0.0	2
10	JORI S X CRANE S	MEXICO	2495.0	139.0	4.0	20.0	50.0	78.0	-	3
18	BD 58-25A	TUNISIA	2266.6	145.0	10.0	30.0	30.0	100.0	20.0	3
24	GANSO S	MEXICO	2236.6	148.0	0.0	10.0	60.0	96.0	60.0	3
19	HARKOVSKAIA	U.S.S.R.	911.6	149.0	-	10.0	50.0	132.0	40.0	3
20	HILBA	LEBANON	373.3	148.0	70.0	40.0	90.0	115.0	10.0	4
		GRAND MEAN	3046.9	144.3	20.8	25.0	29.5	95.2	36.8	
		STANDARD ERROR OF GRAND MEAN	71.3							
		COEFICIENT OF VARIATION	20.1							
		LSD VARIETY MEANS 5 PC	1002.1							

CORRELATIONS

YIELD	KG/HA							
DAYS TO	FLOWER	-0.46*						
STRIPE	RUST	-0.44*	0.25					
LEAF	RUST	-0.18	0.08	0.01				
STEM	RUST	-0.65**	0.12	0.52**	0.21			
HEIGHT	CM.	-0.47*	0.42*	0.39*	-0.18	0.02		
LODGING		0.08	-0.40*	-0.36	-0.21	-0.10	0.02	
XX		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 35 NORTH AMERICA CANADA SASKATCHEWAN

REGINA RESEARCH STATION.
COOPERATORS DR. E. MALLOUGH.

LATITUDE 052 00'N	DATE PLANTED	05/17/72	NITROGEN	006.0 KG/HA
LONGITUDE 106 00'W	DATE HARVESTED	09/15/72	PHOSPHORUS	024.0 KG/HA
ELEVATION +00508 M.ABOVE S.L.	AMOUNT OF MOISTURE	0169 MM	POTASIUM	000.0 KG/HA

VERY WARM WEATHER DURING MAY, COOL IN JULY, WARMER IN AUGUST AND SEPTEMBER. DISEASE DEVELOPMENT NOT REPORTED. INSECT, WEED AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK WASCANA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
15	C 6647	U.S.A.	5961.0	86.2	103.6	71.0	49.0
25	LOCAL CHECK		5947.7	83.0	107.6	100.0	54.0
22	T. DIC. VAR. VERNUM	MEXICO	5893.4	85.5	105.3	60.0	48.0
21	61-130 X LEEDS	U.S.A.	5843.8	83.6	104.3	71.0	52.0
11	COCORIT C 71	MEXICO	5778.6	82.3	105.0	70.0	48.5
16	GUILAFEN	CHILE	5688.1	82.3	107.0	70.0	52.0
7	CRANE S (B)	MEXICO	5684.4	80.4	104.6	65.0	49.5
9	CRANE S (A)	MEXICO	5592.6	84.9	102.0	61.0	45.5
24	GANSO S	MEXICO	5432.0	76.5	111.0	63.0	62.0
18	BD 58-25A	TUNISIA	5416.3	81.0	105.3	72.0	50.5
19	KARKOVSKAIA	U.S.S.R.	5300.4	84.9	106.3	95.0	44.5
8	CAJEME 71	MEXICO	5288.3	78.5	103.6	55.0	51.0
1	GAB-125	ITALY	5253.3	81.0	106.0	74.0	52.5
6	BRANT S	MEXICO	5238.8	79.7	106.3	67.0	50.5
5	ANHINGA S	MEXICO	5230.3	84.9	103.6	71.0	53.0
12	COCORIT S	MEXICO	5227.9	79.7	105.6	80.0	58.0
4	JORI C-69	MEXICO	5031.1	82.3	104.3	63.0	55.5
14	GERARDO 574	ITALY	4874.1	81.0	108.3	67.0	47.0
23	HERCULES	CANADA	4866.8	82.3	102.6	85.0	52.0
10	JORI S X CRANE S	MEXICO	4800.4	78.5	105.3	65.0	54.0
13	GERARDO 565	ITALY	4725.5	74.0	110.6	76.0	51.1
17	PARANA 66/270	ARGENTINA	4708.6	77.8	111.0	68.0	56.0
3	CAPEITI	ITALY	4606.0	80.4	109.3	77.0	47.5
2	LEEDS	U.S.A.	4469.5	83.6	102.0	88.0	38.5
20	HILBA	LEBANON	3783.6	77.2	101.3	67.0	46.5
		GRAND MEAN	5225.7	81.3	105.7	72.0	50.7
	STANDARD ERROR OF GRAND MEAN		48.7		0.1		
	COEFICIENT OF VARIATION		8.0		1.2		
	LSD VARIETY MEANS 5 PC		688.9		2.2		

CORRELATIONS

	YIELD KG/HA	TEST WEIGHT	DAYS TO MATURITY	HEIGHT CM.	1000 GRN WGT GRMS
TEST WEIGHT	0.53**				
DAYS TO MATURITY	0.01	-0.50**			
HEIGHT CM.	-0.04	0.22	0.07		
1000 GRN WGT GRMS	0.19	-0.40*	0.46*	-0.19	

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

TABLE 36 NORTH AMERICA U.S.A. CALIFORNIA

UNIVERSITY OF CALIFORNIA, DAVIS.
COOPERATORS C. O. CLAUSEN AND H. E. VOGT.

