CROP WEATHER CALENDARS FOR ANDHRA PRADESH

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PREFACE

Information on normal weather conditions, water requirements of crop and other agrometeorological information are of vital importance for effective crop planning. More than two decades back the above information was prepared in pictorial form, called "Crop Weather Calendars", for major cereals, pulses and oil seed crops in the country on a districtwise basis.

With the recent information of new strains by the plant breeders and bio-technologists and the changing scenario in agriculture, the earlier crop weather calendars have lost much of their utility. The revision of these calendars has thus become necessary in the light of the recent development in the field of agricultural sciences including agricultural meteorology. These calendars include factors like water requirement of crops during their various phyto phases, meteorological conditions favourable for development of crop pathogens. This is the second publication in the series with the calendars for Andhra Pradesh for Paddy, Bajra, Jowar, Groundnut and Cotton crop.

Information contained in the calendars would prove useful to planners, agricultural administrators, plant breeders and the farmers in formulating policy matters relating plant breeding, crop adoption, drought proofing supplementary irrigation and maximizing the yield.

The preparation of the calendars has been possible due to exhaustive material provided by Department of Agriculture, Govt. of Andhra Pradesh and Andhra Pradesh Agricultural University. We thank them for their co-operation. These calendars were prepared by the Division of Agricultural Meteorology, Meteorological office, Pune. I have great pleasure in acknowledging the work done by Shri M. R. Das, DDGM (Agrimet), Dr. A. Chowdhury, DDGM, Retd., Dr.(s) H. P. Das, Director, R. P. Samui, Director; S/Shri S. B. Gaonkar, Assistant Meteorologist, M. V. Satoskar, Assistant Meteorologist, R. B. Pataskar, A. N. Kale and N. G. Vaidya in preparing these calendars.

R. R. Kelkar Director General of Meteorology

Introduction

1. General

The state of Andhra Pradesh, experiences tropical climate with slight variations depending upon elevations and maritime influence. The Eastern Ghats seperate the Deccan Plateau from the coastal belt. The plateau slopes from the interior towards the east from elevations of less than 1 km and is drained by two major river systems i.e. the Godavari and Krishna. The coastal belt extends to about 100 kms in the south and narrows to 40 kms in the north. These features influence to some extent the climate of the state; the plateau experiencing more temperate climate than the low-lying valleys and the coastal belt. The state may be divided into three meteorological subdivisions, namely

- (i) Coastal Andhra Pradesh consisiting of the districts of Nellore, Guntur, Prakasam, Krishna, West Godavari, East Godavari, Vishakhapatnam and Srikakulam. Out of these the districts of Guntur, Prakasam and Krishna belong to the deltaic region and extend into the interior upto a distance of 100-150 kms where maritime influence on climate is reduced.
- (ii) Rayalaseema consisting of Chittoor, Cuddapah, Anantapur and Kurnool districts and
- (iii) Telengana consisting of districts of Adilabad, Karimnagar, Nizamabad, Medak, Hyderabad, Mehboobnagar, Nalgonda, Warangal and Khammam.

The state has an area of 276, 754 sq. km. The net sown area is 42 percent of total geographical area and is nearly the same in each of the above mentioned three regions. The total irrigated area accounts for nearly 30 per cent of the net sown area. Land resources being limited, emphasis has to be placed on increasing the productivity. Temperature and other climatic conditions being favourable for crop production throughout the year over most parts of the state, it is possible to grow more than one crop in a year provided water, the most important input, is available. However the choice of the crops would have to take into consideration the amount and distribution of the rainfall. Not only in rainfed farming but even under irrigated conditions one will have to plan for the most economic and efficient use of water so as to derive maximum possible benefit from rainfall and reduce dependence on irrigation. In the following paragraphs, climate, soil types, temperature, rainfall, potential evapotranspiration and cropping pattern have been described.

2. Climate

The state experiences two types of climate namely (i) Tropical rainy covering most of coastal Andhra Pradesh and Telengana (ii) Hot steppe covering Rayalaseema (except Chittoor district) and small part of coastal Andhra Pradesh and Telengana. In hot steppe regions, the mean annual temperature is above 18 °C; summer is hot and dry followed by monsoon rains. In case of Tropical Rainy Type, mean daily temperature for the coldest month is 18° C with annual rainfall of less than 250 cms, most of rain occurring during the SW monsoon periods.

3. Soils

In Rayalaseema region soils are mostly red sandy and mixed red and black whereas in Telengana soils are red sandy and deep/medium black. A belt of red loamy soils runs across most of the northern boundary from Asifabad taluk. Medium black soils belt is present along the western boundary. The coastal taluks have in general coastal or deltaic alluvium soil. Deltaic alluvial is the main soil in East Godavari. In the interior of the coastal districts, red sandy soils together with the mixed red and black or deep black soils are present. Laterite soils are present only in small pockets.

4. Temperature

In coastal Andhra Pradesh the mean temperature is always above 22°C. During the hottest part of the year i.e. April to June, the mean temperature ranges between 29°C and 35°C increasing towards the interior and to the south. With the onset of the southwest monsoon, temperature fall appreciably, particularly in July. In Rayalaseema the mean temperature is always above 23°C over the plains and above 20°C over the elevated areas. During April-May, the mean temperatures range between 32° to 35°C over the plains. With the onset of the southwest monsoon, temperatures fall considerably being 28°C in July. Telengana is the hottest part of the state during summer and coldest in winter. The mean daily temperature varies from 30°- 36°C during April to June and from 20° to 24°C in colder months of December and January.

5. Rainfall

The annual rainfall varies from less than 60 cm in Western Rayalaseema to more than 100 cms in the north/north eastern parts of the state, and attaining 150 cms close to the northeastern border. An important feature is that, except Telengana, the state receives substantial amounts of rain during the northeast monsoon period (Oct-Nov) also. This is specially so in the southern coastal belt which receives 50 to 75 cms during October to December. In the Vishakhapatnam district and neighbourhood, the unbroken range of Eastern Ghats lies 40 km west of coastal belt and rises sharply, thus exerting considerable influence on rainfall and its distribution because it acts as a barrier to the easterly wind originating from the Bay of Bengal depressions during the SW monsoon periods. The rainfall here increases inland towards west from 100 cm near the coast to 150 cm along the northern boundary, while over the rest of the state it decreases inland.

6. Potential evapotranspiration (PE)

Potential evapotranspiration (PE) 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 Rayalaseema area and are about 180 cm annually. In Telengana, annual PE values are between 160 to 170 cm. Annual PE of coastal stations is about 150 cm rising in the interior to 170-180 cm.

7. Cropping pattern

In the context of increasing production, it is necessary to examine the cropping patterns from a scientific angle and find out possible alternative patterns 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 crop grown in the state are Paddy, Bajra, Jowar, Groundnut and Cotton. The area under and production of the major three crops of a typical year (1988-89) in the state is given below.

Table

Crops	Area (Thousand hectares)	Production (Thousand tonnes)
Paddy	4107	10559
Jowar	1397	749
Bajra	296	205

8. Crop weather calendars

In preparation of the crop weather calendars information collected from state agricultural departments have been analysed in relation to agroclimatic 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 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 deputed 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 Governments concerned with agriculture and food production.

Contiguous 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 calendar on page 3 for a group of districts viz. Khammam, Adilabad and Nizamabad for irrigated Paddy-I (i.e Kharif) is given as an example. The sowing periods in this group of districts varies from 22 to 25th weeks (28th May-24th June), transplanting from 25 to 30th weeks (18th June-29th July), and flowering from 35 to 39th week. Grain formation in these areas occurs from 39 to 43rd week (24th September-28th October) while harvesting is accomplished from 43rd week onwards.

One of the critical phases of the crop is grain formation. During 40th week the average rainfall recorded is 23.7 mm. The mean daily maximum and minimum temperatures are 32.4 and 21.5 respectively while the average number of sunshine hour is 7.0.

Rains normally in this period adversely affect the yield. Similarly winds > 35 km/hr which leads to lodging of plants also exerts adverse influence. Also maximum temperature $< 10^{\circ}$ C are harmful to the crops. Warnings may be issued, if these types of adverse weather are anticipated.

Under favourable conditions of humid and cloudy weather with continuous rain, pests like stem borer, leaf roller and cut worm may form. Diseases infestations like blast, brown spot, sheath rot can also affect paddy if low temperature accompanied by high relative humidity (RH) prevails during the grain formation stage.

CONTENTS

Crop	Page No	Districts	Crop	Page No	Districts
Paddy – I	1 2 3 4 5 6 7	Nellore, Prakasam, Chittore Vishakhapatanam, Vizianagaram Khammam, Adilabad, Nizamabad Medak, Nalgonda, Mehaboobnagar, Ranga reddi Kurnool, Anantapur, Cuddapah Warangal E. Godavari	Jowar (K) Jowar (R) Groundnut (K)	16 17 18 19 20 21	Ranga reddi, Adilabad Nellore Kurnool Nellore, Chittore, Prakasam Cuddapah, Anantapur, Kurnool Khammam, Warangal, Krishna, Karimnagar Vishakhapatanam, Vizianagaram, Srikakulam
Paddy – II	8	Guntur, E. Godavari, W. Godavari, Krishna	Groundnut (R)	23	Nellore
Bajara	9 10 11 12 13 14 15	Kurnool Nellore Vizianagaram Nalgonda, Prakasam Mehaboobnagar, Nalgonda, Medak Kurnool Prakasam	Cotton	24 25 26 27 28 29	Kurnool, Krishna Khammam, Warangal Kurnool Guntur, Krishna, Prakasam Nellore Adilabad

STATE

: ANDHRA PRADESH

CROP : PADDY-I

VARIETY : |ET- |444, |LR-|396, |LR-2508 SOIL : SANDY LOAM,

BLACK LOAM

DISTRICTS : NELLORE, PRAKASAM, CHITTOOR

IRRIGATED

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2.

STATE

: ANDHRA PRADESH

CROP : PADDY-I

VARIETY

: SWARNA, PHULGUNA

SOIL : BLACK, SANDY LOAM

DISTRICTS : VISAKHAPATNAM, VIZIANAGARAM

IRRIGATED

DURATION: 140-150 DAYS

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STATE

: ANDHRA PRADESH

CROP : PADDY - I

VARIETY

:SUREKHA, BPT/ TELLHASMA SOIL : RED SANDY LOAM

DISTRICTS : KHAMMAM, ADILABAD, NIZAMABAD

IRRIGATED

DURATION : 140 -150 / 90 -105 DAYS

	Rain				-			< 5	о мм	/DAY	,															ı	ANY	RAIN									
	Duration Of	Wet Spell															>	150 N	M FC)R 3	DAYS																
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: ANDHRA PRADESH

CROP : PADDY - I

VARIETY : TELLAHAMSA, BPT-5204 SOIL : SANDY CLAY LOAM

DISTRICTS MEDAK NALGONDA MEHABLÍBNAGAR RANGAREDDY IRRIGATED

DURATION : 115-135 DAYS

	Rain					> 40) MM	/DAY							>	100 N	/M/D	AY						Al	IY RA	IN							
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WHI	Rainfall(20.7	20.8	26.9 3	38.5	32.3	35.1	41.9	44.1	36.0	28.1	35.3	40.8	35.0	41.2	41.8	43.9	43.1 2	3.3 19	0.5							
Weekly	Max.tem	o. O _C						38.0	35.7	33.6 3	33.2	34.0	32.1	31.6	32.1	30.7	30.4	30.7	31.1	31.2	30.9	31.5	31.2	31.0 3	2.1 32	2.7							
normal weather	Min.temp	. °C						26.4	25.0	24.2 2	24.4	24.3	23.6	23.7	23.6	23.3	23.1	23.1	23.3	23.4	23.2	23.1	23.0	22.9 2	2.3 21	.9							
,, 01101101	Sunshine	hours					1	7.6	6.0	5.8	4.8	4.4	5.0	5.0	5.3	4.1	4.8	5.3	4.9	5.1	5.0	6.3	5.8	5.9	.6 8	.3							
							-														GRA	AIN .	-	ARVES MATIO	1	>							
m	Life histo and ean dates	s of						100							VEG	ETAT	TIVE	GRO	WTH	FL(OWER	ING											
_	ortant ep crop gro			~					sow	NG	T	RAN	SPLA	NTII	NG										1								
S	tandard we	eks					22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	0 4	1	42 4	13 4	4				
	Months]]	INE				JUI	LY			AL	IGUS	ST		SEI	PTEN	ЛВЕ	R	0	CTC	BER			s 11 - 1			

