



## Crop Weather Calendar of AMFU Kanpur, Uttar Pradesh

### Agro-climatic Zone

Middle Gangetic Plain  
Region

### Main Crops

Paddy, Wheat, Maize, Pulses,  
Oilseeds (Mustard), Vegetables

### Soil Type

Alluvial Soil (Sandy Loam to  
Clayey Loam)










Developed by


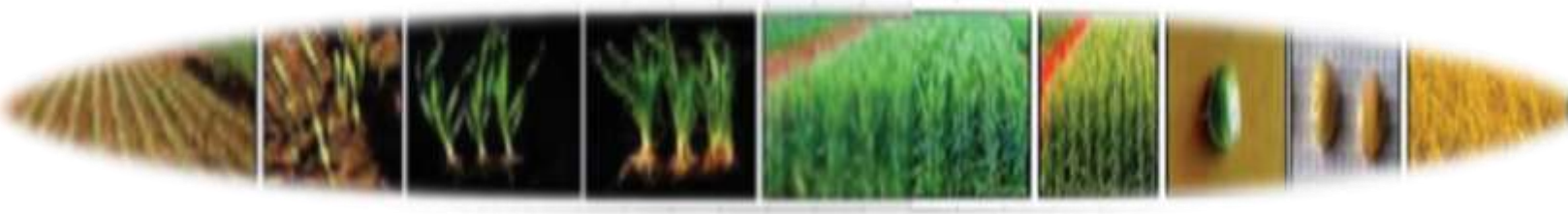

**Chandra Shekhar Azad University of Agriculture & Technology, Kanpur (U.P.)**

**Under Gramin Krishi Mausam Sewa (GKMS)**







## Crop-weather calendar of Rice (*Oryza Sativa* L.)

Climatic Normals	Crop- Rice						Duration – 120- 135 (Days)																		
	Month	June					July				August					September				October					
	Std. week	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45		
	Tmax (°c)	42.2	34.7	33.8	33.3	33.9	34.9	35.6	33.0	33.4	33.5	32.2	35.0	33.5	32.9	33.6	34.3	33.7	35.4	31.7	31.4	31.5	30.4		
	Tmin (°c)	29.8	27.6	25.9	26.5	26.0	27.2	28.9	26.0	26.6	26.4	25.6	25.9	24.8	25.5	24.6	23.7	22.1	20.5	17.3	14.5	15.2	14.6		
	RHm(%)	48	79	89	92	92	80	80	88	81	81	87	80	82	92	87	85	82	77	83	83	93	92		
	RHe(%)	29	69	72	68	71	65	57	73	65	70	79	64	67	72	69	56	58	42	42	37	41	45		
	SS (hr./day)	9.6	4.3	4.3	3.0	2.2	7.0	7.0	2.1	2.8	3.2	2.6	2.6	5.6	2.2	3.6	7.5	7.3	9.1	7.5	8.8	2.3	0.2		
	Rain(mm/week)	0.0	128.6	106.8	40.6	47.4	65.0	8.1	38.0	0.0	16.4	128.0	0.0	25.6	79.2	45.0	0.0	15.7	0.0	3.4	0.0	0.0	0.0		
Phenophase wise weather for better yield																									
		Sowing					Transplanting				Active tillering				Flowering		Grain filling			Physiological maturity					
	Tmax (°c)	30–35°C					28–32°C				30–34°C				28–32°C		25–30°C			22–28°C					
	Tmin (°c)	20–25°C					22–26°C				20–25°C				20–25°C		18–22°C			18–20°C					
	RHm(%)	85–95%					85–95%				80–90%				80–90%		75–85%			70–80%					
	RHe(%)	70–80%					70–80%				65–75%				65–75%		60–70%			55–65%					
	SS (hr./day)	6–7 hrs/day					4–5 hrs/day				5–6 hrs/day				6–7 hrs/day		7–8 hrs/day			8–9 hrs/day					
	Rainfall (mm)	30–50 mm					40–60 mm				40–60 mm				30–50 mm		20–30 mm			<10 mm (dry for harvest)					
Congenial weather for pest/diseases	Stem borer		Tmax: 28–35°C - High humidity: 80–90% - Cloudy weather with intermittent rainVegetative to panicle initiation (Tillering to Booting stage)																						
	Gundhi bug		Tmax: 25–30°C - RH: 60–75% - Dry, cloudy weather with little rain ( Flowering to dough stage)																						
	Leaf roller		Tmax: 30–35°C - High RH (>85%) - Cloudy, humid weather (Tillering to early panicle emergence)																						
	Sheath blight (Rhizoctonia solani)		Tmin: 20–25°C - RH: >90% - Continuous cloudy/rainy days - Poor air circulation (Tillering to heading)																						