LATITUDE 038 32'N
LONGITUDE 121 45'W
ELEVATION +00015 M.ABOVE S.L.

DATE PLANTED 01/01/72
DATE HARVESTED 06/15/72
AMOUNT OF MOISTURE 0229 MM

NITROGEN 045.0 KG/HA
PHOSPHORUS ---.- KG/HA
POTASIUM ---.- KG/HA

COOL AND DAMP EARLY SEASON. HOT WEATHER WITH NO RAINS SINCE MARCH. HEAVY STRIPE RUST AND MODERATE LEAF RUST. NO INSECT, WEED OR PEST PROBLEMS. LOCAL CHECK ANZA. XX= CHALKY.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	XX
7	CRANE S (B)	MEXICO	9279.1	78.7	107.6	153.3	0	0	95.6	0.0	45.7	7.0
8	CAJEME 71	MEXICO	8987.9	78.7	105.6	147.6	0	0	87.3	0.0	52.7	2.0
9	CRANE S (A)	MEXICO	8853.5	79.6	102.0	149.6	0	10MS	93.0	0.0	47.3	9.0
6	BRANT S	MEXICO	8847.9	78.3	105.3	153.0	0	0	89.3	1.6	50.6	28.0
10	JORI S X CRANE S	MEX C	8618.3	79.0	106.0	154.0	0	10MS	95.0	0.0	54.5	0.0
16	GUILAFEN	CHI. .	8433.5	79.2	115.0	155.3	0	0.0	100.6	0.0	48.1	1.0
12	COCORIT S	MEXICO	8181.5	81.7	115.0	155.6	0.0	0	117.0	0.3	56.1	6.0
24	GANSO S	MEXICO	8142.3	87.2	113.6	155.6	0	0.0	103.3	0.0	67.7	67.7
11	COCORIT C 71	MEXICO	8108.7	78.6	105.0	151.3	0.0	10MS	99.6	0.0	51.5	19.0
22	T. DIC. VAR. VERNUM	MEXICO	7979.9	80.1	108.3	153.6	0.0	10MR	96.6	0.0	41.3	12.0
4	JORI C-69	MEXICO	7864.7	81.0	106.6	153.3	0	0.0	95.3	0.0	62.5	1.0
25	LOCAL CHECK		7879.1	40.4	111.3	152.3	0	0.0	91.0	0.0	31.3	31.3
13	GERARDO 565	ITALY	7649.5	77.2	119.0	156.0	20MS	0	108.0	0.0	52.3	1.0
5	ANHINGA S	MEXICO	7470.3	82.1	105.6	151.0	0	0	111.6	50.0	52.6	1.0
17	PARANA 66/270	ARGENTINA	7442.3	79.0	115.0	157.3	0	0	97.0	0.0	53.0	1.0
14	CERARDO 574	ITALY	7330.3	75.8	113.3	155.3	0.0	0	91.6	0.0	44.3	5.0
18	BC 58-25A	TUNISIA	6126.3	77.7	113.3	150.6	0	0.0	118.0	85.0	46.3	1.0
23	HERCULES	CANADA	5415.1	55.5	113.3	149.0	40MR	-	132.6	33.3	43.1	43.1
3	CAPEITI	ITALY	5347.9	79.5	105.3	150.3	0	0.0	114.3	96.6	43.8	1.0
2	LEEDS	U.S.A.	5090.3	80.0	121.0	151.0	0	10MR	131.3	86.6	38.0	1.0
1	GAB-125	ITALY	5011.9	78.5	114.3	151.6	10MR	0	121.3	95.0	54.1	1.0
21	61-130 X LEEDS	U.S.A.	4983.9	76.1	122.0	154.6	80S	0	96.6	0.0	39.2	5.0
15	D 6647	U.S.A.	4743.1	76.1	121.0	155.0	60S	0	97.0	0.0	38.1	3.0
19	HARKOVSKAIA	U.S.S.R.	3863.9	79.9	122.0	151.3	50S	5R	144.0	96.6	40.3	0.0
20	HILBA	LEBANON	2256.7	68.4	115.0	150.3	100S	0	119.3	100.0	42.8	0.0
		GRAND MEAN	6957.1	76.3	112.0	152.7	15.5	1.8	105.8	25.8	47.9	9.8
	STANDARD ERROR OF GRAND MEAN		63.6		0.0	0.1			0.3	0.4		
	COEFICIENT OF VARIATION		7.9		0.6	0.7			2.7	15.3		
	LSD VARIETY MEANS 5 PC		899.8		1.2	1.8			4.7	6.4		

