

CROP WEATHER CALENDARS
FOR
ANDHRA PRADESH

PUBLISHED BY
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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

PUNE - 411 005
DATED

Introduction

1. General

The state of Andhra Pradesh, experiences tropical climate with slight variations depending upon elevations and maritime influence. The Eastern Ghats separate 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 consisting 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 diagrammatically 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 > 40°C and minimum temperature < 10°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	Nellore, Prakasam, Chittore	Jowar (K)	16	Ranga reddy, Adilabad
	2	Vishakhapatnam, Vizianagaram	Jowar (R)	17	Nellore
	3	Khammam, Adilabad, Nizamabad		18	Kurnool
	4	Medak, Nalgonda, Mehaboobnagar, Ranga reddy	Groundnut (K)	19	Nellore, Chittore, Prakasam
	5	Kurnool, Anantapur, Cuddapah		20	Cuddapah, Anantapur, Kurnool
	6	Warangal		21	Khammam, Warangal, Krishna, Karimnagar
	7	E. Godavari		22	Vishakhapatnam, Vizianagaram, Srikakulam
Paddy – II	8	Guntur, E. Godavari, W. Godavari, Krishna	Groundnut (R)	23	Nellore
Bajara	9	Kurnool		24	Kurnool, Krishna
	10	Nellore		25	Khammam, Warangal
	11	Vizianagaram	Cotton	26	Kurnool
	12	Nalgonda, Prakasam		27	Guntur, Krishna, Prakasam
	13	Mehaboobnagar, Nalgonda, Medak		28	Nellore
	14	Kurnool		29	Adilabad
	15	Prakasam			

1.

DURATION : 105 – 120 DAYS

SSH → Sunshine hours, DUR → Duration, RH → Relative Humidity

CROP WEATHER CALENDAR

2.

STATE : ANDHRA PRADESH

CROP : PADDY-I

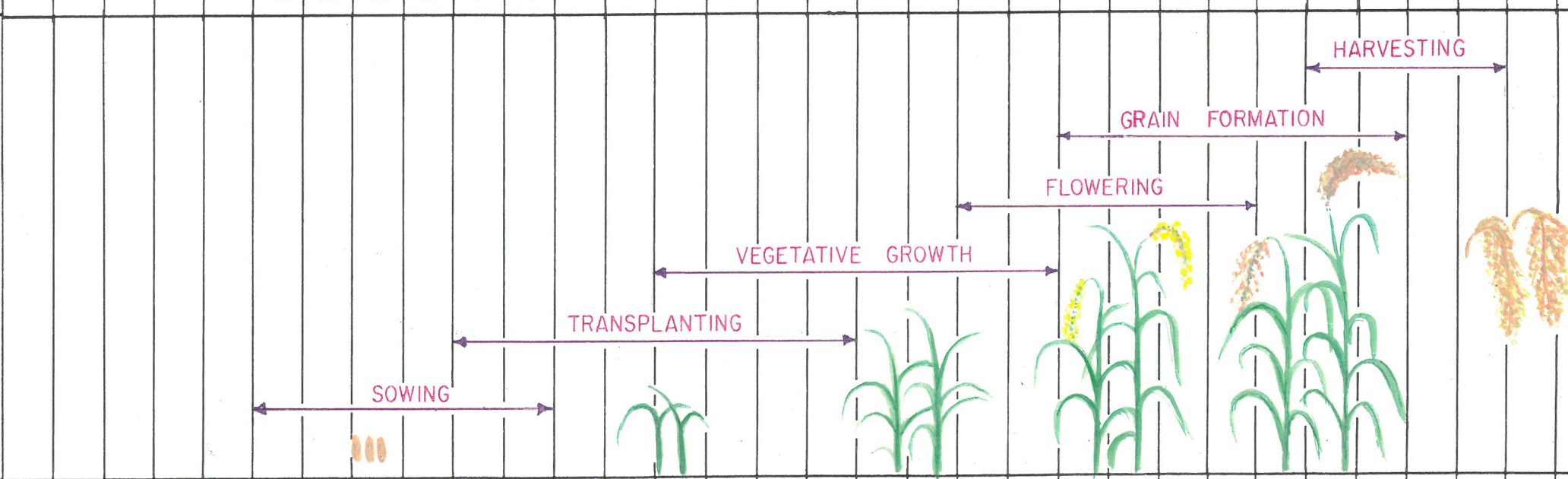
VARIETY : SWARNA, PHULGUNA

SOIL : BLACK, SANDY LOAM

DISTRICTS : VISAKHAPATNAM, VIZIANAGARAM

IRRIGATED

DURATION : 140-150 DAYS

Weather warnings	Rain	> 50 MM / DAY										> 100 / DAY										ANY RAIN																			
	Duration Of Wet Spell	> 50 MM FOR 3 DAYS										> 100 MM FOR 3 DAYS																													
	Cloudy Weather																																								
	Drought	> 7 DAYS										> 10 DAYS										> 10 DAYS																			
	High Winds	> 35 KM / HOUR																																							
	Temperature	MAX. TEMP. > 40°C																																							
	Hail Storm																																								
Weather conditions favourable for incidence of pests and diseases	Pests	LEAF ROLLER, STEM BORER										BPH, GALL MIDGE, LEAF ROLLER STEM BORER										STEM BORER, B.P.H., GALL MIDGE																			
	Weather	PROLONGED CLOUDINESS FOLLOWED BY HEAVY RAINS										PROLONGED CLOUDINESS FOLLOWED BY HEAVY RAINS										PROLONGED CLOUDINESS FOLLOWED BY HEAVY RAINS																			
	Diseases	BLAST										BLAST, SHEATH BLIGHT										BLAST BLIGHT																			
	Weather	HIGH RH AND CLOUDINESS										HIGH RH AND CLOUDINESS										HIGH RH AND CLOUDINESS																			
Normal phase wise Water requirement(mm)							61.2					104.7					245.0					112.6					110.0														
Weekly normal weather	Rainfall(mm)total						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	65.2	36.8	62.1	20.4	15.3	22.4	12.9	16.9	24.5										
	Max.temp. °C						33.6	33.5	33.3	33.0	32.0	31.7	31.9	31.6	31.5	31.6	32.0	31.6	31.8	31.8	31.3	31.9	33.2	32.1	31.7	31.5	31.2	30.6	30.0	29.8	28.9										
	Min.temp. °C						27.5	26.8	27.1	26.5	26.1	26.5	26.2	26.0	26.1	26.6	26.0	25.9	26.0	25.6	25.8	25.2	25.2	24.7	24.0	24.0	23.3	22.9	21.8	21.5	21.0										
	Sunshine hours						4.5	5.9	6.4	5.6	4.4	3.6	3.5	4.0	4.9	5.8	3.1	5.3	6.2	5.7	5.7	6.1	7.9	7.1	7.6	8.9	8.3	7.8	8.6	8.2	8.6										
Life history and mean dates of important epochs of crop growth																																									
																																									