## Crop-weather calendar of Wheat (*Triticum Aestivum*)


Climatic Normals	Crop- Wheat (Timely sown)			Duration – 125-130 (Days)																
	Month	November		December				January				February				March				
	Std. week	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13
	Tmax (°c)	26.8	25.2	24.2	24.6	22.7	19.9	16.8	16.4	12.5	17.7	23.1	21.5	26.0	26.2	25.5	26.4	30.0	30.8	35.8
	Tmin (°c)	11.4	12.7	13.2	8.4	7.6	8.3	10.0	5.5	5.3	5.1	9.0	9.3	10.1	11.6	13.5	10.8	13.3	14.0	20.0
	RHm(%)	94	94	92	94	90	95	95	96	92	95	92	88	92	87	83	73	78	75	67
	RHe(%)	54	61	65	46	47	69	81	72	77	63	55	54	48	45	51	40	36	37	31
	Rain(mm/week)	0.0	6.6	11.8	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	26.8	0.0	0.6	32.2	0.0	0.0	0.0	0.0
																				
Phenophase wise weather for better yield	Sowing & emergence		Emergence to tillering				Tillering to heading				Heading to grain filling				Grain formation to maturity		Physiological Maturity			
Tmax (°c)	24–28°C		20–25°C				20–25°C				22–26°C				25–30°C		28–32°C			
Tmin (°c)	12–16°C		10–15°C				8–14°C				10–15°C				12–18°C		14–20°C			
RHm(%)	80–90%		75–85%				70–80%				65–75%				60–70%		50–60%			
RHe(%)	60–70%		55–65%				50–60%				45–55%				40–50%		30–40%			
Rainfall (mm)	10–15 mm		5–10 mm				<10 mm				<10 mm				<5 mm (minimal)		Nil (dry weather for harvest)			
Congenial weather for pest/diseases	Yellow Rust (Puccinia striiformis)		Tmax: 10–20°C - Tmin: 7–10°C - High RH >85% - Prolonged dew/fog, cloudy weather (Early vegetative to booting stage (Dec–Feb))																	
	Brown Rust (Puccinia triticina)		Tmax: 20–25°C - RH: 60–70% - Clear, warm days followed by cool nights - Light dew (Tillering to grain filling stage)																	
	Loose smut (Ustilago tritici)		Temp: 18–24°C - High soil and air moisture during flowering - Infected seed is major source Infection at <b>flowering</b> stage; symptoms appear at <b>ear emergence</b>																	

## Crop-weather calendar of Mustard (*Brassica spp.*)








Climatic Normals	Crop- Mustard		Duration – 125-130 (Days)																	
	Month	October	November					December				January				February				
	Std. week	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9
	Tmax (°c)	31.4	31.5	30.4	27.5	26.8	25.2	24.2	24.6	22.7	19.9	16.8	16.4	12.5	17.7	23.1	21.5	26.0	26.2	25.5
	Tmin (°c)	14.5	15.2	14.6	12.9	11.4	12.7	13.2	8.4	7.6	8.3	10.0	5.5	5.3	5.1	9.0	9.3	10.1	11.6	13.5
	RHm(%)	83	93	92	93	94	94	92	94	90	95	95	96	92	95	92	88	92	87	83
	RHe(%)	37	41	45	62	54	61	65	46	47	69	81	72	77	63	55	54	48	45	51
	Rain(mm/week)	0.0	0.0	0.0	0.0	0.0	6.6	11.8	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	26.8	0.0	0.6	32.2
<div><div><p>Sowing &amp; seedling establishment ( 15-21 days)</p></div><div><p>Vegetative (25-30 days)</p></div><div><p>Flowering (15-20 days)</p></div><div><p>Pod development (25-30 days)</p></div><div><p>Maturity (15-30 days)</p></div><div></div></div>																				
Phenophase wise weather for better yield	Sowing & emergence		Vegetative growth			Flowering			Siliqua formation			Seed development			Maturity					
Tmax (°c)	30–35°C		25–30°C			20–25°C			18–24°C			20–25°C			25–30°C					
Tmin (°c)	18–22°C		12–16°C			8–12°C			8–10°C			10–15°C			12–18°C					
RHm(%)	80–85%		75–80%			70–80%			70–75%			65–70%			60–65%					
RHe(%)	60–70%		55–65%			50–60%			50–55%			45–50%			40–50%					
Rainfall (mm)	5–10 mm		<5 mm			<5 mm			Nil–2 mm			2–5 mm			Nil					
Congenial weather for pest/diseases	Aphids ( <i>Lipaphis erysimi</i> )		Tmax: 20–25°C - RH: 70–80% - Cloudy weather with light drizzle (Flowering to seed formation)																	
	White Rust ( <i>Albugo candida</i> )		Tmin: 10–15°C - RH: >90% - Frequent dew/fog, wet leaves (Flowering to pod formation)																	
	Downy Mildew		Cool, moist conditions - RH >85% - Intermittent light rains (Vegetative to early flowering)																	
	Alternaria Blight ( <i>A. brassicae</i> )		Tmax: 20–28°C - RH >85% - Prolonged cloudy weather (Pod formation to maturity)																	