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.17									
DAYS TO	FLOWER	-0.61**	-0.07								
DAYS TO	MATURITY	0.23	0.23	0.37							
STRIPE	RUST	-0.74**	-0.15	0.55**	-0.02						
LEAF	RUST	0.25	0.16	-0.38*	-0.18	-0.20					
HEIGHT	CM.	-0.68**	-0.01	0.48*	-0.31	0.24	-0.13				
LODGING		-0.75**	0.00	0.23	-0.51**	0.26	-0.15	0.79			
1000 GRN	WGT GRMS	0.44*	0.57**	-0.33	0.23	-0.39*	0.00	-0.16	-0.24		
XX		0.21	-0.28	-0.10	0.02	-0.17	-0.04	-0.07	-0.27	0.20	

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

TABLE 37 NORTH AMERICA U.S.A. N. DAKOTA

LANGDON EXPERIMENT STATION.
COOPERATORS J. S. GLICK.

LATITUDE 046 54°N
LONGITUDE 096 48°W
ELEVATION +00895 M.ABOVE S.L.

DATE PLANTED 05/09/72
DATE HARVESTED 08/22/72
AMOUNT OF MOISTURE 0212 MM

NITROGEN 050.0 KG/HA
PHOSPHORUS 130.0 KG/HA
POTASIUM 000.0 KG/HA

WEATHER CONDITIONS BELOW NORMAL. RAINFALL DURING ENTIRE GROWING SEASON. YIELDS WERE LOWER AND QUALITY HIGHER THAN NORMAL. PYRENOPHORA AND SEPTORIA DEVELOPMENT WAS GOOD. NO INSECT OR PEST PROBLEMS. WEEDS WERE A PROBLEM. LOCAL CHECK ROLETTE. XX= PYRENOPHORA-SEPTORIA.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	HEIGHT CM.	LODGING	1000 GRN WGT GRMS	PLANT STAND	XX
8	CAJEME 71	MEXICO	4168.1	79.3	60.6	60.0	0.0	51.0	99.0	0.0
7	CRANE S (B)	MEXICO	3880.9	79.3	54.3	56.6	30.0	47.3	99.0	25.8
22	T. DIC. VAR. VERNUM	MEXICO	3744.1	82.1	55.0	61.6	10.0	47.0	95.0	22.1
16	QUILAFEN	CHILE	3602.7	80.2	56.6	63.3	20.0	47.8	85.0	7.3
11	COCORIT C 71	MEXICO	3602.7	79.3	54.6	67.6	20.0	46.5	90.0	22.1
21	61-130 X LEEDS	U.S.A.	3596.0	81.2	56.3	63.3	10.0	50.0	95.0	7.3
15	C 6647	U.S.A.	3347.0	81.0	57.0	65.0	10.0	48.5	90.0	7.3
4	JORI C-69	MEXICO	3311.1	78.9	55.0	61.6	20.0	52.5	85.0	18.4
25	LOCAL CHECK		3207.9	81.2	53.3	78.3	50.0	47.7	99.0	7.3
24	GANSO S	MEXICO	3187.7	76.1	56.3	60.0	40.0	66.0	80.0	22.1
18	BC 58-25A	TUNISIA	3160.8	78.0	58.3	76.6	70.0	47.3	99.0	44.3
17	PARANA 66/270	ARGENTINA	3158.6	78.9	56.3	58.3	10.0	56.5	90.0	29.5
13	CERARDO 565	ITALY	3131.6	76.1	59.6	70.0	30.0	54.6	80.0	0.0
12	COCORIT S	MEXICO	3098.0	81.5	54.6	71.6	40.0	56.6	90.0	11.0
14	GERARDO 574	ITALY	3098.0	78.7	56.6	58.3	0.0	46.5	85.0	18.4
6	BRANT S	MEXICO	3037.4	78.2	56.6	63.3	20.0	49.5	75.0	3.6
5	ANFINCA S	MEXICO	2923.0	82.1	54.6	68.3	20.0	48.5	99.0	40.6
23	HERCULES	CANADA	2918.5	80.6	54.6	88.3	60.0	50.0	90.0	0.0
1	GAB-125	ITALY	2880.4	78.9	55.6	65.0	10.0	52.7	90.0	22.1
19	KARKOVSKAIA	U.S.S.R.	2768.2	82.5	58.0	102.0	70.0	45.8	95.0	0.0
10	JORI S X CRANE S	MEXICO	2754.8	77.2	55.0	61.6	10.0	48.6	85.0	25.8
3	CAPEITI	ITALY	2683.0	79.7	56.0	70.0	40.0	46.3	90.0	33.2
9	CRANE S (A)	MEXICO	2606.7	79.5	53.6	56.6	10.0	44.3	90.0	51.7
2	LEEDS	U.S.A.	2566.3	81.2	55.0	80.0	20.0	41.0	95.0	0.0
20	HILBA	LEBANON	2025.7	75.9	55.6	65.0	20.0	59.0	90.0	55.5
		GRAND MEAN	3138.4	79.5	55.9	67.7	25.5	50.1	90.3	19.0
	STANDARD ERROR OF GRAND MEAN		46.7	0.0	0.0	0.5				1.2
	COEFICIENT OF VARIATION		12.8	0.8	1.2	6.6				55.0
	LSD VARIETY MEANS 5 PC		660.8	1.1	1.1	7.3				17.1

