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All India Coordinated Wheat Improvement Project

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Report on the

Coordinated Experiments

WHEAT AGRONOMY

1983-84

Compiled by :

R. P. SINGH

PRINCIPAL INVESTIGATOR (WHEAT AGRONOMY)

WHEAT PROJECT DIRECTORATE

INDIAN AGRICULTURAL RESEARCH INSTITUTE

NEW DELHI

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ALL INDIA COORDINATED WHEAT IMPROVEMENT PROJECT
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

REPORT ON THE
COORDINATED EXPERIMENTS
WHEAT AGRONOMY
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PREFACE

"Wheat Agronomy" came into prominence with the advent of dwarf wheat varieties directly received from Mexico during 1963-64. Those varieties namely Sonora 63, Sonora 64, Mayo 64 and Lerma Rajo 64-A were tested along with indegenous varieties under on hand, rather conventional, agronomic practices for tall wheats. These results presented during 5th All India Wheat Research Workers' Workshop at Ludhiana, (Punjab Agricultural University) clearly indicated distinct superiority of the dwarf wheats over tall Indian Wheat Varieties at several locations. However, these results were not consistent. General consensus of the wheat scientist viewed that the yield potential of the dwarf wheats was not fully expoloited due to poor initial stand or nonsynchronus tillering at several locations.

So the onward five years (1965 to 1969) were mostly devoted to develop a basic agro-technology based on depth of sowing, dates of sowing, moisture and fertility conditions in soil to realise the yield potential of these dwarfs under different soils and climatic conditions. The efforts were also made to identify the highly adapted varieties for different reasons and to identify the problems limiting wheat production in different regions. This helped in developing a first base for package of practices for wheat production suited to various situations of input supply under different agro-climatic conditions. Next five years (1970 to 74) were devoted to solve some new problems which came up with the change of genotypes. Some of the dwarf wheat varieties like Sonora 64, Sharbati Sonora and Sonalika were not only high yielding but also early maturing, which benefited the farmers even whenssown late after the harvest of long duration maize, bajra, jowar, rice or after the zaid crops like cauliflower, carrots, toria or even after potato and sugarcane. This led to a typical problem of late sowing of wheat even upto 10th January (Northern Plains Zone) which gave low yields and many a times uneconomic returns. The efforts were made to minimise the adverse effects of late sowings.

Energy crisis set in 1973 resulted in shortage and sharp rise in prices of oil. This created short supply, and on high prices the two inputs fertilizer and irrigation water. Studies were directed to develop irrigation schedules to ensure best utilization of even limited quantity of irrigation water. Another serious problem which cropped up during this period was the infestation of wheat crop with Phalaris minor and wild oats. The conventional cultural methods of handweeding and howing were not found much effective against these weeds. Some herbicides which had shown some promise against these weeds in India and abroad were put under detailed experiments in comparison to the conventional methods. Among the herbicides Methabenzthiazuron (Tribunil) gave satisfactory weed control and was recommended for use by the farmers, in 1975. Recently two more herbicides Metoxuron (Dosanex) and Isoproturon (Tolkan, Arelon) have been recommended for controlling these weeds.

Since wheat has started spreading in non traditional areas in recent past, seed-bed preparation and seeding wheat after rice in traditionally rice growing states was one of the important problems. Since wheat was the new crop there on the puddled soil of late harvested rice, suitable implements and mechinery required for the purpose were not available. The research was directed to develop a workable technology for such situation through detailed studies.

Studies on the comparative performance of dwarf durum and dwarf aestivum wheat varieties under varying degrees of fertilizer and irrigation supply indicated the superiority or as good performance of durum even under North Indian, conditions. This point was in favour to encourage durum wheat cultivation in North India in case India assumes the status of an wheat exporting country.

The recommendations on rainfed wheat on seed rate, row-spacing, sowing time and method of fertilizer application have been developed.

This season (1983-84) and in the most recent past efforts have been concentrated to exploite the potential of newly developed wheat varieties and their adaptability under different dates of planting and irrigation schedule. Similar efforts have been made under rainfed wheat in different dates of sowing only. Efforts to economise cost and dependence on chemicals is in progress. Controversies of phosphorus top-dressing v/s placement, nitrogen top-dressing before and after first irrigation, utility of the application of potash as per recommendations, effect of crop geometries on promotion of yield and scope of inter-cropping mustard in wheat are the efforts under way to solve some of the farmers socio-economic problems and constraints acting as barriers to exploit the yield potential of wheat. This year fifty scientists from 37 research centres cooperated in this programme.

The cooperation extended by the cooperating scientists in the conduct of these trials and the facilities provided by the Project Director (Wheat) and the encouragement given by the Director, IARI; Deputy Director General (Crops) and Director General ICAR are greatfully acknowledged.

I also feel highly obliged and greatfully acknowledge the timely advise given by Dr. R.K. Agrawal, Sr. Scientist, Wheat Project Directorate and Dr. R.B.L. Bhardwaj, Ex- Principal Investigator (Agronomy), (now Prof. Division of Agronomy), IARI, for their untiring help and cooperation in processing the data and arriveing at the conclusions.

Special thanks are due to Shri Islam Khan for his keen interest and whole hearted efforts in assisting me for compilation and processing of the whole data. Thanks are also due to Shri Vishwa Nath Chaudhry, Shri Hari Charan and Shri Swaran Singh of the Wheat Project Directorate for their help in processing of the data. Mr. Sarwajit Singh deserves special words of appreciation for assisting in compilation and doing all the typing work in time with accuracy, neatness and promptness.

(R.P. SINGH)
Principal Investigator
(Wheat Agronomy)

List of Coordinated Wheat Agronomy Experiments conducted during Rabi, 1983-84 at different centres

Trial No.	Title	Centres
1	Studies to assess the adaptability of new wheat varieties to different dates of sowing under irrigated conditions.	Ludhiana, Gurdaspur, Pantnagar, Mathura, Meerut, Agra, Morena, Hissar, Durgapura, Vijapur, Kanpur, Varanasi, Faizabad, Pusa (RAU), Sabour, Kalyani, Shillongoni, Akola, Niphad, Coimbatore, Dharwar, Parbhani, Pune, Hebbal, Udaipur, Powerkheda, Junagarh, Chiplima, Almora, Palampur.
2	Assessment of new wheat varieties for their adaptability under varying irrigation supply conditions.	New Delhi, Ludhiana, Pantnagar, Mathura, Meerut, Agra, Hissar, Vijapur, Kanpur, Varanasi, Pusa (RAU), Sabour, Kalyani, Burdwan, Shillongoni, Ranchi, Akola, Niphad, Coimbatore, Dharwar, Parbhani, Pune, Udaipur, Powerkheda.
3	Control of Phalaris minor and wild oats in wheat by cultural and chemical methods.	Ludhiana, Gurdaspur, Pantnagar, R.S. Pu Mathura, Agra, Kanpur, Faizabad, Sabour, Ranchi, Udaipur.
4	Control of weeds in wheat by herbicides.	Ludhiana, Gurdaspur, Pantnagar, R.S. Pu Vijapur, Kanpur, Udaipur, Junagarh, Almora, Shillongoni.
5	Agronomic evaluation of new wheat varieties for different sowing dates under rainfed conditions.	Gurdaspur, Pusa (RAU), Akola, Coimbatore, Dharwar, Pune, Almora, Palampur, Bhowali.

Trial No.	Title	Centres
6	Studies on the comparative efficacy of urea top - dressing in wheat made before and after first irrigation.	: New Delhi, Ludhiana, Pantnagar, Agra, Durgapura, Vijapur, Kanpur, Pusa (RAU), Ranchi, Junagarh, Almora, Palampur, Solan.
7	Studies on the response of potash to wheat crop.	: Pantnagar, Kanpur, Faizabad, Kalyani, Hebbal, Powerkheda.
8	Comparison of the application of P applied as top-dressing before first and second irrigation versus its basal application 5 to 6 cm below the seed before or at sowing.	: Pantnagar, Durgapura, Kanpur, Ranchi, Niphad, Junagarh, R.S. Pura.
9	Comparison of different crop geometries in relation to crop stand and yield of wheat.	: Ludhiana, Pantnagar, Agra, Durgapura, Kanpur, Pusa (RAU), Ranchi, Powerkheda, Junagarh, Almora, Solan.
10	Evaluation the efficacy of inter-cropping of wheat and sarson vis-a-vis pure wheat crop at varying levels of nitrogen.	: Ludhiana, Pantnagar, Durgapura, Kanpur, Kalyani, Ranchi, Powerkheda.

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ZONE WISE LIST OF CENTRES AND COOPERATING SCIENTISTS OF THE COORDINATED EXPERIMENTS ON WHEAT AGRONOMY, UNDER THE ALL INDIA WHEAT IMPROVEMENT PROJECT (1983-84)

****

Research Station		Cooperating Scientists
NORTHERN PLAIN ZONE		
New Delhi	:	Dr. R.P. Singh, Principal Investigator (Agronomy), Wheat Project Directorate, Cummings' Laboratory, IARI, New Delhi-110 012
		Dr. R.B. Lal, Scientist S-2, Division of Agronomy, IARI, New Delhi-110 012
Ludhiana	:	Dr. Jasbir Singh Samra, Wheat Agronomist, Punjab Agricultural University, Ludhiana (Punjab)
R.S. Pura	:	Dr. Harbans Singh, State Agronomist, Agricultural Research Station, R.S. Pura, Jammu J & K.
Gurdaspur	:	Dr. B.S. Boparai, Asstt. Agronomist (Wheat), Regional Research Station, Punjab Agric. University, Gurdaspur (Punjab)
Pantnagar	:	Dr. K.C. Sharma, Head Deptt. of Agronomy, G.B. Pant University of Agric. and Technology, Pantnagar, Distt. Nainital (U.P.)
	:	Dr. R.D. Misra, Associate Professor of Agronomy, College of Agriculture, G.B. Pant University of Agric. and Technology Pantnagar, Distt. Nainital (U.P.)

Research Station		Cooperating Scientists
Meerut	:	Officer Incharge Regional Agric. Research Station, Deptt. of Agriculture, P.O. Ram Lila Ground Meerut (U.P.)
Bichpuri (Agra)	:	Dr. Ramji Lal, Wheat Agronomist, Department of Agronomy, R.B.S. College Bichpuri (Agra)
Morena	:	Dr. S.S. Bhadoria, Scientist (PB & G), JNKVV - Regional Agric. Research Station, PB No. 14, AB Road, Morena (M.P.)
Mathura (Raya)	:	Dr. R.P.S. Chauhan, Deputy Director of Agric. and Incharge, Agric. Research Station, Deptt. of Agric. U.P. 55, Civil Lines Mathura.
NORTH WESTERN PLAIN ZONE		
Hissar	:	Dr. B.D. Sharma, Asstt. Agronomist (Wheat), Haryana Agric. University Hissar (Haryana)
Durgapura	:	Dr. S.C. Kulhari, Asstt. Agronomist (Wheat), Govt. Agric. Research Station, Durgapura (Jaipur)
Vijapur	:	Dr. J.R. Patel, Research Scientist (Wheat), Gujarat Agric. University, Vijapur, District - Mehsana, Gujarat State

Research Station		Cooperating Scientists
NORTH EASTERN PLAIN ZONE		
Kanpur	:	Dr. Vindhyachal Singh, Wheat Agronomist, Deptt. of Genetics and Plant Breeding, C.S. Azad University of Agric. and Technology, Kanpur (U.P.)
Varanasi	:	Dr. G.S. Sharma, Asstt. Wheat Breeder, Deptt. of Genetics and Plant Breeding, Banaras Hindu University, Varanasi (U.P.)
Pusa (R.A.U.)	:	Dr. R.K. Singh, Wheat Agronomist, Rajendra Agriculture University Tirhut College of Agriculture Distt. Samastipur Pusa (Bihar)
Faizabad	:	Dr. D.M. Maurya, Professor and Head (G.P.B.) Crop Research Station, Narendra Dev University of Agric. and Technology Faizabad (U.P.)
Sabour	:	Dr. B.K. Gupta, Asstt. Cerealist, Agric. Research Institute, Sabour (Bhagalpur)
FAR EASTERN PLAIN ZONE		
Kalyani	:	Dr. N.R. Das, Wheat Agronomist, Department of Agronomy, Bidhan Chandra Krishi Vishwa Vidyalaya, Kalyani, District Nadia West Bengal.
Burdwan	:	Mrs. S. Bhattachary, Chief Agronomist, Crop Research Station, Burdwan (West Bengal).

Research Station		Cooperating Scientist
Shillongoni	:	Dr. P.K. Das, Asstt. Wheat Breeder, Regional Agric. Res. Station, Shillongoni, Nowgong, Assam
Ranchi	:	Dr. U.K. Verma, Head, Deptt. of Agronomy, Bisra Agric. University, Kanke, Ranchi
PENINSULAR ZONE		
Akola	:	Dr. A.J. Mulay, Wheat Agronomist, Wheat Research Unit C.R.S., P.K.V. Akola
Niphad	:	Dr. U.R. Mahanan, Wheat Agronomist, Agric. Research Station M.P.A.U., Niphad, District Nasik.
Coimbatore	:	Shri K.P. Ramaswamy, Associate Professor, Deptt. of Agronomy, Tamil Nadu Agric. University, Coimbatore - 641003
Dharwar	:	Shri H.L Halemani, Junior Agronomist (Wheat) Main Centre, Regional Research Station, Dharwar - 5.
Parbhani	:	Dr. P. Joshi, Asstt. Agronomist, Model Agronomy, College of Agriculture, Marathwada Agric. University Parbhani (Maharastra) Pin - 431402
Poona	:	Dr. V.S.P. Rao, Geneticist, M.A.C.S. Institute, Law College Road, Poona (Maharastra).

Research Station		Cooperating Scientists
Bangalore	:	Shri S. Thimme Gowda, Asstt. Agronomist (Wheat), Department of Agronomy, College of Agriculture Hebbal, Bangalore
CENTRAL ZONE		
Udaipur	:	Shri S.M. Singh, Asstt. Agronomist, Deptt. of Agronomy, Rajasthan College of Agriculture, Udaipur (Rajasthan)
Powerkheda	:	Dr. B.S. Thakur, Asstt. Agronomist, Wheat Research Station, Powerkheda, Distt. Hoshangabad (M.P.)
Junagarh	:	Dr. B.S. Jadon, Wheat Breeder, Wheat Research Station, Gujarat Agric. University Junagarh (Gujrat)
SOUTH EASTERN ZONE		
Chiplima	:	Dr. A.K. Sarkar, Officer-In-Charge, Wheat Improvement Project, R.R.S. Chiplima, Sambalpur.
NORTHERN HILL ZONE		
Almora	:	Dr. Kamta Prasad, Scientist S-1, Vivekanand Laboratory for Hill Agriculture, Almora, Almora 263601 (U.P.)
Palampur	:	Dr. C.M. Singh, Chief Scientist and Head, Department of Agronomy and Agrometeorology, College of Agriculture, Himachal Pradesh Agric. University Palampur)(H.P.)

Research Station		Cooperating Scientists
Solan	:	Dr. K.K. Singh, Associate Professor & Head of the Deptt. of Agronomy, H.P. Agric. University, Solan (H.P.)
Bhowali	:	Dr. P.C. Joshi, Vivekananda Parwatiya Krishi Anusandhan Shala, Vivekananda Laboratory for Hill Agric., Sub-Station - Bhowali, Distt. Nainital (U.P.)

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Zonewise distribution of agronomic Research Centres

Name of Zone		Centres
Northern Plain Zone	:	New Delhi, Ludhiana, R.S. Pura, Gurdaspur, Pantnagar, Mathura, Meerut, Agra, Morena, Dhampur+, Karnal ?, Bareilley ?, Ambala ?
North Western Plain Zone	:	Hissar, Durgapura, Vijapur, Sumerpur ?
North Eastern Plain Zone	:	Kanpur, Varanasi, Faizabad, Pusa (RAU), Pusa (IARI)+, Sabour
Far Eastern Plain Zone	:	Kalyani, Burdwan, Shillongoni, Imphal+, Ranchi, Malda ?
Peninsular Zone	:	Akola, Niphad, Coimbatore, Dharwar, Hyderabad+, Parbhani, Bangalore, (Hebbal), Poona
Central Zone	:	Udaipur, Indore+, Powerkheda, Junagarh, Jhansi+, Jabalpur, Kota ?
South Eastern Zone	:	Bhubneshwar+, Bilaspur+, Semiliguda+, Chiplima (Orissa).
Northern Hill Zone	:	Almora, Palampur, Solan, Bhowali.

+ = data not received

? = Expt. not undertaken

Proposed dates of sowing for different Zones in Wheat Agronomy Trial No.I

Dates x Varieties (Irrigated)
Trial NO.I Rabi 1983 - 84

Northern Plain Zone	D_1	44th meteorological week (29th Oct to 5th Nov 1983)
	D_2	46th meteorological week (12th Nov to 18th Nov 1983)
	D_3	50th meteorological week (10th Dec to 16th Dec 1983)
North Western Plain Zone	D_1	44th meteorological week (29th Oct to 5th Nov 1983)
	D_2	46th meteorological week (12th Nov to 18th Nov 1983)
	D_3	50th meteorological week (10th Dec to 16th Dec 1983)
North Eastern Plain Zone	D_1	44th meteorological week (29th Oct to 5th Nov 1983)
	D_2	46th meteorological week (12th Nov to 18th Nov 1983)
	D_3	50th meteorological week (10th Dec to 16th Dec 1983)
Far Eastern Plain Zone	D_1	44th meteorological week (29th Oct to 5th Nov 1983)
	D_2	46th meteorological week (12th Nov to 18th Nov 1983)
	D_3	50th meteorological week (10th Dec to 16th Dec 1983)
Central Zone	D_1	43rd meteorological week (22nd Oct to 28th Oct 1983)
	D_2	45th meteorological week (5th Nov to 11th Nov 1983)
	D_3	50th meteorological week (10th Nov to 16th Nov 1983)
Peninsular Zone	D_1	43rd meteorological week (22nd Oct to 28th Oct 1983)
	D_2	45th meteorological week (5th Nov to 11th Nov 1983)
	D_3	49th meteorological week (3rd Dec to 9th Dec 1983)
Northern Hill Zone	D_1	42nd meteorological week (15th Oct to 21st Oct 1983)
	D_2	44th meteorological week (26th Oct to 4 th Nov 1983)
	D_3	47th meteorological week (19th Nov to 25th Nov 1983)
South Eastern Zone	D_1	43rd meteorological week (22nd Oct to 28th Oct 1983)
	D_2	45th meteorological week (5th Nov to 11th Nov 1983)
	D_3	49th meteorological week (3rd Dec to 9th Dec 1983)

D_1 = Early
D_2 = Normal
D_3 = Late

LOCATION-WISE PERFORMANCE AND ADAPTABILITY OF IInd YEAR U.R.T. WHEAT VARIETIES

UNDER

EXPT. NO. 1 DATES OF SOWING(IRRIGATED)

D1 - EARLY,
D2 - NORMAL,
D3 - LATE

EXPT. NO. 2 IRRIGATION LEVELS

I1 - ONE IRRIGATION,
I2 - TWO IRRIGATION,
I3 - ADEQUATE IRRIGATION.

EXPT. NO. 5 DATE OF SOWING(RAINFED)

D1 - EARLY,
D2 - NORMAL,
D3 - LATE

&

PERFORMANCE OF THE TREATMENTS

IN

AGRONOMIC EXPERIMENTS

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE: Ludhiana

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	43.8	(5)	44.9	(11)	30.7	(6)	39.8	(6)
Raj 2525	32.1	(16)	41.8	(15)	28.3	(11)	34.1	(16)
Raj 2560	39.3	(7)	50.7	(1)	25.5	(15)	38.5	(8)
PBW 94	38.0	(10)	47.6	(7)	28.0	(13)	37.9	(9)
PBW 95	37.6	(11)	49.0	(5)	37.6	(1)	41.4	(4)
PBW 96	35.9	(13)	40.4	(16)	32.8	(4)	36.4	(13)
HD 2270	45.9	(2)	43.1	(13)	37.3	(2)	42.1	(3)
HD 2347	35.2	(15)	49.3	(4)	30.7	(7)	38.4	(12)
HD 2374	39.0	(8)	46.9	(9)	27.3	(14)	37.7	(10)
HD 2382	51.1	(1)	48.7	(6)	31.4	(5)	43.7	(2)
K 8152	35.5	(14)	45.2	(10)	24.8	(16)	35.2	(15)
Raj 2593	41.1	(6)	47.6	(8)	29.7	(8)	39.5	(7)
WH 385	36.6	(12)	42.1	(14)	29.3	(9)	36.0	(14)
WL 711	45.2	(4)	50.0	(2)	36.6	(3)	43.9	(1)
HD 2329	45.9	(3)	49.7	(3)	28.3	(12)	41.3	(5)
HD 2285	39.0	(9)	43.8	(12)	28.6	(10)	37.1	(11)
MEAN	40.1		46.3		30.4			

	F.Test	SEm±	C.D. 5%	CV%
Date of sowing (A)	Sig.	1.04	4.06	18.4
Varieties (B)	Sig.	2.07	6.09	
B within (A)	N.S.	3.77	-	
A within (B)	N.S.	3.79	-	

*Date of sowing 1.11.83 15.11.83 15.12.83

Date of harvesting 11. 4.84 20.4.84 29.4.84

( ) Figures in paranthesis denotes ranking.

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Ludhiana

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	64.9	(5)	69.0	(8)	46.6	(10)	60.2	(7)
Raj 2525	54.2	(16)	67.6	(11)	47.6	(7)	56.5	(13)
Raj 2560	56.6	(13)	67.3	(12)	45.6	(12)	56.5	(14)
PBW 94	60.4	(8)	68.3	(9)	48.0	(6)	58.9	(9)
PBW 95	59.0	(9)	68.3	(10)	48.7	(5)	58.7	(10)
PBW 96	58.7	(10)	66.6	(14)	50.0	(4)	58.4	(11)
HD 2270	71.4	(2)	70.7	(6)	58.3	(1)	66.8	(1)
HD 2347	54.5	(14)	71.4	(4)	44.9	(14)	56.9	(12)
HD 2374	57.6	(11)	66.9	(13)	53.8	(2)	59.4	(8)
HD 2382	73.2	(1)	65.2	(15)	47.3	(8)	61.9	(3)
K 8152	57.6	(12)	61.8	(16)	40.0	(16)	53.1	(16)
Raj 2593	67.3	(4)	73.2	(3)	44.5	(15)	61.7	(4)
WH 385	54.5	(15)	69.7	(7)	45.2	(13)	56.5	(15)
WL 711	68.7	(3)	77.6	(1)	51.4	(3)	65.9	(2)
HD 2329	64.2	(6)	71.1	(5)	45.9	(11)	60.4	(6)
HD 2285	62.8	(7)	73.5	(2)	47.3	(9)	61.2	(5)
MEAN	61.6		69.3		47.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig.	1.45	6.21	
Varieties (B)	N.S.	2.90	-	18.1
B within (A)	N.S.	5.22	-	
A within (B)	N.S.	5.28	-	

*Date of sowing 1.11.83 15.11.83 15.12.83

Date of harvesting 11.4.84 20.4.84 29.4.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Gurdaspur

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	32.6	(14)	43.1	(3)	34.9	(12)	36.9	(10)
Raj 2525	39.2	(6)	41.9	(6)	36.2	(7)	39.1	(6)
Raj 2560	34.9	(12)	40.5	(10)	32.9	(15)	36.1	(14)
PBW 94	47.1	(3)	44.5	(2)	39.5	(3)	43.7	(2)
PBW 95	39.2	(7)	41.5	(8)	39.9	(2)	40.2	(5)
PBW 96	45.1	(4)	47.1	(1)	40.8	(1)	44.3	(1)
HD 2270	37.2	(8)	36.6	(14)	35.9	(10)	36.6	(12)
HD 2347	36.2	(9)	35.9	(16)	37.2	(5)	36.4	(13)
HD 2374	35.2	(10)	42.2	(5)	33.3	(14)	36.9	(11)
HD 2382	34.6	(13)	39.2	(12)	39.2	(4)	37.7	(8)
K 8152	32.3	(15)	38.5	(13)	36.2	(8)	35.7	(15)
Raj 2595	39.5	(5)	40.8	(9)	36.2	(9)	38.8	(7)
WH 385	32.3	(16)	36.6	(15)	32.6	(16)	33.8	(16)
WL 711	50.1	(1)	43.1	(4)	34.3	(13)	42.5	(4)
HD 2329	50.1	(2)	41.8	(7)	36.6	(6)	42.8	(3)
HD 2285	35.2	(11)	39.9	(11)	35.9	(11)	37.0	(9)
MEAN	38.8		40.8		36.4			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.20	3.70	8.6
Varieties (B)	Sig	0.82	3.10	
B within (A)	Sig	1.10	3.23	
A within (B)	Sig	1.67	5.21	

*Date of sowing	2.11.83	16.11.83	12.12.83
Date of harvesting	24.4.84	24.04.84	24.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE: Gurdaspur

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING* EARLY NO	NORMAL	LATE	MEAN
HD 2379	60.3 (14)	62.3 (8)	58.0 (9)	60.2 (13)
Raj 2525	66.9 (7)	67.2 (5)	63.2 (5)	65.8 (3)
Raj 2560	61.9 (11)	67.9 (3)	55.0 (14)	61.6 (9)
PBW 94	62.9 (10)	55.3 (16)	56.3 (11)	58.2 (15)
PBW 95.	72.8 (3)	67.2 (6)	66.9 (2)	69.0 (2)
PBW 96	70.2 (5)	58.3 (13)	55.7 (12)	61.4 (11)
HD 2270	66.9 (8)	56.7 (14)	59.9 (8)	61.2 (12)
HD 2347	71.8 (4)	69.5 (1)	55.7 (13)	65.7 (4)
HD 2374	68.2 (6)	61.6 (9)	67.2 (1)	65.7 (5)
HD 2382	63.2 (9)	61.3 (11)	62.6 (6)	62.4 (8)
K 8152	61.9 (12)	61.6 (10)	66.5 (3)	63.3 (7)
Raj 2593	55.3 (16)	59.0 (12)	53.7 (16)	56.0 (16)
WH 385	59.3 (15)	67.9 (4)	57.3 (10)	61.5 (10)
WL 711	74.4 (2)	67.2 (7)	54.7 (15)	65.4 (6)
HD 2329	60.6 (13)	55.7 (15)	63.9 (4)	60.1 (14)
HD 2285	77.7 (1)	69.5 (2)	61.6 (7)	69.6 (1)
MEAN	65.9	62.6	59.9	

	F.Test	SEm±	C.D. 5%	CV%
Date of sowing (A)				
Varieties (B)				
B within (A)				
A within (B)				

*Date of sowing	2.11.83	16.11.83	12.12.83
Date of harvesting	24.4.84	24.4.84	29.4.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	39.9	(12)	49.8	(2)	38.7	(6)	42.8	(7)
Raj 2525	46.2	(4)	53.7	(1)	41.7	(2)	47.7	(1)
Raj 2560	39.9	(13)	46.2	(12)	39.0	(5)	41.7	(10)
PBW 94	51.0	(1)	46.8	(9)	39.3	(4)	45.7	(2)
pBW 95	41.1	(9)	49.2	(6)	44.1	(1)	44.8	(3)
pBW 96	47.4	(3)	42.3	(14)	35.6	(11)	41.8	(9)
HD 2270	38.0	(14)	46.8	(10)	37.7	(7)	40.9)	(12)
HD 2347	41.1	(10)	49.5	(3)	37.7	(8)	42.8	(8)
HD 2374	37.7	(15)	46.5	(11)	37.7	(9)	40.7	(13)
HD 2382	-		-		-		-	
K 8152	45.9	(7)	49.5	(4)	34.4	(13)	43.3	(5)
Raj 2593	46.2	(5)	47.7	(8)	35.6	(12)	43.2	(6)
WH 385	40.8	(11)	43.5	(13)	32.3	(14)	38.9	(15)
WL 711	48.6	(2)	48.3	(7)	26.3	(15)	41.1	(11)
HD 2329	46.2	(6)	49.5	(5)	35.9	(10)	43.9	(4)
HD 2285	42.3	(8)	38.0	(15)	41.1	(3)	40.5	(14)
MEAN	43.5		47.2		37.1			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig.	1.07	4.22	
Varieties (B)	Sig.	1.32	3.70	9.27
B within (A)	Sig.	2.45	6.89	
A within (B)	Sig.	2.28	6.41	

*Date of sowing 4.11.83 18.11.83 16.12.83

Date of harvesting 5. 4.84 8. 4.84 19. 4.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	60.1	(15)	70.4	(13)	71.9	(14)	67.4	(15)
Raj 2525	90.3	(1)	93.6	(2)	88.8	(1)	90.9	(1)
Raj 2560	75.5	(8)	83.3	(5)	73.4	(12)	77.4	(8)
PBW 94	83.0	(4)	80.0	(7)	75.5	(9)	79.5	(5)
PBW 95	81.5	(6)	91.2	(3)	76.7	(7)	83.1	(3)
PBW 96	71.0	(11)	61.9	(15)	74.9	(11)	69.2	(14)
HD 2270	73.4	(9)	79.4	(8)	77.0	(6)	76.6	(10)
HD 2347	68.2	(12)	87.6	(4)	76.1	(8)	77.3	(9)
HD 2374	78.5	(7)	94.5	(1)	84.2	(2)	85.8	(2)
HD 2382	-		-		-		-	
K 8152	83.6	(3)	77.6	(10)	81.5	(3)	80.9	(4)
Raj 2593	68.2	(13)	67.6	(14)	75.2	(10)	70.4	(13)
WH 385	64.9	(14)	75.5	(12)	77.3	(5)	72.6	(12)
WL 711	84.8	(2)	81.5	(6)	68.5	(15)	78.3	(7)
HD 2329	71.6	(10)	78.2	(9)	72.2	(13)	74.0	(11)
HD 2285	81.8	(5)	76.1	(11)	78.8	(4)	78.9	(6)
MEAN	75.8		79.9		76.8			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig.	1.35	-	10.61
Varieties (B)	Sig.	2.72	7.67	
B within (A)	Sig.	4.76	-	
A within (B)	Sig.	4.72	-	

*Date of sowing	4.11.83	18.11.83	16.12.83
Date of harvesting	5.4.84	8.04.84	19.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Mathura

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	45.6	(2)	49.0	(11)	31.1	(12)	41.9	(7)
Raj 2525	41.4	(10)	50.4	(5)	55.8	(1)	49.2	(1)
Raj 2560	41.4	(11)	50.4	(6)	30.4	(13)	40.7	(12)
PBW 94	40.7	(13)	47.6	(13)	34.5	(5)	40.9	(11)
PBW 95	36.6	(15)	41.4	(16)	30.4	(14)	36.1	(15)
PBW 96	41.4	(12)	45.6	(14)	31.8	(9)	39.6	(13)
HD 2270	45.6	(3)	52.5	(3)	41.4	(3)	46.5	(3)
HD 2347	45.6	(4)	53.8	(2)	45.6	(2)	48.3	(2)
HD 2374	43.5	(5)	50.4	(7)	33.1	(8)	42.3	(5)
HD 2382	39.3	(14)	48.3	(12)	29.0	(15)	38.9	(14)
K 8152	43.5	(6)	49.7	(8)	33.8	(6)	42.3	(6)
Raj 2593	30.4	(16)	43.5	(15)	29.0	(16)	34.3	(16)
WH 385	42.1	(7)	49.7	(9)	33.2	(7)	41.7	(8)
WL 711	42.1	(8)	51.1	(4)	31.8	(10)	41.7	(9)
HD 2329	46.2	(1)	55.9	(1)	37.3	(4)	46.5	(4)
HD 2285	42.1	(9)	49.7	(10)	31.8	(11)	41.2	(10)
MEAN	41.7		49.3		35.0			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	-	1.07	13.1
Varieties (B)	Sig	-	5.12	
B within (A)	-	-	-	
A within (B)	-	-	-	

*Date of sowing 5.11.83 15.11.83 15.12.83

Date of harvesting 22.4.84 24.04.84 -

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Meerut

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	38.7	(11)	48.5	(12)	19.3	(15)	35.4	(15)
Raj 2525	38.7	(12)	49.3	(9)	37.7	(8)	41.9	(10)
Raj 2560	39.6	(9)	57.0	(2)	48.3	(2)	48.3	(2)
PBW 94	65.7	(1)	45.4	(13)	43.5	(3)	51.5	(1)
PBW 95	49.3	(3)	51.2	(7)	39.6	(6)	46.7	(5)
PBW 96	34.8	(13)	45.4	(14)	35.8	(10)	38.7	(12)
HD 2270	33.8	(15)	54.1	(4)	42.5	(4)	43.5	(8)
HD 2347	39.6	(10)	38.7	(15)	32.9	(12)	37.0	(13)
HD 2374	54.1	(2)	51.2	(8)	39.6	(7)	48.3	(3)
HD 2382	42.5	(7)	55.1	(3)	42.5	(5)	46.7	(6)
K 8152	-		-		-		-	
Raj 2593	46.4	(5)	49.3	(10)	49.3	(1)	48.3	(4)
WH 385	34.8	(14)	52.2	(6)	24.2	(14)	37.0	(14)
WL 711	41.5	(8)	49.3	(11)	34.8	(11)	41.9	(11)
HD 2329	48.3	(4)	54.1	(5)	37.7	(9)	46.7	(7)
HD 2285	43.5	(6)	59.9	(1)	27.1	(13)	43.5	(9)
MEAN	43.5		50.5		36.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	-	2.48	11.90
Varieties (B)	Sig	-	4.84	
B within (A)	Sig	-	8.42	
A within (B)	-	-	-	

*Date of sowing	1.11.83	14.11.83	15.12.83
Date of harvesting	23.4.84	24.4.84	24.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Meerut

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
HD 2379	62.8	(10)	72.5	(11)	39.6	(15)	58.3	(14)
Raj 2525	62.8	(11)	71.5	(12)	58.9	(9)	64.4	(11)
Raj 2560	66.7	(7)	87.9	(3)	77.3	(1)	77.3	(2)
PBW 94	84.1	(1)	70.5	(13)	77.3	(2)	77.3	(3)
PBW 95	72.5	(5)	79.2	(7)	66.7	(7)	72.8	(7)
PBW 96	61.8	(13)	75.4	(10)	41.5	(14)	59.6	(13)
HD 2270	58.9	(14)	86.0	(4)	68.6	(5)	71.2	(8)
HD 2347	71.5	(6)	62.8	(15)	49.3	(12)	61.2	(12)
HD 2374	81.2	(2)	84.1	(6)	71.5	(4)	78.9	(1)
HD 2382	63.8	(9)	89.9	(2)	68.6	(6)	74.1	(6)
K 8152	-		-		-		-	
Raj 2593	74.4	(4)	76.3	(8)	76.3	(3)	75.7	(4)
WH 385	58.9	(15)	68.6	(14)	43.5	(13)	57.0	(15)
WL 711	64.7	(8)	76.3	(9)	57.0	(10)	66.0	(10)
HD 2329	77.3	(3)	86.0	(5)	63.8	(8)	75.7	(5)
HD 2285	62.8	(12)	94.7	(1)	50.2	(11)	69.2	(9)
MEAN	68.3		78.8		60.7			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)				
Varieties (B)				
B within (A)				
A within (B)				

*Date of sowing 01.11.83 14.11.83 15.12.83

Date of harvesting 23.4.84 24.04.84 24.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Agra

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*				MEAN	
	EARLY	NORMAL		LATE		
HD 2379	-	53.4	(3)	33.7	(7)	43.6 (3)
Raj 2525	-	-		-		-
Raj 2560	-	49.7	(9)	37.9	(1)	43.8 (2)
PBW 94	-	50.3	(7)	32.1	(10)	41.2 (10)
PBW 95	-	43.7	(13)	35.2	(6)	39.5 (12)
PBW 96	-	39.9	(14)	29.0	(13)	34.5 (14)
HD 2270	-	26.9	(15)	31.3	(11)	29.1 (15)
HD 2347	-	51.8	(6)	35.4	(5)	43.6 (4)
HD 2374	-	48.2	(11)	36.4	(3)	42.3 (7)
HD 2382	-	53.8	(2)	37.9	(2)	45.9 (1)
K 8152	-	49.7	(10)	28.6	(14)	39.2 (13)
Raj 2593	-	55.9	(1)	28.2	(15)	42.1 (9)
WH 385	-	49.9	(8)	30.6	(12)	40.3 (11)
WL 711	-	52.4	(4)	32.7	(9)	42.6 (6)
HD 2329	-	52.4	(5)	33.7	(8)	43.1 (5)
HD 2285	-	48.2	(12)	36.2	(4)	42.2 (8)
MEAN		48.4		33.3		

	F.Tewt	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.31	5.01	12.38
Varieties (B)	Sig	0.92	3.31	
B within (A)	Sig	1.72	5.37	
A within (B)	Sig	1.99	6.45	

*Date of sowing	11.11.83	26.11.83	15.12.83
Date of harvesting	05.04.84	05.04.84	05.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Agra

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING* EARLY	NORMAL	LATE	MEAN
HD 2379	-	98.3 (7)	76.6 (10)	87.5 (11)
Raj 2525	-	-	-	-
Raj 2560	-	88.2 (14)	89.0 (3)	88.6 (9)
PBW 94	-	101.1 (5)	81.0 (7)	91.1 (6)
PBW 95	-	92.1 (10)	73.7 (13)	82.9 (13)
PBW 96	-	115.9 (1)	62.1 (15)	89.0 (7)
HD 2270	-	91.7 (11)	70.4 (14)	81.1 (15)
HD 2347	-	91.1 (12)	78.3 (9)	84.7 (12)
HD 2374	-	93.8 (9)	92.1 (1)	93.0 (5)
HD 2382	-	98.6 (6)	89.2 (2)	93.9 (3)
K 8152	-	110.4 (2)	75.8 (12)	93.1 (4)
Raj 2593	-	97.8 (8)	79.9 (8)	88.9 (8)
WH 385	-	90.7 (13)	85.1 (4)	87.9 (10)
WL 711	-	106.2 (3)	84.5 (5)	95.4 (1)
HD 2329	-	87.0 (15)	76.6 (11)	81.8 (14)
HD 2285	-	104.8 (4)	83.9 (6)	94.4 (2)
MEAN	-	97.9	79.9	

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)				
Varieties (B)				
B within (A)				
A within (B)				

