## **FOR**

# WEST BENGAL

PUBLISHED BY
DIRECTOR GENERAL OF METEOROLOGY
MAUSAM BHAVAN
LODI ROAD, NEW DELHI – 110 003
2003

#### **PREFACE**

Information on normal weather conditions and water requirement of crops is of vital importance for effective crop planning and management. From this point of view, the India-Meteorological Department had compiled Crop Weather Calendars for major cereals, pulses and oilseed crops in the country on a districtwise basis. These calendars provide numerical as well as pictorial information on factors favourable or unfavourable to crops at various stages of their growth.

As and when new strains are introduced by plant breeders and bio-technologists, agricultural practices change accordingly, the crop weather calendars tend to lose some of their relevance. A periodical updating of these calendars thus becomes necessary. This publication which is the tenth in the new series of crop weather calendars is for the state of West Bengal for Paddy, Jute, Wheat, Potato and Mustard crops.

It is hoped that the crop weather calendars would prove useful in a wide range of applications such as plant breeding, crop adaptation, drought proofing and irrigation management, ultimately resulting in maximizing the yield.

The preparation of the calendars would not have been possible without the close co-operation of the Department of Agriculture, Govt. of West Bengal, which is gratefully acknowledged. These calendars were prepared by the Division of Agricultural Meteorology, Meteorological Office, Pune. I have great pleasure in acknowledging the work done by Shri S. K. Banerjee, DDGM (Agrimet), Dr. H. P. Das, Director; Shri S. Sengupta, Meteorologist Grade I; Smt A. S. Nair, Smt A. A. Kale, Smt M. V. Kamble, Smt S. M. Shaikh, Smt V. J. Patwardhan, Smt V. B. Raskar, and Smt V. C. Thakur in preparing these calendars.

**PUNE: 411 005** 

Dated: 20th January 2003.

(R. R. KELKAR)
Director General Of Meteorology

#### Introduction

#### 1. General

The State of West Bengal is located in the northeastern part of India with northern side bounded by the Himalayan range with Sikkim, Bhutan as its neighbourhood states and southern end of the state is surrounded by the Bay of Bengal. Perhaps the distance between the sea and the Himalayan range is shortest in this part of India. In the west, the continuation of southern slope of Bihar plateau constitute some of the districts of West Bengal and the east has the international border with Bangaladesh while southeastern part is famous for being largest delta in the world i.e. Sunderbans. On the northeast, it is bordering with Assam and southwest by the state of Orissa. The Gangetic plains of West Bengal is highly fertile region and variation of altitude and its topography from south to north and east to west causes various types of severe weather phenomena in this region. The state has 18 districts covering an area of 88,752 sq. km. with population nearly 68 million (as per 1991 census) with population density of 767 per sq. km which is highest in India.

Agriculture has a pivotal role in the states's income and 75% of its population are directly or indirectly engaged in agriculture. It is one of the leading state in production of jute and rice. As per State Agricultural Department report (1999-2000) the yield/ productivity of two important crops in the state are Rice-2237 kg/ha and Wheat-2236 kg/ha respectively. The state contributes 15.8 % of total rice production of India.

## Meteorological and Agroclimatic division/zone

West Bengal has two meteorological subdivisions namely:

- a) Gangetic West Bengal consisting of districts of Bankura, Birbhum, Burdwan, Howrah, Kolkata, Hooghly, Murshidabad, East and West Midnapore, Nadia, North and South 24 Parganas, Purulia.
- b) Sub-Himalayan West Bengal consisting of districts of Coochbehar, Darjeeling, Jalpaiguri, Malda, North and South Dinajpur.

On the basis of agro-climatic condition, the state has been broadly divided into following six regions:

- a) Hill region of the north: This region comprises of the district of Darjeeling excluding Siliguri subdivision and northern fringe of Jalpaiguri district. The altitude varies from 60 meters in the foothills regions to 3700 meters above msl. The rivers namely Teesta, Torsha, Jaldhaka, Mahananda etc. originating from the Himalayas flow through this region towards south east. The average annual rainfall varies from 250 to 350cm. and the maximum temperature during summer is 24°C and the minimum temperature goes even below 0°C in winter.
- b) Tarai and teesta alluvial region: This region consists of alluvial plains of Jalpaiguri and Coochbehar and Siliguri subdivisions of Darjeeling district and Islampur subdivision of West Dinajpur district formed by rivers Teests, Torsha, Jaldhaka, Mahananda and others. The

area is chronically flood affected areas where about 20% of the lands are subjected to inundation annually. Coarse sands are deposited on the cultivated lands making it almost barren for the next few years. The annual average rainfall varies from 200 to 350 cm in this region.

- c) Red, laterite and gravelly undulating region: This region comprises of western part of Birbhum, Burdwan, Bankura, Midnapur districts and entire Purulia district. This area is undulated with ridges and valleys which represent the eastern fringe of the Vindhya ranges and are characterised by presence of low hills like Ayodhya, Susunia and others. The altitude varies from 60 to 600 meters above msl. Seasonal rivers namely Kansabati, Ajoy, Damodar, Silabati, Mayurakshi flow through these region towards southeast and ultimately discharge into the river Ganges. Here, the average annual rainfall is varied from 110 cm to 130 cm. The minimum temperature during winter is as low as 7-9°C and the maximum goes as high as 46°C in the summer.
- d) Gangetic alluvial region: This is non saline recent alluvial region mostly on the north and eastern part of the river Ganges comprising of Nadia, Part of Malda, West Dinajpur, Murshidabad, Burdwan, Hooghly and 24 Parangas districts. Topography is flat with number of basins where drainage is extremely difficult causing perpetual problem. A considerable area is subjected to inundation due to river overflow and impeded drainage condition. The average annual rainfall varies from 130 to 160 cm and maximum temperature during summer 38°C with minimum temperature varying from 10°C to 26°C during winter.
- e) Vindhya alluvial regions: This region is centrally located, comprising of western part of Murshidabad, eastern part of Birbhum and Bankura, western part of Hooghly, central part of Burdwan and Midnapur and northern part of Howrah. The soils are formed from deposits brought down mostly by river Mayurakshi, Ajoy, Damodar, Kangsabati and other rivers originating from eastern fringe of the Vindhya ranges. A considerable area is subjected to floods annually caused by impeded drainage and river overflows during rainy season. The average annual rainfall varies from 120 to 150 cm and the maximum temperature during summer is 37° C.
- f) Coastal region: The southern portion of 24 Paraganas, Howrah and Midnapur constitutes the coastal region of the state which includes numerous islands. Deposits from tidal currents in the estuarine region resulted into formation of clusters of Islands. The area is crisscrossed by numerous rivers, mainly the Ganges and their rivulets and natural creeks which are highly active due to tidal action. The vast forests known as the Sunderbans which has great biodiversity of flora and fauna, lie in this region covering an area of 4300 sq km. The average annual rainfall varies from 150 to 170 cm.

#### 2. Climate

The climate over the state is of tropical monsoon type. The average annual precipitation varies from 250 to 350 cm in hill region of north, 200 to 350 cm in Tarai, 110 to 130 cm in red laterite, 130 to 160 cm in gangetic alluvial, 120 to 150 cm in Vindhya alluvial and 150 to 170 cm in coastal alluvial regions. The minimum temperature goes even below 0°C in winter in hill region and as high as 46°C in summer in red laterite region. During winter, temperature is as low as 7 to 9°C in red, laterite region and between 10 to 26°C in Gangetic region.

#### 3. Soils

The soils in hill region of north come under the group brown forest soil. Soils are mostly sandy loam in texture. However, sandy clay loam soils are also found in same areas. Soils are porous, shallow in depth with poor water holding capacity. Red soil is in the districts of Midnapur, Bankura, Burdwan, Birbhum, Malda and West Dinajpur. Laterite and lateritic soils and gravelly soils also dominate in Midnapur, Bankura, Burdwan and Birbhum. Gangetic alluvial soils are in Nadia and Murshidabad districts. Jalpaiguri and central part of Darjeeling have terai soils.

#### 4. Temperature

In the state of West Bengal, the annual averages of mean daily temperature are between 25°C to 27°C. January is the coldest month of the year with minimum temperature of 10°C to 13°C, except for coastal areas, where they are of the order of 15°C. May is the hottest month of the year with mean daily temperatures between 30°C to 33°C. Temperatures decrease by December. April to June are the hottest period of the year.

#### 5. Land Use

About 63 % (5.56 million hectare) of the total geographical area of the state has been brought under cultivation and nearly three out of four persons in the state are directly or indirectly involved in agriculture. About 2.14 million hectare area is under irrigation which constitute about 28 % of gross cropped area under irrigation. The important crop in irrigated area is rice which shares about 80 % of the total area under irrigation. There has been substantial increase in cropping intensity which is about 140 %. In the alluvial region irrigation resources are best utilized and cropping intensity has already reached to 160 %.

#### 6. Rainfall

The annual rainfall varies widely from 150 to 160 cm in the southern districts, 130 to 140 cm in the central districts, 150 to 160 cm in Malda and West Dinajpur, 300 to 400 cm in the northern districts and 200 to 300 cm in the hill districts. June to September are the rainy months.

### 7. Potential Evapotranspiration (PE)

Potential Evapotranspiration is the water transpired from a uniform, short, green, actively growing vegetation when water is unlimited. The concept assumes that there is ample supply of water at the site of evaporation and the rate is governed by evaporating capacity of the atmosphere. The highest values of PE are over coastal belt of the state and are about 160 cms annually. In the southern districts, annual PE values are 140 to 150 cms, in Nadia to Murshidabad they are 130-140 cm while in other places they are 120-125cm.

#### 8. Cropping Pattern

In the context of increasing production, it is necessary to examine the cropping pattern from a scientific angle and find out possible alternative pattern having higher potential. The cropping pattern primarily depends on the soil and climatic factors, but the evolution of cropping pattern in course of time is the combined effect of soil, climate, food habits and requirements and economic factors.

The important crops grown in the state are Paddy (kharif, rabi and summer), Wheat, Potato, Mustard and Jute. The area under cultivation and production of these crops are given below:

**Table** 

Year	Crop	Area (lakh hectares)	Production
1996-97	Paddy	58.0	126.37 lakh tonnes
1996-97	Wheat	3.5	8.39 lakh tonnes
1998-99	Potato	2.45	60.0 lakh million tonnes
1996-97	Mustard	3.2	2.8 lakh million tonnes
1996-97	Jute	6.3	75.7 lakh bales

### 9. Crop Weather Calendars

In preparation of crop weather calendars, information collected from state agricultural departments have been analysed in relation to agro-climatic factors.