## Crop-weather calendar of Maize (*Zea Mays*)

Climatic Normals	Crop- Maize (Zaid)			Duration – 110-120 (Days)																				
	Month	February		March					April				May				June							
	Std. week	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26				
	Tmax (°c)	26.2	25.5	26.4	30.0	30.8	35.8	37.4	38.8	39.0	40.1	39.7	36.9	43.0	41.2	44.8	43.0	44.8	40.2	32.7				
	Tmin (°c)	11.6	13.5	10.8	13.3	14.0	20.0	18.6	20.6	23.0	22.0	21.2	25.2	26.4	28.5	29.4	27.5	30.9	28.5	25.8				
	RHm(%)	87	83	73	78	75	67	50	52	41	42	36	63	48	58	45	42	35	62	81				
	RHe(%)	45	51	40	36	37	31	20	28	21	18	16	39	20	33	19	21	17	39	74				
																								
Phenophase wise weather for better yield	Sowing to emergence		Knee height					Tasseling				Silk formation				Cob filling				Physiological maturity				
Tmax (°c)	28–32°C		30–35°C					30–35°C				30–34°C				28–32°C				25–30°C				
Tmin (°c)	15–20°C		18–22°C					20–24°C				20–24°C				18–22°C				16–20°C				
RHm(%)	70–80%		65–75%					60–70%				60–70%				55–65%				50–60%				
RHe(%)	50–60%		45–55%					40–50%				40–50%				35–45%				30–40%				
Rainfall (mm)	20–30 mm		15–25 mm					10–15 mm				10–15 mm				5–10 mm				<5 mm (dry at harvest)				
Congenial weather for pest/ diseases	Stem Borer (Chilo partellus)		Tmax: 30–35°C - RH: 60–70% - Intermittent showers + cloudy days (Early vegetative to tasseling)																					
	Fall Armyworm (Spodoptera frugiperda)		Tmax: 28–34°C - RH: 60–80% - Bright, dry days followed by rain (Emergence to cob formation)																					
	Turcicum Leaf Blight (Exserohilum turcicum)		Tmax: 20–30°C - High humidity >90% - Frequent dew/fog (Vegetative to reproductive)																					
	Maydis Leaf Blight (Bipolaris maydis)		Warm and moist conditions - RH >85% (Vegetative stage)																					
	Downy Mildew		RH >90% - Low temperatures (18–22°C) - Prolonged dew (Young seedling stage)																					

## Crop-weather calendar of Chickpea (*Cicer Arietinum*)

Climatic Normals		Crop- Chickpea (Timely sown) Duration -130-140 (Days)																			
	Month	November			December				January				February				March				
	Std. week	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11
	Tmax (°c)	31.5	30.4	27.5	26.8	25.2	24.2	24.6	22.7	19.9	16.8	16.4	12.5	17.7	23.1	21.5	26.0	26.2	25.5	26.4	30.0
	Tmin (°c)	15.2	14.6	12.9	11.4	12.7	13.2	8.4	7.6	8.3	10.0	5.5	5.3	5.1	9.0	9.3	10.1	11.6	13.5	10.8	13.3
	RHm(%)	93	92	93	94	94	92	94	90	95	95	96	92	95	92	88	92	87	83	73	78
	RHe(%)	41	45	62	54	61	65	46	47	69	81	72	77	63	55	54	48	45	51	40	36
	Rain(mm/week)	0.0	0.0	0.0	0.0	6.6	11.8	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	26.8	0.0	0.6	32.2	0.0	0.0
																					