*Date of sowing 11.11.83 26.11.83 15.12.83

Date of harvesting 05.04.84 05.04.84 05.04.84

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

CENTRE : Morena

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY	NORMAL	LATE	MEAN
HD 2379	- -	54.0 (2)	32.5 (6)	43.3 (2)
Raj 2525	-	55.3 (1)	33.6 (4)	46.0 (1)
Raj 2560	-	36.8 (16)	25.6 (15)	31.2 (16)
PBW 94	-	50.3 (5)	33.1 (5)	41.7 (6)
PBW 95	-	46.4 (9)	28.2 (12)	37.3 (11)
PBW 96	-	45.0 (13)	28.4 (11)	36.7 (12)
HD 2270	-	49.3 (7)	34.6 (2)	42.0 (5)
HD 2347	-	49.5 (6)	34.6 (3)	42.1 (4)
HD 2374	-	46.4 (10)	35.9 (1)	41.2 (7)
HD 2382	-	53.1 (3)	32.5 (7)	42.8 (3)
K 8152	-	43.2 (14)	27.5 (14)	35.4 (14)
Raj 2593	-	45.3 (12)	27.8 (13)	36.6 (13)
WH 385	-	42.4 (15)	23.8 (16)	33.1 (15)
WL 711	-	45.6 (11)	31.1 (9)	28.4 (10)
HD 2329	-	51.3 (4)	29.9 (10)	40.6 (9)
HD 2285	-	48.9 (8)	32.4 (8)	40.7 (8)
MEAN		47.7	30.7	

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.42	6.00	9.3
Varieties (B)	Sig	0.83	3.81	
B within (A)	Sig	1.82	4.89	
A within (B)	Sig	2.00	7.23	

*Date of sowing	18.11.83	02.12.83	16.12.83
Date of harvesting	28.03.84	05.04.84	12.04.84

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Hissar

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
VW 115	38.9	(8)	37.5	(9)	40.6	(4)	39.0	(6)
WH 367	44.2	(2)	43.1	(1)	39.2	(8)	42.2	(1)
WH 369	43.7	(3)	35.4	(11)	35.9	(12)	38.3	(10)
Raj 2535	45.2	(1)	34.0	(12)	40.6	(5)	39.9	(3)
Raj 2560	38.9	(9)	40.4	(5)	36.1	(11)	38.5	(8)
Raj 2619	41.7	(4)	39.9	(7)	34.4	(14)	38.7	(7)
VW 120	38.2	(10)	42.0	(2)	38.5	(9)	39.6	(5)
VW 121	37.5	(11)	40.6	(4)	41.3	(3)	39.8	(4)
VW 122	34.7	(14)	38.5	(8)	40.3	(6)	37.8	(11)
Raj 2545	41.0	(6)	30.6	(15)	28.5	(15)	33.4	(15)
WH 374	27.8	(15)	40.3	(6)	36.8	(10)	35.0	(14)
Raj 1555	41.7	(5)	41.3	(3)	43.1	(1)	42.0	(2)
WH 283	40.3	(7)	32.6	(14)	35.4	(13)	36.1	(13)
Sonalika	36.8	(12)	33.0	(13)	39.9	(7)	36.6	(12)
Raj 2184	36.1	(13)	37.2	(10)	42.0	(2)	38.4	(9)
MEAN	39.1		37.8		38.2			

	F.Test	SEm±	C.D.5%	CV %
Date of sowing(A)	N.S.	1.19	-	-
Varieties (B)	Sig	1.60	4.67	
B within (A)	Sig	2.89	8.12	
A within (B)				

*Date of sowing 31.10.1983 14.11.83 13.12.83

Date of harvesting 6.4.1984 11.04.84 20.04.84

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Durgapura

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
VW 115	30.7	(7)	32.6	(2)	19.7	(4)	27.7	(2)
WH 367	38.2	(1)	25.5	(12)	14.4	(14)	26.0	(6)
WH 369	28.9	(9)	26.9	(9)	19.3	(5)	25.0	(10)
Raj 2535	35.3	(3)	26.9	(10)	15.3	(11)	25.8	(7)
Raj 2560	29.4	(8)	24.8	(13)	14.9	(13)	23.1	(13)
Raj 2619	28.0	(11)	27.2	(8)	16.9	(9)	24.0	(11)
VW 120	31.8	(5)	32.2	(3)	17.3	(6)	27.1	(4)
VW 121	31.8	(6)	30.4	(4)	17.1	(7)	26.4	(5)
VW 122	37.4	(2)	34.4	(1)	16.3	(10)	29.4	(1)
Raj 2545	-		-		-		-	
WH 374	27.6	(12)	27.7	(7)	20.0	(3)	25.1	(9)
Raj 1555	28.2	(10)	26.3	(11)	17.0	(8)	23.8	(12)
WH 283	26.4	(13)	24.8	(14)	15.3	(12)	22.2	(14)
Sonalika	26.2	(14)	28.4	(6)	22.5	(1)	25.7	(8)
Raj 2184	32.4	(4)	29.7	(5)	20.4	(2)	27.5	(3)
MEAN	30.9		28.4		17.6			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	0.72	2.81	12.26
Varieties (b)	Sig	1.04	2.92	
B within (A)	Sig	1.80	5.08	
A within (B)	Sig	1.89	5.38	

*Date of sowing	2.11.83	15.11.83	17.12.83
Date of harvesting	8.4.84	10.04.84	12.04.84

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Durgapura

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
VW 115	53.8	(2)	47.8	(3)	45.8	(1)	49.2	(1)
WH 367	54.9	(1)	30.0	(11)	35.7	(5)	40.2	(7)
WH 369	31.8	(13)	34.9	(9)	42.9	(2)	36.5	(11)
Raj 2535	44.0	(8)	33.5	(10)	33.1	(12)	36.9	(10)
Raj 2560	50.0	(3)	28.6	(13)	33.4	(11)	37.3	(9)
Raj 2619	37.3	(11)	41.8	(7)	33.9	(9)	37.7	(8)
VW 120	47.5	(6)	43.8	(4)	34.0	(8)	41.8	(4)
VW 121	47.6	(5)	42.0	(6)	34.3	(7)	41.3	(5)
VW 122	43.7	(9)	43.3	(5)	35.5	(6)	40.8	(6)
Raj 2545	-		-		-		-	
WH 374	48.3	(4)	53.1	(1)	33.5	(10)	45.0	(3)
Raj 1555	39.1	(10)	28.9	(12)	32.0	(13)	33.3	(13)
WH 283	35.7	(12)	28.6	(14)	29.2	(14)	31.2	(14)
Sonalika	28.9	(14)	37.1	(8)	39.6	(4)	35.2	(12)
Raj 2184	45.2	(7)	49.6	(2)	41.7	(3)	45.5	(2)
MEAN	43.4		38.8		36.4			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	0.69	2.70	11.0
Varieties (B)	Sig	1.45	4.08	-
B within (A)	Sig	2.51	7.07	-
A within (B)	Sig	2.52	7.19	-

*Date of sowing	2.11.83	15.11.83	17.12.83
Date of harvesting	8.04.84	10.04.84	12.04.84

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Vijapur

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
VW 115	43.6	(11)	44.4	(14)	41.6	(7)	43.2	(13)
WH 367	50.2	(6)	45.0	(13)	41.4	(8)	45.6	(10)
WH 369	44.0	(10)	54.5	(3)	42.4	(6)	48.7	(4)
Raj 2535	47.3	(8)	48.3	(10)	43.5	(4)	46.4	(9)
Raj 2560	56.9	(1)	51.6	(4)	43.5	(5)	50.7	(2)
Raj 2619	53.0	(4)	48.1	(11)	43.8	(3)	48.3	(5)
VW 120	53.8	(3)	55.6	(2)	40.5	(9)	50.0	(3)
VW 121	44.5	(9)	55.7	(1)	49.5	(1)	51.6	(1)
VW 122	55.7	(2)	50.9	(5)	35.0	(14)	47.2	(7)
Raj 2545	-		-		-		-	
WH 374	42.3	(13)	48.0	(12)	40.2	(11)	43.5	(12)
Raj 1555	49.0	(7)	48.7	(9)	44.2	(2)	47.3	(6)
WH 283	42.4	(12)	50.6	(6)	40.4	(10)	44.5	(11)
Sonalika	36.4	(14)	50.0	(7)	37.8	(13)	41.4	(14)
Raj 2184	50.7	(5)	49.9	(8)	38.8	(12)	46.5	(8)
MEAN	47.8		50.1		41.6			

	F.Test	SEm±	C.D. 5%	CV %
DATE OF SOWING (A)	N.S.	2.05	8.05	10.61
Varieties (B)	Sig	1.65	4.66	
B within (A)	Sig	2.86	8.07	
A within (B)	Sig	3.45	11.06	

*Date of sowing	29.10.83	14.11.83	13.12.83
Date of harvesting	13.03.84	24.03.84	04.04.84

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Vijapur

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
VW 115	82.3	(11)	85.1	(14)	79.3	(7)	82.2	(12)
WH 367	94.7	(7)	86.1	(13)	77.6	(8)	86.2	(10)
WH 369	94.2	(8)	102.5	(3)	80.1	(6)	92.3	(5)
Raj 2535	90.8	(10)	89.7	(11)	82.4	(4)	87.6	(9)
Raj 2560	107.0	(2)	96.8	(4)	82.4	(5)	95.4	(2)
Raj 2619	100.6	(4)	91.6	(10)	77.0	(10)	89.7	(8)
VW 120	101.5	(3)	108.3	(1)	71.6	(13)	93.8	(3)
VW 121	95.6	(6)	106.5	(2)	95.5	(1)	99.2	(1)
VW 122	108.2	(1)	95.8	(7)	77.2	(9)	93.7	(4)
Raj 2545	-		-		-		-	
WH 374	82.0	(12)	88.3	(12)	73.7	(11)	81.3	(13)
Raj 1555	99.4	(5)	92.8	(9)	83.4	(3)	91.9	(6)
WH 283	80.1	(13)	96.1	(6)	71.8	(12)	82.7	(11)
Sonalika	70.6	(14)	96.6	(5)	67.5	(14)	78.2	(14)
Raj 2184	94.2	(9)	95.1	(8)	83.6	(2)	91.0	(7)
MEAN	92.9		95.1		78.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	3.60	-	
Varieties (B)	Sig	3.86	10.86	13.00
B within (A)	N.S.	-	-	
A within (B)	N.S.	-	-	

*Date of sowing 29.10.83 14.11.83 13.12.83

Date of harvesting 13.3.84. 24.03.84 04.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	27.3	(11)	34.2	(4)	27.3	(3)	29.6	(6)
K 8110	34.5	(5)	30.0	(8)	23.8	(10)	29.4	(7)
HUW 219	43.1	(2)	29.3	(9)	22.4	(11)	31.6	(3)
HUW 220	41.4	(3)	31.4	(7)	26.6	(4)	31.3	(4)
HUW 221	29.7	(8)	36.6	(3)	28.3	(1)	31.5	(5)
HUW 225	28.6	(9)	33.1	(5)	24.5	(9)	28.7	(9)
HP 1515	-		-		-		-	
HP 1518	-		-		-		-	
BR 326	21.1	(16)	29.3	(10)	20.4	(16)	23.6	(16)
K 8144	28.6	(10)	25.2	(16)	21.1	(13)	25.0	(14)
K 8148	22.8	(15)	32.8	(6)	28.0	(2)	27.9	(10)
HUW 229	26.6	(13)	27.6	(11)	26.6	(5)	26.9	(11)
HUW 231	26.9	(12)	25.9	(14)	24.8	(8)	25.9	(13)
HUW 233	26.6	(14)	27.3	(12)	21.1	(14)	25.0	(15)
HUW 234	46.6	(1)	47.3	(1)	25.7	(6)	39.9	(1)
HP 1524	-		-		-		-	
UP 262	-		-		-		-	
HUW 206	35.9	(4)	26.6	(13)	25.2	(7)	29.2	(8)
Sonalika	31.8	(7)	25.5	(15)	22.1	(12)	26.5	(12)
HUW 213	33.1	(6)	44.2	(2)	21.1	(15)	32.8	(2)
MEAN	31.5		31.6		24.3			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.50	4.17	10.95
Varieties (B)	Sig	1.51	3.00	
B within (A)	Sig	2.61	5.18	
A within (B)	Sig	2.95	5.85	

*Date of sowing	7.11.83	19.11.83	17.12.83
Date of harvesting	20.4.84	20.04.84	20.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	50.7	(7)	52.1	(4)	46.2	(1)	49.7	(3)
K 8110	62.5	(3)	46.2	(11)	38.0	(9)	48.9	(5)
HUW 219	63.8	(2)	48.7	(7)	34.5	(13)	49.0	(4)
HUW 220	60.0	(4)	50.4	(6)	40.4	(5)	50.3	(2)
HUW 221	42.8	(12)	55.9	(2)	39.7	(8)	46.1	(6)
HUW 225	43.1	(10)	48.7	(8)	34.9	(12)	42.2	(13)
HP 1515	-		-		-		-	
HP 1518	-		-		-		-	
BR 326	32.8	(16)	44.9	(12)	32.8	(14)	36.8	(16)
K 8144	43.1	(11)	40.0	(16)	32.1	(15)	38.4	(15)
K 8148	36.6	(14)	47.3	(9)	43.5	(2)	42.5	(12)
HUW 229	40.0	(13)	51.8	(5)	41.8	(3)	44.5	(9)
HUW 231	35.9	(15)	41.8	(15)	40.0	(6)	39.2	(14)
HUW 233	43.5	(9)	44.5	(13)	40.0	(7)	42.7	(11)
HUW 234	65.2	(1)	66.3	(1)	37.3	(10)	56.3	(1)
HP 1524	-		-		-		-	
UP 262	-		-		-		-	
HUW 206	51.8	(6)	44.2	(14)	41.1	(4)	45.7	(7)
Sonalika	49.3	(8)	47.3	(10)	35.2	(11)	43.9	(10)
HUW 213	53.1	(5)	54.2	(3)	30.0	(16)	45.7	(3)
MEAN	48.4		49.0		38.0			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	2.66	7.38	13.52
Varieties (B)	Sig	2.88	5.72	
B within (A)	Sig	4.99	9.92	
A within (B)	Sig	5.51	11.95	

*Date of sowing	7.11.83	19.11.83	17.12.83
Date of harvesting	20.4.84	20.04.84	20.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Varanasi

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	35.3	(5)	38.1	(6)	24.2	(12)	32.5	(6)
K 8110	28.2	(13)	34.7	(15)	27.1	(9)	30.0	(12)
HUW 219	40.1	(3)	48.5	(1)	28.0	(2)	38.8	(2)
HUW 220	31.4	(8)	37.9	(7)	23.5	(15)	30.9	(8)
HUW 221	38.4	(4)	35.7	(14)	27.6	(3)	33.9	(4)
HUW 225	27.3	(16)	36.3	(12)	21.4	(20)	28.3	(17)
HP 1515	27.3	(17)	37.6	(8)	23.0	(17)	29.3	(15)
HP 1518	28.6	(12)	31.4	(17)	27.5	(6)	29.2	(16)
BR 326	30.3	(10)	38.3	(5)	22.5	(18)	30.3	(11)
K 8144	40.8	(2)	36.0	(13)	22.2	(19)	33.0	(5)
K 8148	16.9	(20)	30.2	(20)	23.7	(14)	23.6	(20)
HUW 229	28.1	(14)	36.8	(10)	23.9	(13)	29.6	(14)
HUW 231	32.7	(6)	36.6	(11)	23.3	(16)	30.8	(9)
HUW 233	27.4	(15)	37.6	(9)	27.6	(4)	30.8	(10)
HUW 234	32.3	(7)	40.9	(3)	30.7	(1)	34.6	(3)
HP 1524	24.5	(18)	31.0	(19)	27.2	(8)	27.6	(18)
HP 262	30.8	(9)	32.6	(16)	26.7	(10)	30.0	(13)
HUW 206	42.7	(1)	48.3	(2)	27.4	(7)	39.4	(1)
Sonalika	23.3	(19)	31.3	(18)	26.5	(11)	27.0	(19)
HUW 213	29.0	(11)	39.8	(4)	27.6	(5)	32.1	(7)
MEAN	30.8		37.1		25.7			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	0.71	1.97	10.94
Varieties (B)	Sig	1.03	2.01	
B within (A)	Sig	1.78	3.48	
A within (B)	Sig	1.70	3.38	

*Date of sowing	5.11.83	18.11.83	15.12.83
Date of harvesting	10.04.84	10.04.84	10.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Varanasi

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	63.3	(1)	59.8	(9)	41.8	(12)	55.0	(3)
K 8110	46.4	(7)	69.0	(1)	42.7	(11)	52.7	(7)
HUW 219	42.7	(10)	59.8	(10)	49.2	(5)	50.6	(8)
HUW 220	45.9	(8)	56.3	(15)	36.1	(18)	46.1	(12)
HUW 221	32.7	(19)	55.4	(16)	52.4	(3)	46.8	(11)
HUW 225	36.2	(15)	59.6	(11)	39.4	(14)	45.1	(14)
HP 1515	40.3	(13)	47.9	(19)	45.9	(7)	44.7	(16)
HP 1518	40.4	(12)	62.5	(6)	33.9	(20)	45.6	(13)
BR 326	40.1	(14)	59.0	(12)	43.1	(10)	47.4	(10)
K 8144	47.2	(5)	66.1	(4)	55.1	(1)	56.1	(2)
K 8148	22.0	(20)	47.7	(20)	37.7	(15)	35.8	(20)
HUW 229	41.6	(11)	57.0	(14)	36.7	(16)	45.1	(15)
HUW 231	33.5	(18)	58.6	(13)	34.3	(19)	42.1	(18)
HUW 233	49.2	(3)	62.4	(7)	48.3	(6)	53.3	(5)
HUW 234	45.0	(9)	60.5	(8)	45.2	(8)	50.2	(9)
HP 1524	46.7	(6)	67.7	(2)	49.9	(4)	54.6	(4)
UP 262	49.2	(4)	67.5	(3)	41.6	(13)	52.8	(6)
HUW 206	55.9	(2)	64.9	(5)	54.7	(2)	58.5	(1)
Sonalika	36.0	(16)	49.4	(18)	36.6	(17)	40.7	(19)
HUW 213	33.9	(17)	53.4	(17)	44.9	(9)	44.1	(17)
MEAN	42.7		59.2		44.0			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	8.26	3.25	7.36
Varieties (B)	Sig	9.26	2.62	
B within (A)	Sig	1.60	4.55	
A within (B)	Sig	2.39	6.83	

*Date of sowing	5.11.83	18.11.83	15.12.83
Date of harvesting	10.4.84	10.04.84	10.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE
CENTRE : Faizabad

1983-84

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
K 8103	30.5	(10)	25.9	(12)	21.2	(7)	25.9	(11)
K 8110	32.6	(7)	28.5	(7)	17.6	(10)	26.2	(9)
HUW 219	34.2	(5)	30.5	(5)	19.7	(8)	28.1	(3)
HUW 220	28.5	(12)	25.4	(13)	24.3	(1)	26.1	(10)
HUW 221	31.1	(9)	28.5	(8)	23.8	(3)	27.8	(4)
HUW 225	29.5	(11)	26.9	(9)	24.3	(2)	26.9	(8)
HP 1515	-		-		-		-	
HP 1518	-		-		-		-	
BR 326	-		-		-		-	
K 8144	25.4	(14)	21.2	(16)	22.3	(6)	23.0	(14)
K 8148	23.3	(15)	24.8	(15)	16.1	(13)	21.4	(16)
HUW 229	37.3	(1)	26.4	(11)	23.8	(4)	29.2	(2)
HUW 231	28.5	(13)	29.5	(6)	19.2	(9)	25.7	(12)
HUW 233	33.1	(6)	32.6	(2)	16.1	(14)	27.3	(6)
HUW 234	37.3	(2)	31.6	(4)	23.3	(5)	30.7	(1)
HP 1524	-		-		-		-	
UP 262	34.7	(4)	25.4	(14)	17.1	(11)	25.7	(13)
HUW 206	35.2	(3)	32.6	(3)	13.5	(16)	27.1	(7)
Sonalika	22.8	(16)	26.9	(10)	15.5	(15)	21.7	(15)
HUW 213	31.6	(8)	34.7	(1)	16.6	(12)	27.6	(5)
MEAN	31.0		28.2		19.7			

	F. Test	SEm±	C.D. 5%	C.V. %
Date of sowing (A)	Sig	1.02	3.79	10.08
Varieties (B)	Sig	3.15	8.85	
B within (A)	Sig	5.46	15.29	
A within (B)	-	-	-	

*Date of sowing	5.11.83	18.11.83	16.12.83
Date of harvesting	3.04.84	06.04.84	20.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Faizabad

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	52.3	(7)	51.8	(6)	46.1	(3)	50.1	(3)
K 8110	55.4	(5)	50.2	(8)	36.7	(12)	47.4	(9)
HUW 219	59.0	(3)	57.4	(2)	47.1	(2)	54.5	(1)
HUW 220	49.2	(10)	49.7	(9)	44.0	(7)	47.6	(8)
HUW 221	53.3	(6)	49.2	(10)	45.5	(4)	49.3	(6)
HUW 225	44.5	(12)	45.0	(13)	49.7	(1)	46.4	(11)
HP 1515	-		-		-		-	
HP 1518	-		-		-		-	
BR 326	-		-		-		-	
K 8144	52.3	(8)	51.2	(7)	45.0	(5)	49.5	(5)
K 8148	43.0	(14)	37.3	(16)	34.7	(13)	38.3	(16)
HUW 229	58.4	(4)	44.0	(14)	44.5	(6)	49.0	(7)
HUW 231	39.3	(16)	53.3	(5)	40.4	(10)	44.3	(13)
HUW 233	51.2	(9)	56.9	(3)	25.4	(16)	44.5	(12)
HUW 234	44.5	(13)	53.8	(4)	41.4	(9)	46.6	(10)
HP 1524	-		-		-		-	
UP 262	61.1	(2)	62.6	(1)	34.7	(14)	52.8	(2)
HUW 206	63.2	(1)	46.6	(12)	39.9	(11)	49.9	(4)
Sonalika	45.0	(11)	42.4	(15)	41.9	(8)	43.1	(14)
HUW 213	43.0	(15)	47.1	(11)	33.1	(15)	41.1	(15)
MEAN	50.9		49.9		40.6			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	2.41	9.48	16.52
Varieties (B)	N.S.	6.91	-	
B within (A)	N.S.	11.96	-	
A within (B)	N.S.	11.96	-	

*Date of sowing	5.11.83	18.11.83	16.12.83
Date of harvesting	3.04.84	6.04.84	20.04.84

AGRONOMIC TRIAL NO: *1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Pusa (RAU)

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
K 8103	30.7	(19)	38.3	(18)	35.2	(4)	34.7	(19)
K 8110	41.1	(8)	45.9	(5)	34.9	(6)	40.6	(6)
HUW 219	34.5	(18)	38.0	(20)	34.2	(9)	35.5	(17)
HUW 220	45.3	(2)	46.9	(2)	34.9	(7)	42.4	(2)
HUW 221	44.2	(4)	49.3	(1)	33.8	(11)	42.4	(3)
HUW 225	40.7	(12)	40.4	(14)	36.9	(2)	39.3	(9)
HP 1515	43.5	(6)	45.5	(6)	35.9	(3)	41.6	(4)
HP 1518	43.8	(5)	46.9	(3)	33.8	(12)	41.5	(5)
BR 326	41.1	(9)	43.1	(8)	32.8	(14)	39.0	(10)
K 8144	39.1	(15)	40.7	(13)	28.3	(19)	36.0	(16)
K 8148	40.4	(13)	41.8	(9)	30.4	(18)	37.5	(15)
HUW 229	30.4	(20)	38.3	(19)	32.4	(16)	33.7	(20)
HUW 231	38.3	(17)	41.4	(10)	26.9	(20)	35.5	(18)
HUW 233	46.9	(1)	45.5	(7)	38.0	(1)	43.5	(1)
HUW 234	42.1	(7)	41.1	(12)	32.8	(15)	38.6	(12)
HP 1524	40.4	(14)	39.3	(17)	33.5	(13)	37.7	(14)
UP 262	41.1	(10)	41.3	(11)	34.2	(10)	38.8	(11)
HUW 206	38.6	(16)	46.6	(4)	34.5	(8)	39.9	(8)
Sonalika	44.9	(3)	40.4	(15)	35.2	(5)	40.1	(7)
HUW 213	41.1	(11)	40.4	(16)	32.4	(17)	37.9	(13)
MEAN	40.4		42.6		33.4			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	1.00	3.93	9.79
Va-rieties (B)	Sig	1.27	3.55	
B within (A)	Sig	2.19	6.15	
A within (B)	Sig	3.34	9.27	

*Date of sowing	5.11.83	18.11.83	16.12.83
Date of harvesting	31.3.84	09.04.84	11.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Sabour

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	30.0	(19)	32.4	(15)	36.6	(11)	33.0	(12)
K 8110	43.1	(5)	39.7	(8)	42.8	(1)	41.9	(5)
HUW 219	39.3	(7)	32.8	(14)	23.5	(19)	31.9	(15)
HUW 220	33.5	(15)	25.9	(20)	28.3	(15)	29.2	(19)
HUW 221	37.6	(10)	42.8	(3)	39.7	(4)	40.0	(6)
HUW 225	35.2	(13)	33.1	(13)	30.7	(14)	33.0	(13)
HP 1515	33.1	(17)	38.7	(9)	31.1	(12)	34.3	(10)
HP 1518	43.8	(2)	51.4	(1)	37.3	(8)	44.2	(2)
BR 326	47.6	(1)	48.7	(2)	39.0	(5)	45.1	(1)
K 8144	43.5	(4)	42.4	(4)	41.1	(3)	42.3	(4)
K 8148	33.5	(16)	27.3	(18)	38.7	(6)	33.1	(11)
HUW 229	35.5	(11)	31.1	(16)	28.0	(16)	31.5	(16)
HUW 231	38.7	(8)	29.3	(17)	31.1	(13)	33.0	(14)
HUW 233	35.5	(12)	41.4	(6)	36.9	(9)	38.0	(8)
HUW 234	43.8	(3)	42.1	(5)	41.4	(2)	42.4	(3)
HP 1524	31.8	(18)	33.8	(12)	24.8	(18)	30.1	(17)
UP 262	26.2	(20)	35.5	(11)	28.0	(17)	29.9	(18)
HUW 206	40.4	(6)	40.4	(7)	36.9	(10)	39.2	(7)
Sonalika	34.6	(14)	26.9	(19)	22.1	(20)	27.8	(20)
HUW 213	38.7	(9)	36.2	(10)	37.6	(7)	37.5	(9)
MEAN	37.3		36.6		33.8			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	N.S.	1.33	-	11.97
Va-rieties (B)	Sig	2.02	4.00	
B within (A)	Sig	3.57	6.95	
A within (B)	-	-	-	

*Date of sowing	5.11.83	18.11.83	16.12.83
Date of harvesting	20.3.84	30.03.84	10.04.84

AGRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Sabour

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
K 8103	43.5	(19)	48.7	(13)	54.5	(10)	48.9	(11)
K 8110	63.2	(4)	58.3	(7)	63.2	(1)	61.5	(4)
HUW 219	58.0	(7)	48.0	(15)	33.1	(19)	46.4	(16)
HUW 220	49.7	(15)	37.6	(20)	41.4	(15)	42.9	(19)
HUW 221	57.3	(8)	63.2	(3)	58.7	(4)	59.7	(6)
HUW 225	51.8	(14)	48.3	(14)	44.5	(13)	48.2	(14)
HP 1515	48.0	(17)	56,6	(9)	44.5	(14)	49.7	(10)
HP 1518	64.2	(3)	69.4	(2)	54.5	(11)	62.7	(3)
BR 326	70.7	(1)	71.4	(1)	60.4	(3)	67.5	(1)
K 8144	62.8	(5)	61.8	(6)	58.0	(5)	60.9	(5)
K 8148	49.7	(16)	38.0	(19)	57.6	(6)	48.4	(12)
HUW 229	52.5	(13)	46.6	(16)	40.7	(16)	46.6	(15)
HUW 231	57.3	(9)	42.8	(17)	45.2	(12)	48.4	(13)
HUW 233	52.8	(12)	62.1	(4)	54.9	(9)	56.6	(8)
HUW 234	64.9	(2)	62.1	(5)	62.1	(2)	63.0	(2)
HP 1524	45.6	(18)	50.0	(12)	35.5	(18)	43.7	(18)
UP 262	37.6	(20)	55.2	(10)	40.0	(17)	44.4	(17)
HUW 206	61.0	(6)	58.0	(8)	55.6	(7)	58.2	(7)
Sonalika	53.5	(11)	39.7	(18)	31.8	(20)	41.6	(20)
HUW 213	56.6	(10)	52.8	(11)	55.2	(8)	54.9	(9)
MEAN	55.0		53.5		49.6			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	1.67	-	5.88
Varieties (B)	Sig	1.46	2.89	
B within (A)	Sig	2.53	5.01	
A within (B)	-	-	-	

*Date of sowing	5.11.83	18.11.83	16.12.83
Date of harvesting	20.3.84	30.3.84	10.4.84

AGRONOMIC TRIAL NO: 1

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Kalyani

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
BR 2061	30.1	(8)	23.6	(13)	22.3	(12)	25.4	(13)
BR 2074	36.8	(4)	31.9	(11)	29.5	(8)	32.6	(9)
BW 11	43.5	(1)	35.5	(9)	30.8	(6)	36.6	(3)
BW 158	27.2	(10)	27.7	(12)	31.7	(4)	31.7	(11)
BW 161	-		-		-		-	
BW 182	29.5	(9)	36.2	(8)	44.6	(2)	36.8	(2)
HI 968	33.2	(6)	42.2	(5)	31.3	(5)	35.5	(4)
HD 2367	40.4	(2)	33.7	(10)	30.8	(7)	35.0	(5)
MG 104-4	40.2	(3)	47.1	(2)	45.3	(1)	44.9	(1)
BW 148	-		-		-		-	
DL 220-2	27.2	(11)	44.0	(4)	26.4	(10)	32.6	(10)
HP 1498	-		-		-		-	
Janak	35.0	(5)	38.6	(7)	29.0	(9)	34.2	(7)
UP 262	33.2	(7)	45.3	(3)	21.0	(13)	33.2	(8)
Sonalika	24.6	(13)	47.6	(1)	36.2	(3)	34.5	(6)
HP 1209	25.4	(12)	42.2	(6)	25.4	(11)	31.2	(12)
MEAN	33.2		37.1		29.7			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	2.16	5.76	8.79
Varieties (B)	Sig	4.50	10.26	
B within (A)	N.S.	10.44	-	
A within (B)	N.S.	14.75	-	

*Date of sowing

Date of harvesting

AGRONOMIC TRIAL NO: 1

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Kalyani

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
BR 2061	39.5	(12)	41.3	(11)	43.1	(4)	41.3	(12)
BR 2074	54.5	(1)	54.0	(2)	40.9	(8)	48.9	(4)
BW 11	40.9	(11)	37.3	(13)	41.7	(6)	40.0	(13)
BW 158	42.6	(10)	53.6	(3)	35.5	(10)	43.8	(6)
BW 161	-		-		-		-	
BW 182	47.9	(5)	59.8	(1)	53.1	(1)	60.3	(1)
HI 968	32.8	(13)	42.9	(8)	51.3	(2)	42.6	(11)
HD 2367	47.7	(6)	40.9	(12)	41.2	(7)	43.3	(8)
MG 104-4	50.7	(3)	53.4	(4)	47.1	(3)	50.9	(2)
BW 148	-		-		-		-	
DL 220-2	47.1	(8)	50.7	(6)	30.4	(12)	42.8	(9)
HP 1498	-		-		-		-	
Janak	48.9	(4)	48.0	(7)	40.0	(9)	49.1	(3)
UP 262	54.5	(2)	41.7	(10)	32.3	(11)	33.5	(7)
Sonalika	44.4	(9)	52.3	(5)	42.6	(5)	46.4	(5)
HP 1209	47.3	(7)	42.8	(9)	30.1	(13)	42.8	(10)
MEAN	46.9		47.8		40.2			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	2.34	-	12.60
Varieties (B)	Sig	3.78	0.58	
B within (A)	N.S.	15.48	-	
A within (B)	N.S.	17.64	-	

*Date of sowing

Date of harvesting

AGRONOMIC TRIAL NO: 1

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Shillongani

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY	NORMAL	LATE	MEAN
BR 2061	33.3 (1)	23.3 (4)	15.1 (7)	23.9 (3)
BR 2074	-	-	-	-
BW 11	-	-	-	-
BW 158	-	-	-	-
BW 161	-	-	-	-
BW 182	-	-	-	-
HI 968	27.7 (6)	24.8 (2)	20.6 (1)	24.4 (2)
HD 2367	30.6 (2)	18.8 (8)	11.0 (8)	20.1 (8)
MG 104-4	27.5 (7)	22.6 (5)	18.4 (2)	22.8 (5)
BW 148	-	-	-	-
DL 220-2	28.7 (4)	22.5 (6)	17.1 (4)	22.8 (6)
HP 1498	25.9 (8)	20.4 (7)	18.4 (3)	21.6 (7)
Janak	-	-	-	-
UP 262	28.7 (5)	23.9 (3)	17.0 (5)	23.2 (4)
Sonalika	29.5 (3)	30.3 (1)	15.7 (6)	25.2 (1)
HP 1209	-	-	-	-
MEAN	29.0	23.3	16.7	

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.30	5.11	10.00
Varieties (B)	Sig	0.82	2.29	
B within (A)	Sig	1.43	3.96	
A within (B)	Sig	1.87	7.36	

*Date of sowing

Date of harvesting 23.3.84 3.4.84 7.4.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Akola

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING EARLY		NORMAL		LATE		MEAN	
NI 8188	24.1	(6)	23.1	(15)	24.9	(3)	24.0	(7)
NI 8272	23.2	(8)	27.8	(3)	23.3	(6)	24.8	(5)
NI 8306	21.0	(12)	26.2	(8)	22.7	(7)	23.3	(11)
NI 8414	30.4	(3)	27.7	(5)	21.7	(9)	26.7	(2)
NI 8611	31.7	(2)	27.3	(6)	20.0	(11)	26.3	(3)
MACS 1992	17.8	(16)	23.4	(13)	21.1	(10)	20.7	(16)
APAU 1577	-		-		-		-	
NI 8289	22.3	(11)	22.0	(17)	19.1	(15)	21.1	(15)
NI 8303	24.0	(7)	30.0	(1)	19.3	(14)	24.5	(6)
NI 8453	22.8	(10)	23.2	(14)	19.1	(16)	21.7	(14)
DWR 39	25.2	(5)	25.3	(12)	16.4	(18)	22.3	(13)
HI 934	23.2	(9)	28.2	(2)	18.9	(17)	23.4	(9)
HI 977	28.6	(4)	27.8	(4)	22.4	(8)	26.3	(4)
HD 2270	18.3	(14)	22.6	(16)	20.0	(12)	20.3	(17)
HD 2376	16.8	(18)	18.9	(18)	24.0	(4)	19.9	(18)
NI 5439	35.3	(1)	27.0	(7)	19.6	(13)	27.3	(1)
HD 2189	17.1	(17)	25.4	(11)	27.6	(1)	23.4	(10)
HD 4502	18.0	(15)	25.7	(9)	23.5	(5)	22.4	(12)
Sonalika	20.2	(13)	25.7	(10)	26.3	(2)	24.0	(8)
MEAN	23.3		25.4		21.7			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	1.59	-	10.67
Varieties (B)	Sig	1.10	3.11	
B within (A)	Sig	2.07	5.77	
A within (B)	-	-	-	

*Date of sowing	28.10.83	9.11.83	9.12.83
Date of harvsting	23.02.84	7.03.84	20.3.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Akola

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	44.6	(11)	50.9	(14)	54.7	(3)	50.1	(10)
NI 8272	52.8	(7)	61.0	(4)	51.2	(6)	55.0	(5)
NI 8306	44.5	(12)	57.7	(7)	49.9	(7)	50.7	(9)
NI 8414	66.4	(3)	61.1	(3)	47.8	(9)	58.4	(2)
NI 8611	69.5	(2)	60.0	(5)	46.0	(11)	58.5	(1)
MACS 1992	39.1	(16)	51.5	(12)	46.4	(10)	45.6	(16)
APAU 1577	-		-		-		-	
NI 8289	50.6	(9)	48.4	(17)	41.9	(15)	47.0	(15)
NI 8303	52.9	(6)	50.6	(15)	42.4	(14)	48.6	(13)
NI 8453	50.1	(10)	51.1	(13)	41.9	(16)	47.7	(14)
DWR 39	55.3	(5)	55.7	(11)	36.1	(18)	49.0	(12)
HI 934	50.9	(8)	62.0	(1)	41.6	(17)	51.5	(7)
HI 977	62.8	(4)	61.2	(2)	48.3	(8)	57.8	(4)
HD 2270	40.3	(14)	49.7	(16)	44.1	(12)	44.7	(17)
HD 2376	37.0	(18)	41.5	(18)	52.9	(4)	43.8	(18)
NI 5439	71.9	(1)	59.3	(6)	43.2	(13)	58.1	(3)
HD 2189	37.6	(17)	56.0	(10)	60.8	(1)	51.5	(8)
HD 4502	39.7	(15)	56.5	(8)	51.6	(5)	49.3	(11)
Sonalika	44.4	(13)	56.5	(9)	57.8	(2)	52.9	(6)
MEAN	50.6		55.0		47.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	N.S.	3.06	-	8.32
Varieties (B)	Sig	2.84	7.99	
B within (A)	Sig	4.93	13.85	
A within (B)	-	-	-	

*Date of sowing	28.10.83	9.11.83	9.12.83
Date of harvesting	23.02.84	7.03.84	20.3.84

ACRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Niphad

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
NI 8183	37.4	(3)	31.1	(15)	35.7	(1)	34.2	(6)
NI 8272	40.9	(1)	35.4	(2)	32.4	(9)	36.2	(1)
NI 8306	40.4	(2)	33.3	(7)	34.1	(4)	35.9	(2)
NI 8414	33.2	(15)	34.1	(6)	30.0	(15)	32.4	(14)
NI 8611	36.5	(4)	32.8	(9)	34.9	(2)	34.7	(5)
MACS 1992	36.3	(6)	32.5	(10)	30.5	(13)	33.1	(9)
APAU 1577	36.2	(8)	35.9	(1)	34.7	(3)	35.6	(3)
NI 8289	36.4	(5)	32.2	(11)	31.9	(10)	33.6	(7)
NI 8303	33.4	(14)	34.9	(3)	28.4	(18)	32.2	(15)
NI 8453	35.4	(10)	28.7	(18)	33.3	(8)	32.5	(12)
DWR 39	34.0	(13)	31.0	(16)	33.8	(6)	32.9	(11)
HI 934	28.7	(18)	27.6	(19)	26.2	(19)	27.5	(19)
HI 977	34.2	(12)	34.3	(5)	28.9	(17)	32.5	(13)
HD 2270	26.9	(19)	30.6	(17)	30.8	(12)	29.4	(18)
HD 2376	35.2	(11)	31.7	(12)	34.0	(5)	33.6	(8)
NI 5439	36.3	(7)	31.2	(13)	31.7	(11)	33.1	(10)
HD 2189	36.2	(9)	34.6	(4)	33.5	(7)	34.8	(4)
HD 4502	32.0	(17)	32.1	(14)	30.0	(16)	31.0	(17)
Sonalika	33.0	(16)	32.9	(8)	30.4	(14)	32.1	(16)
MEAN	34.9		32.5		31.9			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	0.87	-	9.32
Varieties (B)	Sig	1.11	3.08	
B within (A)	N.S.	1.93	-	
A within (B)	N.S.	4.23	-	

*Date of sowing	25.10.83	8.11.83	5.12.83
Date of harvesting	6.03.84	12.3.84	5.04.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Niphad

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	42.2	(10)	40.7	(13)	37.6	(15)	40.3	(14)
NI 8272	58.2	(2)	38.8	(15)	38.5	(12)	45.2	(5)
NI 8306	41.8	(11)	46.5	(4)	39.3	(9)	42.5	(7)
NI 8414	40.2	(13)	41.8	(10)	36.8	(16)	39.6	(16)
NI 8611	64.3	(1)	67.7	(1)	44.0	(2)	58.7	(1)
MACS 1992	53.2	(4)	45.2	(5)	38.8	(11)	45.7	(4)
APAU 1577	44.3	(8)	41.4	(11)	42.7	(5)	42.8	(6)
NI 8289	37.6	(17)	41.1	(12)	43.1	(4)	40.6	(12)
NI 8303	32.6	(19)	40.1	(14)	37.7	(14)	36.8	(18)
NI 8453	43.5	(9)	38.2	(16)	38.0	(13)	39.9	(15)
DWR 39	36.9	(18)	47.1	(3)	42.7	(6)	42.2	(8)
HI 934	45.4	(7)	37.7	(18)	31.1	(19)	38.1	(17)
HI 977	40.0	(14)	42.3	(9)	43.6	(3)	42.0	(10)
HD 2270	41.6	(12)	36.3	(19)	31.3	(18)	36.4	(19)
HD 2376	39.7	(15)	44.0	(7)	42.5	(7)	42.1	(9)
NI 5439	57.1	(3)	43.7	(8)	39.3	(10)	46.7	(3)
HD 2189	47.6	(6)	61.2	(2)	44.7	(1)	51.2	(2)
HD 4502	47.8	(5)	37.4	(17)	36.1	(17)	40.5	(13)
Sonalika	38.7	(16)	45.2	(6)	40.5	(8)	41.5	(11)
MEAN	44.9		44.0		39.4			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	1.74	5.38	10.28
Varieties (B)	Sig	4.34	8.52	
B within (A)	N.S.	9.50	-	
A within (B)	N.S.	20.90	-	

*Date of sowing 25.10.83 8.11.83 5.12.83

Date of harvesting 6.03.84 12.3.84 5.04.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Coimbatore

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8180	6.8	(11)	7.8	(18)	10.3	(1)	8.3	(16)
NI 8272	5.0	(19)	10.8	(16)	9.1	(2)	8.3	(17)
NI 8306	8.8	(4)	13.0	(12)	6.4	(9)	9.4	(9)
NI 8414	6.7	(14)	22.2	(2)	5.6	(14)	11.5	(3)
NI 8611	8.5	(7)	13.9	(11)	4.7	(19)	9.0	(11)
MACS 1992	6.1	(16)	11.4	(14)	7.7	(6)	8.4	(15)
APAU 1577	11.0	(2)	24.2	(1)	7.2	(7)	14.1	(1)
NI 8289	6.6	(15)	14.1	(10)	5.6	(15)	8.7	(13)
NI 8303	7.6	(10)	6.1	(19)	5.9	(13)	6.5	(19)
NI 8453	5.2	(18)	14.2	(8)	8.4	(4)	9.3	(10)
DWR 39	6.8	(12)	16.9	(6)	8.9	(3)	10.9	(5)
HI 934	6.8	(13)	14.2	(9)	8.0	(5)	9.7	(8)
HI 977	8.8	(5)	11.7	(13)	6.1	(12)	8.9	(12)
HD 2270	8.1	(9)	8.3	(17)	6.3	(10)	7.6	(18)
HD 2376	8.7	(6)	11.2	(15)	5.6	(16)	8.5	(14)
NI 5439	9.5	(3)	16.8	(7)	6.5	(8)	11.0	(4)
HD 4502	13.0	(1)	18.1	(4)	6.2	(11)	12.5	(2)
Sonalika	5.9	(17)	19.7	(3)	5.4	(17)	10.3	(6)
HD 2189	8.4	(8)	17.3	(5)	5.3	(18)	10.3	(7)
MEAN	7.8		14.3		6.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.19	0.75	7.38
Varieties (B)	Sig	0.34	0.98	
B within (A)	Sig	0.59	1.68	
A within (B)	Sig	0.62	1.80	

*Date of sowing	24.10.83	7.11.83	6.12.83
Date of harvesting	9.01.84	16.2.84	1.03.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Coimbatore

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	10.9	(17)	15.9	(14)	20.5	(3)	15.8	(11)
NI 8272	8.4	(18)	17.7	(11)	18.9	(6)	15.0	(15)
NI 8306	12.3	(12)	19.5	(7)	15.0	(17)	15.6	(12)
NI 8414	11.2	(16)	25.5	(2)	19.5	(5)	18.7	(3)
NI 8611	14.3	(6)	16.9	(13)	10.6	(19)	13.9	(18)
MACS 1992	11.9	(13)	15.9	(15)	17.3	(12)	15.0	(16)
APAU 1577	16.7	(4)	31.1	(1)	17.0	(14)	21.6	(1)
NI 8289	13.1	(9)	18.6	(9)	14.1	(18)	15.3	(13)
NI 8303	11.8	(14)	9.3	(19)	15.5	(16)	12.2	(19)
NI 8453	6.8	(19)	17.7	(12)	21.5	(1)	15.3	(14)
DWR 39	13.0	(10)	19.1	(8)	18.8	(8)	17.0	(8)
HI 934	13.4	(7)	18.1	(10)	16.1	(15)	15.9	(10)
HI 977	13.3	(8)	12.6	(18)	18.9	(7)	14.8	(17)
HD 2270	20.2	(1)	13.7	(17)	17.2	(13)	17.0	(9)
HD 2376	19.4	(2)	14.8	(16)	18.6	(10)	17.6	(5)
NI 5439	18.4	(3)	20.2	(5)	20.2	(4)	19.6	(2)
HD 2189	11.3	(15)	21.3	(3)	18.7	(9)	17.1	(7)
HD 4502	15.7	(5)	19.7	(6)	20.7	(2)	18.7	(4)
Sonalika	12.6	(11)	20.7	(4)	18.4	(11)	17.2	(6)
MEAN	13.4		18.3		17.6			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.26	1.06	9.37
Varieties (B)	Sig	0.58	1.61	
B within (A)	Sig	0.99	2.79	
A within (B)	Sig	0.99	2.91	

*Date of sowing	24.10.83	7.11.83	6.12.83
Date of harvesting	9.01.84	16.2.84	1.03.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Dharwar

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	28.5	(11)	29.8	(8)	32.0	(4)	30.1	(10)
NI 8272	28.9	(10)	34.9	(3)	31.3	(6)	31.7	(7)
NI 8306	34.0	(4)	33.5	(4)	29.8	(7)	32.5	(5)
NI 8414	32.7	(6)	33.3	(5)	32.4	(3)	32.8	(4)
NI 8611	35.9	(2)	37.6	(1)	28.5	(8)	34.0	(1)
MACS 1992	25.8	(12)	29.0	(10)	26.1	(12)	27.0	(12)
APAU 1577	36.6	(1)	30.9	(6)	28.1	(10)	31.9	(6)
NI 8289	-		-		-		-	
NI 8303	-		-		-		-	
NI 8453	-		-		-		-	
DWR 39	34.9	(3)	28.9	(11)	34.8	(1)	32.9	(3)
HI 934	33.4	(5)	30.7	(7)	28.2	(9)	30.8	(9)
HI 977	31.8	(7)	35.4	(2)	33.0	(2)	33.4	(2)
HD 2270	31.5	(8)	29.6	(9)	31.8	(5)	31.0	(8)
HD 2376	29.1	(9)	26.7	(12)	28.1	(11)	28.0	(11)
NI 5439	-		-		-		-	
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
Sonalika	-		-		-		-	

MEAN	31.9	31.7	30.3	
	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	1.02	-	9.0
Varieties (B)	Sig	0.98	2.74	
B within (A)	Sig	1.68	4.69	
A within (B)	Sig	1.91	5.95	

*Date of sowing	22.10.83	6.11.83	3.12.83
Date of harvesting	20.02.84	5.03.84	30.3.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84
CENTRE : Dharwar

VARIETIES X DATES OF SOWING (Irrigated)
Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	53.0	(12)	42.6	(12)	46.0	(12)	47.2	(12)
NI 8272	54.0	(10)	54.5	(3)	47.0	(11)	51.8	(10)
NI 8306	62.0	(3)	47.5	(9)	57.8	(4)	55.8	(5)
NI 8414	58.8	(9)	50.2	(4)	51.5	(9)	53.5	(9)
NI 8611	75.0	(1)	63.2	(1)	61.6	(1)	66.6	(1)
MACS 1992	61.5	(5)	55.2	(2)	53.3	(8)	56.7	(3)
APAU 1577	61.9	(4)	49.8	(6)	61.6	(2)	57.8	(2)
NI 8289	-		-		-		-	
NI 8303	-		-		-		-	
NI 8453	-		-		-		-	
DWR 39	61.4	(6)	42.9	(11)	57.4	(5)	53.9	(8)
HI 934	59.8	(7)	47.6	(8)	55.3	(7)	54.3	(7)
HI 977	59.4	(8)	50.2	(5)	56.8	(6)	55.4	(6)
HD 2270	53.1	(11)	45.9	(10)	47.9	(10)	49.0	(11)
HD 2376	62.7	(2)	47.8	(7)	58.5	(3)	56.3	(4)
NI 5439	-		-		-		-	
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
Sonalika	-		-		-		-	

MEAN	60.2	49.8	54.6	
	F.test	SEm±	C.D. 5%	CV %
Date of sowing(A)	N.S.	2.37	-	10.00
Varieties (B)	Sig	1.83	5.11	
B within (A)	Sig	3.16	8.82	
A within (B)	Sig	3.85	12.38	

*Date of sowing	22.10.83	6.11.83	3.12.83
Date of harvesting	20.2. 84	5.3.84	30.3.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Parbhani

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY	NORMAL	LATE	MEAN
NI 8186	31.8 (3)	31.9 (9)	30.3 (2)	31.3 (3)
NI 8272	31.6 (4)	37.4 (1)	28.5 (6)	32.5 (1)
NI 8306	25.4 (10)	32.7 (5)	30.5 (1)	29.5 (8)
NI 8414	30.8 (5)	32.6 (6)	29.3 (4)	30.9 (6)
NI 8611	38.0 (1)	27.8 (10)	27.0 (8)	30.9 (7)
MACS 1992	23.9 (11)	27.8 (11)	16.5 (11)	22.7 (11)
APAU 1577	-	-	-	-
NI 8289	-	-	-	-
NI 8303	29.0 (7)	36.5 (3)	30.2 (3)	31.9 (2)
NI 8453	29.0 (8)	32.6 (7)	23.7 (10)	28.4 (10)
DWR 39	-	-	-	-
HI 934	26.1 (9)	33.5 (4)	27.6 (7)	29.1 (9)
HI 977	29.4 (6)	37.4 (2)	26.9 (9)	31.2 (5)
HD 2270	-	-	-	-
HD 2376	-	-	-	-
NI 5439	32.8 (2)	32.6 (8)	28.8 (5)	31.4 (4)
HD 2189	-	-	-	-
HD 4502	-	-	-	-
Sonalika	-	-	-	-
MEAN	29.8	33.0	27.2	

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.61	1.83	11.69
Varieties (B)	Sig	1.12	3.01	
B within (A)	Sig	1.38	3.99	
A within (B)	Sig	1.51	4.01	

*Date of sowing	28.10.83	11.11.83	7.12.83
Date of harvesting	17.2.84	10.03.84	28.3.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Parbhani

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	20.2	(6)	42.3	(9)	43.7	(8)	35.4	(9)
NI 8272	17.8	(10)	44.1	(8)	42.5	(9)	34.8	(10)
NI 8306	16.9	(11)	53.1	(5)	46.5	(6)	38.8	(6)
NI 8414	22.9	(3)	45.3	(7)	49.2	(3)	39.1	(5)
NI 8611	27.5	(1)	58.3	(3)	48.5	(4)	53.9	(1)
MACS 1992	22.3	(4)	41.7	(10)	34.8	(11)	32.9	(11)
APAU 1577	-		-		-		-	
NI 8289	-		-		-		-	
NI 8303	20.2	(7)	54.0	(4)	49.5	(2)	41.2	(4)
NI 8453	20.2	(8)	62.5	(1)	41.2	(10)	41.3	(3)
DWR 39	-		-		-		-	
H I 934	19.6	(9)	40.5	(11)	55.4	(1)	38.5	(7)
H I 977	20.8	(5)	47.1	(6)	45.6	(7)	37.8	(8)
HD 2270	-		-		-		-	
HD 2376	-		-		-		-	
NI 5439	26.9	(2)	62.5	(2)	46.7	(5)	45.4	(2)
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
Sonalika	-		-		-		-	
MEAN	21.4		50.1		45.8			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)				
Varieties (B)				
B within (A)				
A within (B)				

*Date of sowing	28.10.83	11.11.83	07.12.83
Date of harvesting	17.02.84	10.03.84	28.03.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Pune

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EALLY		NORMAL		LATE			
NI 8188	27.4	(16)	30.6	(16)	30.7	(10)	29.6	(16)
NI 8272	30.4	(13)	36.0	(4)	31.4	(8)	32.6	(7)
NI 8306	35.5	(7)	32.0	(13)	36.2	(1)	35.0	(2)
NI 8414	32.4	(10)	34.2	(9)	26.1	(14)	30.9	(13)
NI 8611	37.0	(3)	36.1	(3)	23.5	(17)	32.3	(9)
MACS 1992	23.8	(18)	30.8	(15)	25.2	(16)	26.6	(18)
APAU 1577	-		-		-		-	
NI 8289	24.3	(17)	33.1	(11)	31.9	(5)	29.8	(15)
NI 8303	41.1	(1)	35.0	(6)	35.6	(2)	37.3	(1)
NI 8453	35.3	(8)	30.5	(17)	30.3	(11)	32.0	(10)
DWR 39	36.3	(4)	34.7	(8)	27.7	(13)	31.3	(12)
HI 934	31.3	(11)	34.2	(10)	31.7	(6)	32.4	(8)
HI 977	35.7	(6)	37.0	(1)	31.6	(7)	34.7	(3)
HD 2270	30.2	(14)	35.0	(7)	29.3	(12)	31.5	(11)
HD 2376	33.2	(9)	32.3	(12)	33.1	(3)	32.8	(6)
NI 5439	35.8	(5)	36.7	(2)	20.2	(18)	30.9	(14)
HD 2189	31.0	(12)	35.4	(5)	32.9	(4)	33.1	(4)
HD 4502	28.4	(15)	29.9	(18)	25.6	(15)	28.0	(17)
Sonalika	37.1	(2)	31.0	(14)	31.2	(9)	33.1	(5)
MEAN	32.6		33.6		29.7			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.02	0.08	17.6
Varieties (B)	Sig	0.08	0.21	
B within (A)	Sig	0.13	0.37	
A within (B)	Sig	0.13	0.37	

*Date of sowing	28.10.83	8.11.83	6.12.83
Date of harvesting	8.03.84	8.03.84	4.04.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Pune

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	59.9	(,9)	57.7	(13)	64.1	(7)	60.6	(10)
NI 8272	60.0	(8)	69.9	(3)	59.4	(13)	63.1	(7)
NI 8306	59.1	(13)	55.3	(15)	64.5	(4)	59.6	(12)
NI 8414	59.7	(11)	60.6	(9)	56.7	(17)	59.0	(13)
NI 8611	62.7	(6)	69.9	(4)	71.0	(1)	67.9	(3)
MACS 1992	57.0	(14)	60.3	(10)	67.2	(2)	61.5	(8)
APAU 1577	-		-		-		-	
NI 8289	46.4	(18)	55.2	(16)	63.4	(11)	55.0	(18)
NI 8303	54.1	(16)	63.0	(6)	64.4	(5)	60.5	(11)
NI 8453	54.1	(17)	57.1	(14)	58.4	(14)	56.5	(17)
DWR 39	73.8	(1)	63.0	(7)	63.8	(10)	67.0	(4)
HI 934	59.9	(10)	52.8	(18)	60.1	(12)	57.6	(16)
HI 977	59.6	(12)	60.7	(8)	64.0	(8)	61.4	(9)
HD 2270	60.9	(7)	58.8	(12)	57.0	(16)	58.9	(14)
HD 2376	68.3	(5)	65.4	(5)	63.9	(9)	65.8	(5)
NI 5439	71.1	(2)	82.0	(1)	53.0	(18)	68.7	(1)
HD 2189	56.0	(15)	59.8	(11)	57.5	(15)	57.8	(15)
HD 4502	69.6	(4)	70.5	(2)	64.4	(6)	68.2	(2)
Sonalika	70.9	(3)	54.6	(17)	64.8	(3)	63.4	(6)
MEAN	61.3		62.0		62.1			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.05	0.19	15.25
Varieties (B)	Sig	0.14	0.38	
B within (A)	Sig	0.24	0.67	
A within (B)	Sig	0.24	0.67	

*Date of sowing	28.10.83	8.11.83	6.12.83
Date of harvesting	8.03.84	8.03.84	4.04.84

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

CENTRE : Hebbal

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
NI 8188	24.8	(10)	33.1	(6)	25.3	(2)	27.7	(4)
NI 8272	25.3	(9)	31.6	(9)	21.4	(3)	26.1	(8)
NI 8306	29.7	(4)	33.1	(7)	17.5	(11)	26.8	(7)
NI 8414	28.4	(5)	34.4	(5)	20.3	(6)	27.7	(5)
NI 8611	30.0	(3)	31.3	(10)	19.8	(8)	27.0	(6)
MACS 1992	-		-		-		-	
APAU 1577	32.3	(1)	36.8	(3)	20.6	(5)	29.9	(3)
NI 8289	27.6	(6)	30.0	(11)	19.8	(9)	25.8	(11)
NI 8303	25.8	(8)	33.1	(8)	18.8	(10)	25.9	(9)
NI 8453	-		-		-		-	
DWR 39	32.3	(2)	37.0	(1)	21.4	(4)	30.2	(1)
HI 934	-		-		-		-	
HI 977	-		-		-		-	
HD 2270	-		-		-		-	
HD 2376	-		-		-		-	
NI 5439	26.9	(7)	36.9	(2)	26.4	(1)	30.1	(2)
HD 2189	22.9	(11)	34.7	(4)	20.1	(7)	25.9	(10)
HD 4502	-		-		-		-	
Sonalika	-		-		-		-	
MEAN	27.8		33.8		21.0			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig		0.32	9.12
Varieties (B)	Sig		0.04	
B within (A)	Sig		0.11	
A within (B)	Sig		0.53	

*Date of sowing	20.10.83	16.11.83	7.12.83
Date of harvesting	-	-	-

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Udaipur

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY	NORMAL	LATE	MEAN
Raj 6070	49.2 (4)	60.2 (1)	44.9 (5)	51.4 (2)
J 411	42.9 (7)	46.0 (10)	34.9 (10)	41.3 (10)
JU 126	49.3 (3)	49.1 (6)	46.9 (2)	48.4 (4)
Lok-4	41.2 (9)	48.1 (7)	42.5 (7)	43.9 (9)
HI 968	46.8 (6)	47.7 (9)	45.1 (3)	46.5 (6)
HD 2270	39.2 (10)	50.4 (5)	43.5 (6)	44.4 (8)
Raj 1555	54.1 (1)	54.2 (3)	42.5 (8)	50.3 (3)
WH 147	48.5 (5)	51.5 (4)	40.9 (9)	47.0 (5)
J 405	42.2 (8)	48.0 (8)	45.1 (4)	45.1 (7)
Lok-1	52.5 (2)	54.6 (2)	48.4 (1)	51.8 (1)
MEAN	46.6	51.0	43.5	

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.09	4.30	11.81
Varieties (B)	Sig	1.85	5.24	
B within (A)	N.S.	3.20	-	
A within (B)	-	-	-	

*Date of sowing 27.10.83. 11.11.83 12.12.83

Date of harvesting 30.03.84 09.04.84 15.04.84

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Udaipur

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
Raj 6070	67.4	(7)	77.7	(7)	55.8	(9)	67.0	(8)
J 411	82.7	(2)	93.4	(1)	69.9	(6)	82.0	(2)
JU 126	64.6	(8)	73.7	(8)	62.7	(8)	67.0	(9)
Lok-4	63.7	(,9)	92.0	(2)	85.1	(1)	80.3	(5)
HI 968	79.5	(4)	84.7	(6)	81.9	(2)	82.0	(3)
HD 2270	71.2	(5)	86.9	(4)	72.4	(5)	76.8	(6)
Raj 1555	81.8	(3)	87.4	(3)	75.5	(4)	81.6	(4)
WH 147	60.0	(10)	60.2	(10)	54.3	(10)	58.2	(10)
J 405	86.1	(1)	85.8	(5)	77.7	(3)	83.2	(1)
Lok-1	67.6	(6)	72.4	(9)	68.9	(7)	69.6	(7)
MEAN	72.5		81.4		70.2			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.88	3.45	6.43
Varieties (B)	Sig	2.88	8.15	
B within (A)	N.S.	4.99	-	
A within (B)				

*Date of sowing	27.10.83	11.11.83	12.12.83
Date of harvesting	30.3.84	09.04.84	15.04.84

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Powerkheda

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
Raj 6070	30.4	(8)	37.6	(5)	37.6	(4)	35.2	(,7)
J 411	34.2	(5)	44.5	(2)	33.8	(9)	37.5	(6)
JU 126	37.6	(3)	37.6	(6)	39.3	(2)	38.2	(4)
Lok-4	40.0	(1)	37.3	(7)	36.6	(7)	38.0	(5)
HI 968	31.1	(7)	35.2	(9)	35.2	(8)	33.8	(9)
HD 2270	23.5	(10)	34.5	(10)	33.1	(10)	30.4	(10)
Raj 1555	39.7	(2)	43.8	(3)	37.6	(5)	40.4	(1)
WH 147	34.2	(6)	45.5	(1)	40.4	(1)	40.0	(2)
J 405	29.3	(9)	37.3	(8)	37.3	(6)	34.6	(8)
Lok-1	36.9	(4)	39.0	(4)	39.3	(3)	38.4	(3)
MEAN	33.7		39.2		37.2			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	-	-	
Varieties (B)	Sig	1.25	3.32	7.4
B within (A)	Sig	2.07	5.85	
A within (B)	Sig	2.51	8.15	

*Date of sowing	28.10.83	11.11.83	16.12.83
Date of harvesting	3.03.84	23.3.84	23.03.84

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Powerkheda

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
Raj 6070	49.7	(7)	45.2	(10)	52.1	(9)	49.0	(10)
J 411	53.5	(3)	62.5	(1)	62.8	(4)	59.6	(1)
JU 126	41.8	(10)	48.7	(8)	57.3	(8)	49.3	(9)
Lok-4	53.1	(4)	52.4	(3)	63.5	(2)	56.3	(4)
HI 968	55.2	(2)	52.4	(4)	61.4	(6)	56.3	(5)
HD 2270	42.1	(9)	48.3	(9)	63.5	(3)	51.3	(7)
Raj 1555	50.0	(6)	49.3	(7)	52.1	(10)	50.5	(8)
WH 147	48.7	(8)	52.4	(5)	59.7	(7)	53.6	(6)
J 405	56.9	(1)	57.3	(2)	62.8	(5)	59.0	(2)
Lok-1	52.8	(5)	50.7	(6)	67.6	(1)	57.0	(3)
MEAN	50.4		51.9		51.9			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	-	-	7.6
Varieties (B)	N.S.	-	-	
B within (A)	N.S.	-	-	
A within (B)	-	-	-	

*Date of sowing 28.10.83 11.11.83 16.12.83

Date of harvesting 3.03.84 23.03.84 23.03.84

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Junagadh

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
Raj 6070	17.3	(7)	33.1	(6)	35.1	(8)	28.5	(8)
J 411	24.6	(2)	34.3	(5)	33.5	(10)	30.8	(5)
JU 126.	25.8	(1)	43.1	(1)	37.1	(5)	35.3	(1)
Lok-4	11.5	(10)	30.6	(9)	36.7	(7)	26.3	(10)
HI 968	19.7	(3)	36.0	(4)	37.5	(3)	31.1	(4)
HD 2270	19.5	(4)	32.9	(7)	39.9	(1)	30.8	(6)
Raj 1555	18.0	(6)	42.4	(2)	34.1	(9)	31.5	(2)
WH 147	16.0	(9)	30.2	(10)	37.1	(6)	27.8	(9)
J 405	18.9	(5)	37.5	(3)	38.2	(2)	31.5	(3)
Lok-1	17.0	(8)	32.6	(8)	37.3	(4)	29.0	(7)
MEAN	18.8		35.3		36.7			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing(A)	Sig	0.93	3.66	11.04
Varieties (B)	Sig	1.11	3.15	
B within (A)	Sig	1.93	5.45	
A within (B)				

*Date of sowing 28.10.83 14.11.83 6.12.83

Date of harvesting 19.02.84 7.03.84 24.3.84

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

CENTRE : Junagadh

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
Raj 6070	19.0	(5)	32.2	(6)	41.9	(8)	31.0	(6)
J 411	25.1	(2)	36.1	(3)	43.4	(4)	34.9	(2)
JU 126	28.7	(1)	40.8	(1)	46.0	(2)	38.5	(1)
Lok-4	11.3	(10)	29.5	(8)	39.6	(9)	26.8	(9)
HI 968	20.0	(4)	34.1	(5)	44.3	(3)	32.8	(4)
HD 2270	18.1	(7)	30.5	(7)	42.9	(7)	30.5	(7)
Raj 1555	18.2	(6)	36.6	(2)	39.1	(10)	31.3	(5)
WH 147	12.6	(9)	24.3	(9)	43.3	(5)	26.7	(10)
J 405	20.4	(3)	35.0	(4)	46.7	(1)	34.0	(3)
Lok-1	13.7	(8)	24.0	(10)	43.1	(6)	26.9	(8)
MEAN	18.7		32.3		43.0			

	F.Test	SEm±	C.D. 5%	CV %
date of sowing (A)	Sig	1.10	4.30	-
Varieties (B)	Sig	0.90	2.54	8.61
B within (A)	Sig	1.56	4.41	
A within (B)	-	-	-	

*Date of sowing	28.10.83	14.11.83	6.12.83
Date of harvesting	19.02.84	7.03.84	24.3.84

AGRONOMIC TRIAL NO: 1

SOUTH EASTERN PLAIN ZONE 1983-84

CENTRE : Chiplima

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
JWJ 78-2	17.3	(2)	12.4	(4)	19.7	(1)	16.5	(2)
HI 1048	24.5	(1)	15.2	(1)	11.0	(3)	16.8	(1)
Sonalika	9.7	(4)	13.5	(3)	10.4	(4)	11.2	(4)
Lok-1	12.8	(3)	14.5	(2)	11.7	(2)	13.0	(3)
MEAN	16.1		13.9		13.2			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	0.63	1.83	14.02
Varieties (B)	Sig	1.02	2.10	
A within (B)	Sig	1.31	2.87	
B within (A)	Sig	1.20	2.63	

*Date of sowing 9.11.83 24.11.83 9.12.83

Date of harvesting - - -

AGRONOMIC TRIAL NO: 1

NORTHERN HILL ZONE 1983-84

CENTRE : Almora

VARIETIES X DATES OF SOWING (Irrigated)

Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
UP 1039	-		-		-		-	
CPAN 1922	41.9	(4)	39.3	(2)	39.3	(4)	40.2	(2)
Sonalika	43.6	(3)	37.9	(3)	35.0	(5)	38.8	(4)
VL 421	35.0	(5)	37.9	(4)	41.1	(2)	38.0	(5)
HS 86	44.3	(2)	39.5	(1)	44.6	(1)	42.8	(1)
HB 208	45.4	(1)	32.2	(5)	41.1	(3)	39.6	(3)
MEAN	42.0		37.4		40.2			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	1.39	-	12.47
Varieties (B)	N.S.	1.66	-	
B within (A)	N.S.	2.87	-	
A within (B)	N.S.	2.92	-	

*Date of sowing	22.10.83	19.11.83	05.12.83
Date of harvesting	18.05.84	18.05.84	18.05.84

AGRONOMIC TRIAL NO: 1

NORTHERN HILL ZONE 1983-84

CENTRE : Almora

VARIETIES X DATES OF SOWING (Irrigated)

Straw yield q/ha.

VARIETIES	TIME OF SOWING*						MEAN	
	EARLY		NORMAL		LATE			
UP 1089	-		-		-		-	
CPAN 1922	75.7	(2)	63.4	(3)	61.0	(4)	66.7	(3)
Sonalika	80.0	(1)	69.7	(2)	59.3	(5)	69.6	(2)
VL 421	71.3	(4)	78.1	(1)	68.4	(1)	72.6	(1)
HS 86	70.5	(5)	55.6	(5)	63.7	(3)	63.2	(5)
HB 208	75.0	(3)	57.2	(4)	64.4	(2)	65.5	(4)
MEAN	74.5		64.8		63.4			

	F. Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	N.S.	3.20	-	
Varieties (B)	N.S.	2.36	-	10.45
B within (A)	Sig	4.08	11.91	
A within (B)	Sig	4.84	16.25	

*Date of sowing	22.10.83	19.11.83	05.12.83
Date of harvesting	18.05.84	18.05.84	18.05.84

AGRONOMIC TRIAL NO: 1

NORTHERN HILL ZONE 1983-84

CENTRE : Palampur

VARIETIES X DATES OF SOWING (Irrigated)
Grain yield q/ha.

VARIETIES	TIME OF SOWING* EARLY		NORMAL		LATE		MEAN	
UP 1089	29.3	(2)	26.8	(1)	16.9	(3)	24.3	(1)
CPAN 1922	25.8	(4)	21.7	(4)	17.7	(2)	21.7	(5)
Sonalika	-		-		-		-	
VL 421	29.3	(3)	26.5	(2)	15.7	(5)	23.9	(2)
HS 86	25.4	(5)	25.3	(3)	19.3	(1)	23.8	(3)
HB 208	31.8	(1)	21.1	(5)	16.0	(4)	22.9	(4)
MEAN	28.3		24.3		17.1			

	F.Test	SEm±	C.D. 5%	CV %
Date of sowing (A)	Sig	1.01	3.98	-
Varieties (B)	Sig	0.83	2.39	
B within (A)	Sig	1.37	3.97	
A within (B)	Sig	1.65	4.78	

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : New Delhi

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	26.3	(6)	29.2	(5)	39.8	(4)	31.8	(5)
Raj 2525	32.9	(3)	34.9	(1)	43.6	(2)	37.1	(1)
Raj 2560	26.9	(5)	27.2	(6)	37.9	(6)	30.6	(6)
WL 711	33.1	(1)	31.0	(4)	39.4	(5)	34.7	(3)
HD 2009	31.8	(4)	31.3	(3)	40.2	(3)	34.4	(4)
HD 2329	33.1	(2)	32.3	(2)	44.9	(1)	36.6	(2)
MEAN	30.7		31.0		41.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.95	3.30	7.03
VARIETIES (B)	Sig	0.70	2.00	
B WITHIN (A)	Sig	1.20	3.43	
A WITHIN (B)	-	-	-	

Date of sowing 25.11.83

Date of harvesting 30.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84
CENTRE : New Delhi

VARIETIES X IRRIGATION
Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	42.2	(6)	50.6	(5)	60.0	(5)	50.9	(6)
Raj 2525	52.5	(2)	58.5	(2)	68.7	(3)	59.9	(2)
Raj 2560	45.6	(5)	48.9	(6)	58.7	(6)	51.1	(5)
WL 711	59.1	(1)	61.2	(1)	71.6	(1)	64.0	(1)
HD 2009	49.5	(4)	53.3	(4)	62.9	(4)	55.2	(4)
HD 2329	51.9	(3)	55.4	(3)	69.0	(2)	58.8	(3)
MEAN	50.1		54.7		65.2			

	F.Test	SEm±	C.D. 5%	CV%
IRRIGATION (A)	Sig	1.20	4.17	12.51
VARIETIES (B)	Sig	2.04	5.82	
B WITHIN (A)	N.S.	3.54	-	
A WITHIN (B)				

Date of sowing 25.11.83
Date of harvesting 30.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Ludhiana

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	32.1	(5)	35.5	(1)	44.2	(2)	37.3	(2)
Raj 2525	32.4	(4)	33.8	(5)	40.0	(4)	35.4	(4)
Raj 2560	34.5	(1)	34.5	(2)	47.6	(1)	38.9	(1)
WL 711	34.2	(2)	34.5	(3)	41.8	(3)	36.8	(3)
HD 2009	33.8	(3)	34.2	(4)	36.2	(5)	34.7	(5)
HD 2329	30.0	(6)	31.7	(6)	33.8	(6)	31.8	(6)
MEAN	32.8		34.0		40.6			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.66	5.52	14.15
VARIETIES (B)	N.S.	2.07	-	
B WITHIN (A)	N.S.	2.92	-	
A WITHIN (B)	N.S.	3.00	-	

Date of sowing 20.11.83

Date of harvesting 23.04.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Ludhiana

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	45.6	(3)	50.7	(2)	66.6	(1)	54.3	(1)
Raj 2525	45.6	(4)	47.6	(5)	58.0	(3)	50.4	(4)
Raj 2560	48.0	(2)	44.9	(6)	60.7	(2)	51.2	(2)
WL 711	45.2	(5)	50.0	(3)	53.1	(4)	49.3	(5)
HD 2009	52.5	(1)	52.1	(1)	47.3	(6)	50.7	(3)
HD 2329	43.1	(6)	48.6	(4)	49.0	(5)	46.9	(6)
MEAN	46.7		49.0		55.8			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	3.73	-	30.0
VARIETIES (B)	N.S.	1.86	-	
B WITHIN (A)	Sig	3.37	9.73	
A WITHIN (B)	Sig	4.78	3.87	

Date of sowing 20.11.83

Date of harvesting 23.04.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	36.5	(6)	39.9	(5)	39.4	(4)	38.6	(6)
Raj 2525	37.9	(4)	40.1	(4)	40.6	(3)	39.5	(3)
Raj 2560	38.5	(3)	40.3	(3)	42.4	(1)	40.4	(1)
WL 711	41.7	(1)	40.8	(1)	37.6	(6)	40.0	(2)
HD 2009	38.8	(2)	36.5	(6)	40.9	(2)	38.7	(5)
HD 2329	36.8	(5)	40.8	(2)	39.2	(5)	38.9	(4)
MEAN	38.4		39.7		40.0			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	1.24	-	9.2
VARIETIES (B)	N.S.	1.75	-	
B WITNIN (A)	N.S.	3.06	-	
A WITHIN (B)	N.S.	3.06		

Date of sowing 28.11.83

Date of harvesting 10.04.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	56.2	(5)	61.6	(4)	58.3	(5)	58.7	(5)
Raj 2525	55.4	(6)	60.0	(5)	63.2	(2)	59.5	(4)
Raj 2560	59.4	(3)	72.8	(1)	74.6	(1)	69.0	(1)
WL 711	60.9	(1)	66.3	(2)	62.9	(3)	63.3	(2)
HD 2009	57.8	(4)	62.7	(3)	62.9	(4)	61.1	(3)
HD 2329	59.6	(2)	57.6	(6)	56.2	(6)	57.8	(6)
MEAN	58.2		63.5		63.0			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	2.71	-	17.6
VARIETIES (B)	N.S.	3.62	-	
B WITHIN (A)	N.S.	6.15	-	
A WITHIN (B)				

Date of sowing 28.11.83

Date of harvesting 10.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Mathura

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	32.4	(5)	37.3	(6)	57.8	(2)	42.5	(3)
Raj 2525	34.5	(3)	38.6	(4)	51.1	(6)	41.4	(5)
Raj 2560	31.1	(6)	40.0	(3)	51.8	(5)	41.0	(6)
WL 711	34.6	(2)	42.0	(2)	56.6	(3)	44.4	(2)
HD 2009	33.8	(4)	38.6	(5)	53.1	(4)	41.8	(4)
HD 2329	37.3	(1)	42.8	(1)	58.7	(1)	46.3	(1)
MEAN	34.0		39.9		54.9			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	-	1.24	11.0
VARIETIES (B)	N.S.	-	-	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)	N.S.	-	-	

Date of sowing 26.11.83

Date of harvesting 20.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Meerut

VARIETIES X IRRIGATION
Grain yield q/ha.

VATIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	34.5	(4)	35.2	(5)	40.7	(4)	36.8	(3)
Raj 2525	36.6	(2)	36.6	(2)	44.2	(1)	39.1	(1)
Raj 2560	34.5	(5)	35.9	(3)	40.0	(5)	36.8	(4)
WL 711	35.2	(3)	35.9	(4)	39.3	(6)	36.8	(5)
HD 2009	33.1	(6)	34.5	(6)	42.8	(2)	36.8	(6)
HD 2329	38.0	(1)	38.0	(1)	41.4	(3)	39.1	(2)
MEAN	35.3		36.0		41.4			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	-	1.20	4.45
VARIETIES (B)	Sig	-	1.60	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)				

Date of sowing 18.11.83
Date of harvesting 24.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Meerut

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	51.8	(5)	53.1	(4)	58.7	(4)	54.5	(5)
Raj 2525	53.8	(3)	53.1	(5)	61.4	(2)	56.1	(4)
Raj 2560	51.8	(6)	52.5	(6)	58.3	(5)	54.2	(6)
WL 711	81.1	(1)	53.8	(2)	56.6	(6)	63.8	(1)
HD 2009	53.1	(4)	54.5	(1)	66.3	(1)	58.0	(2)
HD 2329	55.2	(2)	53.8	(3)	60.0	(3)	56.3	(3)
MEAN	57.8		53.5		60.2			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)				
VARIETIES (B)				
B WITHIN (A)				
A WITHIN (B)				

Date of sowing 18.11.83

Date of harvesting 24.04.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84
CENTRE : Agra

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	36.2	(2)	37.7	(4)	49.1	(4)	41.0	(3)
Raj 2525	-		-		-		-	
Raj 2560	35.6	(3)	36.2	(5)	38.7	(5)	36.8	(5)
WL 711	31.1	(4)	38.1	(3)	55.3	(1)	41.5	(2)
HD 2009	31.1	(5)	42.2	(1)	49.7	(3)	41.0	(4)
HD 2329	38.7	(1)	40.4	(2)	52.8	(2)	44.0	(1)
MEAN	34.5		39.9		49.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.62	1.26	12.60
VARIETIES (B)	Sig	0.93	2.78	
B WITHIN (A)	N.S.	1.98	-	
A WITHIN (B)	N.S.	2.96	-	

Date of sowing 09.11.83

Date of harvesting 3.4.84

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

CENTRE : Agra

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
HD 2379	49.7	(1)	52.4	(3)	68.3	(2)	56.8	(2)
Raj 2525	-		-		-		-	
Raj 2560	42.0	(3)	47.6	(5)	64.6	(5)	51.4	(5)
WL 711	39.3	(5)	58.0	(2)	65.6	(4)	54.3	(4)
HD 2009	40.0	(4)	80.9	(1)	74.5	(1)	65.1	(1)
HD 2329	45.5	(2)	50.7	(4)	68.3	(3)	54.8	(3)
	43.3		57.9		68.3			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)				
VARIETIES (B)				
B WITHIN (A)				
A WITHIN (B)				

Date of sowing 09.11.83

Date of harvesting 3.04.84

AGRONOMIC TRIAL NO: 2

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Hissar

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
VW 115	26.4	(2)	24.7	(4)	26.7	(4)	25.9	(3)
WH 367	33.7	(1)	34.0	(1)	41.3	(1)	36.3	(1)
WH 369	17.7	(8)	26.0	(2)	21.2	(8)	21.6	(8)
Raj 2535	24.0	(4)	19.8	(8)	24.7	(7)	22.8	(7)
Raj 2560	13.9	(9)	15.6	(9)	15.5	(9)	15.0	(9)
Raj 2619	20.5	(7)	25.3	(3)	30.6	(3)	25.5	(4)
Raj 1555	24.3	(3)	22.6	(6)	34.0	(2)	27.0	(2)
Raj 1972	23.5	(5)	21.2	(7)	25.7	(5)	23.5	(5)
WH 283	20.8	(6)	23.3	(5)	25.3	(6)	23.1	(6)
MEAN	22.8		23.6		27.2			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION(A)	N.S.	1.53	-	
VARIETIES (B)	Sig	2.92	8.74	
B WITHIN (A)	N.S.	2.94	-	
A WITHIN (B)	-	-	-	

Date of sowing 9.11.83

Date of harvesting 13.4.84

AGRONOMIC TRIAL NO: 2

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Vijapur

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
VW 155	27.0	(3)	34.3	(5)	44.0	(3)	35.1	(3)
WH 367	18.7	(9)	34.4	(4)	37.9	(8)	30.3	(8)
WH 369	32.4	(1)	35.4	(1)	44.6	(2)	37.4	(1)
Raj 2535	23.0	(8)	35.1	(2)	42.9	(6)	33.7	(5)
Raj 2560	23.6	(7)	28.0	(8)	40.2	(7)	30.7	(7)
Raj 2619	27.0	(4)	30.4	(7)	43.5	(5)	33.6	(6)
Raj 1555	29.8	(2)	33.1	(6)	44.8	(1)	35.9	(2)
Raj 1972	24.9	(5)	34.8	(3)	44.0	(4)	34.6	(4)
WH 283	24.2	(6)	26.2	(9)	26.5	(9)	28.9	(9)
MEAN	25.6		32.4		42.0			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.07	4.21	14.54
VARIETIES (B)	Sig	1.61	4.59	
B WITHIN (A)	N.S.	2.79	-	
A WITHIN (B)	-	-	-	

Date of sowing 20.11.83

Date of harvesting 2.04.84

AGRONOMIC TRIAL NO: 2

NORTH WESTERN PLAIN ZONE 1983-84
CENTRE : Vijapur

VARIETIES X IRRIGATION
Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
VW 115	62.7	(4)	65.8	(6)	97.5	(1)	75.3	(2)
WH 367	53.8	(9)	72.5	(1)	69.1	(8)	65.1	(8)
WH 369	67.7	(2)	61.2	(9)	90.0	(2)	73.0	(3)
Raj 2535	63.2	(3)	68.5	(4)	84.7	(5)	72.1	(5)
Raj 2560	59.2	(6)	61.8	(8)	77.1	(7)	66.0	(7)
Raj 2619	73.1	(1)	69.6	(3)	87.6	(3)	76.7	(1)
Raj 1555	59.9	(5)	66.9	(5)	79.4	(6)	68.7	(6)
Raj 1972	57.9	(7)	72.2	(2)	87.1	(4)	72.4	(4)
WH 283	55.1	(8)	63.6	(7)	67.0	(9)	61.9	(9)
MEAN	61.4		66.9		82.2			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.80	7.08	11.19
VARIETIES (B)	Sig	2.60	7.41	
B WITHIN (A)	Sig	4.53	12.9	
A WITHIN (B)	-	-	-	

Date of sowing 20.11.83
Date of harvesting 2.04.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	19.3	(8)	17.9	(10)	21.4	(4)	19.5	(5)
K 8110	21.7	(2)	22.1	(1)	20.7	(5)	21.5	(2)
HUW 219	19.7	(6)	21.4	(3)	22.4	(2)	21.2	(3)
HUW 220	21.4	(4)	18.3	(9)	22.1	(3)	20.6	(4)
HUW 221	19.0	(9)	20.7	(5)	17.6	(10)	19.1	(10)
HUW 225	20.7	(5)	20.0	(7)	17.9	(9)	19.5	(6)
HP 1515	21.7	(3)	19.7	(8)	16.6	(11)	19.3	(8)
HP 1518	17.6	(10)	21.1	(4)	19.7	(7)	19.5	(7)
BR 326	19.7	(7)	17.3	(11)	20.7	(6)	19.2	(9)
UP 262	16.6	(11)	20.7	(6)	19.0	(8)	18.8	(11)
HUW 206	22.8	(1)	22.1	(2)	22.8	(1)	22.6	(1)
MEAN	20.0		20.1		20.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	1.16	-	-
VARIETIES (B)	N.S.	4.82	-	
B WITHIN (A)	N.S.	8.36	-	
A WITHIN (B)	N.S.	8.10	-	

Date of sowing 25.11.83

Date of harvesting 19.5.84

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AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	40.0	(1)	39.7	(2)	40.7	(2)	40.1	(1)
K 8110	33.1	(4)	41.4	(1)	39.7	(3)	38.1	(3)
HUW 219	31.8	(9)	33.1	(8)	34.9	(5)	33.1	(7)
HUW 220	34.9	(3)	35.2	(6)	34.9	(6)	35.0	(4)
HUW 221	32.8	(5)	37.6	(4)	28.3	(11)	32.9	(9)
HUW 225	32.8	(6)	30.0	(11)	29.3	(10)	30.7	(11)
HP 1515	32.8	(7)	32.4	(9)	30.4	(9)	31.9	(10)
HP 1518	26.9	(11)	37.6	(5)	35.9	(4)	33.5	(5)
BR 326	32.4	(8)	31.8	(10)	34.9	(7)	33.0	(8)
UP 262	31.1	(10)	33.8	(7)	34.9	(8)	33.3	(6)
HUW 206	35.9	(2)	38.7	(3)	42.4	(1)	39.0	(2)
MEAN	33.1		35.6		35.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	1.62	-	16.36
VARIETIES (B)	Sig	2.71	5.41	
B WITHIN (A)	N.S.	3.31	-	
A WITHIN (B)	N.S.	3.56	-	

Date of sowing 25.11.83

Date of harvesting 19.5.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Varanasi

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	32.3	(4)	32.3	(9)	37.4	(8)	34.0	(6)
K 8110	35.0	(3)	36.5	(4)	39.5	(3)	37.0	(3)
HUW 219	37.8	(1)	38.3	(2)	44.3	(2)	40.1	(2)
HUW 220	27.6	(8)	34.8	(5)	37.4	(9)	33.3	(7)
HUW 221	27.3	(10)	33.9	(7)	38.3	(5)	33.2	(8)
HUW 225	25.8	(11)	30.8	(10)	36.6	(10)	31.1	(10)
HP 1515	28.7	(7)	32.5	(8)	38.3	(6)	33.2	(9)
HP 1518	32.1	(5)	34.6	(6)	39.3	(4)	35.3	(4)
BR 326	30.7	(6)	36.9	(3)	38.1	(7)	35.2	(5)
UP 262	27.5	(9)	30.3	(11)	33.6	(11)	30.5	(11)
HUW 206	36.4	(2)	39.8	(1)	44.5	(1)	40.6	(1)
MEAN	31.2		34.8		38.8			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.44	1.70	7.4
VARIETIES (B)	Sig	0.69	2.00	
B WITHIN (A)	Sig	1.20	3.40	
A WITHIN (B)	Sig	1.22	3.60	

Date of sowing 30.11.83

Date of harvesting 15.04.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Varanasi

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	62.2	(4)	69.8	(4)	67.5	(5)	66.5	(6)
K 8110	57.5	(9)	58.4	(9)	66.8	(6)	60.9	(8)
HUW 219	73.2	(1)	64.5	(7)	66.1	(7)	67.9	(5)
HUW 220	55.8	(10)	57.3	(10)	61.9	(9)	58.3	(10)
HUW 221	60.3	(7)	59.3	(8)	59.7	(10)	59.8	(9)
HUW 225	48.7	(11)	43.7	(11)	57.2	(11)	49.9	(11)
HP 1515	70.7	(2)	71.3	(2)	70.0	(4)	70.7	(2)
HP 1518	57.7	(8)	65.8	(6)	63.6	(8)	62.4	(7)
BR 326	60.4	(6)	71.4	(1)	75.8	(3)	69.2	(4)
UP 262	69.8	(3)	67.7	(5)	77.5	(2)	71.7	(1)
HUW 206	61.2	(5)	69.9	(3)	77.6	(1)	69.6	(3)
MEAN	61.6		63.7		68.0			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.79	7.01	14.98
VARIETIES (B)	Sig	2.63	7.51	
B WITHIN (A)	Sig	4.57	1.30	
A WITHIN (B)	Sig	5.28	15.06	

Date of sowing 30.11.83

Date of harvesting 15.04.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84
CENTRE : Pusa (R.A.U.)

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	33.5	(11)	43.5	(5)	46.2	(9)	41.1	(8)
K 8110	40.0	(4)	41.8	(7)	51.8	(5)	44.5	(6)
HUW 219	37.6	(7)	38.0	(9)	44.2	(10)	39.9	(10)
HUW 220	36.6	(9)	36.6	(10)	39.0	(11)	37.4	(11)
HUW 221	39.7	(5)	44.9	(3)	52.8	(3)	45.8	(5)
HUW 225	44.9	(1)	41.8	(8)	51.1	(6)	45.9	(4)
HP 1515	38.3	(6)	47.3	(2)	52.4	(4)	46.0	(3)
HP 1518	40.4	(3)	44.5	(4)	54.2	(1)	46.4	(2)
BR 326	43.5	(2)	47.6	(1)	53.1	(2)	48.1	(1)
UP 262	37.3	(8)	35.5	(11)	48.0	(8)	40.3	(9)
HUW 206	35.2	(10)	43.1	(6)	49.3	(7)	42.6	(7)
MEAN	38.8		42.2		49.3			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.54	6.07	9.26
VARIETIES (B)	Sig	1.34	3.79	
B WITHIN (A)	Sig	2.32	6.57	
A WITHIN (B)	Sig	3.83	10.64	

Date of sowing 23.11.83
Date of harvesting 27.04.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Sabour

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	16.9	(7)	19.0	(6)	20.7	(6)	18.9	(6)
K 8110	16.9	(8)	18.6	(7)	20.0	(8)	18.5	(7)
HUW 219	19.7	(3)	22.7	(3)	23.5	(3)	21.7	(3)
HUW 220	15.5	(9)	18.3	(8)	20.4	(7)	18.1	(9)
HUW 221	22.1	(1)	23.8	(1)	25.9	(2)	23.9	(2)
HUW 225	19.0	(4)	20.7	(4)	22.1	(5)	20.6	(4)
HP 1515	14.5	(10)	17.9	(10)	19.7	(10)	13.4	(11)
HP 1518	21.4	(2)	23.1	(2)	26.9	(1)	29.8	(1)
BR 326	17.6	(5)	20.7	(5)	22.8	(4)	20.4	(5)
UP 262	17.3	(6)	18.3	(9)	20.0	(9)	18.5	(8)
HUW 206	13.5	(11)	15.2	(11)	16.9	(11)	15.2	(10)
MEAN	17.7		19.9		21.7			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.81	2.26	12.96
VARIETIES (B)	Sig	1.21	2.42	
B WITHIN (A)	N.S.	2.10	-	
A WITHIN (B)	-	-	-	

Date of sowing 22.12.83

Date of harvesting 12.04.84

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Sabour

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
K 8103	24.5	(6)	28.6	(6)	29.7	(6)	27.6	(6)
K 8110	24.2	(8)	26.6	(7)	28.6	(9)	26.5	(8)
HUW 219	27.6	(3)	32.1	(3)	33.5	(2)	31.1	(3)
HUW 220	23.8	(9)	26.2	(9)	29.3	(7)	26.5	(9)
HUW 221	33.1	(1)	35.5	(1)	37.3	(1)	35.3	(1)
HUW 225	26.6	(4)	30.7	(4)	31.4	(4)	29.6	(5)
HP 1515	22.8	(10)	24.2	(10)	28.3	(10)	25.1	(10)
HP 1518	30.0	(2)	33.5	(2)	30.7	(5)	31.4	(2)
BR 326	25.9	(5)	30.4	(5)	33.5	(3)	29.9	(4)
UP 262	24.5	(7)	26.6	(8)	29.3	(8)	26.8	(7)
HUW 206	21.4	(11)	21.1	(11)	23.5	(11)	22.0	(11)
MEAN	25.9		28.7		30.5			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.94	2.61	12.54
VARIETIES (B)	Sig	1.69	3.38	
B WITHIN (A)	N.S.	2.92	-	
A WITHIN (B)	-	-	-	

Date of sowing 22.12.83

Date of harvesting 12.04.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84
CENTRE : Kalyani

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	-		-		-		-	
BR 2074	-		-		-		-	
BW 11	15.9	(9)	36.5	(4)	32.9	(5)	28.5	(7)
BW 158	18.5	(8)	31.1	(7)	30.5	(7)	26.7	(9)
BW 161	-		-		-		-	
BW 182	30.4	(4)	34.8	(5)	33.3	(4)	32.8	(5)
HI 968	40.5	(1)	25.7	(8)	32.9	(6)	33.0	(4)
HD 2367	22.8	(6)	25.7	(9)	35.1	(2)	27.9	(8)
MG 104-4	36.5	(3)	37.6	(3)	30.0	(8)	34.8	(2)
Sonalika	19.8	(7)	38.0	(2)	27.8	(9)	28.6	(6)
Janak	25.3	(5)	41.3	(1)	33.7	(3)	33.4	(3)
UP 262	38.7	(2)	32.2	(6)	40.5	(1)	37.2	(1)
MEAN	27.6		33.7		32.9			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	2.39	5.78	12.89
VARIETIES (B)	Sig	2.17	5.97	
B WITHIN (A)	N.S.	8.80	-	
A WITHIN (B)	N.S.	10.54	-	

Date of sowing 21.11.83
Date of harvesting 18.03.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Kalyani

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	-		-		-		-	
BR 2074	-		-		-		-	
BW 11	36.0	(2)	27.3	(8)	30.2	(5)	31.2	(7)
BW 158	27.5	(9)	25.1	(9)	40.5	(2)	29.2	(9)
BW 161	-		-		-		-	
BW 182	33.2	(7)	38.2	(5)	31.8	(4)	34.0	(6)
HI 968	35.6	(4)	47.5	(2)	29.1	(8)	38.4	(4)
HD 2367	34.2	(5)	38.2	(6)	29.8	(7)	34.2	(5)
MG 104-4	33.7	(6)	46.8	(3)	29.9	(6)	40.9	(3)
Sonalika	31.8	(8)	34.8	(7)	24.2	(9)	30.2	(8)
Janak	36.0	(3)	53.3	(1)	35.5	(3)	41.5	(1)
UP 262	40.8	(1)	41.1	(4)	42.2	(1)	41.3	(2)
MEAN	34.7		39.1		33.3			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	3.91	-	9.31
VARIETIES (B)	Sig	2.82	7.82	
B WITHIN (A)	N.S.	12.06	-	
A WITHIN (B)	N.S.	12.39	-	

Date of sowing 21.11.83

Date of harvesting 18.03.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 101983-84
CENTRE : Burdwan

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	-		-		-		-	
BR 2074	-		-		-		-	
BW 11	24.9	(4)	32.1	(5)	37.5	(3)	31.5	(5)
BW 158	22.8	(6)	31.6	(6)	34.2	(7)	29.5	(7)
BW 161	11.1	(8)	14.5	(8)	26.7	(8)	17.4	(8)
BW 182	24.3	(5)	33.1	(2)	40.4	(1)	32.6	(1)
HI 968	26.4	(1)	34.2	(1)	35.7	(6)	32.1	(2)
HD 2367	19.7	(7)	33.1	(3)	37.8	(2)	30.2	(6)
MG 104-4	-		-		-		-	
Sonalika	25.9	(2)	30.5	(7)	37.3	(4)	31.9	(4)
Janak	-		-		-		-	
UP 262	25.9	(3)	33.1	(4)	37.3	(5)	32.1	(3)
MEAN	22.6		30.3		35.9			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.70	4.85	9.20
VARIETIES (B)	Sig	1.72	3.63	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)				

Date of sowing 8.12.83
Date of harvesting 2.04.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84
CENTRE : Burdwan

VARIETIES X IRRIGATION
Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	-		-		-		-	
BR 2074	-		-		-		-	
BW 11	49.2	(3)	63.4	(4)	63.4	(4)	58.7	(5)
BW 158	47.1	(5)	63.1	(6)	63.1	(6)	57.8	(6)
BW 161	21.7	(8)	28.0	(8)	28.0	(8)	25.9	(8)
BW 182	46.6	(6)	68.3	(2)	68.3	(2)	61.1	(3)
HI 968	52.8	(2)	63.4	(5)	63.4	(5)	59.9	(4)
HD 2367	43.7	(7)	58.0	(7)	58.0	(7)	53.2	(7)
MG 104-4	-		-		-		-	
Sonalika	53.8	(1)	71.2	(1)	66.8	(3)	63.9	(1)
Janak	-		-		-		-	
UP 262	47.6	(4)	66.8	(3)	71.2	(1)	61.9	(2)
MEAN	45.3		60.3		60.3			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)				
VARIETIES (B)				
B WITHIN (A)				
A WITHIN (B)				

Date of sowing 8.12.83
Date of harvesting 2.04.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84
CENTRE : Shillongani

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	28.6	(1)	25.3	(5)	21.5	(5)	25.1	(4)
BR 2074	22.7	(5)	21.6	(7)	21.3	(6)	21.9	(7)
BW 11	-		-		-		-	
BW 158	-		-		-		-	
BW 161	-		-		-		-	
BW 182	-		-		-		-	
HI 968	19.1	(7)	26.7	(3)	28.1	(2)	24.6	(5)
HD 2367	23.9	(3)	25.9	(4)	31.1	(1)	26.9	(1)
MG 104-4	20.2	(6)	31.4	(1)	26.1	(4)	25.9	(3)
Sonalika	24.7	(2)	27.1	(2)	26.5	(3)	26.1	(2)
Janak	-		-		-		-	
UP 262	23.7	(4)	23.6	(6)	19.3	(7)	22.2	(6)
MEAN	23.3		25.9		24.8			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	N.S.	1.44	5.66	11.00
VARIETIES (B)	Sig	0.94	2.61	
B WITHIN (A)	Sig	1.63	4.53	
A WITHIN (B)	Sig	2.10	5.84	

Date of sowing 05.12.83
Date of harvesting 26.03.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Ranchi

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	16.9	(7)	23.1	(8)	26.8	(9)	23.3	(6)
BR 2074	20.5	(2)	27.3	(1)	31.5	(3)	26.5	(2)
BW 11	-		-		-		-	
BW 158	-		-		-		-	
BW 161	12.3	(10)	18.8	(10)	22.5	(10)	17.9	(10)
BW 182	15.9	(9)	24.6	(4)	28.0	(8)	22.9	(8)
HI 968	19.6	(3)	27.3	(2)	30.3	(5)	25.7	(3)
HD 2367	24.9	(1)	24.4	(5)	30.9	(4)	26.7	(1)
MG 104-4	16.2	(8)	25.6	(3)	28.2	(7)	23.3	(7)
Sonalika	18.7	(4)	23.7	(7)	32.9	(2)	25.1	(5)
Janak.	18.4	(6)	24.4	(6)	33.6	(1)	25.5	(4)
UP 262	18.5	(5)	19.3	(9)	30.1	(6)	22.6	(9)
MEAN	18.5		23.9		29.5			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.30	0.84	6.76
VARIETIES (B)	Sig	0.54	1.27	
B WITHIN (A)	Sig	0.93	2.25	
A WITHIN (B)	Sig	0.93	2.20	

Date of sowing 13.12.83

Date of harvesting 19.04.84

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84
CENTRE : Ranchi

VARIETIES X IRRIGATION
Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
BR 2061	48.5	(1)	50.5	(1)	51.9	(6)	50.4	(1)
BR 2074	30.6	(4)	44.0	(6)	48.3	(8)	40.9	(7)
BW 11	-		-		-		-	
BW 158	-		-		-		-	
BW 161	24.5	(9)	27.9	(10)	32.5	(10)	28.3	(10)
BW 182	33.3	(3)	35.1	(9)	50.5	(7)	39.7	(9)
HI 968	35.6	(2)	46.9	(4)	47.8	(9)	43.4	(3)
HD 2367	27.8	(7)	35.6	(8)	57.2(	(1)	40.2	(8)
MG 104-4	27.3	(8)	49.3	(3)	56.8	(2)	44.4	(2)
Sonalika	25.4	(10)	43.4	(7)	56.5	(3)	41.7	(6)
Janak	29.0	(5)	45.8	(5)	52.9	(4)	42.6	(5)
UP 262	28.7	(6)	49.4	(2)	52.1	(5)	43.4	(4)
MEAN	31.1		42.8		50.7			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.71	2.01	13.16
VARIETIES (B)	Sig	1.82	4.32	
B WITHIN (A)	N.S.	3.08	-	
A WITHIN (B)	N.S.	3.16	-	

Date of sowing 13.12.83
Date of harvesting 19.04.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84
CENTRE : Akola

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	17.2	(6)	18.6	(7)	27.2	(7)	21.0	(7)
NI 8272	23.5	(2)	22.8	(4)	37.5	(2)	27.9	(3)
NI 8306	19.5	(4)	22.7	(5)	32.1	(6)	24.8	(5)
NI 8414	17.4	(5)	25.4	(3)	40.6	(1)	27.6	(4)
NI 8611	24.0	(1)	28.3	(1)	35.3	(3)	29.2	(1)
MACS 1992	14.6	(8)	14.2	(9)	22.2	(9)	16.1	(9)
APAU 1577	-		-		-		-	
HD 2189	16.2	(7)	22.0	(6)	33.6	(4)	24.0	(6)
HD 4502	11.7	(9)	18.5	(8)	23.9	(8)	18.0	(8)
NI 5439	23.5	(3)	27.2	(2)	33.6	(5)	28.1	(2)
MEAN	18.6		22.2		31.7			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.59	6.27	12.63
VARIETIES (B)	Sig	1.59	4.53	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)	-	-	-	

Date of sowing 19.11.83
Date of harvesting 10.3.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Akola

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	37.8	(6)	41.0	(7)	59.8	(7)	46.2	(7)
NI 8272	51.8	(2)	50.3	(4)	82.4	(2)	61.5	(3)
NI 8306	42.8	(4)	49.1	(5)	70.6	(6)	54.5	(5)
NI 8414	38.4	(5)	55.9	(3)	88.1	(1)	60.8	(4)
NI 8611	52.7	(1)	62.3	(1)	77.6	(3)	64.2	(1)
MACS 1992	32.1	(8)	31.3	(9)	48.8	(8)	37.4	(8)
APAU 1577	-		-		-		-	
HD 2189	35.6	(7)	48.5	(6)	74.0	(4)	52.7	(6)
HD 4502	25.7	(9)	40.8	(8)	37.4	(9)	34.6	(9)
NI 5439	51.6	(3)	59.8	(2)	74.0	(5)	61.8	(2)
MEAN	40.9		48.9		68.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.84	7.25	8.21
VARIETIES (B)	Sig	3.69	10.50	
B WITHIN (A)	-	-	-	
A WITHIN (B)	-	-	-	

Date of sowing 19.11.83

Date of harvesting 10.03.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84
CENTRE : Niphad

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	21.6	(1)	28.0	(6)	33.2	(4)	27.6	(2)
NI 8272	20.4	(2)	30.3	(1)	37.3	(1)	29.4	(1)
NI 8306	18.5	(5)	29.6	(3)	32.3	(6)	26.8	(5)
NI 8414	18.6	(4)	26.5	(7)	33.2	(5)	26.1	(7)
NI 8611	18.3	(6)	28.3	(5)	35.5	(2)	27.4	(3)
MACS 1992	15.6	(10)	23.7	(10)	28.4	(10)	22.6	(10)
APAU 1577	17.3	(7)	29.4	(4)	35.3	(3)	27.3	(4)
HD 2189	16.2	(9)	26.0	(8)	31.9	(7)	24.7	(8)
HD 4502	16.5	(8)	24.3	(9)	30.8	(8)	23.8	(9)
NI 5439	19.9	(3)	30.1	(2)	30.2	(9)	26.7	(6)
MEAN	18.3		27.6		32.8			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.97	3.79	6.32
VARIETIES (B)	Sig	1.26	3.48	
B WITHIN (A)	N.S.	1.86	-	
A WITHIN (B)	N.S.	3.02	-	

Date of sowing 16.11.83
Date of harvesting 19.03.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84
CENTRE : Niphad

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	30.8	(3)	30.6	(6)	42.8	(7)	34.7	(5)
NI 8272	34.1	(1)	25.6	(10)	48.3	(2)	36.0	(3)
NI 8306	26.4	(7)	31.8	(4)	45.0	(5)	34.4	(6)
NI 8414	24.8	(8)	30.8	(5)	42.8	(8)	32.8	(8)
NI 8611	31.4	(2)	35.9	(1)	53.5	(1)	40.3	(1)
MACS 1992	23.7	(10)	28.1	(9)	39.9	(9)	30.6	(9)
APAU 1577	29.7	(4)	32.7	(2)	46.1	(3)	36.2	(2)
HD 2189	29.4	(5)	32.7	(3)	45.5	(4)	35.8	(4)
HD 4502	24.3	(5)	29.6	(3)	37.6	(10)	30.5	(10)
NI 5439	27.7	(6)	29.3	(8)	44.4	(6)	33.8	(7)
MEAN	28.2		30.7		44.6			

	F.Test	SEm±	C.D. 5%	C.V. %
IRRIGATION (A)	Sig	1.42	5.59	7.32
VARIETIES (B)	Sig	1.79	4.96	
B WITHIN (A)	N.S.	2.69	-	
A WITHIN (B)	N.S.	4.44	-	

Date of sowing 16.11.83
Date of harvesting 19.03.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84
CENTRE : Coimbatore

VARIETIES X IRRIGATION
Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	3.9	(5)	6.0	(6)	7.1	(6)	5.6	(7)
NI 8272	4.0	(4)	5.4	(7)	6.9	(7)	5.4	(9)
NI 8306	3.8	(6)	7.9	(3)	4.8	(10)	5.5.	(8)
NI 8414	3.6	(7)	8.7	(1)	6.5	(8)	6.2	(6)
NI 8611	3.4	(8)	8.6	(2)	11.4	(1)	7.8	(3)
MACS 1992	2.7	(10)	2.6	(9)	6.5	(9)	3.9	(10)
APAU 1577	3.2	(9)	2.1	(10)	10.8	(3)	8.9	(1)
HD 2189	6.7	(2)	6.2	(5)	8.2	(5)	7.0	(4)
HD 4502	6.9	(1)	6.7	(4)	11.1	(2)	8.2	(2)
NI 5439	5.4	(3)	4.9	(8)	10.5	(5)	6.9	(5)
MEAN	4.4		5.9		8.4			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.16	0.62	7.75
VARIETIES (B)	Sig	0.29	0.82	
B WITHIN (A)	Sig	0.51	1.43	
A WITHIN (B)	Sig	0.51	1.49	

Date of sowing 22.10.83
Date of harvesting 5.02.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Coimbatore

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	5.2	(9)	12.6	(6)	12.4	(9)	10.0	(8)
NI 8272	9.4	(3)	11.5	(7)	14.0	(7)	11.6	(4)
NI 8306	8.5	(5)	13.9	(4)	9.0	(10)	10.4	(7)
NI 8414	7.5	(6)	13.3	(5)	13.7	(8)	11.5	(5)
NI 8611	5.3	(8)	14.3	(3)	25.7	(2)	15.1	(3)
MACS 1992	4.2	(10)	5.7	(9)	14.5	(6)	8.1	(10)
APAU 1577	6.8	(7)	5.3	(10)	15.6	(5)	9.2	(9)
HD 2189	12.7	(2)	16.8	(2)	17.3	(3)	15.6	(2)
HD 4502	14.2	(1)	21.2	(1)	27.2	(1)	20.9	(1)
NI 5439	8.9	(4)	8.7	(8)	16.9	(4)	11.5	(6)
MEAN	8.3		12.4		16.6			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.23	0.91	7.5
VARIETIES (B)	Sig	0.39	1.13	
B WITHIN (A)	Sig	0.69	1.96	
A WITHIN (B)	Sig	0.69	2.06	

Date of sowing 22.10.83

Date of harvesting 2.02.84

ACRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Dharwar

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	6.6	(2)	19.5	(1)	34.8	(4)	20.3	(1)
NI 8272	4.3	(5)	15.1	(4)	31.3	(6)	16.9	(6)
NI 8306	6.3	(3)	18.4	(2)	34.5	(5)	19.7	(2)
NI 8414	5.5	(4)	15.1	(5)	35.3	(2)	18.7	(4)
NI 8611	7.9	(1)	14.0	(6)	36.0	(1)	19.3	(3)
MACS 1992	3.4	(7)	13.6	(7)	23.6	(7)	13.5	(7)
APAU 1577	4.2	(6)	16.6	(3)	35.0	(3)	18.6	(5)
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
NI 5439	-		-		-		-	
MEAN	5.5		16.0		32.9			

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.66	6.50	12.0
VARIETIES (B)	Sig	1.35	3.73	
B WITHIN (A)	N.S.	2.35	-	
A WITHIN (B)	N.S.	2.77	-	

Date of sowing 29.10.83

Date of harvesting 29.02.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Dharwar

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	22.8	(4)	33.5	(6)	69.5	(4)	42.0	(5)
NI 8272	22.7	(5)	33.1	(7)	66.7	(5)	40.8	(7)
NI 8306	24.2	(3)	36.4	(4)	62.5	(7)	41.0	(6)
NI 8414	22.2	(6)	34.1	(5)	71.1	(3)	42.5	(3)
NI 8611	31.6	(1)	40.4	(1)	83.9	(1)	52.0	(1)
MACS 1992	20.5	(7)	39.6	(3)	66.2	(6)	42.1	(4)
APAU 1577	25.3	(2)	39.9	(2)	73.5	(2)	46.2	(2)
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
NI 5439	-		-		-		-	
MEAN	42.2		36.7		70.5			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	4.08	15.97	11.00
VARIETIES (B)	Sig	1.62	4.48	
B WITHIN (A)	N.S.	11.52	-	
A WITHIN (B)	N.S.	17.68	-	

Date of sowing 29.10.83

Date of harvesting 29.02.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Parbhani

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.	TWO IRR.	ADEQUATE	MEAN
NI 8188	19.4 (5)	21.0 (6)	28.6 (5)	23.0 (6)
NI 8272	20.2 (3)	30.6 (1)	37.4 (3)	29.4 (1)
NI 8306	23.7 (1)	23.6 (5)	28.0 (6)	25.1 (4)
NI 8414	19.8 (4)	24.0 (4)	37.9 (2)	27.2 (3)
NI 8611	21.0 (2)	26.6 (3)	39.0 (1)	28.9 (2)
MACS 1992	17.3 (6)	19.0 (7)	23.1 (7)	19.8 (7)
APAU 1577	-	-	-	-
HD 2189	-	-	-	-
HD 4502	-	-	-	-
NI 5439	16.6 (7)	27.9 (2)	30.3 (4)	24.9 (5)
MEAN	19.7	24.7	32.4	

	F.Test	SEm+	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.96	2.86	10.09
VARIETIES (B)	Sig	0.98	3.10	
B WITHIN (A)	N.S.	2.18	-	
A WITHIN (B)	N.S.	2.32		

Date of sowing 10.11.83

Date of harvesting 22.2.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84
CENTRE : Parbhani

VARIETIES X IRRIGATION
Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	28.9	(3)	28.6	(7)	49.9	(5)	35.8	(5)
NI 8272	28.1	(5)	44.3	(3)	65.2	(3)	45.9	(2)
NI 8306	37.9	(2)	30.2	(6)	38.4	(6)	35.5	(6)
NI 8414	28.6	(4)	31.6	(5)	56.6	(4)	38.9	(4)
NI 8611	41.9	(1)	45.9	(1)	69.8	(1)	52.5	(1)
MACS 1992	21.4	(6)	35.4	(4)	37.3	(7)	31.4	(7)
APAU 1577	-		-		-		-	
HD 2189	-		-		-		-	
HD 4502	-		-		-		-	
NI 5439	20.8	(7)	44.6	(2)	66.3	(2)	43.9	(3)
MEAN	29.7		37.2		54.8			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)				
VARIETIES (B)				
B WITHIN (A)				
A WITHIN (B)				

Date of sowing 10.11.83
Date of harvesting 22.02.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Pune

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	19.5	(4)	27.7	(2)	23.2	(7)	23.5	(4)
NI 8272	18.0	(6)	24.5	(3)	28.2	(3)	23.6	(3)
NI 8306	18.7	(5)	21.7	(8)	19.5	(9)	20.0	(9)
NI 8414	17.9	(7)	23.2	(4)	24.7	(6)	21.9	(5)
NI 8611	22.2	(2)	29.8	(1)	32.4	(1)	28.1	(1)
MACS 1992	15.2	(9)	21.8	(7)	27.2	(4)	21.4	(7)
APAU 1577	-		-		-		-	
HD 2189	17.5	(8)	22.9	(5)	21.1	(8)	20.5	(8)
HD 4502	20.0	(3)	19.1	(9)	25.4	(5)	21.5	(6)
NI 5439	23.0	(1)	22.5	(6)	28.6	(2)	24.7	(2)
MEAN	19.1		23.7		25.6			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.04	0.15	15.00
VARIETIES (B)	Sig	0.07	0.20	
B WITHIN (A)	Sig	0.12	0.34	
A WITHIN (B)	Sig	0.12	0.35	

Date of sowing 20.11.83

Date of harvesting 04.03.84

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

CENTRE : Pune

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
NI 8188	34.7	(7)	53.0	(2)	50.9	(6)	46.2	(5)
NI 8272	36.5	(6)	42.1	(8)	55.0	(5)	44.5	(6)
NI 8306	41.7	(4)	44.9	(5)	46.0	(8)	44.2	(8)
NI 8414	34.6	(8)	41.7	(9)	50.5	(7)	42.2	(9)
NI 8611	42.3	(3)	67.1	(1)	67.0	(1)	58.8	(1)
MACS 1992	30.3	(9)	44.8	(7)	64.5	(2)	46.6	(4)
APAU 1577	-		-		-		-	
HD 2189	40.1	(5)	48.2	(4)	45.2	(9)	44.5	(7)
HD 4502	51.0	(1)	48.8	(3)	57.8	(3)	52.6	(2)
NI 5439	44.9	(2)	45.5	(5)	56.3	(4)	48.9	(3)
MEAN	39.6		48.5		54.8			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	0.15	0.58	16.1
VARIETIES (B)	Sig	0.14	0.39	
B WITHIN (A)	Sig	0.24	0.68	
A WITHIN (B)	Sig	0.27	0.86	

*Date of sowing 20.11.83

Date of harvesting 04.03.84

AGRONOMIC TRIAL NO: 2

CENTRAL ZONE 1983-84

CENTRE : Udaipur

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.	TWO IRR.	ADEQUATE	MEAN
Raj 6070	20.4 (2)	39.3 (2)	47.7 (1)	35.8 (2)
J 411	19.4 (4)	31.9 (4)	38.4 (4)	29.9 (4)
JU 126	19.7 (3)	30.6 (5)	37.1 (5)	29.1 (5)
Raj 1555	21.9 (1)	39.5 (1)	46.9 (2)	36.1 (1)
WH 147	18.8 (5)	33.1 (3)	44.2 (3)	32.0 (3)
MEAN	20.0	34.9	42.9	

	F. Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.09	4.30	7.53
VARIETIES (B)	Sig	0.82	2.39	
B WITHIN (A)	Sig	1.42	4.14	
A WITHIN (B)				

Date of sowing 27.11.83

Date of harvesting 18.04.84

AGRONOMIC TRIAL NO: 2

CENTRAL ZONE 1983-84

CENTRE : Udaipur

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
Raj 6070	33.7	(4)	55.5	(1)	56.9	(2)	48.0	(1)
J 411	37.5	(1)	46.8	(4)	45.3	(5)	43.2	(4)
JU 126	34.1	(3)	43.3	(5)	47.5	(4)	41.6	(5)
Raj 1555	34.7	(2)	51.6	(2)	57.3	(1)	47.9	(2)
WH 147	29.1	(5)	48.4	(3)	54.5	(3)	44.0	(3)
MEAN	33.8		48.7		52.3			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.60	6.28	13.79
VARIETIES (B)	N.S.	2.08	-	
B WITHIN (A)	N.S.	3.61	-	
A WITHIN (B)	-	-	-	

Date of sowing 27.11.83

Date of harvesting 18.04.84

AGRONOMIC TRIAL NO: 2

CENTRAL ZONE 1983-84

CENTRE : Powarkheda

VARIETIES X IRRIGATION

Grain yield q/ha.