There are critical periods in the life history of a crop from the date of sowing to the date of harvesting. Sowing time is also one of no small anxiety to the farmer. He knows that a heavy shower just after sowing will wash away the seed and seedlings and depress germination considerably. Again, if after sowing is completed, a prolonged drought follows, the tender seedlings would wither away necessitating resowing. It is well known that the weather at sowing time determines even the nature and variety of the crop that the farmer decides to grow in his field. If conditions are favourable during the first phase (germination and the early vegetative growth) the crop gets a good start. Thereafter, intervals of

clear weather are required for interculture and weeding. During the period of rapid vegetative growth, the water requirement and need for sunshine for photosynthesis are maximum. Then follows the period of flowering and reproduction with little vegetative growth.

During the period of flowering and grain-formation, clear weather and minimum cloudiness are favourable. Cloudy wet weather during this period can ruin an otherwise promising crop. When the grains are forming and/or are in the milk stage, one day's hot wind can shrivel up the grains. Even after the entire season has been passed safely, the crop is not free from the danger of adverse and unexpected weather. A heavy shower of rain and hail can do incalculable damage to a standing crop ready for harvest. If warned in time, the farmer would hurry up his harvesting operations. Later, when the harvested crop is lying on the threshing floor, it is again on the mercy of any sudden shower. Here, also timely warning may help the farmer a lot.

In order to provide the farmer with an efficient weather service, it is essential that the weather forecaster is familiar with the farmer's special needs. The farmer should, on his part become familiar with the weather bulletins and learn how to interpret them. One of the function of Division of Agricultural Meteorology, Pune is to tell the farmer how the "Weather forecaster" can come to his aid and to tell the "Weather expert" on the other hand what the exact weather warning requirements of the farmers are. With this object in view, the detailed information regarding the major crops in different districts of the country, their date of sowing, the dates of commencement and duration of the important cultural operations and the important epochs in the life history of the crops during each season and their probable weather requirements have been collected from the agricultural departments in the various states.

The information collected have been condensed and represented in a pictorial form in what is called the "Crop Weather Calendars". The crop weather calendar consists of three parts. At the bottom of the calendar is shown diagramatically the life history of the crop from the date of sowing to the date of harvest and threshing. The important "phases" like sowing, germination, transplantation (in the case of rice), tillering, elongation, flowering, grain formation and harvest are also indicated. These "phases" cover certain time intervals indicated by horizontal arrows, which depend upon variations in (a) crop variety, (b) sowing dates from place to place and from year to year, and (c) in the nature of the crop itself. For ready reference the months and standard weeks are marked at the bottom of the diagram.

The middle of the calendar shows the normal weather conditions of rainfall, temperature and sunshine hours. Normal phasewise water requirement are also indicated here.

The uppermost portion of the calendar indicates the nature of the weather warnings and the periods during which they are to be issued by the forecasting office concerned.

The weather has also another indirect control over the crops. Crops are liable to attacks of various diseases and pests. The intensity of their incidence is dependent upon certain weather conditions. These have also been depicted in the diagram.

It will be obvious that these diagrams is of immense help to the weather forecaster to decide, what warnings are to be issued for a particular district during a given weather situation and during a particular phase of the crop growth. These calendars are of equal interest to the agricultural and general public as well as various departments of Government concerned with agriculture and food production.

The homogeneous districts having similar weather and soil conditions and growing the same type of crop have been clubbed together in preparing the diagrams. Information to be available from this may be demonstrated with the help of the following illustration.

#### Illustration:-

The crop weather calendars on page 1 for a group of districts viz. Malda, Murshidabad and Birbhum for non-irrigated Paddy (Kharif) crop is given as an example. The sowing period in this group of districts varies from 25<sup>th</sup> to 29<sup>th</sup> weeks (18<sup>th</sup> June to 20<sup>th</sup> July), transplanting from 28<sup>th</sup> to 34<sup>th</sup> weeks (12<sup>th</sup> July to 24<sup>th</sup> August) Vegetative from 30<sup>th</sup> to 36<sup>th</sup> weeks (25<sup>th</sup> July to 7<sup>th</sup> September) and flowering from 36<sup>th</sup> to 43<sup>rd</sup> weeks (8<sup>th</sup> September to 23<sup>rd</sup> October). Grain formation in these areas occur from 41<sup>st</sup> to 47<sup>th</sup> weeks (12<sup>th</sup> October to 20<sup>th</sup> November), while harvesting is accomplished from 44<sup>th</sup> week onwards. One of the critical phases of the crop is grain formation. During 44<sup>th</sup> week, the average rainfall recorded is 8.6 mm. The mean daily maximum and minimum temperatures are 31.1°C and 20.5°C respectively. While the average number of sunshine hours is 8.1. Rains normally in this period adversely affect the yield. Similarly drought of > 15 days exert adverse influence. Also maximum temperature of > 40°C and minimum temperature < 15°C are harmful to the crops. Warnings may be issued, if these types of adverse weather are anticipated.

Under favourable conditions of humid and hot weather, diseases like Bacterial Leaf Blight, Blast, Brownspot may appear. Pest infestations like Rice Hispa, Stem Borer, Rice Caseworm can also affect paddy if high humidity and high temperature prevail during the grain formation stage.

## **CONTENTS**

Crop	Page No	Districts	Crop	Page No	Districts
				10	Note: Manufile and 24 December (November & Courth)
Kharif/ Aman	1	Malda, Murshidabad, Birbhum	Jute	12	Nadia, Murshidabad,24 Parganas (North & South)
Paddy	2	Jalpaiguri, Coochbehar, Dinajpur		13	Jalpaiguri, Malda, Coochbehar, Dinajpur(North &
	3	Bankura, Purulia, Burdwan			South)
	4	Midnapore(East), Hoogly, Howrah		14	Burdwan, Hoogly, Howrah
	5	24 Parganas (North & South), Nadia			
			Wheat	15	Purulia, Bankura, Birbhum
Rabi/ Boro	6	Malda, Murshidabad, Birbhum			
Paddy	7	24 Parganas (North & South), Nadia	Potato	16	Burdwan, Hoogly, Howrah
	8	Howrah, Hoogly, Midnapore			
	9	Jalpaiguri, Dinajpur, Coochbehar	Mustard	17	Purulia , Birbhum, Bankura
Aus/ Summer	10	Jalpaiguri, Dinajpur, Coochbehar, Malda			
Paddy	11	Bankura, Purulia, Midnapore			
				-	

**STATE** 

**WEST BENGAL** 

**CROP**: KHARIF/AMAN PADDY

**VARIETY** : IR-36, IET- 1444, IET-4094, MTU-7029,

SOIL CLAY TO CLAY LOAM / SANDY LOAM/

																						56,IR	-42,S	ALIB	AHA	N			LATE	ERITE	E/ALL	UVIA	L			
ISTRIC <sup>7</sup>	ΓS :	MALDA, MURSHIDA	ABAD, BI	RBHUM		NO	N-IR	RIC	GAT	ED			,		DU	'RA'	rioi	N :				YS														_
	Rain			>150	MM/	DAY							M/DAY							MM/D.																_
	Duration o	of wet spell		> 50	MM F	FOR 5 I	DAYS						1 FOR 5							MM FC																_
Veather	Cloudy we	eather											Y WEA	THER						JDY W	EATH	ER														_
arnings	Drought			> 7 I	DAYS							0 DA								DAYS									-							
	High wind	's		> 40	KM/H	HR						50 KM								KM/HR																_
	Temperati	ıre		MAX	K. TEN	MP. > 3	5°C, MI	N. TE	EMP. <	15°C	М	AX. T	EMP. >	40°C,	MIN. T	EMP.	< 15°C		MAX	. TEM	P  > 40	°C, M	IN. TE	EMP. <	15°C											
	Hail Storn	7		, HAI	L STO	DRM							ГORM							STOR		(12(0)2)	CD CA	D CU	Na Na Na											
Veather c	onditions	Pests		YEL	LOW	STEM	BORER	R, RIC	E HISP	A			IIDGE,S ORM,R			,RICE						ИВОRI PH,GU			TINC	ſ						,	3			
							Y, HIGH				HI	GH H	UMIDI ING,CL	Y, HI	GH TEN							, HIGH JDY W														
favoura		Weather					OUDY V		HER				AST, B				STEM	LDOT	BLB,	BLAS	T, BRO	)WN S	POT,E	BLS, S												
icidence (	of	Diseases					OWN SE		VEATH	IFR I	IIGH HI											IGHT.S				LSE										-
pests and	diseases	Weather					ECIPITA				Н	GH T	ЕМР, Н	IGH PF	RECIPI	TATIO	ON		HIGH	TEMI	P. HIG	H PRE	CIPIT.	ATIO	1											_
Nor	mal phase	wise					159	9.4				241.	4				149.	7			1	21.3														
water	requireme	nt(mm)			`										_																			_	_	
Weekly	Rainfall(m	ım) total		52.3	60.2	2 78.5	70.5	69.4	87.2	59.3	57.9 6	.6 5	_	-	81.7		80.7	$\vdash$	27.8	11.8	9.2	8.6	-	2.5	1.0	3.8	0.4					+	+	+	+	
normal	Max. temp	o. <sup>0</sup> C		34.0	33.4	4 33.0	32.9	32.5	32.6	32.5	32.8 32	2.5 3.	2.7 32.	+	32.4	-	32.4			32.4	31.7	-	-	-		28.3				-		-	+	+	+	_
weather	Min. temp	. <sup>0</sup> C		25.3	25.4	4 25.3	25.4	25.2	25.3	25.3	25.4 2:	2	5.6 25.	2 25.2	24.9	+-	24.6		23.6		21.6	-		17.9	17.1	15.7					_		+	+	+	
	Sunshine h	hours		3.7	3.5	3.4	4.1	3.9	3.2	4.2	5.0 4	.9 4	4.7 4.9	4.7	4.4	5.8	5.2	5.8	5.9	8.0	8.6	8.1	8.0	8.3	8.0	7.8	8.3						-	+	+	_
m imp	Life histo and ean date ortant ep crop gro	s of bochs				OWI	NG	TH	RANS		TATIV ANTII		>(	VTH		F	LOV	VER				ORN		FIOR		ING										
C.	- d l -	aalta		25		27	20	20			32 3	3 2			37	30	30	40	41	42	43	44	45	46	47	48	49					-	-	+		_
Sta	Months			JUN		5 27		29 UL\	30	51	_	JGU	-	-	EPTE	-	-	-		OBE.				'EM				ECE	MBE	D					-	-

STATE

WEST BENGAL

**CROP**: KHARIF/AMAN PADDY

**VARIETY** : LOCAL,MTV-7029, IET-1444, IET-4094, MALA.

**SOIL**: CLAY, CLAY LOAM TO SANDY LOAM

IR-36,JAYA,PNR-381.IET-5656,NC-492,SADU,MASURI DISTRICTS: NON-IRRIGATED JALPAIGURI COOCHREHAR DINAIPUR DURATION . 120 150 DAVS