STATE

: ANDHRA PRADESH

CROP : PADDY - I

VARIETY : TELLAHAMSA, RNR - 1446 SOIL : BLACK LOAM,

SANDY LOAM DISTRICTS : KURNOOL , ANANTAPUR , CUDDAPAH DURATION : 150 DAYS IRRIGATED

	n :		Π			50 MN	A / D A														***					ARI	Y R	A 1 A 1							-			
	Rain	C		 																						AN	F R/	4114										
	Duration O			 	>	25 MM	V FOF	8 6 D	AYS							> 5	OMA	VI FC	R 8	DAY	S 																	
Weather	Cloudy Wed	uther																																				
warnings	Drought				>	5 DAY	\$									> 1	O DA	YS																				
··· all manage	High Winds															> 3	5 KN	w/H	R							>	35 1	KM/I	HR									
	Temperatur	e														MAX	r. TEI	MP.	> 40	°c,	MIN.	TEM	P. <1	o°c		MA	X,T	EMP.	>	ю°с,	MIN	. TEN	ИР. <	(10°	С			
	Hail Storm																																					
Wea	ther	Pests				STEM JASSI		ER,	врн,	LEA	F FOI	DER	,								EM B		R, BPH	١,										DY B	U G IOPPE	R		
condit		Weather				LOW	TEMP	.,ніе	SH RE	1						LOW	/ TE	MP.	HIG	H R	Н					LO	WT	EMP.	, HI	3H R	Н							
favoura inciden		Diseases				SEE D BLS,	ING	ROT	, COL VIRU	LAR S	ROTS	, BLA	ST			BLA	ST E	BLIG RO	HT, T, BI	SHE	ATH E	BLIGI OT, F	HT,	ROT			CK AST		т, в	ROWI	V SP	TC						
pests and	diseases	Weather				LOW .	TEMF	P., HI	IGH F	РН						LOV	V TE	MP,	нівн	RH						LO	WT	EMP,	, HIG	H RH								
	ormal phase v											6:	3.3		Τ		107.9)				18	8.9			174	.8			T	117	.4		T				
Wat	er requirement						T					T	T	T	+					70.6	260	25.5	15.0	42.5	24.5		2.5			1.0.	T	T	T	+			1	
Weekly	-	·				-	-+		16.6		25.9	-		+	+-	+	+	-	-		-		17.2				3.7	1	+	+	+	+	+-		+	-	+-	-
normal	Max.tem						-	34.4	34.3	34.4	33.7	+	+	33.1	+-	+	+	$\overline{}$	-				33.0					_	+	+	+	+	+-	5 29.6		-	-	
weather	Min.temp	,. ⁰ C						24.8	24.5	24.6	24.3	24.1	24.0	24.0	23.	9 23	3.8 2.	3.9	23.8	23.7	23.4	23.2	23.1	22.8	22.5	21.4	20.6	20.1	19.5	18.7	18.3	17.4	16.	8 16.8	-		-	-
	Sunshine	hours						4.5	5.6	5.2	5.2	4.1	5.2	5.9	5.9	5.	.9 6	6.1	6.4	6.5	6.7	6.9	7.7	8.1	7.5	7.9	8.0	8.6	8.2	8.4	7.8	8.4	9.3	7.7				
																															€ H	ARVI	ESTI	NG	>			
																										GF	AIN	FO	I RMA	TION								
I	ife histo	ry																					FI	_OWI	ERIN	G				900				3		Pie.		
	ean dates ortant ep	1							.co							<		VEG	ETA	TIVE	GF	ROWT	Ή	->	The state of the s									1				
of	crop gro	wth								S	OWIN	IG		RAN	ISPL	ANT	ING		->		1	V					V					1						100
						14.					• •						1)			h	1	7				Y		1		1/	7				-		
St	andard we	eks						27	28	29	30	31	32	33	34	3:	5 3	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2		
	Months								JU	LY			A	UGI	IST			SEF	ΤΕλ	ΛВЕ	R		OCT	OBE	R		NC	VΕΛ	ЛВЕ.	R	D	ECE	ЕМВ	ER				

: ANDHRA PRADESH

CROP : PADDY ~ I

VARIETY : TELLAHAMSA

SOIL : RED EARTHS
WITH LOAMY

DISTRICTS : WARANGAL

IRRIGATED

DURATION : 150 DAYS

DISTRIC	AVA	MANOAL									111	KIOA	LLED								Olux	11011	•																	
	Rain						>	> 50 1	MM/D	ΑΥ	7				, controlled the waster												ANY RA	IN												
	Duration Of	Wet Spell					>	> 25	MM F	OR 10	DAYS	5																												
Weather	Cloudy Wea	ther																									,							0-3-14-14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1						
warnings	Drought																															a l								
w at mings	High Winds																																							
	Temperature																																							
	Hail Storm																																				Profitographical control date			
Weat	ther	Pests					S	TEM	BORE	R								STEM	ВОІ	RER					3		BROWN	PLA	NT H	OPP	ER,	CLIM	BING	cu.	T WO	RM				
condit		Weather					Н	1GH F	₹H, L	ow T	EMP,							HIGH	RH,	"OW	TEMP).					HIGH R	H, L	ow T	EMF	Р.									,
favoura inciden		Diseases					В	LAST										LEAF	BITE								LEAF E	ITE												
pests and	diseases	Weather					Н	IGH	RH									HIGH	RH		***************************************						HIGH F	Н												
N	ormal phase w	ise										66.5					89.5				2	28.9				1	39.3				118.0						manus Ad			
VY 2.5	Rainfall(n				8.5	13.9	18.3	27.0	47.5	55.6	54.0	58.6	58.8	69.9	51.0	42.0	46.5	48.0	44.8	526	45.5	44.9	38.2	20.7	15.9	15.7	11.6 1	3.6	9.5 2	7	4.6	3.4	2.0	2.6	1.3	0.9	2.3	1.7		
Weekly	Max.temp	. °C			40.8	40.4	39.3	38.2	36.0	34.1	32.5	32.5	32.5	32.7	31.9	32.1	31.8	30.7	31.2	31.5	32.1	324	32.6	32.6	32.8	32.6	32.2 3	.2 3	0.8 3	0.7	29.7	29.3	29.3	28.6	28.8	29.0	29.2	29.4		
normal weather	Min.temp.	• o C			27.9	28.0	27.6	26.6	26.3	25,4	24.4	24.6	24.7	24.6	24.2	24.3	24.3	23.8	23.9	24.1	24.0	23.9	23.6	23.2	22.7	22.3	21.5 2	0.8 1	9.7 1	9.1	18.1	17.6	16.6	15.8	16.0	15.5	16.0	16.3		
,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Sunshine	hours			9.2	8.0	8.0	5.0	5.6	3.8	2.0	3.4	5.0	4.8	4.0	4.2	3.8	4.0	4.0	4.2	6.0	6.0	5.8	5.6	7.0	7.0	6.4 7	.2	8.2 8	.8	8.0	8.0	8.4	8.3	8.2	8.2	9.3	8.8		
																												<			DR	YIN	G /	THE	RESH	IING		Ι,		
																											<	-		H	IARV	'EST	ING			<u> </u>	<u> </u>			
																									-		GRAIN	FO	RMAT	rion	y			<u> </u>						
I	ife histor	СУ																					FL	 OWEF	RING	5														
	ean dates			10															VECE	TAT	IV/E	GŔO	MTU					Ī.			۸.	3								
	ortant ep crop grov									8						<	1	1	VEGE	I	IVE	GRU	AA 11			>		State of		- Comment			E N	Sales A	縣	等				
	crop 5ro	VV 022								<-		1	T(RANS	SPLA	NTIN	NG I	1	1	>										_	1		A	1		ATT TO	À			
										SOW	ING						,						1				1			1	1		A	,	L'ELY.	Polisi				
											0 0							1			ĺ		V	A			V						7							
St	andard wee	eks	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43 4	4	45 4	6	47	48	49	50	51	52	1	2	3	4
	Months			MA	AY		-	JUI	VE			JU	LY			Al	IJGU	ST		SE	PTE	MBE	R	(OCT	OBE	R	1	IOVI	EMI	BER		D	ECE	MBE	ER		JAN	UAR	Υ
															4																									

STATE

: ANDHRA PRADESH

CROP : PADDY - I

VARIETY : MTU - 5

SOIL : RED AND DELTAIC ALLUVIUM

DISTRICTS : E.GODAVARI

IRRIGATED

DURATION : 150 DAYS

																		,														-						
	Rain		-			>50	OMM/	DAY									MM /									AN	Y RA	IN										
	Duration O	f Wet Spell				> 10	0 M M	FOR 4	4 DAYS	3						> 50	MM	FOR	3 DAY	S																		
Weather	Cloudy Wed	uther																																				
warnings	Drought																																					
warnings	High Winds														:	> 30	KM/	/ HR								>	25 K	M/HF	3									
	Temperature	2		is the second		MAX	. TEN	1P. >	• 40°C	, MIN	. TEM	P. <	10°C		N	1AX.	TEME	P. >	40°C	, MIN	. TEM	P. <	10 °C															
	Hail Storm																																					
Wea	ther	Pests				STE	МВ	ORER	, GAL	L FLY						STEM		ER, G	GALL	FLY, E	врн, і	EAF	ROLL	ER				ORER,					WORI	VI				
condi		Weather				HIGH	I RH,	LOW	TEM	Ρ.					ŀ	HIGH	RH, L	LOW '	TEMP							ніе	H RI	H, LOV	V TE	MP.								
favoura incider		Diseases				BLAS	ST								Е	BLB,	SHEA	нти	BLIGH	IT, BL	AST			5		BL.	AST,	SHEA	TH E	BLIGH	Т							
pests and	diseases	Weather				HIGH	RH,	LOW	TEMP						H	IIGH	RH,	LOW	TEMF	·.			4			ні	нт	EMP										
N	ormal phase v er requiremen	vise									,	70.9]	102.6				2	41.7		•			19	2.7				133	.7						
vv ac	Rainfall(3.1	11.9	5.9	7.9	6.5	18.8	9.0	14.9	24.3	34.0	34.8	61.0	60.7	7 43.0	0 41.5	59.7	56.8	43.8	34.8	44.8	35.2	41.4	35.1	43.8	39.7	46.3	51.1	34.9	27.3	16.7	21.7	4.6	13.2	
Weekly	Max.temp	o. °C			36.8	36.4	37.4	37.5	37.5	37.6	38.4	38.9	38.2	36.2	35.1	34.0	33.5	33.3	3 33.0	32.9	31.7	32.1	32.4	32.3	32.2	32.6	32.9	32.9	33.0	32.8	32.8	31.9	31.5	31.3	30.8	30.4	29.6	
normal weather	Min.temp	. ° _C			26.1	26.0	26.7	27.4	27.4	28.2	28.0	28.3	27.7	27.3	26.8	26.2	25.8	26.3	1 26.0	26.0	25.5	25.4	25.7	25.7	25.6	25.5	25.7	25.7	25.7	25.2	25.1	24.5	24.1	23.6	22.9	22.5	21.5	
	Sunshine	hours			9.2	9.2	9.2	9.3	9.4	8.8	8.2	7.6	7.0	5.6	5.0	4.0	3.8	4.0	4.2	3.8	3.8	4.4	4.6	4.0	4.5	5.0	5.6	5.4	5.4	5.6	5.8	5.8	6.8	7.6	7.6	8.4	7.6	
																																l DRYII	NG /	THR	ESHI	NG		
																														HA	RVES	STING] 3					
I	ife histor	ry										#														GRA	IN F	ORM	ΑΤΙΟ	N								
m	and ean dates	of									Ta Carlo												F	LOWE	ERIN	3						The state of the s	11/2					
imp	ortant ep	ochs															/FGE	 	IVE	- GBO!	 A/T J				3		35	A STATE OF THE PARTY OF THE PAR		*	No.			1116				
of	crop gro	wth									5			<						I	44 1 12		>		\checkmark						W		1	X		e G		N. S. S. S.
						a a			<		10	TF	RANS	PLA	NTIN	G 	<u> </u> 	1			5	X					X	1			h	1	1	1		A.		
					<					OW-IN	NG .				<u> </u>			h		3	2	1			Y		1	1			Y							
St	andard we	eks	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	Months				Al	PRIL				MA	(JUN	ΙE			Jl	ULY			Al	UGU	ST		SEI	TE	MBE.	R		OC	TOB	ER		NO	VEN	1BEF	2