VARIETIES	ONE IRR.		TWO IRR.		ADEQUATE		MEAN	
Raj 6070	24.0	(5)	28.8	(4)	36.6	(3)	29.8	(5)
J 411	29.0	(1)	29.6	(2)	34.4	(4)	31.0	(3)
JU 126	27.3	(2)	29.6	(3)	33.5	(5)	30.1	(4)
Raj 1555	25.9	(4)	30.0	(1)	37.3	(2)	31.1	(2)
WH 147	27.3	(3)	28.6	(5)	38.7	(1)	31.5	(1)
MEAN	26.7		29.3		36.1			

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.23	4.04	9.02
VARIETIES (B)	N.S.	-	-	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)				

Date of sowing 15.11.83

Date of harvesting 20.03.84

AGRONOMIC TRIAL NO: 2

CENTRAL ZONE 1983-84

CENTRE : Powarkheda

VARIETIES X IRRIGATION

Straw yield q/ha.

VARIETIES	ONE IRR.	TWO IRR.	ADEQUATE	MEAN
Raj 6070	36.4 (4)	37.5 (5)	47.4 (3)	40.4 (4)
J 411	50.1 (1)	53.8 (1)	49.7 (2)	51.2 (1)
JU 126	41.0 (3)	49.5 (2)	45.3 (5)	45.3 (3)
Raj 1555	43.3 (2)	40.0 (3)	55.5 (1)	46.3 (2)
WH 147	31.7 (5)	37.7 (4)	46.4 (4)	38.6 (5)
MEAN	40.5	43.7	48.9	

	F.Test	SEm±	C.D. 5%	CV %
IRRIGATION (A)	Sig	1.95	6.33	9.8
VARIETIES (B)	Sig	2.65	7.58	
B WITHIN (A)	N.S.	-	-	
A WITHIN (B)	-	-	-	

Date of sowing 15.11.83

Date of harvesting 20.03.84

AGRONOMIC TRIAL NO: 3

NORTHERN PLAIN ZONE 1983-84

CENTRE : Ludhiana

Control of P. minor and wild oats by cultural & chemical methods.

	Treatments	Grain yield q/ha.	Straw yield	P.minor /m²	Other weeds /m²	Dry wt. of weed g/m²
1	Unweeded check	20.2 (12)	60.5	9	14	76
2	Hand weeding between 4 and 5 weeks	28.1 (7)	49.8	4	15	43
3	Hand hoeing (Interculture) between 4 and 5 weeks	28.1 (8)	55.0	5	4	39
4	Closer row spacing 15 cm	36.5 (1)	58.9	6	10	52
5	Cross sowing	30.6 (3)	57.1	8	10	63
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	31.3 (2)	50.3	-	-	-
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	27.6 (9)	48.2	1	1	20
8	Isoproturon at 0.5 kg a.i /ha 4 weeks (after Ist irr.)	28.5 (6)	58.4	7	7	59
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	24.5 (11)	48.0	2	2	11
10	Isoprotuorn at 0.33 kg a.i./ha 2 weeks	29.2 (4)	47.6	5	5	55
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	29.0 (5)	49.1	2	5	14
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	27.0 (10)	46.9	-	-	-
	F.Test	Sig	Sig			
	SEm+	0.14	0.22			
	C.D. 5%	0.41	-			
	C.V. %	18.06	15.04			

Date of sowing 04.12.83

Date of harvesting 25.04.84

AGRONOMIC TRIAL NO: 3

NORTHERN PLAIN ZONE 1983-84

CENTRE : R.S. Pura

Control of P.minor and wild oats by cultural & chemcial menthods.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	P.minor /m²	Other weeds /m²	Dry wt. of weeds g/m²
1	Unweeded check	13.4 (12)	35.5	549	390	900.0
2	Hand weeding between 4 and 5 weeks	22.6 (8)	43.2	111	52	308.0
3	Hand hoeing (Inter-cultura) between 4 and 5 weeks	21.1 (11)	39.1	539	86	398.8
4	Closer row spacing 15 cm	21.9 (9)	42.9	104	69	311.3
5	Cross sowing	21.7 (10)	41.9	114	68	380.0
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	28.3 (1)	51.5	46	29	201.3
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	23.3 (7)	44.8	105	39	281.3
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irrg.)	25.7 (5)	45.3	73	25	252.5
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	28.1 (2)	50.5	67	23	216.3
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	27.6 (4)	46.6	67	26	210.0
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	27.8 (3)	50.3	72	21	222.5
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	24.8 (6)	44.8	116	27	240.0
	F.Test	NS.	Sig			
	SEm+	-	2.39			
	C.D. 5%	-	6.63			
	C.V. %	-	-			
	Date of sowing	15.11.83				
	Date of harvesting	27.04.84				

AGRONOMIC TRIAL NO: 3

NORTHERN PLAIN ZONE 1983-84

CENTRE : Gurdaspur

Control of P. minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	P.minor /m²	Other weeds /m²	Dry wt. of weed g/m²
1	Unweeded check	29.2 (11)	54.3	d	d	d
2	Hand weeding between 4 and 5 weeks	30.8 (10)	49.4	e	e	e
3	Hand hoeing (Interculture) between 4 and 5 weeks	33.1 (6)	54.8	b	b	b
4	Closer row spacing 15 cm	26.0 (12)	54.1	a	a	a
5	Cross sowing	32.6 (8)	56.4	c	c	c
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	35.3 (5)	49.1	b	b	b
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	36.5 (3)	51.2	e	e	e
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irr.)	36.9 (1)	52.5	a	a	a
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	35.8 (4)	49.8	f	f	f
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	32.8 (7)	48.5	b	b	b
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	36.7 (2)	53.0	c	c	c
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	31.2 (9)	47.5	a	a	a
	F.Test	Sig	Sig			
	SEm±	1.04	1.81			
	C.D: 5%	2.99	5.59			
	C.V. %	7.83	11.67			

Date of sowing 24.11.83

Date of harvesting 07.05.84

AGRONOMIC TRIAL NO: 3

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

Control of P. minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	P.minor /m²	Other weeds /m²	Dry wt. of weed g/m²
1	Unweeded check	23.9 (12)	58.9	24	87	76.5
2	Hand weeding between 4 and 5 weeks	36.2 (2)	64.7	9	80	39.2
3	Hand hoeing (Interculture) between 4 and 5 weeks	36.6 (1)	71.9	14	91	44.2
4	Closer row spacing 15 cm	32.1 (3)	88.7	5	126	57.8
5	Cross sowing	29.0 (5)	83.0	4	88	46.3
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	25.9 (9)	65.8	8	132	53.2
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	28.4 (6)	71.2	10	84	70.3
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irr.)	26.6 (8)	66.5	4	83	41.7
9	Isoproturon at 0.33 kg a.i./ha 2 weeks	25.4 (10)	66.1	24	142	72.0
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	25.4 (11)	73.9	20	99	73.1
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	30.8 (4)	81.0	27	129	72.6
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	28.4 (7)	81.9	8	78	37.5
	F.Test	N.S.	Sig			
S	SEm±	3 .07	4.1			
	C.D. 5%	-	11.95			
	C.V. %	11.00	11.00			

Date of sowing 25.11.83

Date of harvesting 17.04.84

AGRONOMIC TRIAL NO: 3

NORTHERN PLAIN ZONE

1983-84

CENTRE : Mathura

Control of P. minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha.	Straw yield q/ ha.	P.minor /m²	Other weeds /m2	Dry wt. of weed g/m²
1	Unweeded check	27.0 (12)	NOT REPORTED	15	165	NOT REPORTED
2.	Hand weeding between 4 and 5 weeks	30.2 (11)		-	2	
3	Hand hoeing (Interculture) between 4 and 5 weeks	30.6 (9)		-	2	
4	Closer row spacing 15 cm	33.0) 4)		7	141	
5	Cross sowing	36.2 (2)		11	120	
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	33.0 (5)		-	-	
7	Isoproturon at 0.50 kg a.i./ha 5 weeks	32.2 (7)		-	13	
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irr.)	32.6 (6)		2	10	
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	30.6 (10)		-	3	
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	31.4 (8)		-	3	
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	33.8 (3)		1	10	
12	Cross sowing + Isoproturon 0.33 kg a .i./ha 2 weeks	37.8 (1)		1	7	

F.Test.	Sig
SEm±	0.18
C.D. 5%	0.55
CV %	9.32

*Date of sowing 21.11.83

Date of harvesting 30.04.84

AGRONOMIC TRIAL NO: 3

NORTH PLAON ZONE 1983-84

CENTRE : Agra

Control of P. minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	P. minor /m²	Other weeds /m²	Dry wt. of weed g/m²
1	Unweeded check	29.0 (11)	83.7			
2	Hand weeding between 4 and 5 weeks	27.2 (12)	86.4			
3	Hand hoeing (Interculture) between 4 and 5 weeks	32.6 (7)	80.1			
4	Closer row spacing 15 cm	30.8 (10)	86.4			
5	Cross sowing	36.2 (3)	89.7			
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	32.6 (8)	86.4	REPORTED	REPORTED	REPORTED
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	34.4 (5)	86.1			
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irr.)	38.1 (2)	87.9	NOT	NOT	NOT
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	32.6 (9)	82.8			
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	34.4 (6)	84.3			
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	34.5 (4)	94.6			
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	41.7 (1)	97.8			

F.Test		Sig	N.S.
SEm±		2.58	3.83
C.D.	5%	7.39	-
C.V.	%	8.31	10.63

*Date of sowing 4.12.83
Date of harvesting 9.04.84

AGRONOMIC TRIAL NO: 3

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

Control of P.minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha	Straw yield q/ha	P.minor /m2	Other weeds /m2	Dry wt. of weed g/m2
1	Unweeded check	15.9 (12)	31.0			31.3
2	Hand weeding between 4 and 5 weeks	16.8 (11)	34.9			20.3
3	Hand hoeing (Interculture) between 4 and 5 weeks	18.1 (10)	32.6			24.8
4	Clos-er row spacing 15 cm	24.7 (6)	51.9			19.2
5	Cross sowing	25.1 (3)	52.8	REPORTED	REPORTED	19.3
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	24.9 (5)	46.4			21.8
7	Isoproturon at 0.5 kg a.i./ha 5 weeks	23.8 (7)	43.9			19.9
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irr.)	25.1 (4)	51.6	NOT	NOT	19.5
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	21.1 (8)	39.0			24.4
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	20.4 (9)	40.3			25.1
11	Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	25.8 (2)	49.1			21.2
12	Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	28.3 (1)	59.1			20.1

F.test	Sig	Sig
S.Ed.	1.94	3.39
C.D. 5%	3.95	6.89
C.V. %	12.23	10.72

Date of sowing 11.12.83

Date of harvesting 16.05.84

AGRONOMIC TRIAL NO: 3

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Faizabad

Control of P.minor and wild oats by cultural and chemical methods.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	P.minor /m²	Other weeds /m²	Dry wt of wee g/m²
1	Unweeded check	31.3 (12)	58.4			13.9
2	Hand weeding between 4 and 5 weeks	33.1 (8)	58.4			11.8
3	Hand hoeing (Inercu-lture) between 4 and 5 weeks	33.5 (6)	54.8			13.7
4	Closer row spacing 15 cm	37.1 (1)	70.2			15.6
5	Cross sowing	33.1 (9)	63.9			11.3
6	Isoproturon at 0.75 kg a.i./ha 5 weeks	33.5 (7)	56.6	REPORTED	REPORTED	15.4
7	Isoproturon at 0.50 kg a.i./ha 5 weeks	31.7 (10)	57.5			10.9
8	Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist Irrigation)	31.7 (11)	61.1	NOT	NOT	13.6
9	Isoproturon at 0.33 kg a.i./ha 3 weeks	36.7 (2)	58.9			18.5
10	Isoproturon at 0.33 kg a.i./ha 2 weeks	34.4 (5)	62.5			9.5

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Date of sowing 24.11.83

Date of harvesting 10.04.84

AGRONOMIC TRIAL NO: 9

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

Comparison of crop Geometries

Treatments	Grain yield q/ha		Straw yield q/ha	
1 Planting in rows 22.5cm fertilizer & seed normal	26.8	(3)	56.9	(3)
2 Planting in rows 15.0cm fertilizer & seed normal	30.9	(1)	65.3	(1)
3 Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal	28.0	(2)	58.9	(2)
4 Skip planting in orws 22.5cm fertilizer & seed normal but 4th row skipped	24.6	(5)	51.5	(5)
5 Planting in rows 22.5cm fertilizer & seed 75% of normal	21.4	(8)	44.5	(8)
6 Planting in rows 15.0cm fertilizer & seed 75% of normal	22.4	(6)	46.8	(6)
7 Cross sowing 22.5 cm x 22.5 cm fertilizer & seed normal of 75%	21.9	(7)	44.6	(7)
8 Skip planting in rows 22.5 cm apart but 4th row skipped sseed 75% of normal	20.2	(9)	42.8	(9)
9 Paired row planting 15cm/ 30cm. Fertilizer & seed normal	24.9	(4)	51.7	(4)
F.Test	Sig		Sig	
SEm±	0.87		1.78	
C.D. 5%	1.78		3.67	
C.V. %	4.99		4.89	

Date of sowing 19.11.83

Date of harvesting 27.04.84

AGRONOMIC TRIAL NO: 9

NORTH EASTERN PLAIN ZONE 1983-84

CENTRE : Pusa (R.A.U.)

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha
1	Planting in rows 22.5cm fertilizer & seed normal	48.3	(5)	
2	Planting in rows 15.0cm fertilizer & seed normal	50.0	(2)	
3	Cross sowing 22.5cm x 22.5cm fertilizer & seed normal	49.4	(4)	
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row skipped	49.6	(3)	
5	Planting in rows 22.5cm fertilizer & seed 75% of normal	42.2	(8)	
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	39.3	(9)	
7	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal of 75%	43.3	(7)	
8	Skip planting in rows 22.5cm apart but 4th row skipped, seed 75% of normal	47.0	(6)	
9	Paired row planting 15cm/ 30cm. Fertilizer & seed normal	50.9	(1)	
	F.Test	Sig		
	SEm±	2.12		
	C.D. 5%	6.22		
	C.V. %	8.00		

Date of sowing 02.12.83

Date of harvesting 06.04.84

AGRONOMIC TRIAL NO: 9

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Ranchi

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha	
1	Planting in rows 22.5cm fertilizer & seed normal	41.7	(3)	57.7	(4)
2	Planting in rows 15.0cm fertilizer & seed normal	38.3	(5)	68.3	(1)
3	Cross sowing 22.5 cm x 22.5cm fertilizer & seed normal	47.8	(1)	53.8	(8)
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row skipped	36.7	(6)	60.4	(2)
5	Planting in rows 22.5cm fertilizer & seed 75% of normal	32.9	(8)	57.7	(5)
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	35.9	(7)	56.6	(6)
7	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal of 75%	44.1	(2)	55.9	(7)
8	Skip planting in rows 22.5cm apart but 4th row skipped, seed 75% of normal	28.3	(9)	40.8	(9)
9	Paired row planting 15cm/ 30 cm. Fertilizer & seed normal	39.4	(4)	60.4	(3)
	F. Test	Sig		Sig	
	SEm±	0.68		2.92	
	C.D. 5%	1.99		8.51	
	C.V. %	3.58		10.26	

Date of sowing	19.12.83
Date of harvesting	25.04.84

AGRONOMIC TRIAL NO: 9

CENTRAL ZONE 1983-84

CENTRE : Powerkheda

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha	
1	Planting in rows 22.5cm fertilizer & seed normal	48.9	(2)	57.9	(1)
2	Planting in rows 15.0cm fertilizer & seed normal	49.9	(1)	53.4	(3)
3	Cross sowing 22.5cm x 22.5cm fertilizer & seed normal	46.6	(4)	48.9	(6)
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row skipped	45.8	(5)	51.4	(4)
5	Planting in rows 22.5 cm fertilizer & seed 75% of normal	40.7	(9)	43.5	(8)
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	43.9	(6)	49.0	(5)
7	Cross sowing 22.5cm x 22.5cm fertilizer & seed normal of 75%	42.4	(8)	40.9	(9)
8	Skip planting in rows 22.5cm apart but 4th row skipped, seed 75% of normal	43.4	(7)	44.3	(7)
9	Paired row planting 15cm/ 30cm. Fertilizer & seed normal	46.9	(3)	55.6	(2)
	F.Test	Sig		Sig	
	SEm±	1.54		2.93	
	C.D. 5%	4.51		8.54	
	C.V. %	6.80		11.80	

Date of sowing 01.12.83

Date of harvesting 30.03.84

AGRONOMIC TRIAL NO: 9

CENTRAL ZONE 1983-84

CENTRE : Junagadh

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha	
1	Planting in rows 22.5cm fertilizer & seed normal	43.7	(2)	52.9	(2)
2	Planting in rows 15.0cm fertilizer & seed normal	44.0	(1)	53.7	(1)
3	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal	43.2	(4)	50.5	(4)
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row skipped	39.5	(9)	46.5	(8)
5	Planting in rows 22.5 cm fertilizer & seed 75% of normal	40.1	(7)	49.1	(6)
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	42.5	(5)	49.2	(5)
7	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal of 75%.	40.8	(6)	47.5	(7)
8	Skip planting in rows 22.5 cm apart but 4th row skipped, seed 75% of normal	39.9	(8)	45.0	(9)
9	Paired row planting 15cm/ 30cm. Fertilizer & seed normal	43.7	(3)	51.7	(3)
	F. Test	N.S.		N.S.	
	SEm±	1.85		3.30	
	C.D. 5%	-		-	
	C.V. %	8.81		13.22	

Date of sowing 12.11.83

Date of harvesting 02.03.84

AGRONOMIC TRIAL NO: 9

NORTHERN HILL ZONE 1983-84

CENTRE : Almora

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha	
1	Planting in rows 22.5cm fertilizer & seed normal	23.7	(6)	40.2	(5)
2	Planting in rows 15.0cm fertilizer & seed normal	25.4	(3)	43.1	(3)
3	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal	27.3	(2)	44.8	(2)
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row si skipped.	24.5	(4)	41.8	(4)
5	Planting in rows 22.5cm fertilizer & seed 75% of normal	19.9	(7)	33.9	(8)
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	19.2	(8)	32.1	(9)
7	Cross sowing 22.5cm x 22.5 cm fertilizer & seed normal of 75%	24.0	(5)	36.8	(7)
8	Skip planting in rows 22.5 cm apart but 4th row skipped, seed 75% of normal	18.9	(9)	39.2	(6)
9	Paired row planting 15cm/ 30 cm. Fertilizer & seed normal	31.5	(1)	46.3	(1)
	F.Test	Sig		Sig	
	SEm±	0.96		2.25	
	C.D. 5%	2.87		6.74	
	C.V. %	6.96		9.78	

Date of sowing	24.11.83
Date of harvesting	17.05.84

AGRONOMIC TRIAL NO: 9

NORTHERN HILL ZONE 1983-84

CENTRE : Solan

Comparison of crop geometries

	Treatments	Grain yield q/ha		Straw yield q/ha	
1	Planting in rows 22.5cm fertilizer & seed normal	24.1	(2)	48.9	(2)
2	Planting in rows 15.0cm fertilizer & seed normal	22.5	(3)	47.7	(3)
3	Cross sowing 22.5cm x 22.5cm fertilizer & seed normal	20.9	(7)	53.2	(1)
4	Skip planting in rows 22.5cm fertilizer & seed normal but 4th row skipped	21.5	(6)	39.4	(7)
5	Planting in rows 22.5cm fertilizer & seed 75% of normal	22.5	(4)	44.1	(5)
6	Planting in rows 15.0cm fertilizer & seed 75% of normal	18.8	(9)	32.2	(9)
7	Cross sowing 22.5 cm x 22.5 cm fertilizer & seed normal of 75%	24.4	(1)	47.2	(4)
8	Skip planting in rows 22.5 cm apart but 4th row skipped, seed 75% of normal	21.9	(5)	44.1	(6)
9	Paired row planting 15cm/30cm. Fertilizer & seed normal.	19.5	(8)	38.8	(8)
	F.Test	N.S.		N.S.	
	SEm±	2.77		6.42	
	C.D. 5%	-		-	
	C.V. %	-		-	
	Date of sowing	28.11.83			
	Date of harvesting	02.05.84			

AGRONOMIC TRIAL NO: 10

NORTHERN PLAIN ZONE 1983-84

CENTRE : Ludhiana

To evaluate the efficacy of inter-cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen

	Treatments	Grain yield q/ha Wheat yield q / ha	Straw yield q/ha	Sarson yield q/ha
1	Wheat pure crop at 0 kg N/ha	17.0 (5)	23.2 (5)	-
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha.	16.5 (6)	22.4 (6)	3.6 (3)
3	Wheat pure crop at 50 kg N/ha.	26.5 (3)	40.7 (3)	-
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	25.9 (4)	35.3 (4)	8.0 (2)
5	Wheat prre crop at 100 kg N/ha.	34.6 (1)	47.4 (1)	-
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	32.4 (2)	41.5 (2)	10.7 (1)
	F.Test	Sig	Sig	
	SEm ±	0.48	0.61	
	C.D. 5%	1.44	1.83	
	C.V. %	13.14	12.20	

Date of sowing	21.11.83
Date of harvesting	27.04.84

AGRONOMIC TRIAL NO: 10

NORTHERN PLAIN ZONE 1983-84

CENTRE : Pantnagar

To evaluate the efficacy of inter-cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen.

	Treatments	Grain yield q/ha.	Straw yield q/ha.	Sarson yield q/ha
		Wheat yield q/ha.		
1	Wheat pure crop at 0 kg N/ha.	13.2 (5)	23.8 (5)	-
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha.	12.0 (6)	19.2 (6)	0.79 (3)
3	Wheat pure crop at 50 kg N/ha.	29.0 (3)	54.7 (2)	-
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	26.4 (4)	50.4 (4)	1.08 (2)
5	Wheat pure crop at 100 kg N/ha	32.2 (1)	59.7 (1)	-
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	30.2 (2)	54.5 (3)	1.48 (1)
	F.Test	Sig	Sig	
	SEm±	1.33	3.53	
	C.D. 5%	3.98	10.62	
	C.V. %	11.00	16.00	

Date of sowing 19.11.83

Date of harvesting 12.04.84

AGRONOMIC TRIAL NO: 10

NORTH WESTERN PLAIN ZONE 1983-84

CENTRE : Durgapura

To evaluate the efficacy of inter-cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen

	Treatments	Grain yield q/ha.	Straw yield q/ha.	Sarson yield q/ha.
		Wheat yield q/ha.		
1	Wheat pure crop at 0 kg N/ha	10.9 (5)	16.8 (5)	-
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha.	10.1 (6)	15.4 (6)	0.5 (3)
3	Wheat pure crop at 50 kg N/ha	17.9 (3)	29.4 (3)	-
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	17.9 (4)	27.0 (4)	0.8 (2)
5	Wheat pure crop at 100 kg N/ha	25.0 (1)	32.8 (1)	-
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	23.1 (2)	29.7 (2)	0.9 (1)
	F.Test	Sig	Sig	Sig
	SEm±	1.18	0.74	0.02
	C.D. 5%	3.58	2.25	0.08
	C.V. %	9.45	8.54	6.60

Date of sowing 09.11.83

Date of harvesting 12.04.84

AGRONOMIC TRIAL NO: 10

NORTHER EASTERN PLAIN ZONE 1983-84

CENTRE : Kanpur

To evaluate the efficacy of inter cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen.

	Treatments	Grain yeild q/ha.	Straw yield q/ha.	Sarson yield q/ha.
		Wheat yield q/ha.		
1	Wheat pure crop at 0 kg N/ha.	9.6 (5)	20.0 (5)	-
2	8 rows of wheat + 1 row fo sarson at 0.kg N/ha	88.3 (6)	19.7 (6)	1.15 (3)
3	Wheat pure crop at 50 kg N/ha	19.8 (3)	39.5 (3)	-
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	14.0 (4)	30.4 (5)	1.95 (2)
5	Wheat pure crop at 100 kg N/ha.	29.1 (1)	54.8 (1)	-
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	20.7 (2)	41.4 (2)	2.30 (1)
	F.Test	Sig	Sig	
	SEm±	2.01	3.58	
	C.D. 5%	4.29	7.62	
	C.V. %	16.60	14.63	
	Date of sowing	30.11.83		
	Date of harvesting	26.04.84		

AGRONOMIC TRIAL NO: 10

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Kalyani

To evaluate the efficacy of inter cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen

	Treatments	Grain yield q/ha.	Straw yield q/ha.	Sarson yield q/ha.
		Wheat yield q/ha.		
1	Wheat pure crop at 0 kg N/ha.	14.5 (5)	34.1 (2)	Not reported
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha	8.2 (6)	31.0 (3)	
3	Wheat pure crop at 50 kg N/ha	24.6 (2)	30.0 (5)	
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	19.5 (4)	30.6 (4)	
5	Wheat pure crop at 100 kg N/ha.	34.2 (1)	35.7 (1)	
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	24.1 (3)	29.4 (6)	
	F.Test	N.S.		
	SEm±	2.65		
	C.D. 5%	-		
	C.V. %	-		
	Date of sowing	17.11.83		
	Date of harvesting	14.03.84		

AGRONOMIC TRIAL NO: 10

FAR EASTERN PLAIN ZONE 1983-84

CENTRE : Ranchi

To evaluate the efficacy of inter cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen

	Treatments	Grain yield q/ha-	Straw yield q/ha.	Sarson yield q/ha.
		Wheat yield q/ha.		
1	Wheat pure crop at 0 kg N/ha.	7.2 (5)	11.7 (5)	-
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha.	5.8 (6)	11.6 (6)	0.24 (3)
3	Wheat pure crop at 50 kg N/ha.	28.7 (3)	39.8 (3)	-
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha.	26.6 (4)	33.6 (4)	0.62 (2)
5	Wheat pure crop at 100 kg N/ha.	41.7 (1)	50.5 (2)	-
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	36.3 (2)	52.0 (1)	1.13 (1)
	F.Test	Sig	Sig	
	SEm±	0.89	1.83	
	C.D. 5%	2.69	5.51	
	C.V. %	7.34	10.83	
	Date of sowing	19.12.83		
	Date of harvesting	20.04.84		

AGRONOMIC TRIAL NO: 10

CENTRAL ZONE 1983-84

CENTRE : Powerkheda

To evaluate the efficacy of inter cropping of wheat and sarson vis-a-vis pure wheat crop at varying level of nitrogen

	Treatments	Grain yield q/ha.	Straw yield q/ha.	Sarson yield q/ha.
		Wheat yield q/ha.		
1	Wheat pure crop at 0. kg N/ha	11.4 (6)	15.0 (6)	Not reported
2	8 rows of wheat + 1 row of sarson at 0 kg N/ha.	13.7 (5)	17.2 (5)	
3	Wheat pure crop at 50 kg N/ha.	25.8 (4)	31.0 (4)	
4	8 rows of wheat + 1 row of sarson at 50 kg N/ha	28.5 (3)	35.8 (3)	
5	Wheat pure crop at 100 kg N/ha.	42.3 (1)	40.1 (1)	
6	8 rows of wheat + 1 row of sarson at 100 kg N/ha.	36.3 (2)	39.4 (2)	
	F. Test	Sig	Sig	
	SEm±	2.34	3.74	
	C.D. 5%	4.85	7.74	
	C.V. %	15.50	9.80	

Date of sowing 14.11.83

Date of harvesting 22.03.84

/sarwajit/

Project No.1- PERFORMANCE AND ADAPTABILITY OF (2ND YEAR URT) WHEAT VARIETIES

Experiment 1. Studies to asses the adaptability of new wheat varieties to different dates o. sowing under irrigated conditions.

A. Northern Plains Zone:

Table -1 (a) Comparative performance of wheat varieties tested for normal sowing.

Locations	Varieties									
	HD 2379		Raj 2525*		Raj 2560		WL 711 (CHECK)	D x V
Ludhiana	44.9		41.8		50.7		50.0	N.S.
Gurdaspur	43.1	=	41.9	=	40.5	=	43.1	3.23
Pantnagar	49.8	=	55.7	=	46.2	=	48.3	6.89
Mathura	49.0		50.4		50.4		51.1	N.S.
Meerut	48.5	=	49.3	=	47.0	=	49.3	8.42
Agra	53.4	=	-		49.7	=	52.4	5.37
Morena	54.0	+	55.3	+	36.8	-	45.6	4.89
Mean	49.0	(1)	48.7	(2)	45.9	(4)	48.5	(3)

Table -1 (b) Performance of varieties (tested for normal sowing) in comparison to check (WL 711) under early sowing

Location	HD 2379		Raj 2525*		Raj 2560		WL 711 (CHECK)	D x V
Ludhiana	43.8		32.1		39.3		45.2	N.S.
Gurdaspur	32.6	-	39.2	-	34.9	-	50.1	3.23
Pantnagar	39.9	-	46.2	=	39.9	-	48.6	6.89
Mathura	45.6		41.4		41.4		42.1	N.S.
Meerut	38.7	=	38.7	=	39.6	=	41.5	8.42
Agra	-		-		-		-	5.37
Morena	-		-		-		-	4.89
Mean	40.1	(2)	39.5	(3)	39.0	(4)	45.5	(1)

Table -1 (c) Performance of varieties tested for normal sowing in comparison to check (WL 711) under late sowing

Locations	HD 2379		Raj 2525*		Raj 2560		WL 711 (CHECK)	D x V
Ludhiana	30.7		28.3		25.5		36.6	N.S.
Gurdaspur	34.9	=	36.2	=	32.9	=	34.3	3.23
Pantnagar	38.7	+	41.7	+	39.0	+	26.3	6.89
Mathura	31.1		55.8		30.4		31.8	N.S.
Meerut	19.1	-	37.7	=	48.3	+	34.8	8.42
Agra	33.7	=	-		37.9	=	32.7	5.37
Morena	32.5	=	33.6	=	25.6	-	31.9	4.89
Mean	31.5	(4)	38.9	(1)	34.2	(2)	32.6	(3)

Table -1 (d) Comparative performance of wheat varieties tested for late sowing

Varieties	Locations							
	Ludhiana	Gurdaspur	Pantnagar	Mathura	Meerut	Agra	Morena	Mean
PBW 94	28.0	39.5 +	39.3 =	34.5	43.5 +	32.1 =	33.1 =	35.7 (4)
*PBW 95	37.6	39.9 +	44.1 =	30.4	39.6 +	35.2 =	28.2 =	36.4 (2)
PBW 96	32.8	40.8 +	35.6 =	31.8	35.8 +	29.0 -	28.4 =	33.5 (8)
HD 2270	37.3	35.9 =	37.7 =	41.4	42.5 +	31.3 =	34.6 =	37.2 (1)
HD 2347	30.7	37.2 =	37.7 =	45.6	32.9 =	35.4 =	34.6 =	36.3 (3)
HD 2374	27.3	33.3 =	37.7 =	33.1	39.6 +	36.4 =	35.9 =	34.8 (6)
*HD 2382	31.4	39.2 +	-	29.0	42.5 +	37.9 =	32.5 =	35.4 (5)
K 8152	24.8	36.2 =	34.4 =	33.8	-	28.6 -	27.5 -	30.9 (10)
Raj 2593	29.7	36.2 =	35.6 =	29.0	49.3 +	28.2 -	27.8 =	33.7 (7)
WH 305	29.3	32.6 -	32.3 -	33.2	24.2 =	30.6 -	23.8 -	29.4 (11)
HD 2285 (CHECK)	28.6	35.9	41.1	31.8	27.1	36.2	32.4	33.3 (9)
D x V	N.S.	3.23	6.89	N.S.	8.42	5.37	4.89	

Table -1 (e) Adaptability of varieties (tested for late sowing) to timely sown conditions.

Varieties	Locations							
	Ludhiana	Gurdaspur	Pantnagar	Mathura	Meerut	Agra	Morena	Mean
PBW 94	47.6	44.5 +	46.8 +	47.6	45.4 -	50.3 =	50.3 =	47.5 (2)
*PBW 95	49.0	41.5 =	49.2 +	41.4	51.2 -	43.7 =	46.4 =	46.1 (7)
PBW 96	40.4	47.1 +	42.3 =	45.6	45.4 -	39.9 -	45.0 =	43.7 (11)
HD 2270	43.1	36.6 -	46.8 +	52.5	54.1 =	26.9 -	49.3 =	44.2 (10)
HD 2347	49.3	35.9 -	49.5 +	53.8	38.7 -	51.8 =	49.5 =	46.9 (5)
HD 2374	46.9	42.2 =	46.5 +	50.4	51.2 -	48.2 =	46.4 =	47.4 (3)
*HD 2382	48.7	39.2 =	-	48.3	55.1 =	53.8 +	53.1 =	49.7 (1)
K 8152	45.2	38.5 =	49.5 +	49.7	-	49.7 =	43.2 -	46.0 (3)
Raj 2593	47.6	40.8 =	47.7 +	43.5	49.3 -	55.9 +	45.3 =	47.2 (4)
WH 385	42.1	36.6 -	43.5 =	49.7	52.2 =	49.9 =	42.4 -	45.2 (9)
HD 2285 (CHECK)	43.8	39.9	38.0	49.7	59.9	48.2	48.9	46.9 (6)
D x V	N.S.	3.23	6.89	N.S.	8.42	5.37	4.89	

B. North Western Plains Zone :

Table -2 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Locations				
	Hissar	Durgapura	Vijapur	Mean	
VW 115	37.5 =	32.6 +	44.4 =	38.2	(4)
*WH 367	43.1 +	25.5 =	45.0 =	37.9	(5)
WH 369	35.4 =	26.9 =	54.5 =	38.9	(1)
Raj 2535	34.0 =	26.9 =	48.3 =	36.4	(6)
Raj 2560	40.4 =	24.8 =	51.6 =	38.9	(2)
Raj 2619	39.9 =	27.2 =	48.1 =	38.4	(3)
WH 147 (Check)	32.6	24.8	50.6	36.0	(7)
D x V	8.12	5.08	8.07		

Table -2 (b) Performance of varieties (tested for normal sowing) in comparison to check (WH 147) under early sowing

Varieties	Locations				
	Hissar	Durgapura	Vujapur	Mean	
VW 115	38.9 =	30.7 =	43.6 =	37.7	(6)
*WH 367	44.2 =	38.2 +	50.2 =	44.2	(1)
WH 369	43.7 =	28.9 =	44.0 =	38.9	(5)
Raj 2535	45.2 =	35.3 +	47.3 =	42.6	(2)
Raj 2560	38.9 =	29.4 =	56.9 +	41.7	(3)
Raj 2619	41.7 =	28.0 =	53.0 +	40.9	(4)
WH 147 (Check)	40.3	26.4	42.4	36.4	(7)
D x V	8.21	5.08	8.07		

Table -2 (c) Performance of wheat varieties (tested for normal sowing) in comparison to check under late sowing

Varieties	Locations				
	Hissar	Durgapura	Vijapur	Mean	
VW 115	40.6 =	19.7 =	41.6 =	34.0	(1)
*WH 367	39.2 =	14.4 =	41.4 =	31.7	(4)
WH 369	35.9 =	19.3 =	42.4 =	32.5	(3)
Raj 2535	40.6 =	15.3 =	43.5 =	33.1	(2)
Raj 2560	36.1 =	14.9 =	43.5 =	31.5	(6)
Raj 2619	34.4 =	16.9 =	43.8 =	31.7	(5)
WH 147 (Check)	35.4	15.3	40.4	30.4	(7)
D x V	8.21	5.08	8.07		

Table -2 (d) Comparative performance of wheat varieties tested for late sowing

Varieties	Locations				
	Hissar	Durgapura	Vijapur	Mean	
VW 120	38.5 =	17.3 -	40.5 =	32.1	(4)
*VW 121	41.3 =	17.1 -	49.5 +	36.0	(1)
VW 122	40.3 =	16.3 -	35.0 =	30.5	(5)
Raj 2646	-	-	-	-	
WH 374	36.3 =	20.0 =	40.2 =	32.3	(3)
Sonalika (Check)	39.9	22.5	37.8	33.4	(2)
D x V	8.21	5.08	8.07		

Table 2 (e) Adaptability of varieties tested for late sowing to timely sown conditions

Varieties	Locations				
	Hissar	Durgapura	Vijapur	Mean	
VW 120	42.0 +	32.2 =	55.6 =	43.3	(1)
*VW 121	40.6 =	30.4 =	55.7 =	42.2	(2)
VW 122	38.5 =	34.4 +	50.9 =	41.3	(3)
Raj 2646	-	-	-	-	
WH 374	40.3 =	27.7 =	48.0 =	38.7	(4)
Sonalika (check)	33.0	28.4	50.0	37.1	(5)
D x V	8.21	5.08	8.07		

North Eastern Plains Zone :

Table -3 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Locations					
	Kanpur	Varanasi	Faizabad	Pusa (RAU)	Sabour	Mean
K 8103	34.2 +	38.1 -	25.9 =	38.3 -	32.4 -	33.8 (9)
K 8110	30.0 =	34.7 -	28.5 =	45.9 =	39.7 =	35.8 (6)
HUW 219	29.3 =	40.5 =	30.5 =	38.0 -	32.8 -	35.8 (7)
HUW 220	31.4 =	37.9 -	25.4 =	46.9 =	25.9 -	33.5 (10)
*HUW 221	36.6 +	35.7 -	28.5 =	49.3 =	42.8 =	38.6 (5)
HUW 225	33.1 +	36.3 -	26.9 =	40.4 -	33.1 -	34.0 (8)
HP 1515	-	-	-	45.5 =	38.7 =	42.1 (2)
HP 1518	-	-	-	46.9 =	51.4 +	49.2 (1)
BR 326	29.3 =	38.3 -	-	43.1 =	48.7 +	39.9 (3)
HUW 206 (Check)	26.6	48.3	32.6	46.6	40.4	38.9 (4)
D x V	5.18	3.48	15.29	6.15	6.95	

Table -3 (b) Performance of varieties in comparison to check (HUW 206) under early sowing

Varieties	Locations					
	Kanpur	Varanasi	Faizabad	Pusa (RAU)	Sabour	Mean
K 8103	27.3 -	35.3 -	30.5 =	30.7 -	30.0 -	30.8 (10)
K 8110	34.5 =	28.2 -	32.6 =	41.1 =	43.1 =	35.9 (6)
HUW 219	43.1 +	40.1 =	34.2 =	34.5 =	39.3 =	38.2 (3)
HUW 220	41.4 +	31.4 -	28.5 =	45.3 +	33.5 =	36.0 (5)
*HUW 221	29.7 -	38.4 -	31.1 =	44.2 =	37.6 =	36.2 (4)
HUW 225	28.6 -	27.3 -	29.5 =	40.7 =	35.2 =	32.3 (9)
HP 1515	-	27.3 -	-	43.5 =	33.1 -	34.6 (8)
HP 1518	-	28.6 -	-	43.8 =	43.8 =	38.7 (1)
BR 326	21.1 -	30.3 -	-	41.1 =	47.6 +	35.0 (7)
HUW 206 (Check)	35.9	42.7	35.2	38.6	40.4	38.6 (2)
D x V	5.18	3.48	15.29	6.15	6.95	

Table - 3 (c) Performance of varieties (tested for normal sowing) in comparison to check (HUW 206) under late sowing

Varieties	Locations					
	Kanpur	Varanasi	Faizabad	Pusa (RAU)	Sabour	Mean
K 8103	27.3 =	24.2 =	21.2 =	35.2 =	36.6 =	28.9 (5)
K 8110	23.8 =	27.1 +	17.6 =	34.9 =	42.8 =	29.2 (4)
HUW 219	22.4 =	28.0 +	19.7 =	34.2 =	23.5 -	25.6 (10)
HUW 220	26.6 =	23.5 =	24.3 =	34.9 =	28.3 -	27.5 (8)
*HUW 221	28.3 =	27.6 +	23.8 =	33.8 =	39.7 =	30.6 (2)
HUW 225	24.5 =	21.4 =	24.3 =	36.9 =	30.7 =	27.6 (7)
HP 1515	-	23.0 =	-	35.9 =	31.1 =	30.0 (3)
HP 1518	-	27.5 +	-	33.8 =	37.3 =	32.9 (1)
BR 326	20.4 =	22.5 =	-	32.8 =	39.0 =	28.7 (6)
HUW 206 (Check)	25.2	22.2	13.5	34.5	36.9	26.5 (9)
D x V	5.18	3.49	15.29	6.15	6.95	

Table -3 (d) Comparative performance of wheat varieties tested for late sown.