CORRELATIONS

YIELD	KG/HA							
TEST	WEIGHT	0.21						
DAYS TO	FLOWER	0.26	-0.28					
HEIGHT	CM.	-0.32	0.41*	0.06				
LODGING		-0.20	0.11	0.00	0.77**			
1000 GRN	WGT GRMS	-0.05	-0.55**	0.16	-0.25	0.02		
PLANT	STAND	0.21	0.57**	-0.11	0.26	0.18	-0.40*	
XX		-0.39*	-0.31	-0.32	-0.37	-0.06	0.11	0.15

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

TABLE 38 SOUTH AMERICA ARGENTINA BUENOS AIRES
ESTACION EXPERIMENTAL REGIONAL AGROPECUARIA BALCARCE.
COOPERATORS E. ERNIE, R. BEDOGNI AND A. CORCHADO.

LATITUDE 037 45'S DATE PLANTED 06/16/71 NITROGEN 036.0 KG/HA
LONGITUDE 058 18'W DATE HARVESTED 01/05/72 PHOSPHORUS 094.0 KG/HA
ELEVATION +0130 M.ABOVE S.L. AMOUNT OF MOISTURE 0327 MM POTASIUM ---.- KG/HA
NORMAL WEATHER UNTIL END OF OCTOBER. NOVEMBER WAS DRY. SEVERAL FROST DAYS. HOT, STRONG WINDS IN DECEMBER FAVORED SHATTERING AND SHRIVELLING. HEAVY DEVELOPMENT OF LEAF RUST. INSECT, 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	STRIPE RUST	HEIGHT CM.	LODGING	SHATTERING	SEPTORIA TRITICI	FROST DAMAGE
6	ERANT S	MEXICO	3632.9	72.5	73.0	114.0	10MS	70.0	5.0	0.0	75.0	-
16	SUILAFEN	CHILE	3321.8	74.7	77.0	116.0	10MS	80.0	5.0	0.0	50.0	10.0
7	CRANE S (B)	MEXICO	3244.1	74.7	75.0	115.0	10MS	66.6	7.5	0.0	50.0	5.0
11	COCORIT C 71	MEXICO	3177.4	73.6	74.0	116.0	5MS	71.6	11.6	0.0	58.3	20.0
21	61-130 X LEEDS	U.S.A.	3155.2	75.6	82.0	123.0	20MS	73.3	0.0	0.0	50.0	20.0
22	T. DIC. VAR. VERNUM	MEXICO	3044.1	75.6	75.0	115.0	10MS	68.3	6.6	-	75.0	5.0
5	ANHINGA S	MEXICO	2910.8	78.1	75.0	117.0	5MS	51.6	7.5	-	50.0	5.0
12	COCORIT S	MEXICO	2910.8	78.1	79.0	121.0	5MS	76.6	5.0	5.0	75.0	30.0
4	JORI C-65	MEXICO	2855.2	75.6	75.0	115.0	10MS	73.3	5.0	-	75.0	2.3
10	JORI S X CRANE S	MEXICO	2744.1	72.9	74.0	116.0	10MS	70.0	7.5	-	50.0	18.3
25	LOCAL CHECK		2721.9	73.1	75.0	115.0	5MS	76.6	12.5	-	25.0	5.0
15	C 6647	U.S.A.	2666.3	76.5	79.0	118.0	30MS	71.6	5.0	0.0	50.0	20.0
24	GANSO S		2644.1	73.3	75.0	116.0	10MS	71.6	5.0	0.0	100.0	20.0
9	CRANE S (A)	MEXICO	2644.1	72.0	71.0	115.0	10MS	70.0	-	-	50.0	20.0
17	PARANA 66/270	ARGENTINA	2610.8	75.1	78.0	118.0	10MS	73.3	5.0	-	58.3	10.0
18	BC 58-25A	TUNISIA	2566.4	78.7	78.0	118.0	20MS	56.6	6.6	-	50.0	10.0
14	CERARDO 574	ITALY	2533.0	75.1	76.0	118.0	5MS	75.0	0.0	-	25.0	10.0
13	CERARDO 565	ITALY	2455.7	73.6	80.0	122.0	20MS	76.6	5.0	-	50.0	20.0
2	LEEDS	U.S.A.	2444.1	77.8	80.0	121.0	40MS	103.3	5.0	-	25.0	10.0
3	CAPEITI	ITALY	2433.0	77.2	74.0	114.0	10MS	-	10.0	-	-	-
8	CAJEME 71	MEXICO	2410.8	72.2	74.0	117.0	10MS	66.6	-	-	75.0	10.0
1	GAB-125	ITALY	2388.6	73.6	78.0	118.0	5OS	81.6	18.3	5.0	12.5	0.0
19	MARKOVSKAIA	U.S.S.R.	1377.6	68.5	80.0	121.0	30MS	103.3	5.0	-	66.6	-
23	HERCULES	CANADA	1277.6	72.7	79.0	119.0	80S	56.6	10.0	-	0.0	0.0
20	HILBA	LEBANON	588.8	76.0	77.0	116.0	90S	0.0	100.0	-	0.0	0.0
		GRAND MEAN	2592.1	74.7	76.5	117.3	18.6	78.9	11.2	7.7	51.9	12.3
	STANDARD ERROR OF GRAND MEAN		42.5				0.1	0.5	0.8		0.7	0.0
	COEFICIENT OF VARIATION		14.2				8.5	5.4	52.2		12.0	6.4
	LSD VARIETY MEANS 5 PC		601.3				2.5	7.0	9.6		10.2	1.2