: ANDHRA PRADESH

CROP : PADDY - II

VARIETY : KRISHNA, CHAITANYA MTU 2067, 7029 DURATION : 150 DAYS

SOIL : BLACK LOAM/BLACK CLAY ALLUVIAL

DISTRICTS : GUNTUREGODAVARI, W.GODAVARI, KRISHNA

IRRIGATED

	Rain					50	MM/	DAY																	AN	IY RA	IN												
	Duration Of	Wet Spell																																					
Weather	Cloudy Wea	ther																													6				*				
	Drought																																		100				
warnings	High Winds																								>	25 K	м/н	OUR											
	Temperature				M	IEAN	TEM	P. >	35°C						ME	AN T	EMP.	> 3	5°C						ME	AN .	ГЕМР	. > 3	5 °C										
	Hail Storm																																						
Weat	ther	Pests			S	TEM	BORE	R							ST	EM B	ORER	R, GAL	L M	IDGE					В.	P. H.,	STEM	и вог	RER					4,					
condit		Weather			Н	IIGH I	HUMIE	OITY,	'HIGH	ME	AN TE	EMP.			ME	AN T	EMP.	> 2	9 C		¥1				ME	AN F	RH >	80%	5										
favoura inciden		Diseases								2										ERIAI (RTV		AF BL	IGHT,						BACTI		L LE	AF BL	IGHT	,					
pests and	diseases	Weather													CO	NTIN	uous	RAIN	I, ME	AN R	н >	85%)		FR	EQUE	NT R	AIN A	AND I	MEAI	N RH	> 8	3%						
N	ormal phase w	ise								1	87.1				199.1					31	3.7					158.	1			105,	6								
VV AIL	Rainfall(r					10.6	13.3	13.3	15.2	19.0	27.6	31.6	38.4	42.4	39.1	42.2	45.2	41.6	37.8	36.7	39.8	38.0	37.7	36.0	39.4	45.7	42.3	35.7	46.2	36.8	37.9	29.5	19.5						
Weekly	Max.temp	. ° _C				38.9	38.8	39.7	39.5	38.3	36.9	35.1	33.8	32.7	33.2	32.9	32.2	31.9	32.1	32.3	31.8	32.1	32.4	32.6	32.7	32.7	32.6	32/3	31.8	31.8	31.3	31.1	30.8						
normal weather	Min.temp.	. °C				26.5	26.8	27.1	27.5	27.0	27.0	26.1	25.3	25.1	25.3	25.2	25.1	24.7	25.1	25.2	25.1	25.1	25.4	25.5	25.3	25.1	24.3	24.5	23.4	23.1	22.7	21.0	19.9						
	Sunshine	hours				9.1	8.7	8.0	7.4	6.7	5.4	4.6	3.5	3.6	4.5	4.5	4.4	3.8	4.4	4.8	4.5	4.7	4.9	5.6	5.5	5.3	5.7	6.3	6.8	6.9	7.6	7.6	8.4						
m imp	Life histor and ean dates ortant ep crop grov	of ochs				*			SOWII	NG	TRA	MSP	LANT	TING		VEGE	TAT	VE	GRO	WTH		<	FI	_OWE	ERING		GRA	AIN	FORM		VEST	TING							
St	andard wee	eks	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	Months	*					MAY			L	JUN					ILY	l	T		UGU.		T			MBE	R		OCT	OBE	ER		NC	VEλ	1BER		<i>D</i> .	ECE!	MBE	R

STATE : ANDHRA PRADESH

CROP : BAJRA

VARIETY: WCC-75

SOIL: RED

DISTRICTS : KURNOOL

NON-IRRIGATED

DURATION: 80-90 DAYS

DISTRIC	.15 : KU	RNOOL											NO.	14-114	KIGA	HED			υ L	UICA	11014															
	Rain								>	40 MM	I/DAY	1						>	60 N	IM/DA	ΔY							ANY	RAIN							
	Duration Of	f Wet Spell							> :	20 MM	/ FOF	R 4 DA	AYS					>	40 N	IM FO	R 5 D	AYS														
Weather	Cloudy Wea	uther							101	DAYS								20	DAY	3																
	Drought																																No. do a financia de la companya de			
warnings	High Winds																																			
	Temper ature	е							MAX	K. TEN	1P. >	40	C, MII	N. TE	MP. <	< 15°	c	M	4 X. TI	EMP. >	> 40°	c, MI	N. TEI	/IP. <	< 15	င		MAX.	TEM	P. >	40°	C, M	IN. TE	IMP. <	< 15°C	
	Hail Storm													-																						
Weat	ther	Pests							JAS	SIDS,	GRA	SS HO	OPPER	₹ .				LI	AF E	ATIN	G CA	TERP	ILLAR					EAR	HEAD	BUC	GS, B	ULB	S			
condit		Weather							CLO	UDY	WEAT	HER						CI	OUDY	WEA	HER	2						CLOU	DY W	VEAT	HER					
favoura inciden		Diseases							*									DO	YNW	MILE	EW															
pests and	diseases	Weather																C	ONT.	RAINI	ALL		_													
N	ormal phase v	vise				1 3								7	0.2	T	-	74.5			121.	1	12	21.1		62.	2									
Wat	er requiremen Rainfall(T	T		T	T	T	T		37.8	9.4	6.8	20.	7 16.6	30.0	25.9	38.9	24.9	25.8	29.0	29.0	19.7	32.3	39.6	36.8	35.7	17.2	23.5	;		T	T	T	
Weekly	Max.temp	. ^о С				+	+	+	+	+	\dagger	36.6	+-	+-	+-	+	+	+	+	+		32.7	33.1	32.9	33.4	32.8	32.3	32.5	33.0	32.6					T	
normal weather	Min.temp			+			+		+	1		+	+	+-	+-	+	+	+	-	23.1			23.2				-	+		+		T				
WCALLICI	Sunshine								+			6.8	6.4	5.2	4.4	5.6	5.0	5.4	4.0	5.6	5.8	5.9	6.6	6.8	7.0	6.6	6.4	6.4	7.4	8.0		T				
																					<	GR/	AIN I	FORM	MATI		ARVE	ESTIN	IG							
m imp	and ean dates ortant ep	s of oochs							, edit			<			ERM 	INAT		/EGE	ATIV	E G		OWER	RING	A Constitution))))))				//			5				
St	andard we	eks			+		1	+	+	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44				
	Months		+							1		JUN					LY		T	<u> </u>	JGU.					MBE	<u> </u>		OC'	TOB.						
												, 414	_			, ~																				

: ANDHRA PRADESH

CROP : BAJRA

VARIETY: BK-560, BJ-104, WCC-75 SOIL: SANDY CLAY LOAM,

LIGHT BLACK

DISTRICTS : NELLORE

IRRIGATED

DURATION: 90-95 DAYS

	Rain			*						> 4	о мм	/ DAY						> 6	O MM	/DAY	Y -					ANY	RAII	N								
	Duration Of	f Wet Spell								> 2	омм	FOR	4 DA	YS				>	OMN	1 FOR	8 5 DA	YS				***************************************			,							
Weather	Cloudy Wea	uher																																	1	
warnings	Drought																																			
warmigs	High Winds																																	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Temperature	е								MAX	. TEM	P. >	40°C	,MIN	TEM	P. <	15°C	MAX	. TEM	P. >	40°C,	MIN.	ГЕМР.	< 15	°c	MAX	TEM	1P. >	40°C	, MIN.	TEMP	2. < 1	5°C			
	Hail Storm							M																												
Weat	ther	Pests			Period and a street of the str					SHO	OT FL	Y,EA	R HE	AD,C	ATERI	PILLA	AR																			
condit		Weather		***************************************						CLOU	JDINES	SS, PE	RIOD	ICAL	RAIN	S																				
favoura inciden		Diseases				* 1																			2											
pests and	diseases	Weather																																		
N	ormal phase wer requirement	l vise										,			80.0	T	82	2.8	Γ	127.	.6		138.	0	8	1.3										
Wate	Rainfall(r			1			T	T			14.7	7.8	8.1	0.4	11.0	124	Т		182	T	Т	17.6	Т	T	-	I	23.6	24.6	27.2	32.9	T				$\overline{}$	
Weekly	Max.temp				-		\vdash	+				-	+-	+	+-	+	+	1	+	+	+		-	-	-	-	-	+	+	33.6	+		2		-	
normal	Min.temp.						-				+-		\vdash	+	+	+	+	+	 	+	-		-				 	-	+	25.5	+				_	+
weather	Sunshine				-						9.0	-	-	5.8	-		_	+	6.0	5.0	4.0	6.0	5.8	6.4		6.0	5.8	+	6.2	7.4	-				+	
									-		7.0	7.6	1.2	3.6	10.0	3.2	10.0	0.5	0.0	3.0	4.0	0.0	3.6	0.4	0.2	0.0	3.0	0.0	0.2	/.*	+				_	
										10 -										- ~					<		HAR	VES I	TING	 						
										78												< 0	RAIN	V FC	RM	ATIC	N									
L	ife histor	cy.																		FI	OWE	ERIN	G				P.V.Web									
me	and ean dates	of																	-					*			800 K				A STATE OF THE PARTY OF THE PAR					
impo	ortant ep	ochs															< VE	GET	ATIV	E G	ROW	TH	6,970.974	anna.	_		5	1				September 1				
of o	crop grov	wth												I GERI	I MIN	 	NC				\							N		1	53.5°					
										loc	A		SOW	ING				1		5			36				1	1								
						,			na ř		< .		30 1	1					4	V	J	1		V)\			V								
,														-				-	-	VE	3	X	Y	V			Y	1	\					\dashv	_	_
Sta	andard wee	eks								20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
	Months												JUI	VE			Ji	JLY.				AUG	UST			SE.	PTE	MBE	R							

: ANDHRA PRADESH

CROP : BAJRA

VARIETY : BK-560/1CMH-451,

BK-560/ICMH-451, SOIL: SANDY LOAM

MBH-IIO, WCC-75, VISAKHA

DISTRICTS : VIZIANAGARAM

NON-IRRIGATED

DURATION : 85-90 DAYS / 75-80 DAYS

	T																																			
	Rain							> 40	MM C	/ DAY				-	> 80	MM.	/DAY					IA	NY R	AIN												
	Duration O	f Wet Spell						25 MM	for	R 2 DA	YS				50 MN	A FO	R 2 D	AYS																		
XX7 41	Cloudy Wed	uher																																		
Weather	Drought				************			>10	DAYS						> 21	DAY	S					>	- 21 [DAYS												
warnings	High Winds																																			
	Temperatur	е																										al manuscritorius	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
	Hail Storm		-			T-0,431-00-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-																														
		Pests										-					-															·····				
Wea condi		Weather																																		
favoura		weather																	597											,						
incide		Diseases						MILDE	W, E	RGOT					MILDE	W,E	RGOT					MI	LDE	V,ERG	TOE											
pests and	diseases	Weather						RH FO	LLOW	VED B	Y CON	T. RAI	NFAL	L	RH FO	LLO	WED B	Y COI	NT. R	AINFA	LL	RH	I FOL	LOWE	D BY	r con	IT. RA	INFA	LL							
N Wai	Vormal phase v ter requiremen	vise										7	0.0		73.7			112.1	l	7	8.2	67.	.0													
	Rainfall(31.5	34.3	21.3	41.1	32.1	26.2	33.3	22.3	38.6	29.6	24.1	42.2	33.7	47.7	34.7	24.7	44.6										and the same of
Weekly	Max.tem	o. ^o C			+					37.6	35.7	34.7	33.7	33.6	33.5	33.9	34.0	32.6	33.0	33.5	33.5	32.5	33.3	33.2	33.7	33.2										
normal weather	Min.temp	o. °C			+					26.2	25.6	25.7	25.2	24.8	25.2	24.9	24.7	24.5	24.5	24.9	24.6	24.4	24.3	24.1	24.2	24.0							\top	\neg		
weather	Sunshine			+						6.7	-	4.7	3.8	3.8		4.2	4.5	3.2	4.0	4.7	4.6		$\overline{}$		6.1	5.6							+			
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+	+	+		+	+		0.7	4.7	4.7	5.0	5.0	7.1	7.2	1.5		4.0	4.,	7.0					:	-								+	
																					<	HAF	VES	TING	;	>										
									4										G	RAIN	FOI	 RMAT	ION													
1	Life histor	rv																					N. Salar	Carrie Contraction of the Contra												
•	and																< F	LOW	ERI	NG			Megerin	Then.												
	ean dates						45								VEGI	ETA	 TIVE	GRO	WTH	1000			A CHO	Sidi			A PATER	The Water								12
	ortant ep crop gro								250							,				1	-		-	M		1		Sea day	200							
	or ob Bro	.,								/*	<	GEF	RMIN	ATIC	N	->		-6			A		À	1			- Contract of the contract of									
										<		SOV	VING		->	_	Y	A			N															
												6	5	1	Y		Y	X		A	30	7/	Y	Y												
St	tandard we	eks		+					22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40									
	Months	a a							T		JUNI				JUI	ĹΥ			AL	IGUS	T		SEF	TEN	1BE	R		1	1		J					_
											, ~ , , , , ,	_			, ~.						_															