Standard weeks					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									
Months							JUNE					JULY					AUGUST					SEPTEMBER					OCTOBER					NOVEMBER									

CROP WEATHER CALENDAR

3.

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

DISTRICTS : KHAMMAM, ADILABAD, NIZAMABAD										IRRIGATED										DERIVATION																										
Weather warnings		Rain	< 50 MM /DAY																				ANY RAIN																							
		Duration Of Wet Spell	> 150 MM FOR 3 DAYS																																											
		Cloudy Weather																																												
		Drought																																												
		High Winds	> 35 KM / HOUR																																											
		Temperature	MAX. TEMP. > 40°C, MIN. TEMP. < 10°C										MAX. TEMP. > 40°C, MIN. TEMP. < 10°C										MAX. TEMP. > 40°C, MIN. TEMP. < 10°C																							
		Hail Storm																																												
Weather conditions favourable for incidence of pests and diseases		Pests	BPH, STEM BORER, GALL FLY, GALL MIDGE, HISPA										GALL MIDGE, STEM BORER, LEAF ROLLER, BPH, HISPA										STEM BORER, LEAF ROLLER, BPH, CUT WORM																							
		Weather	HUMID AND CLOUDY WEATHER FOLLOWED BY CONTINUOUS RAIN										HUMID AND CLOUDY WEATHER FOLLOWED BY CONTINUOUS RAIN										HUMID AND CLOUDY WEATHER FOLLOWED BY CONTINUOUS RAIN																							
		Diseases	BLAST, FOOT BLAST, BLD										BLAST, SHEATH BLIGHT										BLAST, BROWN SPOT, SHEATH ROT																							
		Weather	LOW TEMP., HIGH RH										LOW TEMP., HIGH RH										LOW TEMP., HIGH RH																							
Normal phase wise Water requirement(mm)												76.2					90.2					221.3					140.1					89.7														
Weekly normal weather	Rainfall(mm)total								9.8	20.5	32.1	50.3	57.1	55.1	62.1	68.4	77.9	64.4	50.2	48.1	52.8	52.4	54.3	41.5	43.7	36.8	23.7	16.4	15.5	12.2	11.6	7.3														
	Max.temp. °C								40.3	38.9	36.8	34.8	33.3	32.3	31.9	32.3	32.1	31.0	31.1	31.1	30.3	31.1	30.9	31.8	32.4	32.7	32.4	33.2	32.5	32.0	31.4	31.0														
	Min.temp. °C								27.2	26.0	24.7	24.1	24.3	23.7	23.7	24.0	23.7	23.4	23.2	23.1	23.0	22.9	22.4	23.0	22.8	22.6	21.5	20.7	20.3	19.8	19.2	17.5														
	Sunshine hours								8.4	7.9	6.3	5.8	4.0	4.6	5.0	4.8	4.8	3.6	4.2	5.1	4.4	4.9	5.6	6.4	6.6	6.8	7.0	8.8	8.3	8.5	8.1	8.8														
Life history and mean dates of important epochs of crop growth																																														
Standard weeks					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							MAY					JUNE					JULY					AUGUST					SEPTEMBER					OCTOBER					NOVEMBER									

CROP WEATHER CALENDAR

4.

STATE : ANDHRA PRADESH

CROP : PADDY - I

VARIETY : TELLAHAMSA, BPT-5204

SOIL : SANDY CLAY LOAM

DISTRICTS : MEDAK, NALGONDA, MEHABUBNAGAR, RANGAREDDY IRRIGATED

DURATION : 115 - 135 DAYS

Weather warnings	Rain	> 40 MM/DAY										> 100 MM/DAY										ANY RAIN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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	Diseases	BLAST , SHEATH BLIGHT										BLAST										BLAST, BLB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Normal phase wise Water requirement(mm)							45.5					79.4					192.3					147.6					64.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Weekly normal weather	Rainfall(mm)total								20.7	20.8	26.9	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	23.3	19.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

5.

SANDY LOAM

D.D.G.M.(AGRIMET) , I.M.D. , PUNE 1996.

CROP WEATHER CALENDAR

6.

STATE : ANDHRA PRADESH

CROP : PADDY - I

VARIETY : TELLAHAMSA

SOIL : RED EARTHS
WITH LOAMY

DISTRICTS : WARANGAL

IRRIGATED

DURATION : 150 DAYS

Weather warnings	Rain	> 50 MM / DAY																ANY RAIN																															
	Duration Of Wet Spell	> 25 MM FOR 10 DAYS																																															
	Cloudy Weather																																																
	Drought																																																
	High Winds																																																
	Temperature																																																
	Hail Storm																																																
Weather conditions favourable for incidence of pests and diseases	Pests	STEM BORER																STEM BORER																BROWN PLANT HOPPER, CLIMBING CUT WORM															
	Weather	HIGH RH, LOW TEMP.																HIGH RH, LOW TEMP.																HIGH RH, LOW TEMP.															
	Diseases	BLAST																LEAF BITE																LEAF BITE															
	Weather	HIGH RH																HIGH RH																HIGH RH															
Normal phase wise Water requirement(mm)										66.5				89.5				228.9				139.3				118.0																							
Weekly normal weather	Rainfall(mm)total			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	52.6	45.5	44.9	38.2	20.7	15.9	15.7	11.6	13.6	9.5	2.7	4.6	3.4	2.0	2.6	1.3	0.9	2.3	1.7												
	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	32.4	32.6	32.6	32.8	32.6	32.2	31.2	30.8	30.7	29.7	29.3	29.3	28.6	28.8	29.0	29.2	29.4												
	Min.temp. °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	20.8	19.7	19.1	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												
Life history and mean dates of important epochs of crop growth																																																	
Standard weeks		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	1	2	3	4										
Months		MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER				JANUARY															

CROP WEATHER CALENDAR

7.