DISTRIC	TS:	JALPAIGURI,	СООСНВ	EHA.	R, D	INAJ	PUR		N	ON-	-IRF	RIGA	TE	D			I	DUR	ATI	ON	:	120-	-150	DA	YS														
	Rain		> 1	50 M	IM/DA	ΑY						> 2	50 MM	/DAY									>120 1	MM/DA	AY'														
	Duration	of wet spell	> 5	0MM	1 FOR	6 DA	YS					> 1	00 MM	FOR 6	DAYS								> 50 N	им FO	R 4 DA	YS													
Weather	Cloudy we	eather										CL	OUDY	WEAT	HER							(	CLOU	IDY WI	EATHE	ER													
warnings	Drought		> 1	0 DA	YS							> 1	5 DAY	S								,	> 20 D	DAYS															
	High wind	ls .	> 3	0 KM	1/HR							> 50	0 KM/F	ΗR								,	> 50 K	M/HR															
	Temperati	ire	. MA	X. TI	ЕМР.	> 40°	C. MIN	N. TEM	P. < 15°	,C		MA	X. TEN	MP. > 40	oʻC. MI	IN TEN	1P. < 1	5°C				1	MAX.	TEMP.	> 40°	C. MIN	TEMP	< 1500											
	Hail Storn	1			- 0	7						HA	IL STR	ОМ								ŀ	HAIL	STRON	1														
Weather c	conditions	Pests	YE	LLOV	W STE	ЕМ ВС	RER.	STEM	BORER					A, STE		RER. RI LDER	CE- CA	ASEWO	RM, LE	EAF RO	LLER			UTTIN				ТЕМ В	ORER.	GUNE	HI BU	G.RICE	E BUG. I	RICE					
favoura	ble for	Weather	НІС	эн на	UMID	ITY, 0	CLOUI	DY WE	ATHER			WA	RM HI	JMID C	LIMAT	ΓE								и HUM															
incide	nce of	Diseases	BL	AST.	BROV	WN SF	ОТ					BLE	B. BLA	ST, BR	OWN S	POT.ST	EM RO	OT. SHI	EATH E	LIGHT	1	E	BLB. E	BROWN	N SPOT	, SHE	тн ві	IGHT.	BLAST										
pests and	l diseases	Weather	HIG	Н ТЕ	EMP, I	HIGH	нимі	DITY,C	CLOUD	Y WEA	ATHER	WA	RM HU	JMID C	LIMAT	ΓE. CLC	UDY V	WEATH	IER			V	WARM	и HUM	ID CLI	MATE	CLOU	DY WE	ATHE	R									
Nor	mal phase	wise					93.	0	T			14.0					15	(7		T		71 1			<i></i>														
water	requireme	nt(mm)					93.	0			2	214.9					15	6.7			/	71.1			54.2	2													
Weekly	Rainfall(m	m) total	124	.0 1	158.2	131.6	151.7	7 171	R 108.	8 100	.1 82	.9 130.	.9 89	.5 99	.1 143	7.5 82	6 90	0.9 69	9.1 39	9.6	9.7	8.4	3.5	3.4	1.4	1.1	4.1				T			T	T				
	Max. temp		32.	.2 3	31.9	32.1	31.7	7 31.7	31.8	32.	6 32	7 32	2 32	.1 32	.0 31	5 31	.6 31	1.5 3	.4 3	.2 3	1.4	30.7	30.4	29.6	29.0	28.6	27.7							T					
weather	Min. temp.	<sup>0</sup> C	24.	6 2	24.5	24.7	24.6	24.4	24.7	7 25.	1 24	9 24.	8 24	7 24.	.5 24	.2 24	0 23	3.7 23	3.4 22	2.4 2	1.6	20.2	18.9	17.6	16.6	15.5	14.1		,	7									
	Sunshine h	ours	2.4	4   1	2.5	3.0	2.8	2.5	3.0	2.4	4 4.	2 4.0	3.	8 4.1	3 3	4 4.	3 4	.7 5	1 6	1 7	1.1	7.9	7.3	7.5	7.2	7.2	7.1							T					
me impo	ife histor and ean dates ortant eperoy	of ochs						RAN				1	FRO	WT	H	FI	O V	VER			IN	FOR				TIM	G												
					SOV				K			1 6	19																										
Stan	ıdard we	eks	26	1	1	00	0	30	31	32	33	34		36	37	38	30	) 40	) 41	43	2 4	3 4	4 .	45	46	47	48								-		_	-	

**STATE** 

WEST BENGAL

**CROP**: KHARIF/AMAN

**VARIETY** : MTU- 7029, IET- 1444, IET-4094,IR-36

**SOIL** SANDY LOAM TO CLAY

ALLUVIAL / LATERITE

		PADDY	PANKAJ, SWARNA. RATNA, PALMON-579
DISTRICTS:	BANKURA. PURULIA, BURDWAN	NON-IRRIGATED	<b>DURATION</b> : 110-140 DAYS

																		2	AY	U D.	40	10-1		N.	110	KA	טע						עני	11	GA	CKI	-11	UN	IN		1	VAN	RDW	A. BU	LIA.	JRUL	PURU	I. PU	KURA. F	CURA. PURULIA, BURDWAN NON-IRRIGATED DURATION: 110-140 DAY
																			/DAY	MM/I	100	>								17.	1M/DA	> 150N								′	۸/DA۱	0 MM	> 50							> 50 MM/DAY > 150MM/DAY > 100 MM/DAY
																	'S	DAY	FOR 2	MM FO	50 M	> 5							AYS	₹ 5 DA	M FOR	> 50M							YS	6 DA	1 FOR	5 MM	> 25					11	spell	spell> 25 MM FOR 6 DAYS> 50 MM FOR 5 DAYS> 50 MM FOR 2
																	2	ГНЕ	WEAT	JDY V	LOU	CL							IER	EATH'	DY WE	CLOU																		CLOUDY WEATHER CLOUDY WEAT
																			S	DAYS	15 D	> 1									AYS	>15 D/									YS	DAY	>10							>10 DAYS >15 DAYS > 15 DAYS
																			łR	KM/HF	40 K	> 4									M/HR	> 50 K																		> 50 KM/HR > 40 KM/HR
														18'C	P.<	TEMI	MIN 1	5°C.	ΔP.≥ 35	TEM	AX.	Ma				5"C	MP.<	IN.TE	C. MI	> 35"(	ТЕМР.	MAX				5"C	1P.< 1	тем	, MIN	· 35 °C.	EMP.	X. TE	MA							MAX. TEMP. > 35"C, MIN.TEMP. < 15"C MAX. TEMP. > 35"C, MIN.TEMP. < 15"C MAX. TEMP. > 3.
																			RM	STOR	AIL S	HA								И	STORN	HAIL S															T			HAIL STORM HAIL STORM
												ARE	PILL	TERP	CAT	ring	CUTT	EAR	RER. E	BOR	EM	JG. ST	Y B	. MEA	.GLF	OLLEI									H	E. GLH	IIDGI	LL M	R,GA	BORE	TEM	P.A.,S	HISE				-		S	HISPASTEM BORER.GALL MIDGE. GLH  GALL MIDGE.BPH,HISPA,LEAF ROLLER.GLH, MEALY BUG. LEAF FOLDER.STEM BORER.
*													ELL	Y SPE	DR'	ЕМР,	GH TI	Y,HI	MIDITY	HUM	GH	НІ			L	SPEI	IP.DR	H TEN	.HIGH	I.YTIC	HUMIE	HIGH I			LL	SPEL	DRY	ГЕМР	IGH T	ІТҮ.Н	UMID	т н	HIG						ther	ther HIGH HUMIDITY.HIGH TEMP,DRY SPELL HIGH HUMIDITY.HIGH TEMP,DRY SPELL HIGH HUMIDITY
		_		_	_		_					РОТ	N SP	ROW	F BR	LEA	IGHT.	BL	IEATH	T.SHE	_AST	BL	WN	AF BR	JS.LE	) VIR	UNGR	ST,T	. BLA	GHT.	'H BLI			NWC	F BRO	, LEA	IGHT	F BL	LEA	ERIAL	BACT								ases	BLAST.BACTERIAL LEAF BLIGHT, LEAF BROWN SHEATH BLIGHT, BLAST.TUNGRO VIRUS.LEAF BROWN
61-201-61											HER	WEAT	DY W	OUD	E.CL	МАТЕ	CLIM	JMID						THER	WEA	OUDY						WARM	ER	ATHE	WEA	OUDY	E,CL	MAT	D CLI	HUMII		RM A	WA				+		ther	WARM AND HUMID CLIMATE.CLOUDY WEATHER WARM AND HUMID CLIMATE,CLOUDY WEATHER WARM AND HU
																			N	RAJN	ITH	WI	Т				NG	OGGI	ER LC	WATE	RAIN.V	VITH		T			_	_			AIN	'H RA	WIT			-	+	-	iner	ther WITH RAIN WITH RAIN, WATER LOGGING WITH RAIN
																3	76.3			7	2.7	82			1.0	15				6	.07.	2				)	89.6	18											n)	189.6 207.6 151.0 82.7
TIT		$\neg$	$\top$	Г		$\top$	T	T		T		1.1	4	4.4	2.8	2	7.6	1.6	.3 1	11.3	5.0	3.9 25	+	62	-33.	56.5	72.4	88.6	0 8	48.0	63.8	66.2	59.3	8 5	54.8	76.0	0.1	1 6	64.	62.1	44.3	6 4	32.		T		+		tal	
+++	$\vdash$	$\dashv$	+	$\vdash$		+	+			+		29.6	+	30.0	0.5	+-	30.8	1.8	-	-	-	-	+	+-				-	+	-	32.4		-	+	-		-	+	-		$\rightarrow$	+	+		+		+			
		$\dashv$	+			+	+	$\vdash$		+		15.7	0 1	17.0	8.1	18	19.2	0.3	.6 20	21.6	2.5	3.1 22	1	23.	24.2	24.3	24.3	4.4	8 2	24.8	24.4	24.7	4.7	7 2	24.7	24.5	4.7	8 2	24.8	24.9	25.3	6 2	25.0		+		+			25.6 25.3 24.9 24.8 24.7 24.5 24.7 24.7 24.4 24.8 24.4 24.8 24.4 24.3 24.2 23.8 23.1 22.5 21.6 20
+++		$\dashv$	+	H		+	+	$\vdash$	 1	+		8.4	,	8.9	4	8.	8.5	8.8	4 8	8.4	.4	.3 7.	$\dagger$	5.9	6.6	4.9	5.0	5.6	5	5.4	5.3	5.2	5 1	+	4.4	4.6	1.7	2	4.1	3.8	3.6	3 :	6.8		+		$\top$			6.8 3.6 3.8 4.1 4.7 4.6 4.4 5.1 5.2 5.3 5.4 5.6 5.0 4.9 6.6 5.9 6.3 7.4 8.4 8
		+	+	$\vdash$	$\dashv$	+	+			+		1	+			+			+			+	t	T				$\dashv$			-			+			1	$\dagger$				$\dagger$			1					
												->	1	NC		707	RVE	AT		<	+																													
														10			CVE	AI																																
											To the	T	-1												_																						İ	-		
										1		1	1	1	1			N	IOI	AT	M	OR		RAI	ĞI																									GRAIN FORMATION
						-				1	1	A	88		1																																			
							-		7	r.	<b>D</b>		· Ø		-					1	1	> 0	+	NC	RI	W	FI.	+	<																					FLOWERING >
									13	5	1			18	8	A	1		4	YM	8	18				1		-																						The state of the s
									T		A	1	0		B	1	-				A &	Soo			7	8.3	. /	>			CD	VE	TI	T. A	CE	VE	-													WEGETATIVE CROWTH
									1	As	83	1		M							18	3		1	33			1	1 11	JW	JKU	VE	111	I A	GE	VE														VEGETATIVE GROWTH
										T	O	K	1		4						18	ada			de	E S					110	1																		
	0											1	y						1		3				M				T	F		,		G	ΓIN	INA	PL	NSI	RAI	TI										TRANSPLANTING
												/-	1	-					1							1					W	,		1	MA															
																			1		1			1		ŀ					W			1	V	-	+	G	IN	oW	S	T	*							SOWING
									İ																						My				13			T												
+++	+	+	+		+	+	+		+	+		17	4	46	5	44	44	3	4	42	1	0 41	4	39	38	37	36	5	3	34	33	32	1	3	30	29	8	2	27	26	2.5	2	24		+		+	+		24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 4
							_					_	_	_		_	_		_	-	_		-		- 101 700			_	_					1	-			1			_	_	-					+		
												47 ER	_	_		_	44	3	_	-	_		4		- 101 700			5 :	3:	34	33	32	>	G	7IN 30	AN7 ->	8 :	G	IN	OW 00 26	2.5	_	-							TRANSPLANTING  SOWING  OOO  OOO  SOWING