: ANDHRA PRADESH

CROP : BAJRA

VARIETY : WCC-75, BK- 560

SOIL: BLACK

DISTRICTS : NALGONDA, PRAKASAM

NON-IRRIGATED

DURATION : 90 DAYS

			T			 										-																		
	Rain								>	40 M	M/D	AY					> 60	MM C	'DAY				-	ANY	RAIN	1								
	Duration O	f Wet Spell				 •	and the second s		>	30 N	M FO	R 2 D	AYS				> 50	MMC	FOR 2	2 DAY	S													
Weather	Cloudy Wed	uther											2																					
warnings	Drought								7 [DAYS							10 D	AYS																
warmings	High Winds																																	
	Temperature	2							MA	X. TI	EMP.>	> 40°C	, MIN	TEMP	<15	°c	MAX.	. TEMF	P. > 4	0°C,N	IIN. TE	MP.<	<15°C	MAX	.TEM	P. > 4	40°C,1	MIN.T	EMP.	. < 15°	c .			***************************************
	Hail Storm	8						,																								***************************************		
Wea	ther	Pests							SH	оот	FLY,	CATE	R PIL	LER			STE	м вог	RER					EAR	HEAD	, CAT	ER PI	LLER	}					
condit favoura		Weather				×			ніс	SH RI	H, LO	W TE	MP.				HIGH	RH, L	_ow ¬	ГЕМР.				HIGH	RH,	LOW	TEM	P.						
incider		Diseases							GR	EEN I	EARH	EAD, D	OWN	EY MI	LDEW	v	GREE	N EA	RHEA	D				GREE	N EA	RHE	AD, EA	ARGO	Т					
pests and	diseases	Weather										IFALL		OWED	BY		HIGH CLOU	RH,R DY W	AINFA EATH	ALL F	OLLOV	VED.	BY	HIGH	RH, I	RAINI VEAT	FALL HER	FOLL	OWE	D BY				
N Wat	ormal phase w er requiremen	vise t(mm)											82.9		79.8	3		123.7			115.8			108.3										
	Rainfall(r								4.7	9.6	13.1	8.9	14.0	14.8	22.2	25.7	23.5	22.2	29.6	29.8	21.1	19.8	22.9	31.0	28.6	29.2	32.5	35.5	36.4	4				
Weekly	Max.temp	. ° _C				The females are an experience			39.3	40.2	41.4	39.6	40.3	38.1	35.9	35.4	36.6	34.8	33.8	34.7	33.5	33.2	33.3	33.7	33/6	34.1	34.1	33.2	32.7	7				
normal weather	Min.temp	. °C							27.6	28.6	28.8	28.7	28.9	27.5	26.6	26.8	26.8	26.1	26.0	26.0	25.9	25.7	25.3	25.8	25.9	25.9	25.6	25.0	25.1	1			+	
	Sunshine	hours							9.8	1	9.0	7.8	+	5.5		7.4			5.6			5.0	-	-	5.3	-	6.2	6.0	5.9	+				
me imp	ife histor and ean dates ortant ep crop grov	of ochs								<	GE	SO	WIN		1	VEG	ETAT	TIVE	GRO		GF	RAIN	FO		RVES	STING						h		
St	andard wee	ks						18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39					
	Months			-	_			T	λ	1AY			j	UNE	;	T		JULY	,	T	F	UC	GUST	7	Т	SEI	PTEN	1BEI	?					

STATE

: ANDHRA PRADESH

CROP : JOWAR(K)

VARIETY : LOCAL YELLOW, CSH-5,

SOIL : SANDY LOAM,

BLACK AND RED

DISTRICTS : MEHABOOBNAGAR, NALGONDA, MEDAK

NON-IRRIGATED

SPV-462
DURATION : 100 - 115 DAYS

			_				MEDA			 				1 1111	1107	TED						1: 1	00 -	115	DATS)										-
	Rain					,					> 50	O MM	/ DAY						> 7	5 MM	DAY					> 5	OMM	/DAY	Y							
	Duration Of	Wet Spell									> 50	MMC	FOR	2 DAY	'S				> 6	ОММ	FOR 3	DAYS	5			> 2	OMN	FOR	2 DA	YS	0					
Weather _	Cloudy Wear	her													V				CLOU	DINE	SS					CLO	JDINE	SS								
1	Drought										> 1	5 DAY	rs						> 2	O DAY	'S					> 2	20 DA	YS								
	High Winds																																			
	Temperature										MAX.	TEM	P. >	39°C,1	MIN.	ГЕМР.	<15°	c	MAX.	TEMI	2. > 39	°С,М	IN. TE	MP.<	15°C	MAX	. TEM	P.>	39°C	, MIN.	TEM	P. < 1	15°C			
	Hail Storm										HAIL	зто	RM													HAIL	STO	RM								
Weath	her	Pests									sнос	T FI	_Y						SHOC	T FL	Y,ST	EM B	DRER			MIDG	E, E	ARHE	AD BI	JG, M	ITES					
		Weather									HIGH CLOU	RH, L	OW T	TEMP,	THE	R			HIGH CLOU	RH, L	OW T	EMP,	THER			HIGH	RH,	LOW	TEM Y WE	P,	ER					
	1	Diseases														WNY N	IILDE					ED LE		РОТ			LDS,					Patricia de la Carteria de Car				
		Weather	\vdash							 	HIGH	RH,	LOW	TEM	P.				HIGH	RH,	LOW .	ТЕМР.				CLO	JDINE	SS W	/ITH	DRIZ	ZLINC	AND	нівн			
No	ormal nhase wi		-					THE Brand State of the control of th					T	41.9	T		84.6	1			3.7			86.4			74									
Water	r requirement	(mm)			T	T	T		Γ					T		T	T	Т		Т	T	I		T					T		Т	T	T			
Weekly			-										-	+	+-	35.1	-	-	-	+-	-				-				-	-	+	+	+			
normal	Drought High Winds Temperature Hail Storm Weather onditions ourable for cidence of and diseases Weather Normal phase wise Water requirement(mm) Rainfall(mm)total kly Max.temp. OC		-	-		-	_							~	+-	30.9	-			-					-+		-			 	+	+	-			
weather			-	-	-		_	-							+-	22.9	-			-										-	+	-	-	\vdash		
	Sunshine	hours						-			8.0	6.0	5.8	4.5	4.5	5.2	5.0	5.0	4.0	4.3	5.0	4.6	5.0	5.0	6.2	6.0	6.0	6.8	9.0	7.8	7.6	-			_	
																										=	·		VES	-		->				
mea impo	and an dates ortant epo	of ochs										<	SC	ERMII			EGET	ATIV	E GI	ROW	1	LOW		-	RMAT	N / (E X (
C4-	andord was	ko					14.									n .	1 1		r					1	-		V								_	
		KS								22	23	24 JUN	25	26	27	28	29 LY	30	31	32	33 IGU	34	35	36	TEN	38	39	40	OCTO	. 42	43	44				

: ANDHRA PRADESH

CROP : JOWAR (K) CROP I

VARIETY : SPV 86/CSH-5

SOIL : RED AND

MEDIUM BLACK

DISTRICTS : KURNOOL

NON-IRRIGATED

DURATION : 105 DAYS

	7																				7010																	
	Rain								> 60	MM/D	YA				>	60 N	MM/DA	AY					>10	MM/	DAY													
	Duration O	f Wet Spell							> 101	им го	DR 5	DAYS			>	20 N	MM FO	R 5 D	AYS																			
Weather	Cloudy Wei	ather																					CLOL	DINE	SS													
warnings	Drought								> 15 0	AYS					>	40 D	AYS																					
	High Winds	7						:	>30 K	м/н	OUR				>	40	KM/H	OUR					> 3	ОКМ	/HOU	R												
	Temper atur	е													MA	Х. Т	EMP.	> 38	С								-											
	Hail Storm																																					
Wea	ther	Pests						S	ноот	FLY A	ND S	TEM	BORE	R	SH	ООТ	BORER	2					APHI	DS, J	ASSID	s, MI	DGE											
condi		Weather						L	OW T	EMP. A	ND H	IGH R	Н		LO	N TE	MP. A	ND HI	GH RH	1				P _a														
favoura incider		Diseases													SUC	GARY	DISEA	SES A	AND S	MUTT			SUGA	RY DI	SEAS	ES AN	ID SM	UTT						10				
pests and	diseases	Weather	1												HIG	H RE	- WITH		N AND	LOW -	TFMP		HIGH						TEMP				,					
N	ormal phase v	vise	+									46.7	T		95.0		T		96.1					1	-		AND		LIVIT									
Wat	er requiremen Rainfall()	t(mm)	+	T	T		1	T	T	T		T		T		T		Т		Ī		87.1	T			2.3	T			T		T	T		T .	T	T	
Weekly	Max.temp			+	+	+		-	+					+	+	+	0 29.0	+	+		-	+	-				-	2.9	3.3		-	-		-		-		
normal			-	-	+	-	-	-	1-					+	+	+	4 32.8	+	+	 	 	+	-					-				-						
weather	Min.temp		-	+		-	-	-			24.0	23.8	23.3	23.2	23.3	23.	3 23.2	23.3	23.2	23.1	22.8	22.6	22.5	22.3	21.9	21.0	19.8	19.3	18.7			-		-				
	Sunshine	hours	-	+	+	-	-	-	4.5	5.2	4.9	5.1	3.9	4.4	5.6	5.6	5.9	6.4	6.1	6.4	6.4	6.7	7.6	8.0	7.7	8.1	8.4	9.0	8.5									
																										HAR	VES.	TING										
me	ife histor and ean dates ortant ep erop grov	of ochs								SOW		NATIO		EGET	FATIV	E G	SROW1		LOWI			AIN	FORM	ATIC	Z					さらなり								
Sta	andard wee	ks	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			1	
	Months					-				JU	LY			A	UGU	IST		SE	PTE	MBE	R		OCT	OBE	R	T	NO	VEN	BER			L						

STATE

: ANDHRA PRADESH

CROP : JOWAR (K)

VARIETY : CSH-5, SPV-351, CSH-9 SOIL : BLACK SOIL

DISTRICTS : PRAKASM

IRRIGATED

DURATION : 85 DAYS

Number Color Version Color Color Version Color Color Version Color Color Color Version Color		n - i -		T									70.141	. / -						/ -													8					
Color Weather Colo		Rain	CW C !!	+-	-	 												>	901	4M / D/	4Y			>	50 M	M / DA	Υ											
						militar alipulu hunguyaya						>.	50 MM	FOF	2 D	AYS		>	701	M FOI	2	DAYS		>	35 M	M FO	R 2 D	AYS								-		
### ### ### ### ### ### ### ### ### ##	Weather	Cloudy Wed	uther						b															CLO	DUDINE	SS												
May red	warnings	Drought										7 D/	AYS					15	DAYS	·				10	DAYS											•		
Mail Standard Mail Standar	Walanago	High Winds										> 4	ОКМ	/ HOI	JR			>	25 H	M/HC	UR			>	15 KI	n∕ HOU	IR											
Mail Standard Mail Standar		Temperature	e									MAX	. TEN	1P. >	34°	c,		MA	X. T	EMP. >	34	°C,		MA	X. TEI	/IP. >	34°C											
Vector V		Hail Storm				-							1 - 1111		10			19(1)	4. 11	iver.	10						10 C									fundamental transmission and		
Favourable for incidence of Diseases: Diseases	Weat	ther	Pests									SHOO	T FL	Υ.				ST	EM I	BORER				EAI	RHED	BUG,	CATER	RPILLA	AR									
Disease Dise			Weather		***************************************							LOW	TEMI	P.				CL	OUDY	WEA	THER	?		CLO	DUDY	WEAT	IER				8							
Normal place wise viser requirementations Weekly normal place wise (National Conference of the Conference of Conf			Diseases															LE	AF R	от				SM	UTT												5	
Standard weeks Stan	pests and	diseases	Weather																				Y	RAI	NFALL	FOL	LOWE	D BY	CLOU	IDY	WEAT	HER						
Rainfall(mm)total Weekly normal weather Rainfall(mm)total Max.temp. O Min.temp. O Sumshine hours 20 21 22 23 24 25 26 27 28 29 30 31 32 30 32 32 32 32 32 32 32 32 32 32 32 32 32	N Wate	ormal phase wer requiremen	vise t(mm)										54	1.1		81	.9							74.9		46.6									Dalah dengah perakan menjada pak	-		
Normal weather Min.temp. °C 25.1 27.9 27.3 27.0 27.3 27.2 26.8 26.5 26.7 26.3 26.7 26.5 26.5 26.6 25.9 25.7										T		12.2	14.8	15.4	17.4	17.	.6 22.	7 23.	4 17	.3 15.4	1 20).7 22.	9 22	.6 22.5	25.7	32.9	32.3						T					
Weather Min.temp. °C 2 2 2 2 2 2 2 2 2		Max.temp	o. °C									38.0	37.3	36.0	35.8	35.	.9 36.	35.	2 34	.3 34.4	1 34	.8 34.	6 34	.7 35.1	35.4	34.3	33.9	1										
Life history and mean dates of important epochs of crop growth Standard weeks 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48		Min.temp	. °C							-		28.1	27.9	27.3	27.0	27.	.3 27.:	2 26.	8 26	.5 26.3	7 26	.3 26.	7 26	.5 26.5	26.6	25.9	25.7											
Life history and mean dates of important epochs of crop growth Standard weeks 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48		Sunshine	hours									5.8	5.8	10.0	6.0	6.8	6.0	5.8	4.0	5.6	5.8	3 4.8	5.8	6.2	6.0	6.4	6.0											
Standard weeks 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	me impo	and ean dates ortant ep	of ochs		•								SOV		NAT	ION	1	VE (VERI CONTRACTOR OF THE PROPERTY OF THE PROPERT		IN F	ORMA	-	1	TING											
	Sta	andard wee	eks				\$	20	21	22	23	24		26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
TADICIS JULE JULE AUGUST SEPTEMBER OCTOBER		Months				 	1			\top		NE.				IUL			1					1								T						