STATE : ANDHRA PRADESH
DISTRICTS : E.GODAVARI

CROP : PADDY - I
IRRIGATED
VARIETY : MTU - 5
DURATION : 150 DAYS

SOIL : RED AND DELTAIC
ALLUVIUM

Weather warnings	Rain	>50MM/DAY										> 100 MM /DAY										ANY RAIN																				
	Duration Of Wet Spell	> 10 MM FOR 4 DAYS										> 50 MM FOR 3 DAYS																														
	Cloudy Weather																																									
	Drought																																									
	High Winds											> 30 KM / HR										> 25 KM / HR																				
	Temperature	MAX. TEMP. > 40°C, MIN. TEMP. < 10°C										MAX. TEMP. > 40°C, MIN. TEMP. < 10 °C																														
	Hail Storm																																									
Weather conditions favourable for incidence of pests and diseases	Pests	STE M BORER, GALL FLY										STEM BORER, GALL FLY, BPH, LEAF ROLLER HISPA										STEM BORER, BPH, CLIMBING CUT WORM EARTH HEAD BUG, CUT WORM																				
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.																				
	Diseases	BLAST										BLB, SHEATH BLIGHT, BLAST										BLAST, SHEATH BLIGHT																				
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										HIGH TEMP																				
Normal phase wise Water requirement(mm)							70.9					102.6					241.7					192.7					133.7															
Weekly normal weather	Rainfall(mm)total			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	43.0	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						
	Max.temp. °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	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						
	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	26.1	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						
Life history and mean dates of important epochs of crop growth																																										
Standard weeks		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			APRIL					MAY					JUNE					JULY					AUGUST					SEPTEMBER					OCTOBER					NOVEMBER				

8.

**SOIL : BLACK LOAM/BLACK CLAY
ALLUVIAL**

DURATION : 150 DAYS

9.

SOIL : RED

DURATION : 80 – 90 DAYS

SSH → Sunshine hours , DUR → Duration , RH → Relative Humidity

CROP WEATHER CALENDAR

STATE : ANDHRA PRADESH

CROP : BAJRA

VARIETY : BK-560,BJ-104,WCC-75

SOIL : SANDY CLAY LOAM,
LIGHT BLACK

DISTRICTS : NELLORE

IRRIGATED

DURATION : 90-95 DAYS

Weather warnings	Rain	> 40 MM / DAY										> 60 MM / DAY										ANY RAIN																
	Duration Of Wet Spell	> 20 MM FOR 4 DAYS										> 40 MM FOR 5 DAYS																										
	Cloudy Weather																																					
	Drought																																					
	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																																					
Weather conditions favourable for incidence of pests and diseases	Pests	SHOOT FLY, EAR HEAD, CATERPILLAR																																				
	Weather	CLOUDINESS, PERIODICAL RAINS																																				
	Diseases																																					
	Weather																																					
Normal phase wise Water requirement(mm)												80.0		82.8		127.6		138.0		81.3																		
Weekly normal weather	Rainfall(mm)total										14.7	7.8	8.1	9.4	11.0	12.6	15.2	16.1	18.2	19.4	15.4	17.6	18.8	20.8	18.0	22.4	23.6	24.6	27.2	32.9								
	Max.temp. °C										40.5	39.6	39.7	37.9	37.6	36.5	36.1	36.5	36.2	35.4	35.0	34.9	35.3	35.1	35.1	35.5	35.5	34.4	34.5	33.6								
	Min.temp. °C										28.5	28.8	29.3	28.5	28.2	27.9	27.2	27.0	26.9	26.6	26.6	26.4	26.4	26.7	26.4	26.6	26.3	25.7	25.9	25.5								
	Sunshine hours										9.0	7.8	7.2	5.8	6.0	5.2	6.6	6.5	6.0	5.0	4.0	6.0	5.8	6.4	6.2	6.0	5.8	6.0	6.2	7.4								
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								
Months												JUNE					JULY					AUGUST					SEPTEMBER											

CROP WEATHER CALENDAR

11.

STATE : ANDHRA PRADESH
DISTRICTS : VIZIANAGARAM

CROP : BAJRA
NON-IRRIGATED

VARIETY : BK-560/ICMH-45I,
MBH-110,WCC-75,VISAKHA
DURATION : 85-90 DAYS / 75-80 DAYS
SOIL : SANDY LOAM

Weather warnings	Rain	> 40 MM / DAY										> 80 MM / DAY										ANY RAIN																	
	Duration Of Wet Spell	25 MM FOR 2 DAYS										50 MM FOR 2 DAYS																											
	Cloudy Weather																																						
	Drought	> 10 DAYS										> 21 DAYS										> 21 DAYS																	
	High Winds																																						
	Temperature																																						
	Hail Storm																																						
Weather conditions favourable for incidence of pests and diseases	Pests																																						
	Weather																																						
	Diseases	MILDEW, ERGOT										MILDEW, ERGOT										MILDEW, ERGOT																	
	Weather	RH FOLLOWED BY CONT. RAINFALL										RH FOLLOWED BY CONT. RAINFALL										RH FOLLOWED BY CONT. RAINFALL																	
Normal phase wise Water requirement(mm)												70.0		73.7		112.1		78.2		67.0																			
Weekly normal weather	Rainfall(mm)total											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											
	Max.temp. °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											
	Min.temp. °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											
	Sunshine hours											6.7	4.7	4.7	3.8	3.8	4.1	4.2	4.5	3.2	4.0	4.7	4.6	4.5	5.0	5.4	6.1	5.6											
Life history and mean dates of important epochs of crop growth																																							
Standard weeks												22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40									
Months												JUNE					JULY					AUGUST					SEPTEMBER												