Varieties	Locations					
	Kanpur	Varanasi	Faizabad	Pusa (RAU)	Sabour	Mean
K 8144	21.1 =	22.2 -	22.3 =	28.3 =	41.1 =	27.0 (6)
K 8148	28.0 +	23.7 -	16.1 =	30.4 =	38.7 =	27.4 (4)
HUW 229	26.6 +	23.9 -	23.8 =	32.4 =	28.0 -	26.9 (7)
HUW 231	24.8 =	23.3 -	19.2 =	26.9 =	31.1 =	25.1 (8)
HUW 233	21.1 =	27.6 =	16.1 =	38.0 =	36.9 =	27.9 (3)
*HUW 234	25.7 =	30.7 =	23.3 =	32.8 =	41.4 =	30.8 (1)
HP 1524	-	27.2 =	-	33.5 =	24.8 -	28.5 (2)
HUW 213 (Check)	21.1	27.6	16.6	32.4	37.6	27.1 (5)
D x V	5.18	3.48	15.29	6.15	6.95	

Table -3 (e) Adaptability of varieties (tested for late sowing) to timely sown condition.

Varieties	Locations					
	Kanpur	Varanasi	Faizabad	Pusa (RAU)	Sabour	Mean
K 8144	25.2 -	36.0 -	21.2 =	40.7 =	42.4 =	33.1 (5)
K 8148	32.8 -	30.2 -	24.8 =	41.8 =	27.3 -	31.4 (8)
HUW 229	27.6 -	36.8 =	26.4 =	38.3 =	31.1 =	32.0 (7)
HUW 231	25.9 -	36.6 =	29.5 =	41.4 =	29.3 =	32.5 (6)
HUW 233	27.3 -	37.6 =	32.6 =	45.5 =	41.4 =	36.9 (3)
*HUW 234	47.3 =	40.9 =	31.6 =	41.1 =	42.1 =	40.6 (1)
HP 1524	-	31.0 -	-	39.3 =	33.8 =	34.7 (4)
HUW 213 (Check)	44.2	39.8	34.7	40.4	36.2	39.1 (2)
D x V	5.18	3.49	15.29	6.15	6.95	

D. Far Eastern Plains Zone :

Table -4 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Locations. Kalyani	Shillongoni		Mean	
BR 2061	23.6	23.3	-	23.5	(9)
BR 2074	31.9	-		31.9	(6)
*BW 11	35.5	-		35.5	(3)
BW 158	27.7	-		27.7	(7)
BW 161	-	-		-	
+BW 182	36.2	-		36.2	(2)
HI 968	42.2	24.8	-	33.5	(5)
HD 2367	33.7	18.8	-	26.3	(8)
MG 104-4	47.1	22.6	-	34.9	(4)
Sonalika (Check)	47.6	30.3		39.0	(1)
D x V	N.S.	3.96			

Table -4 (b) Performance of varieties (tested for normal sowing) in comparison to Sonalika (check) under early sowing

Varieties	Locations Kalyani	Shillongoni		Mean	
BR 2061	30.1	33.3	=	31.7	(5)
BR 2074	36.8	-		36.8	(2)
*BW 11	43.5	-		43.5	(1)
BW 158	27.2	-		27.2	(8)
BW 161	-	-		-	
+BW 182	29.5	-		29.5	(7)
HI 968	33.2	27.7	=	30.5	(6)
HD 2367	40.4	30.6	=	35.5	(3)
MG 104-4	40.2	27.5	=	33.9	(4)
Sonalika (Check)	24.6	29.5		27.1	(9)
D x V	N.S.	3.96			

Table -4 (c) Performance of varieties (tested for normal sowing) in comparison to Sonalika (check) under late sowing

Varieties	Locations Kalyani	Shillongoni		Mean	
BR 2061	22.3	15.1	=	18.7	(9)
BR 2074	29.5	-		29.5	(5)
*BW 11	30.8	-		30.8	(4)
BW 158	31.7	-		31.7	(3)
+BW 182	44.6	-		44.6	(1)
HI 968	31.3	20.6	+	26.0	(6)
HD 2367	30.8	11.0	-	20.9	(8)
MG 104-4	45.3	18.4	=	31.8	(2)
Sonalika (Check)	36.2	15.7		26.0	(7)
D x V	N.S.	3.96			

Table - 4 (d) Comparative performance of wheat varieties tested for late sowing

Varieties	Locations		Mean	
	Kalyani	Shillongoni		
+BW 11	30.8	-	30.8	(3)
BW 148	-	-	-	
BW 158	31.7	-	31.7	(2)
*BW 182	44.6	-	44.6	(1)
DL 220-2	26.4	17.1 =	21.8	(5)
HP 1498	-	18.4 =	18.4	(6)
Sonalika (check)	36.2	15.7	26.0	(4)
D x V	N.S.	3.96		

Tabe -4 (e) Adaptability of varieties (tested for late sowing) to timely sown conditions

Varieties	Locations		Mean	
	Kalyani	Shillongoni		
+BW 11	35.5	-	35.5	(3)
BW 148	-	-	-	
BW 158	27.7	-	27.7	(5)
*BW 182	36.2	-	36.2	(2)
DL 220-2	44.0	22.5 -	33.3	(4)
HP 1498	-	20.4 -	20.4	(6)
Sonalika (Check)	47.6	30.3	39.0	(1)
D x V	N.S.	3.96		

Central Zone :

Table - 5 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Locations						Mean	
	Udaipur		Powerkheda		Junagarh			
Raj 6070 (d)	60.2		37.6	-	33.1	-	43.6	(2)
J 411	46.0		44.5	=	34.3	=	41.6	(5)
*JU 126 (d)	49.1		37.6	-	43.1	=	43.3	(3)
Raj 1555 (d) (check)	54.2		43.8		42.4		46.8	(1)
WH 147 (Check)	51.5		45.5		30.2		42.4	(4)
D x V	NS.		5.85		5.45			

Table - 5 (b) Performance of normal sowing varieties in comparison to Raj 1555(d), WH 147 (Checks) late sowing. under late sowing.

Varieties	Locations						Mean	
	Udaipur		Powerkheda		Junagarh			
Raj 6070 (d)	49.2		30.4	-	17.3	=	32.3	(5)
J 411	42.9		34.2	=	24.6	+	33.9	(3)
*JU 126 (d)	49.3		37.6	=	25.8	+	37.6	(1)
Raj 1555 (d) (check)	54.1		39.7		18.0		37.3	(2)
WH 147 (check)	48.5		34.2		16.0		32.9	(4)
D x V	N.S.		5.85		5.45			

Table - 5 (c) Performance of varieties (tested for normal sowing) in comparison to Raj 1555 (check) under late sowing.

Varieties	Locations						Mean	
	Udaipur		Powerkheda		Junagarh			
Raj 6070 (d)	44.9		37.6	=	35.1	=	39.2	(3)
J 411	34.9		33.8	-	33.5	=	34.1	(5)
*JU 126 (d)	46.9		39.3	=	37.1	=	41.1	(1)
Raj 1555 (d) (check)	42.5		37.6		34.1		38.1	(4)
WH 147 (check)	40.9		40.4		37.1		39.5	(2)
D x V	N.S.		5.85		5.45			

Table -5 (d) Comparative performance of wheat varieties tested for late sowing

Varieties	Locations			Mean
	Udaipur	Powerkheda	Junagarh	
Lok-4	42.5	36.6 =	36.7 =	38.6 (4)
*HI 968	45.1	35.2 =	37.5 =	39.3 (2)
HD 2270	43.5	33.1 -	39.9 =	38.8 (3)
Lok-1 (check)	48.4	39.3	37.3	41.7 (1)
D x V	N.S.	5.85	5.45	

Table -5 (e) Adaptability of varieties (tested for late sowing) to timely sown conditions.

Varieties	Locations			Mean
	Udaipur	Powerkheda	Junagarh	
Lok-4	48.1	37.3 =	30.6 =	38.7 (4)
*HI 968	47.7	35.2 -	36.0 =	39,6 (2)
HD 2270	50.4	34.5 -	32.9 =	39.3 (3)
Lok-1 (check)	54.6	39.0	32.6	42.1 (1)
D x V	N.S.	5.85	5.45	

Table -6 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Akola	Niphad	Dharwar	Parbhani	Pune	Hebbal	Mean	
NI 8188	23.1 =	31.1	29.8	31.9 =	30.6 -	33.1 -	29.9	(7)
*NI 8272	27.8 =	35.4	34.9	37.4 +	36.0 -	31.6 -	33.9	(2)
NI 8306	26.2 =	33.3	33.5	32.7 =	32.0 -	33.1 -	31.8	(6)
NI 8414	27.7 =	34.1	33.3	32.6 =	34.2 -	34.4 -	32.7	(4)
NI 8611	27.3 =	32.8	37.6	27.8 -	36.1 -	31.3 -	32.2	(5)
MACS 1992 (d)	23.4 =	32.5	29.0	27.8	30.8 =	-	28.7	(9)
*APAU 1577	-	35.9	30.9	-	-	36.8 =	34.5	(1)
NI 5439 (check)	27.0	31.2	-	32.6	36.7	36.9	32.9	(3)
HD 4502 (d) (check)	25.7	32.1	-	-	29.9	-	29.2	(8)
D x V	5.77	N.S.	4.69	3.99	0.37	0.11		

Table -6 (b) Performance of varieties (tested for normal sowing) in comparison to HD 4502 (check) under early sowing.

Varieties	Locations							
	Akola	Niphad	Dharwar	Parbhani	Pune	Hebbal	Mean	
NI 8188	24.1 -	37.4	28.5	31.8 =	27.4 -	24.8 -	29.0	(7)
*NI 8272	23.2 -	40.9	28.9	31.6 =	30.4 -	25.3 -	30.1	(6)
NI 8306	21.0 -	40.4	34.0	25.4 -	35.5 -	29.7 +	31.0	(5)
NI 8414	30.4 =	33.2	32.7	30.8 =	32.4 -	28.4 +	31.3	(4)
NI 8611	31.7 =	36.5	35.9	38.0 +	37.0 +	30.0 +	34.9	(2)
MACS 1992 (d)	17.8 =	36.3	25.8	23.9 -	23.8 -	-	25.5	(9)
*APAU 1577	-	36.2	36.6	-	-	32.3 +	35.0	(1)
NI 5439 (check)	35.3	36.3	-	32.8	35.8	26.9	33.4	(3)
HD 4502 (d) (check)	18.0	32.0	-	-	28.4	-	26.1	(8)
D x V	5.77	NS.	4.69	3.99	0.37	0.11		

Table 6 (c) : Performance of varieties tested for (normal sowing) in comparison to NI 5439 & HD 4502 (d) (CHeck) under late sowing varieties.

Varieties	Locations							
	Akola	Niphad	Dharwar	Parbhani	Pune	Hebbal	Mean	
NI 8188	24.9 =	35.7	32.0 =	30.3 =	30.7 +	25.3 -	29.8	(1)
*NI 8272	23.3 =	32.4	31.3 =	28.5 =	31.4 +	21.4 -	28.1	(3)
NI 8306	22.7 =	34.1	29.8 =	30.5 =	36.2 +	17.5 -	28.5	(2)
NI 8414	21.7 =	30.0	32.4 =	29.3 =	26.1 +	20.3 -	26.6	(5)
NI 8611	20.0 =	34.9	28.5 =	27.0 =	23.5 +	19.8 -	25.6	(7)
MACS 1992 (d)	21.1 =	30.5	26.1 =	16.5 -	25.2 -	-	23.9	(9)
*APAU 1577	-	34.7	28.1	-	-	20,6 -	27.8	(4)
NI 5439 (check)	19.6	31.7	-	28.8	20.2	26.4	25.3	(8)
HD 4502 (d) (check)	23.5	30.0	-	-	25.6	-	26.4	(6)
D x V	5.77	N.S.	4.69	3.99	0.37	0.11		

Table 6 (d) Comparative performance of wheat varieties tested for late sowing.

Varieties	Locations							
	Akola	Niphad	Dharwar	Parbhani	Pune	Hebbal	Mean	
NI 8289	19.1 -	31.9	-	-	31.9 -	19.8 -	25.7	(9)
NI 8303	19.3 -	28.4	-	30.2	35.6 +	18.8 -	26.5	(7)
NI 8453	19.1 -	33.3	-	23.7	30.3 -	-	26.6	(6)
DWR 39	16.4 -	33.8	34.8	-	27.7 -	21.4 +	26.8	(5)
HI 934	18.9 -	26.2	28.2	27.6	31.7 -	-	26.5	(8)
*HI 977	22.4 =	28.9	33.0	26.9	31.6 -	-	28.6	(2)
HD 2270	20.0 -	30.8	31.8	-	29.3 -	-	28.0	(4)
HD 2376	24.0 =	34.0	28.1	-	33.1 =	-	29.8	(1)
HD 2189 (Check)	27.6	33.5	-	-	32.9	20.1	28.5	(3)
D x V	5.77	N.S.	4.69	3.99	0.37	0.11		

Table - 6 (e) Adaptability of varieties (tested for late sowing) to timely sown conditions

Varieties	Locations						
	Akola	Niphad	Dharwar	Parbhani	Pune	Hebbal	Mean
NI 8289	22.0 =	32.2	-	-	33.1 -	30.0 -	29.3 (7)
NI 8303	30.0 =	34.9	-	36.5	35.0 -	33.1 -	33.9 (2)
NI 8453	23.2 =	28.7	-	32.6	30.5 -	---	28.8 (8)
DWR 39	25.3 =	31.0	28.9	-	34.7 -	37.0 +	31.4 (4)
HI 934	28.2 =	27.6	30.7	33.5	34.2 -	-	30.8 (5)
*HI 977	27.8 =	34.3	35.4	37.4	37.0 +	-	34.4 (1)
HD 2270	22.6 =	30.6	29.6	-	35.0 -	-	29.5 (6)
HD 2376	18.9 -	31.7	26.7	-	32.3 -	-	27.4 (9)
HD 2189 (Check)	25.4	34.6	-	-	35.4	34.7	32.5 (3)
D x V	5.77	N.S.	4.69	3.99	0.37	0.11	

Northern Hill Zone

Table -7 (a) Comparative performance of wheat varieties tested for normal sowing

Varieties	Locations			Mean
	Almora	Palampur		
*CPAN 1922	39.3	21.7	=	30.5 (2)
UP 1089	-	26.8	=	26.8 (3)
HS 86 (check)	39.5	25.3		32.4 (1)
D x V	N.S.	3.97		

Table -7 (b) Performance of varieties (tested for normal sowing) in comparison to HS 86 (check) under early sowing.

Varieties	Locations			Mean
	Almora	Palampur		
UP 1089	-	29.3	=	29.3 (3)
*CPAN 1922	41.9	25.8	=	33.9 (2)
HS 86 (check)	44.3	25.4		34.9 (1)
D x V	N.S.	3.97		

Table 7 (c) Performance of varieties tested for (normal sowing) in comparison to HS 86 (check) under late sowing.

Varieties	Locations			Mean
	Almora	Palampur		
UP 1089	-	16.9	=	16.9 (3)
*CPAN 1922	39.3	17.7	=	28.5 (2)
HS 86 (Check)	44.6	19.3		32.0 (1)
D x V	NS.	3.97		

South Eastern Zone

Table -8 (a) Comparative performance of wheat varieties tested for late sowing.

Varieties	Location Chiplima
JWJ 78-2	19.7 +
HI 1048	11.0 =
Lok-1 (check)	11.7
D x V	2.87

Table -8 (b) Adaptability of varieties (tested for late sowing) to timely sown condition

Varieties	Location Chimplima
JWJ 78-2	12.4 =
HI 1048	15.2 =
Lok-1 (Check)	14.5
D x V	2.87

Experiment No: 2 Assessment of new wheat varieties for their adaptability under varying irrigation supply conditions.

Northern Plain Zone

Table 1 (a) Performance of new wheat varieties in comparison to check (WL 711) under normal sown adequately irrigated conditions.

Locations	Varieties				
	HD 2379+	Raj 2525*	Raj 2560	WL 711(Check)	I X V
New Delhi	39.8 =	43.6 +	37.9 =	39.4	3.43
Ludhiana	44.2	40.0	47.6	41.8	N.S.
Pantnagar	39.4	40.6	42.4	37.6	N.S.
Mathura	57.8	51.1	51.8	56.6	N.S.
Meerut	40.7	44.2	40.0	39.3	N.S.
Agra	49.1	-	38.7	55.3	N.S.
Mean	45.2 (1)	43.9 (3)	43.1 (4)	45.0 (2)	

Table 1 (b) Relative performance of new wheat varieties in comparison to check (WL 711) under limited (one)Irrigation

Locations	Varieties				
	HD 2379+	Raj 2525*	Raj 2560	WL 711 (Check)	I X V
New Delhi	26.3 -	32.9 =	26.9 -	33.1	3.43
Ludhiana	32.1	32.4	34.5	34.2	N.S.
Pantnagar	36.5	37.9	38.5	41.7	N.S.
Mathura	32.4	34.5	31.1	34.6	N.S.
Meerut	34.5	36.6	34.5	35.2	N.S.
Agra	36.2	-	35.6	31.1	N.S.
Mean	33.0 (4)	34.9 (2)	33.5 (3)	35.0 (1)	

Table 1 (c) Relative performance of new wheat varieties in comparison to check (WL 711) under two irrigations.

Locations	Varieties				
	HD 2379+	Raj 2525*	Raj 2560	WL 711 (Check)	I X V
New Delhi	29.2 =	34.9 +	27.2 -	31.0	3.43
Ludhiana	35.5	33.8	34.8	34.5	N.S.
Pantnagar	39.9	40.1	40.3	40.8	N.S.
Mathura	37.3	38.6	40.0	42.0	N.S.
Meerut	35.2	36.6	35.9	35.9	N.S.
Agra	37.7	-	36.2	38.1	N.S.
Mean	35.8 (3)	36.8 (2)	35.7 (4)	37.1 (1)	

North E
North Western Plain Zone

Table 2 (a) Performance of new wheat varieties in comparison to check (Raj 1972) under normal sown adequately irrigated conditions.

Varieties	Locations		Mean	
	Hissar	Vijapur		
*VW 115	26.7	44.0	35.4	(3)
*WH 367	41.3	37.9	39.6	(1)
WH 369	21.2	44.6	32.9	(6)
Raj 2535	24.7	42.9	33.8	(5)
Raj 2560	15.5	40.2	27.9	(7)
+Raj 2619	30.6	43.5	37.1	(2)
Raj 1972 (Check)	25.7	44.0	34.9	(4)
I X V	N.S.	N.S.		

Table 2 (b) Relative performance of new wheat varieties in comparison to check (Raj 1972) under limited (one) irrigation

Varieties	Locations		Mean	
	Hissar	Vijapur		
*VW 115	26.4	27.0	26.7	(1)
*WH 367	33.7	18.7	26.2	(2)
WH 369	17.7	32.4	25.1	(3)
Raj 2535	24.0	23.0	23.5	(6)
Raj 2560	13.9	23.6	18.8	(7)
+Raj 2619	20.5	27.0	23.8	(5)
Raj 1972 (Check)	23.5	24.9	24.2	(4)
I X V	N.S.	N.S.		

Table 2 (c) Relative performance of new wheat varieties in comparison to check (Raj 1972) under two irrigations.

Varieties	Locations		Mean	
	Hissar	Vijapur		
*VW 115	24.7	34.3	29.5	(3)
*WH 367	34.0	34.4	34.2	(1)
WH 369	26.0	35.4	30.7	(2)
Raj 2535	19.8	35.1	27.5	(6)
Raj 2560	15.6	28.0	21.8	(7)
Raj 1972 (Check)	21.2	34.8	28.0	(4)
+Raj 2619	25.3	30.4	27.9	(5)
I X V	N.S.	N.S.		

North Eastern Plain Zone

Table 3 (a) Performance of new wheat varieties in comparison to check (HUW 206) under normal sown adequately irrigated condition.

Varieties	Locations				
	Kanpur	Varanasi	Pusa (RAU)	Sabour	Mean
K 8103	21.4	37.4 -	46.2 =	20.7	31.4 (9)
K 8110	20.7	39.5 -	51.8 =	20.0	33.0 (6)
+HUW 219	22.4	44.3 =	44.2 =	23.5	33.6 (4)
HUW 220	22.1	37.4 -	39.0 -	20.4	29.7 (10)
HUW 221	17.6	38.3 -	52.8 =	25.9	33.7 (2)
HUW 225	17.9	36.6 -	51.1 =	22.1	31.9 (7)
HP 1515	16.6	38.3 -	52.4 =	19.7	31.7 (8)
*HP 1518	19.7	39.3 -	54.2 =	26.9	35.0 (1)
*BR 326	20.7	38.1 -	53.1 =	22.8	33.7 (3)
HUW 206 (Check)	22.8	44.5	49.3	16.9	33.4 (5)
I X V	N.S.	3.40	6.57	N.S.	

Table 3 (b) Relative performance of new wheat varieties in comparison to check (HUW 206) under limited (one) irrigation.

Varieties	Locations				
	Kanpur	Varanasi	Pusa (RAU)	Sabour	Mean
K 8103	19.3	32.3 -	33.5 =	16.9	25.5 (9)
K 8110	21.7	35.0 =	40.0 =	16.9	28.4 (2)
+HUW 219	19.7	37.8 =	37.6 =	19.7	28.7 (1)
HUW 220	21.4	27.6 -	36.6 =	15.5	25.3 (10)
+HUW 221	19.0	27.3 -	39.7 =	22.1	27.0 (7)
HUW 225	20.7	25.3 -	44.9 +	19.0	27.6 (5)
HP 1515	21.7	28.7 -	38.3 =	14.5	25.8 (8)
*HP 1518	17.6	32.1 =	40.4 =	21.4	27.9 (3)
*BR 326	19.7	30.7 -	43.5 +	17.6	27.9 (4)
HUW 206 (Check)	22.8	36.4	35.2	13.5	27.2 (6)
I X V	N.S.	3.40	6.57	N.S.	

North Eastern Plain Zone

Table 3 (c) Relative performance of new wheat varieties in comparison to check (HUW 206) under two irrigation condition.

Varieties	Locations				
	Kanpur	Varanasi	Pusa (RAU)	Sabour	Mean
K 8103	17.9	32.3 -	43.5 =	19.0	28.2 (9)
K 8110	22.1	36.5 =	41.8 =	18.6	29.8 (6)
+HUW 219	21.4	38.3 =	38.0 =	22.7	30.1 (4)
HUW 220	18.3	34.8 -	36.6 -	18.3	27.0 (10)
+HUW 221	20.7	33.9 -	44.9 -	23.8	30.8 (1)
HUW 225	20.0	30.8 -	41.8 =	20.7	28.3 (8)
HP 1515	19.7	32.5 -	47.3 =	17.9	29.3 (7)
*HP 1518	21.1	34.6 -	44.5 =	23.1	30.8 (2)
*BR 326	17.3	36.9 =	47.6 =	20.7	30.6 (3)
HUW 206 (Check)	22.1	39.8	43.1	15.2	30.1 (5)
I X V	N.S.	3.40	6.57	N.S.	

Far Eastern Plain Zone

Table 4 (a) Performance of new wheat varieties in comparison to check (Sonalika) under normal sown adequately irrigated condition.

Varieties	Locations				
	Kalyani	Burdwan	Shillongoni	Ranchi	Mean
BR 2061	-	-	21.5 -	26.8 -	24.2 (10)
BR 2074	-	-	21.3 -	31.5 =	26.4 (8)
BW 11	32.9	37.5	-	-	35.2 (1)
BW 158	30.5	34.2	-	-	32.4 (4)
BW 161	-	26.7	-	22.5 -	24.6 (9)
*BW 182	33.3	40.4	-	28.0 -	33.9 (2)
+HI 968	32.9	35.7	28.1 =	30.3 -	31.8 (5)
+HD 2367	35.1	37.8	31.1 +	30.9 =	33.7 (3)
MG 104-4	30.0	-	26.1 =	28.2 -	28.1 (7)
Sonalika (Check)	27.8	37.3	26.5	32.9	31.1 (6)
I X V	N.S.	N.S.	4.53	2.25	

Table 4 (b) Relative performance of new wheat varieties in comparison to check (Sonalika) under limited (once) irrigation.

Varieties	Locations				
	Kalyani	Burdwan	Shillongoni	Ranchi	Mean
BR 2061	-	-	28.6 =	16.9 =	22.8 (4)
BR 2074	-	-	22.7 =	20.5 =	21.6 (7)
BW 11	15.9	24.9	-	-	20.4 (9)
BW 158	18.5	22.8	-	-	20.7 (8)
BW 161	-	11.1	-	12.3 -	11.7 (10)
*BW 182	30.4 =	24.3	-	15.9 -	23.5 (3)
+HI 968	40.5	26.4	19.1 -	19.6 =	26.4 (1)
+HD 2367	22.8	19.7	23.9 =	24.9 +	22.8 (5)
MG 104-4	36.5	-	20.2 =	16.2 -	24.3 (2)
Sonalika (Check)	19.8	25.9	24.7	18.7	22.3 (6)
I X V	N.S.	N.S.	4.53	2.25	

Table 4 (c) Relative performance of new wheat varieties in comparison to check (Sonalika) under two irrigation condition .

Varieties	Locations				
	Kalyani	Burdwan	Shillongoni	Ranchi	Mean
BR 2061	-	-	25.3 -	23.1 =	24.2 (9)
BR 2074	-	-	21.6 -	27.3 +	24.5 (8)
BW 11	36.5	32.1	-	-	34.3 (1)
BW 158	31.1	31.6	-	-	31.4 (3)
BW 161	-	14.5	-	18.8 -	16.7 (10)
*BW 182	34.8	33.1	-	24.6 =	30.8 (4)
+HI 968	25.7	34.2	26.7 =	27.3 +	28.5 (6)
+HD 2367	25.7	33.1	25.9 =	24.4 =	27.3 (7)
MG 104-4	37.6	-	31.4 =	25.6 =	31.5 (2)
Sonalika (Check)	38.0	30.5	27.1	23.7	29.8 (5)
I x V	N.S.	N.S.	4.53	2.25	

Central Zone

Table 5 (a) Performance of new wheat varieties in comparison to check (Raj 1555 & WH 147) under normal sown adequately irrigated conditions.

Varieties	Locations			
	Udaipur	Powerkheda	Mean	
*Raj 6070 (d)	47.7 =	36.6	42.2	(1)
J 411	38.4 =	34.4	36.4	(4)
JU 126 (d)	37.1 -	33.5	35.3	(5)
Raj 1555 (d) (Check)	46.9	37.3	42.1	(2)
WH 147 (Check)	44.2	38.7	41.5	(3)
I X V	4.14	N.S.		

Table 5 (b) Relative performance of new wheat varieties in comparison to check (WH 147 & Raj 1555) under limited (one) irrigation.

Varieties	Locations			
	Udaipur	Powerkheda	Mean	
*Raj 6070 (d)	20.4 =	24.0	22.2	(5)
J 411	19.4 =	29.0	24.2	(1)
JU 126 (d)	19.7 =	27.3	23.5	(3)
Raj 1555 (d) (Check)	21.9	25.9	23.9	(2)
WH 147 (Check)	18.8	27.3	23.1	(4)
I X V	4.14	N.S.		

Table 5 (c) Relative performance of new wheat varieties in comparison to check (WH 147 & Raj 1555) under two irrigation conditions.

Varieties	Locations			
	Udaipur	Powerkheda	Mean	
*Raj 6070 (d)	39.3 =	28.8	34.1	(2)
J 411	31.9 =	29.6	30.8	(4)
JU 126 (d)	30.6 -	29.6	30.1	(5)
Raj 1555 (d) (Check)	39.5	30.0	34.8	(1)
WH 147 (Check)	33.1	28.6	30.9	(3)
I X V	4.14	N.S.		

PENINSULAR ZONE

Table 6 (a) Performance of new wheat varieties in comparison to check (NI 5439 & HD 4502) under normal sown adequately irrigated conditions.

Varieties	Locations					Mean
	Akola	Niphad	Dharwar	Parbhani	Pune	
NI 8188	27.2	33.2	34.8	28.6	23.2 -	29.4 (5)
*NI 8272	37.5	37.3	31.3	37.4	28.2 -	34.3 (3)
NI 8306	32.1	32.3	34.5	28.0	19.5 -	29.3 (6)
NI 8414	40.6	33.2	35.3	37.9	24.7 -	34.3 (4)
*NI 8611	35.3	35.5	36.0	39.0	32.4 +	35.6 (1)
MACS 1992(d)	22.2	28.4	23.6	23.1	27.2 -	24.9 (9)
APAU 1577	-	35.3	16.6	-	-	35.2 (2)
NI 5439 (Check)	33.6	30.2	-	30.3	28.6	28.2 (7)
Check HD 4502(d)	23.9	30.8	-	-	25.4	26.7 (8)
I X V	N.S.	N.S.	N.S.	N.S.	0.34	

Table 6 (b) Relative performance of new wheat varieties in comparison to check (NI 5439 & HD 4502) under limited (one) irrigation.

Varieties	Locations					Mean
	Akola	Niphad	Dharwar	Parbhani	Pune	
NI 8188	17.2	21.6	6.6	19.4	19.5 -	16.9 (5)
*NI 8272	23.5	20.4	4.3	20.2	18.0 -	17.3 (3)
NI 8306	19.5	18.5	6.3	23.7	18.7 -	17.3 (4)
NI 8414	17.4	18.6	5.5	19.8	17.9 -	15.8 (7)
*NI 8611	24.0	18.3	7.9	21.0	22.2 -	18.7 (2)
MACS 1992(d)	14.6	15.6	3.4	17.3	15.2 -	13.2 (8)
APAU 1577	-	17.3	4.2	-	-	19.8 (9)
NI 5439 (Check)	23.5	19.9	-	16.6	23.0	20.8 (1)
HD 4502(d) (Check)	11.7	16.5	-	-	20.0	16.1 (6)
I X V	N.S.	N.S.	N.S.	N.S.	0.34	

Table 6 (c) Relative performance of new wheat varieties in comparison to check (HD 4502 &NI 5439) under two irrigations condition.

Varieties	Locations					Mean
	Akola	Niphad	Dharwar	Parbhani	Pune	
NI 8188	18.6	28.0	19.5	21.0	27.7 +	23.0 (5)
*NI 8272	22.8	30.3	15.1	30.6	24.5 +	24.7 (3)
NI 8306	22.7	29.6	18.4	23.6	21.7 -	24.2 (4)
NI 8414	25.4	26.5	15.1	24.0	23.2 +	22.8 (7)
*NI 8611	28.3	28.3	14.0	26.6	29.8 +	25.4 (2)
APAU 1577	-	29.4	16.6	-	-	23.0 (6)
MACS 1992(d)	14.2	23.7	13.6	19.0	21.8 +	18.5 (9)
NI 5439 (Check)	27.2	30.1	-	27.9	22.5	26.9 (1)
HD 4502 (d) (Check)	18.5	24.3	-	-	19.1	20.6 (8)
I X V	N.S.	N.S.	N.S.	N.S.	0.34	

Experiment No. 5 Assesment of new wheat varieties for their adaptability to different sowing dates under rainfed conditions.

Northern Plain Zone

Table -1 (a) Relative performance of new wheat varieties in comparison to check (C 306) under timely sown rainfed condition.

Varieties	Gurdaspur
BH 4395	17.8 -
+HP 174	21.4 =
PBW 65	21.1 =
*PBW 102	21.7 =
C 306 (Check)	22.7
D x V	2.74

Table 1 (b) Adaptability of varieties (tested for normal sowing) to early sown condition.

Varieties	Gurdaspur
BH 4395	12.5 -
+HP 174	15.2 -
PBW 65	14.8 -
*PBW 102	16.5 -
C 306 (Check)	18.1
D x V	2.74

Table 1 (c) Adaptability of varieties (tested for normal sowing) to late sown condition

Varieties	Gurdaspur
BH 4395	22.4 -
+HP 174	25.4 =
PBW 65	20.8 -
*PBW 102	26.7 =
C 306 (Check)	25.4
D x V	2.74

Table 6 (c) Relative performance of new wheat varieties in comparison to check (HD 4502 &NI 5439) under two irrigations condition.

Varieties	Locations					Mean
	Akola	Niphad	Dharwar	Parbhani	Pune	
NI 8188	18.6	28.0	19.5	21.0	27.7 +	23.0 (5)
*NI 8272	22.8	30.3	15.1	30.6	24.5 +	24.7 (3)
NI 8306	22.7	29.6	18.4	23.6	21.7 -	24.2 (4)
NI 8414	25.4	26.5	15.1	24.0	23.2 +	22.8 (7)
*NI 8611	28.3	28.3	14.0	26.6	29.8 +	25.4 (2)
APAU 1577	-	29.4	16.6	-	-	23.0 (6)
MACS 1992(d)	14.2	23.7	13.6	19.0	21.8 +	18.5 (9)
NI 5439 (Check)	27.2	30.1	-	27.9	22.5	26.9 (1)
HD 4502 (d) (Check)	18.5	24.3	-	-	19.1	20.6 (8)
I X V	N.S.	N.S.	N.S.	N.S.	0.34	

Experiment No. 5 Assesment of new wheat varieties for their adaptability to different sowing dates under rainfed conditions.

Northern Plain Zone

Table -1 (a) Relative performance of new wheat varieties in comparison to check (C 306) under timely sown rainfed condition.

Varieties	Gurdaspur	
BH 4395	17.8	-
+HP 174	21.4	=
PBW 65	21.1	=
*PBW 102	21.7	=
C 306 (Check)	22.7	
D x V	2.74	

Table 1 (b) Adaptability of varieties (tested for normal sowing) to early sown condition.

Varieties	Gurdaspur	
BH 4395	12.5	-
+HP 174	15.2	-
PBW 65	14.8	-
*PBW 102	16.5	-
C 306 (Check)	18.1	
D x V	2.74	

Table 1 (c) Adaptability of varieties (tested for normal sowing) to late sown condition

Varieties	Gurdaspur	
BH 4395	22.4	-
+HP 174	25.4	=
PBW 65	20.8	-
*PBW 102	26.7	=
C 306 (Check)	25.4	
D x V	2.74	

North Eastern Plain Zone

Table 2 (a) Relative performance of new wheat varieties in comparison to check (C 306) under timely sown rainfed condition

Varieties	Pusa (RAU)	
*K 8027	21.0	+
*K 8121	21.0	+
K 8122	15.2	-
K 8128	15.9	=
C 306 (Check)	17.9	
D x V	2.59	

Table 2 (b) Adaptability of varieties (tested for normal sowing) to early sown condition.

Varieties	Pusa (RAU)	
*K 8027	15.5	+
*K 8121	14.5	=
K 8122	12.4	=
K 8128	16.9	+
C 306 (Check)	12.1	
D x V	2.59	

Table 2 (c) Adaptability of varieties (tested for normal sowing) to late sown conditions

Varieties	Pusa (RAU)	
*K 8027	24.8	=
*K 8121	25.5	=
K 8122	20.4	-
K 8128	23.8	=
C 306 (Check)	24.8	
D x V	2.59	

Peninsular Zone

Table 3 (a) Relative performance of new wheat varieties in comparison to check (NI 5439 & B. Yellow (d) under timely sown rainfed condition

Varieties	Locations Akola	Dharwar	Pune	Mean	
*PBN 22-28	14.0	10.0	17.2 +	13.7	(4)
*MACS 1967 (d)	13.0	12.6	18.6 +	14.7	(2)
MACS 1972 (d)	10.3	11.2	17.1 -	12.9	(6)
DWR 59	-	11.7	-	11.7	(7)
DWR 69	-	-	18.1 +	18.1	(1)
NI 5439 (Check)	14.1	12.0	15.0	13.7	(5)
B. yellow (d) (Check)	14.7	10.6	18.0	14.4	(3)
D x V	N.S.	N.S.	0.23		

Table 3(b) Adaptability of varieties (tested for normal sowing) to early sown condition

Varieties	Locations Akola	Dharwar	Pune	Mean	
*PBN 22-28	17.9	10.4	19.3 -	15.9	(2)
*MACS 1967 (d)	11.9	8.7	12.4 -	11.0	(5)
MACS 1972 (d)	8.9	10.7	9.9 -	9.8	(7)
DWR 59	-	10.0	-	10.0	(6)
DWR 69	-	-	17.1 -	17.1	(1)
NI 5439 (Check)	17.3	10.7	19.8	15.9	(3)
B. yellow (d) (Check)	13.8	10.0	13.4	12.4	(4)
D x V	N.S.	N.S.	0.23		

Table3 (c) Adaptability of varieties (tested for normal sowing) to late sown condition

Varieties	Locations Akola	Dharwar	Pune	Mean	
*PBN 22-28	10.4	8.0	18.6 +	12.3	(5)
*MACS 1967 (d)	7.6	11.0	18.7 -	12.4	(4)
MACS 1972 (d)	7.4	10.4	17.8 -	11.9	(6)
DSR 59	-	10.8	-	10.8	(7)
DWR 69	-	-	21.8 +	21.8	(1)
NI 5439 (Check)	10.4	10.4	17.9	12.9	(3)
B. yellow (d) (Check)	10.5	9.4	20.7	13.5	(2)
D x V	N.S.	N.S.	0.23		

Northern Hill Zone

Table 4 (a) Relative performance of new wheat varieties in comparison to check (HB 208) under timely sown rainfed condition.