CORRELATIONS

YIELD	KG/HA										
TEST	WEIGHT	0.18									
DAYS TO	FLOWER	-0.30	0.19								
DAYS TO	MATURITY	-0.22	0.06	0.88**							
STRIPE	RUST	-0.79**	-0.04	0.38	0.19						
HEIGHT	CM.	0.23	-0.00	0.24	0.32	-0.32					
LODGING		-0.64**	0.09	-0.00	-0.17	0.70**	-0.78**				
SHATTERING		-0.01	0.08	0.01	0.18	-0.08	0.10	-0.11			
SEPTORIA	TRITICI	0.53**	-0.10	-0.27	-0.14	-0.70**	0.12	-0.48	0.15		
FROST	DAMAGE	0.31	0.03	0.14	0.40*	-0.42*	0.06	-0.35	-0.02	0.45*	

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

TABLE - 39 SOUTH AMERICA PERU ANCASH

PROGRAMA DE CEREALES- L. N. A.
COOPERATORS M. ROMERO, L. LAVADO AND L. GOMEZ.

LATITUDE 009 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 +02600 M.ABOVE S.L.	AMOUNT OF MOISTURE	---- MM	POTASIUM	000.0	KG/HA

FROM 5°C AT NIGHT UP TO 40°C DURING SOME DAYS. GOOD INFECTIONS OF STEM, HEAVY RAINS FROM PLANTING TO GRAIN-FORMING STAGE. TEMPERATURES RANGED LEAF AND STRIPE RUSTS. INSECT AND WEED PROBLEMS NOT REPORTED. 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
25	LOCAL CHECK		3874.3	75.3	58.0	0	10S	95.0	38.7
8	CAJEME 71	MEXICO	3163.3	73.9	74.0	0	30-60S	60.0	41.0
7	CRANE S (B)	MEXICO	2746.7	75.8	65.0	0	30S	50.0	43.5
12	COCORIT S	MEXICO	2670.4	77.0	85.0	0	50S	80.0	46.2
11	COCORIT C 71	MEXICO	2273.2	74.9	68.0	0	TS	60.0	42.3
6	BRANT S	MEXICO	2069.1	68.5	72.0	0	70S	50.0	45.3
23	HERCULES	CANADA	2014.9	75.0	0.0	60S	10S	110.0	45.0
18	BD 58-25A	TUNISIA	2006.6	72.9	80.0	10S	60S	85.0	42.0
3	CAPEITI	ITALY	1834.4	73.7	65.0	0	70S	85.0	36.3
1	GAB-125	ITALY	1821.9	67.4	70.0	0	40-60S	85.0	42.0
17	PARANA 66/270	ARGENTIN	1810.8	68.7	80.0	30S	60S	70.0	39.3
21	61-130 X LEEDS	U.S.A.	1799.7	74.1	0.0	0	0	70.0	35.1
2	LEEDS	U.S.A.	1774.7	75.7	80.0	30S	10S	100.0	37.7
5	ANHINGA S	MEXICO	1709.4	77.5	62.0	20S	30S	75.0	0.0
15	D 6647	U.S.A.	1412.2	72.3	0.0	20S	0	60.0	34.5
9	CRANE S (A)	MEXICO	1256.7	70.2	65.0	0	80S	60.0	28.5
16	QUILAFEN	CHILE	1115.0	73.5	85.0	5S	90S	70.0	32.7
10	JORI S X CRANE S	MEXICO	1081.7	65.7	74.0	0	90S	55.0	41.6
24	GANSO S	MEXICO	1001.2	60.7	80.0	10S	90S	65.0	36.8
4	JORI C-69	MEXICO	827.6	63.9	65.0	20S	90S	55.0	29.8
22	T. DIC. VAR. VERNUM	MEXICO	724.8	64.5	72.0	0	100S	60.0	22.1
13	GERARDO 565	ITALY	244.4	0.0	85.0	10S	90S	65.0	38.0
20	HILBA	LEBANON	0.0	0.0	80.0	100S	100S	75.0	0.0
19	HARKOVSKAIA	U.S.S.R.	0.0	0.0	0.0	0	90S	95.0	0.0
14	GERARDO 574	ITALY	0.0	0.0	81.0	TS	80S	55.0	0.0