CROP WEATHER CALENDAR

STATE : ANDHRA PRADESH CROP : BAJRA VARIETY : WCC-75,BK- 560 SOIL : BLACK
DISTRICTS : NALGONDA , PRAKASAM NON-IRRIGATED DURATION : 90 DAYS

Weather warnings	Rain	> 40 MM / DAY										> 60 MM / DAY										ANY RAIN																			
	Duration Of Wet Spell	> 30 MM FOR 2 DAYS										> 50 MM FOR 2 DAYS																													
	Cloudy Weather																																								
	Drought	7 DAYS										10 DAYS																													
	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																																								
Weather conditions favourable for incidence of pests and diseases	Pests	SHOOT FLY, CATER PILLER										STEM BORER										EARHEAD, CATER PILLER																			
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.																			
	Diseases	GREEN EARHEAD, DOWNEY MILDEW										GREEN EARHEAD										GREEN EARHEAD, EARGOT																			
	Weather	HIGH RH, RAINFALL FOLLOWED BY CLOUDY WEATHER										HIGH RH, RAINFALL FOLLOWED BY CLOUDY WEATHER										HIGH RH, RAINFALL FOLLOWED BY CLOUDY WEATHER																			
Normal phase wise Water requirement(mm)												82.9		79.8		123.7		115.8		108.3																					
Weekly normal weather	Rainfall(mm)total										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										
	Max.temp. °C										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										
	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										
	Sunshine hours										9.8	8.6	9.0	7.8	7.3	5.5	5.9	7.4	5.2	6.0	5.6	5.4	4.1	5.0	5.6	4.6	5.3	5.6	6.2	6.0	5.9										
Life history and mean dates of important epochs of crop growth																																									
Standard weeks											18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39									
Months												MAY					JUNE					JULY					AUGUST					SEPTEMBER									

CROP WEATHER CALENDAR

13.

STATE : ANDHRA PRADESH

CROP : JOWAR(K)

VARIETY : LOCAL YELLOW, CSH-5,
SPV-462SOIL : SANDY LOAM,
BLACK AND RED

DISTRICTS : MEHABOONAGAR, NALGONDA, MEDAK

NON-IRRIGATED

DURATION : 100 - 115 DAYS

Weather warnings	Rain	> 50 MM/DAY										> 75 MM/DAY										> 50 MM/DAY																	
	Duration Of Wet Spell	> 50 MM FOR 2 DAYS										> 60 MM FOR 3 DAYS										> 20 MM FOR 2 DAYS																	
	Cloudy Weather											CLOUDINESS										CLOUDINESS																	
	Drought	> 15 DAYS										> 20 DAYS										> 20 DAYS																	
	High Winds																																						
	Temperature	MAX. TEMP. > 39°C, MIN. TEMP. < 15°C										MAX. TEMP. > 39°C, MIN. TEMP. < 15°C										MAX. TEMP. > 39°C, MIN. TEMP. < 15°C																	
	Hail Storm	HAIL STORM																				HAIL STORM																	
Weather conditions favourable for incidence of pests and diseases	Pests	SHOOT FLY										SHOOT FLY, STEM BORER										MIDGE, EARHEAD BUG, MITES																	
	Weather	HIGH RH, LOW TEMP, CLOUDY, RAINY WEATHER										HIGH RH, LOW TEMP, CLOUDY, RAINY WEATHER										HIGH RH, LOW TEMP, CLOUDY, RAINY WEATHER																	
	Diseases	SEEDLING ROOT ROT, DOWNY MILDEW										LEAF BLIGHT, RED LEAF SPOT										MOULDS, ERGOT																	
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										CLOUDINESS WITH DRIZZLING AND HIGH RH																	
Normal phase wise Water requirement(mm)												41.9		84.6				83.7				86.4		74.1															
Weekly normal weather	Rainfall(mm)total										20.7	20.8	26.9	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	42.1	23.3	19.5	17.5	12.4								
	Max.temp. °C										36.5	33.6	33.0	32.6	32.7	30.9	31.4	30.3	28.9	28.9	29.5	29.8	30.3	28.9	30.0	30.4	30.1	31.1	31.9	31.0	30.6								
	Min.temp. °C										25.8	23.6	23.4	23.5	23.2	22.9	23.3	22.5	22.1	22.0	22.3	22.5	22.3	22.1	22.1	22.1	22.1	21.3	20.5	19.5	20.1								
	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								
Life history and mean dates of important epochs of crop growth																																							
Standard weeks											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44						
Months												JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER											

14.

SOIL : RED AND
MEDIUM BLACK

SSH \rightarrow Sunshine hours , DUR \rightarrow Duration , RH \rightarrow Relative Humidity

15.

DURATION : 85 DAYS

SSH → Sunshine hours , DUR → Duration , RH → Relative Humidity

16.

SOIL : SANDY LOAM, BLACK,
SANDY CLAY LOAM

DURATION : 105 -110 DAYS

SSH → Sunshine hours, DUR → Duration, RH → Relative Humidity

CROP WEATHER CALENDAR

STATE : 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

Weather warnings	Rain	> 50 MM / DAY										> 150 MM / DAY										ANY RAIN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Duration Of Wet Spell	> 40 MM FOR 4 DAYS										> 100 MM FOR 4 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	Cloudy Weather											CLOUDINESS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	Drought	> 15 DAYS										> 20 DAYS										> 40 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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	Temperature	MAX. TEMP.>40°C, MIN. TEMP.<15°C										MAX. TEMP.>40°C, MIN. TEMP.<15°C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Weather conditions favourable for incidence of pests and diseases	Pests	SHOOT FLY, MITE, EAR HEAD CATERPILLAR										SHOOT FLY, MITE, EAR HEAD CATERPILLAR										SHOOT FLY, MITE, EAR HEAD CATERPILLAR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Weather	CLOUDINESS AND FREQUENT RAINS										CLOUDINESS AND FREQUENT RAINS										CLOUDINESS AND FREQUENT RAINS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Normal phase wise Water requirement(mm)												29.6		60.8				64.6				77.8				70.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Weekly normal weather	Rainfall(mm)total										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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

CROP WEATHER CALENDAR

18.