: ANDHRA PRADESH

CROP : JOWAR (K)

VARIETY: CSH-5, CSH-9

SOIL : SANDY LOAM, BLACK, SANDY CLAY LOAM

DISTRICTS : RANGA REDDY, ADILABAD

NON-IRRIGATED

DURATION : 105 - 110 DAYS

	Υ	, TEDOT,	1	 																																
	Rain								> 2	OMM	/DAY	1				>	50 N	MM/D	YY					AN'	Y RAI	N										
	Duration Of	Wet Spell							> 2	20 M N	FOR	2 DA	YS			>	50 N	IM FO	RMO	RE T	HAN 2	DAYS	S													
Weather	Cloudy Wea	ther																																	×	
	Drought								> 7	DAYS	3					>	15 D	AYS						>	20 DA	YS									•	
warnings	High Winds	,											Ran Pila Andrianna and Anna				7																			
1 2	Temperature								MIN.	. TEN	P. <	15 C				MIN	I. TE	MP. <	10 C					MIN	. TEM	P. <	10 C									
	Hail Storm			2					HAIL	STO	ORM			A Harinton James (Au		НА	IL S	TORM	·					HAI	L ST	ORM										
Weat	ther	Pests							sHo	OT F	LY					ST	EM E	BORER					8	EAR	HEAD	BU	, HEI	LIOTI	HIS							
condit	tions	Weather							CLO	UDY A	NDH	UMID	WEA	THE	R	CLC	OUDY	AND	HUMII) WE	ATHE	R		CLO	UDY .	AND	нимі	D WE	ATHE	ER						
favoura inciden		Diseases		 					LEA	F BL	IGHT					LE	AF B	LIGHT						LEA	F BLI	GHT	WIT	H GR	AIN I	MOUL	DS					
pests and		Weather									ND H		WEA	THEF	?			AND OW TE) WE	ATHE	R			UDY A			D WE	ATHE	R						
N	formal phase w	ise									T	6.0		1	09.7				31.6				72.6				11.5									
Wat	Rainfall(n			T	T		1		19.5	30.6	51.3	60.3	57.0	60.5	68.9	72.8	61.8	45.0	49.8	46.8	49.0	52.2	43.1	45.1	33.3	21.4	12.5	9.1	7.0		1	T	T	T		
Weekly	Max.temp	. °C			+	+	+		+		-	-	+	+	+-	+	+	30.2		_	-						-	-	+		+	+				
normal	Min.temp.				+	+			+	 		<u> </u>	-	+	+	+	+	22.5									-		+	+	1	+				
weather	Sunshine					+			7.7	5.3	6.1		-	5.2	+-	+	+	+				5.2						 	+	+-	+					
me	Life histor and ean dates ortant ep crop grov	of ochs									GERM		TION		GETA	ATIVE	GRO	DWTH	FLO	WER	ING	G	RAIN	FO	<		VES	TING								
St	tandard wee	eks						22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	+-	+				
	Months							 		JUN					ILY		T		UGL				EPTE				OC7			T						
										,	_			, ,									~													

: ANDHRA PRADESH

CROP : JOWAR (R)

VARIETY: CSH-5, CSH-9, SPV-86

SOIL : SILTY SANDY LOAM

DISTRICTS : NELLORE

NON-IRRIGATED

DURATION : 105 DAYS

SANDY CLAY LOAM, LIGHT BLACK

	Rain										> 5	50 MM	/ DA	Υ΄				> 15	50 MM	/ DAY	1				ANY	RAIN										
	Duration Of	f Wet Spell									> 4	O MN	FOR	4	DAYS			> 1	00 MM	FOR	4 D	AYS														
Weather	Cloudy Wea	uther																							CLOU	DINES	S									
	Drought										> 15	5 DAY	/S					> 2	20 DA	YS					> 4	O DAY	S									
warnings	High Winds												CAMPINE A CAMPINE	Manuscondon.																						
	Temperature	е	1								MAX.	TEMP	>40°	PC, MI	N. TER	AP. <	15°C		A	AX. T	EMP.	>40°	C, MIN	I. ŢEŅ	PKI	°C ·										
	Hail Storm		1													-								,	HAIL	STO	RM									
Wea	ther	Pests									SHOO			E, E	AR HE	AD			OT FL'	-	E, E	AR HE	EAD		SHOO)T FL	Y, MIT	E, EA	AR HE	AD C	ATER	RPILL	AR			
condit		Weather				(CLOU	DINES	S AN	D FR	EQUE	VT R	AINS	CLOU	JDINES	S AND	FRE	QUEN	T RA	INS	CLOU	DINES	S AN	D FRI	EQUE	NT R	AINS					
favoura inciden		Diseases																															ų.			
pests and		Weather																																		
- N	Vormal phase w	vise t(mm)										,	29	9.6			60.8			6	4.6			77.8			70.0				10					
77.20	Rainfall(70.1	82.5	84.0	64.6	52.9	34.	8 36.	2 24.3	15.8	12.3	10.0	7.5	6.9	3.9	1.9	1.7	1.9	2.3	2.3	2.9			×			
Weekly	Max.temp	o. O _C									31.2	31.0	30.4	30.1	29.4	29.	3 29.0	28.5	28.7	28.9	29.5	29.7	30.0	30.5	31.4	31.7	32.2	33.1	34.1	33.8						
normal weather	Min.temp	o. °C			-						24.3	23.7	23.3	22.9	22.5	21.	8 21.0	21.0	20.3	20.2	19.7	19.5	19.9	20.4	20.7	21.6	21.3	22.1	22.0	22.7					-	
	Sunshine	hours									6.8	7.2	7.3	8.0	7.6	8.2	7.5	7.8	8.8	7.2	9.8	9.6	9.4	9.8	9.6	9.6	10.2	10.2	10.0	10.0				T		
m imp	Life histor and ean dates ortant ep crop gro	of oochs											GI SOWII		INAT		EGET	TATIV	E GF	ROWT	1	OWEF	GRA	AIN	FORM	<		VEST	TING							
St	tandard we	eks		+			1	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13		+	
	Months							-	OCT	-					1BEF				MBE			IAN	UAF	RY		FEB	RUA	ARY			<u>I</u> МАR					
	17 A ORIGINA							1		JUL			1,0			1				-		<i>y '</i>						_								

: ANDHRA PRADESH

CROP : JOWAR (R) CROP II

VARIETY: SPV-86, CSH-5

SOIL : RED AND MEDIUM,
MEDIUM BLACK

DISTRICTS : KURNOOL

NON-IRRIGATED

DURATION : 105 DAYS

	TO . KUI	MOOL												110	14-114	11107	ALLI				JOIL			.00	DATE												
y - 9	Rain									> 6	OMM	/ DA	YS			>	60 MN	1 / D/	ΑΥ				> 10	MM/	DAY										•		
	Duration O	f Wet Spell								> 10	MM	FOR	5 DAY	rs		>	20MM	FOR	5 D	AYS												•					
Weather	Cloudy Wed	uther																					CLOU	DINES	SS						-						
warnings	Drought									> 15	DAYS	3				>	20 DA	YS																			
warnings	High Winds									> 3	O KM	/ HR				>	40 KW	I/HR	2				> 30	KM/	HR							,					
	Temperatur	е														MA	K. TEI	MP.>	38°C																		
	Hail Storm																																				
Wea	ther	Pests								SHO	OT FL	Y, S1	EM E	BORE	R	SHO	от в	ORER	₹				APHI	DS,J	ASSID	S, M	IDGE										
condit		Weather								LOW	TEM	P. AN	D HIG	H RH	I	LOV	V TEN	IP. AN	ND HIG	H RH				2													Britan Control Control
favoura incider		Diseases									-		8			SUC	SARY	DISE	EASES				SUGA	RY D	ISEAS	ES A	ND S	MUT	Г								
pests and	diseases	Weather		,												HIG	H RH,	LOW	V TEM	o.			HIGH	RH,	LOW	TEN	MP.										
	formal phase v	vise							***************************************			3	3.4	T	(56.0		T	63.	3	T	6:	5.6			48.7	,										
Wat	Rainfall(T		T		T	39.6	36.8	35.7	17.2	23.5	5 24.5	5 22.	9 3.7	2.9	9 3.3	10.1	0.3	0.4	0.0	2.8	0.0	0.0	0.0	0.0			T	1		T	T		
Weekly	Max.temp	o. O _C	-	+					+	-	+	+	+	+-	+	+-	+	+	.2 30.	7 30.4	30.	5 30.1	30.0	30.1	30.8	30.9	31.3	32.2									
normal weather	Min.temp	. ° _C								23.1	22.8	22.6	22.5	22.3	3 21.9	21.	0 19.	3 19.	.3 18.	17.5	17.	3 16.3	16.0	15.6	15.4	15.7	16.5	17.5									
,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Sunshine		-							6.4	6.4	6.7	7.6	8.0	7.7	8.1	8.4	9.0	8.5	8.5	8.1	8.8	9.4	8.0	9.4	9.5	9.4	9.3									
																									u	A D\/I	CTU	NC.									
																									< [□]	ARVE											
																						GRAI	N FO	RMA	TION	.~											
I	ife histo	ry																	FL	OWE	RING	,		l Ab	A	À		AL STATE		100							
m	and ean dates	of																				in the second			6								2 (5)				
	ortant ep									900				YE	JE IA	1146	GRO	10	7		-	1	_							物							
of	crop gro	wth	-								GE	RMIN	ATIO	N.		1	N			Y				1					60								
											SO	WING					A		1	1	\mathcal{T}																
										- 1	•			1		N	X		4	N	6	D															
St	andard we	eks	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	5 47	48	49	50	51	52	1	2	3	4	5	6	.7	8	9	10			
	Months			1				SE	PTE	MBE	R		00	TOL	BER		N	OVE	ЕМВЕ	R	I	DECE	MBE	R		JAN	IUAI	RY									
			4				- 1					4				- 1																					

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT (K)

VARIETY : TMY-2, TL-24, ICG-44 SOIL : RED SANDY LOAM

DISTRICTS : NELLORE . CHITTOR . PRAKASAM

IRRIGATED

DURATION : 105 - 110 DAYS

DIDIANA	15 : NEL	LORE , CHITT	iok,	PRAF	KASA	A IVI					11/1		IEU													70.	484 /	DAY					HIGH EMP. 3.5 0.0 1.9 6				
	Rain									:	> 40	MM/I	YAC							MM/D						> 30 N											
	Duration Of	Wet Spell								;	> 10 1	MM F	OR 7	DAYS				>	20 N	IM FO	RIOD	AYS			>	> 10 N	IM F	OR 10	DAY	S							
7 41	Cloudy Weat	her																																	1		
eather	Drought									:	> 10 [DAYS						>	25 [OAYS						> 20											
arnings	High Winds																											HOUF									
	Temperature								15	N	ИАХ.Т	EMP.	> 35	°с,мі	N TE	MP. <	€15°C	M	AX.T	EMP.	> 40°	°C			N	1AX.	ГЕМЕ	2. > 4	10°C								
	Hail Storm																												750	DII I	A.D. I						
Wea	ther	Pests								L	_EAF E	EATINGER, RO	G CAT OT GF	ERPI RUB,J	LLAR ASSID	, LEA S, Th	F IRIPS	W	EBBE	R, LE	AF M	INOR		,LEAF	V	EBBE	ER	NG CA									
condi		Weather									FREQU RAIN,H	ENT F	RAIN A	AND	DRY S	PELL OW T	,HIGH EMP.	H FI	REQUI	ENT F	RAIN A	JDINE:	RY SP SS,LO	ELL,HIG	GH F	REQU	ENT	RAIN RH,CL	AND OUDI	DRY	SPEL ,LOW	L, HI	GH IP.				
favoura incider		Diseases									TIKKA BUDNE	,LEA	F SPO								F SPO							AF SP									
ests and	diseases	Weather									HIGH I	RH,LO	W TE	MP.,	CLOUI	DINES	S	Н	IGH F	RH,LO	W TE	MP., C	LOUD	NESS	Н	IIGH F	H,L	OW TE	MP.,	CLOUI	DINES	Ş					
ľ	Vormal phase w	ise													68.	1		117.	6		170.0	5		146.9			13	8.6									
Wa	Rainfall(r										13.8	16.2	17.9	20.2	21.5	16.4	29.2	30.9	22.5	21.5	23.0	26.4	30.6	30.1 3	1.2	36.0	52.4	50.0	53.7	56.7	41.6	34.5					
Weekly	Max.temp	. °C									36.0	35.8	35.9	36.1	35.2	34.3	36.4	34.8	34.6	34.7	35.1	35.4	34.3	33.9	4.0	34.7	32.3	31.6	31.5	31.2	30.7	30.0		-			
normal weather	Min.temp	. °C									27.3	27.0	27.3	27.2	26.8	26.5	26.7	26.3	26.7	26.5	26.5	26.6	25.9	25.7	25.5	25.3	24.8	24.2	23.8	23.1	22.7	21.9					
,, chon or	Sunshine	hours									10.0	6.0	6.8	6.0	5.8	4.0	5.6	5.8	4.8	5.8	8.2	6.0	6.4	8.0	5.8	6.2	6.8	6.7	7.4	7.4	8.0	7.6				+	
																											_		HAR'	VEST	ING						
																							G	RAIN	FOF												
	Life histo	rv																				l ow	ERIN	G					-			 					
,	and	J																		<		LOW			>						St.	3					
	iean date: portant ej																< \	VEGE	TATI	VE G	ROW	TH >		90		5		5	95		3		M	NO.			
_	crop gro													 GERI	MINA.	 TION							3	73	Z		33	AS,		5							
														SOV	/ING						24		4		P			1		•			100				
							1				<			1		30		>	7	N		E		") "			800										
	Standard we	eks		, a			22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48				
	Months					1	1		JUN	JĖ.	1		IL	ILY		T	A	UGU	IST		SE	EPTE	МВЕ	R		OCI	OBI	ER		NO	OVE	ИВЕ	R				