Varieties	Locations			Mean	
	Almora	Palampur	Bhowali		
UP 1089	-	6.6 =	26.6 -	16.6	(3)
*CPAN 1922	14.4	8.6 =	39.6 +	20.9	(1)
HB 208 (Check)	15.8	11.6	35.3	20.9	(2)
D x V	N.S.	6.25	2.89		

Table 4 (b) Adaptability of varieties (tested for normal sowing) to early sown condition

Varieties	Locations			Mean	
	Almora	Palampur	Bhowali		
UP 1089	-	18.4 =	30.4 =	24.4	(1)
*CPAN 1922	12.4	20.5 =	33.1 +	22.0	(2)
HB 208 (Check)	12.5	17.1	30.2	19.9	(3)
D x V	N.S.	6.25	2.89		

Table 4 (c) Adaptability of varieties (tested for normal sowing) to late sown condition

Varieties	Location			Mean	
	Almora	Palampur	Bhowali		
UP 1089	-	4.1 =	25.1 -	14.6	(3)
*CPAN 1922	13.6	7.9 =	33.3 =	18.3	(1)
HB 208 (Check)	13.6	4.2	33.1	17.0	(2)
D x V	N.S.	6.25	2.89		

Table 4 (d) Relative performance of varieties tested for early sowing in comparison to check (VL 401) under early sown condition.

Varieties	Locations			
	Almora	Palampur	Bhowali	Mean
*VL 612	-	24.6 =	28.7 -	26.7 (2)
VL 614	14.8	19.8 =	26.1 -	20.2 (5)
+VL 616	15.2	20.7 =	30.9 -	22.3 (3)
*HS 172	-	29.8 +	30.7 -	30.3 (1)
VL 401 (Check)	13.4	18.9	34.3	22.2 (4)
D x V	N.S.	6.25	2.89	

Table 4 (e) Relative performance of varieties (tested for late sowing) in comparison to check (VL 401) under timely sown condition

Varieties	Locations			
	Almora	Palampur	Bhowali	Mean
*VL 612	-	15.6 =	27.1 -	21.4 (1)
VL 614	15.6	11.1 =	29.5 -	18.7 (5)
+VL 616	15.6	15.2 =	29.0 -	19.9 (4)
*HS 172	-	13.5 =	29.0 -	21.3 (2)
VL 401 (Check)	14.8	11.5	33.8	20.0 (3)
D X V	N.S.	6.25	2.89	

ZONAL PERFORMANCE OF IInd YEAR URT WHEAT VARIETIES UNDER DIFFERENT AGRONOMIC CONDITIONS.

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of Sowing (Irrigated)

Grain yield q/ha.

VARIETIES		Time of Sowing Early (5)*	Normal (7)*	Late (7)*	MEAN	@MEAN
HD 2379	T.S.	40.1 (10)	49.0 (3)	31.6 (14)	40.2 (11)	
*Raj 2525	T.S.	39.5 (12)	48.7 (4)	38.9 (1)	42.4 (3)	
Raj 2560	T.S.	39.0 (15)	47.3 (8)	34.2 (9)	40.2 (12)	
PBW 94	L.S.	48.5 (1)	47.5 (6)	35.7 (5)	43.9 (2)	41.6(
*PBW 95	L.S.	40.8 (7)	46.1 (12)	36.4 (3)	41.1 (7)	41.3(
pBW 96	L.S.	40.9 (6)	43.7 (16)	33.5 (11)	39.4 (14)	38.6(
HD 2270	L.S.	40.1 (11)	44.2 (15)	37.2 (2)	40.5 (9)	40.7(
HD 2347	L.S.	39.5 (13)	46.9 (10)	36.3 (4)	40.9 (8)	41.6(
HD 2374	L.S.	41.9 (4)	47.4 (7)	34.8 (8)	41.4 (6)	41.1(
*HD 2382	L.S.	41.9 (5)	49.7 (2)	35.4 (7)	42.3 (4)	42.6(
K 8152	L.S.	39.3 (14)	46.0 (13)	30.9 (15)	38.7 (15)	38.5(
Raj 2593	L.S.	40.7 (8)	47.2 (9)	33.7 (10)	40.5 (10)	40.5(
WH 385	L.S.	37.3 (16)	45.2 (14)	29.4 (16)	37.3 (16)	37.3(
WL 711 (check)		45.5 (3)	48.5 (5)	32.5 (13)	42.2 (5)	
HD 2329		46.5 (2)	50.7 (1)	35.6 (6)	44.3 (1)	
HD 2285(check)		40.4 (9)	46.9 (11)	33.3 (12)	40.2 (13)	40.1(

* Denotes better performance and adaptability of the variety

( )* Average over No. of station

( ) Denotes ranking

T.S. Timely sown

L.S. Late sown

@Mean Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

NORTHERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of Sowing (Irrigated)

Grain yield q/ha.

VARIETIES		Time of Sowing Early (5)*	Normal (7)*	Late (7)*	MEAN	@MEAN
HD 2379	T.S.	40.1 (10)	49.0 (3)	31.6 (14)	40.2 (11)	
*Raj 2525	T.S.	39.5 (12)	48.7 (4)	38.9 (1)	42.4 (3)	
Raj 2560	T.S.	39.0 (15)	47.3 (8)	34.2 (9)	40.2 (12)	
PBW 94	L.S.	48.5 (1)	47.5 (6)	35.7 (5)	43.9 (2)	41.6(
*PBW 95	L.S.	40.8 (7)	46.1 (12)	36.4 (3)	41.1 (7)	41.3(
PBW 96	L.S.	40.9 (6)	43.7 (16)	33.5 (11)	39.4 (14)	38.6(
HD 2270	L.S.	40.1 (11)	44.2 (15)	37.2 (2)	40.5 (9)	40.7(
HD 2347	L.S.	39.5 (13)	46.9 (10)	36.3 (4)	40.9 (8)	41.6(
HD 2374	L.S.	41.9 (4)	47.4 (7)	34.8 (8)	41.4 (6)	41.1(
*HD 2382	L.S.	41.9 (5)	49.7 (2)	35.4 (7)	42.3 (4)	42.6(
K 8152	L.S.	39.3 (14)	46.0 (13)	30.9 (15)	38.7 (15)	38.5(
Raj 2593	L.S.	40.7 (8)	47.2 (9)	33.7 (10)	40.5 (10)	40.5(
WH 385	L.S.	37.3 (16)	45.2 (14)	29.4 (16)	37.3 (16)	37.3(
WL 711 (check)		45.5 (3)	48.5 (5)	32.5 (13)	42.2 (5)	
HD 2329		46.5 (2)	50.7 (1)	35.6 (6)	44.3 (1)	
HD 2285(check)		40.4 (9)	46.9 (11)	33.3 (12)	40.2 (13)	40.1(

* Denotes better performance and adaptability of the variety

( )* Average over No. of station

( ) Denotes ranking

T.S. Timely sown

L.S. Late sown

@Mean Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

NORTH WESTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of sowing (Irrigated)

Grain yield q/ha.

VARIETIES		Time of sowing Early (3)*	Normal (3)*	Late (3)*	MEAN	@Mean
VW 115	T.S.	37.7 (12)	38.2 (10)	34.0 (4)	36.6 (11)	
*WH 367	T.S.	44.2 (1)	37.9 (11)	31.6 (11)	37.9 (4)	
WH 369	T.S.	38.9 (10)	38.9 (4)	35.5 (2)	37.8 (5)	
Raj 2535	T.S.	42.6 (2)	36.4 (13)	33.1 (7)	37.4 (7)	
Raj 2560	T.S.	41.7 (4)	38.9 (5)	31.5 (12)	37.4 (8)	
Raj 2619	T.S.	40.9 (7)	38.4 (9)	31.7 (10)	37.0 (10)	
VW 120	L.S.	41.3 (5)	43.3 (1)	32.1 (9)	38.9 (1)	37.7(2
*VW 121	L.S.	37.9 (11)	42.2 (2)	36.0 (1)	38.7 (2)	39.1(1
VW 122	L.S.	42.6 (3)	41.3 (3)	30.5 (13)	38.1 (3)	35.9(4
Raj 2545	L.S.	41.0 (6)	30.6 (15)	28.5 (15)	33.4 (15)	29.6(7
WH 374	L.S.	32.6 (15)	38.7 (8)	32.3 (8)	34.5 (12)	35.5(5
Raj 1555		39.6 (9)	38.8 (7)	34.8 (5)	37.7 (6)	
WH 283 (check)		36.4 (13)	36.0 (14)	30.4 (14)	34.3 (14)	
Sonalika		33.1 (14)	37.1 (12)	33.4 (6)	34.5 (13)	35.3(6
Raj 2184 (check)		39.7 (8)	38.9 (6)	33.7 (5)	37.4 (9)	36.3(3

* Denotes better performance and adaptiability of the variety.

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

L.S. Late sown.

@ Average over normal and late sowing

ACRONOMIC TRIAL NO: 1

NORTH EASTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of sowing (Irrigated)

Grain yield q/ha.

VARIETIES		Time of sowing Early (5)*	Normal (5)*	Late (5)*	MEAN	@Mean
K 8103	T.S.	30.8 (19)	33.8 (13)	28.9 (6)	31.2 (15)	
K 8110	T.S.	35.9 (7)	35.6 (10)	29.2 (5)	33.6 (7)	
HUW 219	T.S.	38.2 (4)	35.8 (9)	25.6 (18)	33.2 (9)	
HUW 220	T.S.	36.0 (6)	33.5 (15)	27.5 (11)	32.3 (11)	
*HUW 221	T.S.	36.2 (5)	38.6 (7)	30.6 (3)	35.1 (3)	
HUW 225	T.S.	32.3 (15)	34.0 (12)	27.6 (10)	31.3 (14)	
HP 1515	T.S.	34.6 (11)	40.6 (2)	30.0 (4)	35.1 (4)	
HP 1518	T.S.	38.7 (2)	43.2 (1)	32.9 (1)	38.3 (1)	
BR 326	T.S.	35.0 (9)	39.8 (4)	28.7 (7)	34.5 (6)	
K 8144	L.S.	35.5 (8)	33.1 (16)	27.0 (15)	31.9 (12)	30.1(5
K 8148	L.S.	27.4 (20)	31.4 (19)	27.4 (13)	28.7 (19)	29.4(7
HUW 229	L.S.	31.6 (17)	32.0 (18)	26.9 (16)	30.2 (17)	29.5(6
HUW 231	L.S.	33.0 (14)	32.5 (17)	25.1 (19)	30.2 (18)	28.8(8
HUW 233	L.S.	33.9 (12)	36.9 (8)	27.9 (9)	32.9 (10)	32.4(3
*HUW 234	L.S.	40.4 (1)	40.6 (3)	30.8 (2)	37.3 (2)	35.1(1
HP 1524	L.S.	32.2 (16)	34.7 (11)	28.5 (8)	31.8 (13)	31.6(4
UP 262	(Check)	33.3 (13)	33.7 (14)	26.5 (17)	31.2 (16)	
HUW 206		38.6 (3)	38.9 (6)	27.5 (12)	35.0 (5)	
Sonalika		31.5 (18)	30.2 (20)	24.3 (20)	28.7 (20)	
HUW 213	(Check)	34.7 (10)	39.1 (5)	27.1 (14)	33.6 (8)	33.1(2

* Denotes better performance and adaptability of the variety

( )* Average over No, of stations.

( ) Dentoes ranking

T.S. Timely sown

L.S. Late sown

@ Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

FAR EASTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of sowing (Irrigated)

yield q/ha.

VARIETIES		Time of sowing* Early (2)*	Normal (2)*	Late (2)*	MEAN	@MEAN
BR 2061	T.S.	31.7 (6)	23.5 (13)	18.7 (13)	24.6 (13)	
BR 2074	T.S.	36.8 (2)	31.9 (10)	29.5 (5)	32.7 (5)	
*BW 11 L.S.	T.S.	43.5 (1)	35.5 (5)	30.8 (4)	36.6 (2)	32.2 (3)
BW 158 L.S.	T.S.	27.2 (11)	27.7 (11)	31.7 (3)	28.9 (9)	29.7 (4)
BW 161	T.S.	-	-	-	-	
*BW 182 L.S.	T.S.	29.5 (9)	36.2 (4)	44.6 (1)	36.8 (1)	40.4 (1)
HI 968	T.S.	30.5 (8)	33.5 (8)	26.0 (7)	30.0 (8)	
HD 2367	T.S.	35.5 (3)	26.3 (12)	20.9 (11)	27.6 (12)	
MG 104-4	T.S.	33.9 (5)	34.9 (6)	31.9 (2)	33.6 (4)	
BW 148 L.S.	T.S.	-	-	-	-	
DL 220-2 L.S.	T.S.	28.0 (10)	33.3 (9)	21.8 (10)	27.7 (11)	27.6 (5)
HP 1498 L.S.	T.S.	25.9 (13)	20.4 (14)	18.4 (14)	21.6 (14)	19.4 (6)
Janak	T.S.	35.0 (4)	38.6 (3)	29.0 (6)	34.2 (3)	
UP 262	T.S.	31.0 (7)	34.6 (7)	19.0 (12)	28.2 (10)	
Sonalika (Check)	T.S.	27.1 (12)	39.0 (2)	26.0 (8)	30.7 (7)	32.5 (2)
HP 1209	T.S.	25.4 (14)	42.2 (11)	25.4 (9)	31.0 (6)	

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

L.S. Late sown

@ Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

CENTRAL ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of sowing (Irrigated)

Grain yield q/ha.

VARIETIES		Time of sowing Early (3)*	Normal (3)*	Late (3)*	MEAN	@Mean
Raj 6070 (d)	T.S.	32.3 (7)	43.6 (2)	39.2 (6)	38.4 (4)	
J 411	T.S.	33.9 (4)	41.6 (6)	34.1 (10)	36.5 (8)	
*JU 126 (d)	T.S.	37.6 (1)	43.3 (3)	41.1 (2)	40.7 (1)	
Lok-4	L.S.	30.9 (8)	38.7 (10)	38.6 (8)	36.1 (9)	38.7 (4)
*HI 968	L.S.	32.5 (6)	39.6 (8)	39.3 (5)	37.1 (6)	39.5 (2)
HD 2270	L.S.	27.4 (10)	39.3 (9)	38.8 (7)	35.2 (10)	39.1 (3)
Raj 1555 (d)		37.3 (2)	46.8 (1)	38.1 (9)	40.7 (2)	
WH 147 (check)		32.9 (5)	42.4 (4)	39.5 (4)	38.3 (5)	
J 405		30.1 (9)	40.9 (7)	40.2 (3)	37.1 (7)	
Lok-1 (check)		35.5 (3)	42.1 (5)	41.7 (1)	39.8 (3)	41.9 (1)

*	Denotes better performance and adaptability of the variety
( )*	Average over No. of stations.
( )	Denotes ranking
T.S.	Timely sown
L.S.	Late sown
@	Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

PENINSULAR ZONE 1983-84

ZONAL MEAN

Varieties x Dates of sowing (Irrigated)
Grain yield q/ha.

VARIETIES		Time of sowing Early (6)*	Normal (6)*	Late (6)*	MEAN	@
NI 8188	T.S	29.0 (12)	29.9 (12)	29.8 (1)	29.6 (11)	
*NI 8272	T.S	30.1 (10)	33.9 (3)	28.1 (7)	30.7 (4)	
NI 8306	T.S	31.0 (7)	31.8 (9)	28.5 (5)	30.4 (6)	
NI 8414	T.S	31.3 (6)	32.7 (6)	26.6 (11)	30.2 (8)	
NI 8611	T.S	34.9 (2)	32.2 (8)	25.6 (12)	30.9 (3)	
MACS 1992 (d)	T.S	25.5 (19)	28.7 (18)	23.9 (19)	26.0 (19)	
*APAU 1577	T.S	35.0 (1)	34.5 (1)	27.8 (9)	32.4 (1)	
NI 8289	L.S	27.7 (15)	29.3 (15)	25.7 (16)	27.6 (17)	27.5 (9)
NI 8303	L.S	30.7 (8)	33.9 (4)	26.5 (13)	30.4 (7)	30.2 (3)
NI 8453	L.S	30.6 (9)	28.8 (17)	26.6 (12)	28.7 (13)	27.7 (8)
DWR 39	L.S	32.5 (4)	31.4 (10)	2668 (10)	30.2 (9)	29.1 (4)
NI 934	L.S	28.5 (14)	30.8 (11)	26.5 (14)	28.6 (14)	28.7 (6)
*HI 977	L.S	31.9 (5)	34.4 (2)	28.6 (4)	31.6 (2)	31.5 (1)
HD 2270	L.S	26.7 (17)	29.5 (14)	28.0 (8)	28.1 (16)	28.8 (5)
HD 2376	L.S	28.6 (13)	27.4 (19)	29.8 (2)	28.6 (15)	28.6 (7)
NI 5439	L.S	33.4 (3)	32.9 (5)	25.3 (18)	30.5 (5)	29.1 ( )
HD 2189 (check)	L.S	26.8 (16)	24.5 (7)	28.5 (6)	29.3 (12)	30.5 (2)
HD 4502 (d)(check)	L.S	26.1 (18)	29.2 (16)	26.4 (15)	27.2 (18)	
Sonalika	L.S	30.1 (11)	29.9 (13)	29.3 (3)	29.8 (10)	
HD 2189	L.S	-	-	-	-	

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations.

T.S. Timely sown

L.S. Late sown

( ) Denotes ranking

@ Average over normal and late sowing

AGRONOMIC TRIAL NO: 1

NORTHERN HILL ZONE 1983-84

Z O N A L M E A N

Varieties x Dates of sowing (Irrigated)
Grain yield q/ha.

VARIETIES		Time of sowing			MEAN
		Early* (2)	Normal* (2)	Late* (2)	
UP 1089	N.S.	29.3 (5)	26.8 (4)	16.9 (5)	24.3 (5)
*CPAN 1922		33.9 (3)	30.5 (3)	28.5 (3)	31.0 (3)
VL 421		32.2 (4)	32.2 (2)	28.4 (4)	30.9 (4)
HS 86 (check)		34.9 (2)	32.4 (1)	32.0 (1)	33.1 (1)
HB 208		38.6 (1)	26.7 (5)	28.6 (2)	31.3 (2)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

LS. Late sown

AGRONOMIC TRIAL NO: 2

NORTHERN PLAIN ZONE 1983-84

ZONAL MEAN

Varieties x Irrigation

Grain yield q/ha.

VARIETIES	ONE IRR. (6)*	TWO IRR. (6)*	ADEQUATE (6)*	MEAN
+HD 2379)	33.0 (6)	35.8 (5)	45.2 (1)	38.0 (4)
*Raj 2525) T.S.	34.9 (3)	36.8 (3)	43.9 (4)	38.5 (3)
Raj 2560)	33.5 (5)	35.7 (6)	43.1 (6)	37.4 (6)
WL 711 (check)	35.0 (2)	37.0 (2)	45.0 (3)	39.0 (2)
HD 2009	33.7 (4)	36.2 (4)	43.8 (5)	37.9 (5)
HD 2329	35.7 (1)	37.7 (1)	45.1 (2)	39.5 (1)

*	Denotes better performance and adaptability of the variety
( )*	Average over No. of stations
( )	Denotes ranking
T.S.	Timely sown

AGRONOMIC TRIAL No; 2

NORTH WESTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Irrigation

Grain yield q/ha.

VARIETIES		ONE IRR. (2)*	TWO IRR. (2)*	ADEQUATE (2)*	MEAN
*VW 115	T.S.	26.7 (2)	29.5 (3)	35.4 (4)	30.5 (3)
*WH 367	T.S.	26.2 (3)	34.2 (1)	39.6 (1)	33.3 (1)
WH 369	T.S.	25.1 (4)	30.7 (2)	32.9 (7)	29.6 (4)
Raj 2535	T.S.	23.5 (7)	27.5 (7)	33.8 (6)	28.3 (7)
Raj 2560	T.S.	18.8 (9)	21.8 (9)	27.9 (9)	22.8 (9)
+Raj 2619	T.S.	23.8 (6)	27.9 (5)	37.1 (3)	29.6 (5)
Raj 1555 (d)		27.1 (1)	27.9 (6)	39.4 (2)	31.5 (2)
Raj 1972 (check)		24.2 (5)	28.0 (4)	34.9 (5)	29.0 (6)
WH 283		22.5 (8)	24.8 (8)	30.9 (8)	26.6 (8)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 2

NORTH EASTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Irrigation

Grain yield q/ha.

VARIETIES		ONE IRR. (4)*	TWO IRR. (4)*	ADEQUATE (4)*	MEAN
K 8103	T.S.	25.5 (9)	28.2 (9)	31.4 (9)	28.4 (9)
K 8110	T.S.	28.4 (2)	29.8 (6)	33.0 (6)	30.4 (5)
+HUW 219	T.S.	28.7 (1)	30.1 (4)	33.6 (4)	30.8 (2)
HUW 220	T.S.	25.3 (10)	27.0 (10)	29.7 (11)	27.3 (10)
+HUW 221	T.S.	27.0 (7)	30.8 (1)	33.7 (2)	30.5 (4)
HUW 225	T.S.	27.6 (5)	28.3 (8)	31.9 (7)	29.3 (7)
HP 1515	T.S.	25.8 (8)	29.3 (7)	31.7 (8)	28.9 (8)
*HP 1518	T.S.	27.9 (3)	30.8 (2)	35.0 (1)	31.2 (1)
*BR 326	T.S.	27.9 (4)	30.6 (3)	33.7 (3)	30.7 (3)
UP 262	T.S.	24.7 (11)	26.2 (11)	30.2 (10)	27.0 (11)
HUW 206 (check)	T.S.	27.2 (6)	30.1 (5)	33.4 (5)	30.2 (6)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 2

FAR EASTERN PLAIN ZONE 1983-84

Z O N A L M E A N

Varieties x Irrigation
Grain yield q/ha.

VARIETIES		ONE IRR. (4)*	TWO IRR. (4)*	ADEQUATE (4)*	MEAN
BR 2061	T.S.	22.8 (5)	24.2 (11)	24.2 (12)	23.7 (11)
BR 2074	T.S.	21.6 (9)	24.5 (10)	26.4 (10)	24.2 (10)
BW 11	T.S.	20.4 (11)	34.3 (1)	35.2 (1)	30.0 (1)
BW 158	T.S.	20.7 (10)	31.4 (4)	32.4 (5)	28.2 (6)
BW 161	T.S.	11.7 (12)	16.7 (12)	24.6 (11)	17.7 (12)
*BW 182	T.S.	23.5 (4)	30.8 (5)	33.9 (2)	29.4 (3)
+HI 968	T.S.	26.4 (2)	28.5 (7)	31.8 (6)	28.9 (4)
+HD 2367	T.S.	22.8 (6)	27.3 (8)	33.7 (3)	27.9 (8)
MG 104-4	T.S.	24.3 (3)	31.5 (3)	28.1 (9)	28.0 (7)
Sonalika (check)	T.S.	22.3 (7)	29.8 (6)	31.1 (8)	27.7 (9)
Janak	T.S.	21.9 (8)	32.9 (2)	33.7 (4)	29.5 (2)
UP 262	T.S.	26.7 (1)	27.1 (9)	31.3 (7)	28.5 (5)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 2

CENTRAL ZONE 1983-84

Z O N A L M E A N

Varieties x Irrigation

Grain yield q/ha.

VARIETIES		ONE IRR. (2)*	TWO IRR. (2)*	ADEQUATE (2)*	MEAN
*Raj 6070 (d)	T.S.	22.2 (5)	34.1 (2)	42.2 (1)	32.8 (2)
J 411	T.S.	24.2 (1)	30.8 (4)	36.4 (4)	30.3 (4)
JU 126 (d)	T.S.	23.5 (3)	30.1 (5)	35.3 (5)	29.6 (5)
(d)Raj 1555 (check)		23.9 (2)	34.8 (1)	42.1 (2)	33.6 (1)
WH 147		23.1 (4)	30.9 (3)	41.5 (3)	31.8 (3)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 2

PENINSULAR ZONE 1983-84

Z O N A L M E A N

Varieties x Irrigations.

Grain yield q/ha.

VARIETIES	ONE IRR. (5)*	TWO IRR. (5)*	ADEQUATE (5)*	MEAN
NI 8188	16.9 (5)	23.0 (6)	29.4 (5)	23.1 (6)
*NI 8272	17.3 (3)	24.7 (3)	34.3 (3)	25.4 (2)
NI 8306	17.3 (4)	24.2 (4)	29.3 (6)	23.6 (5)
NI 8414	15.8 (8)	22.8 (8)	34.3 (4)	24.3 (4)
*NI 8611	18.7 (2)	25.4 (2)	35.6 (1)	26.6 (1)
MACS 1992 (d)	13.2 (9)	18.5 (10)	24.9 (10)	18.9 (10)
APAU 1577	10.8 (10)	23.0 (7)	35.2 (2)	23.0 (7)
HD 2189	16.6 (6)	23.6 (5)	28.9 (7)	23.0 (8)
HD 4502 (d)	16.1 (7)	20.6 (9)	26.7 (9)	21.1 (9)
(Check) NI 5439 (Check)	20.8 (1)	26.9 (1)	28.2 (8)	25.3 (3)

T.S.

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 5

PENINSULAR ZONE 1983-84

Z O N A L M E A N

Date x Varieties (Rainfed)

Grain yield q/ha.

VARIETIES		Time of sowing* Early (3)*	Normal (3)*	Late (3)*	MEAN
*PBW 22-28	T.S.	15.9 (2)	13.7 (4)	12.3 (5)	14.0 (3)
*MACS 1967 (d)	T.S.	11.0 (5)	14.7 (2)	12.4 (4)	12.7 (5)
MACS 1972 (d)	T.S.	9.8 (8)	12.9 (6)	11.9 (6)	11.5 (6)
DWR 59	T.S.	10.0 (7)	11.7 (7)	10.8 (7)	10.8 (8)
DWR 69	T.S.	17.1 (1)	18.1 (1)	21.8 (1)	19.0 (1)
NI 5439 (check)		15.9 (3)	13.7 (5)	12.9 (3)	14.2 (2)
MACS 9 (d)		10.8 (6)	11.1 (8)	10.7 (8)	10.9 (7)
B.Yellow (d) (Check)		12.4 (4)	14.4 (3)	13.5 (2)	13.4 (4)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

AGRONOMIC TRIAL NO: 5

NORTHERN HILL ZONE 1983-84

Z O N A L M E A N
Date x Varieties (Rainfed)
Grain yield q/ha.

VARIETIES		Time of sowing* Early (3)*	Normal (3)*	Late (3)*	MEAN
*VL 612	E.S.	26.7 (2)	21.4 (1)	12.1 (10)	20.1 (4)
VL 614	E.S.	20.2 (7)	18.7 (7)	12.0 (11)	17.0 (8)
+VL 616	E.S.	25.8 (3)	19.9 (6)	16.5 (5)	20.7 (2)
*HS 172	E.S.	30.3 (1)	21.3 (2)	17.9 (3)	23.2 (1)
UP 1089	T.S.	24.4 (4)	16.6 (10)	14.6 (8)	18.5 (7)
+CPAN 1922	T.S.	22.0 (6)	20.9 (3)	18.3 (1)	20.4 (3)
VL 401 (check)		22.2 (5)	20.0 (5)	18.2 (2)	20.1 (5)
Sonalika		15.0 (10)	14.7 (11)	14.8 (7)	14.8 (11)
VL 421		16.7 (9)	17.3 (9)	14.9 (6)	16.3 (9)
HS 86		13.0 (11)	18.3 (8)	13.9 (9)	15.1 (10)
HB 208 (check)		19.9 (8)	20.9 (4)	17.0 (4)	19.3 (6)

* Denotes better performance and adaptability of the variety

( )* Average over No. of stations

( ) Denotes ranking

T.S. Timely sown

E.S. Early sown

EFFECT OF DIFFERENT AGRONOMIC TREATMENTS ON GRAIN YIELD

AGRONOMIC TRIAL NO: 3

ZONAL MEAN (Grain yield)

Tr. No.	Ludhiana	R.S.Pura	Gurdas-pur	Pant-nagar	Mathura	Agra	Kanpur	Faiza-bad	Sabour	Ranchi	Udai-pur	Mean
1	20.2	13.4	29.2	23.9	27.0	29.0	15.9	31.3	16.0	22.2	32.2	23.7(12)
2	28.1	22.6	30.8 =	36.2	30.0	27.2	16.8	33.1	24.7	22.6 =	43.3	28.7(11)
3	28.1 =	21.1	33.1	36.6 +	30.6 =	32.6=	18.1	33.5	20.3	25.1 =	47.7 =	29.7(8)
4	36.5 *	21.9	26.0	32.1	33.0 *	30.8=	24.7 *	37.1 +	19.9	26.7 *	39.5	29.8(7)
5	30.6 *	21.7	32.6	29.0	36.2 *	36.2*	25.1 *	33.1	18.8	32.3 *	41.5	30.7(4)
6	31.3 *	28.3 +	35.3 *	25.9	33.0 *	32.6=	24.9 *	33.5	26.9 =	23.4 =	51.9 *	31.6(3)
7	27.6	23.3	36.5 *	28.4	32.2 *	34.4=	23.8 *	31.7	24.5 =	23.3 =	47.0 =	30.3(6)
8	28.5	25.7 +	36.9 *	26.6	32.6 *	38.1*	25.1 *	31.7	22.1	22.8 =	44.8 =	30.5(5)
9	24.5	28.1 +	35.8	25.4	30.6 =	32.6=	21.1 *	36.7 +	21.3	23.4 =	43.8 =	29.4(9)
10	29.2 *	27.6 +	32.8	25.4	31.4 *	34.4=	20.4 =	34.4 +	20.7	24.6 =	40.9	29.3(10)
11	29.0 *	27.8 +	36.7 *	30.8	33.8 *	34.5=	25.8 *	34.9 +	22.8	27.9 *	53.2 *	32.5(2)
12	27.0	24.8 +	31.2 =	28.4	37.8 *	41.7*	28.3 *	35.3 +	24.9 =	24.2 =	55.2 *	32.6(1)
C.D. at 5%	0.41	N.S.	2.99	N.S.	0.55	7.39	3.95	N.S.	2.25	2.93	7.48	

AGRONOMIC TRIAL NO: 3 (a)

Relative effectiveness of various cultural and chemical methods in controlling weeds and effecting wheat yield. (Mean of 3 locations)*

Treatments	% Reduction in stand of weeds over unweeded check		Increase in yield over unweeded check	
	P. minor	Other weeds	q/ha	%
1 Hand weeding between 4 and 5 weeks	78.7	72.9	10.8	46.6
2 Hand hoeing (Interculture) between 4 and 5 weeks	4.2	65.2	11.9	51.3
3 Closer row spacing 15 cm	80.2	59.2	8.0	34.5
4 Cross sowing	78.5	67.4	7.5	32.3
5 Isoproturon at 0.75 kg a.i./ha 5 weeks	90.0	68.5	12.2	52.6
6 Isoproturon at 0.5 kg a.i./ha 5 weeks	79.2	75.0	9.7	41.8
7 Isoproturon at 0.50 kg a.i./ha 4 weeks (after Ist irrigation)	85.7	77.1	9.2	39.7
8 Isoproturon at 0.33 kg a.i./ha 3 weeks	83.4	66.1	9.2	39.7
9 Isoproturon at 0.33 kg a.i./ha 2 weeks	83.9	72.1	8.1	34.9
10 Closer row spacing 15 cm + Isoproturon 0.33 kg 2 weeks	82.2	71.3	14.1	60.8 *
11 Cross sowing + Isoproturon 0.33 kg a.i./ha 2 weeks	78.1	79.8	12.9	55.6 *

* R.S. Pura, Pantnagar and Udaipur.

AGRONOMIC TRIAL NO: 4

ZONAL MEAN (Grain yield)

Tr.No.	Ludhiana	R.S. Pura	Pant nagar	Gurdaspur	Kanpur	Udaipur	Mean
1	19.0	16.5	25.5	28.8	13.4	33.1	22.7 (16)
2	23.8	27.2	41.3	34.0	19.1	43.6	31.5 (12)
3	31.5 *	31.0 =	32.6	36.9 *	-	49.0 +	36.2 (1)
4	34.7 *	25.8	31.0	37.8 *	22.2 =	46.1 +	32.9 (8)
5	27.9 *	31.7 =	30.4	37.4 *	24.7 *	45.2 +	32.9 (9)
6	27.2 *	34.0 *	30.1	35.5 *	25.1 *	44.5	32.7 (11)
7	-	23.8	34.6	39.4 *	25.6 *	47.9 +	34.3 (3)
8	30.3 *	33.1 *	36.4	38.0 *	20.4 =	47.6 +	34.3 (4)
9	31.5 *	31.3 =	31.9	36.9 *	22.4 *	47.4 +	33.6 (6)
10	29.0 *	30.6 =	31.9	33.1	23.1 *	41.4	31.5 (13)
11	31.7 *	31.0 =	30.3	33.5	21.1 =	49.3 +	32.8 (10)
12	29.0 *	28.1 =	32.8	36.2 *	22.2 *	43.0	31.9 (14)
13	27.2 *	30.3 =	30.4	37.4 *	-	46.9 +	34.4 (2)
14	24.9 *	33.1 =	32.1	37.4 *	21.3 =	41.4	31.7 (15)
15	25.1 *	38.9 *	31.2	37.1 *	22.6 *	47.3 +	33.7 (5)
16	31.3 *	24.5 =	31.7	39.4 *	27.1 *	45.4	33.2 (7)
C.D. 5%	0.29	5.15	N.S.	0.64	3.15	N.S.	

AGRONOMIC TRIAL NO: 4 (a)

Relative effectiveness of various herbicidal treatments in controlling weeds and effecting wheat yield (Mean of 3 locations)*

	Treatments	% Reduction in stand of weeds/m^2 over unweeded check		Increase in yield over unweeded check	
		P.minor	Other weeds	q/ha	%
1	Hand weeding between 30 and 35 DAS	60.5	25.8	12.4	49.6
2	Isoproturon (Arelon) post 0.75 kg a.i./ha 5 weeks	64.9	48.8	12.5	50.0
3	Isoproturon post 0.5 kg a.i./ha 5 weeks	48.8	41.9	9.3	37.2
4	Isoproturon post 0.5 kg a.i./ha 4 weeks (after Ist irrig.)	65.7	38.2	10.8	43.2
5	Isoproturon post 0.5 kg a.i./ha 3 weeks (before Ist irrig.)	65.7	31.0	11.2	44.8
6	Hexamar (Isop. 75%)	66.9	48.2	10.4	41.6
7	Tourus (Isop. 50%)	54.4	35.2	14.0	56.0
8	Nocil (Isop. 50%)	74.6	44.8	11.9	47.6
9	Terbutryn (Terbutres) 0.4 kg a.i./ha 30-35 DAS	69.0	26.2	9.6	38.4
10	Terbutryn (Terbutrex) 0.6 kg a.i./ha 30-35 DAS	74.6	35.2	11.9	47.6
11	Tolurex (Chlortoluron 50%) 0.5 kg a.i./ha 30-35 DAS	68.6	21.0	9.6	38.4
12	Tolurex (Chlortoluron 50%) 0.75 kg a.i./ha 30-35 DAS	73.8	36.1	10.9	43.6
13	Dicuran 0.5 kg a.i./ha 30-35 DAS	79.0	39.3	10.5	42.0
14	Dicuran 0.75 kg a.i./ha 30-35 DAS	82.7	51.2	14.1	56.0
15	Stomp 1.00 kg a.i./ha pre-emergence	63.7	32.4	8.9	35.6

* R.S. Pura, Pantnagar and Udaipur.