		GRAND MEAN	1783.3	71.5	73.6	12.6	60.2	71.5	38.1
		STANDARD ERROR OF GRAND MEAN	67.5	0.4			4.1		
		COEFICIENT OF VARIATION	30.7	4.7			47.4		
		LSD VARIETY MEANS 5 PC	896.3	5.5			46.6		

CORRELATIONS

YIELD	KG/HA						
TEST	WEIGHT	0.74**					
DAYS TO	FLOWER	0.00	-0.02				
STRIPE	RUST	-0.27	-0.27	-0.07			
STEM	RUST	-0.61**	-0.51**	0.49*	0.20		
HEIGHT	CM.	0.17	0.03	-0.30	0.31	-0.17	
1000 GRN	WGT GRMS	0.64**	0.64**	0.09	-0.28	-0.34	-0.0

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

TABLE 40 SOUTH AMERICA CHILE SANTIAGO

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

LATITUDE 032 27'S
LONGITUDE 070 38'W
ELEVATION +00625 M.ABOVE S.L.

DATE PLANTED 08/11/71
DATE HARVESTED 01/20/72
AMOUNT OF MOISTURE 0066 MM

NITROGEN 029.0 KG/HA
PHOSPHORUS 053.0 KG/HA
POTASIUM 000.0 KG/HA

DRY WEATHER WITH HIGH TEMPERATURES IN LATE SPRING AND EARLY SUMMER. GOOD DEVELOPMENT OF STRIPE AND STEM RUSTS. POOR DEVELOPMENT OF LEAF RUST. CHEMICAL CONTROL OF M. DIRHODUM W. WEEDS AND PEST PROBLEMS NOT REPORTED. LOCAL CHECK NOT REPORTED.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	DAYS TO FLOWER	STRIPE RUST	STEM RUST	HEIGHT CM.
16	CUILAFEN	CHILE	5649.4	88.0	0	40S	80.0
17	PARANA 66/270	ARGENTINA	5360.5	88.0	0	TS	76.3
8	CAJEME 71	MEXICO	5238.3	84.0	0	50MS	68.3
25	LOCAL CHECK		5027.2	87.0	0	20S	80.0
15	C 6647	U.S.A.	4855.0	89.0	20S	0	73.3
7	CRANE S (B)	MEXICO	4816.1	86.0	0	TMS	73.3
12	COCORIT S	MEXICO	4577.3	88.0	1TR	TS	83.3
22	T. DIC. VAR. VERNUM	MEXICO	4543.9	87.0	0	70S	73.3
6	BRANT S	MEXICO	4421.7	82.0	0	15S	70.0
11	COCORIT C 71	MEXICO	4386.4	84.0	0	0	76.6
5	ANHINGA S	MEXICO	4382.8	81.0	0	5S	88.3
21	61-130 X LEEDS	U.S.A.	4127.3	89.0	30S	0	66.6
4	JORI C-69	MEXICO	4082.9	85.0	0	50S	70.0
9	CRANE S (A)	MEXICO	4049.5	76.0	0	70S	76.6
18	BD 58-25A	TUNISIA	3710.7	82.0	0	20S	103.3
3	CAPEITI	ITALY	3666.2	76.0	0.0	10S	95.0
24	GANSO S	MEXICO	3649.6	86.0	0	70S	80.0
1	GAB-125	ITALY	3605.1	86.0	5R	30S	96.6
2	LEEDS	U.S.A.	3544.0	88.0	40S	0	106.6
23	HERCULES	CANADA	3527.4	83.0	50S	5R	110.0
13	GERARDO 565	ITALY	3488.5	90.0	5MR	40S	80.0
10	JORI S X CRANE S	MEXICO	3310.7	86.0	0	20S	68.3
14	GERARDO 574	ITALY	3266.3	86.0	0	30S	68.3
19	HARKOVSKAIA	U.S.S.R.	2983.0	94.0	30S	50S	113.3
20	HILBA	LEBANON	1016.5	87.0	90S	30S	91.6
		GRAND MEAN	4051.5	85.5	10.9	24.4	82.8
		STANDARD ERROR OF GRAND MEAN	100.7				0.5
		COEFICIENT OF VARIATION	21.3				5.3
		LSD VARIETY MEANS 5 PC	1414.8				7.2