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT (K)

VARIETY : TMV-2

SOIL: RED, SANDY LOAM, AND LIGHT BLACK

DISTRICTS : CUDDAPAH, ANANTAPUR, KURNOOL

NON-IRRIGATED

DURATION : 105 - 110 DAYS

	I	DUAL ALL, AL		-,									110		NIG!	ALED						· ·	100		DAI												
	Rain								> 50	MM/	DAY						> 8	ОММ	/DAY				_ !	> 3	30 MN	/DAY	Y'										
	Duration O	f Wet Spell							> 25	MM	OR 6	DAYS	3				> 3	омм	FOR 4	4 DAY	S			> :	30 M M	FOR	4 DAY	YS									
Weather	Cloudy Wed	uther																																			
	Drought								> 10	DAYS	3						> 2	5 DAY	S					> :	30 DA	rs											
w at timgs	High Winds																				160																
	Temperatur	е							MAX.	TEMF	. > 3	5°C,N	IIN. T	EMP.	< 25	c	MAX	.TEM	P. >40	o°c				MA:	X. TEN	1P. >	40°C	0			-		titurium eren en e				-
Duration Of Wet Spell Cloudy Weather Weather													*****													Minutes and Minute											
Wea	ther	Pests							ROOT	GRUE	,RED	HAIR	Y CA	TERF	PILLA	\R	LEA	F MIN	OR,SP	EED H	HELIO	THIS		POD	BORE	R,ST	ЕМ В	ORER	,тов	BACCO	сит	WOR	M				pens
	eather Cloudy Weather Drought High Winds Temperature Hail Storm Weather conditions favourable for incidence of ests and diseases Weather Normal phase wise Water requirement(mm) Rainfall(mm)total Max.temp. OC Sunshine hours Life history and mean dates of important epochs of crop growth	Weather							LOW T			LOUI	OY W	EATH	ER			TEMF	. AND	CLOU	DY W	EATH	ER	LOW	TEM	P. AN	D CLC	Yduc	WE AT	THER	WITH	RAIN	١			•	
inciden		Diseases							SEED STEM		SEEDI	ING	ROT,	COLL	AR R			SPO	SIS,E	ARLY	AND	LATI	E	TIK	KA, RL	IST, E	ARLY	AND	LATE	ELEA	F SP	от					_
pests and					1		- 11	LOW T	ГЕМР.	COUP	LED	WITI	H HIG	HRH		LOW	TEMP	.COUP	PLED	WIŢH	HIGH	RH	LOW	/ TEM	P. CO	UPLE	ED WI	тн н	IGH R	Н							
N Wat	ormal phase v er requiremen	vise t(mm)											67	7.0		15	50.0			157	7.3		.1	141.7		104	4.6										
Weather Warnings High Winds Temperature Hail Storm Weather conditions favourable for incidence of pests and diseases Weather Normal phase wise Water requirement(mm) Rainfall(mm)total Meekly normal weather Min.temp. OC Sunshine hours Life history and mean dates of important epochs of crop growth Standard weeks							6.8	20.7	16.6	30.0	25.9	30.9	24.9	25.8	29.0	29.0	19.7	32.3	39.6	36.8	35.7	17.2	23.5	24.5	22.8	3.7	2.9	3.3	10.1								
							34.3	34.8	34.6	34.6	33.7	33.0	33.0	33.3	32.7	33.1	32.9	33.4			32.5	33.0	32.6	31.9	31.7	31.6	31.3	30.7	30.5	;							
							24.1	24.4	23.7	24.0	23.7	23.2	23.1	23.2	23.3	23.2	23.3	23.0	22.8	22.9	22.5	22.4	22.4	21.8	21.0	19.5	19.1	18.7	17.5	;							
	eather Cloudy Weather Drought High Winds Temperature Hail Storm Weather conditions favourable for incidence of ests and diseases Weather Normal phase wise Water requirement(mm) Rainfall(mm)total Max.temp. OC Sunshine hours Life history and mean dates of important epochs of crop growth	hours							5.2	4.4	5.6	5.0	5.4	4.0	5.6	5.8	5.9	6.6	6.8	7.0	6.6	6.4	6.4	7.4	8.0	7.8	8.2	8.6	8.8	8.4	8.6		1				
										-															ПΛ	DVC	STIN	C									
	Temperature Hail Storm Weather conditions Avourable for incidence of its and diseases Normal phase wise Weather Rainfall(mm)total Max.temp. OC Sunshine hours Life history and mean dates of important epochs of crop growth																						<				1		+	 	-			0			
	mings Drought High Winds Temperature Hail Storm Weather conditions avourable for incidence of ts and diseases Weather Normal phase wise Weather Normal phase wise Weather Normal phase wise Weather Normal phase wise Weather Max.temp. OC Min.temp. OC Sunshine hours Life history and mean dates of important epochs of crop growth Standard weeks										-										<	(NAR	N FO	ĎŘΜΔ I	TION	1	>	-								
I	Life history and mean dates of	ry																		FLO	WER	ING															
me	and mean dates of important epochs	of																												4							
	mean dates of important epochs														-	VEG	ETA	TIVE	GRO	WTH	>								3	N		2					
of	crop gro	wth										GE	RMI	NATI	ON			9	3	3	200		1	4	*		1-9	2/1	2	1							
												SC	WIN	 G				4	Y		•			To the second	7		13		8	M		九					
						%			<		•	6		9		<u> </u>			1/85	13-3			39	R		7	No.			10							
St	andard wee	eks			22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
	Months		1		T		JUN	VE			IU	LY			A	UGU.	ST		SEI	PTEN	MBE	R		OC	ГОВЕ	\mathbb{R}	T	NO	$VE\lambda$	MBEF	2	D	ECE!	MBEI	R		-

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT(K)

VARIETY : TM

:TMV-2, JL-24, TMV-2, K3 (IMPROVED)

SOIL : RED SANDY LOAM/ SANDY CLAY LOAM

DISTRICTS : KHAMMAM, WARANGAL, KRISHNA, KARIMNAGAR

NON-IRRIGATED

DURATION : 100 - 110 DAYS

		AMMAM, WA	TANG	AL,	KIND	TIVA,	NAIN		> 50	8484				NOI			OMM								> 30	MM										0		
	Rain Duration Of	Wet Snell	-					,	> 101		OR 3	DAY	S				O MM	FOR	3 DA	/S					> 30	MM C	FOR 3	3 DAY	YS									
	Cloudy Wea		-														JDY W								CLOU	DY W	EATH	IER					-					
Weather	Drought								> 20	DAYS						> 2	O DAY	S							> 50	DAY	S								-	•		
varnings	High Winds	-				-,									***************************************																							
	Temperature	2	+						MAX.T	EMP.	> 35°	C,MIN	I. TEM	P. < 10	o°c	MAX	TEMP	> 4	0°C, R	AIN. TE	EMP. «	< 18°0	;		MAX.	TEM	P. > 4	ю°с,	, MIN	TEM	P. < 11	8°C						
	Hail Storm		+																						HAILS	STOR	M	,										
N N Z	41	Pests							APHID LEAF			RUB, L	EAF	FOLD	ER		IDS,T		, LE	FFO	LDER	,			RED	HAIRY	CAT	ERPII	LLAR									
Weat condit		Weather						1	CLOU	OY W	EATH		AIN, H	IIGH I	RH	LOW	TEM	P AND	HUM	IDITY,	CLOL	IDY W	EATH	ER,	LOW	TEMP	AND	LOW F	RH, C	LOUD'	Y WE	ATHER	R R	AINS				
favoura		Diseases							COLL	AR R	OT, S		ROT,	WILT	9		A, LE		POT	PEDO	TIVE,	BUDNE	CROS	IS	TIKK	A,LEAF	SPO	T, RU	IST, R	00 T	ROT,	, COLL	_AR F	ROT				
ests and		Weather	-						LEAF HIGH			TEMP,	CLOU	DY WE	ATHER	HIGH	H RH, L	ow T	EMP,	CLOUI	DY W	EATHE	ER .		HIGH	RH, L	_OW T	EMP,	, cLo	UDY 1	WEAT	THER						
	I	<u></u>								,		54.3			18.4		1		72.5				7.6			99.5	i											
Wat	ormal phase ver requiremen	t(mm)	-	1		T						T	-	T	T	T			1	12.2	15.3	39.8		20.6	25.1	21.2	27.0	101	100	13	7		\top					
ww7 1 1	Rainfall(-		-				28.3			-	54.9	+	+-	+	+	-	+	-	-	-	-	-	-	-	+	1	+	+	_	-	+	+	+	+	+	
Weekly normal	Max.tem	p. ⁰ C										-	+	+	+	+	32.2	-	+	 	1											_	+	+		+	+	
weather	Min.temp	o. °C	_		-				26.6	26.3	25.4	-	+	1	+		24.5																+	+	+	+	+	
	Sunshine	hours	-						5.6	5.6	4.0	4.0	4.9	4.7	4.8	4.2	4.9	5.9	4.3	5.0	4.5	6.0	5.4	5.8	5.3	6.7	7.2	7.3	7.8	8.1	-	-	+	+	+		+	
																									-	1	HAR\	VEST										
																							GR	RAIN	FOR	I MAT	ION						1					
	Life histo	rv) 	INC																
	and	L y																		I FLO	1 2 44 EL	RING		-					9	6)	8						
	ean date:													1	'EGE	TATI	VE G	ROW	TH									(-	-	1							
_	pochs wth									G	 FRM	 INAT	ION				2			4	4		8	2	3	3	\$ }		M	X	$\overline{}$	*						
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S	tandard we	eeks					22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	5 40	6 47	1 4	48				
	Months			4					JUN	E			Jl	ILY			A	UGI	IST		S	EPTE	EMBE	ER		OC'	ГОВ	ER		NC	OVE	MBE	R					

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT (K)

VARIETY : JL-24, TMV-2

SOIL : RED SANDY LOAM,

RED LOAM

DISTRIC	CTS : VIS	AKHAPATNAN	A,VIZ	IANA	GARA	AM,SR	IKAKU	JLAM						NON	-IRR	IGAT	red			Di	URA'	TION	: 1	05-	110	DAYS						RE	D LO	MAC			
	Rain										> 25	MM/	DAY						> 50	MM/	DAY						> 30	MM/	DAY								
	Duration Of	Wet Spell	<u> </u>								> 15	MM	FOR 2	DAYS	5				> 30	MMC	FOR	4 DAY	S				> 25	ММ	FOR 3	B DAY	S						
	Cloudy Wea	ther																								(CLOU	DINE	SS								
Weather											15	DAYS	3						10	DAYS	3						12	DAYS	5		;						
warnings	High Winds										> 25	5 KM/	HOUF	?					> 40	O KM/	/HOU	R			ā												
	Temperature	?									MAX.	TEM	P. >	40°C					MAX.	TEMI	P. >	40°C				ľ	MAX.	TEM	P. > 4	40° C							
	Hail Storm		+																																		
Wea	ther	Pests									LEAF	MINC	R,API	HIDS,	THRIP	s,RQC	T GR	UB	LEAF	MINO	R, API	HIDS,L	EAF	WEBB	ER	I	POD E	BUG,R	00T	RUB,	POD E	BOREF	2				
ndi		Weather	+										P. LOW			GED I	HUMIE		HIGH SPEL		,LOW	RH,P	ROLO	NGED	DRY			ONGE Y RA		SPEL	L IMI	MEDIA	ATELY				
incider		Diseases	+										OT, LE			rikk <i>i</i>	1				AF SP	от, в	JDNE	CROSI	S					ot, st	EMR	от					
pests and		Weather	-										DHUN		AND				LOW	TEMP,	HIGH F	RH,WE	TSPE	LL IN	GROW	ING I	LOW 7	TEMP,	HIGH	RH,W	ET SP	ELL,	PROLO	ONGE)		
	Vormal phase w		-								CLOU	DY CC	NDIT	IONS	73.6				6.6	D,PRC		158.5			148.0	,		121.6			1 11 1	4111121					
Wai	ter requiremen	t(mm)		T		1	T	T		T		Τ	Ι		Γ							38.8						1	Т	49.0	10.5	44.2	52.3	Τ			
Waaldy	Rainfall(1							-			7.4	9.9	14.6	-	17.6		21.2	-										1		-	-	-	 	+-			
Weekly normal	Max.temp		-				-			-	33.6			34.7			-	-				32.0											†			-	
weather	Min.temp	. °C	-				-				26.5	26.9	26.7	27.4	24.7		27.7	27.1				26.2			7				 		 	25.4	 	-			-
	Sunshine	hours	ļ	_	-	-				-	9.8	8.7	8.9	8.3	8.1	4.9	6.0	6.1	4.6	5.2	5.6	5.1	4.3	3.2	3.7	4.0	4.8	5.5	3.6	5.3	6.0	5.5	5.6	-			_
																												НД	RVE	ST				En			
																									RAIN	FOR	aati			- 4			1				
,												- 365													I PATTY	FOR	IANTALI	OIA	<u>.</u> I								
,	Life histor	гу																	ı		F	LOW	ERIN	G													
	ean dates								-	300	1							 VEGE	TAT	IVE (3ROV	VTH															
_	ortant ep crop gro																								S												
Ű.	erob 8.		-									-	1	GEF	RMINA	AOITA I	<u> </u>	1		2	48 /	-	3		1		·	-	6	98		19		36			
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							16						4	•		•	7	~	ı					יוע	1		7		X)	1)V				
S	tandard we	eks		+			13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
	Months								API	RIL		T	1	MAY			1	JUN	ΙE			JU	LY			Al	UGU	ST		SE	EPTE	EMBE	ER				