SUVARNA MASURI, SABITA, RATNA, KHITISH, LALAT, LOCAL

#### **CROP WEATHER CALENDAR**

STATE

WEST BENGAL

**CROP**: KHARIF/AMAN PADDY

VARIETY: IET-5656,MTV-7029,IET-5636,IR-36,SR-26-B,CR-1009.

**SOIL** LATERITE AND ALLUVIUM/ SANDY LOAM TO CLAY

DISTRICTS: **NON-IRRIGATED DURATION**: 140-160 DAYS MIDNAPORE(EAST), HOOGHLY, HOWRAH 100 MM/DAY > 200 MM/DAY Rain 20 MM FOR 4 DAYS 50 MM FOR 4 DAYS Duration of wet spell 25 MM FOR 3 DAYS Weather Cloudy weather CLOUDY WEATHER CLOUDY WEATHER >15 DAYS >15 DAYS warnings Drought > 10 DAYS High winds > 25 KM/HR > 25 KM/HR > 30 KM/HR MAX. TEMP. > 35°CMIN TEMP. < 10°C MAX. TEMP. > 38°C, MIN. TEMP. <12°C MAX. TEMP > 40°C, MIN. TEMP < 10°C **Temperature** HAIL STORM Hail Storm HAIL STORM LEAF ROLLER, GLH, STEM BORER, GALL GLH.STEM BORER.BPH.ECC.RICE BUG Weather conditions | Pests HISPA, STEM BORER, GLH MIDGE.HISPA.LEAF FOLDER.MEALY BUG CLOUDY WEATHER.HIGH TEMP,HIGH HUMIDITY.HEAVY CLOUDY WEATHER.HIGH TEMP,HIGH HUMIDITY.HEAVY CLOUDY WEATHER, HIGH TEMP, HIGH HUMIDITY. HEAVY favourable for Weather SHEATH BLIGHT, ROOT ROT, BLAST, BLB, SHEATH BROWN SPOT, FALSE SMUT, BLAST, SHEATH BLIGHT, NECK SHEATH BLIGHT, BLAST, BLB, BROWN SPOT, BLIGHT incidence of Diseases BLIGHT, ROOT, TUNGRO VIRUS CLOUDY AND RAINY DAYS WITH LOW NIGHT TEMP pests and diseases Weather CLOUDY AND RAINY DAYS WITH LOW NIGHT TEMP HUMIDITY Normal phase wise 72.0 115.2 182.9 192.5 251.3 water requirement(mm) Weekly Rainfall(mm) total 32.2 32.0 32.0 Max. temp.  ${}^{0}C$ 34 1 32.2 normal Min. temp. <sup>0</sup>C weather Sunshine hours HARVESTING **GRAIN FORMATION** Life history and **FLOWERING** mean dates of important epochs **VEGETATIVE GROWTH** of crop growth TRANSPLANTING **SOWING** 000 45 | 46 | 47 | 48 36 37 38 39 40 41 42 43 44 28 29 30 31 Standard weeks 32 33 34 35 21 | 22 | 23 | 24 | 25 | 26 | 27 **OCTOBER** NOVEMBER **SEPTEMBER** Months MAY JUNE JULY **AUGUST** 

WEST BENGAL

**CROP:** KHARIF/AMAN PADDY

**VARIETY** 

IET-5656. RATNA, NC-492, IET-4094. IET-1444, IR-36, IR-64, PANKAJ

SOIL SANDY LOAM/CLAY/ CLAY LOAM

**DISTRICTS**:

24 PARGANAS(NORTH & SOUTH)

**NON-IRRIGATED** 

**DURATION** 140-160 DAYS

**NADIA** > 100 MM/DAY > 120 MM/DAY >200 MM/DAY Rain > 20 MM FOR 5 DAYS > 50 MM FOR 3 DAYS > 40 MM FOR 5 DAYS Duration of wet spell **CLOUDY WEATHER** CLOUDY WEATHER Weather Cloudy weather 20 DAYS 15 DAYS 25 DAYS warnings Drought > 30 KM/HR > 45 KM/HR > 50 KM/HR High winds MAX.TEMP.>45°C MAX TEMP >45°C **Temperature** MAX. TEMP.>45°C HAIL STORM HAIL STORM Hail Storm RICE HISPA, STEM BORER, BPH, GALL MIDGE YELLOW STEM BORER, GLH BPH,ECC Weather conditions Pests CLOUDY WEATHER, HIGH HUMIDITY, HIGH CLOUDY WEATHER, HIGH CLOUDY WEATHER, HIGH favourable for Weather HUMIDITY, HIGH TEMP **HUMIDITY, HIGH TEMP** TEMP BROWN SPOT.BLB,BLAST,SHEATH SHEATH ROT, NECK BLAST, BLB, BLS **BROWN SPOT** incidence of Diseases BLIGHT CLOUDY WEATHER, HIGH CLOUDY WEATHER, HIGH HUMIDITY, HIGH CLOUDY WEATHER, HIGH HUMIDITY, HIGH TEMP pests and diseases | Weather HUMIDITY.HIGH TEMP Normal phase wise 189.7 113.0 68.6 203.4 263.6 water requirement(mm) 61.4 32.4 69.6 63.5 Weekly Rainfall(mm) total 28.6 Max. temp. <sup>0</sup>C 34.6 normal 24.8 25.6 25.2 Min. temp. <sup>0</sup>C weather 5.2 4.3 4.8 4.6 4.6 6.2 Sunshine hours HARVESTING **GRAIN FORMATION** Life history and **FLOWERING** mean dates of important epochs of crop growth **VEGETATIVE GROWTH** TRANSPLANTING **SOWING** 000 44 45 46 47 48 49 50 36 37 38 39 40 41 42 43 28 29 30 31 32 Standard weeks 24 | 25 33 34 | 35 **DECEMBER** NOVEMBER **Months** JUNE JULY **AUGUST SEPTEMBER OCTOBER** 

WEST BENGAL

CROP: RABI/BORO PADDY VARIETY: IET-4094,PNR-381

**SOIL**: CLAY TO CLAY LOAM/ALLUVIAL

DISTRICTS:

MALDA, MURSHIDABAD,

**IRRIGATED** 

**DURATION**: 110 - 140 DAYS

		BIRBHUM																																
	Rain																																	
	Duration of	of wet spell																		( -														
Weather	Cloudy we	ather												CLC	UDY	WEATI	HER																	
warnings	Drought				10 DA	AYS								12 E	DAYS							20 DA	YS											
	High wind	S																																
	Temperatu	ire			MIN.	TEMP	< 10	°C						MIN	TEM	P < 8°0	C							$P_{\rm c} < 10^{0}$										
	Hail Storn	1												HAI	L STO	RM						HAIL	STOF	RM				_						
Weather c	onditions	Pests			YELL	.ow s	TEM	BOREF	₹					GAL	L MID	GE						RICE	HISP	A										
favoura	ble for	Weather			WAR	M,HU	MID A	AND CI	LOUI	DY WE	ATH	ER		WA	RM,HU	MID A	AND C	CLOUD	Y WE	EATHE	R	WAR	M,HU	MID A	ND CLO	DUDY	WEA	THEF	₹					
incide	nce of	Diseases			BLAS	ST								BLA	ST			T <sub>i</sub>				SHEA	тн в	LIGHT										
pests and	diseases	Weather			MOIS	T,HU	MID C	LOUD	Y WI	EATH	ER			MO	IST,HL	MID C	LOUI	DY WE	ATHE	ER		MOIS	T,HU	MID CI	OUDY	WEA	THER							
	mal phase	-						,	77.8	>			112	6			10	6.2			108.	7	83	3.1										
water	requireme	nt(mm)							/ / • 0	,			112	•0			10	0.2			100.	′	0.								 	 	 	
Weekly	Rainfall(m	m) total			1.0	3.8	0.4	2.4	0.4	8.0	1.3	0.9	2.1	3.1	2.6	3.3	2.0	24.7	3.2	3.1	2.7	3.8	5.6	4.1	11.7	11.8	10.3	191					_	
normal	Max. temp	. °C			29.6	28.1	27.5	26.6	26.3	25.6	24 7	25.3	3 25.2	25.6	26.4	26.7	28.3	29.8	30.8	32.4	34.0	35.4	35.9	37.4	38.0	36.8	37.4	36.7						
	Min. temp.				17.1	15.7	14.1	13.4	12.6	12.0	11.4	11.6	11.8	12.5	12.9	12.8	14.5	15.2	16.2	17.5	18.2	19.7	20.8	22.0	22.8	23.0	23.6	23.4					-	
	Sunshine h	iours			8.0	7.9	8.4	8.0	8.0	7.7	7.6	8.4	7.9	- 7.7	7.7	8.2	7.2	8.4	8.1	7.5	8.2	8.1	7.8	8.2	8.2	7.7	7.9	§.1						
m imp	Life histor and ean dates ortant ep crop gro	s of ochs				SO		TRA	ANS	PLA					E GR			OWE	RIN		AIN	FO		HA	RVE	STIF	NG			A				
Sta	ndard w	eeks			47	-	49		51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	7	18						
200	Months		NO	VEM				ECEN			T		UAF			FEB	DII					RCH	_			RIL	_							