CORRELATIONS

YIELD	KG/HA				
DAYS TO	FLOWER	-0.03			
STRIPE	RUST	-0.66**	0.25		
STEM	RUST	-0.15	0.02	-0.16	
HEIGHT	CM.	-0.42*	0.02	0.45*	-0.11

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

TABLE 41

MEAN OVERALL LOCATIONS FOR YIELD, AGRONOMIC AND DISEASE DATA FOR THE THIRD INTERNATIONAL DURUM YIELD NURSERY.

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

MOYENNE DE TOUS LES EMPLACEMENTS POUR LE RENDEMENT ET LES DONNEES AGRONOMIQUES ET DES MALADIES DU TROISIEME PEPINIERE INTERNATIONALE DE BLES DURS.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	YIELD KG/HA	TEST WEIGHT	DAYS TO FLOWER	DAYS TO MATURITY	STRIPE RUST	LEAF RUST	STEM RUST	HEIGHT CM.	LODGING
11	CODORIT C 71	MEXICO	4292.28	76.19	97.19	139.14	10.77	23.77	14.93	81.76	12.20
8	CAJEME 71	MEXICO	4255.36	74.39	100.52	135.00	0.20	3.37	27.72	70.96	4.51
7	CRANE S (B)	MEXICO	4246.61	71.16	97.74	138.01	23.50	27.75	25.61	75.26	9.03
12.	CODORIT S	MEXICO	4227.27	77.88	107.72	146.65	17.00	29.04	21.52	93.83	14.10
6	BRANT S	MEXICO	4078.08	73.12	98.15	139.35	35.40	24.50	40.46	72.79	2.92
9	CRANE S (A)	MEXICO	3959.06	74.30	94.58	137.04	24.99	30.39	40.01	74.63	12.75
10	JURI S X CRANE S	MEXICO	3917.69	71.82	100.74	141.00	20.04	20.14	24.30	75.35	7.68
5	ANHINGA S	MEXICO	3915.72	78.26	96.65	139.50	17.72	25.40	20.30	96.51	23.83
16	QUILAFEN	CHILE	3868.76	74.66	104.29	147.09	22.19	27.13	30.60	80.03	2.83
22	T. DICO. VAR. VERNUM	MEXICO	3833.86	69.17	98.13	141.41	13.20	29.78	36.28	78.67	18.05
4	JURI C-69	MEXICO	3787.13	75.94	99.13	140.17	29.88	26.00	29.57	77.05	3.63
25	LOCAL CHECK		3763.19	69.96	96.59	142.85	11.29	23.53	28.05	95.07	36.22
17	PARANA 66/270	ARGENTINA	3738.88	75.80	107.84	148.20	15.80	3.35	16.24	78.52	1.76
24	GAVSJ S	MEXICO	3694.67	67.59	100.04	144.03	27.01	19.45	29.75	82.18	10.49
3	CAPEITI	ITALY	3576.13	77.27	99.63	142.47	25.20	35.04	24.60	100.77	49.45
15	D 6647	U.S.A.	3509.58	74.51	103.63	146.83	20.24	31.00	12.26	80.63	2.43
14	GERARDO 574	ITALY	3489.54	64.91	105.16	145.23	13.71	21.29	37.32	75.46	0.76
18	BD 56-25A	TUNISIA	3470.72	74.90	105.28	144.37	17.29	15.25	23.20	102.93	39.43
21	61-130 X LEEDS	U.S.A.	3410.40	73.90	103.88	147.90	29.59	30.54	20.26	77.76	1.69
1	GAB-125	ITALY	3396.32	70.97	105.47	144.98	27.10	20.40	34.98	102.33	54.58
13	GERARDO 565	ITALY	3290.25	66.71	100.39	149.40	20.05	30.45	35.20	87.50	4.96
23	HERCULES	CANADA	3078.94	71.44	99.47	144.05	30.43	39.07	13.97	118.47	48.58
2	LEEDS	U.S.A.	3008.37	69.14	105.88	147.07	20.17	27.59	19.08	117.41	40.08
19	HARKOVSKAIA	U.S.S.R.	2357.76	60.41	104.62	147.20	35.74	29.74	45.73	127.55	54.98
20	HILBA	LEBANON	2035.32	58.27	102.92	143.51	03.33	31.14	62.38	106.88	74.21
	SUMMARY MEANS OVER VARIETIES		3609.17	71.71	101.69	143.53	24.92	25.93	29.09	89.20	21.15