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT(R)

VARIETY : TMV-2, JL-24

SOIL : SANDY LOAM

SANDY CLAY LOAM

DISTRICTS : NELLORE NON-IRRIGATED DURATION : 105 - 110 DAYS >40 MM/DAY > 50 MM / DAY > 50 MM / DAY Rain Duration Of Wet Spell > 20 MM FOR 4 DAYS > 30 MM FOR 7 DAYS >30 MM FOR 4 DAYS CLOUDINESS Cloudy Weather CLOUDINESS Weather Drought warnings High Winds Temperature MAX. TEMP. > 40°C, MIN. TEMP. < 15°C MAX. TEMP. >40°C, MIN. TEMP. < 15°C MAX. TEMP. > 40°C, MIN. TEMP < 15°C Hail Storm HAILSTROM LEAF EATING CATERPILLAR. LEAF EATING CATERPILLAR LEAF EATING CATERPILLAR, LEAF WEBBER Pests Weather LEAF WEBBER LEAF WEBBER conditions Weather FREQUENT RAINS AND DRY SPELLS FREQUENT RAINS AND DRY SPELLS FREQUENT RAINS AND DRY SPELLS favourable for TIKKA AND LEAF SPOT TIKKA AND LEAF SPOT TIKKA AND LEAF SPOT Diseases incidence of pests and diseases HIGH RH, LOW TEMP. Weather HIGH RH, LOW TEMP. HIGH RH. LOW TEMP. 38.9 93.0 1728 161.4 153.4 Normal phase wise Water requirement(mm) Rainfall(mm)total 6.9 3.9 1.9 2.3 2.2 2.5 34.8 36.2 24.3 15.8 10.8 10.0 7.5 1.9 Weekly Max.temp. OC 29.5 | 29.7 | 30.0 31.4 31.7 32.2 33.1 34.1 33.8 35.7 29.3 29.0 28.5 28.7 30.5 normal Min.temp. OC 22.0 22.9 25.1 25.9 20.3 20.4 20.7 21.6 21.3 22.1 22.7 23.5 24.3 21.8 21.6 21.0 20.2 19.7 19.5 19.9 weather 9.8 Sunshine hours 9.8 10.2 10.2 10.0 10.0 10.0 9.0 8.2 7.5 7.8 8.8 7.2 9.8 9.6 9.4 9.6 9.6 HARVESTING GRAIN FORMATION Life history FLOWERING and mean dates of VEGETATIVE GROWTH important epochs of crop growth GERMINATION SOWING Standard weeks 10 11 12 13 14 15 16 17 43 44 45 46 47 50 51 52

JANUARY

FEBRUARY

MARCH

Months

NOVEMBER

DECEMBER

APRIL

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT (R)

VARIETY : TMV - 2, JL - 24

SOIL: BLACK AND RED LOAM,
SANDY CLAY LOAM

DISTRICTS : KURNOOL, KRISHNA

IRRIGATED

DURATION: 105-110 DAYS

	Rain		-					> 50	MM/	'DAY						> 5	о мм,	DAY			,			> 30	MM/	DAY									
	Duration Of	f Wet Spell						> 10	MMF	OR 5	DAYS			1		> 3	ОММ	FOR	3 DAY	S				> 30	MMC	FOR 3	3 DAY	S							
	Cloudy Wea	uher														CLO	UDINE	SS																	
Weather		-																																	
warnings	High Winds																																		
	Temperature	2														MIN.	TEM	0. < 1	o°c												7				
	Hail Storm		+	 																												Buddymout and the second	•		
Weat	ther	Pests						APHII			UB,LI	AF F	OLDEI	R,			F MIN				EAF F	OLDE	R,	APHII	DS,TH RPILL	RIPS,	LEAF ASSID	FOLI	DER, T	ОВАС	cco				
condit	tions	Weather	-					CLOU			R AN	RAI	1S			DRY	WEAT	HER (CONDI	TION	s,			CLOU	DY W	EATH	ER AI	ND RA	INS						
favoura inciden		Diseases						SEED			ING RO	т,со	LLAR	ROT,			A,LEA				F SPO	т,		TIKK			EASE	,RUS	T, BUD	ONEC	ROSIS	,			
pests and	diseases	Weather						LOW .	TEMP.	,CLOU	DY WE	ATHE	R,HIG	Н		LOW	TEMP IFALL	CLOI AND	UDY W	/EATH	IER, H	IGH		LOW RAIN	TEMP FALL	CLO AND	UDY \	WEAT RH	HER,	HIGH	1				
N	ormal phase v	vise										40.0			9	0,6			159.7	7		148.8	3		1	39.4									
Wat	Rainfall(27.5	15.0	13.1	5.7	1.3	4.6	1.7	1.4	0.2	1.3	1.8	1.1	0.8	1.3	3.3	3.0	1.4	2.8	0.8	3.6	4.0	2.4	4.7					
Weekly	Max.temp	o. °C						31.2	30.6	30.3	29.9	29.7	29.6	29.2	28.9	29.1	28.9	29.4	30.1	30.6	31.0	31.5	32.6	34.4	33.7	34.7	35.1	35.5	36.4	36.3	3				
normal weather	Min.temp	. °C						22.1	22.1	20.3	20.3	19.8	20.0	19.4	18.8	18.1	17.9	18.4	19.2	19.7	20.3	20.3	21.2	21.6	22.0	22.6	23.3	23.0	25.0	25.4	4				
	Sunshine	hours						7.7	8.3	7.4	7.9	7.4	7.4	9.1	8.2	9.4	9.5	9.1	9.1	9.2	9.2	9.4	9.4	9.8	8.6	9.0	8.9	8.8	8.4	9.2					
																									ШΛ	RVES	STIN	G							
																								-					1	·			8		
																				GI	RAIN	FOF	RMAT	ION											
I	Life histor	ry																FLC	 WER	RING															
m	ean dates	of																1			1							-	ہے ط		B.00				
_	ortant ep													VEG	ETAI	IVE I	GROV	 I			%	4	80	90	7		4	8	180	4		*			
10	crop gro	wtn						-		GE	RMIN	ATIO	N I	1			7	-	96	8	70 10	32			7	A	5	3			6				
										SO	 WING					3	X	4	7	Pa				9	Y	N	-		9	1	0		100		
										6	6		-		•		7	T		ø				1	200	1		AND THE STREET	1						
St	tandard we	eks				1	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	. 13	14	15	16	17			
	Months				1		T	NC	VEN	ивел	R	E	ECE	MBI	ER		JAN	IUAI	RY		FEE	RUA	ARY		N	1ARC	CH			AF	PRIL				

STATE

: ANDHRA PRADESH

CROP : GROUNDNUT (R)

VARIETY : TMV - 2

SOIL : BLACK AND RED

DISTRICTS : KHAMMAM, WARANGAL

IRRIGATED

DURATION : 100 - 110 DAYS

DISTRIC	15 . 1117	AIVIMAIVI, WAN	THE THE				> 30	0494	DAY				> 50) BABA	/ DAY					> 30	MM/	/DAY													
	Rain									4							AVC							2											
	Duration Of	Wet Spell					> 10	MM F	FOR 4	DA.	YS				FOR	4 0,	AYS												-						
Weather	Cloudy Wea	ther											CLOU	DINES			,																		
warnings	Drought																							-											
warnings	High Winds		11																																
	Temperature	e											MAX	TEMP.	> 40	O°C MI	N TE	MP. Z	15°C														×		
	Hail Storm												HAILS	TORN	A			*																	
Wea	ther	Pests				L	_EAF	WEBI	BER,R .AR	ED H	AIRY		SPED!				LAR,			SPED	OTIVE	CATE	ERPIL	LAR,	LEAF	SPOT,	, RUS	ST							
condi		Weather				ŀ	HIGH I	RH WI	ITH L	_OW 1	remp		HIGH	RH W	ITH L	T WO.	EMP.			HIGH	RH V	VITH I	Low	TEMF											
favoura incide		Diseases					TIKKA	DIS	EASE				TIKK	A DIS	EASE					TIKK	A DIS	EASE													
pests and	diseases	Weather				Į.	LOW T	EMP	AND	HIGH	RH		LOW	TEMF	. AND	HIG	H RH			LOW .	TEMP	AND	HIGH	RH											
	Normal phase v	wise							45.2			98.0				103	.6		92.0) ,		78.0	1												
Wa	ter requiremen	nt(mm) (mm)total		T		T	12.5	12.6	30 3	23.3	18.1	18.8	14.5	14.4	9.5	3.8	3.8	3.2	1.3	2.1	2.1	0.7	1.5	1.4	1.7										
XX/ - alala				+		-	-		-	-	+	-	+			-	-	20 3	29.3	28.6	28.8	29.0	29.2	29.4	29.9	/									
Weekly normal	Max.tem	p. °C		-					-		+	1	32.2							+	-	15.5		<u> </u>		-									
weather	Min.temp	p. ⁰ C					24.0	23.9	23.6	23.2	22.7		21.5		1					+			9.3	8.8				+	1.		1				
	Sunshine	e hours					6.0	6.0	5.8	5.6	7.0	7.0	6.4	7.2	8.2	8.8	8.0	8.0	8.4	8.3	8.2	8.2	9.3	8.8	9.4		-	+		1	-			+	
		A 101																			НА	RVES	TIN	G											
																	GF	RAIN	FOF	 RMAT	ION														
	T 10 1 1																																		
	Life histo and	ory													FLO	WER	ING	1	1	-															
n	nean date	es of										VF	 GETA	 TIVE	GRO	 WTH															2 (0)				
_	portant e																							-	4	a									
of	f crop gro	owth						4	GER	MINA	TION	-		2		36		1		2	4		2		-	3		6							
								 SOWI	NG				1		4	-	-	Y	6				RE	3			1								
					3.			1	6		*	4	A	55	bl.			J	01		. 1	7)		1				9460							
	Standard w	eeks				36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5								
							PTE	MRF	ER	(DCTC	OBEI	R	T	NOI	/EM	BER		DE	ECEN	1BEI	2	J.	ÁNL	IARY	(1012	•			
	Months	1.	1																																