STATE : ANDHRA PRADESH
DISTRICTS : KURNOOL

CROP : JOWAR(R) CROP II
NON-IRRIGATED

VARIETY : SPV-86, CSH-5
DURATION : 105 DAYS

SOIL : RED AND MEDIUM,
MEDIUM BLACK

Weather warnings	Rain	> 60 MM / DAYS										> 60 MM / DAY										> 10MM / DAY															
	Duration Of Wet Spell	> 10MM FOR 5 DAYS										> 20MM FOR 5 DAYS																									
	Cloudy Weather	CLOUDINESS																																			
	Drought	> 15 DAYS										> 20 DAYS																									
	High Winds	> 30 KM / HR										> 40 KM / HR										> 30 KM / HR															
	Temperature	MAX. TEMP.>38°C																																			
	Hail Storm																																				
Weather conditions favourable for incidence of pests and diseases	Pests	SHOOT FLY, STEM BORER										SHOOT BORER										APHIDS , JASSIDS, MIDGE															
	Weather	LOW TEMP. AND HIGH RH										LOW TEMP. AND HIGH RH																									
	Diseases											SUGARY DISEASES										SUGARY DISEASES AND SMUTT															
	Weather											HIGH RH, LOW TEMP.										HIGH RH , LOW TEMP.															
Normal phase wise Water requirement(mm)										33.4		66.0				63.3				65.6				48.7													
Weekly normal weather	Rainfall(mm)total								39.6	36.8	35.7	17.2	23.5	24.5	22.9	3.7	2.9	3.3	10.1	0.3	0.4	0.0	2.8	0.0	0.0	0.0	0.0										
	Max.temp. °C								32.8	32.2	32.4	33.0	32.6	31.9	31.7	31.5	31.2	30.7	30.4	30.5	30.1	30.0	30.1	30.8	30.9	31.3	32.2										
	Min.temp. °C								23.1	22.8	22.6	22.5	22.3	21.9	21.0	19.8	19.3	18.7	17.5	17.3	16.3	16.0	15.6	15.4	15.7	16.5	17.5										
	Sunshine hours								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										
Life history and mean dates of important epochs of crop growth																																					
Standard weeks		31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10				
Months							SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER					JANUARY										

CROP WEATHER CALENDAR

19.

STATE : ANDHRA PRADESH

CROP : GROUNDNUT (K)

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

DISTRICTS : NELLORE, CHITTOR, PRAKASAM

IRRIGATED

DURATION : 105 - 110 DAYS

DISTRICTS : NELLORE , CHITTOR , PRAKASAM		IRRIGATED		DURATION : 105 TO 115 DAYS																																													
Weather warnings	Rain	> 40 MM / DAY										> 60 MM / DAY										> 30 MM / DAY																											
	Duration Of Wet Spell	> 10 MM FOR 7 DAYS										> 20 MM FOR 10 DAYS										> 10 MM FOR 10 DAYS																											
	Cloudy Weather																																																
	Drought	> 10 DAYS										> 25 DAYS										> 20 DAYS																											
	High Winds	> 60 KM / HOUR																																															
	Temperature	MAX. TEMP. > 35°C, MIN TEMP. < 15°C										MAX. TEMP. > 40°C										MAX. TEMP. > 40°C																											
	Hail Storm																																																
Weather conditions favourable for incidence of pests and diseases	Pests	LEAF EATING CATERPILLAR, LEAF WEBBER, ROOT GRUB, JASSIDS, THRIPS										LEAF EATING CATERPILLAR, LEAF WEBBER, LEAF MINOR										LEAF EATING CATERPILLAR, LEAF WEBBER																											
	Weather	FREQUENT RAIN AND DRY SPELL, HIGH RAIN, HIGH RH, CLOUDINESS, LOW TEMP.										FREQUENT RAIN AND DRY SPELL, HIGH RAIN, HIGH RH, CLOUDINESS, LOW TEMP.										FREQUENT RAIN AND DRY SPELL, HIGH RAIN, HIGH RH, CLOUDINESS, LOW TEMP.																											
	Diseases	TIKKA, LEAF SPOT, SEEDS COLLAR ROT BUDNECROSIS										TIKKA, LEAF SPOT										TIKKA, LEAF SPOT, RUST																											
	Weather	HIGH RH, LOW TEMP., CLOUDINESS										HIGH RH, LOW TEMP., CLOUDINESS										HIGH RH, LOW TEMP., CLOUDINESS																											
Normal phase wise Water requirement(mm)												68.1			117.6			170.6			146.9			138.6																									
Weekly normal weather	Rainfall(mm)total									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	31.2	36.0	52.4	50.0	53.7	56.7	41.6	34.5																		
	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	34.0	34.7	32.3	31.6	31.5	31.2	30.7	30.0																		
	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																		
	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	6.8	6.2	6.8	6.7	7.4	7.4	8.0	7.6																		
Life history and mean dates of important epochs of crop growth																																																	
Standard weeks						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							JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER																											

CROP WEATHER CALENDAR

20.