AGRONOMIC TRIAL NO: 6

ZONAL MEAN (Grain yield)

Tr. No.	New Delhi	Ludhiana	Pant nagar	Agra	Durgapura	Vijapur	Kanpur	Pusa (RAU)	Ranchi	Junagarh	Almora	Solan	Palampur	Mean
1	37.2	27.4	11.0	32.3	25.5	31.7	19.3	19.1	10.3	13.0	7.8	14.2	8.2	19.8(8)
2	56.3	39.9	28.0	57.1	36.7	43.5	33.5	29.9	26.9	25.7	19.6	28.7	20.4	34.3(7)
3	57.9	48.5 *	31.9	56.2	44.7 *	48.0	31.0	33.3	23.2	30.9	19.2	31.6	22.6	36.9(5)*
4	57.3	43.3	31.1	45.7	40.1	49.8	32.6	36.2**	26.8*	28.3	21.3	32.5	22.3	36.0(6)
5	58.8	61.1 *	44.0 *	64.1	48.2 +	56.3	36.7 *	40.8	31.8	31.9	27.3	44.8	18.1	43.4(2)*
6	61.4	56.2	39.4	66.3	44.9	58.0	20.3	44.9	35.1*	29.4	31.7	40.6	22.5	42.4(3)
7	59.8	51.9	42.0	66.3	43.5	50.6	56.1*	34.8	28.0	30.1	26.2	37.1	22.6	42.2(4)
8	62.1	55.3 *	37.4	78.6 *	46.9	51.1	37.4	-	34.6*	32.2	27.0	42.9	22.6	44.0(1)
C.D. 5%	3.62	0.45	4.38	3.84	4.02	2.92	7.44	4.62	2.69	5.05	4.80	6.63	3.88	

AGRONOMIC TRIAL NO: 7

ZONAL MEAN (Grain yield)

Tr.No.	Pantnagar	Kanpur	Faizabad	Kalyani	Hebbal	Powerkheda	Mean
1	49.7	40.0	22.5	52.2	28.1	29.3	37.0 (4)
2	47.2	41.7	25.1 *	47.5	29.4	32.0 *	37.2 (3)
3	48.8	43.6	30.9 *	52.7	30.2	35.9 *	40.4 (1)
4	49.5	39.0	34.6 *	50.7	30.6	37.7	40.4 (2)
C.D. at 5%	N.S.	N.S.	2.11	N.S.	N.S.	1.99	

ZONAL MEAN

AGRONOMIC TRIAL NO: 8

ZONAL MEAN (Grain yield)

Tr.No.	R.S.Pura	Pantnagar	Durgapura	Kanpur	Ranchi	Niphad	Junagarh	Mean
1	18.1	33.2	34.2	31.3	31.5	27.3	27.2	29.0 (8)
2	24.7 *	32.4	39.2	36.5 *	33.2	29.4	30.1 =	32.2 (4)
3	29.9	33.2	40.9 *	38.3 =	32.5	31.1	30.3	33.7 (1)
4	23.6	34.0	37.6	34.9	33.5 =	30.4	29.4	31.9 (5)
5	24.2	33.5	41.0 =	38.3 +	33.3 =	32.7 +	29.8	33.3 (2)
6	22.0	31.9	36.8	31.5	28.5	31.7 +	27.3	30.0 (7)
7	22.0	32.4	39.4 =	33.3	30.6	30.0	28.0	26.8 (9)
8	27.8	41.3 *	36.3 =	35.3 =	26.6	-	28.8	32.7 (3)
9	26.0	33.2	29.8	20.8	15.6	-	26.1	25.3 (10)
10	27.2	35.3 +	39.3 =	27.4	21.4	-	31.3 +	30.3 (6)
11	11.1	12.7	18.4	19.3	11.6	-	15.1	14.7 (11)
C.D.at 5%	5.86	5.77	5.58	4.30	8.52	N.S.	4.05	

AGRONOMIC TRIAL NO: 9

ZONAL MEAN (Grain yield)

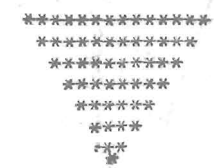
Tr. No.	Ludhiana	Pant-nagar	Agra	Durga-pura	Kanpur	Pusa (RAU)	Ranchi	Power-kheda	Junagarh	Almora	Solan	Mean
1	24.6	47.2	47.5	42.4	26.8	48.3	41.7	48.9	43.7	23.7	24.1	38.1 (4)
2	26.1*	43.2-	54.9*	46.5+	30.9*	50.0=	38.3-	49.9=	44.0	25.4=	22.5	39.3 (2)
3	26.1*	44.2=	62.4	43.8	28.0*	49.4=	47.8*	46.6=	43.2	27.3*	20.9	40.0 (1)
4	25.9*	43.6-	47.2=	43.2	24.6-	49.6=	36.7-	45.8=	39.5	24.5=	21.5	36.6 (5)
5	24.1=	41.6-	42.1-	40.6	21.4-	42.2=	32.9-	40.7-	40.1	19.9-	22.5	33.5 (6)
6	24.8=	41.0-	49.3=	41.5	22.4-	39.3-	35.9-	43.9-	42.5	19.2-	18.8	34.4 (7)
7	23.0*	40.7-	46.9=	40.6	21.9-	43.3=	44.1*	42.4-	40.8	24.0=	24.4	35.7 (8)
8	22.8-	37.2-	32.9-	41.5	20.2-	47.0=	28.3-	43.4-	39.9	18.9-	21.9	32.2 (9)
9	31.6*	44.2=	43.9-	44.5	24.9-	50.9=	39.4-	46.9=	43.7	31.5+	19.5	38.3 (3)
CD. at 5%	0.53	3.32	1.99	N.S.	1.78	6.22	1.99	4.51	N.S.	2.87	N.S.	

AGRONOMIC TRIAL NO: 10

ZONAL MEAN (Grain Yield)

Tr.No.	Ludhiana	Pant nagar	Durgapura	Kalyani	Kanpur	Ranchi	Powerkheda	Mean	
1	17.0 =	13.2 =	10.9 =	14.5 +	9.6 =	7.2 =	11.4	12.0	(5)
2	16.5	12.0	10.1	8.2	8.3	5.8	13.7	10.7	(6)
3	26.5 =	29.0 =	17.9 =	24.6 +	19.8 *	28.7 =	25.8	24.6	(3)
4	25.9	26.4	17.9	19.5	14.0	26.6	28.5	22.7	(4)
5	34.6 *	32.2 =	25.0 =	34.2 +	29.1 *	41.7 *	42.3 *	34.2	(1)
6	32.4	30.2	23.1	24.1	20.7	36.3	36.3	29.0	(2)
C.D. at 5%	1.44	3.98	3.58	N.S.	4.29	2.69	4.85		

SUMMARY AND CONCLUSIONS



SUMMARY OF IMPORTANT RESULTS

With a view to ensure stability in wheat production a number of studies were under taken during the year 1983-84. A summary of important results is presented here.

PROJECT NO. 1 STUDIES TO ASSESS THE ADAPTABILITY OF NEW (2nd YEAR URT) WHEAT VARIETIES

Studies were undertaken to generate information about the relative performance of these varieties under normal sowing dates and adequate irrigation. Also the behaviour of these varieties under flactuations of temperature (created by varying the sowing dates) and soil moisture (manipulated by varying the frequencies of irrigation) which so often operate under farmers' field conditions was also studied. Under rainfed conditions the varieties were obviously exposed to sowing dates only.

In all, three such experiments were conducted during 1983-84 and their results are summarised below:-

Experiment No.1 Studies to asses the adaptability of new wheat varieties to different dates of sowing under irrigated conditions.

The trial was conducted at 30 locations in different zones. The most significant findings, zone wise, are summarised here.

A. Northern Plains Zone :

The trial was conducted at 7 locations i.e. Ludhiana, Gurdaspur, Pantnagar, Mathura, Meerut, Agra and Morena. The detailed results have been tabulated on page 14 to 25. The comparative performance of varieties is given on page 188 to 190 and final performance given on page 220 and also summarised here.

Among the varieties tested under timely sown conditions Raj 2525 and HD 2379 gave as good or slightly better performance as compared to check WL 711. Their performance under early sowings was not upto the mark. However, under late sowings Raj 2525 and Raj 2560 were superior to WL 711. On over all average and for its good adaptability Raj 2525 scored better.

Among the varieties tested under late sowings, HD 2270, PBW 95, HD 2347, PBW 94 and HD 2382 scored better than check HD 2285. Their performance was also good under normal sowing conditions (except HD 2270). Finally HD 2382 and PBW 95 scored better for yield under late sowings and adaptability under normal sowings.

B. North Western Plains Zone :

The trial was conducted at Hissar, Durgapura and Vijapur. Results have been tabulated on page 26 to 30, main comparisons tabulated on page 191 to 192 and final performance given on page 221. Some of the significant findings are presented below.

All the varieties tested for normal sowings proved better (except Raj 2525) than check WH 283. Raj 2525 was at par in yield with WH 283. Their adaptability and performance was also good under early and late sowings. On over all basis variety WH 367 performed better and showed better adaptability.

Of the varieties tested under late sowings VW 121 yielded better than check Raj 2184. The performance of all other varieties was inferior to Raj 2184. However, VW 121, VW 120 and VW 122 yielded better and WH 374 gave as good performance as the check under timely sown conditions. On over all average VW 121 scored better for yield and adaptability, while VW 120 and VW 122 were at par in yield and possess as good as check Raj 2184.

C. North Eastern Plains Zone :

The trial was conducted at Kanpur, Varanasi, Faizabad, Pusa (RAU) and Sabour. Detailed data have been tabulated on

page 193 to 195 and the final average on page 222. Main findings are discussed below:

Variety HUW 221 yielded as good as check HUW 206 under normal sowings and was also found reasonably adapted under early sowings and showed good adaptability under late sowings. However, HP 1518 and BR 326 proved better than check under normal sowing conditions. Their performance was not good under early sowings while in late sown conditions they yielded better than check. Out of these, HP 1518 proved better on over all average.

Among the varieties tested for late sowings HUW 234 and HP 1524 proved better than check HUW 213. Out of these, HUW 234 yielded as much as check under normal sowings and also proved better than check on over all average.

D. Far Eastern Plains Zone :-

The trial was conducted at Kalyani and Shillongoni. The tables of the detailed results are on page 40 to 42. Main comparisons tabulated on page 196 to 197 and final average on page 223. The main findings are summarised here.

None of the varieties tested under normal sowings (except BW 11 yielded more and BW 182 on par) proved better than check Sonalika. As regards their performance under early planting, BW 11, BR 2074, HD 2367, MG 104-4 and BR 2061 yielded more than the check. Their adaptability under late sowings also indicated their better performance in order of BW 182, MG 104-4, BW 158, BW 11 and BR 2074 over Sonalika the check. On overall average BW 11 and BW 182 scored better followed by MG 104-4 and BR 2074 for their performance under normal sowings and adaptability under early and late sowings.

Among the varieties tested for late sowings, BW 182 yielded better and showed reasonable adaptability under normal sowings.

E. Central Zone :

The experiment was conducted at Udaipur, Powerkheda and Junagarh. The detailed results are presented on page 56 to 61 and comparisons tabulated on page 198 to 199. The final performance given on page 224 and the main findings are summarised here.

Among the durums tested for normal sowings JU 126 gave as good yield as check Raj 1555 and was also found better adapted to early and late sowing conditions. The aestivum variety J 411 was not as good as check WH 147 and suffered badly under late sowings. However, it gave good yield under early sowings. Of the varieties tested for late sowings, HI 968 yielded as good as check Lok-1, and also showed reasonable adaptability under normal sowings.

F. Peninsular Zone :

The experiment was conducted at six locations viz; Akola, Niphad, Dharwar, Parbhani, Pune and Hebbal (Banglore). The detailed results have been presented on page 43 to 55 and the main comparions tabulated on page 200 to 202. The final performance given on page 225 and also summarised here.

All the varieties APAU 1577, NI 8272, NI 8414, NI 8611 and NI 8188 tested for normal sowing yielded more than the check NI 5439. Out of these, only APAU 1577 and NI 8611 performed better under early sowings, while NI 8188, NI 8306, NI 8272 and APAU 1577 yielded more and NI 8414 and NI 8611 yielded equal to check under late sowing conditions. On the basis of over all performance and adaptability APAU 1577 and NI 8272 scored better.

Among the varieties tested for late sowings only HD 2376 gave slighly more yiled and HI 977 was as good as check HD 2189, while the performance of HI 977 and NI 8303 was good under timely sown conditions. On over all basis only HI 917 yielded better and showed good adaptability as compared to NI 8303 which equalled with check HD 2189 in this respect.

G. Northern Hills Zone :

The trial was conducted at Almora and Palampur. Results have been presented on page 63 to 65 and comarisons given on page 203. The final performance given on page 226 and discussed here.

Among the varieties tested for normal sowing only CPAN 1922 yielded almost as good as check HS 86. The variety also showed better adaptability to early and late sowings.

H. South Eastern Zone:

The trial was conducted at Chimplima (Sambalpur). The results presented on page 62, comparison on page 204 and summarised here.

The variety HI 1048 yielded as good as check Lok-1 under normal sowings. In early sowings both HI 1048 and JWJ 78-2 yielded better than check, while in late sowings only JWJ 78-2 yielded more than the check. On over all basis both the varieties performed better than check Lok-1.

Since the trial was conducted only at one location and as the varieties change under diverse environments, no valid conclusions could be drawn from the above data.

Experiment No. 2 Assessment of new wheat varieties for their adaptability under varying irrigation supply conditions.

The trial was conducted at 24 locations with a view to assess the performance of new wheat varieties under one, two and adequate irrigation situations. The varieties tested for normal sowings only were included in this study. The important results are highlighted here.

A. Northern Plains Zone :

The experiment was conducted at six locations viz; New Delhi, Ludhiana, Agra, Mathura, Pantnagar and Meerut. The detailed results have been presented on page 66 to 76 and

comparisons made on page 205 to 206. Final performance given on page 227 and significant results summarised here.

Among the varieties tested, none yielded better than check WL 711 at different irrigation levels. Varieties Raj 2525 and HD 2379 yielded as good as check under adequate irrigation supply and were also found adaptive and atable in giving as good yield as check at one and two irrigations.

B. North Western Plains Zone :

The experiment was conducted at Hissar and Vijapur. Detailed results presented on page 77 to 79 and comparisons made on page 207. The final performance of the varieties under varied irrigation conditions given on page 228 and summarised below.

Varieties HWH 367 and VW 115 yielded more under adequate irrigation supply and were also found better adapted under one and two irrigations as compared to check Raj 1972. However, variety Raj 2619 yielded more than the check under adequate irrigation and fairly adaptive only under one and two irrigations.

C. North Eastern Plains Zone :

The experiment was conducted at four locations viz; Kanpur, Varanasi, Pusa (RAU) and Sabour. The detailed results have been presented on page 80 to 86 and comparisons made on page 208 to 209. The final performance presented on page 229 and main results discussed here.

Varieties HP 1518 and BR 326 yielded slightly more under adequate irrigation and were equally adaptive to check HUW 206 under one and two irrigation. Whereas varieties HUW 219 and HUW 221 yielded as good as check under adequate irrigations and were found fairly adaptive at one and two irrigations.

D. Far Eastern Plains Zone :

The experiment was conducted at Kalyani, Ranchi, Burdwan and Shillongoni. The detailed results have been presented on page 87 to 93 and main comparisons made on page 210 to 211.

Final performance presented on page 230 and the main findings discussed here.

Variety BW 182 yielded better than check Sonalika under adequate irrigations and showed better adaptivity under one and tow irrigations. However, varieties HI 968 and HD 2367 yielded as good as check Sonalika and were fairly adapted under one and two irrigations.

E. Central Zone :

The experiment was conducted at Udaipur, and Powerkheda. Detailed results have been presented on page 106 to 109 and the comparisons made on page 212. The final performance given on page 231 and main findings are given below.

Among the varieties tested Raj 6070 yielded as good as check Raj 1555 under adequate irrigations and was also found fairly adaptive under one and two irrigations.

F. Peninsular Zone :

The experiment was conducted at five locations viz; Akola, Niphad, Dharwar, Parbhani and Pune. The detailed results have been presented on page 94 to 105, main compariosons made on page 213 to 214. Final performance presented on page 232 and the main findings summarised here.

Varieties NI 8611 and NI 8272 yielded better than check NI 5439 under adequate irrigations and their performance has been fairly adaptive and better in comparison to other varieties, under one and two irrigation also.

Experiment No. 5 Assessment of new wheat varieties for their adaptability to different dates of sowing under rainfed conditions.

The experiment was conducted at 9 locations in order to asses the performance of varieties under normal sowing and their adaptivity under early and late sowings. Main findings are summarised here.

A. Northern Plains Zone :

The experiment was conducted only at one location i.e., Gurdaspur and the data given on page 129 to 130 and comparison made on page 215. The main findings are discussed below.

Out of th the varieties tested, PBW 102 yielded as good as check C 306 while HP 174 yielded slighily less than the check. Both these varieties showed good adaptability under early and late sowings also.

B. North Eastern Plains Zone :

The experiment was conducted at Pusa (RAU) only, the results have been presented on page 131 and main comparisons made on page 216 Main findings are summarised here.

Out of all the varieties tested, K 8027 and K 8121 yielded better than the check C 306 under normal sowings and were also found better adapted under early and late sowings.

C. Peninsular Zone :

The experiment was conducted at Akola, Dharwar, and Pune. The results are given on page 132 and 139 and the comparisons made on page 217. The final performance of varieties given on page 233 and main findings presented here.

Among the aestivums, variety PBW 22-28 yielded as good as check NI 5439 under timely sown conditions and also showed better adaptability under early and late sowings.

Durum variety MACS 1967 yielded as good as check Bijiga Yellow and also exhibited adaptability to early and late sowings.

C. Northern Hills Zone :

The experiment was conducted at three locations viz; Almora, Bhowali and Palampur. The detailed results presented on page 140 to 144 and comparions made on page 218 to 219. The Final performance has been given on page 234 and main findings summarised here.

Among the va-rieties tested for early sowings, HS 172 yielded better and VL 112 and VL 616 as good as check VL 401. All the three varieties exhibited better adaptability under timely sowing conditions also.

Variety CPAN 1922 yielded as good as check HB 208 under normal sowing conditions and also proved adaptive under early and late sowings.

PROJECT NOO: 2 WEED CONTROL IN WHEAT.

STUDIES TO DEVELOP CHEAP, CONVENIENT AND EFFECTIVE METHODS OF CONTROLLING WEEDS ESPECIALLY PHALARIS MINOR AND WILD OATS IN WHEAT.

Phalaris minor and wild oats are posing serioud problems to wheat cultivation particularly under irrigated conditions in the major wheat growing areas of the country. From there they are gradually being disseminated to pther parts of the country with the seed. Since these weeds belong to the similar family (grass) as that of wheat and have almost the same growth habit, it is thus impossible to distinguish them from the wheat plant in the vegetative phase. Conventional hand weeding in such a case has proved ineffective against these weed. and depending on their intensity losses in the range of 10 to 80% are expected by these weeds. In most severe infestations there is no other alternative but to harvest the crop as fodder. Realizing the gravity and urgency of the problem, three pronged activitines have been initiated to find a suitable soluation of this problem.

(i) Evaluation of different potent herbicides to avoid monopoly of single formulation.

(ii, Efforts to economise on the dose of herbicide through manipulation of its time of application.

(iii) Effectiveness of cultural method alone and cultural + chemical methods to suit different situations.

So far five herbicides viz; three formulations (Tolkan, Arelon and Graminon) of isoproturon, one formulation (Dosanex) of metoxuron and one formulation (Tribunil) of methabenzthiazuron have already been recommended to control Phalaris minor and wild oats.

Besides the above herbicides, three more formulations of isoproturon, one formulation of terbutryn and several other herbicides, like Basalin, Dicuron and Stomp were tested during 1983-84.

On the basis of last years' trials, lower rate of 0.5 kg a.i./ha of isoproturon when sprayed between 3-5 weeks gave good results as compared to spraying of 0.75 kg a.i./ha (the recommended dose) of the herbicides at 30-35 days after sowing. This provided a basis for reducing the dose and the experiment was continued during 1983-84 also to confirm this finding.

Inspite of the fact that quite a few selective herbicides have been developed for controlling Phalaris minor and wild oats in wheat, it has to be accepted that chemical control is not the ultimate solution to this problem in our country for several reasons such as:

(i) Herbicides are very costly

(ii) At present all of these herbicides are imported and thus their availability in time is seldom ensured.

(iii) The effect of these herbicides is dependent/modified by the soil type, moisture status of the soil and temperature and due to these factors results obtained with these herbicides have not been consistent.

Taking into the consideration all the points mentioned above it would be desirable to find an effective method of controlling these weeds either by cultural method alone or in combination with chemical methods. Keeping this objective in view, the following two experiments were executed during 1983-84 and the main findings of the results are summarised here.

Experiment No. 3 Control of Phalaris minor and wild oats in wheat by cultural and chemical methods

The experiment was conducted at 11 locations viz; Ludhiana, R.S. Pura, Gurdaspur, Pantnagar, Mathura, Bichpuri, Kanpur, Faizabad, Sabour, Ranchi and Udaipur. The detailed data have bee presened on page 110 to 119 and the final comparison made on page 235 and 236. Main findings are discussed here.

The appreciable increase in grain yield of wheat due to control of weeds by hand weeding or hand hoeing or with the use of chemicals have been obtained from as many as eight centres (except Gurdaspur, Bichpuri and Faizabad). Howeing appeared to be slightly better at Gurdaspur, Bichpuri, Faizabad, Udaipur, Kanpur and Ranchi. However, cross sowing 22.5 cm or closer sowing at 15 cm with normal seed and fertilizer at few centres gave as good or significantly more yields over hand weeding. For example, closer sowing proved significantly superior over hand weeding at Ludhiana Mathura, Kanpur and Ranchi, while cross sowing was superior at Ludhiana, Bichpuri, Mathura, Kanpur and Ranchi. This clearly indicated that both the systems provide better orientation of plants in the field to exert smothering effect on the weeds. The use of Isoproturon @ 0.75 kg a.i./ha at 5 weeks or after Ist irrigation gave almost similar effect as that of the lower dose of Isoproturon @ 0.33 kg a.i./ha applied at 2 or 3 weeks. This clearly indicate that it is possible to economise on the use of this chemical without losing its effect.

The most encouraging results have been obtained again with closer sowing at 15 cm distance or with cross sowing (22.5 cm) in conjuction with the use of low dose (0.33 kg a.i./ha) of Isoproturon weedicide sprayed at 2 weeks. The rationale appears to be to smother the weeds in early stage with crop orientation, and the early use of weedicide to control the weeds effectively. Closer sowing at 15 cm distance with low dose of weedicide gave significantly high wheat yields over handweeding at Ludhiana, Gurdaspur, Bichpuri, Mathura, Udaipur, Kanpur and Ranchi and appreciably high yields at R.S. Pura and Faizabad. The cross

sowing with low dose of weedicide use gave appreciably good performance at R.S. Pura, Gurdaspur, Bichpuri, Mathura, Faizabad, Udaipur, Kanpur and Ranchi.

Experiment No. 4 Control of weeds in wheat by herbicides.

The experiment was conducted at 10 locations viz; Ludhiana, R.S. Pura, Pantnagar, Gurdaspur, Kanpur, Kanpur, Vizapur, Shillongoni, Udaipur, Junagarh and Almora. The detailed results have been presented onppage 120 to 128 and the final table given on page 237tto 238. The main findings are summarised here.

The weed control treatment by way of hand weeding or chemical use has reflected in 30-40% increase in yield at almost all the locations. On examination of the whole data the following broad conclusions may be drawn.

(i) The post em-ergence application at 5 weeks of new formulations i.e. Hexamar, Torus, Nocil, Tolurex and Dicuran when used @ 0.75 kg a.i./ha have given as good performance as Isoproturon (Arelon) at the same rate or Stomp 1.00 kg a.i./ha as pre-emergence. The last two of the above weedicides have already been recommended.

(ii) Isoproturon applied any time from 3-5 weeks gives alomost similar results.

(iii) Hexamar, Torus, Nocil and Tolurex have been consistantly good results even in earlier experiments and may be recommended.

PROJECT No.3 FERTILIZER USE EFFICIENCY IN WHEAT

Some of the convtroversies regarding the application and use of fertilizers such as nitrogen, phosphorus and potash still exist not only among the farmers but even among the scientists and extension workers.

The first and foremost is whether the half N which at present is recommended tobe applied at first irrigation should be applied before or after the irrigation? The view against the application of N just before Ist irrigation contends that part of it may be leached down along with the percolation of excess irrigation water and is lost beyond the reach of the crop roots. Another view opine that application soon after irrigation is not possible and it may be applied 5-6 days after as soon as soil is walkable. Also, the applications of N on the suffface of the soil at that time may not be fully utilized and part of it may be left lying on the surfacr because upper soil is drying and there may be a lot of volatilization losses till the next irrigation is given.

The second controversy relates to the placement or top dressing of phosphorus to the wheat crop. The basal application of phosphorus, the only recommended practice does not give any opportunity for its latr use in the already sown crops if one fails to apply due to its nonavailability, scarcity and many a times beyond the reach of poor farmers to purchase it in time. If under these situations the crop is allowed to without P, there may be as high as 30% reduction in wheat yield and the efficiency of other fertilizers may also not be fully utilized. Now the only possibility remains of its application as top dressing at Ist irrigation or at the most upto second irrigation, which is most necessary to stabilize the wheat production under such adverse conditions.

The third and not the least important is the use of potash as per the recommendations for balanced fertilizer use and efficient use of nitrogen and phosphorus. Many a times a question has been asked whether the use of potash in wheat reflects in any direct gain for increasing grain yield or is it a loss to the farmer?

The probe the above practical problems faced by the farmers, following experiments were planned during 1982-83 and were also executed during 1983-84.

Experiment No.6 Studies on the comparative efficiency of urea top-dressing in wheat made before and after first irrigation.

The experiment was conducted at 13 different locations viz; New Delhi, Ludhiana, Pantnagar, Agra, Durgapura, Vijapur, Kanpur, Pusa (RAU), Ranchi, Junagarh, Almora, Solan and Palampur. The detailed results have been presented on page 145 to 157 and comparative performance on page 239. The main findings of the results are given here.

1 There are clear indications from six location i.e., Ludhiana, pantnagar, Agra, Durgapura, Junagarh and Solan that half the nitrogen applied before Ist irrigation gave increased yield over that applied after irrigation. At Delhi and Palampur the effect of N applied before or after irrigation equalled. However, at Vijapur, Kanpur, Pusa (RAU), Ranchi and Almora the trend reversed in favour of the N application after first irrigation.

2 The gain or loss in favour or against appear to be magnified with the increase in N dose.

3 There are definite indications from the higher yields obtained from almost all the centres (except Pantnagar and Kanpur) that basal N may not be needed and for higher gains and N use efficiency much of the N applied at or after Ist irrigation gives higher grain yield in wheat. This might be due to the feeding of the wheat plant as per the need at critical requirements.

Experiment No. 7 Studies on the response of Potash (kg/ha.) to be applied at or before sowing.

The experiment was conducted at six locations i.e. Pantnagar, Kanpur, Faizabad, Kalyani, Hebbal and Powerkheda. The detailed results have been presented on page 158 to 163 and comparative statement on page 240. The main findings presented here.

Out of the six centres, four centres (Kanpur, Faizabad, Hebbal and Powerkheda) showed increase in wheat yields even with the first dose of 30 kg K_2O/ha. The trend of increase in yield was maintained upto the dose of 60 kg K_2O/ha. Moreover, out of these four places at Faizabad and Powerkheda there appeared to be a significant response of applied potash to wheat. At Pantnagar and Kalyani, however, wheat crop did not respond to potash application.

Experiment No. 8 — Comparison to the application of P applied as top-dressing before 1st irrigation v/s its application 5 to 6 cm below the seed before or at sowing.

The experiment was conducted at six locations i.e. R.S. Pura, Pantnagar, Durgapura, Kanpur, Ranchi, Niphad and Junagarh. The detailed results have been presented on page 164 to 169 and a compartive statement on page 241. The main findings are summarised below.

The response of applied phsophorus has been obtained at R.S. Pura and Kanpur only with 20 kg/ha dose. Inspite of the increasing trend in yield due to the application of P doses, significant difference has not been obtained between the response of 20 and 40 kg P_2O_5 dose. However, there appeared to be a trend of getting as good yield as that of the check treatments (20,40 kg P_2O_5 basal) when the P was top dressed at first irrigation or the total 120 kg N and 40 kg P_2O_5 was top-dressed at first irrigation or in split $\frac{1}{2}$ at Ist irrigation + $\frac{1}{2}$ at 2nd irrigation. In earlier years of testing clear indications in favour of P top dressing have been obtained from many locations. The above fact clearly dispels the myth that P will not be useful if top-dressed after the crop has already been sown.

PROJECT NO. 4 CROP GEOMETRY AND INTER CROPPING

Orientation of the initial plant stand in a way to get maximum advantage out of the soil, fertilizer irrigation, macro and micro climates and the optimum utilization of the natural resource of abundence of sun light in the green revolution wheat crop, has been one of the priority areas of the attempts for smashing yield barriers. Many of the favourable attempts have been reported in this direction and few still remained un-utilized.

One such attempt in this direction was planned to utilize the arrangement of plants through closer sowings, cross sowing, skip sowings, paired row sowing under ecommended fertilizer or 75 % of its dose. This attempt aimed at utilizing the natural gifts of soil and climatic assests for increasing the yield with adequately applied (seed and fertilizer) or under applied resources (75% of seed and fertilizer)

Experiment No. 9 Comparison of different crop geometries in relation to crop stand and yield of wheat.

The experiment was undertaken at eleven locations spread over different zones of the country. The centres were Ludhiana Pantnagar, Agra, Durgapura, Kanpur, Pusa (RAU), Ranchi, Powerkheda, Junagarh, Almora and Solan. The detailed results have been presented on page 170 to 180 and comparative statement on page 242. The main findings are given here.

The cross sowing at 22.5 cm and closer sowing at 15 cm with normal seed and fertilizer appeared to increase the grain yield in wheat almost at all the locations (except at Pantnagar Ranchi and Solan) over recommended planting system and other geometries tested.

The second as good as the recommended practive appeared to be the paired row planting of 15 cm/30 cm (with seed and fertilizer normal) has shown distinction at Ludhiana, Durgapura, Pusa (RAU), and at Almora.

The cross sowing and closer sowings have shown their superiority earlier in 1982-83 also and this year in this and other experiments too at almost all the locations, and may be recommended to utilize this non-monitory input.

Experiment No . 10 Evaluation of the efficiency of inter-cropping of wheat and Sarson vis-a-vis- pure wheat crop at varying level of nitrogen.

The farmers in almost all wheat growing zones take mustard as an inter crop for their house hold use of oil. This has become as one of the compulsory preposition for them. To eliminate the doubt whether sarson inter cropping does any harm to the wheat yield or not, the experiment was planned. The main treatments were the incorporation of one row of sarson after eight rows of wheat to be compared with sole crop of wheat under 0 , 50 and 100 kg N/ha. under irrigated conditions.

The experiment was conducted at eight locations viz; Ludhiana, Pantnagar, Durgapura, Kalyani, Ranchi, Powerkheda and Hebbal. The detailed results have been presented on page 181 to 187 and comparative statement on page 243, The main findings are given here.

There are clear indications from the results of almost all the centres that taking sarson as inter crop in wheat adversely affects the wheat yield. The adverse effects are magnified with the increase in nitrogen dose. At some locations the adverse effects have touched the level of significance as in theccase of Ludhiana, Kanpur, Ranchi and Powerkheda. ~~The recommendation can thus be made discouraging inter cropping of sarson in wheat.~~

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/sarwajit/

Total monthly rainfall (m.m) during the crop season rabi 1983 - 84
(From October 1983 to April 1984)

Location	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	Total
New Delhi	41.6	-	4.2	-	6.4	-	-	53.2
Ludhiana	-	-	-	-	76.4	7.1	-	83.5
Gurdaspur	8.9	-	-	4.5	80.0	20.5	4.0	117.9
Pantnagar	-	1.0	11.2	22.6	160.2	3.4	8.3	206.7
Mathura	8.0	-	-	15.0	-	-	-	23.0
Meerut	-	-	17.5	9.0	24.0	2.0	-	52.5
Morena	-	-	-	7.5	-	-	-	7.5
Hissar	-	-	5.5	1.0	12.8	-	-	19.3
Durgapura	24.0	-	-	2.2	-	-	-	26.2
Vijapur	38.8	-	-	-	-	-	-	38.8
Kanpur	-	-	20.0	7.2	2.3	-	1.6	31.1
Varanasi	108.1	-	5.9	34.6	47.7	0.5	6.9	203.7
Faizabad	-	-	40.6	31.2	1.2	1.8	24.4	99.2
Pusa (R.A.U.)	-	-	15.8	22.4	32.0	-	4.0	74.2
Sabour	51.3	-	8.4	41.3	31.0	2.0	0.5	134.5
Burdwan	-	-	22.4	19.8	-	-	-	42.2
Shillongoni	18.9	1.5	15.0	24.7	16.8	23.8	-	100.7
Ranchi	77.2	-	17.8	32.0	5.8	-	15.8	148.8
Akola	45.0	-	4.2	6.0	27.8	-	-	83.0
Niphad	19.7	-	0.2	-	-	0.1	-	20.0
Coimbatore	183.2	105.4	136.5	10.0	53.8	121.7	-	610.6
Dharwar	36.2	19.5	1.5	-	1.4	14.1	-	72.7
Poone	-	-	-	-	12.0	-	-	12.0
Bangalore	49.5	9.0	40.5	-	58.8	16.9	-	174.7
Udaipur	18.5	-	-	-	-	-	-	18.5
Powerkheda	-	-	-	50.0	-	-	-	50.0
Almora	28.7	-	21.0	37.6	203.3	17.3	15.2	323.1
Palampur	24.4	-	9.7	28.5	139.0	35.9	196.0	413.5
Solan	-	-	14.8	3.0	69.0	5.3	18.3	110.4
Bhowali	14.0	-	36.0	17.2	172.0	17.0	27.0	283.2

Soil analysis of the experimental plots trial conducted at different centres during rabi 1984 - 1984

a) Chemical analysis

Location	Trial No.	Soil depth (cm.)	E C	P H	Organic carbon% on available N	Available P_2O_5 (kg/ha)	Available K_2O kg/ha	Calcium carbonate
New Delhi	2	0 - 15	0.13	8.6	0.17 L	5.6	120 M	Low
		15 - 30	0.10	8.7	0.14 L	6.0	85 L	Low
	6	0 - 15	0.30	8.3	0.29 L	20.0 M	230 M	Nil
		15 - 30	0.20	8.5	0.17 L	20.0 M	180 M	Nil
	9	0 - 15	0.28	8.5	0.15 L	6.0 L	125 M	Low
		15 - 30	0.25	8.5	0.15 L	12.0	115	Low
Durgapura	1,6,8,9,10		0.38	8.2	0.10	72.0	340	-
Vijapur	1,2,4,6		0.20	8.5	0.27	96.9	467	-
Sabour	1,2,3		-	6.1	0.408	0.0148*	0.025*	-
Ranchi	2,3,6,8,9,10		-	6.4	0.54	40.6	118.0	-
Akola	1		-	7.9	0.0538	0.132*	0.382*	-
	2		-	7.8	0.0436	0.108*	0.358*	-
	5		-	7.6	0.0525	0.104*	0.415*	-
Niphad	1,2		-	8.2	0.080	32.0	200.0	-
	8		-	8.0	0.082	32.0	250.0	-
Coimbatore	1,2,5		-	8.2	0.62 (240.50)	12.5	480.5	-
Dharwar	1,2,5		56.5	7.8	0.071	0.0031*	0.0104*	-
Udaipur	1,2,3,4,		0.87	-	0.80 (0.0720)	0.0018*	0.0082*	-

L : low, M : medium; ( ) : available N; * = % in soil

Soil analysis of the experimental plots trial conducted at different centres during rabi 1983- 1984

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b) Mechanical analysis:

Location	Exp. No.	Texture	Sand %	Silt %	Clay %
New Delhi	2,6	Sandy loam	-	-	-
Durgapura	1,6,8,9,10	Sandy loam	-	-	-
Vijapur	1,2,4,6	Sandy clay loam	45.94	25.00	25.00
Faizabad	1,3,7	Silt to Silty clay loam	-	-	-
Sabour	1,2,3	Sandy loam	-	-	-
Udaipur	1,2,3,4		34.84	30.40	34.66
			Coarse sand	Fine sand	
Akola	1	2.44	16.90	27.35	45.90
	2	10.15	20.40	23.52	40.81
	5	2.35	17.80	26.40	49.90
Coimbatore	1,2	40.70	25.38	10.65	28.20
	5	30.60	37.50	20.20	21.60
Dharwar	1,2,5	5.72	15.03	27.19	52.06

Soil physical properties

CENTRE : Dharwar

Field capacity	34%
Wilting point	17%
Bulk density	1.3%

Physical composition of the soil

CENTRE : Udaipur

Bulk density (gm/cc)	1.41
Particle density (gm/cc)	2.62
Porosity (%)	40.27
Infilteration rate (cm/min)	0.32
Saturation percent	N.D.

Physical soil characteristic

CENTRE : Niphad

Particulars	Soil depth (cm)		
	0 - 15	15 - 30	30 - 60
Bulk density	1.12	1.14	-
Field capacity	34.4	34.6	33.7
Parmanent wilting point	17.64		
Available soil moisture	16.36%		

Soil moisture characteristics

CENTRE : Coimbatore (Trial No. 2)

Soil depth (cm)	F.C.	P.H.	B.D.
0 - 15	26	12	1.33
15 - 30	27	13	1.40
30 - 45	28	14	1.45
45 - 60	28	14	1.45
60 - 75	30	15	1.47
75 - 90	31	16	1.49

Soil moisture characteristics

CENTRE : Coimbatore (Trial No.5)

0 - 15	30.5	14.5	1.50
15 - 30	31.5	14.2	1.50
30 - 45	32.0	14.0	1.55
45 - 60	33.5	15.5	1.53
60 - 75	35.0	16.0	1.60
75 - 90	35.0	16.0	1.60

Available soil moisture

CENTRE : Coimbatore (Trial No.5)

	D1	D2	D3
At boot stage	80%	60%	30%
grain	60%	30%	70%
harvest	30%	70%	70%

NEW DELHI (Trial No.2)

1) Consumptive use of water under different irrigation treatments :

Treatment	CU (mm)
One irrigation	251
Two irrigations	305
Adequate (Irrigations)	390

ii) Soil moisture contents

Soil depth	Field capacity Moist (%)	Wilting point Moist (%)	Bult density (g/ml.)
0 - 15	18.1	5.5	1.49
15 - 30	18.5	5.8	1.57
30 - 60	18.4	6.1	1.60
60 - 90	18.9	6.3	1.60
90 - 120	18.7	6.5	1.62

Soil moisture characteristics

Vijapur (Trial No.2)

Particular's	Depth in cm 0-15	15 - 30	30 - 60	60 - 90
Field capacity	14.52	14.57	15.05	15.53
P.W.P.	4.05	4.25	4.75	5.00
Bulk density	1.34	1.37	1.41	1.42
Moisture percentage (at sowing)	11.82	12.23	13.40	13.73
Moisture percentage before Ist irrigation (At CRI)	11.38	10.24	10.25	11.13
Moisture percentage before IInd irrigation (At boot stage)	8.07	7.95	11.29	13.75
Moisture percentage before IIIrd irrigation (at milk stage)	8.03	7.62	9.28	12.24
At harvest				
Two irrigation	4.00	4.90	5.00	7.28
Three irrigation	4.50	5.00	5.65	7.13
Adequate irrigation	4.82	5.17	6.34	8.82

Physical Soil characteristics :

Field capacity	22.12.%	21.25%	20.7%
Permanent wilting point	6.3 %	5.6 %	5.8%
Bulk density	1.36 gm/cc	1.38gm/cc	1.40 gm/cc
Water lable	3.12 to 3.92 metre		
Rate of Infiltration	0.19 gm/cc.		