STATE

DISTRICTS : KURNOOL

: ANDHRA PRADESH

. CROP : COTTON

VARIETY : G.ASTOREM, SRISAILAM

SOIL : BLACK SOIL

DURATION: 180-200 DAYS NON-IRRIGATED

	Т													110	711-11) / N I I	עו				UKA	110	14 :	180-	- 20	U U	Ars								TEMP. 0.0 0.1 0.6 0.1 0.0 33.2 34.0 34.3 35.4 36.8 18.0 18.6 18.6 19.9 19.9 9.4 9.8 10.4 10.0 10.4 PICKING UP 5 6 7 8 9 FEBRUARY			
	Rain	***************************************		>	50 M	M/DA	AY								>	50 N	MM/D	AY									ANY	RAIN											
	Duration O	f Wet Spell		>	40 M	M FO	RTW	O DAY	/ \$						>,	40 M	M/FC)R 3 D	YAC	\$																			
Weather	Cloudy Wed	uher																																	*		-		
warnings	Drought			20	DAYS										25	DAYS	S										32 D	AYS											
	High Winds								080						>	40 K	м/н	3							7		> 2	о км.	/HR										
	Temperature	е		MA	X. TE	MP. >	> 36 '	C, MI	N. TEN	1P. <	: 15°C				MAX	(, TE	MP.>	> 36 °C	, M	IN. 7	ГЕМР	. <	5°C					T) A											
	Hail Storm																																						
Wea	ther	Pests		JAS	SIDS										SHO	ОТ	FLY,	HELIO	THI	S							HELK	THIS											
condi		Weather		HIGH	RH,	LOW 7	ГЕМР.							5	HIG	H RH	I, LOW	TEM	P.								HIGH	RH, L	OW T	EMP.			***************************************						
inciden		Diseases		BLA	CK A	RM,W	/ILT, F	ROOT	ROT						BLA	CK A	ARM,	WILT,	ROC	OT RO	T						WILT	AND	R00	T ROT									
pests and	diseases	Weather		HIGH	RAIN	IFALL	.,HIG	HRH	FOLLO	WED	ву Н	igh t	EMP.		HIG	HRA	INFAL	L,HIG	HR	H FO	LLOW	ED B	Y HIG	н теу	MP,		HIGH	RAINI	FALL,	HIGH	RH FO	LLOW	ED B	Y HIG	H TEN	1P.			
N	ormal phase w	ise					4	17.5			2	59.0							24	3.3							51.7			T			39.7						
***************************************	Rainfall(n	· · · · · · · · · · · · · · · · · · ·		20.7	16.6	30.0	25.9	38.9	24.9	25.8	29.0	29.0	19.7	32	3 39.0	5 36	5.8 35	5.7 17.	.2	23.5	24.5	22.8	3.7	2.9	3.3	10.1	0.3	0.4	0.0	2.8	0.0	0.0	0.0	0.0		0.1	0.6	0.1	0.0
Weekly	Max.temp	. °C		34.8	34.6	34.6	33.7	33.0	33.0	33.3	32.7	33.1	32.9	33.6	4 32.8	+	_	.5 33.	+	-			-	-	-	-	-	30.2	+	+	31.0	+	+	1	+-				
normal weather	Min.temp.	o _C		24.4	23.7	24.0	23.7	23.2	23.1		_	+-	+	+	-	+	_	\dashv	+					-	-	-	-	-	+	+	+	+	+		+	-			
	Sunshine	hours	1	4.4	5.6	5.0	5.4	4.0	5.6	5.8	5.9	6.6	6.8	7.0		1			\top	8.0			8.6		8.4	8.6		9.2	1	1	9.4	9.4	9.0	1	9.4				
																				1																			
																																	<	1					->
																									<		- BO	LL	MA	TURI	TY	<u> </u>	<u> </u> >						
L	ife histor and	У																			F	LOV	VERI	NG		39													
me	ean dates	of																																6	-		3		
	ortant epo crop grov										<	<u> </u>	VEG	ETA	TIVE	GF	ROW	TH 	1	->		70	M	M										(=	1	No.			
01 (crop grov	Y LII			<			GER	MINA	TION	1									G		7	4				A		A										
							SO	WING		K	6			12		KE	The same of the sa				2					5	TI								A		to.		
							66								91	1											Y												
Sta	andard wee	ks	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	1	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	0
	Months			L	JL	ILY		Т		IGU.	-	T			MBE		+			BER					BER			ECE1		<u> </u>		[] JANU							
		***************************************	4																															Τ΄			1		

STATE

: ANDHRA PRADESH

CROP : COTTON

MCU-5, JKHY-1, DCH-32, AH-349 SOIL : BLACK, RED LOAMY, NHH44, LK 861, LPS-141 CLAY LOAMS

CLAY LOAMS

DISTRICTS : GUNTUR, KRISHNA, PRAKASAM

NON-IRRIGATED

DURATION: 160-180 DAYS

	Rain						> 50	MM/	DAY								> 80	MM/	DAY				¥ -			AN	Y RA	IN										
	Duration Of	Wet Spell					> 40	MM F	OR 2	DAYS							> 50	MM F	OR 3	DAYS							·											
Weather	Cloudy Wea	ther			10											Territor Agricultura																						
warnings	Drought																20 DA	YS								40	DAYS											
warnings	High Winds	ð.		181													> 40) KM/	/HR							>	20 K	M/HR	2									
	Temperature	2															MAX.	TEMF	0. >	40 C	, MIN.	. TEM	P, <	20 C														
	Hail Storm														•			-							100													
Weat	ther	Pests					JASSID MITES	S,TH	RIPS,	APHID	s,sho	от в	OREF	₹,					HELI BOLL			SIDS	, APHI	DS		HE	LIOTH	HS, SF	PODO	PTER	A, WI	HITE	FLY					
condit		Weather				1	MODEF TEMP	RATE	RAIN, T 25	CLOU	DY W	EATH	ER A	ND	A-Parker-Hanning and pro-				RAIN	~		ΛP.				LO	W TE	MP. A	ND HI	IGH R	RH							
favoura inciden		Diseases					BACTE					РОТ					BACTE	ERIAL ROT,	BLIG LEAF	HT, A	LITER	RNAR	IA LEA	AF SF	OT	B0 LE	LL RO	OT, ALT	TERN. GRAY	ARIA	LEAF DEW	SPO	T, CE	RCOS	PORA			
pests and	diseases	Weather		nymmercene i residior-cond		(CLOUD	Y WE	ATHE	ER							HIGH	RH A	AND (CLOUD	Y WE	EATH	ER					i ANI										
N Wat	ormal phase w	ise (mm)				N. Awar (S. M. P. Award and Applicated)			4	52.9				218.5	5				19'	7.0				150.8						136.0)							
	Rainfall(r				15.1	17.3	24.9	25.8	30.4	28.2	35.2	34.8	27.6	25.2	30.0	33.7	32.9	32.5	30.8	35.8	36.5	30.8	32.0	43.5	35.1	38.9	33.0	19.7	15.6	7.8	3.2	7.0	3.5	2.2	0.7	1.5	2.2	1.1
Weekly	Max.temp	. °C			39.3	37.1	36.6	35.2	35.5	34.9	34.7	33.5	33.2	33.3	33.7	33.4	33.3	33.4	33.4	32.8	32.5	32.8	32.7	32.0	31.5	31.3	30.9	30.5	30.1	29.7	29.7	29.5	29.2	29.1	29.2	29.1	29.5	29.9
normal weather	Min.temp	°C			28.2	27.3	27.0	26.5	26.3	26.3	26.0	25.7	25.6	25.7	25.5	25.7	25.5	25.6	25.7	25.2	25.1	24.8	24.6	23.9	23.6	23.1	22.3	21.8	20.5	20.4	19.8	19.4	18.8	18.6	18.0	17.9	18.2	19.2
	Sunshine	hours			7.1	5.6	5.4	5.4	5.3	5.7	5.1	5.0	4.3	5.6	7.0	4.5	5.7	4.9	6.0	5.2	5.3	5.2	6.2	6.9	6.7	7.9	7.7	8.1	7.4	7.9	7.1	7.4	9.0	8.0	9.5	9.5	9.1	9.2
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	Months					JUN	E	T		JU	LY		T	A	UGL	IST		SE	EPTE	MBE	R		OCI	OBE	ER		NO	VEM	BER	T	Di	ECE!	MBE	R	J	ANL	(AR)	

STATE

: ANDHRA PRADESH

CROP : COTTON

VARIETY : KRISHNA

SOIL : RED SANDY SOIL

DISTRICTS : NELLORE

NON-IRRIGATED

DURATION: 150 DAYS

	1				 																	150	DA	0												
	Rain	W-1			> 5	OMM	1/DAY	•																	ŀ	NY F	RAIN									
	Duration O	f Wet Spell			> 5	OMM	for	4-5[DAYS						>	50 1	MM FC	R 7-1	O DA	YS																
Weather	Cloudy Wed	uther										-	1																	-				2		
warnings	Drought																	· · · · · · · · · · · · · · · · · · ·								ž,								•		
Wal Hilligs	High Winds																				,										-					
	Temperature	2		Par ar American											MA	X. TI	EMP.	> 45	°C, M	IN. TE	MP. <	< 15°(N	1AX.	TEMP.	. > 4	45°C.	MIN	TEM	IP, <	15°C			
	Hail Storm																																			
Weat	her	Pests			BOLI	. WOF	RM, M	ITE,S	ноот	BOR	ER,T	HRING	9S		ВО	LL W	ORM,	MITE,	SHOO	от во	RER,	THRIN	GS	D C STREET, DATE OF THE STREET, DESCRIPTION OF T	В	OLL W	VORM,	MITE	E, SHO	00T f	BORE	R,TH	RINGS			
conditi favoural		Weather			FREG	UEN.	T RAI	IN, CL	OUDII	VEBS					FR	EQUE	NT R	AIN,	CLOUI	DINES	\$				F	REQU	ENT	RAIN	. CLC	41 DUC	NESS		-			
inciden		Diseases			LEAF	SPO	T						,		LE	AF S	POT										SPOT		*							
pests and o	diseases	Weather	************	,	LOW	TEM	P, H1	GH R	H						LOV	N TE	MP,	HIGH	RH								TEMP,		l RH							
No Wate	ormal phase wer requirement	ise (mm)	·		 				1 4	19.3				267.				T		99.1			21	6.4				60.6			7		,			-
	Rainfall(n					1.9	2.3	2.3	2.9	0.5	2.2	2.5	1.6	4.5	3.9	3.3	4.3	6.4	15.5	14.7	7.8	8.1	9.4	11.0	12.6	15.2	161	183	2 10	1 15	4 17	6 19	3.8 20.		T	T
Weekly	Max.temp	. °C				32.2	33.1	34.1	33.8	34.9	35.7	36.2	36.8	37.8	37.8	38	3 39.6	39.2	+	+	39.6	-			_	+	+	+	+	-	_	_	3.3 35.	+-	-	
normal weather	Min.temp.	o _C				21.3	22.1	22.0	22.7	22.9	23.5	24.3	25.1	\vdash	1	+-	+	27.7	+	+	28.8					1	+	+	+	+	+		.4 26.	-	-	-
	Sunshine	hours				10.2	10.2	10.0	10.0	10.0	9.8	9.0	9.4	9.8	9.8	9.6	9.6	9.4	8.8	9.0	7.8	7.2	5.8	6.0	5.2	6.6	+	+	-	+	+	-	+	+	+	
Li	ife histor	y																		F	LOWE	RING		LL N	ИДТІ	JRIT'	Y		F	ICKI	ING	UP				
impo	and an dates rtant epo rop grow	ochs							GERI		TION	2			VEG	ETAT	TIVE	GRO	WTH																	
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		13		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		
	Months				FEB.	KUA	RY		M	IARC	CH			AP	RIL			\mathcal{N}	1AY	181		J	UNE	;			JU	LY			A	UGL	IST			

STATE

: ANDHRA PRADESH

CROP : COTTON

VARIETY: H4,MECH-1,B1,CO-7

SOIL : BLACK SOIL

DISTRICTS : ADILABAD

NON-IRRIGATED

DURATION: 140-160 DAYS

ANY RAIN >50 MM / DAY >20 MM / DAY Rain >60 MM FOR 3 DAYS Duration Of Wet Spell >20 MM FOR 3 DAYS Cloudy Weather >20 DAYS Weather >15 DAYS >7 DAYS Drought warnings High Winds MIN. TEMP. < 10°C Temperature Hail Storm BOLL WORM, WHITE FLY BOLL WORM, WHITE FLY SUCKING PESTS Pests Weather HUMID AND CLOUDY WEATHER HUMID AND CLOUDY WEATHER conditions HUMID AND CLOUDY WEATHER Weather ROOT ROT, BLACK ARM, GRAY MILD, BOLL ROT favourable for ROOT ROT, BLACK ARM BLACK ARM Diseases incidence of CLOUDY HUMID WEATHER WITH LOW TEMP. CLOUDY HUMID WEATHER WITH LOW TEMP. pests and diseases CLOUDY HUMID WEATHER WITH LOW TEMP. Weather 121.8 147.2 202.1 250.7 56.2 Normal phase wise Water requirement(mm) 1.2 1.4 2.8 7.0 8.1 12.5 45.1 33.3 21.4 43.1 49.0 52.2 46.8 49.8 45.0 61.8 72.8 57.0 68.9 60.3 51.3 Rainfall(mm)total 19.5 30.6 29.8 29.8 30.9 31.8 32.4 32.7 32.4 33.2 32.5 30.7 30.4 32.0 31.4 31.0 30.3 31.1 31.1 32.3 32.1 31.0 31.1 Weekly 32.3 31.9 34.8 33.3 Max.temp. OC 38.9 36.8 14.5 | 13.2 | 13.4 23.0 22.8 22.6 21.5 20.7 20.3 15.3 19.2 17.5 16.7 15.6 19.8 23.1 23.0 22.9 22.4 normal 23.2 23.4 23.7 24.0 24.3 23.7 23.7 24.7 24.1 26.0 Min.temp. OC weather Sunshine hours PICKING UP BOUL MATURITY FLOWEING Life history and VEG GROWTH mean dates of important epochs GERMINATION of crop growth SOWING 50 0 52 51 44 45 46 47. 42 43 41 38 39 40 37 36 35 34 32 33 30 31 29 25 27 28 23 24 26 Standard weeks 22 **DECEMBER** NOVEMBER **OCTOBER** SEPTEMBER **AUGUST** JUNE IULY Months

05