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

Weather warnings	Rain	> 50 MM / DAY										> 80 MM / DAY										> 30 MM / DAY																								
	Duration Of Wet Spell	> 25 MM FOR 6 DAYS										> 30 MM FOR 4 DAYS										> 30 MM FOR 4 DAYS																								
	Cloudy Weather																																													
	Drought	> 10 DAYS										> 25 DAYS										> 30 DAYS																								
	High Winds																																													
	Temperature	MAX. TEMP. > 35°C, MIN. TEMP. < 25°C										MAX. TEMP. > 40°C										MAX. TEMP. > 40°C																								
	Hail Storm																																													
Weather conditions favourable for incidence of pests and diseases	Pests	ROOT GRUB, RED HAIRY CATERPILLAR										LEAF MINOR, SPEED HELIOTHIS										POD BORER, STEM BORER, TOBACCO CUTWORM																								
	Weather	LOW TEMP. AND CLOUDY WEATHER WITH RAIN										LOW TEMP. AND CLOUDY WEATHER WITH RAIN										LOW TEMP. AND CLOUDY WEATHER WITH RAIN																								
	Diseases	SEED ROT, SEEDLING ROT, COLLAR ROT, STEM ROT										BUDNECROSIS, EARLY AND LATE LEAF SPOT										TIKKA, RUST, EARLY AND LATE LEAF SPOT																								
	Weather	LOW TEMP. COUPLED WITH HIGH RH										LOW TEMP. COUPLED WITH HIGH RH										LOW TEMP. COUPLED WITH HIGH RH																								
Normal phase wise Water requirement(mm)												67.0					150.0					157.3					141.7					104.6														
Weekly normal weather	Rainfall(mm)total								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															
	Max.temp. °C								34.3	34.8	34.6	34.6	33.7	33.0	33.0	33.3	32.7	33.1	32.9	33.4	32.8	32.3	32.5	33.0	32.6	31.9	31.7	31.6	31.3	30.7	30.5															
	Min.temp. °C								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															
	Sunshine 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															
Life history and mean dates of important epochs of crop growth																																														
Standard weeks					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		JUNE					JULY					AUGUST					SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER														

CROP WEATHER CALENDAR

21.

STATE : ANDHRA PRADESH

CROP : GROUNDNUT(K)

VARIETY : 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

Weather warnings	Rain	> 50 MM										> 50 MM										> 30 MM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Duration Of Wet Spell	> 10MM FOR 3 DAYS										> 30 MM FOR 3 DAYS										> 30 MM FOR 3 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Cloudy Weather											CLOUDY WEATHER										CLOUDY WEATHER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Drought	> 20 DAYS										> 20 DAYS										> 20 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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	Temperature	MAX.TEMP.>35°C,MIN.TEMP.<10°C										MAX. TEMP.> 40°C, MIN.TEMP. < 18°C										MAX. TEMP.> 40°C, MIN.TEMP.<18°C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Hail Storm	HAILSTORM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Weather conditions favourable for incidence of pests and diseases	Pests	APHIDS, ROOT GRUB, LEAF FOLDER LEAF MINOR										APHIDS, THRIPS, LEAF FOLDER, LEAF MINOR										RED HAIRY CATERPILLAR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Weather	CLOUDY WEATHER, RAIN, HIGH RH WITH LOW TEMP.										LOW TEMP AND HUMIDITY, CLOUDY WEATHER, AND RAINS										LOW TEMP AND LOW RH, CLOUDY WEATHER RAINS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Diseases	COLLAR ROT, STEM, ROT, WILT, LEAF WEBBR										TIKKA, LEAF SPOT, SPEDOTIVE, BUDNECROSIS										TIKKA, LEAF SPOT, RUST, ROOT ROT, COLLAR ROT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Weather	HIGH RH, LOW TEMP, CLOUDY WEATHER										HIGH RH, LOW TEMP, CLOUDY WEATHER										HIGH RH, LOW TEMP, CLOUDY WEATHER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Normal phase wise Water requirement(mm)		54.3										118.4										172.5										127.6										99.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Weekly normal weather	Rainfall(mm)total							28.3	44.2	48.8	50.3	54.9	57.4	64.1	50.7	42.1	43.2	48.2	43.3	47.3	39.8	42.7	38.6	25.1	21.2	23.0	18.1	19.0	13.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

CROP WEATHER CALENDAR

22.

STATE : ANDHRA PRADESH

CROP : GROUNDNUT (K)

VARIETY : JL-24, TMV-2

SOIL : RED SANDY LOAM, RED LOAM

DISTRICTS : VISAKHAPATNAM, VIZIANAGARAM, SRIKAKULAM

NON-IRRIGATED

DURATION : 105-110 DAYS

Weather warnings	Rain	> 25 MM/DAY										> 50 MM/DAY										> 30 MM/DAY																			
	Duration Of Wet Spell	> 15 MM FOR 2 DAYS										> 30 MM FOR 4 DAYS										> 25 MM FOR 3 DAYS																			
	Cloudy Weather	CLOUDINESS																																							
	Drought	15 DAYS										10 DAYS										12 DAYS																			
	High Winds	> 25 KM/HOUR										> 40 KM/HOUR																													
	Temperature	MAX. TEMP. > 40° C										MAX. TEMP. > 40° C										MAX. TEMP. > 40° C																			
	Hail Storm																																								
Weather conditions favourable for incidence of pests and diseases	Pests	LEAF MINOR,APHIDS,THRIPS,ROOT GRUB										LEAF MINOR,APHIDS,LEAF WEBBER										POD BUG,ROOT GRUB,POD BORER																			
	Weather	HIGH TEMP.LOW RH,PROLONGED HUMID AND CLOUDY WEATHER										HIGH TEMP,LOW RH,PROLONGED DRY SPELL										PROLONGED DRY SPELL IMMEDIATELY HEAVY RAINS																			
	Diseases	COLLAR ROT,LEAF SPOT, TIKKA										TIKKA,LEAF SPOT, BUDNECROSIS										TIKKA,LEAF SPOT,STEM ROT																			
	Weather	PROLONGED HUMIDITY AND CLOUDY CONDITIONS										LOW TEMP,HIGH RH,WET SPELL IN GROWING PERIOD,PROLONGED HUMID CLOUDY WEATHER										LOW TEMP,HIGH RH,WET SPELL,PROLONGED HUMID AND CLOUDY WEATHER																			
Normal phase wise Water requirement(mm)												73.6					146.6					158.5					148.0					121.6									
Weekly normal weather	Rainfall(mm)total									7.4	9.9	14.6	15.7	17.6	19.3	21.2	29.1	40.3	44.3	37.6	38.8	39.6	40.9	45.0	38.3	41.6	50.9	44.1	48.9	49.5	44.2	52.3									
	Max.temp. °C									33.6	34.0	34.0	34.7	35.2	35.7	35.0	33.7	33.3	32.4	32.8	32.0	31.6	32.0	31.5	31.5	31.7	32.0	31.6	31.9	32.0	31.6	32.0									
	Min.temp. °C									26.5	26.9	26.7	27.4	24.7	28.2	27.7	27.1	27.1	26.5	26.6	26.2	25.7	26.2	25.9	25.8	25.9	26.2	25.8	25.7	25.7	25.4	25.5									
	Sunshine hours									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									
Life history and mean dates of important epochs of crop growth																																									
Standard weeks						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							APRIL					MAY					JUNE					JULY					AUGUST					SEPTEMBER									

23.