WEST BENGAL

**CROP**: RABI/BORO PADDY

**VARIETY** : IET-1444, IR-36, IET-4094,

IET-2815, RATNA

**SOIL** SANDY LOAM / CLAY AND CLAY

LOAM / LOAM

DISTRICTS:

24 PARAGANAS(NORTH & SOUTH),

**IRRIGATED** 

**DURATION**: 120-140 DAYS

NADIA

		NADIA	,																															 	
	Rain					> 50 M	IM/D	AY							> 100	MM/	DAY							> 50 1	MM/D	AY									
	Duration o	of wet spell				> 25 M	IM FO	OR 3 D	AYS						> 50	MM F	OR 4 I	DAY:	S					> 20 1	MM F	OR 4 I	DAYS								
Weather	Cloudy we	ather													CLO	UDY V	WEAT	HER						CLOU	JDY V	VEAT	HER								
warnings	Drought																																		
	High wind.	S				> 50 K	M/HI	2							> 40	KM/H	R							> 30 I	CM/H	R									
	Temperatu	re				MIN. T	ЕМР	P. < 10 <sup>6</sup>	,C						MIN.	TEM	P. < 10	D <sub>O</sub> C						MIN.	TEM	P. < 15	°C								
	Hail Storm														HAIL	STO	RM							HAIL	STO	RM									
Weather co	onditions	Pests				RICE I													ER, GI									CATER							
favoural	ble for	Weather				CLOU! HIGH					HIGH	HUMII	DITY.		CLOU					HIGH :	HUMI	DITY .	AND	CLOU HIGH					HIGH	HUMI	DITY	AND			
inciden	nce of	Diseases				BROW	N SP	ОТ							BRO	WN SI	POT. B	BLB,	BLAST					SHEA	TH R	OT, N	ECK	BLAST							
pests and						CLOUI					IIGH I	HUMII	OITY						WITH		HUMI	DITY		CLOU					HIGH	HUMI	DITY				
	mal phase					AND H	цон			UKE						пібн	IEMI	PEKA	ATURE			Π					EKA	IUKE							
	requiremen							76	.2				2	221.9	9				18	8.9			146.	6	10	2.0									
	Rainfall(m		$\top$			2.9	0.4	1.9	1.0	0.8	2.6	2.3	2.4	4.5	5.2	7.5	8.0	6.8	3.2	9.4	11.4	6.2	9.5	17.6	20.2	21.7	1								
	Max. temp.					27.8	27.5	26.8	26.0	26.7	26.7	27.3	28.0	28.2	29.4	30.7	31.4	32.6	5 34.1	35.0	35.1	36.2	36.6	36.2	36.1	35.8									
weather		The second secon				14.0	13.3	12.6	11.7	12.6	12.5	13.0	14.2	14.2	15.9	16.4	17.4	19.0	20.0	21.4	22.1	23.4	24.2	24.2	24.6	24.3									
Г	Sunshine h					7.5	7.3	6.9	7.6	7.6	7.8	8.2	8.0	8.2	8.4	8.8	8.4	8.0	8.8	8.3	8.5	8.7	9.1	8.4	9.3	9.2	-								
me impo	ife histor and an dates ortant eperov	of ochs						TI		NSPI	AN	VEG		ATIV	VE C	GRO			WER					RVE		NG	The second secon	a famous a f	Software of the state of the st						Ę
Stan	idard we	eks	+++	++	+	50 5	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				-		-	-	+	-
	Months					CEM			JA	NU				EBI	RUA				MA				APF												

**STATE** 

WEST BENGAL

CROP: RABI/BORO PADDY VARIETY: RATNA. IET-1444(RASI). IR-36.IET-2233

**SOIL**: SANDY LOAM TO CLAY,

ALLUVIAL / LATERITE

DISTRICTS:

HOWRAH, HOOGHLY,

**IRRIGATED** 

KITISH.SANKAR.IR-64

**DURATION**: 115-140 DAYS

DISTRIC		MIDNAPO			11121	,				AII							DO				11.	3-140	DI	10														
	Rain			> 75 M	MM / DA	AY								> 100	MM / D	ΑΥ								> 25 M	1M/DAY													
	Duration o	of wet spell		> 25 M	1M FOR	R 3 DA	Y							> 50 N	1M FOR	R 4 DA	y'S							> 20 M	IM FOR	4 DAY	r'S											
Weather	Cloudy we	ather												CLOU	DY WE	EATHE	R							CLOU	DY WEA	THE	?											
varnings	Drought			10 DA	YS									15 DA	YS									25 DA	YS													
	High wind	S		> 50 K	M/HR									> 40 K	M/HR									> 30 K	M/HR													
	Temperatu	re	1	MAX.	TEMP.	. > 35°	C. MIN	. TEMP	< 12''C					MAX.	TEMP.	> 40°°C	MIN.	ТЕМР.	< 10°°C					MAX	TEMP.	35°C	. MIN T	ЕМР.	< 15°C									
	Hail Storm													HAIL	STORM	1									STORM													
eather c	onditions	Pests	5	STEM	BORE	R, HOF	PPER	3						STEM	BORE	R									N PLAN			ЕМЕ	OREK. I	AR								
favoura	ble for	Weather	I	нот. н	HUMID	CLOU	JDY W	EATHE	R WITE	H RAIN	FALL			нот.	HUMID	,CLOU	DY WE	EATHE	R WITH	RAINF	FALL			нот. І	HUMID.(	CLOU	DY WEA	THEF	WITH	RAINE	FALL							
incide	nce of	Diseases			T, BAC BLIGH		L LEA	F BLIGI	HT, SH	EATH E	LIGHT	,BROW	'n.	BLAS	Г. ВАС	TERIAI	L LEAF	BLIG	НТ					BLAST	г, васт	ERIAI	LEAF	BLIGH	HT, NEC	K BLA	AST							
pests and	diseases	Weather	ŀ	н,тон	IUMID.	. CLOU	JDY W	EATHE	R WITH	H RAIN	FALL.	LOW T	ЕМР	HOT.H TEMP			OY WE.	ATHER	WITH	RAINF.	ALL.L	OII.			HUMID, WIND, H			THE	R WITH	RAIN	FALL.	LOW T	ЕМР.					
	mal phase requiremen										7	5.8				20	0.9					161.	2		1	12.	4	89	0.4									
Weekly	Rainfall(m	m) total		9.0	13.4	3.1	0.8	3.7	3.0	6.2	0.6	2.9	1.0	0.1	2.7	8.4	4.2	6.1	7.2	8.2	8.3	5.4	3.3	6.6	15.0	8.3	7.5	14.3	17.4	20.5	24.4	26.7						
normal	Max. temp.	<sup>0</sup> C		31	30	29.9	29.4	28.4	27.6	26.8	26.7	26.0	25.2	25.9	26.4	26.8	27.4	27.4	28.8	30.0	30.8	31.2	32.9	34.2	33.9	35	35.4	34.7	34.9	34.8	34.9	34.9						
weather	Min. temp.	<sup>0</sup> С		21	19.7	18.5	17.3	15.6	14.2	13.9	13.2	12.7	11.9	12.6	17.3	13.5	14.7	14.5	16.4	16.7	17.9	19.4	20.0	21.9	22.6	23.5	24.3	24.3	24.8	24.6	24.8	25.2						
	Sunshine h	ours		8.1	8.3	8.2	7.7	77	8.2	8.0	7.8	7.3	8.3	8.1	8.5	9.2	7.8	8.1	8.0	8.6	9.0	7.8	8.5	8 1	8.1	8.3	8.5	8.7	9.2	9.0	8.1	8.8						
me	ife histor and ean dates ortant ep erop grov	of ochs						50	WIN	G	TR	ANS		VEG	->	TIV	EG	ROY		>	WI	GRERIN		FO	RMA	ATI		RV	EST	Z Company	CO CONTRACTOR OF THE CONTRACTO	N Company	286					
Star	ndard we	eks		44	45	46	47		49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		+	+	+	+	$\dashv$
	Months				OV		_			ECE			I	NU					JAF		Í		ARC				APR	_			MA							

STATE

WEST BENGAL

**CROP**: RABI/BORO PADDY

**VARIETY** : IET-4094, PNR-381, IR-36, IET-6223

SOIL: CLAY TO CLAY LOAM

DISTRICTS:

JALPAIGURI, DINAJPUR,

**IRRIGATED** 

**DURATION**: 120-140 DAYS

COOCHBEHAR > 25 MM/DAY > 100 MM/DAY > 75 MM/DAY Rain > 20 MM FOR 4 DAYS > 50 MM FOR 4 DAYS > 25 MM FOR 4 DAYS Duration of wet spell CLOUDY WEATHER CLOUDY WEATHER Cloudy weather Weather > 25 DAYS > 15 DAYS > 10 DAYS warnings Drought > 30 KM/HR > 40 KM/HR > 50 KM/HR High winds MIN. TEMP.  $< 10^{\circ}$ C MIN. TEMP. < 10°C MIN. TEMP < 7°C **Temperature** HAIL STORM HAIL STORM Hail Storm RICE HISPA YELLOW STEM BORER GALL MIDGE Weather conditions | Pests MOIST HUMID, CLOUDY WEATHER MOIST HUMID, CLOUDY WEATHER MOIST HUMID, CLOUDY WEATHER favourable for Weather SHEATH BLIGHT BLAST, BROWN SPOT BLAST Diseases incidence of MOIST HUMID, CLOUDY WEATHER MOIST HUMID, CLOUDY WEATHER MOIST HUMID, CLOUDY WEATHER pests and diseases | Weather 111.0 229.2 142.7 Normal phase wise 111.3 water requirement(mm) Rainfall(mm) total Weekly `24.6 24.7 24.2 24.0 Max. temp. <sup>0</sup>C normal 10.4 10.7 weather Min. temp. <sup>0</sup>C 6.6 6.8 7.2 7.2 Sunshine hours HARVESTING GRAIN FORMATION Life history **FLOWERING** and mean dates of important epochs VEGETATIVE GROWTH of crop growth TRANSPLANTING SOWING 17 18 19 15 16 8 9 10 3 6 47 48 4 49 | 50 | 51 | 52 46 44 45 Standard weeks **FEBRUARY** MARCH **APRIL** JANUARY

**DECEMBER** 

NOVEMBER

**Months** 

STATE

WEST BENGAL

**CROP**: AUS/SUMMER PADDY

VARIETY: PARIJAT, IET-4094, IET-1444. IR-36, BAGUNBICH.