Phenophase wise weather for better yield	Sowing & emergence	Vegetative Growth			Flowering			Pod Formation				Pod Filling				Physiological Maturity					
Tmax (°c)	25–30°C	22–28°C			20–25°C			20–25°C				20–25°C				25–30°C					
Tmin (°c)	10–15°C	10–15°C			10–12°C			8–12°C				8–12°C				10–15°C					
RHm(%)	80–90%	70–80%			60–70%			60–70%				55–65%				50–60%					
RHe(%)	50–60%	45–55%			40–50%			40–50%				35–45%				30–40%					
Rainfall (mm)	20–30 mm/week	15–25 mm/week			<10 mm/week (dry spell needed)			<10 mm/week (too much rain causes disease)				Minimal (only light irrigation if needed)				Nil (dry weather ideal for harvest)					
Congenial weather for pest/diseases	Fusarium Wilt	Soil temperature: 20–25°C - Dry soil, low soil moisture - Poor drainage (Early vegetative to flowering stage)																			
	Pod Borer (Helicoverpa armigera)	Tmax: 25–30°C - Low to moderate rainfall - RH: 40–60% - Bright sunny days (Flowering to pod development stage (60–110 DAS))																			
	Grey Mould (Botrytis cinerea)	Tmin: 12–20°C - RH: >90% - Cloudy, foggy, drizzly weather - Dense canopy (Flowering to pod filling stage)																			

## Crop-weather calendar of Potato (*Solanum tuberosum* L.)

Climatic Normals	Crop- Potato			Duration – 110-120 (Days)																
	Month	October		November					December				January				February			
	Std. week	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9
	Tmax (°c)	31.4	31.5	30.4	27.5	26.8	25.2	24.2	24.6	22.7	19.9	16.8	16.4	12.5	17.7	23.1	21.5	26.0	26.2	25.5
	Tmin (°c)	14.5	15.2	14.6	12.9	11.4	12.7	13.2	8.4	7.6	8.3	10.0	5.5	5.3	5.1	9.0	9.3	10.1	11.6	13.5
	RHm(%)	83	93	92	93	94	94	92	94	90	95	95	96	92	95	92	88	92	87	83
	RHe(%)	37	41	45	62	54	61	65	46	47	69	81	72	77	63	55	54	48	45	51
	Rain(mm/week)	0.0	0.0	0.0	0.0	0.0	6.6	11.8	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	26.8	0.0	0.6	32.2



Phenophase wise weather for better yield	Sowing & emergence	Vegetative growth	Flowering	Siliqua formation	Seed development	Maturity
Tmax (°C)	20–25°C	20–25°C	18–22°C	18–22°C	20–25°C	20–25°C
Tmin (°C)	10–15°C	12–16°C	10–14°C	10–14°C	12–16°C	10–15°C
RHm(%)	85–90%	80–90%	85–95%	80–90%	75–85%	85–90%
RHe(%)	60–70%	60–70%	65–75%	60–70%	55–65%	60–70%
Rainfall (mm)	15–25 mm	10–20 mm	5–15 mm	5–10 mm	<5 mm (dry period needed)	15–25 mm
Congenial weather for pest/diseases	Late Blight (Phytophthora infestans)	Tmax: 18–22°C - RH: >90% - Cloudy, humid, and rainy weather (Tuber initiation to bulking)				
	Early Blight (Alternaria solani)	Tmax: 25–30°C - RH: 70–80% - Intermittent dry and wet spells (Vegetative to maturity)				
	Aphids	Tmax: 20–28°C - RH: 70–85% - Dry, warm weather with tender foliage (Vegetative to flowering)				
	White Grubs / Cutworms	Tmax: 25–30°C - Soil moisture > field capacity - Cloudy, wet conditions (Sowing to emergence)				