SOIL : SANDY LOAM
SANDY CLAY LOAM

DURATION : 105 - 110 DAYS

SSH → Sunshine hours, DUR → Duration, RH → Relative Humidity

CROP WEATHER CALENDAR

24.

STATE : ANDHRA PRADESH

CROP : GROUNDNUT (R)

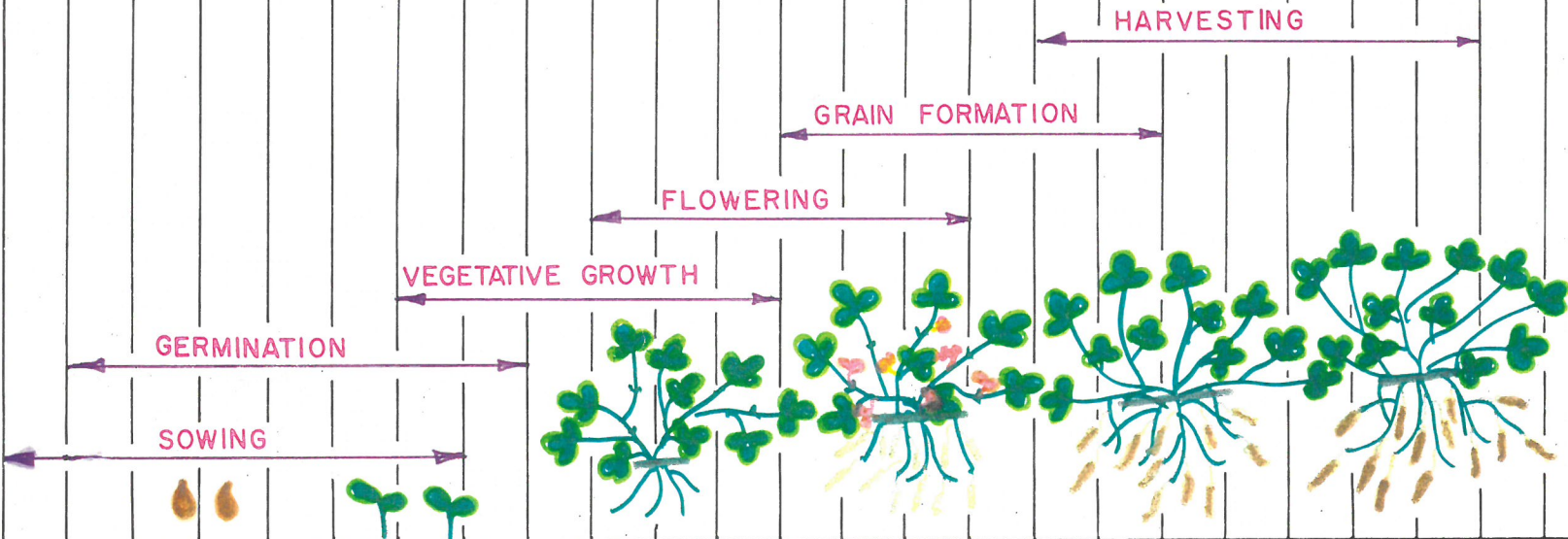
VARIETY : TMV - 2, JL-24

SOIL : BLACK AND RED LOAM,
SANDY CLAY LOAM

DISTRICTS : KURNOOL, KRISHNA

IRRIGATED

DURATION : 105 - 110 DAYS

Weather warnings	Rain	> 50 MM/DAY										> 50 MM/DAY										> 30 MM/DAY																			
	Duration Of Wet Spell	> 10 MM FOR 5 DAYS										> 30MM FOR 3 DAYS										> 30 MM FOR 3 DAYS																			
	Cloudy Weather	CLOUDINESS																																							
	Drought																																								
	High Winds																																								
	Temperature	MIN. TEMP. < 10 ^o C																																							
	Hail Storm																																								
Weather conditions favourable for incidence of pests and diseases	Pests	APHIDS,ROOT GRUB,LEAF FOLDER, CATWORM										LEAF MINOR,HELIOTHIS,LEAF FOLDER, APHIDS,JASSIDS,THRIPS										APHIDS,THRIPS,LEAF FOLDER,TOBACCO CATERPILLAR JASSIDS																			
	Weather	CLOUDY WEATHER AND RAINS										DRY WEATHER CONDITIONS, CLOUDY WEATHER AND RAINS										CLOUDY WEATHER AND RAINS																			
	Diseases	SEED AND SEEDLING ROT,COLLAR ROT, STEM ROT										TIKKA,LEAF DISEASE,LEAF SPOT, BUDNECROSIS AND RUST										TIKKA LEAF DISEASE,RUST,BUDNECROSIS, LEAF SPOT																			
	Weather	LOW TEMP,CLOUDY WEATHER,HIGH RAINFALL AND HIGH RH										LOW TEMP,CLOUDY WEATHER,HIGH RAINFALL AND HIGH RH										LOW TEMP,CLOUDY WEATHER,HIGH RAINFALL AND HIGH RH																			
Normal phase wise Water requirement(mm)												40.0				90.6				159.7				148.8				139.4													
Weekly normal weather	Rainfall(mm)total								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										
	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										
	Min.temp. ^o 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										
	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										
Life history and mean dates of important epochs of crop growth																																									
Standard weeks								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									NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH				APRIL												

CROP WEATHER CALENDAR

25.