CONT'D. TABLE 41

MEAN OVERALL LOCATIONS FOR YIELD, AGRONOMIC AND DISEASE DATA FOR THE THIRD INTERNATIONAL DURUM YIELD NURSERY.

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

MOYENNE DE TOUS LES EMPLACEMENTS POUR LE RENDEMENT ET LES DONNEES AGRONOMIQUES ET DES MALADIES DU TROISIEME PEPINIERE INTERNATIONALE DE BLES DURS.

VARIETY NUMBER	VARIETY OR CROSS	ORIGIN	SHATTER-ING	1000 GRN WGT GRMS	POWDERY MILDEW	SEPTORIA TRITICI	SEPTORIA NODORUM	SEPTORIA SPP.	FROST DAMAGE	PLANT STAND
11	COCORIT C 71	MEXICO	5.00	45.31	52.89	65.69	20.00	38.23	20.00	85.00
8	CAJEME 71	MEXICO	50.00	45.27	41.05	80.50	10.00	65.37	10.00	89.50
7	CRANE S (B)	MEXICO	0.0	42.82	65.41	61.07	10.00	51.80	5.00	89.50
12	COCORIT S	MEXICO	2.50	50.61	45.50	74.95	10.00	45.63	30.00	45.00
6	BRANT S	MEXICO	0.0	45.44	49.52	74.95	10.00	53.03	5.00	74.17
9	CRANE S (A)	MEXICO	0.0	41.67	42.60	66.62	30.00	44.40	20.00	85.00
10	JORI S X CRANE S	MEXICO	0.0	48.18	59.54	75.87	10.00	54.88	18.33	75.00
5	ANHINGA S	MEXICO	5.83	46.32	53.04	72.17	10.00	49.33	5.00	49.50
16	QUILAPEN	CHILE	0.0	42.83	71.50	40.72	20.00	44.40	10.00	42.50
22	T. DIC. VAR. VERNUM	MEXICO	2.50	36.86	45.32	70.65	10.00	42.55	5.00	87.50
4	JORI C-69	MEXICO	2.50	50.56	73.29	87.90	10.00	47.48	2.33	82.50
25	LOCAL CHECK		1.67	44.82	42.22	52.73	10.00	62.50	5.00	49.50
17	PARANA 667270	ARGENTINA	3.33	50.12	63.62	50.89	20.00	23.43	10.00	80.00
24	GANSO S	MEXICO	3.33	57.96	72.73	59.23	10.00	32.68	20.00	77.50
3	LAPEITI	ITALY	2.50	44.31	67.69	51.62	30.00	38.85	5.00	45.00
15	D 6647	U.S.A.	0.0	38.64	56.12	55.52	10.00	41.93	20.00	85.00
14	GERARDO 574	ITALY	0.0	41.24	71.21	63.83	10.00	40.70	10.00	79.17
18	SD 56-25A	TUNISIA	5.00	45.56	27.96	38.87	20.00	38.23	10.00	84.50
21	61-130 X LEEDS	U.S.A.	5.00	39.09	46.68	38.67	10.00	32.07	20.00	87.50
1	GAB-125	ITALY	4.17	47.96	64.77	50.42	10.00	48.72	0.0	45.00
13	GERARDO 565	ITALY	5.00	48.23	38.91	57.37	10.00	44.40	20.00	75.00
23	HERCULES	CANADA	0.0	42.77	16.84	51.60	10.00	46.87	0.0	85.00
2	LEEDS	U.S.A.	10.00	36.04	40.47	41.63	10.00	40.70	10.00	47.50
19	HARKOVSKAIA	U.S.S.R.	0.0	34.15	44.24	66.62	20.00	30.83	10.00	47.50
20	HILBA	LEBANON	3.33	41.02	72.94	14.80	30.00	61.67	0.0	45.00
	SUMMARY MEANS OVER VARIETIES		4.47	44.32	52.15	58.94	14.40	44.84	10.83	69.53