DULAR, KAJALI, IET-2233

**SOIL**: SANDY LOAM,

CLAY/ CLAY LOAM

**DISTRICTS**:

JALPAIGURI, DINAJPUR,

**NON-IRRIGATED** 

**DURATION**: 110-140 DAYS

COOCHBEHAR MAIDA

		COOCHBI	HAR, M	ALD	)A																													 		 
	Rain					> 10)	0 MM D	ΛY						> 150 N	MM : DAY						> 100 N	M/DAY														
	Duration	of wet spell				> 5()	ММ ГОГ	4 DAYS	S					> 50 M	M FOR 6	DAYS					> 50 M	I FOR 4	DAYS												,	
Weather	Cloudy w	eather				CLO	UDY WE	TAHER						CLOUI	DY WETA	HER					CLOUT	Y WETA	HER													
varnings	Drought					> 10	DAYS							> 15 D/	AYS						> 20 D/	YS														
	High wind	ds				> 5()	KM/HR							> 40 KM	MHR						> 30 KM	1 HR														
	Temperat	ure				MA	X. TEMP.	> 4() <sup>()</sup> (`						MAX.	TEMP > 4	10°C					MAX. T	EMP. > 4	0°C													
	Hail Stori	n				HAI	LSTORM							HAILS	TORM						HAILS	ORM														
Weather c	conditions	Pests				YEL	LOWST	EM BORI	ER					GALL! NEMA		GUNDHI	BUG, STE	M BORE	R.		RICE H	ISPA														
favoura	able for	Weather					RM AND H TEMPE			THER W	VITH			WARM	AND CL	OUDY V	EATHER				WARM	AND CL	OUDY WI	EATHER												
incide	ence of	Diseases				BLA	ST							BLAST	BLB, B	ROWN S	TOT				SHEAT	H BLIGH	T. NECK	BLAST												
ests and	diseases	Weather					RM AND				VITH				I AND CL		EATHER MIDITY	WITH					OUDY WI HIGH HU?		WITH											
	rmal phase	wise					0.3	2	T			20	1.2				17	6.9			12	3.5			91.0	)										
	requirem						92	.3				20	4.3				1 /	0.9			13	3.3			71.0	,										
	Rainfall(n				T	3.	6 2.	8 3	3.6	6.3	10.1	7.4	11.8	30.0	37.8	38.4	46.9	51.5	52.4	83.5	93 6	109.5	101.6	106.3	139.9	113.0										
	Max. temp					29.	.1 30	.3 31	1.6	32.8	33.0	34.2	34.4	33.4	33 7	32.8	33.2	33.1	33.6	33.5	33.1	32.8	32 7	37.6	32.1	32.4										
	Min. temp					14.	.2 15	.2 16	6.1	17.4	18.8	19.9	20.4	20.9	21.6	21.5	22.1	22.7	23.3	23.7	23.9	24.3	24.5	24.9	24.7	24.9		1								
	Sunshine					7.	1 7.	2 7.	7.5	7.4	7.2	7.3	6.9	6.5	6.5	6.5	5.9	6.0	6.1	5.5	4.1	3.1	3.4	2.7	2.7	3.1										
m imp	Life histo and lean date lortant e crop gro	s of oochs									V	ÆG.	ETA	TIV	E G	RO	FI	_>	VER)		N I	FOR	F		VES	TIM	IG	College State of	Colons of the Co	A Lander		e & & &				
							1	1							_	4				1					8.1	1			1	1	1	1	1			
Sta	ındard w	eeks	6	7	8	9	10	) 1			WIN  00  13		15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							

WEST BENGAL

**CROP**: AUS/SUMMER PADDY

**VARIETY** : IET-1444, IET-4786, IR-36

**SOIL:** LATERITE AND ALLUVIAL

DISTRICTS:

BANKURA, PURULIA,

**NON-IRRIGATED** 

**DURATION**: 115-140 DAYS

MIDNAPORE

		MIDNAPO	DRE																																				
	Rain									>	• 100 MMT	DAY							> 150 M	M/DAY								> 150 M	IM DAY										
	Duration o	of wet spell								>	• 60 MM F	OR 3 D/	<b>AY</b> S						> 80 MN	1 FOR 3 I	DAYS							> 100 M	M FOR 2	DAYS									
Weather	Cloudy we	ather																																					
warnings	Drought									>	· 10 DAYS								> 15 DA	YS								> 25 DA	YS										
	High wind.	S																																					
	Temperatu	re								N	илх. тем	P > 42b	C. MIN	TEMP <	298€				MAX. T	EMP > 4:	2 <sup>®</sup> €. MIN	TEM₱ <	15°C					MAX T	EMP > 40	°C. MIN	TEMP. < 1	15°C							
	Hail Storm	1					,																																
Weather c		T									IISPA. WH				BROW?	S PLANT			STEM B	ORER, R	ICE HISP	A. LEAF	ROLLER					STEM B	ORER. HI	SPA.LE.	AF SPOT, G	JUNDHI	BUG. <b>Ecc</b>	5					
favoura	ble for	Weather								R	AINFALL	WITH	LOW TE	MPERA'	ruri-													нібн н	UMIDITY	, DRY S	PELI.								
incide		Diseases									LAST, BR	OWN S	РОТ. НЕ	ELMINTI	IOSPORII	M. BLS	FOOT		LEAF SI	НЕАТН. 1	BLAST, B	ROWN S	POT. HEL	MINTHO	SPORIUM	1. BLB		BLAST,	LEAF SH	ЕАТН, Е	ROWN SPO	ОТ, НЕГ	MINTHOS	SPORIUM	1, BLS				
	diseases									R	AINFALL EMPERAT		SSH. HIC	ЭН НСМ	IDITY. F/	MI OF N	IGHT		RAINFA		SSH. HI	GH HUM	IDITY. FA	LL OF N	IGHT				LL. LOW	SSH. HI	GH HUMII	DITY. FA	LL OF NIC	GH1					
	mal phase									T									TEMPE	- Trends										_									
	requiremen										15	53.9				28	5.2					196.	9			12.	3.1		61	.8									
	Rainfall(m			П	T	Т				$\dashv$	17.0 2	21.1	14.9	49.6	40.2	59.6	66.5	68.0	63.8	65.3	59.2	71.7	68.1	62.2	46.7	102.9	64.6	62.8	35.7	72.3			Т				T	T	
	Max. temp.				$\rightarrow$	$\dashv$				-+	-	-	37.4	36.4	35.6	34.5	33.3	33.0	32.3	32.2	32 4	32.0	31.9	31.9	32.2	31.8	32.1	32.0	32.5	32.2					1		$\dashv$	$\dashv$	
	Min. temp.				$\rightarrow$					$\dashv$	25.2 2	5.7	26.4	25.8	25.8	25.5	25.2	25.1	24.9	24.9	25.0	24.9	24.9	24.8	25.1	24.6	24.7	24.6	24.6	24.2					$\dashv$			$\dashv$	$\top$
	Sunshine h				$\rightarrow$	$\dashv$				-	_	8.8	8.1	7.5	7.3	3 5	3.7	4.3	4.8	4.5	47	51	5.1	5.7	5.2	5.3	5.2	5.1	7.2	₿.0					$\dashv$	1	$\top$	$\top$	十
me impe	ife histor and ean dates ortant ep erop grov	of ochs											WIN		ANS	PLA	NTI	EGE	TAT	IVE	GR	OW	>	) M	ERIN		ARV		TIN	No feet and the second	a de la companya de l	So the same							
Star	ndard we	eks		13	14	15	16	17	18	19 2	20 2	70 1	22		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39				+	+			+	
Stai	Months	VALU		13		PRIL		1 /	10		AY	1 .	7-1	43	JUI		20	- /	JUI		50	71		GU:		221			MBE										

**WEST BENGAL** 

CROP: JUTE

**VARIETY** : JRO-524, JRO-7835, JRO-632

SOIL: SANDY LOAM

**DISTRICTS**:

NADIA, MURSHIDABAD,

**NON-IRRIGATED** 

**DURATION:** 110-115 DAYS

**CLAY LOAM** 

24 PARGANAS (NORTH & SOUTH) > 75 MM / DAY Rain > 20 MM FOR 30 DAYS > 10 MM FOR 30 DAYS > 5 MM FOR 30 DAYS Duration of wet spell **CLOUDY WEATHER** CLOUDY WEATHER Weather Cloudy weather > 20 DAYS > 15 DAYS > 25 DAYS warnings Drought > 40 KM/HR > 40 KM/HR > 50 KM/HR High winds MAX. TEMP. > 45°C MAX. TEMP. > 45°C MAX. TEMP. > 45°C, MIN. TEMP. < 25°C **Temperature** HAIL STORM HAIL STORM HAIL STORM Hail Storm BPH, EAR CUTTING CATERPILLAR, MITE, HAIRY CATER YELLOW STEM BORER, GLH, MITE. SEMILOOPER RICE HISPA, JUTE APION, MOLE CRICKET, MITE Weather conditions Pests PILLAR, WEEVIL HAIRY CATER PILLAR, STEM WEEVIL (APION) **SEMILOOPER** HIGH TEMP., HIGH HUMIDITY, CLOUDINESS HIGH TEMP., HIGH HUMIDITY, CLOUDINESS HIGH TEMP., HIGH HUMIDITY, CLOUDINESS favourable for Weather STEM ROT, NEMATODE, BROWN SPOT, BLB, BLAST STEM ROT, NEMATODE, SHEATH BLIGHT, NECK BLIGHT BROWN SPOT, STEM ROT incidence of Diseases CLOUDY WEATHER WITH HIGH RAINFALL, HIGH TEMP. CLOUDY WEATHER WITH HIGH RAINFALL, HIGH TEMP.. CLOUDY WEATHER WITH HIGH RAINFALL, HIGH pests and diseases | Weather HIGH HUMIDITY TEMP., HIGH HUMIDITY Normal phase wise 120.9 96.0 207.7 310.1 water requirement(mm) Weekly 18.4 Rainfall(mm) total 32.9 32.8 32.8 33.1 33.2 Max. temp.  ${}^{0}C$ normal 23.4 22.9 23.7 24.2 24.0 24.2 25.0 25.4 25.4 25.5 25.4 25.2 25.1 25.1 Min. temp. <sup>0</sup>C weather 3.8 3.7 4.2 4.5 4.7 4.3 3.8 3.9 4.2 4.5 8.2 3.8 Sunshine hours HARVESTING Life history and mean dates of **MATURITY** important epochs of crop growth **VEGETATIVE GROWTH SOWING** 068 29 30 31 32 33 34 35 36 23 | 24 | 25 | 26 | 27 | 28 Standard weeks 10 11 12 13 14 16 18 19 | 20 | 21 22 15 **AUGUST** JULY **MARCH APRIL** MAY JUNE