STATE : ANDHRA PRADESH

CROP : GROUNDNUT (R)

VARIETY : TMV -2

SOIL : BLACK AND RED

DISTRICTS : KHAMMAM, WARANGAL

IRRIGATED

DURATION : 100 - 110 DAYS

DISTRICTS : KHAMMAM, WARANGAL		IRRIGATED		DURATION : 100 TO 120 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Weather warnings	Rain	> 30 MM/DAY										> 50 MM/ DAY										> 30 MM/DAY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Duration Of Wet Spell	> 10MM FOR 4 DAYS										> 30 MM FOR 4 DAYS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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	Temperature											MAX TEMP. > 40°C MIN TEMP. < 15°C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Hail Storm	HAILSTORM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Weather conditions favourable for incidence of pests and diseases	Pests	LEAF WEBBER,RED HAIRY CATERPILLAR										SPEDOTIVE CATERPILLAR, LEAFSPOT, RUST										SPEDOTIVE CATERPILLAR,LEAFSPOT, RUST																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Weather	HIGH RH WITH LOW TEMP										HIGH RH WITH LOW TEMP.										HIGH RH WITH LOW TEMP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Diseases	TIKKA DISEASE										TIKKA DISEASE										TIKKA DISEASE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Weather	LOW TEMP. AND HIGH RH										LOW TEMP. AND HIGH RH										LOW TEMP AND HIGH RH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Normal phase wise Water requirement(mm)												45.2				98.0				103.6				92.0				78.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Weekly normal weather	Rainfall(mm)total							42.5	42.6	39.3	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

CROP WEATHER CALENDAR

26.

STATE : ANDHRA PRADESH

CROP : COTTON

VARIETY : G.ASTOREM, SRISAILAM

SOIL : BLACK SOIL

DISTRICTS : KURNOOL

NON-IRRIGATED

DURATION : 180-200 DAYS
JADKAR

Weather warnings	Rain	> 50 MM / DAY										> 50 MM / DAY										ANY RAIN																				
	Duration Of Wet Spell	> 40 MM FOR TWO DAYS										> 40 MM / FOR 3 DAYS																														
	Cloudy Weather																																									
	Drought	20 DAYS										25 DAYS										32 DAYS																				
	High Winds											> 40 KM / HR										> 20 KM / HR																				
	Temperature	MAX. TEMP. > 36 °C, MIN. TEMP. < 15 °C										MAX. TEMP. > 36 °C, MIN. TEMP. < 15 °C																														
	Hail Storm																																									
Weather conditions favourable for incidence of pests and diseases	Pests	JASSIDS										SHOOT FLY, HELIOTHIS										HELIOTHIS																				
	Weather	HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.										HIGH RH, LOW TEMP.																				
	Diseases	BLACK ARM, WILT, ROOT ROT										BLACK ARM, WILT, ROOT ROT										WILT AND ROOT ROT																				
	Weather	HIGH RAINFALL, HIGH RH FOLLOWED BY HIGH TEMP.										HIGH RAINFALL, HIGH RH FOLLOWED BY HIGH TEMP.										HIGH RAINFALL, HIGH RH FOLLOWED BY HIGH TEMP.																				
Normal phase wise Water requirement(mm)						47.5		259.0					243.3					151.7					139.7																			
Weekly normal weather	Rainfall(mm)total		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	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	0.0	0.1	0.6	0.1	0.0					
	Max.temp. °C		34.8	34.6	34.6	33.7	33.0	33.0	33.3	32.7	33.1	32.9	33.4	32.8	32.3	32.5	33.0	32.6	31.9	31.7	31.6	31.3	30.7	30.5	30.6	30.2	30.0	30.1	31.0	31.0	31.3	32.2	33.2	34.0	34.3	35.4	36.8					
	Min.temp. °C		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	17.1	16.2	15.9	15.7	15.5	15.6	16.2	17.3	18.0	18.6	18.6	19.9	19.9					
	Sunshine hours		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	8.0	9.2	9.4	7.9	9.4	9.4	9.0	9.2	9.4	9.8	10.4	10.0	10.4					
Life history and mean dates of important epochs of crop growth																																										
Standard weeks		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	2	3	4	5	6	7	8	9					
Months			JULY					AUGUST					SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER					JANUARY					FEBRUARY				

27.

VARIETY : MCH-5, JKHY-1, DCH-32, AH-349 SOIL : BLACK, RED LOAMY,
NHH44, LK 861, LPS-141 CLAY LOAMS
DURATION : 160 - 180 DAYS

SSH → Sunshine hours, DUR → Duration, RH → Relative Humidity

28.

SOIL : RED SANDY SOIL

DURATION : 150 DAYS

SSH → Sunshine hours, DUR → Duration, RH → Relative Humidity

CROP WEATHER CALENDAR

STATE : ANDHRA PRADESH
DISTRICTS : ADILABAD

CROP : COTTON
NON-IRRIGATED

VARIETY : H4,MECH-1,B1,CO-7
DURATION : 140-160 DAYS

SOIL : BLACK SOIL

Weather warnings	Rain	>20 MM / DAY										>50 MM / DAY										ANY RAIN									
	Duration Of Wet Spell	>20 MM FOR 3 DAYS										>60 MM FOR 3 DAYS																			
	Cloudy Weather																														
	Drought	>7 DAYS										>15 DAYS										>20 DAYS									
	High Winds																														
	Temperature											MIN. TEMP. < 10 ⁰ C																			
	Hail Storm																														
Weather conditions favourable for incidence of pests and diseases	Pests	SUCKING PESTS										BOLL WORM ,WHITE FLY										BOLL WORM ,WHITE FLY									
	Weather	HUMID AND CLOUDY WEATHER										HUMID AND CLOUDY WEATHER										HUMID AND CLOUDY WEATHER									
	Diseases	BLACK ARM										ROOT ROT,BLACK ARM										ROOT ROT,BLACK ARM,GRAY MILD,BOLL ROT									
	Weather	CLOUDY HUMID WEATHER WITH LOW TEMP.										CLOUDY HUMID WEATHER WITH LOW TEMP.										CLOUDY HUMID WEATHER WITH LOW TEMP.									
		56.2										250.7										202.1									
Normal phase wise Water requirement(mm)																															
Weekly normal weather	Rainfall(mm)total																														
	Max.temp. °C																														
	Min.temp. °C																														
	Sunshine hours																														
Life history and mean dates of important epochs of crop growth																															
Standard weeks																															
Months																															