Months

**STATE** 

WEST BENGAL

CROP: JUTE

VARIETY: JRO-524, JRO-632, JRC-212, JRC-878 SOIL: SANDY LOAM/

JRO-7835, JRC-321

CLAY LOAM

**DISTRICTS**:

JALPAIGURI, MALDA, COOCHBEHAR,

**NON-IRRIGATED** 

**DURATION**: 110-125 DAYS

DINAIPUR (NORTH & SOUTH)

	Rain	DINAJPUI						> 10	0 MM/D	DAY						> 150 N	MM/DA	Y				>	> 150 MM	/DAY										
	Duration o	f wet spell						> 80	MM FC	)R 2 D/	AYS					> 125 N	мм го	R 4 DA	YS			>	> 150 MM	FOR 3	DAYS									
Weather	Cloudy we	ather																																
varnings	Drought							> 10	DAYS						>	> 15 D.	AYS					>	> 20 DAY	S										
	High wind	5						40 K	M/HR						>	> 40 K	M/HR					>	> 40 KM/l	HR .										
	Temperatu	re		- 6				MAX	. TEMI	P. > 45°	C. MIN	I. TEMP	< 24°C.		1	MAX.	TEMP.	> 45 <sup>0c</sup>				N	MAX. TE	MP. > 4	5°C									
	Hail Storn							HAII	STOR	М							STORM					ŀ	HAIL STO	RM										
Weather c	onditions	Pests						JUTE	E SEMII	LOOPE	R. LEA	F ROLL	ER						AR.LEA ER.MIT		ON	,	YELLOW	MITE,	APION									
favoura	ble for	Weather						DRO	UGHT.	WARM	I,MOIS	T AND I	IUMID		1	WARN	и, MOIS	ST AND	HUMII	D		\	VARM. N	10IST A	AND HU	MID								
incide	nce of	Diseases						SEEI	DLING	BLIGH	T, DAN	IPING C	FF		5	STEM	ROT. R	OOT R	ОТ			(	COLLAR	ROT, R	OOT RC	T, STEN	I ROT							
pests and	diseases	Weather							ST. HUI H HIGH			ON. RA	INFALL	ALON		HIGH I		ALL. M	10IST A	ND HU	IMID		HIGH RA		, MOIS	AND H	UMID							
	mal phase									T											1(0	2			120.0									
	requireme										1	61.4				289	9.5				160	.2			120.9									
	Rainfall(m		T	$\top$	Т	T	T	2.8	3.5	6.3	10.	7.4	11.8	30.0	32.8	38.4	46.9	51.5	52.4	83.5	93.6	109.5	101.4 10	4.3 13	9.9 113	.0 133.	5 152.9	97.4						
	Max. temp		T			$\neg$		30.3	31.6	32.8	33.0	34.2	34.4	33.4	33.7	32.8	33.5	33.5	33.6	33.5	33.1	32.8	32.5 3:	2.5 32	2.1 32.	4 32.0	31.9	31.9						
	Min. temp.		T		$\neg$		$\top$	15.2	16.1	17.4	18.8	19.9	20.4	21.0	21.6	16.3	22.1	22.7	23.3	23.7	24.0	24.3	24.5 2	1.9 24	1.7 25.	0 24.8	24.7	24.9						
	Sunshine h							7.2	7.5	7.4	7.2	7.3	6.9	6.5	6.5	6.5	5.9	6.0	6.0	5.5	4.1	3.1	3.4 2	.7 2	.7 3.	3.0	2.6	3.1						
me imp	aife histor and ean dates ortant ep crop grov	of ochs								SO	WIN	NG.	VEC	SET.	ATIV	E G	GRO	WTI	H		->	MA	TUR	ITY	HAI		STIN	1						
			 - 1			- 1				1	BB				BIK	1							H											
Sta	ndard we	eks	+	1	+		+	9 10	11	12		14	15	16	17	18	19	20	21	22	23	24	25 2	6 2	7 28	29	30	31			$\dashv$	+	+	

**STATE** 

WEST BENGAL

CROP: JUTE

VARIETY: JRO-524, JRO-632, JRC-212, JRC-878 SOIL: SANDY LOAM/

JRO-7835, JRC-321

CLAY LOAM

DISTRICTS:

JALPAIGURI, MALDA, COOCHBEHAR,

**NON-IRRIGATED** 

**DURATION**: 110-125 DAYS

DINAJPUR (NORTH & SOUTH)

	Rain	DINAJPUI						> 100	MM/D	AY						> 150	MM/D	ΛΥ					> 150 M	M/DA	Y										
		of wet spell						> 80 M	им го	R 2 DA	YS				-	> 125	MM FC	R 4 DA	YS				> 150 M	M FO	R 3 DA	'S								, ,	
Veather	Cloudy we																																		
varnings	Drought							> 10 D	AYS							> 15 [	DAYS						> 20 DA	YS											
	High wind	!s						40 KM	I/HR							> 40 K	M/HR						> 40 KM	1/HR											
	Temperatu	ire						MAX.	ТЕМР	. > 45°	C, MIN	TEM	2 < 24°C			MAX.	ТЕМР	> 45 <sup>(x)</sup>					MAX. 1	EMP.	> 45°C										_
	Hail Storm	n						HAIL	STORM	М						HAIL	STORN	1					HAIL S	ГОRМ											_
Veather c	conditions	Pests						JUTE	SEMIL	OOPE	R. LEA	F ROLI	.ER						AR.LEA ER.MIT		)N		YELLO	w mit	E, API	N									
favoura	able for	Weather						DROU	GHT.V	VARM	MOIS.	AND	HUMID			WAR	м, моі	ST AND	HUMII	)			WARM	MOIS	T AND	HUMI	D								
incide	ence of	Diseases						SEEDI	LING E	BLIGH	r, dan	IPING (	)FF			STEM	ROT, I	OOT R	ОТ				COLLA	R ROT	, ROOT	ROT.	STEM	ROT							
nests and	d diseases	Weather							r. Hun High			ON. R	INFAL	L ALO	NG	HIGH		ALL. M	IOIST A	ND HU	MID		HIGH R		LL, MO	IST A	ND HU	MID							
	rmal phase							******	mon	T				1.							4.00				12/										
	requireme										1	61.4				28	9.5				160	).2			120	1.9									
Weekly	Rainfall(m		T	T	T	T		2.8	3.5	6.3	10.	7.4	11.8	30.0	32.8	38.4	46.9	51.5	52.4	83.5	93.6	109.5	101.4	104.3	139.9	113.0	133.5	152.9	97.4						
	Max. temp		$\top$	十	$\top$			30.3	31.6	32.8	33.0	34.2	34.4	33.4	33.7	32.8	33.5	33.5	33.6	33.5	33.1	32.8	32.5	32.5	32.1	32.4	32.0	31.9	31.9			-			
	Min. temp.		+					15.2	16.1	17.4	18.8	19.9	20.4	21.0	21.6	16.3	22.1	22.7	23.3	23.7	24.0	24.3	24.5	24.9	24.7	25.0	24.8	24.7	24.9						
	Sunshine h							7.2	7.5	7.4	7.2	7.3	6.9	6.5	6.5	6.5	5.9	6.0	6.0	5.5	4.1	3.1	3.4	2.7	2.7	3.1	3.0	2.6	3.1						
me	Life histor and ean dates												,									MA	ATU	RIT		AR'	VEST	FIN	,						
of	ortant ep crop grov	ochs wth								1	WIN	IG	VEO	GET	ATI	VE (	GRO	WT	н		>		10 mg		2										
of	ortant ep crop grov	wth					9	10	11	1	DA DA		VEO	<b>GET</b>	ATI	VE (	<b>GRO</b>			22	23	24	25	26	27	28	29	30	31						

SOIL SANDY LOAM/CLAY LOAM **VARIETY** : JRO-632, JRO-524, JRO-7835, JRO-878 CROP: JUTE **STATE WEST BENGAL** LATERITE **DURATION:** 110-125 DAYS BURDWAN, HOOGHLY, HOWRAH **NON-IRRIGATED** DISTRICTS: Rain > 100 MM FOR 3 DAYS > 25 MM FOR 2 DAYS > 50 MM FOR 3 DAYS Duration of wet spell CLOUDY WEATHER Weather Cloudy weather > 15 DAYS > 25 DAYS >10 DAYS warnings Drought > 35 KM/HR > 40 KM/HR > 35 KM/HR High winds MAX. TEMP.  $> 45^{\circ}$ C, MIN. TEMP.  $< 20^{\circ}$ C MAX. TEMP. > 45°C MAX. TEMP > 45°C **Temperature** HAIL STORM Hail Storm HAIRY CATERPILLAR, SEMILOOPER, JUTE APION, HAIRY CATERPILLAR. JUTE APION, JUTE WEEVIL SEMILOOPER, CATERPILLAR Weather conditions | Pests LIGHT RAINFALL, DRY AND HOT WEATHER WITH LIGHT RAINFALL, DRY AND HOT WEATHER WITH DRY WEATHER WITH CLEAR SKY favourable for Weather CLOUDINESS STEM ROT BACTERIAL WILT, STEM ROT BACTERIAL WILT incidence of Diseases HOT HUMID ALONGWITH WARM SPELL OF HOT HUMID ALONGWITH WARM SPELL OF CLOUDINESS DRY SPELL CLOUDINESS pests and diseases Weather Normal phase wise 103.0 178.6 209.7 326.1 water requirement(mm) 82.0 70.5 62.8 61.2 8.0 26.3 Rainfall(mm) total Weekly 32.6 35.8 36.4 36.6 36.7 36.4 36.6 36.6 36.8 Max. temp. <sup>0</sup>C normal 25.3 25.3 25.5 25.7 25.4 25.3 25.4 24.1 25.3 23.1 Min. temp. °C weather 4.3 4.5 4.4 4.9 4.3 4.0 6.2 4.9 4.4 4.2 7.5 8.5 8.8 9.1 8.2 8.8 Sunshine hours HARVESTING Life history and **MATURITY** mean dates of important epochs of crop growth

**SOWING** 

OBB

16

**APRIL** 

19

MAY

20 21

14 15

**VEGETATIVE GROWTH** 

24 25 26 27

JUNE

JULY

28 29 30 31 32 33 34 35

AUGUST

36

SEPTEMBER

Standard weeks

Months

WEST BENGAL

**CROP**: WHEAT

VARIETY : SONALIKA

**SOIL** LATERITE AND ALLUVIAL

DISTRICTS:

PURULIA, BANKURA, BIRBHUM

IRRIGATED

**DURATION**: 115-120 DAYS

DISTRIC	TS:	<b>PURULIA</b>	, BA	NKI	JRA	, BII	RBH	HUM				IRI	RIG	ATE	D					DU	RA	LIO	N :	115	-120	DA'	YS												
	Rain																								ANY R	AIN											40,604.00		
	Duration o	of wet spell							50 N	им FO	R 1 D	AY					50 M	M FOI	R 2 DA	YS	*																		
Weather	Cloudy we	ather															CLO	JDY V	VEAT	HER																			
warnings	Drought								> 15	DAYS							> 20 ]	DAYS							> 25 D	AYS													
	High wind	S																																					
	Temperatu	re							MAX	(.TEM	P. > 32	2°C, M	IN. TE	.MP.<1	0°C		MAX	TEM	[P.> 30	°C. M	IN T	EMP.	<10 <sup>0</sup> C		MAX.1	ГЕМР	> 350	С, МП	N. TEN	1P.<1	0°C								
	Hail Storm								HAJI	STO	RM						HAIL	STOF	RM						HAIL S	STOR	М												*
Weather (	conditions	Pests							TER	MITE							TERM	MITE																					
favoura	ble for	Weather																																					
incide	nce of	Diseases							SEEI	DLING	BLIG	НТ					ALTE	ERNAI	RIA, I	EAF	BLIGH	T																	
pests and	l diseases	Weather							PROI	LONG	ED RA	AIN W	тн н	IGH H	UMID	ITY	PROL	ONG	ED RA	IN W	ІТН Н	IGH F	IUMID	ITY															
Noi	mal phase	wise									26.4	1			13	4.9					112.	3			25.3														
water	requireme	nt(mm)									20	_			13	7.7					112.				20.0														
Weekly	Rainfall(m	m) total						2.0	3.9	0.8	2.7	0.2	3.8	3.8	0.8	1.8	3.8	5.9	5.3	6.5	3.9	7.2	3.7	3.4	5.6	8.4	5.1	5.8	11.9	9.3	14.9							_	
normal	Max. temp.	<sup>0</sup> C						29.3	27.7	26.8	26.2	25.9	25.4	25.0	25.7	25.8	26.2	26.8	26.7	28.7	30.2	31.2	32.2	34.2	35.9	36.4	37.7	38.5	38.3	38.8	38.6							_	
weather	Min. temp.	<sup>0</sup> C						16.4	15.0	13.1	12.8	11.9	11.3	10.7	7.9	11.7	12.3	12.9	12.8	14.7	15.4	16.4	17.6	18.6	20.4	21.3	22.7	23.5	23.5	24.3	24.2		2		1				
	Sunshine h	ours						8.3	8.3	8.8	8.3	8.4	8.0	7.8	8.6	8.9	8.9	8.1	8.5	8.3	8.8	8.6	7.5	8.5	8.4	8.2	8.4	8.8	84	8.7	8.9							1	_
me imp	Life histor and ean dates ortant ep crop grov	of ochs								GEI WIN	RMI	GET NAT		<b>-&gt;</b>	GRO	WT	Н	F	LOW		GRA		FOR	MA	FION	_	VES	TIN	G										
Sta	ndard we	eks			1.			48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13 1	14	15	16	17	18	19	+		_	+	+	+	+	+
			$\vdash$						_	ECE	-				AR			FEB				_	MAF			_	APR				MAY	<del>,</del>							

**STATE** 

WEST BENGAL

**CROP**: POTATO

VARIETY: KUFRI-JYOTI, KUFRI-CHANDRAMUKHI,

K-BADSA,K-22,S-PUNJAB

**SOIL** SANDY LOAM/

CLAY LOAM/LATERITE

**DURATION**: 80-120 DAYS BURDWAN HOOGHLY HOWRAH - IRRIGATED

ISTRIC	Rain	BURDWAN	,							25 MM/I							2	> 100 M	M/DA`	Y						- 2	25 M	M/DAY								
		of wet spell							>	25 MM F	FOR 2 D	AYS					2	> 50 MN	1 FOR	3 DAYS							> 25 N	IM FOR	3 DA	YS						
Veather	Cloudy we																(	CLOUD	Y WEA	ATHER						(	CLOUI	DY WEA	ATHER	2						
varnings	Drought								>	10 DAY	S						;	> 15 DA	YS							>	15 D	AYS								
	High wind	2									,						;	> 30 KM	l/HR								30 KJ	M/HR								
									М	AX. TEN	MP. > 25	°C					!	MAX. T	EMP >	> 20°C. N	AIN. T	EMP. <1	р°С,			1	MAX.	TEMP. >	> 25°C.	MIN.	ГЕМР.	< 10°C.				
	Temperati Hail Storn			Y,	4				Н	AIL STO	RM						I	HAIL S	ORM							1	HAIL S	STORM								
										ERMITE		ORM									BEETI	LES, LEA	F EAT	ING CA	TER	(	CUTW	ORM. B	ORER	, CRIC	KET CL	JTWOR	RM			
Veather o	conditions	Pests											ECC 41	DNORM	A.L. 111/	CUTE		PILLAR			NECC	ADNOD	MAI F	лен т	EMP		:OGG'	Y AND (	CLOU	DINESS	S. ABNO	ORMAL	L HIGH	TEMP.		
favoura	able for	Weather													AL HIC	JH IEN						ABNOR		-									SCURF			
incide	ence of	Diseases												M WILT	H NIC	UT TE						BLIGHT			11			COAL R			ATHER	R,HIGH	NIGHT			
pests and	d diseases	Weather								ND HIGI					II NIG	INI IE.	IVIT. I	TEMP.	AND H	IGH HU	MIDIT	Y.RAIN	FALL				ГЕМР.	AND H	IGH H	UMIDI	TY,RAI	INFALI	L,DEW			
	rmal phase									38	3.1				13	5.9					80	.9		6	2.7											
Weekly	Rainfall(n		$\overline{}$	T	$\top$			T	+	2.7 0	.7 4	1 1	5 5	5.5 0.	6 3	3.4 1	1.9	0.1	1.7	8.8	4.6	8.5	6.3	6.6	6.8	5.2	3.6	6.1								
	Max. temp		+	+	+	+	$\vdash$	$\dashv$	$\rightarrow$	0.3 29	-	.9 27	.9 2	7.0 26	.9 20	6.3 2	25.6	26.2	26.6	27.1	27.5	27.6	29.2	30.6	31.3	32.1	33.6	35.1								
	Min. temp		_	+	+		$\vdash$		-	-	5.9 15	1 13	.6 1	3.1 12	.3 1	1.9 1	1.3	12.0	12.2	12.9	13.8	13.5	15.4	15.9	17.2	18.6	19.2	21.2								
veather	Sunshine i			+	+				1	8.1 7	.8 7	9 8	.3 7	7.7 7.	6 7	7.4 8	8.2	8.1	8.6	9.0	8.2	8.3	8.5	8.7	8.9	8.2	8.7	8.1								
m imp	Life histo and ean date ortant ep crop gro	s of oochs								S	SOW.			ETAT	0	EGI				R FC	)RN	HATI			FIN	G &	MA	ATU		Y						
											OF					W.	×					1		4		1		1 6								
Sta	ındard w	eeks		100	+			+		16 4	-		9 5	0 5	1 5	ET /	1	2	3	4	5	6	7	8	9	10	11	12								

WEST BENGAL

CROP: MUSTARD VARIETY : B-9

SOIL LATERITE AND ALLUVIAL

ISTRICTS		PURUI				, _	1					> 50 M	IM/DA	Y		1/2			>	> 50 M	M/DAY						> 50 M	IM/DA	Y									
	Cain	C	11									50 MM	I FOR	1 DAY						50 MM	FOR 2	DAYS					25 MN	и FOR	1 DAY									
	Ouration of		.1																(	CLOUI	Y WE.	ATHER					CLOU	DY WI	EATHE	R								
	Cloudy wed	itner	+									> 10 D	AYS						>	> 20 D	AYS						> 30 D	AYS										
arnings L			+						 																													
	ligh winds		+									MAX	ТЕМР	.> 30°C	,MIN.	TEMP.	<10°C		1	MAX.1	EMP.	→ 30°C.	MIN.TE	MP < 1	0"C.		MAX.	TEMP.	> 30°C	MIN.T	EMP.<	10°C						
_	Temperatui Hail Storm	re	-			77						HAIL	STOR	М					1	HAIL S	TORM				*		HAIL	STOR	М									
eather co	7	Dosts	-									APHII	DS, MU	STARI	SAW	FLY				APHID	s. Mus	TARD	SAWFI	.Y			APHII											
			-											DITY, I	RAINF	ALL, (	CLOUI	DY		HIGH I		ITY, R	AINFAI	L. CLO	UDY		HIGH WEAT		DITY.	RAINF.	ALL, C	LOU	DY					
favourab	le for	Weathe	$\rightarrow$						 				RNAR	IA, LE	F BL	GHT, (	CLUB			ALTE	NARIA		F BLIGI	IT. CL	JB		ALTE			AF BLI	GHT. C	CLUB	3					
inciden		Disease	_									ROOT		ASE DITY V	UTU (	ZI OLIF	v w	EATH			DISEA		ITH CL	OUDY	WEAT	HER			-	WITH C	CLOUD	Y W	'EATHE	ER				
pests and d	liseases	Weathe	_									HIGH	номі	DITYV	VIIII	LOUL	) i w.	EATH	LK	111011									T.	•	T							
Norm	al phase	wise													1	4.4				67.2				63.1			52.9	)	2	3.9								
	equiremen		$\rightarrow$		_						Т	9.7	3.4	3.6	2.0	3.	9 (	0.8	2.7	0.2	3.8	3.8	0.8	1.8	3.8	5.9	5.3	6.5	3.9	7.2	2 3.7	7	3.4					
	Rainfall(m		-	_	+	+	+	$\rightarrow$		_	+	+-	30.3	+	+	+-	_	6.8	_	25.9		25.0	25.9	25.8	26.2	26.8	26.7	28.7	30.2	2 31.	2 32.	2 3	34.2					
-	Max. temp.		-	+	+	+	+	$\rightarrow$			-	-	18.3	+-	+	-	+	+	12.8	11.9	11.3	10.7	7.9	11.7	12.3	12.9	12.8	14.7	15.4	16.	4 17.	6 1	18.6					
weather /	Min. temp. Sunshine h		_		+	+	+	+	/_	_	-	8.4	-	+	-	+	+	-	8.3	8.4	8.0	7.8	8.6	8 9	8.9	8.1	8.5	8.3	8.8	8.6	6 8.0	6	8.5					
me impo	fe histor and an dates ertant ep rop grov	of												VI			riv	E G	RO	WT	H	FL	OW.	ERI		EED ->	F	ORM			VES		NG					
		eeks				4	-			-		44	4.		000		8 4	49	50	51	52	1	2	3	4	5	6	7	8	9	) 1	0	11 :	12	13			1